UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction
2015

BACKGROUND PAPER

Prepared for the 2015 Global Assessment Report on Disaster Risk Reduction

UPDATE ON THE PROBABILISTIC MODELLING OF NATURAL RISKS AT GLOBAL LEVEL: GLOBAL RISK MODEL

Global Earthquake and Tropical Cyclone Hazard Assessment. Disaster Risk Assessment at Country Level for Earthquakes, Tropical Cyclones (Wind and Storm Surge), Floods, Tsunami and Volcanic Eruptions

International Center for Numerical Methods in Engineering and INGENIAR Ltda.





February 2015

Report developed by the consortium of consultants:



Centro Internacional de Métodos
Numéricos en Ingeniería
Barcelona, Spain



Ingeniería para el Análisis del Riesgo
Ingenieros Consultores
Bogotá, Colombia

Direction and Coordination of Technical Working Groups

Omar-Darío Cardona A.
Project Direction

Mario Gustavo Ordaz S.
Associated Advisor

Gabriel Andrés Bernal G.
Technical Direction INGENIAR

Alex Horia Barbat B.
Technical Direction CIMNE

Mario Andrés Salgado G.
General Coordination INGENIAR

Martha Liliana Carreño T.
General Coordination CIMNE

Specialists – Working Groups

Miguel G. Mora
Specialist

Daniela Zuloaga
Specialist

César A. Velásquez
Specialist

Diana M. González
Specialist

Claudia P. Villegas
Technical Assistant

Juan C. Olaya
Technical Assistant

Table of Contents

ACKNOWLEDGEMENTS 1

FOREWORD 2

1 UPDATE ON THE PROBABILISTIC SEISMIC HAZARD ASSESSMENT 8

1.1 PURPOSE AND SCOPE 8
1.2 METHODOLOGICAL APPROACH 9
1.3 UNCERTAINTIES AND LIMITATIONS OF THE STUDY. 10
1.4 CRISIS 2014 10
1.5 INFORMATION USED FOR THE ANALYSIS 11
1.5.1 SEISMIC CATALOGUE 11
1.5.2 TECTONIC ZONING 15
1.5.3 SEISMICITY PARAMETERS 21
1.5.4 SELECTION AND ASSIGNATION OF THE GROUND MOTION PREDICTION EQUATIONS 23
1.6 SEISMIC HAZARD ASSESSMENT RESULTS 23

2 UPDATE OF THE TROPICAL CYCLONES PROBABILISTIC HAZARD ASSESSMENT 26

2.1 PURPOSE AND SCOPE 26
2.2 METHODOLOGICAL APPROACH 27
2.2.1 CYCLONE TRACKS PERTURBATION 27
2.2.2 WIND HAZARD MODELLING 28
2.2.3 STORM SURGE HAZARD MODELLING 34
2.3 INFORMATION USED FOR THE ANALYSIS 35
2.3.1 CATALOGUE OF HISTORICAL TROPICAL CYCLONES 35
2.3.2 TOPOGRAPHY 39
2.3.3 GROUND ROUGHNESS 43
2.3.4 BATHYMETRY 44
2.3.5 WIND HAZARD RESULTS 44
2.3.6 STROM SURGE HAZARD RESULTS 53
2.4 STRONG WINDS HAZARD ASSESSMENT CONSIDERING CLIMATE CHANGE FOR THE NORTH ATLANTIC BASIN 64
2.4.1 CATALOGUE OF FUTURE TROPICAL CYCLONES 65
2.4.2 WIND HAZARD RESULTS 67

3 FLOOD, TSUNAMI AND VOLCANIC ASH FALL HAZARDS 69

3.1 FLOOD HAZARD 69
3.2 TSUNAMI HAZARD 71
3.3 VOLCANIC ASH FALL HAZARD 73

4 UPDATE ON THE GLOBAL EXPOSURE DATABASE 76

4.1 IMPROVEMENTS ON GED 2015 76
4.1.1 POPULATION DATA 76
4.1.2 URBAN AND RURAL SETTLEMENTS DELIMITATION 76
4.1.3 AGGREGATION ON THE 5X5 KM REFERENCE GRID 78
4.1.4 GDP BASE MAP 81
4.2 1X1 KM EXPOSURE DATABASE FOR THE COASTAL AREAS 82

5 PHYSICAL VULNERABILITY OF THE EXPOSED ASSETS FOR THE CONSIDERED HAZARDS 85

5.1 PROBABILISTIC REPRESENTATION OF VULNERABILITY 85
5.2 CONSTRUCTION CLASSES 86
5.3 VULNERABILITY REGIONALIZATION 88
5.4 GEOSCIENCE AUSTRALIA'S VULNERABILITY SCOPE 93

6 DISASTER RISK ASSESSMENT 95

6.1 PURPOSE AND SCOPE 95
6.2 METHODOLOGICAL APPROACH 96
6.2.1 ANALYTICAL PROCEDURE 96
6.2.2 RISK METRICS 98
6.3 RISK INDICATORS 100
6.4 PROBABILISTIC RISK RESULTS 102
6.4.1 SEISMIC RISK 104
6.4.2 TROPICAL CYCLONE RISK (WIND SPEED) 116
6.4.3 TROPICAL CYCLONE RISK (STORM SURGE) 127
6.4.4 TSUNAMI RISK 139
6.4.5 FLOOD RISK 150
6.4.6 VOLCANIC ASH FALL RISK 156
6.4.7 DISASTER RISK DEVELOPMENT IMPLICATIONS 159
6.5 WIND RISK RESULTS IN THE CARIBBEAN INCLUDING CLIMATE CHANGE 165
6.6 CATASTROPHE RISK PROFILES 173

7 COMPILATION OF LOCAL FULLY PROBABILISTIC HAZARD AND RISK ASSESSMENT CASES 174

7.1 OVERVIEW 174
7.2 MEDELLÍN, COLOMBIA 175
7.2.1 INTRODUCTION 175
7.2.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 177
7.2.3 HAZARD ASSESSMENT 178
7.2.4 EXPOSED ASSETS 178
7.2.5 VULNERABILITY OF THE EXPOSED ASSETS 182
7.2.6 PHYSICAL RISK RESULTS 182
7.2.7 CASUALTIES ESTIMATION 186
7.2.8 HOLISTIC RISK ASSESSMENT 189
7.3 BARCELONA, SPAIN 192
7.3.1 INTRODUCTION 192
7.3.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 193
7.3.3 HAZARD ASSESSMENT 193
7.3.4 EXPOSED ASSETS 194
7.3.5 VULNERABILITY OF THE EXPOSED ASSETS 197
7.3.6 PHYSICAL RISK RESULTS 197
7.3.7 CASUALTIES ESTIMATION 201
7.3.8 HOLISTIC RISK ASSESSMENT 201
7.4 BOGOTÁ, COLOMBIA 204
7.4.1 INTRODUCTION 204
7.4.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 204
7.4.3 HAZARD ASSESSMENT 205
7.4.4 EXPOSED ASSETS 208
7.4.5 VULNERABILITY OF THE EXPOSED ASSETS 211
7.4.6 PHYSICAL RISK RESULTS 211
7.5 BELIZE CITY, BELIZE 216
7.5.1 INTRODUCTION 216
7.5.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 217
7.5.3 HAZARD ASSESSMENT 217
7.5.4 EXPOSED ASSETS 219
7.5.5 VULNERABILITY OF THE EXPOSED ASSETS 222
7.5.6 PHYSICAL RISK RESULTS 223
7.6 GALERAS VOLCANO, COLOMBIA 227
7.6.1 INTRODUCTION 227
7.6.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 227
7.6.3 HAZARD ASSESSMENT 227
7.6.4 EXPOSED ASSETS 228
7.6.5 VULNERABILITY OF THE EXPOSED ASSETS 231
7.6.6 PHYSICAL RISK RESULTS 231

7.7 LORCA, SPAIN **233**
7.7.1 INTRODUCTION 233
7.7.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 233
7.7.3 HAZARD ASSESSMENT 233
7.7.4 EXPOSED ASSETS 234
7.7.5 VULNERABILITY OF THE EXPOSED ASSETS 238
7.7.6 PHYSICAL RISK RESULTS 239
7.8 MANIZALES, COLOMBIA **243**
7.8.1 INTRODUCTION 243
7.8.2 PURPOSE OF THE RISK ASSESSMENT AND RESOLUTION LEVEL 243
7.8.3 HAZARD ASSESSMENT 244
7.8.4 EXPOSED ASSETS 251
7.8.5 VULNERABILITY OF THE EXPOSED ASSETS 256
7.8.6 PHYSICAL RISK RESULTS 257
7.8.7 CROSS SUBSIDY INSURANCE SCHEME 261

8 REFERENCES **263**

ANNEX 1. HAZARD REPRESENTATION FOR PROBABILISTIC RISK ASSESSMENT

ANNEX 2. MAPS OF THE SEISMIC PARAMETERS TO ASSESS THE SEISMIC HAZARD

ANNEX 3. SEISMIC HAZARD MAPS CALCULATED WITH CRISIS 2014 (CAPRA)

ANNEX 4. SEISMIC HAZARD CURVES FOR SOME SELECTED CITIES

ANNEX 5. UNIFORM HAZARD SPECTRA FOR SOME SELECTED CITIES

ANNEX 6. CHANGES FROM GAR13 RESULTS

ANNEX 7. HISTORICAL TRACKS OF CYCLONES FOR DIFFERENT CCATEGORIES

ANNEX 8. TROPICAL CYCLONE HAZARD CURVES FOR SOME SELECTED CITIES

ANNEX 9. CLIMATE CHANGE IN THE CARIBBEAN

ANNEX 10. SIMULATED TRACKS OF FUTURE TROPICAL CYCLONES (2014-2055) IN THE NORTH ATLANTIC OCEAN CONSIDERING CLIMATE CHANGE

ANNEX 11. CLIMATE CHANGE WIND HAZARD CURVES FOR SOME SELECTED CITIES

ANNEX 12. VULNERABILITY REGIONALIZATION

ANNEX 13. VULNERABILITY CURVES

ANNEX 14. COMPARISON OF STRONG WINDS VULNERABILITY FUNCTIONS

ANNEX 15. EXPOSURE, VULNERABILITY AND RISK DATA FOR MEDELLÍN

ANNEX 16. EXPOSURE, VULNERABILITY AND RISK DATA FOR BARCELONA

ANNEX 17. EXPOSURE, VULNERABILITY AND RISK DATA FOR BOGOTÁ

ANNEX 18. EXPOSURE, VULNERABILITY AND RISK DATA FOR BELIZE CITY

ANNEX 19. EXPOSURE, VULNERABILITY AND RISK DATA FOR GALERAS VOLCANO

ANNEX 20. EXPOSURE AND RISK DATA FOR LORCA

ANNEX 21. EXPOSURE, VULNERABILITY AND RISK DATA FOR MANIZALES

ANNEX 22. RANKINGS OF RISK INDICATORS BY REGION, EECONOMY AND SIDS

ANNEX 23. RANKING OF RISK INDICATORS FOR ALL COUNTRIES

List of Figures

FIGURE 1. CRISIS 2014 V1.2 11
FIGURE 2. COMPLETENESS VERIFICATION FOR THE SELECTED THRESHOLD MAGNITUDE 12
FIGURE 3. EVENTS' EPICENTERS (0-30KM) 13
FIGURE 4. EVENTS' EPICENTERS (30-60KM) 14
FIGURE 5. EVENTS' EPICENTERS (60+ KM) 14
FIGURE 6. TECTONIC REGIONS OF SHALLOW DEPTH USED IN THE ANALYSIS 16
FIGURE 7. OBSERVED (LEFT COLUMN) AND ASSIGNED (RIGHT COLUMN) MU OF EACH TECTONIC PROVINCE (UPPER LAYER) 17
FIGURE 8. OBSERVED (LEFT COLUMN) AND ASSIGNED (RIGHT COLUMN) MU OF EACH TECTONIC PROVINCE (DEEPER LAYER) 19
FIGURE 9. NUMBER OF EVENTS IN THE CATALOGUE ASSOCIATED WITH THE SELECTED DEPTH RANGES 22
FIGURE 10. SEISMIC HAZARD MAP FOR 0.5SEC AND 975 YEARS RETURN PERIOD. UNITS OF ACCELERATION ARE CM/S^2 24
FIGURE 11. TRACK PERTURBATION PROCESS APPLIED TO HURRICANE HATTIE. 28
FIGURE 12. SCHEME OF A TOPOGRAPHIC PROFILE WITH SITES (X,Y) AND (K,L). SITE (X,Y) CLASSIFIED AS OF LOW TOPOGRAPHIC EXPOSURE. 32
FIGURE 13. SCHEME OF A TOPOGRAPHIC PROFILE WITH SITES (X,Y) AND (K,L). SITE (X,Y) CLASSIFIED AS OF NORMAL TOPOGRAPHIC EXPOSURE. 32
FIGURE 14. SCHEME OF A TOPOGRAPHIC PROFILE WITH SITES (X,Y) AND (K,L). SITE (X,Y) CLASSIFIED AS OF HIGH TOPOGRAPHIC EXPOSURE. 33
FIGURE 15. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE NORTHEAST PACIFIC OCEAN BASIN 36
FIGURE 16. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE SOUTH PACIFIC OCEAN BASIN 36
FIGURE 17. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE NORTHWEST PACIFIC OCEAN BASIN 36
FIGURE 18. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE NORTH INDIAN OCEAN BASIN 37
FIGURE 19. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE SOUTH INDIAN OCEAN BASIN 37
FIGURE 20. TOTAL NUMBER OF ACCUMULATED EVENTS FOR THE NORTH ATLANTIC OCEAN BASIN 37
FIGURE 21. CYCLONE TRACKS USED IN HAZARD MODELLING 38
FIGURE 22. SRTM TOPOGRAPHY AND QUADRANTS FOR THE GLOBE. 39
FIGURE 23. SRTM TOPOGRAPHY QUADRANTS USED IN STORM SURGE HAZARD ASSESSMENT. 40
FIGURE 24. SRTM TOPOGRAPHY QUADRANTS USED FOR THE EAST PACIFIC BASIN REGION. 40
FIGURE 25. SRTM TOPOGRAPHY QUADRANTS USED FOR THE SOUTH PACIFIC BASIN REGION. 41
FIGURE 26. SRTM TOPOGRAPHY QUADRANTS USED FOR THE WEST PACIFIC BASIN REGION. 41
FIGURE 27. SRTM TOPOGRAPHY QUADRANTS USED FOR THE NORTH ATLANTIC BASIN REGION. 42
FIGURE 28. SRTM TOPOGRAPHY QUADRANTS USED FOR THE NORTH INDIAN BASIN REGION. 42
FIGURE 29. SRTM TOPOGRAPHY QUADRANTS USED FOR THE SOUTH INDIAN BASIN REGION. 43
FIGURE 30. URBAN AREAS WORLDWIDE. 43
FIGURE 31. WORLD BATHYMETRY. 44
FIGURE 32. WORLDWIDE TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD. 45
FIGURE 33. WORLDWIDE TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD. 45
FIGURE 34. WORLDWIDE TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD. 46
FIGURE 35. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE NORTHEAST PACIFIC OCEAN. 46
FIGURE 36. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE NORTHEAST PACIFIC OCEAN. 47
FIGURE 37. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE NORTHEAST PACIFIC OCEAN. 47
FIGURE 38. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE NORTHWEST PACIFIC OCEAN. 48
FIGURE 39. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE NORTHWEST PACIFIC OCEAN. 48
FIGURE 40. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE NORTHWEST PACIFIC OCEAN. 49
FIGURE 41. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE SOUTH PACIFIC OCEAN. 49
FIGURE 42. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE SOUTH PACIFIC OCEAN. 49

FIGURE 43. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE SOUTH PACIFIC OCEAN. 50
FIGURE 44. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE NORTH INDIAN OCEAN. 50
FIGURE 45. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE NORTH INDIAN OCEAN. 50
FIGURE 46. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE NORTH INDIAN OCEAN. 51
FIGURE 47. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE SOUTH INDIAN OCEAN..... 51
FIGURE 48. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE SOUTH INDIAN OCEAN..... 51
FIGURE 49. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE SOUTH INDIAN OCEAN..... 52
FIGURE 50. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN..... 52
FIGURE 51. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN..... 53
FIGURE 52. TROPICAL CYCLONES' STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN..... 53
FIGURE 53. MEAN VALUE OF THE STORM SURGE RUN-UP ALONG THE COAST OF BELIZE FOR 100 SIMULATIONS OF HURRICANE HATTIE (1961). 54
FIGURE 54. VARIANCE OF THE STORM SURGE RUN-UP ALONG THE COAST OF BELIZE FOR 100 SIMULATIONS OF HURRICANE HATTIE (1961). 55
FIGURE 55. MEAN STORM SURGE COASTAL FLOOD IN BELIZE FOR 100 SIMULATIONS OF HURRICANE HATTIE (1961). 55
FIGURE 56. VARIANCE OF THE STORM SURGE COASTAL FLOOD IN BELIZE FOR 100 SIMULATIONS OF HURRICANE HATTIE (1961). 56
FIGURE 57. MEAN VALUE OF THE STORM SURGE RUN-UP ALONG THE COAST OF JAPAN FOR 100 SIMULATIONS OF TYPHOON TIP (1979). 56
FIGURE 58. VARIANCE OF THE STORM SURGE RUN-UP ALONG THE COAST OF JAPAN FOR 100 SIMULATIONS OF TYPHOON TIP (1979). 57
FIGURE 59. MEAN STORM SURGE COASTAL FLOOD IN JAPAN FOR 100 SIMULATIONS OF TYPHOON TIP (1979). 57
FIGURE 60. VARIANCE OF THE STORM SURGE COASTAL FLOOD IN JAPAN FOR 100 SIMULATIONS OF TYPHOON TIP (1979)..... 58
FIGURE 61. MEAN VALUE OF THE STORM SURGE RUN-UP ALONG THE COAST OF MYANMAR FOR 100 SIMULATIONS OF CYCLONE GIRI (2010). 58
FIGURE 62. VARIANCE OF THE STORM SURGE RUN-UP ALONG THE COAST OF MYANMAR FOR 100 SIMULATIONS OF CYCLONE GIRI (2010). 59
FIGURE 63. MEAN STORM SURGE COASTAL FLOOD IN MYANMAR FOR 100 SIMULATIONS OF CYCLONE GIRI (2010)..... 59
FIGURE 64. VARIANCE OF THE STORM SURGE COASTAL FLOOD IN MYANMAR FOR 100 SIMULATIONS OF CYCLONE GIRI (2010)..... 60
FIGURE 65. MEAN VALUE OF THE STORM SURGE RUN-UP ALONG THE COAST OF PHILIPPINES FOR 100 SIMULATIONS OF TYPHOON NESAT (2011). 60
FIGURE 66. VARIANCE OF THE STORM SURGE RUN-UP ALONG THE COAST OF PHILIPPINES FOR 100 SIMULATIONS OF TYPHOON NESAT (2011). 61
FIGURE 67. MEAN STORM SURGE COASTAL FLOOD IN PHILIPPINES FOR 100 SIMULATIONS OF TYPHOON NESAT (2011). 61
FIGURE 68. VARIANCE OF THE STORM SURGE COASTAL FLOOD IN PHILIPPINES FOR 100 SIMULATIONS OF TYPHOON NESAT (2011). 62
FIGURE 69. MEAN VALUE OF THE STORM SURGE RUN-UP ALONG THE COAST OF USA FOR 100 SIMULATIONS OF HURRICANE KATRINA (1961). 62
FIGURE 70. VARIANCE OF THE STORM SURGE RUN-UP ALONG THE COAST OF USA FOR 100 SIMULATIONS OF HURRICANE KATRINA (1961). 63
FIGURE 71. MEAN STORM SURGE COASTAL FLOOD IN USA FOR 100 SIMULATIONS OF HURRICANE KATRINA (1961)..... 63
FIGURE 72. VARIANCE OF THE STORM SURGE COASTAL FLOOD IN USA FOR 100 SIMULATIONS OF HURRICANE KATRINA (1961)..... 64
FIGURE 73. SST ANOMALY FOR THE NORTH ATLANTIC OCEAN..... 66
FIGURE 74. SST ANOMALY AND NUMBER OF SS 3, 4 AND 5 CYCLONES PER YEAR IN THE NORTH ATLANTIC OCEAN. 66
FIGURE 75. STRONG WINDS HAZARD MAP FOR 25 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN CONSIDERING CLIMATE CHANGE. 67
FIGURE 76. STRONG WINDS HAZARD MAP FOR 50 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN CONSIDERING CLIMATE CHANGE. 68
FIGURE 77. STRONG WINDS HAZARD MAP FOR 100 YEARS RETURN PERIOD, FOR THE NORTH ATLANTIC OCEAN CONSIDERING CLIMATE CHANGE 68

FIGURE 78. FLOOD MAPS FOR THAILAND FOR 25 (LEFT) AND 1000 (RIGHT) YEARS. SCALE IS WATER DEPTH IN METERS. DELIVERED BY CIMA 70
FIGURE 79. FLOOD HAZARD CURVES FOR ARBITRARY LOCATIONS NEAR BANGKOK (LEFT) AND BOGOTÁ (RIGHT). 70
FIGURE 80. REGIONS WITH TSUNAMI CALCULATION 71
FIGURE 81. GLOBAL TSUNAMI HAZARD MAP DISPLAYING THE RUN-UP HEIGHT FOR A RETURN PERIOD OF 500 YEARS. TAKEN FROM LØVHOLT ET.AL. (2014). 72
FIGURE 82. VOLCANIC SOURCES AND SITE GRID BUFFERS DEFINED BY GEOSCIENCE AUSTRALIA. TAKEN FROM BEAR-COZIER ET.AL. 2014. 73
FIGURE 83. ESTIMATED MAXIMUM VOLCANIC ASH LOAD FOR THE ASIA-PACIFIC REGION AT THE 100 YEARS RETURN PERIOD. TAKEN FROM BEAR-CROZIER ET.AL, 2014. 74
FIGURE 84. ESTIMATED MAXIMUM VOLCANIC ASH LOAD FOR THE ASIA-PACIFIC REGION AT THE 100 YEARS RETURN PERIOD. TAKEN FROM BEAR-CROZIER ET.AL, 2014. 74
FIGURE 85. BUILT-UP PERCENTAGE FOR MEXICO CITY AND NEARBY AREAS AS PRESENTED IN BUREF. 77
FIGURE 86. EXAMPLE OF A 5 KM CELL (BLACK SQUARE) CONTAINING 1 KM CELLS OF BOTH CPX1 (RED) AND CPX3 (GREEN), IN DIFFERENT PROPORTIONS. 79
FIGURE 87. ECONOMIC ACTIVITY INTENSITY WITH RESOLUTION OF 1 KM (LEFT) AND ECONOMIC ACTIVITY INTENSITY INTEGRATED WITH THE REGIONAL GRD ONTO THE 5X5 GRID (RIGHT). EXAMPLE OF THE BARCELONA REGION 81
FIGURE 88. COEFFICIENT OF VARIATION BETWEEN THE NATIONAL VALUES OF GDP AND THOSE AT SUBNATIONAL LEVEL 82
FIGURE 89. EXPOSURE POINTS ON THE 5X5 KM GRID FOR MEXICO. 83
FIGURE 90. EXPOSURE POINTS ON THE 1X1 KM COASTAL GRID FOR MEXICO. 83
FIGURE 91. EXPOSURE POINTS ON THE 5X5 KM GRID FOR A COASTAL ZONE OF MEXICO. 84
FIGURE 92. EXPOSURE POINTS ON THE 1X1 KM GRID FOR A COASTAL ZONE OF MEXICO. 84
FIGURE 93. EXAMPLE OF A VULNERABILITY FUNCTION 86
FIGURE 94. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR SEISMIC HAZARD 90
FIGURE 95. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR TC WIND HAZARD 90
FIGURE 96. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR TC STORM SURGE HAZARD 91
FIGURE 97. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR FLOOD HAZARD 91
FIGURE 98. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR TSUNAMI HAZARD 92
FIGURE 99. SOURCE OF INFORMATION ON VULNERABILITY FUNCTIONS FOR VOLCANIC ASH FALL HAZARD 92
FIGURE 100. DISTRIBUTION OF THE NATIONAL EXPOSED VALUE BY COUNTRY 103
FIGURE 101. DISTRIBUTION OF THE FISCAL EXPOSED VALUE BY COUNTRY 103
FIGURE 102. PARTICIPATION OF THE FISCAL PORTFOLIO IN THE NATIONAL PORTFOLIO 104
FIGURE 103. DISTRIBUTION OF THE WORLD TOTAL EARTHQUAKE AAL BY REGION 104
FIGURE 104. COMPARISON OF EARTHQUAKE AALS BY REGION (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE REGION) 105
FIGURE 105. DISTRIBUTION OF THE WORLD TOTAL EARTHQUAKE AAL BY ECONOMY 105
FIGURE 106. COMPARISON OF EARTHQUAKE AALS BY ECONOMY (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE ECONOMY) 106
FIGURE 107. DISTRIBUTION OF THE WORLD TOTAL EARTHQUAKE AAL BETWEEN SIDS AND OTHER COUNTRIES 106
FIGURE 108. COMPARISON OF EARTHQUAKE AALS BETWEEN SIDS AND OTHER COUNTRIES (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE COUNTRIES AGGRUPATION) 107
FIGURE 109. DISTRIBUTION OF AAL FOR EARTHQUAKE BY COUNTRY 107
FIGURE 110. DISTRIBUTION OF AAL FOR EARTHQUAKE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 108
FIGURE 111. DISTRIBUTION OF PML (250 YEARS) FOR EARTHQUAKE BY COUNTRY 108
FIGURE 112. DISTRIBUTION OF PML (250 YEARS) FOR EARTHQUAKE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 109
FIGURE 113. DISTRIBUTION OF PML (500 YEARS) FOR EARTHQUAKE BY COUNTRY 109
FIGURE 114. DISTRIBUTION OF PML (500 YEARS) FOR EARTHQUAKE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 110
FIGURE 115. DISTRIBUTION OF PML (1000 YEARS) FOR EARTHQUAKE BY COUNTRY 110
FIGURE 116. DISTRIBUTION OF PML (1000 YEARS) FOR EARTHQUAKE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 111

FIGURE 117. DISTRIBUTION OF PML (1500 YEARS) FOR EARTHQUAKE BY COUNTRY 111
FIGURE 118. DISTRIBUTION OF PML (1500 YEARS) FOR EARTHQUAKE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 112
FIGURE 119. AAL/ GFCF (NATIONAL) BY COUNTRY (EARTHQUAKES) 112
FIGURE 120. AAL/ GGC (NATIONAL) BY COUNTRY (EARTHQUAKES) 113
FIGURE 121. AAL/GNE (NATIONAL) BY COUNTRY (EARTHQUAKES) 113
FIGURE 122. AAL/PC (NATIONAL) BY COUNTRY (EARTHQUAKES) 114
FIGURE 123. PML (250 YEARS)/ GDP (NATIONAL) BY COUNTRY (EARTHQUAKES) 114
FIGURE 124. PML (250 YEARS)/ GNI (NATIONAL) BY COUNTRY (EARTHQUAKES) 115
FIGURE 125. PML (250 YEARS)/ PC (NATIONAL) BY COUNTRY (EARTHQUAKES) 115
FIGURE 126. DISTRIBUTION OF THE WORLD TOTAL TC WIND AAL BY REGION 116
FIGURE 127. COMPARISON OF TC WIND AALS BY REGION (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE REGION) 116
FIGURE 128. DISTRIBUTION OF THE WORLD TOTAL TC WIND AAL BY ECONOMY 117
FIGURE 129. COMPARISON OF TC WIND AALS BY ECONOMY (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE ECONOMY) 117
FIGURE 130. DISTRIBUTION OF THE WORLD TOTAL TC WIND AAL BETWEEN SIDS AND OTHER COUNTRIES 118
FIGURE 131. COMPARISON OF TC WIND AALS BETWEEN SIDS AND OTHER COUNTRIES (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE COUNTRIES AGGRUPATION) 118
FIGURE 132. DISTRIBUTION OF AAL FOR TC WIND BY COUNTRY 119
FIGURE 133. DISTRIBUTION OF AAL FOR TC WIND RELATIVE TO THE EXPOSED VALUE BY COUNTRY 119
FIGURE 134. DISTRIBUTION OF PML (250 YEARS) FOR TC WIND BY COUNTRY 120
FIGURE 135. DISTRIBUTION OF PML (250 YEARS) FOR TC WIND RELATIVE TO THE EXPOSED VALUE BY COUNTRY 120
FIGURE 136. DISTRIBUTION OF PML (500 YEARS) FOR TC WIND BY COUNTRY 121
FIGURE 137. DISTRIBUTION OF PML (500 YEARS) FOR TC WIND RELATIVE TO THE EXPOSED VALUE BY COUNTRY 121
FIGURE 138. DISTRIBUTION OF PML (1000 YEARS) FOR TC WIND BY COUNTRY 122
FIGURE 139. DISTRIBUTION OF PML (1000 YEARS) FOR TC WIND RELATIVE TO THE EXPOSED VALUE BY COUNTRY 122
FIGURE 140. DISTRIBUTION OF PML (1500 YEARS) FOR TC WIND BY COUNTRY 123
FIGURE 141. DISTRIBUTION OF PML (1500 YEARS) FOR TC WIND RELATIVE TO THE EXPOSED VALUE BY COUNTRY 123
FIGURE 142. AAL/ GFCF (NATIONAL) BY COUNTRY (TC WIND) 124
FIGURE 143. AAL/ GGC (NATIONAL) BY COUNTRY (TC WIND) 124
FIGURE 144. AAL/GNE (NATIONAL) BY COUNTRY (TC WIND) 125
FIGURE 145. AAL/PC (NATIONAL) BY COUNTRY (TC WIND) 125
FIGURE 146. PML (250 YEARS)/ GDP (NATIONAL) BY COUNTRY (TC WIND) 126
FIGURE 147. PML (250 YEARS)/ GNI (NATIONAL) BY COUNTRY (TC WIND) 126
FIGURE 148. PML (250 YEARS)/ PC (NATIONAL) BY COUNTRY (TC WIND) 127
FIGURE 149. DISTRIBUTION OF THE WORLD TOTAL TC STORM SURGE AAL BY REGION 127
FIGURE 150. COMPARISON OF TC STORM SURGE AALS BY REGION (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE REGION) 128
FIGURE 151. DISTRIBUTION OF THE WORLD TOTAL TC STORM SURGE AAL BY ECONOMY 128
FIGURE 152. COMPARISON OF TC STORM SURGE AALS BY ECONOMY (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE ECONOMY) 129
FIGURE 153. DISTRIBUTION OF THE WORLD TOTAL TC STORM SURGE AAL BETWEEN SIDS AND OTHER COUNTRIES 129
FIGURE 154. COMPARISON OF TC STORM SURGE AALS BETWEEN SIDS AND OTHER COUNTRIES (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE COUNTRIES AGGRUPATION) 130
FIGURE 155. DISTRIBUTION OF AAL FOR TC STORM SURGE BY COUNTRY 130
FIGURE 156. DISTRIBUTION OF AAL FOR TC STORM SURGE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 131
FIGURE 157. DISTRIBUTION OF PML (250 YEARS) FOR TC STORM SURGE BY COUNTRY 131
FIGURE 158. DISTRIBUTION OF PML (250 YEARS) FOR TC STORM SURGE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 132

FIGURE 159. DISTRIBUTION OF PML (500 YEARS) FOR TC STORM SURGE BY COUNTRY 132
FIGURE 160. DISTRIBUTION OF PML (500 YEARS) FOR TC STORM SURGE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 133
FIGURE 161. DISTRIBUTION OF PML (1000 YEARS) FOR TC STORM SURGE BY COUNTRY 133
FIGURE 162. DISTRIBUTION OF PML (1000 YEARS) FOR TC STORM SURGE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 134
FIGURE 163. DISTRIBUTION OF PML (1500 YEARS) FOR TC STORM SURGE BY COUNTRY 134
FIGURE 164. DISTRIBUTION OF PML (1500 YEARS) FOR TC STORM SURGE RELATIVE TO THE EXPOSED VALUE BY COUNTRY 135
FIGURE 165. AAL/ GFCF (NATIONAL) BY COUNTRY (TC STORM SURGE) 135
FIGURE 166. AAL/ GGC (NATIONAL) BY COUNTRY (TC STORM SURGE) 136
FIGURE 167. AAL/GNE (NATIONAL) BY COUNTRY (TC STORM SURGE) 136
FIGURE 168. AAL/PC (NATIONAL) BY COUNTRY (TC STORM SURGE) 137
FIGURE 169. PML (250 YEARS)/ GDP (NATIONAL) BY COUNTRY (TC STORM SURGE) 137
FIGURE 170. PML (250 YEARS)/ GNI (NATIONAL) BY COUNTRY (TC STORM SURGE) 138
FIGURE 171. PML (250 YEARS)/ PC (NATIONAL) BY COUNTRY (TC STORM SURGE) 138
FIGURE 172. DISTRIBUTION OF THE WORLD TOTAL TSUNAMI AAL BY REGION 139
FIGURE 173. COMPARISON OF TSUNAMI AALS BY REGION (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE REGION) 139
FIGURE 174. DISTRIBUTION OF THE WORLD TOTAL TSUNAMI AAL BY ECONOMY 140
FIGURE 175. COMPARISON OF TSUNAMI AALS BY ECONOMY (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE ECONOMY) 140
FIGURE 176. DISTRIBUTION OF THE WORLD TOTAL TSUNAMI AAL BETWEEN SIDS AND OTHER COUNTRIES 141
FIGURE 177. COMPARISON OF TSUNAMI AALS BETWEEN SIDS AND OTHER COUNTRIES (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE COUNTRIES AGGRUPATION) 141
FIGURE 178. DISTRIBUTION OF AAL FOR TSUNAMI BY COUNTRY 142
FIGURE 179. DISTRIBUTION OF AAL FOR TSUNAMI RELATIVE TO THE EXPOSED VALUE BY COUNTRY 142
FIGURE 180. DISTRIBUTION OF PML (250 YEARS) FOR TSUNAMI BY COUNTRY 143
FIGURE 181. DISTRIBUTION OF PML (250 YEARS) FOR TSUNAMI RELATIVE TO THE EXPOSED VALUE BY COUNTRY 143
FIGURE 182. DISTRIBUTION OF PML (500 YEARS) FOR TSUNAMI BY COUNTRY 144
FIGURE 183. DISTRIBUTION OF PML (500 YEARS) FOR TSUNAMI RELATIVE TO THE EXPOSED VALUE BY COUNTRY 144
FIGURE 184. DISTRIBUTION OF PML (1000 YEARS) FOR TSUNAMI BY COUNTRY 145
FIGURE 185. DISTRIBUTION OF PML (1000 YEARS) FOR TSUNAMI RELATIVE TO THE EXPOSED VALUE BY COUNTRY 145
FIGURE 186. DISTRIBUTION OF PML (1500 YEARS) FOR TSUNAMI BY COUNTRY 146
FIGURE 187. DISTRIBUTION OF PML (1500 YEARS) FOR TSUNAMI RELATIVE TO THE EXPOSED VALUE BY COUNTRY 146
FIGURE 188. AAL/ GFCF (NATIONAL) BY COUNTRY (TSUNAMI) 147
FIGURE 189. AAL/ GGC (NATIONAL) BY COUNTRY (TSUNAMI) 147
FIGURE 190. AAL/GNE (NATIONAL) BY COUNTRY (TSUNAMI) 148
FIGURE 191. AAL/PC (NATIONAL) BY COUNTRY (TSUNAMI) 148
FIGURE 192. PML (250 YEARS)/ GDP (NATIONAL) BY COUNTRY (TSUNAMI) 149
FIGURE 193. PML (250 YEARS)/ GNI (NATIONAL) BY COUNTRY (TSUNAMI) 149
FIGURE 194. PML (250 YEARS)/ PC (NATIONAL) BY COUNTRY (TSUNAMI) 150
FIGURE 195. DISTRIBUTION OF THE WORLD TOTAL FLOOD AAL BY REGION 150
FIGURE 196. COMPARISON OF FLOOD AALS BY REGION (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE REGION) 151
FIGURE 197. DISTRIBUTION OF THE WORLD TOTAL FLOOD AAL BY ECONOMY 151
FIGURE 198. COMPARISON OF FLOOD AALS BY ECONOMY (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE ECONOMY) 152
FIGURE 199. DISTRIBUTION OF THE WORLD TOTAL FLOOD AAL BETWEEN SIDS AND OTHER COUNTRIES 152
FIGURE 200. COMPARISON OF FLOOD AALS BETWEEN SIDS AND OTHER COUNTRIES (PRESENTED AS RELATIVE TO THE TOTAL EXPOSED VALUE OF THE COUNTRIES AGGRUPATION) 153
FIGURE 201. DISTRIBUTION OF AAL FOR FLOOD BY COUNTRY 153
FIGURE 202. DISTRIBUTION OF AAL FOR FLOOD RELATIVE TO THE EXPOSED VALUE BY COUNTRY 154

FIGURE 203. AAL/ GFCF (NATIONAL) BY COUNTRY (FLOOD) 154
FIGURE 204. AAL/ GGC (NATIONAL) BY COUNTRY (FLOOD) 155
FIGURE 205. AAL/GNE (NATIONAL) BY COUNTRY (FLOOD) 155
FIGURE 206. AAL/PC (NATIONAL) BY COUNTRY (FLOOD) 156
FIGURE 207. DISTRIBUTION OF AAL FOR VOLCANIC ASH FALL BY COUNTRY 156
FIGURE 208. DISTRIBUTION OF AAL FOR VOLCANIC ASH FALL RELATIVE TO THE EXPOSED VALUE BY COUNTRY 157
FIGURE 209. AAL/ GFCF (NATIONAL) BY COUNTRY (VOLCANIC ASH FALL) 157
FIGURE 210. AAL/ GGC (NATIONAL) BY COUNTRY (VOLCANIC ASH FALL) 158
FIGURE 211. AAL/GNE (NATIONAL) BY COUNTRY (VOLCANIC ASH FALL) 158
FIGURE 212. AAL/PC (NATIONAL) BY COUNTRY (VOLCANIC ASH FALL) 159
FIGURE 213. COMPARISON OF TOTAL AALS BY REGION, NORMALIZED BY THE GROSS FIXED CAPITAL FORMATION 159
FIGURE 214. COMPARISON OF TOTAL AALS BY ECONOMY, NORMALIZED BY THE GROSS FIXED CAPITAL FORMATION 160
FIGURE 215. COMPARISON OF TOTAL AALS BY REGION, NORMALIZED BY THE SOCIAL EXPENDITURE 160
FIGURE 216. COMPARISON OF TOTAL AALS BY ECONOMY, NORMALIZED BY THE SOCIAL EXPENDITURE 161
FIGURE 217. COMPARISON OF TOTAL AALS BY REGION, NORMALIZED BY THE TOTAL RESERVES 161
FIGURE 218. COMPARISON OF TOTAL AALS BY ECONOMY, NORMALIZED BY THE TOTAL RESERVES 162
FIGURE 219. COMPARISON OF TOTAL AALS BY REGION, NORMALIZED BY THE GROSS NATIONAL SAVINGS 162
FIGURE 220. COMPARISON OF TOTAL AALS BY ECONOMY, NORMALIZED BY THE GROSS NATIONAL SAVINGS 163
FIGURE 221. DISTRIBUTION OF THE DISASTER RISK SOCIAL IMPLICATIONS SUB-INDEX (DRSI) BY COUNTRY 163
FIGURE 222. DISTRIBUTION OF THE DISASTER RISK GROWTH & FINANCIAL IMPLICATIONS SUB-INDEX (DRGI) BY COUNTRY 164
FIGURE 223. DISTRIBUTION OF THE DISASTER RISK ECONOMIC IMPLICATIONS SUB-INDEX (DREI) BY COUNTRY 164
FIGURE 224. DISTRIBUTION OF THE DISASTER RISK DEVELOPMENT IMPLICATIONS INDEX (DRSI) BY COUNTRY 165
FIGURE 225. COMPARISON OF THE AAL WITH AND WITHOUT CLIMATE CHANGE FOR ALL COUNTRIES IN THE CARIBBEAN 166
FIGURE 226. COMPARISON OF THE AAL WITH AND WITHOUT CLIMATE CHANGE FOR ALL COUNTRIES IN THE CARIBBEAN (RELATIVE TO THE EXPOSED VALUE OF THE COUNTRIES) 166
FIGURE 227. RATIO OF THE AAL COMPUTED WITH CLIMATE CHANGE AND THE AAL COMPUTED WITHOUT. 167
FIGURE 228. COMPARISON OF THE PML CURVES FOR THE COUNTRIES IN THE CARIBBEAN REGION. 168
FIGURE 229. SEISMIC HAZARD MAP OF COLOMBIA. PGA, 1000 YEARS – CM/S^2 (FROM AIS, 2010) 176
FIGURE 230. SEISMIC HAZARD MAP CONSIDERING SITE EFFECTS FOR MEDELLÍN. PGA, 475 YEARS (G) 178
FIGURE 231. BUILDING CLASS DISTRIBUTION FOR MEDELLÍN 180
FIGURE 232. MAIN USE DISTRIBUTION FOR MEDELLÍN 181
FIGURE 233. VULNERABILITY FUNCTION FOR UNREINFORCED MASONRY DWELLINGS 182
FIGURE 234. EARTHQUAKE LOSS EXCEEDANCE CURVE FOR MEDELLÍN 183
FIGURE 235. RELATIVE (‰) AAL LOSS DISTRIBUTION BY DWELLING IN DOWNTOWN MEDELLÍN (FROM SALGADO ET AL., 2014A) 185
FIGURE 236. INJURIES ESTIMATION BY COUNTY 187
FIGURE 237. DEATHS ESTIMATION BY COUNTY 188
FIGURE 238. URBAN SEISMIC RISK INDEX OF MEDELLÍN AT COUNTY LEVEL (FROM SALGADO ET AL., 2014B) 190
FIGURE 239. SEISMIC HAZARD MAP OF SPAIN. PGA, 475 YEARS (CM/S^2) 192
FIGURE 240. HOMOGENEOUS SOIL ZONE AREAS FOR BARCELONA (FROM CID ET AL., 2001) 194
FIGURE 241. BUILDING CLASS DISTRIBUTION FOR BARCELONA 195
FIGURE 242. REPLACEMENT VALUE BY DWELLING IN BARCELONA 196
FIGURE 243. VULNERABILITY FUNCTION FOR UNREINFORCED MASONRY DWELLINGS 197
FIGURE 244. EARTHQUAKE PML PLOT FOR BARCELONA 198
FIGURE 245. RELATIVE (‰) AAL LOSS DISTRIBUTION BY DWELLING IN DOWNTOWN BARCELONA (FROM MARULANDA ET AL., 2013) 200
FIGURE 246. URBAN SEISMIC RISK INDEX OF BARCELONA AT DISTRICT LEVEL (FROM MARULANDA ET AL., 2013) 202
FIGURE 247. HOMOGENEOUS SOIL ZONES FOR BOGOTÁ (FROM CEDERI, 2006) 205
FIGURE 248. SOFT SOIL SPECTRAL TRANSFER FUNCTIONS 206

FIGURE 249. SEISMIC HAZARD MAP CONSIDERING SITE EFFECTS FOR BOGOTÁ. PGA, 475 YEARS (G)..... 207
FIGURE 250. BUILDING CLASS DISTRIBUTION FOR BOGOTÁ..... 209
FIGURE 251. NUMBER OF STORIES DISTRIBUTION FOR BOGOTÁ..... 210
FIGURE 252. VULNERABILITY FUNCTION FOR UNREINFORCED MASONRY DWELLINGS..... 211
FIGURE 253. EARTHQUAKE LOSS EXCEEDANCE CURVES FOR BOGOTÁ..... 212
FIGURE 254. RELATIVE (‰) AAL LOSS DISTRIBUTION BY BLOCK IN BOGOTÁ WITH AIS-2010 MODEL (FROM ZULOAGA, 2011)..... 214
FIGURE 255. RELATIVE (‰) AAL LOSS DISTRIBUTION BY BLOCK IN BOGOTÁ WITH CALDAS TEAR MODEL (FROM ZULOAGA, 2011)..... 215
FIGURE 256. GEOGRAPHICAL LOCATION OF BELIZE CITY..... 216
FIGURE 257. STRONG WIND EXCEEDANCE RATES FOR BELIZE CITY..... 218
FIGURE 258. STORM SURGE EXCEEDANCE RATES FOR BELIZE CITY..... 219
FIGURE 259. BUILDING CLASS DISTRIBUTION FOR BELIZE CITY..... 220
FIGURE 260. MAIN USE DISTRIBUTION FOR BELIZE CITY..... 221
FIGURE 261. WIND VULNERABILITY FUNCTION FOR WOODEN DWELLINGS..... 222
FIGURE 262. FLOOD VULNERABILITY FUNCTION FOR REINFORCED CONCRETE FRAMED DWELLINGS..... 222
FIGURE 263. PML PLOT FOR TROPICAL CYCLONES (WIND AND STORM SURGE) FOR BELIZE CITY..... 223
FIGURE 264. TROPICAL CYCLONE RELATIVE AAL BY DWELLING IN BELIZE CITY DUE TO STRONG WINDS..... 225
FIGURE 265. TROPICAL CYCLONE RELATIVE AAL BY DWELLING IN BELIZE CITY DUE TO STORM SURGE..... 226
FIGURE 266. PYROCLASTIC FLOWS HAZARD MAP FOR GALERAS VOLCANO..... 228
FIGURE 267. BUILDING CONDITION..... 229
FIGURE 268. ROOF TYPE..... 230
FIGURE 269. VULNERABILITY FUNCTION FOR LIGHT ROOF STRUCTURES..... 231
FIGURE 270. RELATIVE (‰) AAL LOSS DISTRIBUTION BY ELEMENT IN THE GALERAS VOLCANO SURROUNDING BUILDINGS..... 232
FIGURE 271. PGA (CM/S2) FOR THE SELECTED SCENARIO..... 234
FIGURE 272. NUMBER OF STORIES DISTRIBUTION FOR LORCA..... 236
FIGURE 273. BUILDING CLASS DISTRIBUTION FOR LORCA..... 237
FIGURE 274. SEISMIC VULNERABILITY FUNCTIONS USED IN LORCA..... 239
FIGURE 275. MDR DISTRIBUTION IN LORCA'S HISTORICAL CENTER..... 241
FIGURE 276. SEISMIC HAZARD MAP FOR MANIZALES; RT: 975 YEARS, PGA (CM/S^2)..... 244
FIGURE 277. FUNDAMENTAL VIBRATION PERIOD OF THE SOIL ZONES IN MANIZALES (SEC)..... 245
FIGURE 278. STOCHASTIC RAINFALL SCENARIOS (MM)..... 246
FIGURE 279. RAINFALL HAZARD MAP. TR: 75 YEARS; 1 DAY (MM)..... 246
FIGURE 280. VOLCANIC ASH THICKNESS HAZARD MAP (M)..... 247
FIGURE 281. EXPECTED LOSSES DUE TO LANDSLIDES IN MANIZALES..... 249
FIGURE 282. LANDSLIDE IMPLICIT RISK LEVEL FOR MANIZALES..... 250
FIGURE 283. MAIN USE OF THE BUILDING STOCK OF MANIZALES..... 252
FIGURE 284. NUMBER OF STORIES CATEGORY FOR THE BUILDING STOCK OF MANIZALES..... 253
FIGURE 285. PIPE MATERIAL FOR THE MAIN WATER NETWORK OF MANIZALES..... 255
FIGURE 286. VULNERABILITY FUNCTION FOR 5 STORIES REINFORCE CONCRETE BUILDINGS..... 256
FIGURE 287. SEISMIC VULNERABILITY FUNCTION FOR CONCRETE PIPELINES..... 257
FIGURE 288. EARTHQUAKE LOSS EXCEEDANCE CURVES FOR MANIZALES..... 257
FIGURE 289. RELATIVE (‰) AAL LOSS DISTRIBUTION FOR THE BUILDING STOCK OF MANIZALES..... 259
FIGURE 290. AVERAGE ANNUAL REPAIR RATE BY KILOMETER DISTRIBUTION FOR THE SEWAGE NETWORK IN DOWNTOWN MANIZALES..... 260
FIGURE 291. SUBSIDIZED INSURANCE FINANCIAL SCHEME FOR MANIZALES (FROM MARULANDA ET AL. 2014)..... 261

List of Tables

TABLE 1. NUMBER OF EVENTS WITH MAGNITUDE EQUAL OR HIGHER THAN THE INDICATED 15
TABLE 2. NUMBER OF EVENTS BY DEPTH RANGE 21
TABLE 3. TERRAIN CLASSES AND RANGES FOR PARAMETERS Z0 AND CD PROPOSED BY WMO 31
TABLE 4. CUT-OFF YEAR FOR EACH BASIN. 38
TABLE 5. ANNUAL OCCURRENCE FREQUENCY OF THE CYCLONES FOR EACH BASIN. 39
TABLE 6. AGGREGATED DATA ON A 5 KM CELL. 80
TABLE 7. CONSTRUCTION CLASSES. 86
TABLE 8. GEOSCIENCE AUSTRALIA'S VULNERABILITY SCOPE BY COUNTRY AND HAZARD 93
TABLE 9. SUMMARY OF PHYSICAL SEISMIC RISK RESULTS FOR MEDELLÍN 183
TABLE 10. USRI RESULTS BY COUNTY FOR MEDELLÍN 191
TABLE 11. SUMMARY OF PHYSICAL SEISMIC RISK RESULTS FOR BARCELONA 198
TABLE 12. AVERAGE ANNUAL DEATHS BY EARTHQUAKES IN BARCELONA 201
TABLE 13. AVERAGE ANNUAL INJURED BY EARTHQUAKES IN BARCELONA 201
TABLE 14. USRI RESULTS BY DISTRICT FOR BARCELONA 203
TABLE 15. SUMMARY AND COMPARISON OF PHYSICAL SEISMIC RISK RESULTS FOR BOGOTÁ 212
TABLE 16. SUMMARY OF TROPICAL CYCLONIC RISK IN BELIZE CITY 224
TABLE 17. SUMMARY OF EXPOSED ASSETS STATISTICS FOR LORCA, SPAIN 238
TABLE 18. MDR BY BUILDING CLASS IN LORCA 240
TABLE 19. DAMAGE CATEGORIES STATISTICS FROM THE SIMULATED SCENARIO 240
TABLE 20. SUMMARY OF PHYSICAL SEISMIC RISK RESULTS FOR MANIZALES 258

Acknowledgements

The Global Risk Model is the result of a closed collaboration between the United Nations Office for Disaster Risk Reduction – UNISDR (Geneva), the consulting firm INGENIAR Ltda. (Bogotá), the International Center for Numerical Methods in Engineering – CIMNE (Barcelona), the United Nations Environment Programme / Global Resource Information Database – UNEP-GRID (Geneva), Geoscience Australia (Canberra), the World Agency on Planetary Monitoring and Earthquake Risk Reduction – WAPMERR (Geneva), the CIMA Foundation (Savona), the Norwegian Geotechnical Institute – NGI (Oslo) and the Global Earthquake Model – GEM (Pavia).

This report was prepared under project direction of Omar-Dario Cardona, coordination of Gabriel Bernal and supervision of Alex Barbat and Martha Liliana Carreño. Miguel Mora automatized the parallel risk calculations. Special contributions for this report have been made by Claudia Villegas, Daniela Zuloaga, Diana Gonzalez and Juan Camilo Olaya. Mario Salgado, Mario Ordaz and Shri Krishna Sing calculated the global earthquake hazard. Gabriel Bernal calculated wind and storm surge for all countries exposed to this hazards. The authors express their gratitude to Mabel-Cristina Marulanda, Julio Serge and Sahar Safaie, for their valuable feedback and coordination, and to Andrew Maskrey from UNISDR for his permanent technical support.

Foreword

Risk management is all about making effective decisions based on prospective forecasts of uncertain consequences. However, stakeholders usually do not have access to risk models, to prospective forecasts and even less to a measure of their uncertainty, then decisions are not well informed and their effectiveness is left to chance. It is generally recognized that looking into the past is not enough to make appropriate decisions, not only because of the limited information regarding catastrophic events occurred in the past but also because, in most cases, the worst events are still yet to occur. Therefore, usually it is not possible to forecast the future consequences to be caused by extreme events based on the information available for the historically ones.

When looking into the future to assess the possible consequences of upcoming events, all kinds of uncertainties appear to blur the prospective view of the stakeholders, so that no reasonable decisions can be made under such scenario. This is the reason why risk assessment should be addressed through the use of analytical probabilistic models that incorporate the related uncertainties in a rational manner, and provide uncertainty-sensitive consequence metrics. Only by accomplishing this will the stakeholder be empowered to anticipate the occurrence of catastrophic events and their feasible consequences, while considering the uncertainties associated with estimating the severity and frequency at that they will occur.

The Global Risk Model (GRM), which was initially developed for the global risk assessment in GAR13 and is now updated for GAR15, incorporates the relevant components of catastrophe risk assessment: the exposed elements or assets, the level of hazard affecting them and their vulnerability to such hazard. The main outcome of the GRM is a national Loss Exceedance Curve (LEC) for each country, which is a metric that represents the annual frequency at that a determined economic loss may be exceeded in the future. In general, it is highly recognized that this curve or the curve deriving from it (the curve of maximum probable losses) is the most robust technique for catastrophe risk assessment.

The hazard associated with a natural phenomenon is measured using its frequency of occurrence and its severity, where the latter is characterized through a parameter of intensity computed at specific geographical locations. The hazard assessment is thus based on the historical frequency of occurrence of the phenomenon and its various degrees of intensity. Once the parameters that characterize the occurrence of the phenomenon are defined from a physical point of view, it is necessary to generate a set of stochastic events – through the simulation of a series of random events – which, analytically speaking, define all possible ways in which said phenomenon may manifest itself in the region under analysis, in terms of its frequency and severity.

GAR13 centered in evaluating losses due to earthquakes and tropical cyclones winds. For GAR15, other hazards were incorporated, particularly tropical cyclones storm surge, tsunami, floods and volcanic ash fall. The latest was obtained only for some countries in the Asia-Pacific region, while the other are defined globally. This is a major improvement on the GRM of this version of GAR.

The damage susceptibility of every asset exposed to the considered natural hazards is modeled through vulnerability functions, which characterize the behavior of elements belonging to a specific construction class during the occurrence of a hazard event. Vulnerability functions define the probability distribution of the loss as a function of the intensity produced for a specific scenario, i.e., conditional to the occurrence of a specific intensity level at the location of the exposed element. The loss is generally understood as the loss relative to the replacement value of the exposed element.

In general, an exposed element is any object that is susceptible to suffer damage or loss because of the occurrence of a hazardous event. Once all of the exposed elements are identified in a territory, it is necessary to assign each of them at least an economic replacement value and a definition of its vulnerability by identifying a construction class.

The exposed elements have an implicit component associated with loss liability. If, for example, the exposed elements in a risk assessment correspond to public health buildings, then the losses caused by the occurrence of hazardous phenomena will be responsibility of the corresponding public health administration institution. If the exposed elements, for example, are households of low socioeconomic income, then we are talking about fiscal responsibility of the State, given the inability of the owners of the private homes to cope with the disaster situation. It is therefore important to determine liability for losses directly in the definition of the exposed elements. For this reason, the exposed elements are herein grouped into portfolios.

When looking at the fiscal responsibility portfolio of a country, which comprises the public health and education assets, the government infrastructure and the property of the low-income private householders, the losses caused on it by disasters are implicit contingent liabilities that increase the fiscal vulnerability of countries. In other words, a future disaster is an uncertain, hidden public debt that becomes a certain liability when the event occurs. This “contingent debt” that represents the potential losses has to be added to the current, explicit debt. If the total value is greater than the present discounted value of future primary surpluses of the country, there is an imbalance in the equation of the country's fiscal sustainability. Governments should therefore recognize that future disasters need to be considered in the country’s balance sheets, as they can generate important macroeconomic imbalances.

This is why future disasters have to be considered a “sovereign risk” for a country. They, in fact, constitute a risk that has to be handled by all the society, in the similar way that the society complies with the constitution and the legislation. To measure this collective responsibility, it is necessary to employ loss assessment models that embed the intrinsic uncertainties of the phenomenon, as well as allow taking decisions considering the aleatory nature of such losses. It is necessary to produce a quantitative measure of this losses, because “what it is not quantified cannot be managed”. The best way of assessing these potential losses is by using probabilistic models, as the GRM, which allow the governments to measure disaster risk in the context of the fiscal sustainability. In this way, it would be possible to identify optimal strategies for financial

protections in terms of transferring or retaining this sovereign risk. In particular, this will allow implementing actions to reduce the losses, minimizing the possibility of insolvency as well as the effects on the development and the quality of life of the population.

For GAR15, disaster risk for 216 countries was evaluated using the GRM to obtain actuarial risk metrics of loss associated with the occurrence of the selected natural hazards. Metrics such as the Average Annual Loss (AAL) and the Probable Maximum Loss (PML) curve were calculated for the 216 countries, by directly deriving them from the LEC of each country. The AAL is the most robust measure of risk, being a compact probabilistic metric that is relatively insensitive to uncertainty. This metric is calculated through the sum of the product of the expected losses from each event with the annual frequency of occurrence of the same event, assuming a stationary and exhaustive process of events (i.e. all the possible events are considered). Furthermore, the annual average loss can be expressed as a fraction of the exposed value. This versatile metric is known in the insurance industry as the "pure premium", and can be used to express the risk for a building, for a portfolio of buildings, for a city or for a country. It can be obtained for a single or for multiple hazards, allowing to consider at the same time the aggregated risk from different hazards. At the same time, the PML is a compacted measure related to the loss exceedance annual rate and can be considered as a complementary measure to the AAL, as benchmark for the amount of less frequent losses (i.e. with higher return periods) that can be exceeded in the future.

From the AAL, Disaster Risk Development Implications index (DRDI) was calculated. This index is useful to provide a ranking of the countries based on the ratio of the AAL regarding a set of relevant economic, financial, and social development variables. This index attempts to reveal the load of the AAL to the social expenditure (social spending), the capital formation (domestic investment) and reserves (financial capacity), and the produced capital or capital stock (assets at risk) and savings (treasury) of each country. It would reflect, in adverse conditions, growth and social constraints for the country as results of potential future disasters.

The methodologies to assess hazard and risk, to define exposure and vulnerability, which compose the GRM, as well as the risk outcomes, metrics and indicators are a step towards closing the breach between the governments as users of this information, and the risk modelling industry that holds the know-how of this type of evaluations. If there is to be effective risk management in the next decade, the appropriated tools and information must be at-hand of the stakeholders at the higher spheres of the public administration, so it can progressively permeate the subsequent levels. GRM provides the global view on disaster risk, as a seed that in time should derive in detailed local risk evaluations in all countries. Comprehensive risk knowledge is the basis for effective risk management.

A Continuous Effort

This report should be read along with the one for GAR13. The GRM was conceived as a long-term initiative, to kickoff for GAR13, but to be in constant evolution and enrichment, so that by the

launch of GAR15 it had a higher scope and robustness. Thus the development of the GRM really started after GAR11, in which an approximation to fully probabilistic disaster risk assessment was achieved for Colombia, Mexico and Nepal. In any case, taking it globally was indeed a very ambitious goal. The construction of the GRM is the result of the collaborative work between several individuals and institutions. Such aggrupation of specialists, through an international network of collaborative efforts, became a huge modeling team, working together for over 5 years to give life to this milestone on disaster risk assessment.

Onto the future, the approach should be to take a closer look at the particular situation of each country, which means models refinement, data gathering and recalculation of the risk metrics for higher resolution levels. On one hand, the aim of this study was to produce a risk assessment at global level, which required a series of simplifications and assumptions coherent with the scale of the analysis. On the other hand, this report wants to underline the necessity for countries to undertake risk assessment with better resolution and details at national and sub-national level, using consistent information appropriated with the scale of analysis, but with the same probabilistic approach and method presented here. In other words, it is possible to use the same "arithmetic" at sub-national and local level. In fact, this approach can be considered to be the "correct" for the catastrophe risk assessment caused by one or more hazards.

The risk assessment carried out in this study has been done with an open model that can be used by every government or user: the CAPRA (Comprehensive Approach to Probabilistic Risk Assessment) platform. This platform is open access, open source and has a modular architecture, and can be used free of cost. The development of this platform has been supported by the World Bank, the Inter-American Development Bank and the UNISDR. The CAPRA model has been developed by members of the technical team of this consultancy group.

Scope and Constraints at Global Level

A risk assessment at global level can only have a "coarse grain" definition. This means that it has to be done consistently in each phase without excessive details or precision. A high level of precision would be in fact irrelevant for the scale of the analysis. It would not be possible to produce a high resolution global risk assessment, due to the lack of detailed information for all the countries, and because of the time and money that it would require. A global level analysis allows obtaining results that provide an idea of the magnitude of disaster risk at a national scale. It also allows producing general classifications and rankings between the countries based on their risk, using relative indicators. These indicators are particularly useful to identify disaster risk at a global level and for comparative purpose, in order to highlight the need of carrying out measures for risk reduction, finance protection and disaster preparedness. Also, of encouraging countries to undertake risk assessment with improved details at sub-national and urban level, using the same probabilistic approach.

It is important to notice that the resolution and precision are not only associated with the hazard assessment, but also to the representation of the exposure and the characterization of the vulnerability. For this reason, it is necessary to have consistency and compatibility on the level of rigor and details in the different phases of the risk assessment. The choice of the resolution is related to the type of decisions that the risk assessment will inform. For this study, the simplifications and assumptions, appropriate for this work at global level, meant that the precision was sacrificed. It was nevertheless obtained a "common operating picture" of the risk for the countries that allows a comparative, initial view of their economic dimension and capability to recover from disasters. In other words, this analysis provides information on the economic resilience of the countries, in terms of indicators of the countries' economic flow.

As a way to easily and assertively communicate disaster risk to the countries, summarized catastrophe risk profiles were developed and are delivered in parallel to this background paper. These profiles intend to provide a glimpse into the disaster risk situation of any country. The *World Summarized Catastrophe Risk Profiles* come to be a fundamental reference for the governments to know the order of magnitude of their contingent liabilities, to know their situation relative to other countries of their region, and to keep in mind the implications that disaster risk has on their development from the social, economic and financial growth perspectives.

The GRM can be nevertheless improved, especially on the data that could be used for an evaluation resulting in countries' risk profiles. The use of more detailed information is linked to the need of carrying out cost-benefit analyses on the implementation of disaster risk reduction measures. In other words, it is important to point out that the more the scale goes down into national and sub-national levels, the more detailed the analysis is required, even if the same methodological approach used here is applied. The probabilistic metrics can be used at all territorial scales, and the appropriate precision to be adopted for the study depends on the required scope and use of the results.

Organization of the Report

The report has been organized in 7 chapters. Chapter 1 presents the update on the global seismic hazard assessment by the incorporation of more recent information on seismicity and on ground motion prediction equations for different tectonic settlements. The seismic hazard world map, obtained from a smooth seismicity approach, is presented for several strong motion intensity measures. The differences between the results here presented and the ones obtained for GAR13 are discussed.

Chapter 2 comprises the tropical cyclone hazard model. As a result form the peer-review process undertaken by UNISDR for the hazard models included in GAR13, several comments and suggestions were given by experts at WMO in order to improve the model and make it more reliable for hazard assessment. This chapter presents the new adopted model for wind and storm surge modeling in GAR15. The used input data and the global hazard results are also presented. Climate

Change was incorporated by making use of future hurricane tracks simulations obtained by NCAR for the North Atlantic basin. Hazard and hypothetical risk using the present exposure were assessed considering Climate Change up to 2055.

Chapter 3 summarizes the hazard outcomes delivered by other partners, particularly floods (CIMA), tsunami (NGI) and volcanic ash fall (Geoscience Australia). Chapter 4 illustrates the main changes and improvements made by UNEP-GRID on the Global Exposure Database (GED). Chapter 5 presents the complete set of vulnerability functions used for risk assessment, as well as the global vulnerability regionalization defined. In such regionalization, Geoscience Australia played an important role in defining vulnerability functions of all hazards, for countries in the Asia-Pacific region. All the other vulnerability functions were defined by this consultancy group by taking inputs from different regional initiatives and projects such as RISK-EU in Europe, HAZUS in North America and CAPRA in Latin America and the Caribbean.

Chapter 6 presents in detail the methodological approach for probabilistic risk assessment, and the risk assessment results in terms of risk metrics and indicators. Such results are presented separated by hazard. In addition, the DRDI index is presented for all countries in the world. Chapter 7 moves forward into the illustration of what has been stressed in this introduction: the need to go from "global to local". Several local study cases are presented for different cities around the world, where the same methodological approach is used to obtain risk metrics at a building-by-building basis. This chapter was included to provide a guide on the type of evaluation that can be done by using the probabilistic risk model on detailed cases. Finally, several annexes accompany the different topics in the report by extending particular subjects.

Omar-Dario Cardona
Bogotá, February 2015

1 Update on the Probabilistic Seismic Hazard Assessment

This background paper presents the probabilistic seismic hazard assessment methodology and results for the Global Risk Assessment of the UNISDR's Global Assessment Report on Disaster Risk Reduction 2015 (GAR15). An update on some of the inputs used for the assessment of GAR13 (CIMNE et al., 2012; Ordaz et al. 2014a) was performed in order to incorporate them in the subsequent probabilistic seismic risk analysis for this new version. This section of this background paper presents the changes, improvements and updates considered in this analysis. As will be explained in more detail in the following sections, the changes consist mainly on the update of the earthquake catalogue and the ground motion prediction equations (GMPE).

1.1 Purpose and Scope

The purpose of this study is to conduct a fully probabilistic seismic hazard assessment at global level to be used in the Global Risk Assessment GAR15, whose objective is to estimate risk levels at a world-wide scale. In order for the hazard assessment to be compatible with risk calculations, the results must be expressed in terms of a set of stochastic scenarios that represent possible events that could occur and generate damage and losses to the exposed infrastructure (see Annex 1). From these scenarios integrated uniform hazard maps for different spectral ordinates and return periods can be generated, which is a more conventional way of conveying seismic hazard. Given the scope of GAR15, a coarse-grain analysis approach for the hazard estimation has been selected (same as for the first version of this assessment, GAR13): generalized tectonic provinces were defined for the Globe, for which individual ground motion prediction equations (GMPEs) were defined according to the tectonic environment and probable maximum earthquake magnitudes, and a smoothed seismicity methodology was used to calculate seismicity parameters.

This section presents the modifications that have been made since the first version of GAR13 (CIMNE et al., 2012; Ordaz et al. 2014a), which relate only to the input data since the methodological approach for both the calculation and representation of the seismic hazard is exactly the same. This new seismic hazard assessment at global level should be understood as a continuation of that first work given that the purpose of the assessment is the same: to conduct a probabilistic risk assessment at global level intended to estimate the order of magnitude of potential losses.

For GAR13, risk results were obtained in terms of the Average Annual Loss and Probable Maximum Loss for a return period of 250 years (CIMNE et al., 2012; Cardona et al. 2014). For GAR15, aside from these two metrics the full loss exceedance curve, from where any return period for the PML can be chosen, has been obtained. The representation of the hazard through stochastic scenarios is what allows the computation of the loss exceedance curve, which makes it a mandatory requirement, as well as is the use of spectral accelerations as measures of intensity.

1.2 Methodological Approach

The methodological approach used to calculate seismic hazard in a fully probabilistic way is the same as the one followed in the previous assessment of GAR13. A detailed explanation can be found at CIMNE et al. (2012).

The main steps of the methodology followed to calculate the seismic hazard at global level with a probabilistic approach can be summarized as follows:

1) *Definition and characterization of tectonic regions:* based on geological and neo-tectonic information collected the Globe is divided into tectonic provinces. Each of these are then classified in one of 6 categories (explained below), and they are assigned a depth range and an earthquake maximum magnitude.
2) *Calculation of the seismicity parameters:* three different depth ranges are defined which represent shallow, intermediate and deep seismicity, and the Globe is divided into a grid in which seismicity is calculated at each node. Based on the seismic catalogue and using a smoothed seismicity methodology, seismicity parameters are calculated (based on statistical methods) for each node of the different grids that have been assigned at different depths in the analysis.
3) *Generation of a set of stochastic set of scenarios:* based on the above mentioned information, a set of feasible seismic events is generated through sampling of the seismicity parameters in each node. For each node, a set of scenarios is generated with different magnitudes, and whose probabilities of occurrence are obtained from specific magnitude recurrence curves for that point.
4) *Assignation of ground motion prediction equations:* tectonic environment compatible GMPEs are selected and assigned to each tectonic province based on the information collected, which includes previous studies on tectonic environment and the state of current knowledge of the relationships.
5) *Generation of hazard maps for representative events:* maps are generated with the spatial distribution of seismic intensities; since spectral ground motion prediction equations have been considered, hazard curves can be obtained for different spectral ordinates.

As can be seen from these steps, the methodology is mainly based on the use of instrumental seismicity to represent the hazard. The earthquake catalogue comprised of recorded earthquakes and the estimation of maximum magnitudes by general regions is what provides the input for the hazard calculations, while the smoothed seismicity approach is the tool used to perform the computations. Given that this is a large-scale hazard evaluation, this methodology is appropriate in that it provides a relatively simple but robust way of obtaining results in accordance to the scope of the GAR15 project.

1.3 Uncertainties and Limitations of the Study.

In any seismic hazard assessment there are numerous sources of uncertainty, which is why it is customary to use a fully probabilistic approach for these evaluations. The different uncertainties will be discussed next.

- Earthquake catalogue: there is uncertainty in the event parameters such as localization, time, depth and magnitude, given the different methods that exist and the method accuracy.
- Selection of GMPEs: GMPEs are experimentally based and thus contain inherent uncertainties regarding mathematical modeling, data collection and interpretation. Furthermore, the selection of one GMPE over another for a certain zone carries uncertainty regarding which represents better the tectonic regime.
- Assignation of maximum magnitudes: maximum magnitudes are estimated based on knowledge regarding regional tectonics, geology and seismicity, but it can be difficult to estimate it accurately given that in most cases the worst events have not occurred.
- Seismicity parameters: because the occurrence of future events is unknown it is assumed that it follows a Poisson process, which describes the seismicity in a probabilistic way.

Furthermore, given the scale and scope of the study it is worth acknowledging the limitations and appropriate usage of this study. Firstly, it is important to bear in mind that this is a coarse-grain analysis, and hence all input parameters and results are smoothed over large regions; this may cause generalizations that do not capture small scale particularities and thus the results should not be used to pin-point values as absolute results for specific locations. This is related to the objective of the study and subsequent risk analysis which is to rank countries with respect to risk conditions, and not to provide specific values for every point in the globe. In addition, the heavy reliance on instrumental seismicity is another limitation that must be kept in mind; this may limit the influence of additional factors such as localized faults or conditions that may not necessarily manifest themselves properly in the recorded events but that nonetheless could represent an increased seismic hazard. However, this again relates to the large-scale resolution of the analysis, where such specificities are outside the scope of the project.

1.4 CRISIS 2014

A new version of the seismic hazard module of the CAPRA Platform, CRISIS 2014 V1.2 (Ordaz et al., 2014b) has been developed. This new version uses the same calculation methodology as the previous versions, but the difference lies in a parallelized algorithm that accelerates the calculation process up to 3 times.

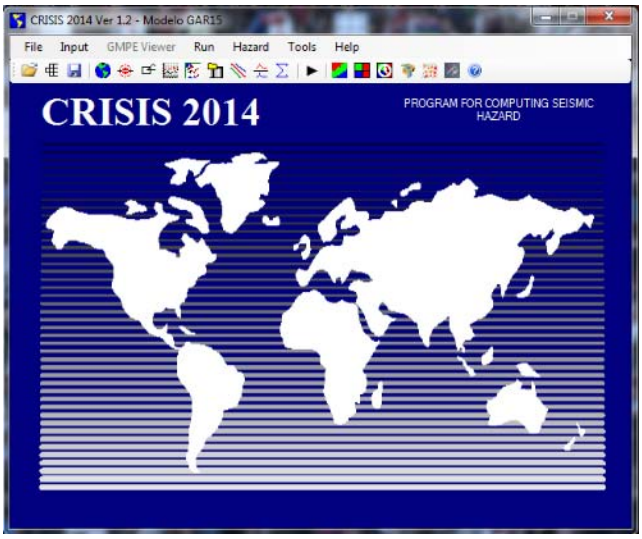


Figure 1. CRISIS 2014 V1.2

The representation of the hazard is again through the *.AME file, compatible with the CAPRA Platform, that accounts for a probabilistic representation, both in temporal and geographical dimensions, through a set of stochastic scenarios.

1.5 Information Used for the Analysis

This section presents the details of the input data used for the probabilistic seismic hazard assessment (PSHA) at global level for GAR15. The input data can be classified the following groups: seismic catalogue (from where the seismicity parameters are calculated), tectonic zoning in provinces, and the selection and assignment of GMPEs.

1.5.1 Seismic Catalogue

The seismic catalogue used in this assessment has been assembled using two sources: 1) The NEIC-USGS (2014) catalogue, as in GAR13, but now with an ending cut-off date of 31 December 2013, that is, approximately 21 more months of information; and 2) The ISC-GEM catalogue (Storchak et al., 2013).

The NEIC-USGS catalogue was used as a base using a threshold magnitude (M_0) of 4.5, as in GAR13, to which the ISC-GEM catalogue was added in the manner described next. Given that it is acknowledged that the parameters associated to the latter catalogue have a higher reliability, the events contained in this catalogue were compared to the ones in the NEIC-USGS (observing similarities in the reported dates and times) and were either replaced or updated considering the fact that the threshold magnitude for the ISC-GEM catalogue is 5.5 (one magnitude unit above the selected threshold) and the final cut-off date is 31 December 2009. Hence, if the event was already

included in the NEIC-USGS catalogue, the location (epicenter and depth) as well as the magnitude (Mw) reported was updated, and in the case that the event was not included in the NEIC-USGS catalogue, it was then added to it. A total of 13,352 events were either included or updated.

Given that a Poisson model is to be used in the analysis, foreshocks and aftershocks were removed from the base catalogue, and since the ISC-GEM contains only main shocks, the events that were added from this catalogue did not include foreshocks or aftershocks. Furthermore, for the merged catalogue a completeness verification procedure, using the methodology proposed by Tinti and Mulargia (1985), was followed. According to this methodology the accumulated number of events are plotted against time, and a year is identified from which point onward the rate of recorded events is constant. It was determined that the starting cut-off year for the selected threshold magnitude is 1973 as can be seen in Figure 2.

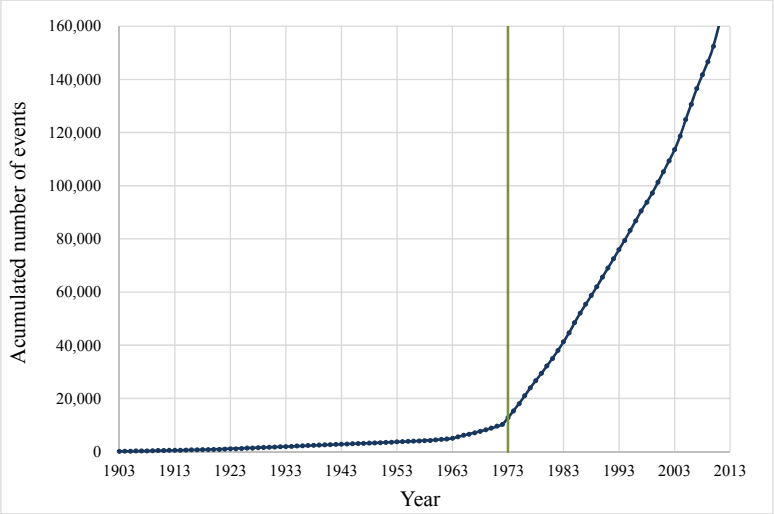


Figure 2. Completeness verification for the selected threshold magnitude

The total number of events included in the final catalogue after the above mentioned procedures is 162,516; compared to the catalogue used in GAR13, this new catalog includes 10,996 more recorded events. Each of the events has (at least) the following attributes:

- Date (day, month, year)
- Time (hour, minute, second)
- Longitude
- Latitude
- Depth
- Magnitude

Figure 3 to Figure 5 show the geographical distribution by magnitude and depth of the events included in the final catalogue, while Table 1 shows some of the relevant statistics of the final catalogue.

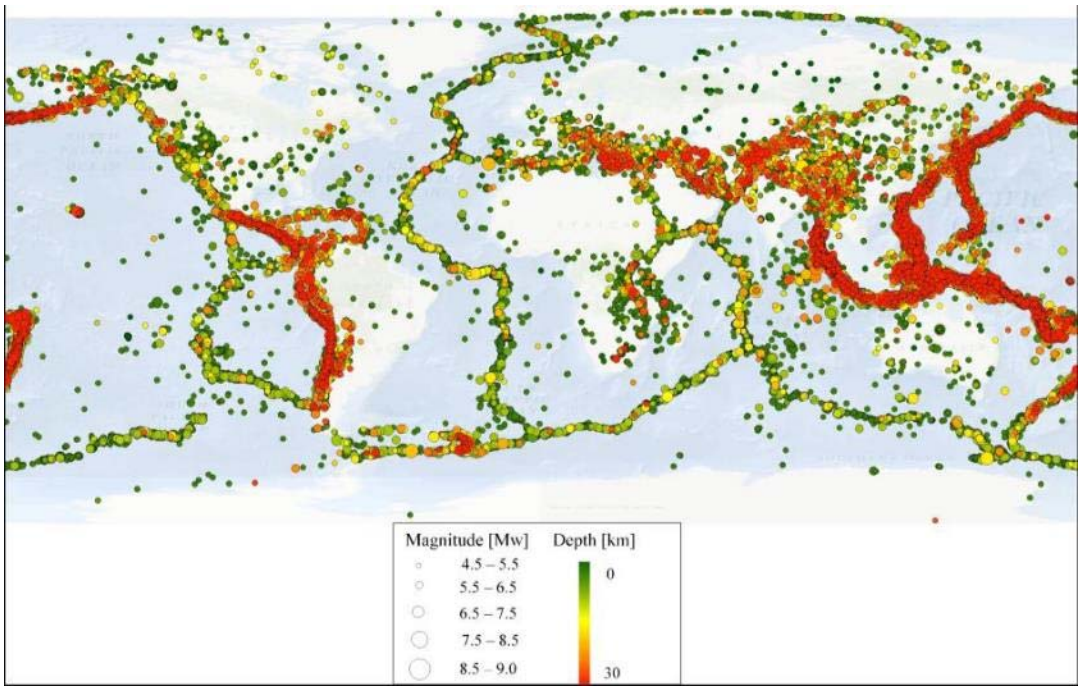


Figure 3. Events' epicenters (0-30km)

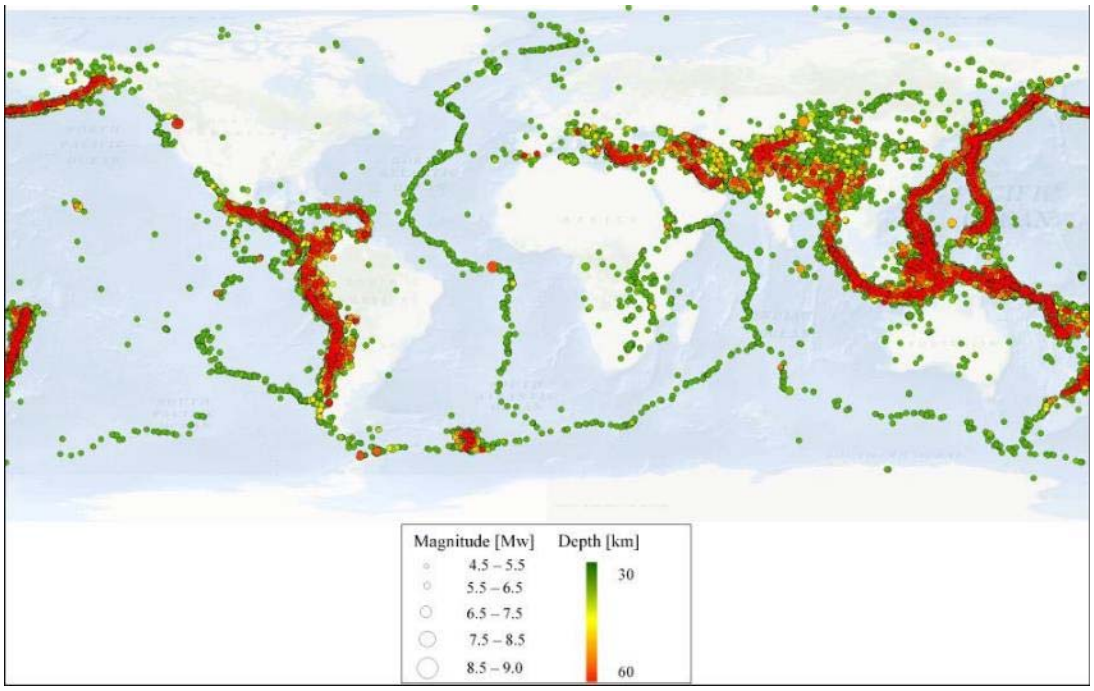


Figure 4. Events' epicenters (30-60km)

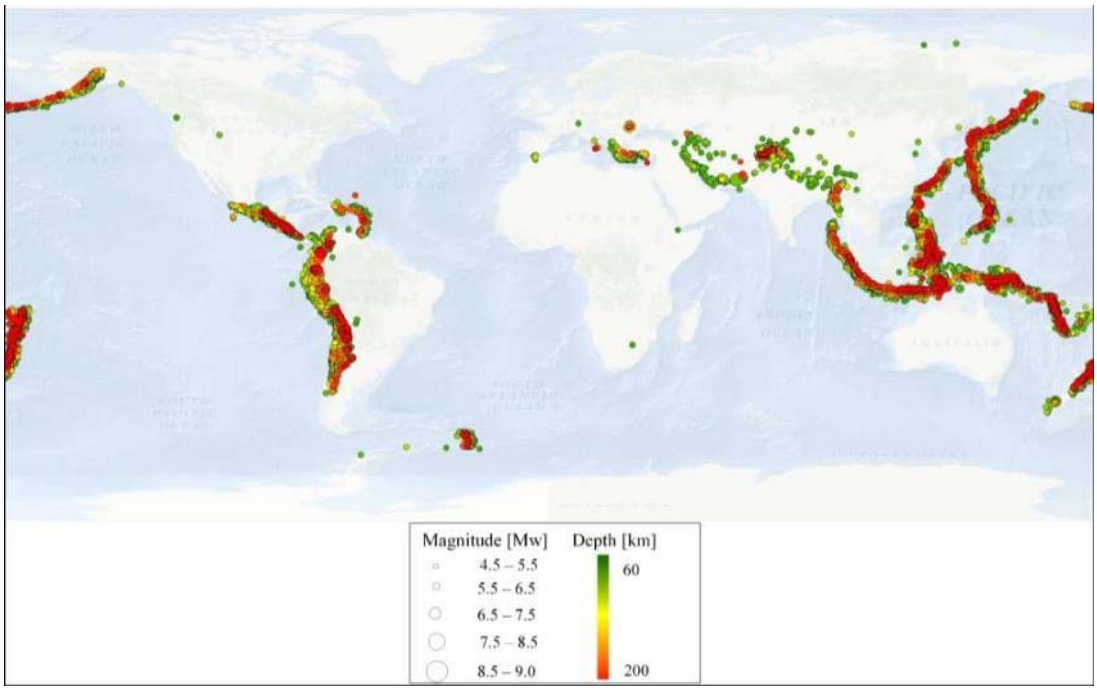


Figure 5. Events' epicenters (60+ km)

Table 1. Number of events with magnitude equal or higher than the indicated

Magnitude (Mw)	Number of events
4.5	162,516
5	64,877
5.5	16,436
6	5,403
6.5	1,622
7	516
7.5	158
8	28
8.5	5
9	2

1.5.2 Tectonic Zoning

No updates were made on the tectonic zoning, classification and/or determination of the maximum magnitude (M_U). We had the intention of updating these features based on the work that the Global Earthquake Model (GEM) has performed but, due to timing reasons for this project, it was not possible to include that information in this analysis.

Still, it is worth noting again that the definition of the tectonic provinces is based on the 50 regions defined by Flinn and Engdahl (1965) and the knowledge of the tectonic plates boundaries, seismicity, focal mechanisms and geological mapping of active faults. This tectonic provinces account for both seismicity due to plate boundaries and seismicity occurring in the interior of the plates.

Figure 6 shows the shallow depth tectonic provinces, as the deep provinces are located below these polygons. As in GAR13, a depth range and a M_U value were assigned to each of the provinces; each province was in turn classified in one of the following categories, used to assign a GMPE to the province (values in brackets indicate the coding associated to the zones presented in Figure 6):

- Interplate subduction thrust (1)
- Intraslab in the subducting plate (2)
- Active crustal – not plate boundary (3)
- Stable continental (4)
- Active crustal - plate boundaries (5)
- Off shore (6)

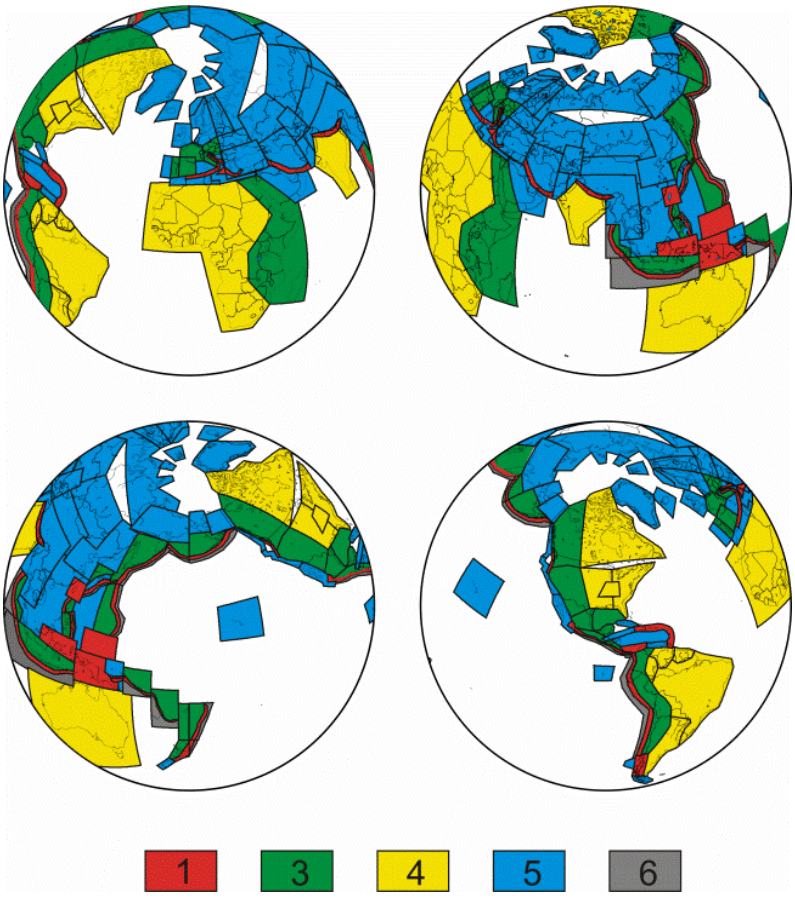


Figure 6. Tectonic regions of shallow depth used in the analysis

The total number of regions is 132 but because in some regions there is more than one polygon (one polygon for a different depth range), a total of 401 provinces are considered in the analysis for the stochastic set generation. More details about the procedure followed to define the tectonic provinces can be found in CIMNE et al. (2012). Figure 7 and Figure 8 show the assigned M_U values for each of the tectonic regions. For more details regarding the assignation of the M_U please refer to CIMNE et al. (2012).

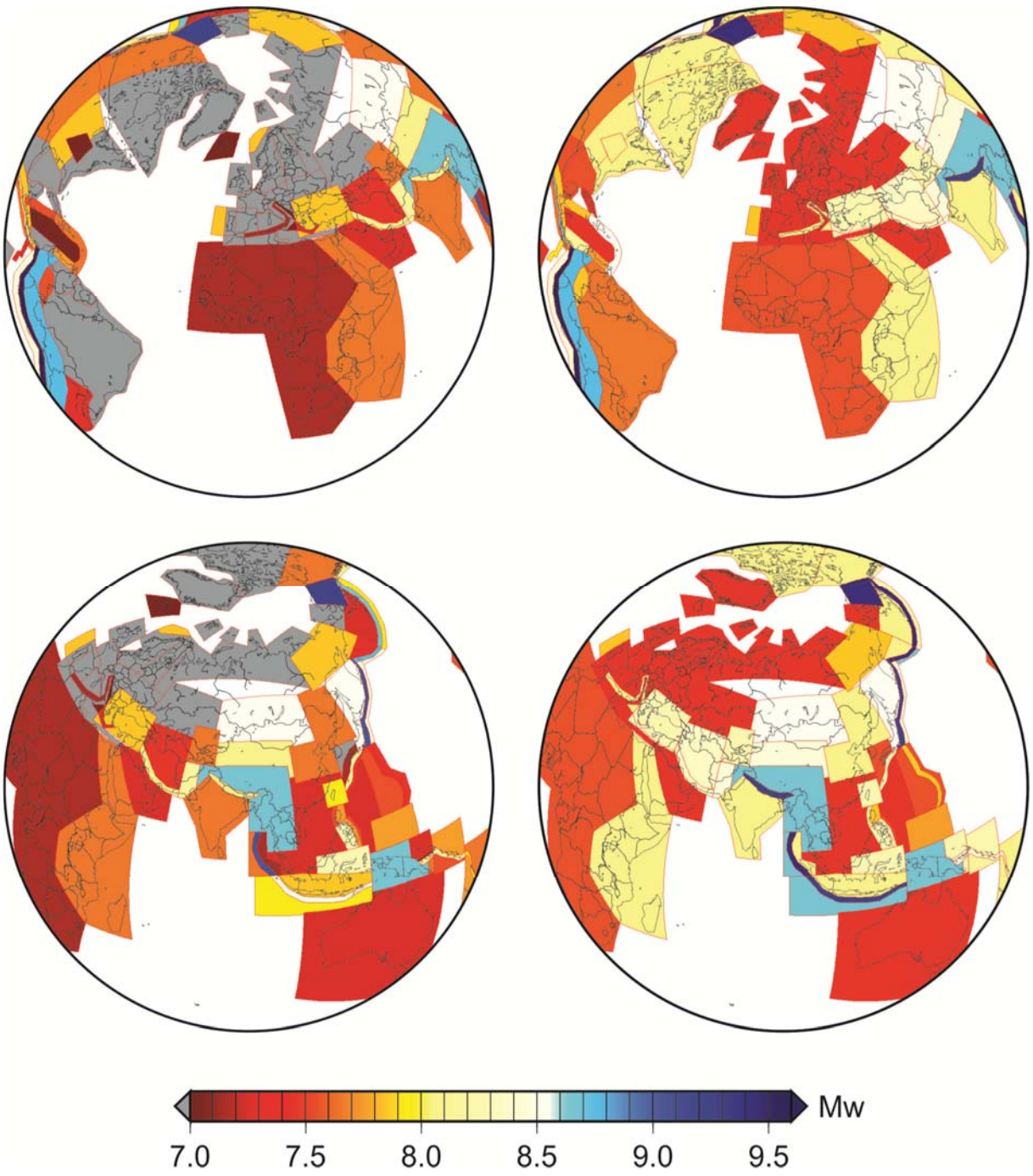


Figure 7. Observed (left column) and assigned (right column) Mu of each tectonic province (upper layer)

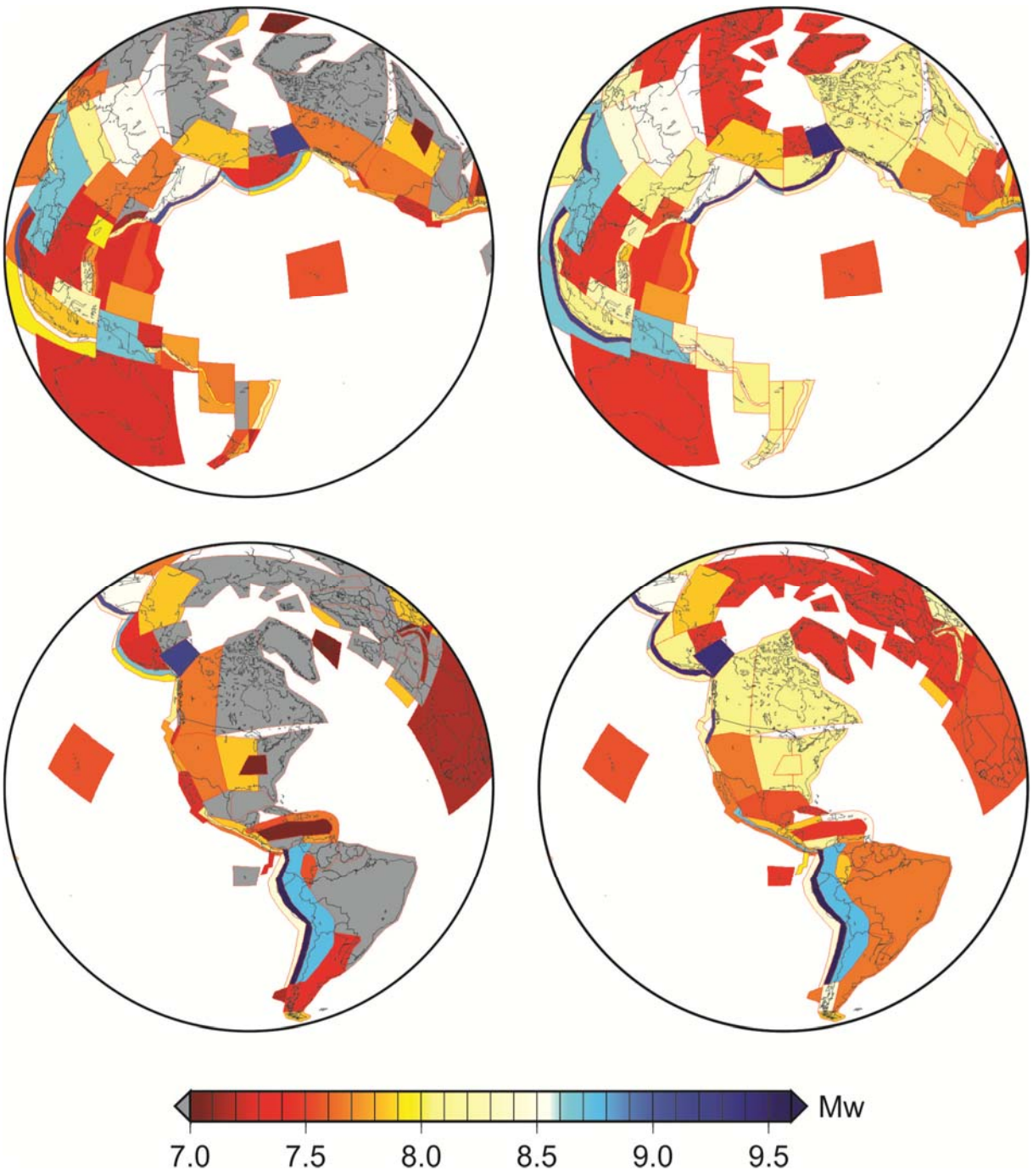


Figure 7 (continuation). Observed (left column) and assigned (right column) Mu of each tectonic province (upper layer)

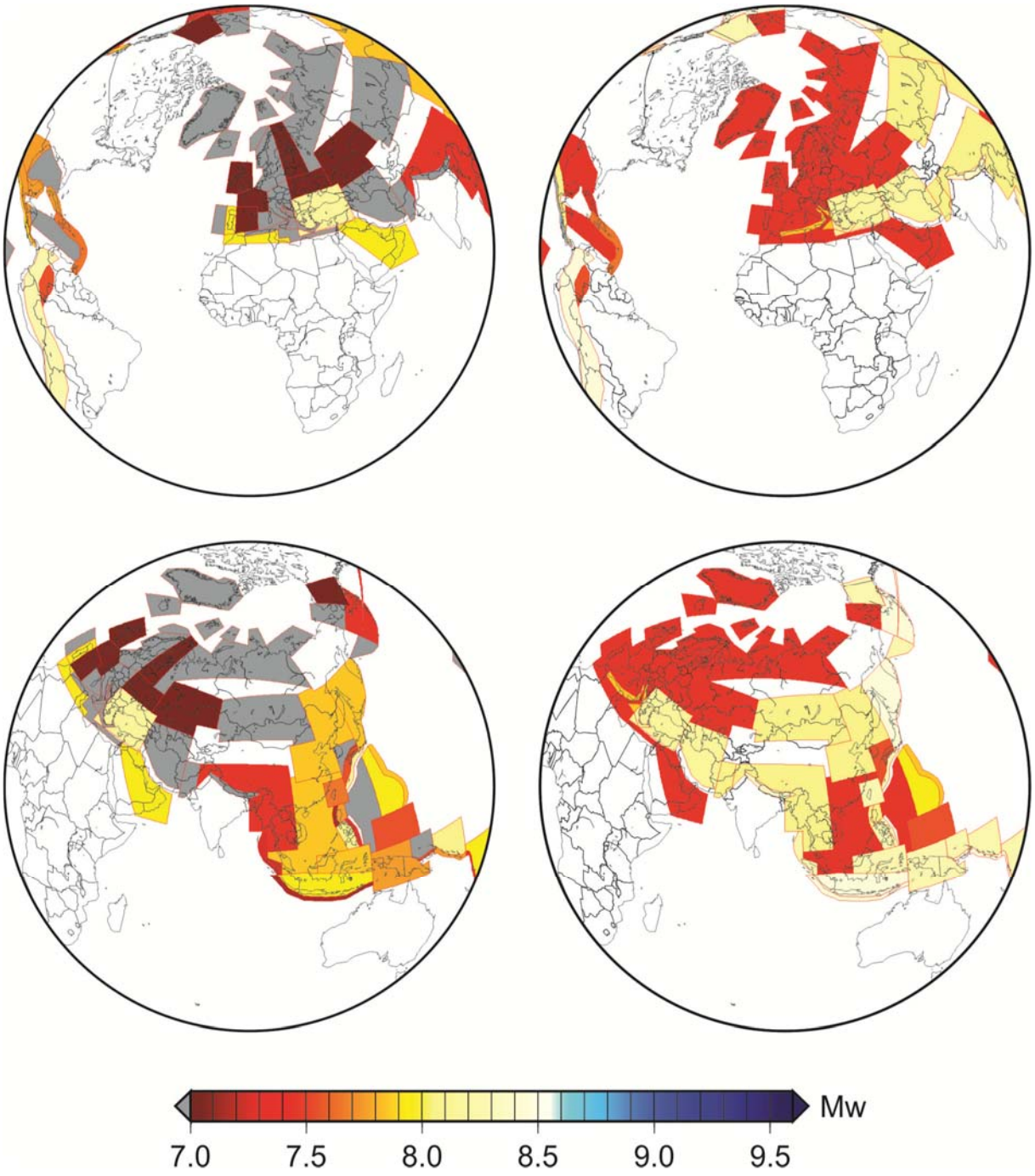


Figure 8. Observed (left column) and assigned (right column) Mu of each tectonic province (deeper layer)

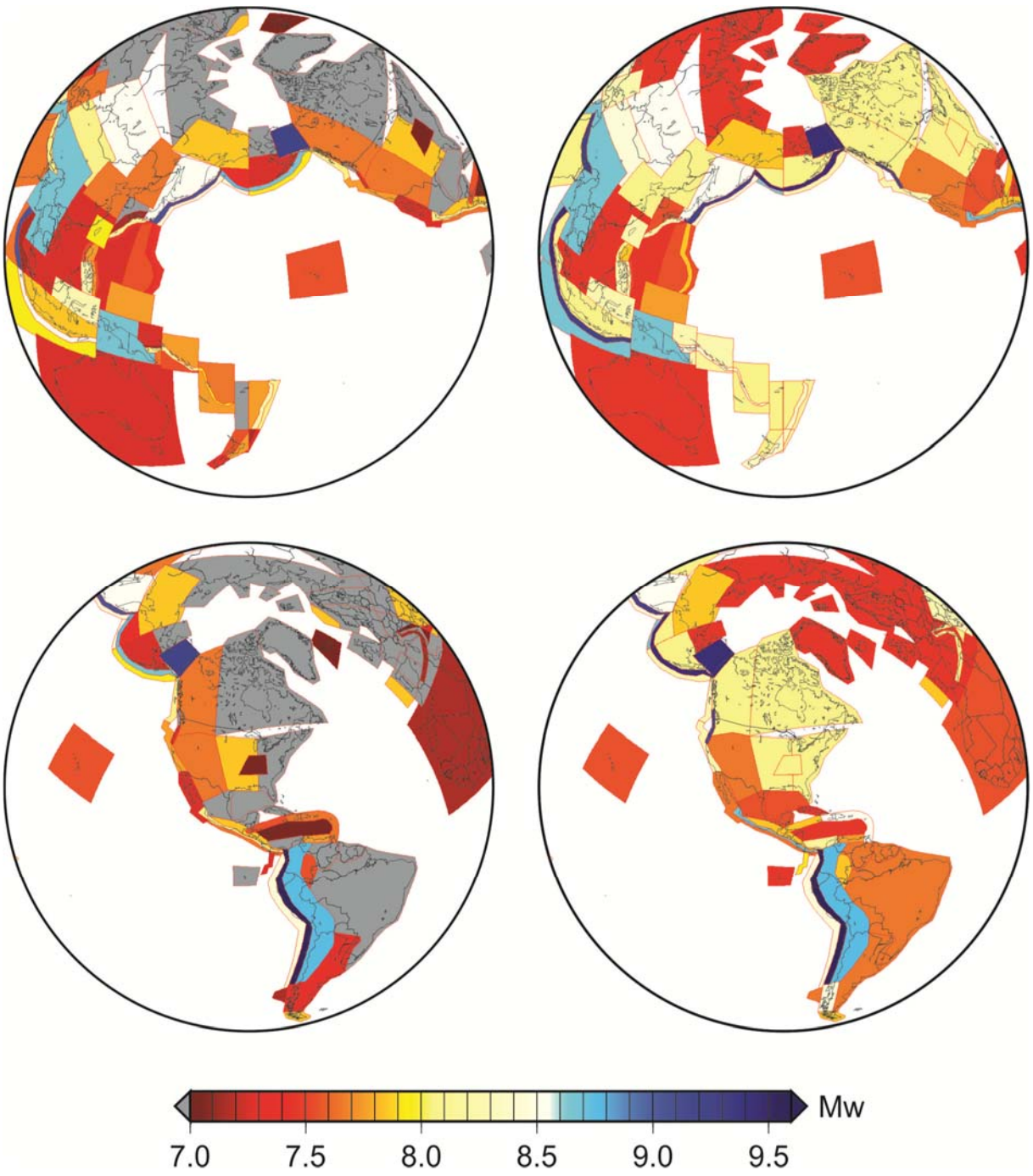


Figure 8 (continuation). Observed (left column) and assigned (right column) Mu of each tectonic province (deeper layer)

1.5.3 Seismicity Parameters

Since a Poissonian seismicity model using Gutenberg-Richter (1944) relationships has been selected to conduct the PSHA (Cornell and Van Marke, 1969), it is necessary to calculate the *a* and *b*-values (also denoted in this report as λ_0 and β) which vary spatially. A bounded Gutenberg-Richter recurrence relationship has been used, which is expressed as (McGuire and Arabasz, 1990):

$$\lambda(M) = \lambda_0 \frac{e^{-\beta M} - e^{-\beta M_u}}{e^{-\beta M_0} - e^{-\beta M_u}} \qquad \textbf{(Eq. 1)}$$

where the λ_0 value represents the activity rate of the seismic source (in this case each node) and is calculated as the number of events with magnitude equal or greater than the threshold magnitude per year associated to each source. The β value represents the relative ratio of large and small earthquakes and is calculated as the slope of the initial part of the magnitude recurrence curve for each source. The relationship between the *a* and *b* values from the original G-R relationship and the λ_0 and β values of the bounded G-R relationship used here are as follows:

$$\lambda_0 = 10^a$$
$$\beta = b\ln 10 \qquad \textbf{(Eq. 2)}$$

Seismicity has been grouped in three depth ranges, 0-30 km, 30-60 km and more than 60 km. Table 2 and Figure 9 present the number of events by depth range considered in the analysis; from that information, it is worth noting that in seismic catalogues it is common to assign a depth equal to 33 km to those earthquakes whose focal depths are difficult to calculate; this practice can distort the statistics shown in the table. However, since seismicity is grouped at the above mentioned depth categories, the focal depth reporting error can be considered as somehow accounted for since it is not assigned directly to the reported depth (33 km) but to 45 km.

Table 2. Number of events by depth range

Depth range (km)	Number of events
0 - 30	54,018
30 - 60	70,045
> 60	38,453
TOTAL	**162,516**

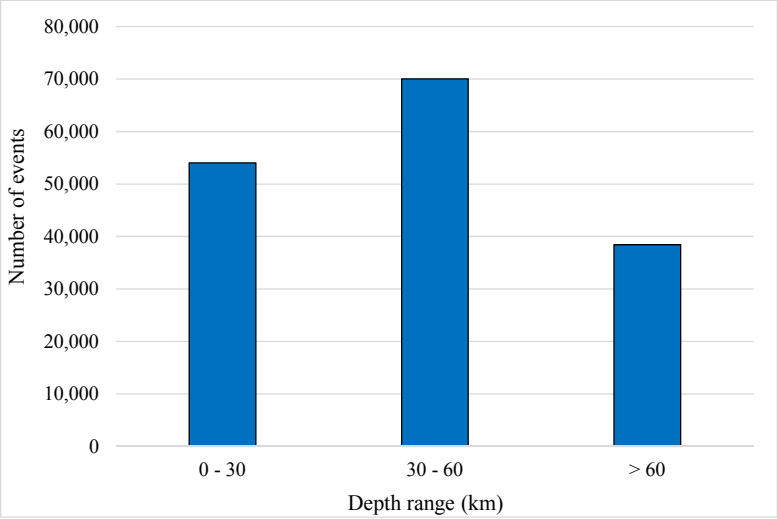


Figure 9. Number of events in the catalogue associated with the selected depth ranges

Considering the coarse-grain resolution level of the analysis, for each of the ranges, a grid that has the a and b-values has been located at 15, 45 and 75 km respectively. All grids have been defined with a 0.3° spacing in both orthogonal directions covering the globe, that is, 720,000 nodes for each parameter and for each depth range. Finally, a smoothed seismicity procedure, following the methodology proposed by Woo (1996) to calculate said values, was followed. It is the same procedure that was used in the previous assessment for GAR13.

The smoothing radii kept the same values as in the previous assessment, repeated here for convenience of the reader:

- R_{min}=0.3°
- R_{max}=1.2°

For this procedure, a weighting process is required as a function of the focal distances of the events to the node on the grid for which the seismicity parameters calculation is being performed. The criterion for the weighting process is the same as in the previous version, and is repeated in this report for the convenience of the reader:

- C/Rmin if R<Rmin
- C/R if Rmin<R<Rmax
- 0 if R>Rmax

Where again, R is the focal distance between the event in the seismic catalogue and the node on the grid that is being characterized. Finally, to avoid errors in the characterization due to the small numbers of events available to conduct the process, β values, again, have been truncated between 1.8 and 3.0.

Annex 2 presents the values for the *a* and *b*-values, according to the depth range, used in this analysis. Since the *b*-values represent a function that is not perfectly known the values shown in Annex 2 represent the expected value of *b*, and in order to account for the uncertainty the coefficient of variation, calculated in the classical statistical formulation, was also calculated and assigned to each node of the grids (which is not shown on the figures).

1.5.4 Selection and Assignation of the Ground Motion Prediction Equations

Several modifications have been included in this new assessment in terms of the GMPEs' assignation. Based on the suggestions of the GEM on this topic, a unique GMPE has been assigned to each of the tectonic environments (Stewart et al., 2013). It is important to highlight that the tectonic environments are compatible with those identified in the tectonic zoning process.

According to that selection, the following GMPEs were considered in this analysis:

- Zhao et al. – interface (2006) for interplate subduction thrust
- Zhao et al. – intraslab (2006) for intraslab subducting plate
- Atkinson and Boore (2006) for stable continental regions
- Cauzzi and Faccioli (2008) for active crustal and off shore
- Chiou and Youngs (2008) for active crustal – plate boundaries

Changes to GAR13 lie in the interplate subduction thrust, intraslab subducting plate and active crustal zones, where a completely different GMPE has been assigned. Additionally for all the tectonic environments, in the GMPEs' parameters definition a Vs30 value of 1,100 m/s was explicitly included, to guarantee the consistency of the analysis across the Globe.

All selected GMPEs account for a wide range of spectral ordinates, allowing, as in GAR13, a quantification of different intensities to be later used in the probabilistic risk assessment.

1.6 Seismic Hazard Assessment Results

The seismic hazard assessment was performed for each node, where the exceedance rates for acceleration were determined for each spectral ordinate considered in the analysis, with the methodology explained in CIMNE et al. (2012); this is the same procedure followed by program CRISIS 2014.

Based on the parameters of seismic activity (*a*, *b*, and M_u values) calculated for each node, scenarios are generated in each of them for different magnitudes and occurrence frequencies. In this analysis, as in GAR13, following the smoothed seismicity approach, the nodes are treated as sources.

From the set of stochastic scenarios (.AME file), after integrating hazard, seismic hazard maps were calculated for the following spectral ordinates: spectral acceleration at 0.0 sec, 0.2 sec, 0.5 sec, 1.0 sec and 2.0 sec, and for different return periods – 225, 475, 1,000 and 2,500 years (see

Annex 3). It is important to note that the results are given for intensities at bedrock level (Vs30=1,100 m/s); that is, the effect of local site effects or topographical factors, which in certain cities may be important, are not considered. Figure 10 shows an example of a seismic hazard map calculated with CRISIS 2014 for a 975 year return period and a spectral ordinate of 0.5 seconds, which roughly corresponds to the seismic demand for reinforced concrete, medium-rise buildings of five to seven stories.

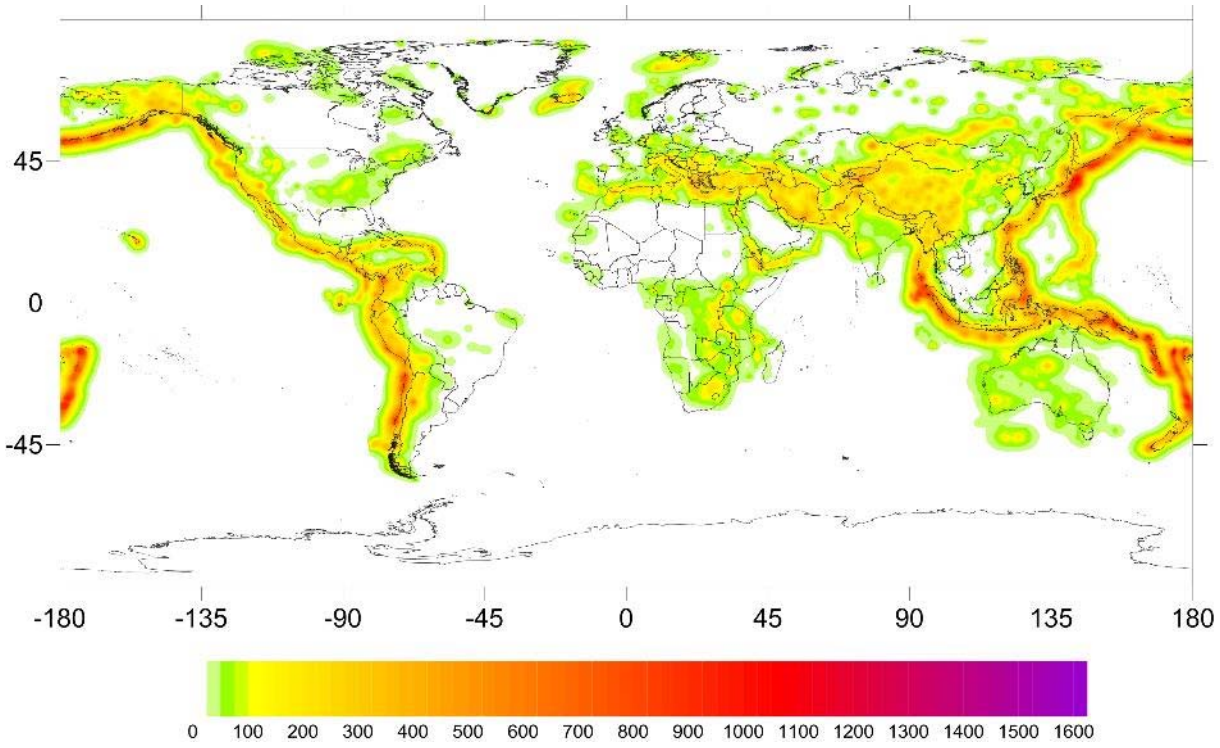


Figure 10. Seismic hazard map for 0.5sec and 975 years return period. Units of acceleration are cm/s^2

Annex 4 shows the hazard curves for peak ground acceleration (PGA) for a selected group of cities in different regions of the world; Annex 5 shows the uniform hazard spectra for the same cities for a return period of 475 years; and Annex 6 shows various comparisons that were made with respect to the results of GAR13, evaluating the effect of modifying the seismicity parameters and GMPEs.

As can be seen in Annex 5, for many cities the resulting UHS has lower acceleration values as well as a different shape as compared to the GAR13; this is due to the inherent changes in the model of GAR15. As was mentioned before, and as can be seen in Annex 6, there are differences in the resulting hazard due to both seismicity and GMPE changes; however, the change in GMPEs is what contributes most to these differences, and this is what accounts for the changes in the shape of the UHS for Bogotá and Shanghai among other cities.

Additionally, it is worth emphasizing the fact that the hazard model built for GAR15 relies heavily on recent instrumental seismicity records, being one of the two inputs used for the computations (the other being the estimation of maximum magnitude). This may cause some differences with local seismic hazard assessments which consider more detailed tectonic regimes and/or faults that affect specific places and that may not be fully represented by using instrumental seismicity exclusively. This is the case of the cities of Wellington and Christchurch, New Zealand, where for the former the GAR15 does not reflect the effect of specific faults that contribute to the local hazard as considered in the National Seismic Hazard Model, whereas for the latter the GAR15 is consistent with the National Seismic Hazard Model given that background seismicity dominates in the region.

A final note that the reader must keep in mind is that no matter how carefully a global hazard model is made, differences will always exist with respect to regional more detailed models given the differences in local GMPEs, traditions of the scientific groups in charge, catalogue choices, and instrumental information available, among others. Moreover, the purpose of this study is not to replace all other seismic hazard evaluations performed at regional level for the different countries or regions of the world, but to have uniformly derived hazard estimations at global level that allow for a uniformly derived risk evaluation. In turn, this risk evaluation is intended to be used for limited purposes such as developing a ranking of countries according to their level of risk.

2 Update of the Tropical Cyclones Probabilistic Hazard Assessment

In the framework of GAR13 a Global Risk Model (GRM) was developed to compute catastrophe risk for all countries in the world due to the occurrence of tropical cyclones. Risk results were presented in terms of the Annual Average Loss (AAL) and Probable Maximum Loss (PML) for a fixed return period of 250 years.

As result of a peer-review process undertaken by UNISDR and WMO, several comments and suggestions were issued by peers to the strong winds model used for GAR 13. In order to take into account those valuable reviews, a new strong winds model was proposed in this version of GAR for the wind hazard assessment at global level. In addition, storm surge, which is widely recognized to be a very destructive effect of tropical cyclones, was included in the global hazard model.

Hazard for both strong winds and storm surge was assessed using as input 2594 historical tropical cyclones from five different oceanic basins: Northeast Pacific, Northwest Pacific, South Pacific, North Indian, South Indian and North Atlantic. Completeness periods were calculated for each basin to determine the occurrence frequency of historical cyclones. For each historical track, a family of one-hundred associated "children" tracks was obtained using a bi-dimensional Wiener process. Strong winds speed and storm surge flooding was calculated for each cyclone child track and the results were used to compute probability moments of wind speed and coastal flood for each historical track. The results are expressed, for the strong winds, in terms of the geographical distribution of the peak wind speed of 3-seconds gusts, and for the storm surge, as the distribution along the shorelines of the maximum surge run-up and its associated flooding. In both cases, intensities are modeled as random variables with a Gamma distribution. This analysis was repeated for all historical cyclones. The hazard assessment result is the set of probabilistic wind fields and storm surge floods. This hazard assessment was performed in the framework of the Global Assessment Report on Disaster Risk Reduction of 2015 (GAR15) for catastrophe risk analysis of all countries in the world.

2.1 Purpose and Scope

The simulation of tropical cyclones is a widely accepted approach for hazard assessment. Main uses of the mathematical simulation of cyclones are the estimation of wind and storm surge intensities for buildings and infrastructure design and loss estimation for setting insurance rates (Vickery et al., 2009). Although, wind hazard is commonly assessed at national and sub-national levels in countries exposed to tropical cyclones, worldwide hazard assessments are quite scarce. The most widely circulated global hazard study is the World Map of Natural Hazards developed by Munich Re (Berz et al., 2001), which presents the global distribution of wind speed for 100 years return period. In the case of storm surge, global hazard assessments are also scarce. Previous efforts were made in past versions of GAR (GAR 09 mainly), where run-up heights were estimated for each historical cyclone as a function of its Saffir-Simpson category, which provides an estimated range of run-up values.

In this study, we are applying an event-based hazard assessment in order to create a set of stochastic cyclones that were used for probabilistic loss assessment worldwide. The hazard associated with tropical cyclones is defined by means of its annual occurrence frequency and its severity, the latter being characterized through a parameter of intensity computed at each specific geographical location. The selected intensity for strong winds is the speed for 3-seconds gusts at 10 meters over the surface (v_{10}). For storm surge, the intensity is the run-up height over coastal locations (η). The hazard assessment is based on the historical frequency of occurrence of tropical cyclones and its various degrees of intensity. Once the parameters that characterize the occurrence of tropical cyclones are defined, from a physical point of view, it is necessary to generate a set of stochastic events through the simulation of a series of random events. The set of random events contains all possible ways in which the hazard related to tropical cyclones may manifest itself in the region of analysis, in terms of its frequency and severity.

For each event, hazard is characterized, at any point in a certain territory, through the probability distribution of the intensity (v_{10}, η), defined in terms of its expected value and its variance. The hazard is thus represented as a set of stochastic events with average intensities and frequencies of occurrence compatible with the historical information available.

Hazard analysis was performed using the software Tropical Cyclones Hazard Modeler (Bernal, 2014a). TCHM provides full compatibility with the standards and methodologies required for risk assessment within CAPRA. Also, the software returns hazard results in AME format, which is an event-based hazard format fully compatible with the probabilistic loss estimation methodology. Further details on the AME format can be found in Torres et al. (2013).

2.2 Methodological Approach

2.2.1 Cyclone Tracks Perturbation

For each historical cyclone, a set of one-hundred "children" tracks was generated following a bi-dimensional Wiener process in which the historical track is artificially disturbed to create a new child track. The disturbing process is presented in Equation 3 for the longitude (X) coordinate of the track points.

$$X(t_{k+1}) = X(t_k) + \Delta X_{k,k+1} + e \qquad \textbf{(Eq. 3)}$$

Where $X(t_k)$ is the longitude coordinate of a track point at instant t_k, $X(t_k+1)$ is the longitude coordinate of a the next track point recorded at instant t_k+1, $\Delta X_{k,k+1}$ is the known longitude delta between instant k and $k+1$, and e is random variable following a normal distribution with $\mu=0.0$ and $\sigma=0.5$. An equivalent process must be performed simultaneously for the latitude (Y) coordinate. After the perturbation process, the cyclone's main characteristics remain unaltered, which means that each child track point will have the same central pressure and sustained wind speed as the original.

Figure 11 shows the result of applying this perturbation process to the track of 1961 hurricane Hattie. The red thick line is the original track of Hattie, and the gray thin lines are 10 simulations of Hattie obtained by applying the bi-dimensional Wiener process.

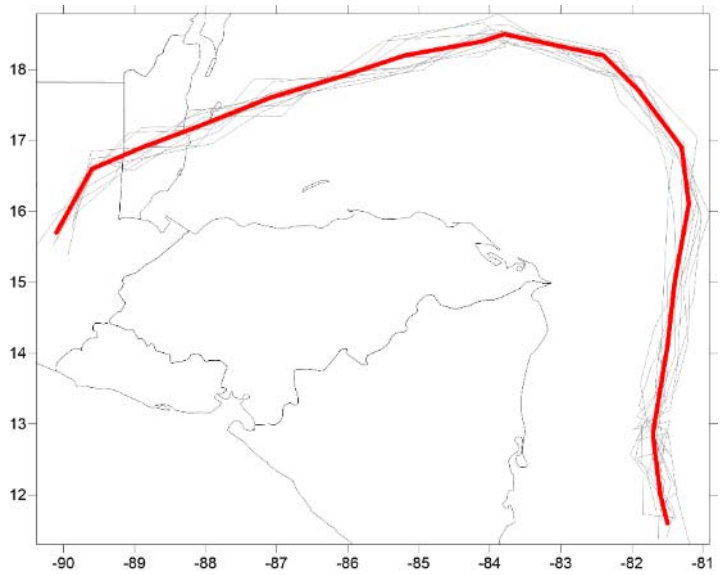


Figure 11. Track perturbation process applied to hurricane Hattie.

2.2.2 Wind Hazard Modelling

For each one of the children tracks, the wind field is calculated over a grid of variable resolution. As summarized by Vickery et al., (2009a), wind field modelling is a three-step process:

1. Given cyclone characteristics such as central pressure and radius to maximum wind (RMW), wind speed at gradient height is calculated. Gradient height is the altitude at which wind speed is completely unaffected by surface conditions. It is usually assumed to be equivalent to a mean wind speed.
2. From the wind speed at gradient height, a mean surface speed is calculated by applying an atmospheric boundary layer (BL) model.
3. Finally, the mean surface speed is modified by site-specific conditions, such as topographic amplification and surface roughness, and set to an averaging time using gust factors.

There have been enormous advances in wind field modelling since the early 1970s when the first studies took place. There are several proposals in the literature to account for each one of the steps presented above. A complete description of the state of the art in wind field modelling can be found in Vickery et al. (2009a).

2.2.2.1 Gradient Wind Field

The gradient wind speed (V_G) is calculated using the representation introduced by Holland (1980), in which V_G is given as

$$v_G = \sqrt{\left(\frac{RMW}{r}\right)^B \cdot \frac{B \cdot \Delta P \cdot \exp\left(-\left(\frac{RMW}{r}\right)^B\right)}{\rho} + \frac{r^2 f^2}{4}} - \frac{f \cdot r}{2} \qquad \textbf{(Eq. 4)}$$

where r is the observation distance (i.e. the distance from the calculation site to the center of the storm), B is the Holland parameter, ΔP is the pressure gradient ($\Delta P = P_n - P_0$, where P_n is a nominal atmospheric pressure set to 100.5 KPa), ρ is the density of the air, and f is the Coriolis force parameter, defined as

$$f = 2\Omega Sin\,\phi \qquad \textbf{(Eq. 5)}$$

where Ω is the angular rotation speed of The Earth, and ϕ is the latitude of the cyclone's eye.

The Radius to Maximum Winds (RMW) is calculated as a function of the cyclone's central pressure P_0,

$$RMW = 0.4785\ P_0 - 413.01 \qquad \textbf{(Eq. 6)}$$

Vickery and Wadhera (2008) found that Holland's B parameter could be modeled as a function of a non-dimensional parameter, A, defined as

$$B = 1.732 - 2.237\sqrt{A} \qquad \textbf{(Eq. 7)}$$

$$A = \frac{RMW \cdot f}{\sqrt{2R_d T_s \cdot \ln\left(1 + \frac{\Delta P}{P_0 \cdot e}\right)}} \qquad \textbf{(Eq. 8)}$$

where R_d is the air gas constant and T_s is the surface temperature of the sea (given in °K).

2.2.2.2 Surface Wind Speed

The wind speed at gradient height (V_G) is modified to obtain the speed at surface level (10 meters above water or ground, v_{10}) by means of an atmospheric boundary layer model. Vickery et al. (2009b) modeled the variation of the mean wind speed, $u(z)$ with height z, in the cyclone boundary layer as

$$u(z) = \frac{u_*}{k}\left[\ln\left(\frac{z}{z_0}\right) - 0.4\left(\frac{z}{H^*}\right)^2\right] \quad \textbf{(Eq. 9)}$$

where k is the von-Karman coefficient (k=0.4), u* us the friction velocity, z_0 is the aerodynamic roughness length, and H* is the boundary layer height. Vickery et.al. (2009b) modeled H* as

$$H^* = 343.7 + \frac{0.26}{I} \quad \textbf{(Eq. 10)}$$

where I is the inertial instability, defined by Kepert (2001) as

$$I = \sqrt{\left(f + \frac{2V_G}{r}\right)\left(f + \frac{V_G}{r} + \frac{\partial V_G}{\partial r}\right)} \quad \textbf{(Eq. 11)}$$

When applying this model, the term $\partial V_G/\partial r$ is neglected. The friction velocity, u*, is defined as

$$u_* = \sqrt{\frac{\tau}{\rho}} \quad \textbf{(Eq. 12)}$$

where τ is the surface wind shear stress, defined as

$$\tau = \rho \cdot C_d \cdot u^2 \quad \textbf{(Eq. 13)}$$

where C_d is the drag coefficient, and u is the surface wind speed.

2.2.2.3 Site-specific Modifiers of the Wind Speed

Local conditions modify the final value of the wind speed at each geographical location. Within our wind model, the surface roughness and the topographic effect are considered as the main modifiers of the wind speed at local level.

2.2.2.3.1 Surface Roughness

Surface roughness is directly considered in the calculation of surface wind speed, by means of parameters z_0 (aerodynamic roughness length) and C_d (drag coefficient). These parameters depend on the type of terrain over which wind speed is calculated. For our model, we use the central value of the ranges proposed by the WMO (WMO, 2010), for seven general classes of terrain (see Table 3).

Table 3. Terrain classes and ranges for parameters z0 and Cd proposed by WMO.

Terrain Class	Terrain Description	Roughness Lenght z_0 (m)	Surface Drag Coefficient *C10*
Sea	Open sea conditions for all winds speeds, exposed tidal flats, featureless desrt, and tarmac.	0.0002-0.005	0.001-0.003
Smooth	Featureless land with negligible vegetation such as wide beaches and cays, exposed reefs.	0.005-0.03	0.003-0.005
Open	Nearshore water for winds >30m/s, level country with low grass, some isolated trees, airport surrounds.	0.03-0.10	0.005-0.008
Roughly Open	Low crops, few trees, ocassional bushes.	0.10-0.25	0.008-0.012
Rough	Lightly wooded country, high crops, centres of small towns.	0.25-0.5	0.012-0.019
Very Rough	Mangrove forests, palm plantations, metropolitan areas.	0.5-1.0	0.019-0.032
Closed	Mature regular rainforests, inner city buildings (CBD).	1.0-2.0	0.032-0.065
Skimming	Mixture of large high and low-rise buildings, irregular large forests with many clearings.	>2.0	>0.065

2.2.2.3.2 Topographic effect

The topographic effect is assessed by identifying wind exposed and protected areas on a Digital Elevation Model (DEM). The topographic effect factor (F_T) is defined by the site topographic exposure, as:

- Low exposure. Corresponds to topographic depressions (i.e. protected site). $F_T = 0.8$.
- Normal exposure. Corresponds to a flat site. $F_T = 1.0$.
- High exposure. Corresponds to the top of hills (i.e. exposed site). $F_T = 1.2$.

For each node in the DEM, given its geographical location (X,Y), its exposure is quantified by searching all four cardinal directions (north, south, east, west). This search is bounded by setting the following limits:

- *Nmax*: Maximum horizontal distance at which the exposure will be evaluated with respect to a fixed location.
- *m*: Reference topographic slope, used to assess the site exposure with respect to the surrounding terrain.

Then, for each site (X,Y) in the DEM, we seek for a site (K,L) until the following condition fails:

$$Z_{K,L} \geq Z_{X,Y} + Z_{Lim} \qquad \textbf{(Eq. 14)}$$

where Z_{Lim}: is the height difference required between sites (X,Y) and (K,L) to obtain a slope m.

If the site (K,L) exists, then the site (X,Y) is classified as of low exposure. This corresponds to a topographic depression (see Figure 12). If this condition is not fulfilled, then the mean topographic slope (m_T) between site (X,Y) and site (K,L) is calculated as

$$m_T = \frac{Z_{X,Y} - Z_{K,L}}{D} \qquad \textbf{(Eq. 15)}$$

where D is the distance between site (X,Y) and site (K,L). If $|m_T| \leq m$, then site (X,Y) is classified as of normal exposure (see Figure 13). Finally, if $|m_T| > m$ then site (X,Y) is classified as of high topographic exposure (see Figure 14).

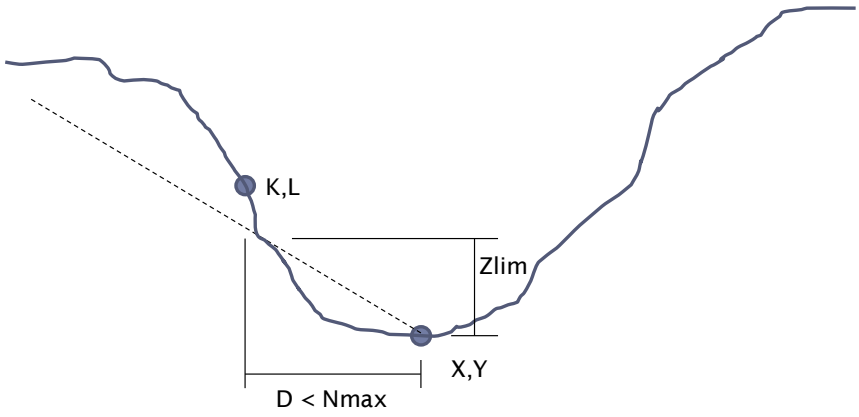


Figure 12. Scheme of a topographic profile with sites (X,Y) and (K,L). Site (X,Y) classified as of low topographic exposure.

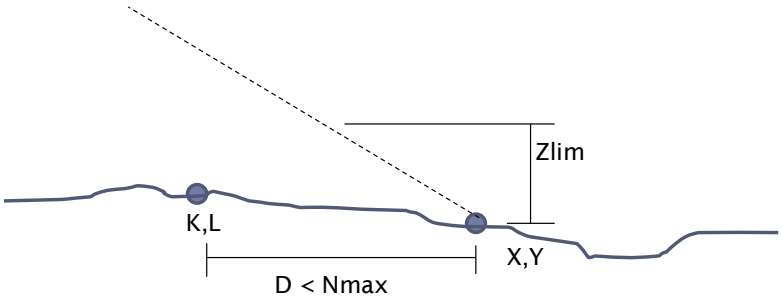


Figure 13. Scheme of a topographic profile with sites (X,Y) and (K,L). Site (X,Y) classified as of normal topographic exposure.

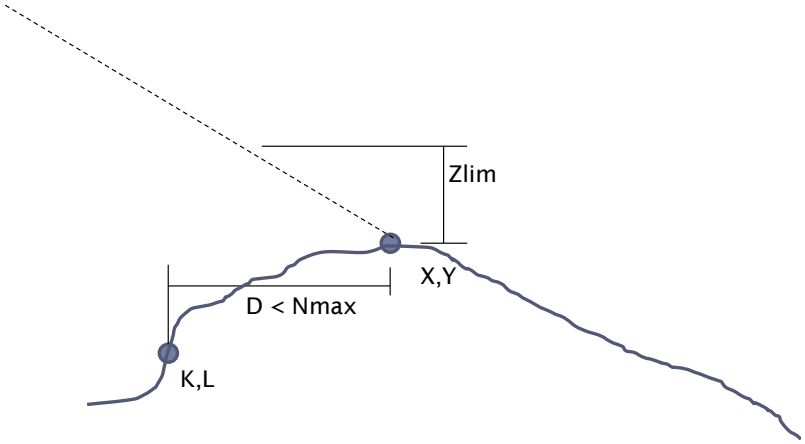


Figure 14. Scheme of a topographic profile with sites (X,Y) and (K,L). Site (X,Y) classified as of high topographic exposure.

2.2.2.4 Gust Factor

The vulnerability models used in the risk calculation for GAR correlate loss to the wind speed for 3-seconds gusts. This means that we need to determine the speed for a different averaging time than the one produced by the basic wind field model. The gust factor formulation proposed in ESDU (1983) is used, given that, although it has been developed for extra-tropical storms, several authors conclude that there is no evidence to suggest that gust factors associated with tropical cyclones are different than those associated with extra-tropical storms (Sparks and Huang, 1999; Vickery and Skerlj, 2005).

The gust factor K_τ is defined in ESDU (1983) as

$$K_\tau = 1 + gI_u \qquad \textbf{(Eq. 16)}$$

where g is the peak factor and I_u is the turbulence intensity. The peak factor g is modeled as

$$g = 1 - 0.193\left[\frac{T_u}{\tau} + 0.1\right]^{-0.63} \qquad \textbf{(Eq. 17)}$$

where τ is the target gust duration (3 seconds) and $T_u = 3.13z^{0.2}$. The turbulence intensity I_u is calculated as

$$I_u = \frac{7.5\eta\left(0.538 + 0.09\ln\left(z/z_0\right)\right)^{\eta^{16}}}{2.5\left(1 + 0.156\ln\left(u_*/f\cdot z_0\right)\right)\cdot\left(\ln\left(z/z_0\right) + 34.5\, f\cdot z/u_*\right)} \qquad \textbf{(Eq. 18)}$$

where

$$\eta = 1 - \frac{6 \cdot f \cdot z}{u_*} \qquad \textbf{(Eq. 19)}$$

Finally, the mean wind speed at 10 meters above the water or ground is calculated as

$$v_{10} = u\left(z = 10\ m\right) \cdot F_T \cdot K_\tau \qquad \textbf{(Eq. 20)}$$

Wind fields are given in terms of the geographical distribution of v_{10}.Therefore, for each historical cyclone one-hundred wind fields are calculated each corresponding to a simulation of the historical track. From the set of wind fields, the expected value and variance of the wind speed is calculated at each grid location, which respectively represent the first natural moment and second central moment of a Gamma probability distribution that defines the random nature of v_{10}. Therefore, there is one probabilistic hazard scenario calculation for each historical cyclone.

2.2.3 Storm Surge Hazard Modelling

Storm surge is widely recognized to be one of the most destructive effects related to tropical cyclones. Therefore, it became highly relevant to include it in the tropical cyclones hazard assessment for the 2015 version of GAR. The objective is to determine the sea water run-up height at the shore line as a consequence of the tangential stress exerted by strong winds and the lower atmospheric pressure. The total run-up height at a shore location (η) is modeled as composed by two parts,

$$\eta = \eta_C + \eta_P \qquad \textbf{(Eq. 21)}$$

where η_C is the wind-forced run-up height, and η_P is the barometric run-up. The astronomic tide is not considered in the analysis given the global nature of this hazard assessment. We assume an initial condition of mean sea level all over the calculation shore locations.

Given the fact that wind-forced run-up is the one of highest importance and significance in coastal flooding due to storm surge, the barometric run-up is included in the model simply by applying the inverted barometric effect, and considering full adjustment (i.e. a decrease in barometric pressure of 1 mb corresponds to a rise in sea level of 0.01 m).

$$\eta_P = 0.01\left(P_n - P(r)\right) \qquad \textbf{(Eq. 22)}$$

where P_n is a nominal atmospheric pressure (taken as a constant value of 100.5 Kpa), and $P(r)$ is the pressure at the shore location produced by the cyclone pressure field. $P(r)$ can be modeled as

$$P(r) = P_0 + \Delta P \exp\left(-\frac{RMW}{r}\right) \qquad \textbf{(Eq. 23)}$$

For the wind-forced run-up, we use a simple but very robust model for coastal sea level prediction, proposed by Tilburg and Garvine (2003), based in coastal Ekman circulation principles, in which wind-forced run-up (η_C) is modeled considering the effect of the wind along and across the continental shelf,

$$\eta_C = \frac{fLU_x}{g}\sqrt{\frac{\rho_a c_a U}{\rho \cdot c_b |U_x|}} - \frac{\rho_a c_a U_y U}{\rho g \alpha}\ln\left(1 + \frac{\alpha L}{D_0}\right) \qquad \textbf{(Eq. 24)}$$

where U is the total wind speed, U_x is the along-shelf component of wind speed, U_y is the across-shelf component of wind speed, ρ_a is the density of the air, ρ is the density of the sea water, c_a is the surface drag coefficient, c_b is the bottom drag coefficient, g is the acceleration of gravity, L is the shelf width, α is the mean bottom slope from the shore to distance L, and D_0 is the vertical coastal wall. Finally, coastal flooding height (h) is calculated by subtracting the topographical elevation in-land (h_T) from the obtained run-up at the shoreline.

$$h = h_T - \eta \qquad \textbf{(Eq. 25)}$$

Storm surge hazard is modeled in terms of the geographical distribution of h. Similar to the case of wind fields, for each historical cyclone one-hundred storm surge floods are calculated each corresponding to a simulation of the historical track. From the set of floods, the expected value and variance of the flood height is calculated at each location, which respectively represent the first natural moment and second central moment of a Gamma probability distribution that defines the random nature of h.

2.3 Information Used for the Analysis

2.3.1 Catalogue of Historical Tropical Cyclones

The tracks of historical tropical cyclones were obtained from the IBTrACS database (Knapp et al. 2010). This database represents the repository of information associated with tropical cyclones that is the most up to date. IBTrACS provides the following information:

- Record date (hour, day, month and year).
- Central pressure of the cyclone (in milibars)
- Geographical positioning (latitude, longitude).
- Maximum sustained speed of the wind averaged at 1 min
- Basin and sub-basin to that the recorded cyclone belongs.

The hazard analysis was divided by oceanic basins. The IBTrACS database contains cyclone records from 1842. Given the scarce number of records from 1842 to the middle of the 20th Century, an analysis of the completeness of the number of cyclones recorded per year was carried out, with the aim of determining the cut-off year from which the database can be considered adequate and exhaustive. Figure 15 to Figure 20 show the accumulated number of tropical cyclones recorded in IBTrACS for the analyzed basins, up to 2013.

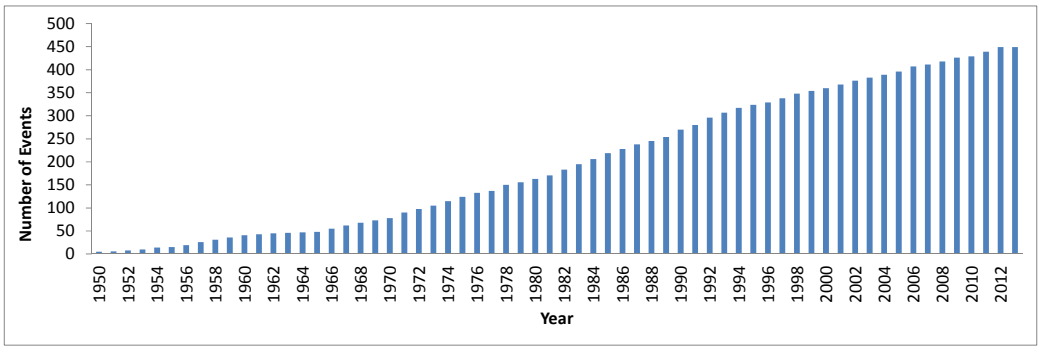


Figure 15. Total number of accumulated events for the Northeast Pacific Ocean basin

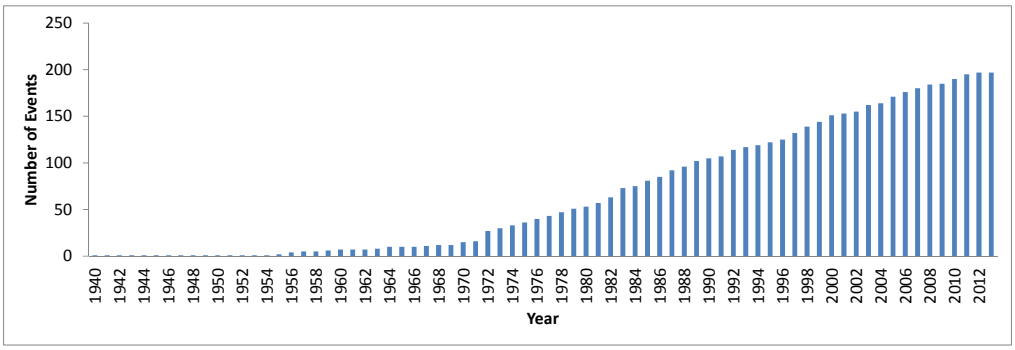


Figure 16. Total number of accumulated events for the South Pacific Ocean basin

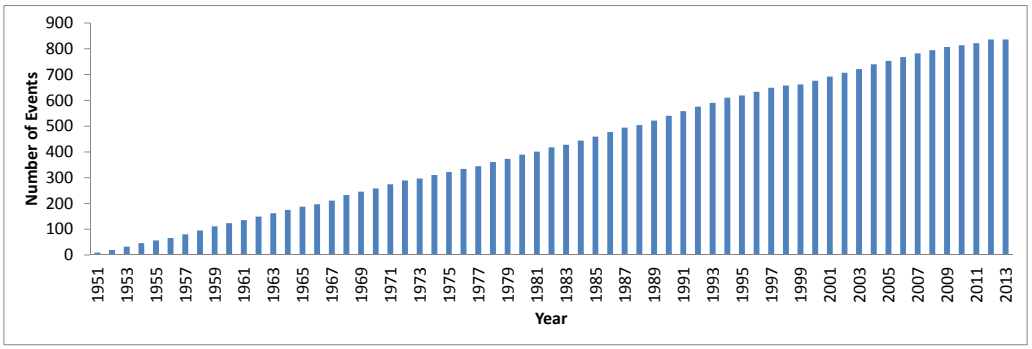


Figure 17. Total number of accumulated events for the Northwest Pacific Ocean basin

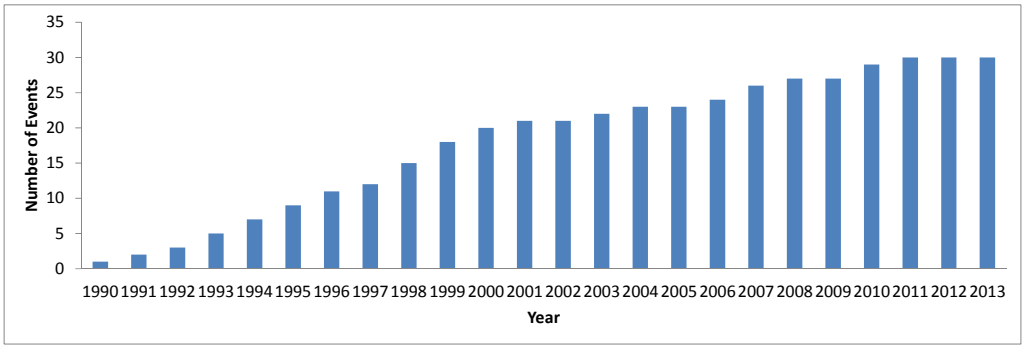


Figure 18. Total number of accumulated events for the North Indian Ocean basin

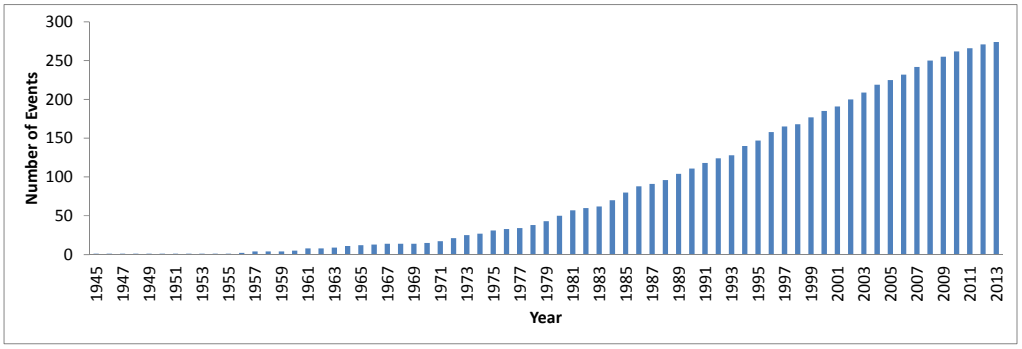


Figure 19. Total number of accumulated events for the South Indian Ocean basin

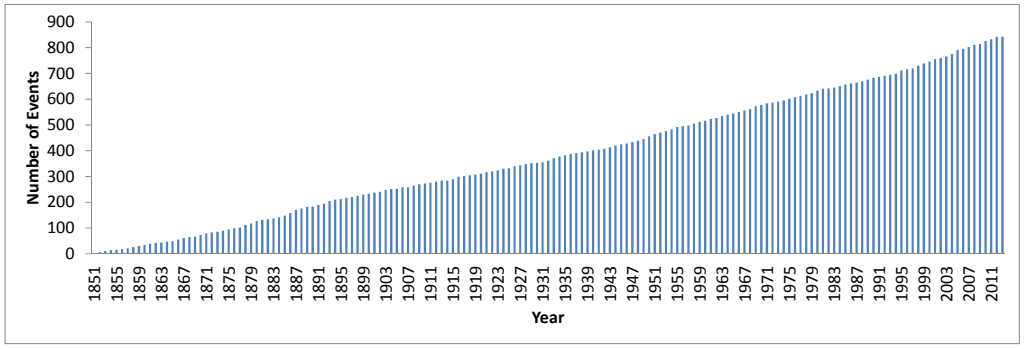


Figure 20. Total number of accumulated events for the North Atlantic Ocean basin

Following the analysis of the completeness, it is possible to determine the cut off year that is most appropriate for each one of the basins under analysis, value that is presented in Table 4.

Table 4. Cut-off year for each basin.

Basin	Cut-off year
Northeast Pacific Ocean	1950
South Pacific Ocean	1972
Northwest Pacific Ocean	1951
North Indian Ocean	1990
South Indian Ocean	1964
North Atlantic Ocean	1851

In Figure 21, the tracks of the complete set of cyclones selected from IBTrACS are shown from the cut off year until 2013. In total 2594 tropical cyclones were selected on a global scale. Annex 7 shows the complete set of historical tracks by basin and by Saffir-Simpson category.

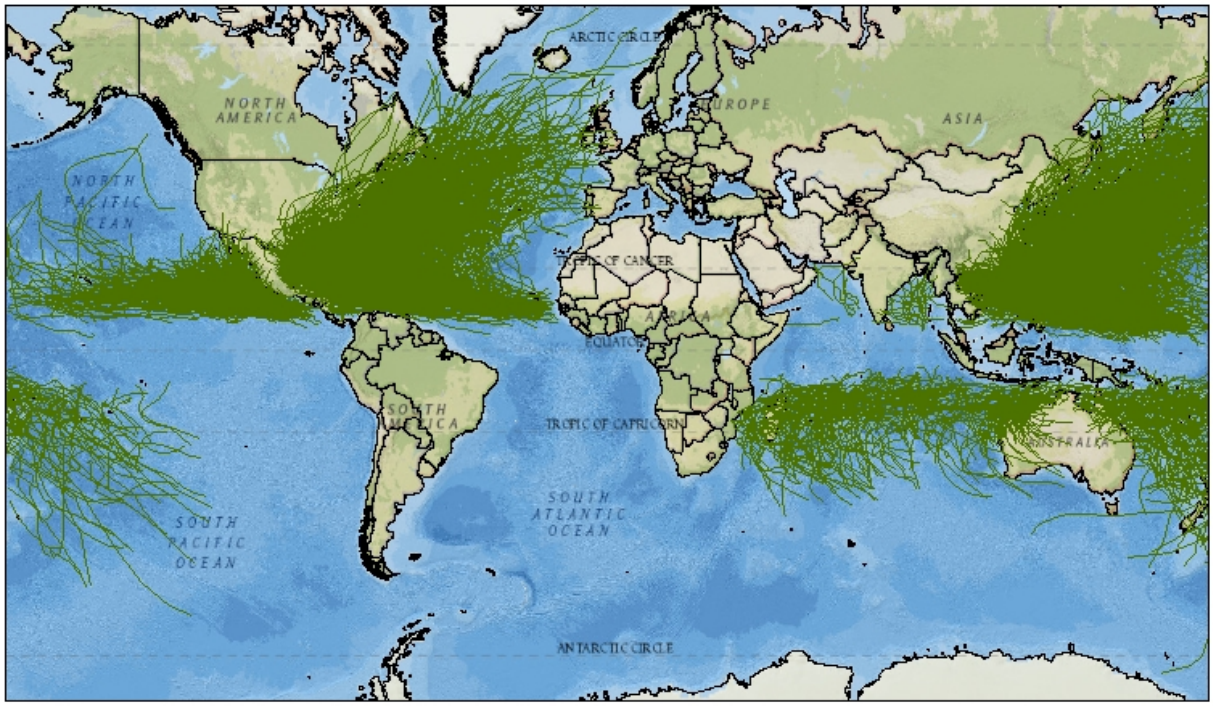


Figure 21. Cyclone tracks used in hazard modelling

2.3.1.1 Annual Occurrence Frequency

For risk assessment, an annual occurrence frequency has to be assigned to the gridded probability moments of the intensity (v_{10} or h). This frequency accounts for the temporal probability of occurrence of each cyclone in any year. The annual occurrence frequency is assumed to be the same for all cyclones of each oceanic basin. In other words, we are assuming that each cyclone is unique and unrepeatable. Therefore, the occurrence frequency of all cyclones is calculated as the

inverse of the number of years of data recording and observation at each basin. This period is determined by the cut-off year of each basin.

Table 5. Annual occurrence frequency of the cyclones for each basin.

Basin	Annual occurrence frequency (1/year)
Northeast Pacific Ocean	0.016
South Pacific Ocean	0.023
Northwest Pacific Ocean	0.016
North Indian Ocean	0.042
South Indian Ocean	0.028
North Atlantic Ocean	0.006

2.3.2 Topography

Topography was taken from the Shuttle Radar Topography Mission (SRTM) of NASA, which provides terrain elevation grids at a 90 meters resolution, delivered by quadrants over the world (see Figure 22).

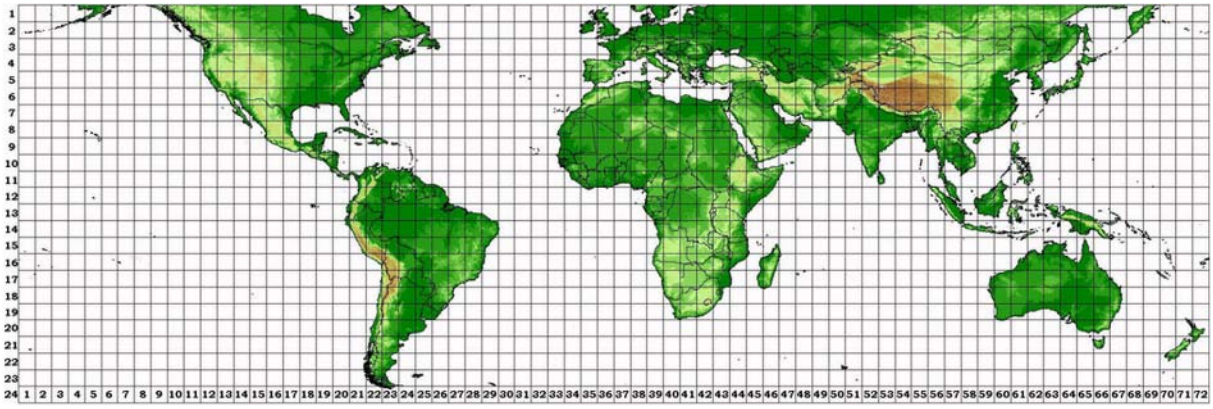


Figure 22. SRTM topography and quadrants for the globe.

For storm surge modelling, only some quadrants are necessary to order to fully represent the required topography. Figure 23 shows the quadrants used for the entire globe for storm surge hazard assessment. Figure 24 to Figure 29 show the same quadrants, region by region, for reader reference.

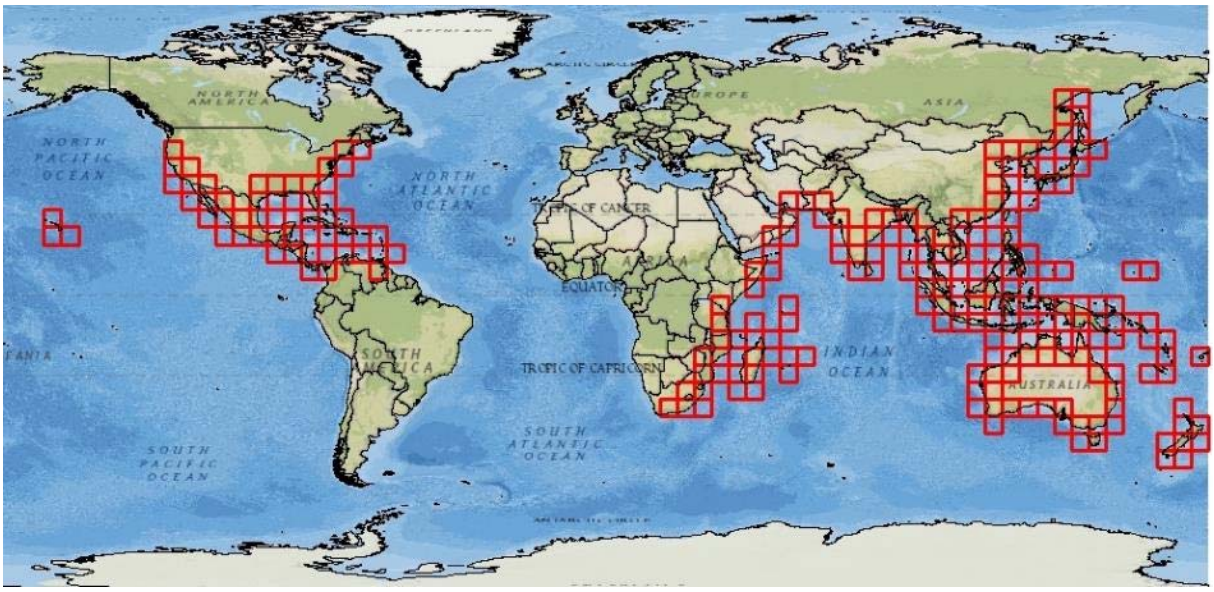


Figure 23. SRTM topography quadrants used in storm surge hazard assessment.

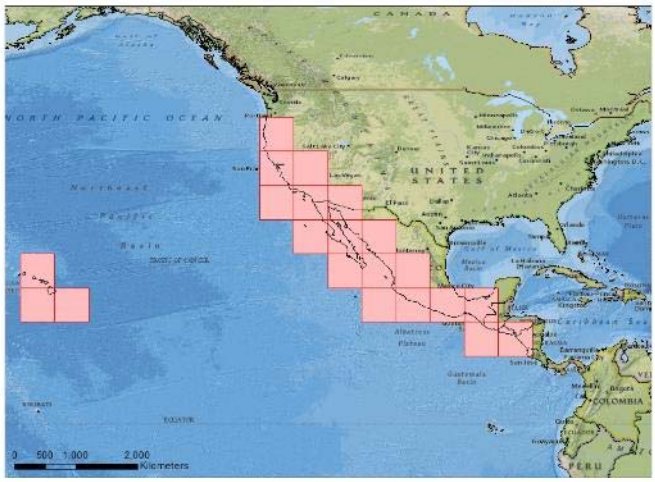


Figure 24. SRTM topography quadrants used for the East Pacific basin region.

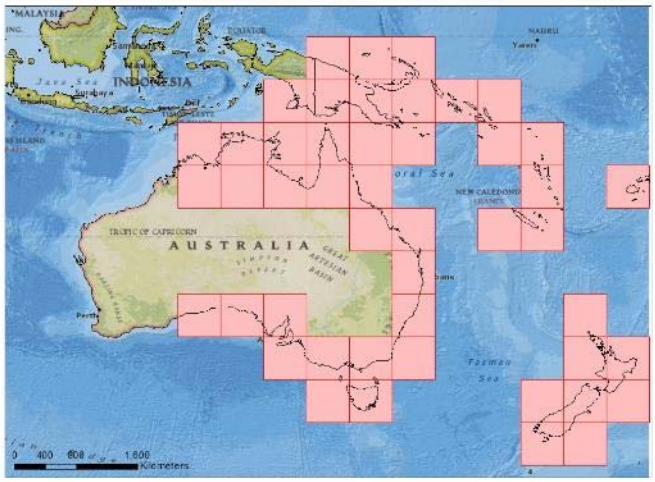


Figure 25. SRTM topography quadrants used for the South Pacific basin region.

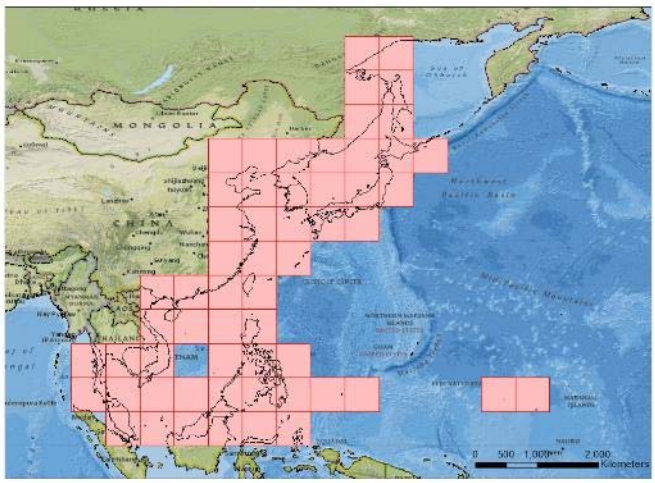


Figure 26. SRTM topography quadrants used for the West Pacific basin region.

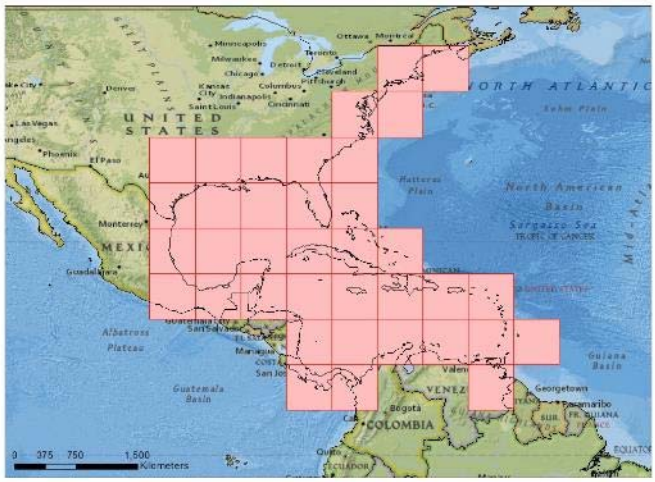


Figure 27. SRTM topography quadrants used for the North Atlantic basin region.

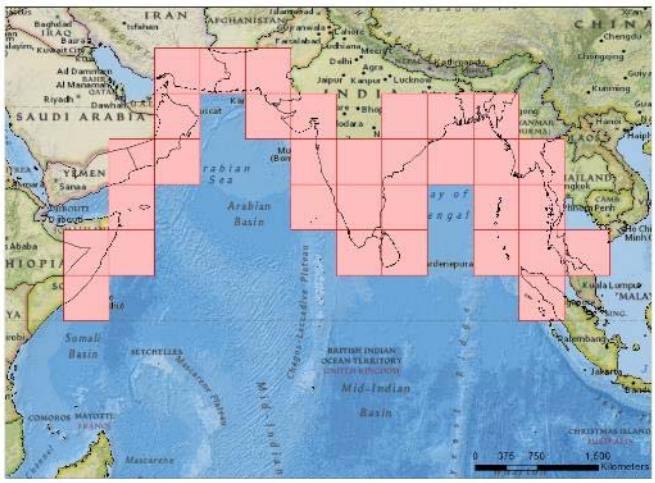


Figure 28. SRTM topography quadrants used for the North Indian basin region.

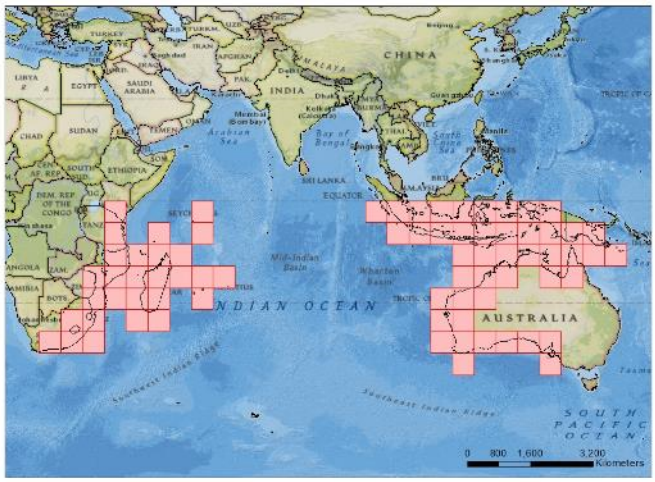


Figure 29. SRTM topography quadrants used for the South Indian basin region.

2.3.3 Ground roughness

To account for surface roughness, polygons of urban areas worldwide were obtained from the Socioeconomic Data and Applications Centre, SEDAC (CIESIN et al., 2011). This was considered a good proxy of the spatial variation of surface roughness. Figure 30 shows the location of urban polygons at a global level.

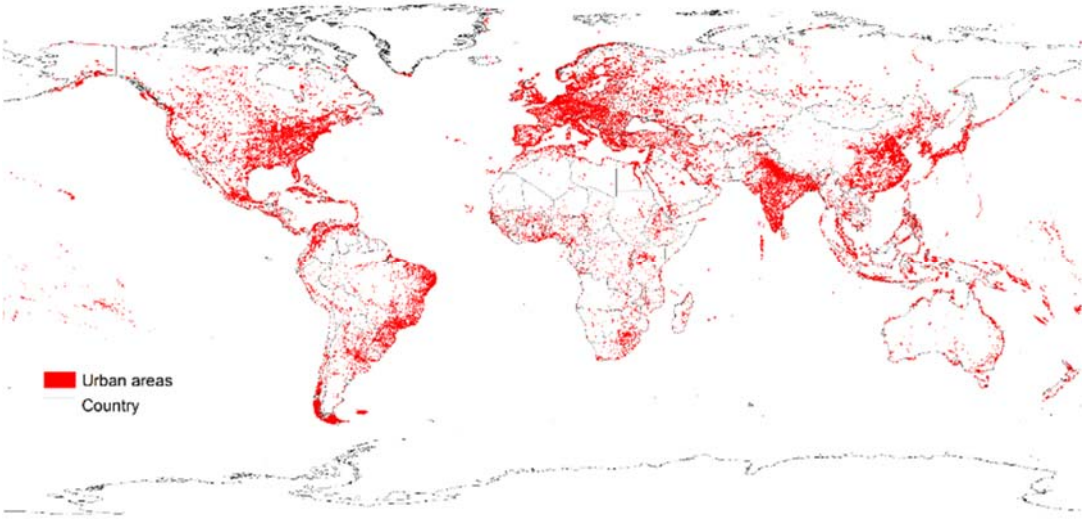


Figure 30. Urban areas worldwide.

2.3.4 Bathymetry

A digital bathymetry model is employed with a spatial resolution of 30 arc-seconds, taken from the GEBCO_08 (General Bathymetric Chart of the Oceans) Grid Database of the British Oceanographic Data Centre (2009). Figure 31 shows the global bathymetry map.

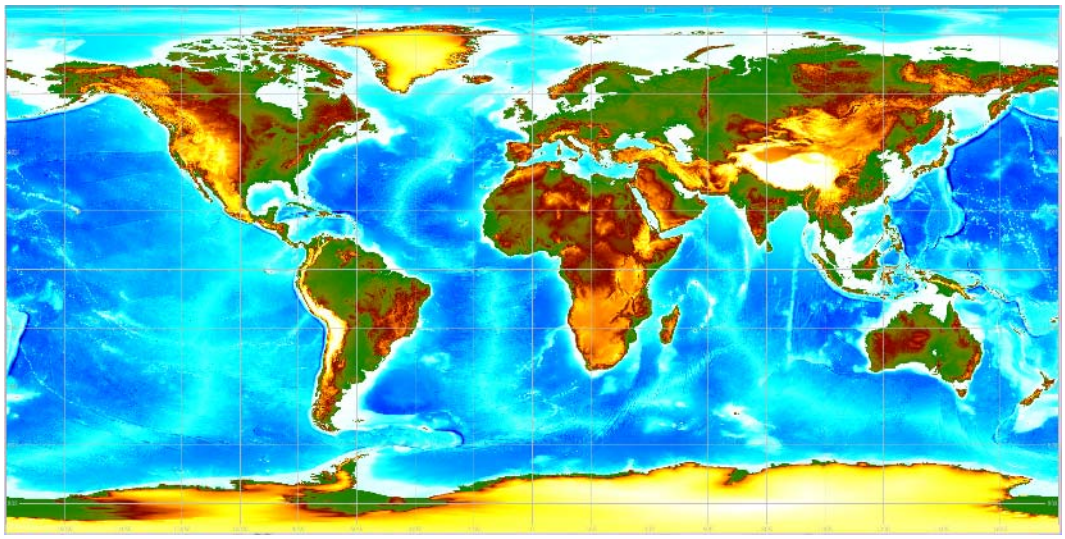


Figure 31. World bathymetry.

2.3.5 Wind hazard results

In this study, 2594 hazard scenarios were obtained worldwide following the hazard assessment methodology (one for each historical cyclone). This set of scenarios was used to calculate catastrophe risk at several countries of the world. However, in order to present the results in a more traditional fashion, hazard is integrated at each geographical location, using the following expression.

$$\nu(v_{10}) = \sum_{i=1}^{N} \Pr(v > v_{10} \mid E_i) F_i \qquad \textbf{(Eq. 26)}$$

where $\nu(v_{10})$ is the annual excess rate of v_{10}, N is the total number of scenarios, $\Pr(v>v_{10}|E_i)$ is the probability of exceeding v_{10} at the geographical location, given the occurrence of scenario E_i, and F_i is the annual occurrence frequency of scenario E_i. Using this procedure, hazard maps of fixed return period may be generated, taking into account that $\nu(v_{10})$ is the inverse of the return period.

Figure 32 to Figure 52 present the hazard maps for 25, 50 and 100 years return period for all basins under analysis. Hazard curves (i.e. return period as a function of v_{10}) for some cities of the world

were also computed and are presented in Annex 8. These hazard curves were computed at an arbitrary location inside each city.

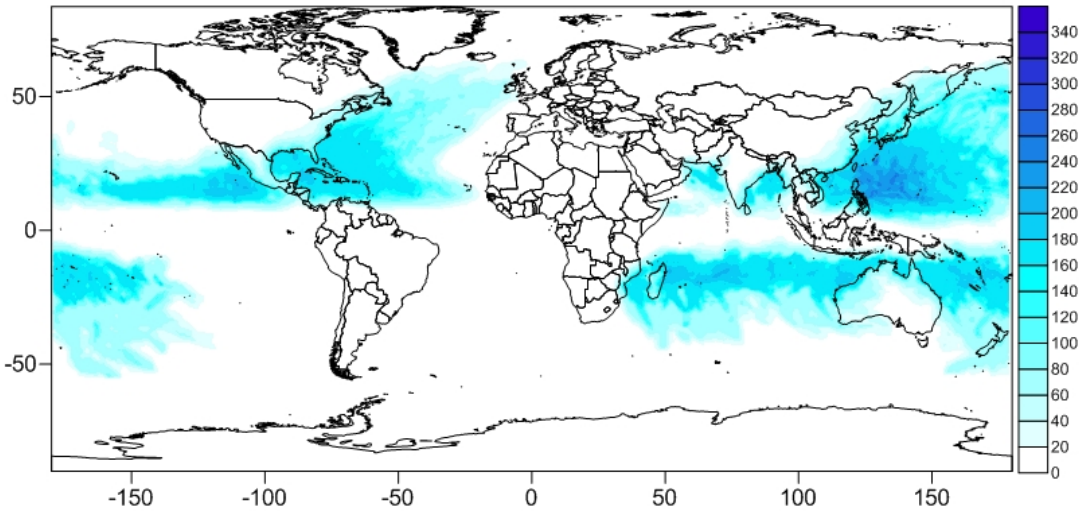


Figure 32. Worldwide tropical cyclones' strong winds hazard map for 25 years return period.

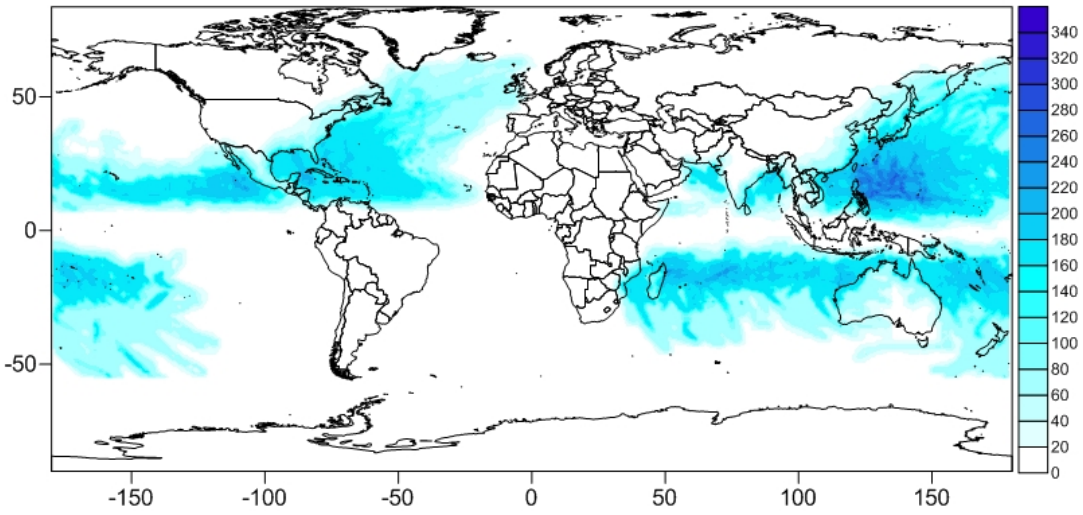


Figure 33. Worldwide tropical cyclones' strong winds hazard map for 50 years return period.

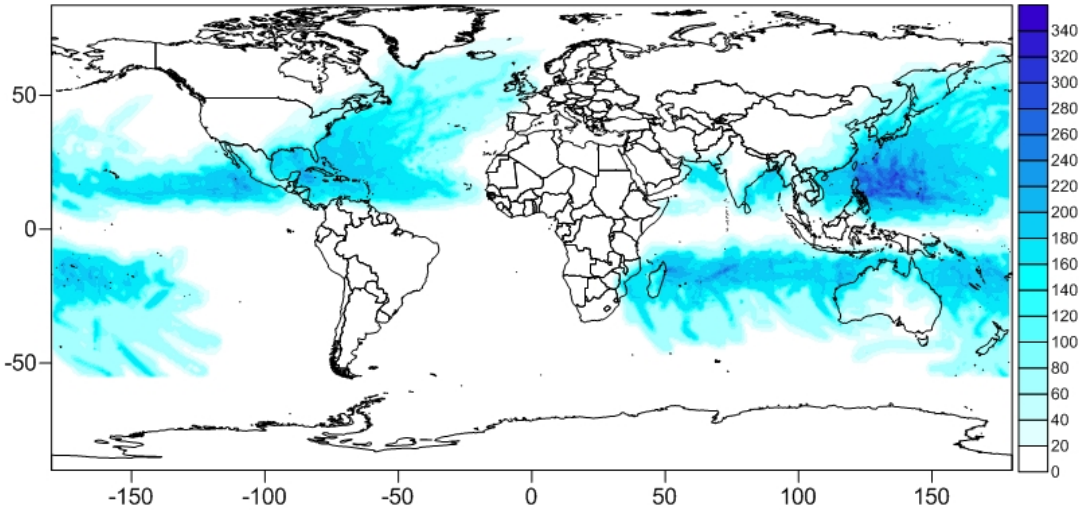


Figure 34. Worldwide tropical cyclones' strong winds hazard map for 100 years return period.

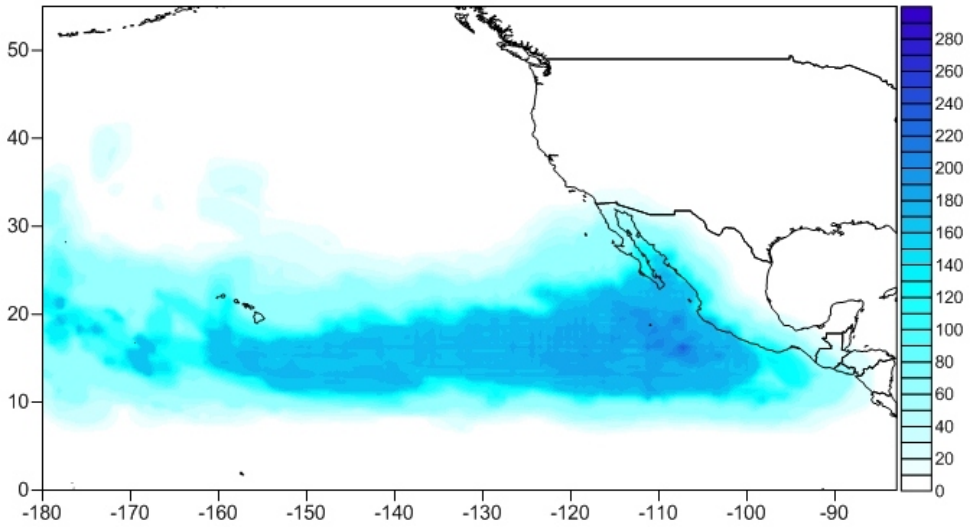


Figure 35. Tropical cyclones' strong winds hazard map for 25 years return period, for the Northeast Pacific Ocean.

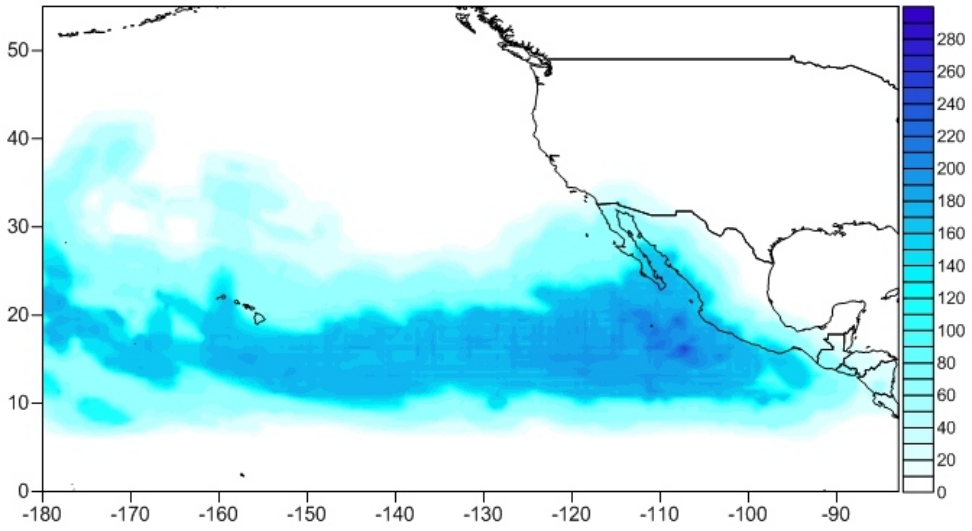


Figure 36. Tropical cyclones' strong winds hazard map for 50 years return period, for the Northeast Pacific Ocean.

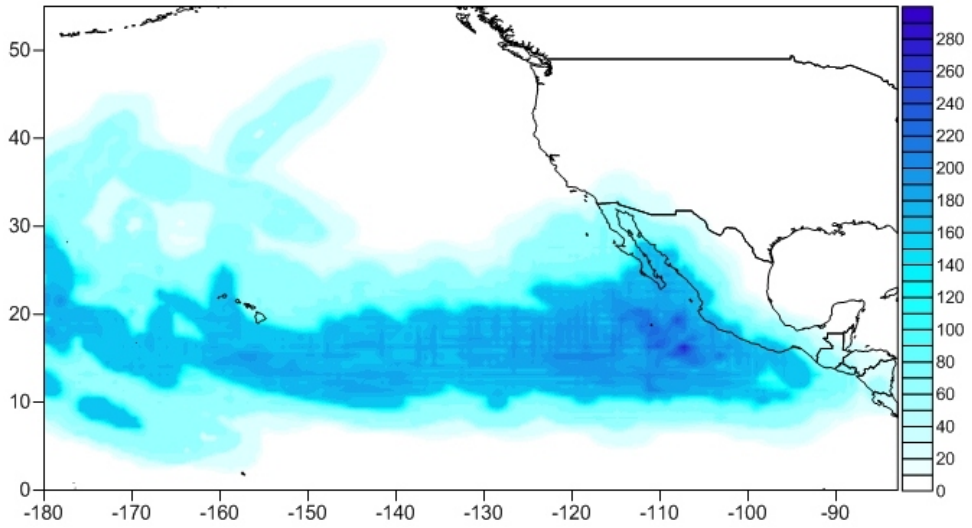


Figure 37. Tropical cyclones' strong winds hazard map for 100 years return period, for the Northeast Pacific Ocean.

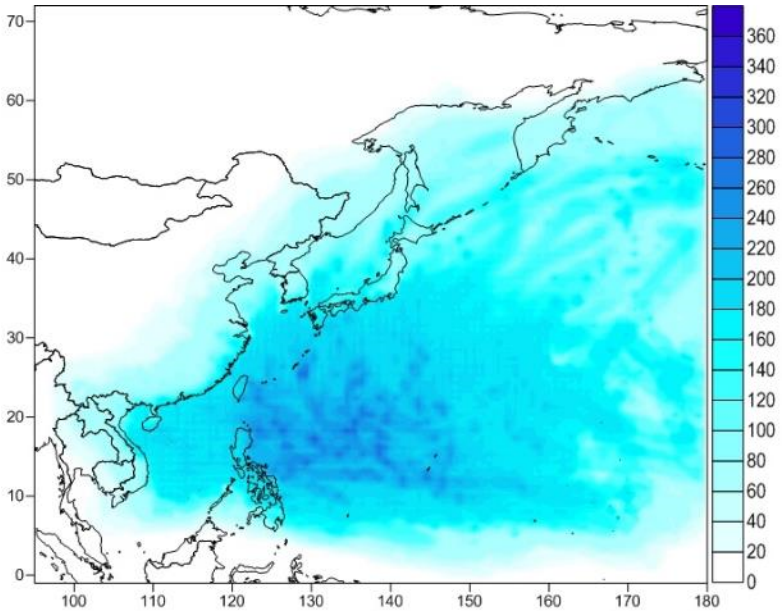


Figure 38. Tropical cyclones' strong winds hazard map for 25 years return period, for the Northwest Pacific Ocean.

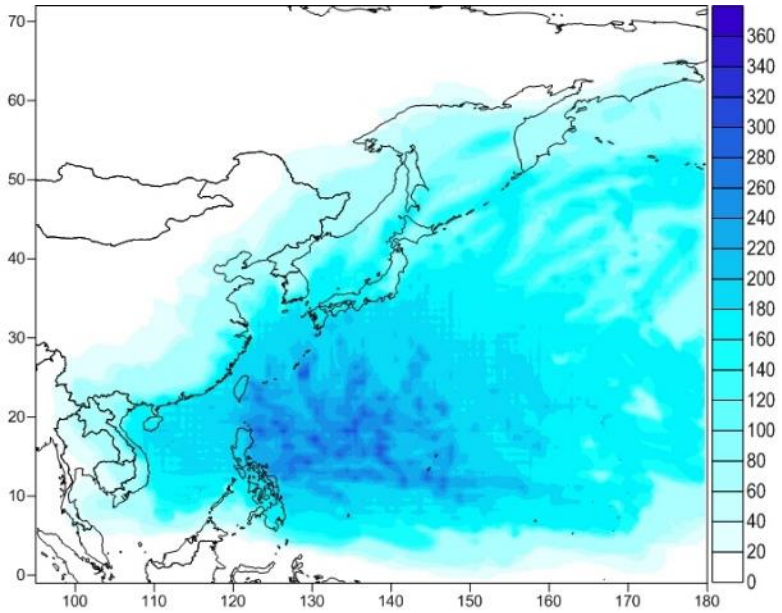


Figure 39. Tropical cyclones' strong winds hazard map for 50 years return period, for the Northwest Pacific Ocean.

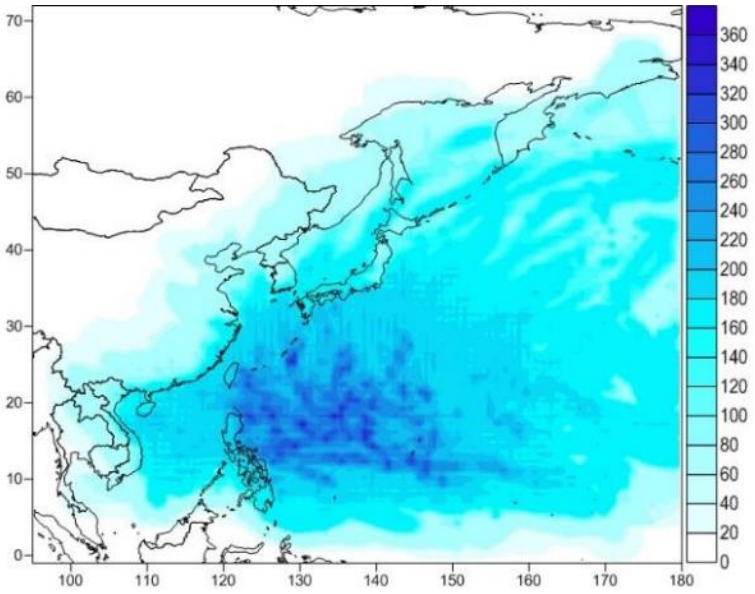


Figure 40. Tropical cyclones' strong winds hazard map for 100 years return period, for the Northwest Pacific Ocean.

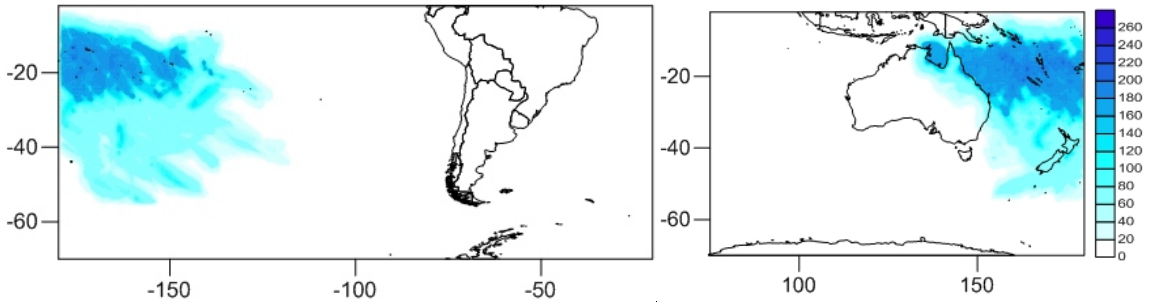


Figure 41. Tropical cyclones' strong winds hazard map for 25 years return period, for the South Pacific Ocean.

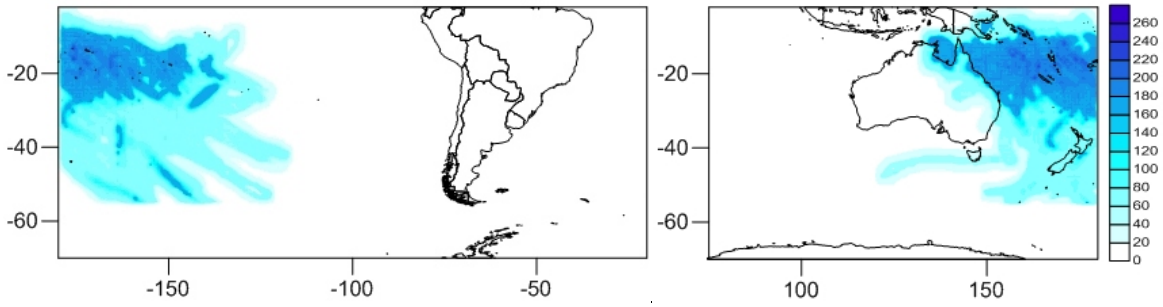


Figure 42. Tropical cyclones' strong winds hazard map for 50 years return period, for the South Pacific Ocean.

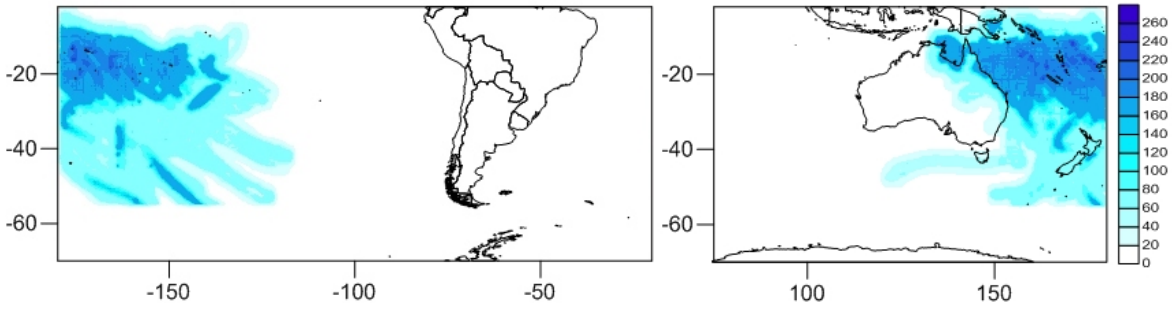


Figure 43. Tropical cyclones' strong winds hazard map for 100 years return period, for the South Pacific Ocean.

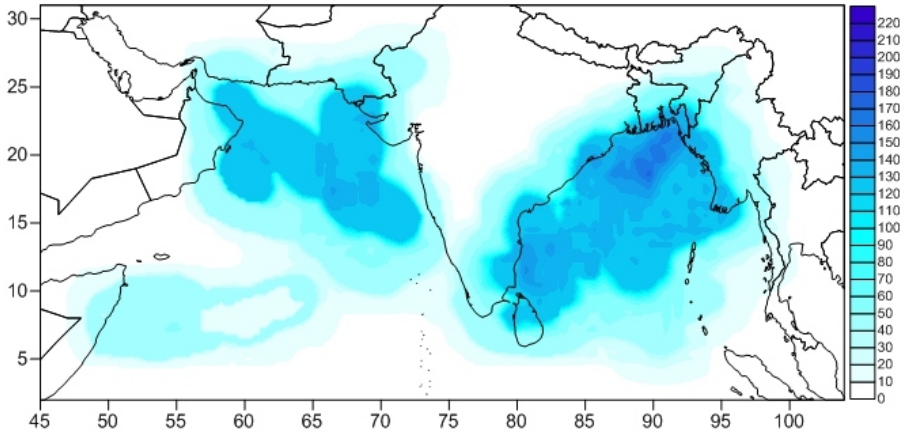


Figure 44. Tropical cyclones' strong winds hazard map for 25 years return period, for the North Indian Ocean.

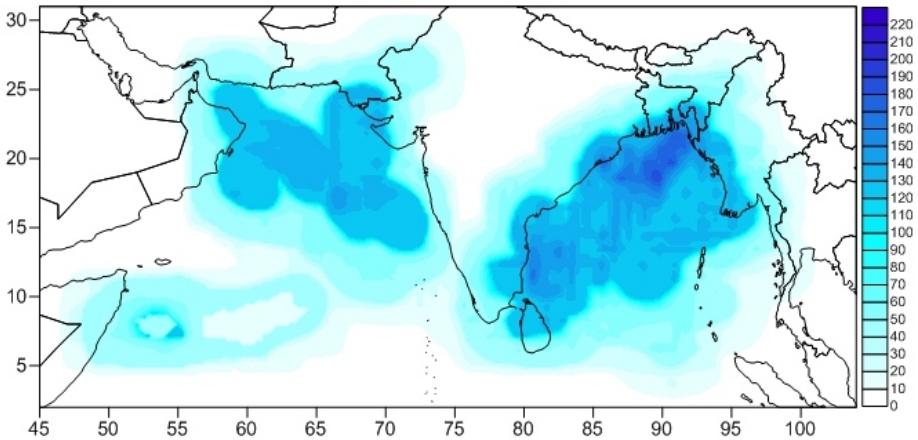


Figure 45. Tropical cyclones' strong winds hazard map for 50 years return period, for the North Indian Ocean.

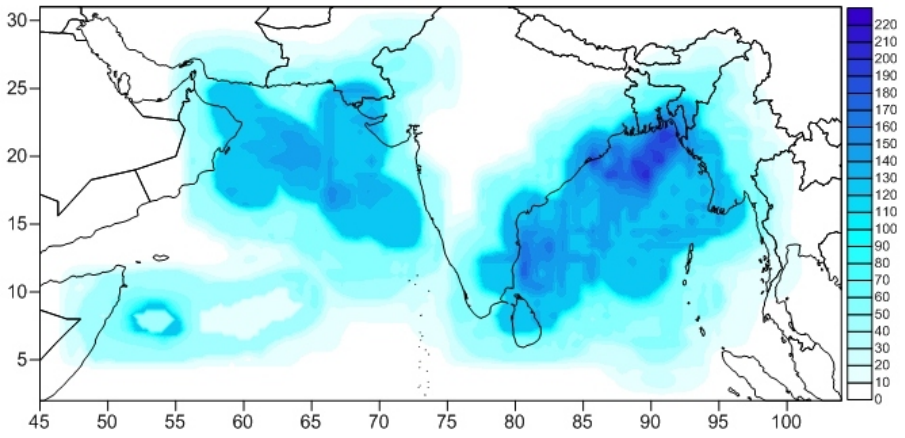


Figure 46. Tropical cyclones' strong winds hazard map for 100 years return period, for the North Indian Ocean.

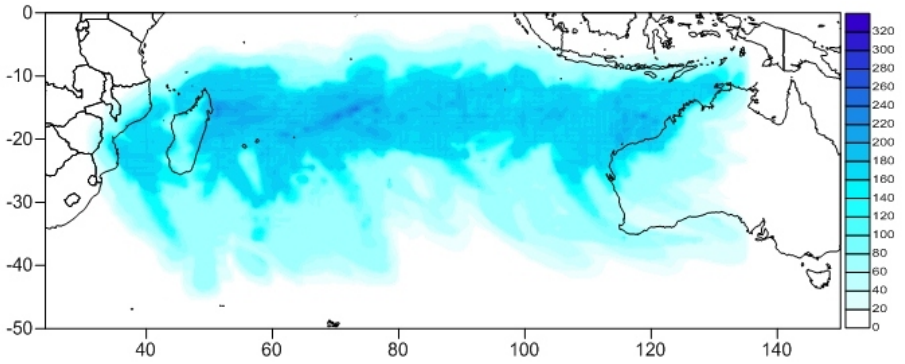


Figure 47. Tropical cyclones' strong winds hazard map for 25 years return period, for the South Indian Ocean.

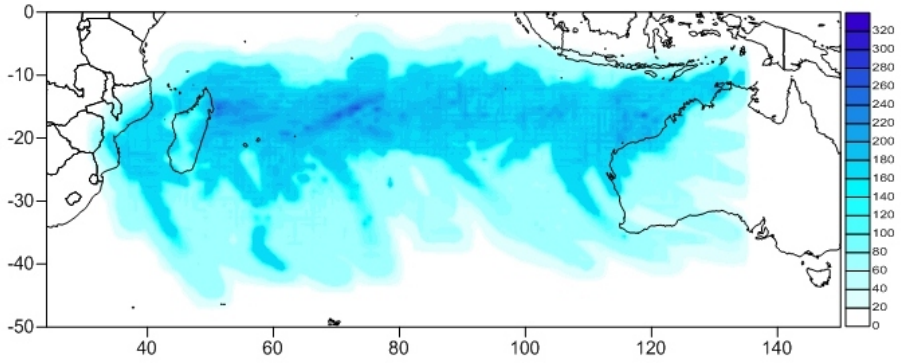


Figure 48. Tropical cyclones' strong winds hazard map for 50 years return period, for the South Indian Ocean.

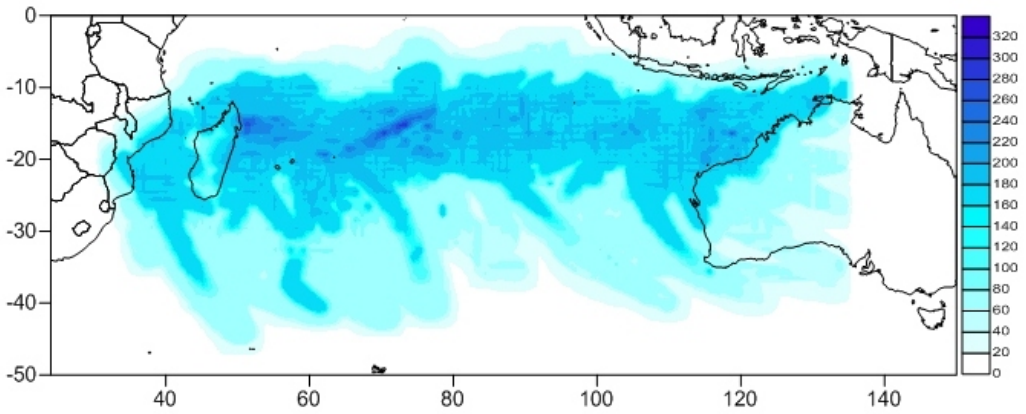


Figure 49. Tropical cyclones' strong winds hazard map for 100 years return period, for the South Indian Ocean.

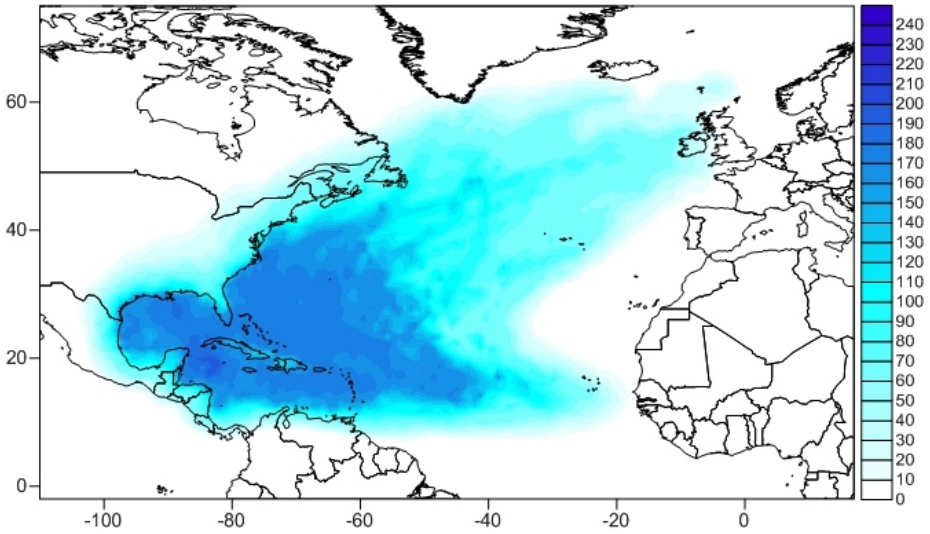


Figure 50. Tropical cyclones' strong winds hazard map for 25 years return period, for the North Atlantic Ocean.

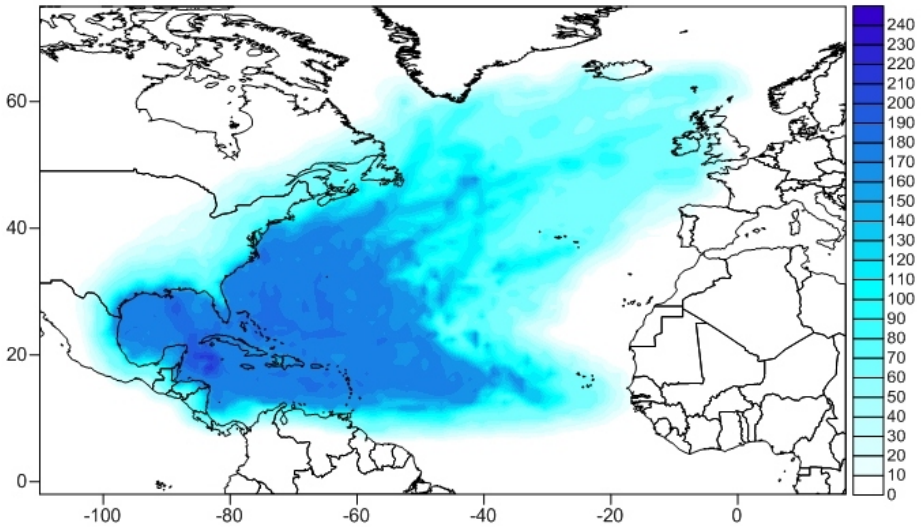


Figure 51. Tropical cyclones' strong winds hazard map for 50 years return period, for the North Atlantic Ocean.

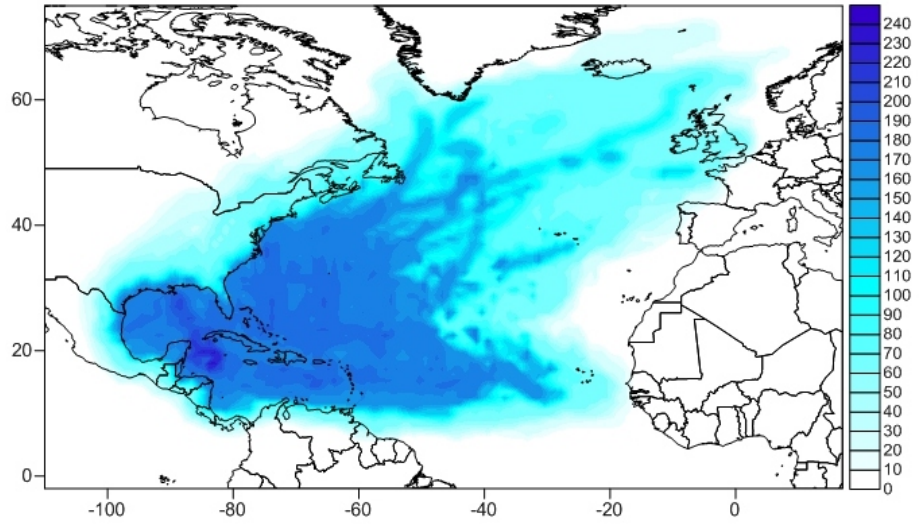


Figure 52. Tropical cyclones' strong winds hazard map for 100 years return period, for the North Atlantic Ocean.

2.3.6 Strom Surge Hazard Results

Strom surge flood at coastal areas was calculated for all the countries in the world exposed to tropical cyclones. Given the large amount of data generated, in this report we present only a few case results in order to illustrate the reader. Hazard curves (i.e. return period as a function of coastal

flood depth *h*) for some cities of the world were also computed and are presented in Annex 8. These hazard curves were computed at an arbitrary location inside each city.

2.3.6.1 Hurricane Hattie (1961) in Belize.

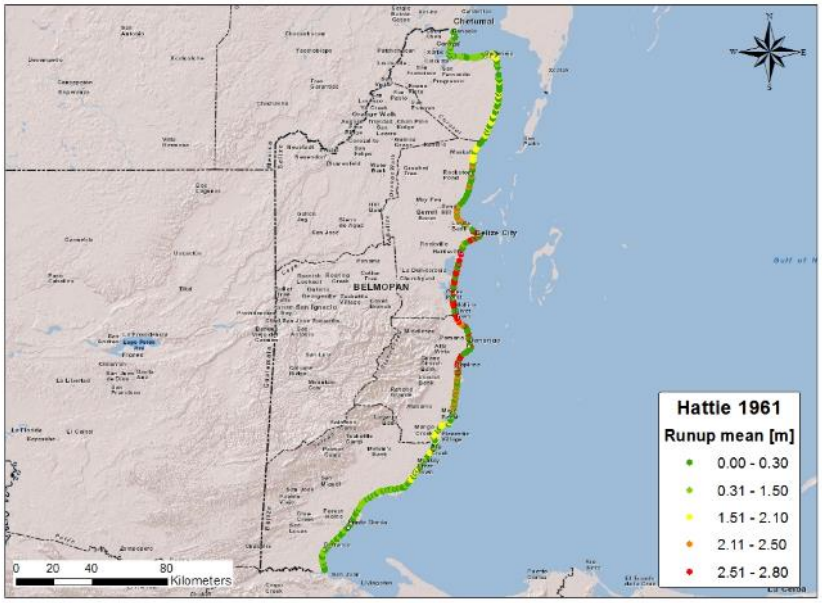


Figure 53. Mean value of the storm surge run-up along the coast of Belize for 100 simulations of hurricane Hattie (1961).

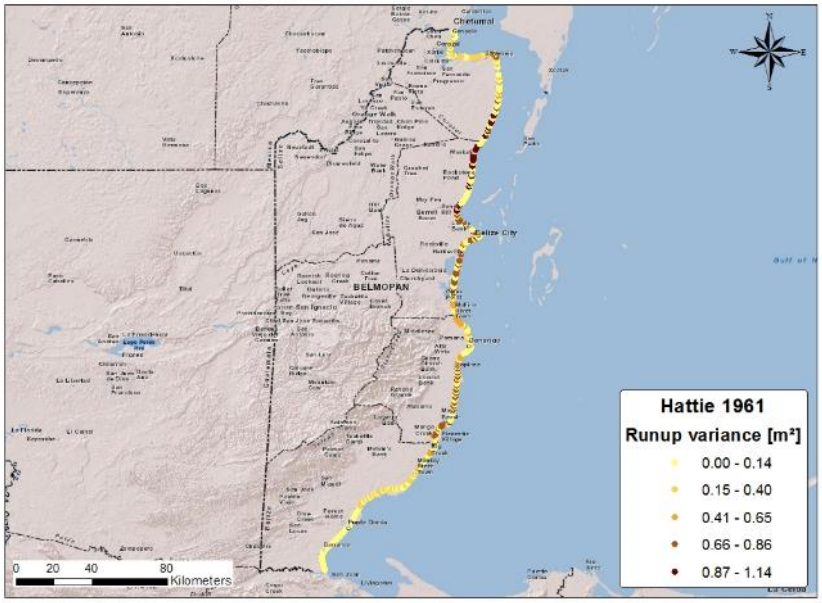


Figure 54. Variance of the storm surge run-up along the coast of Belize for 100 simulations of hurricane Hattie (1961).

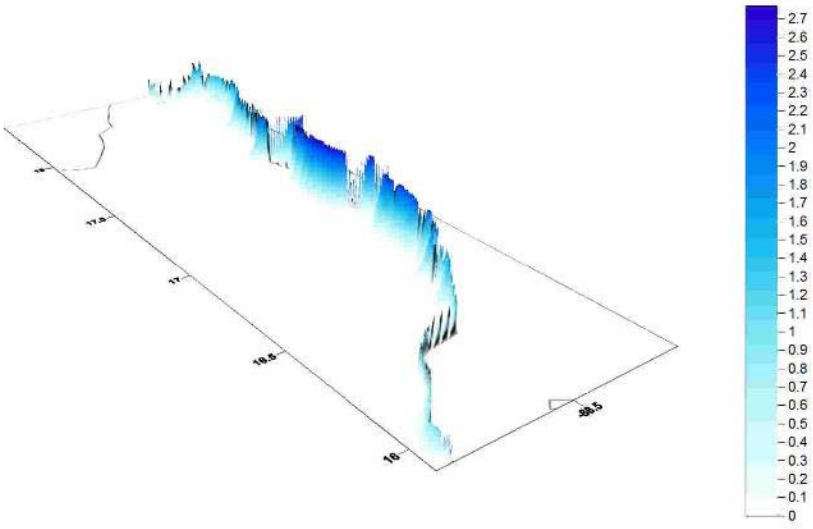


Figure 55. Mean storm surge coastal flood in Belize for 100 simulations of hurricane Hattie (1961).

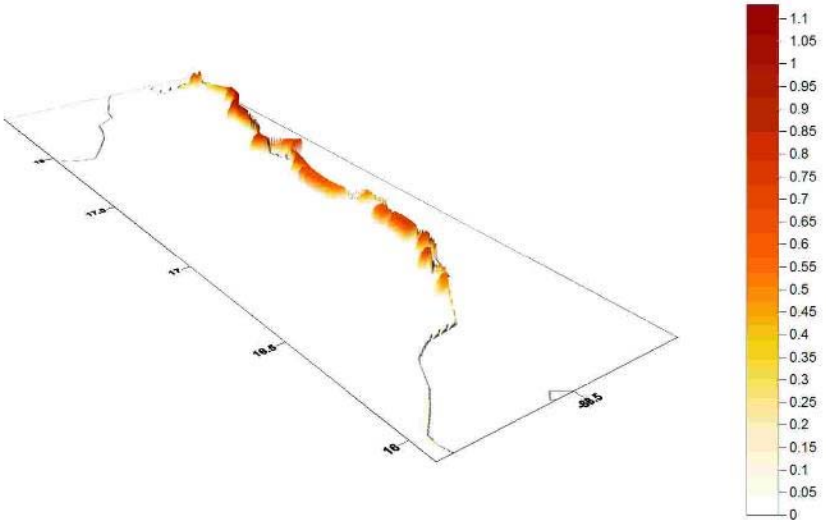


Figure 56. Variance of the storm surge coastal flood in Belize for 100 simulations of hurricane Hattie (1961).

2.3.6.2 Typhoon Tip (1979) in Japan

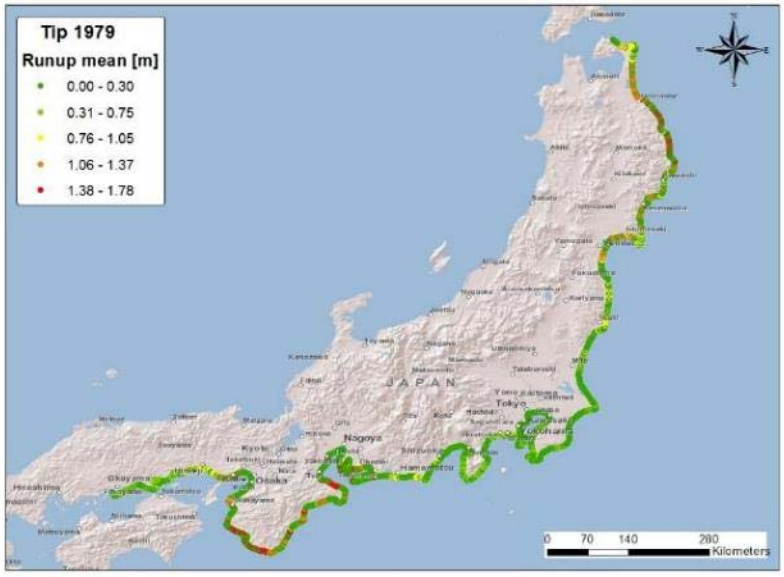


Figure 57. Mean value of the storm surge run-up along the coast of Japan for 100 simulations of typhoon Tip (1979).

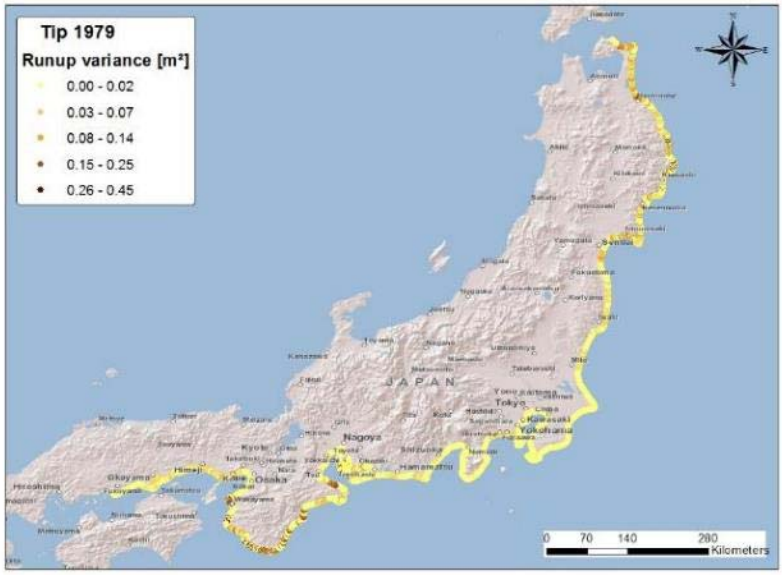


Figure 58. Variance of the storm surge run-up along the coast of Japan for 100 simulations of typhoon Tip (1979).

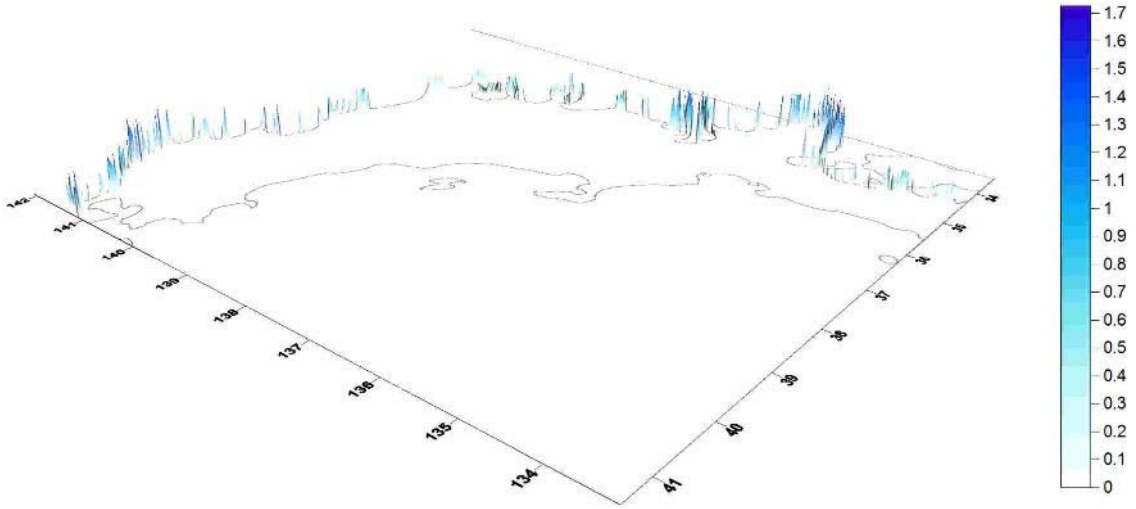


Figure 59. Mean storm surge coastal flood in Japan for 100 simulations of typhoon Tip (1979).

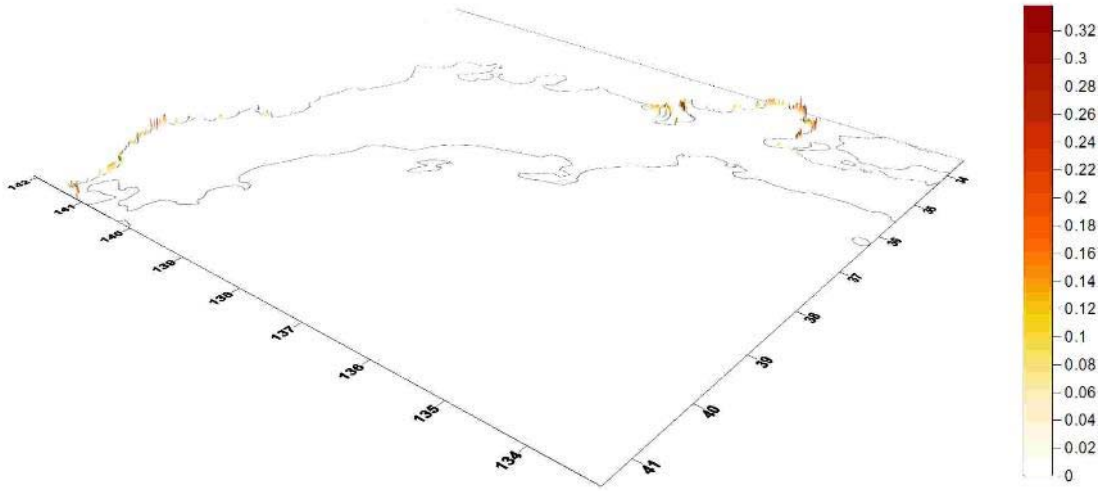


Figure 60. Variance of the storm surge coastal flood in Japan for 100 simulations of typhoon Tip (1979).

2.3.6.3 Cyclone Giri (2010) in Myanmar.

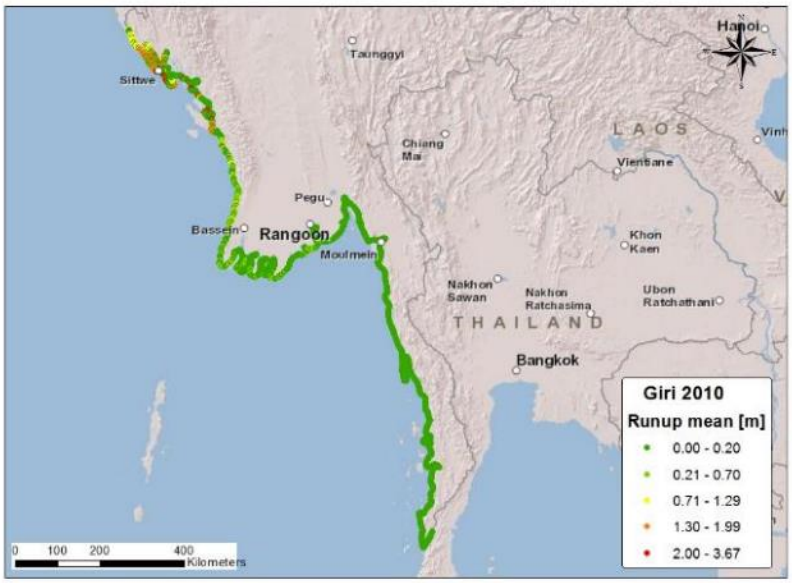


Figure 61. Mean value of the storm surge run-up along the coast of Myanmar for 100 simulations of cyclone Giri (2010).

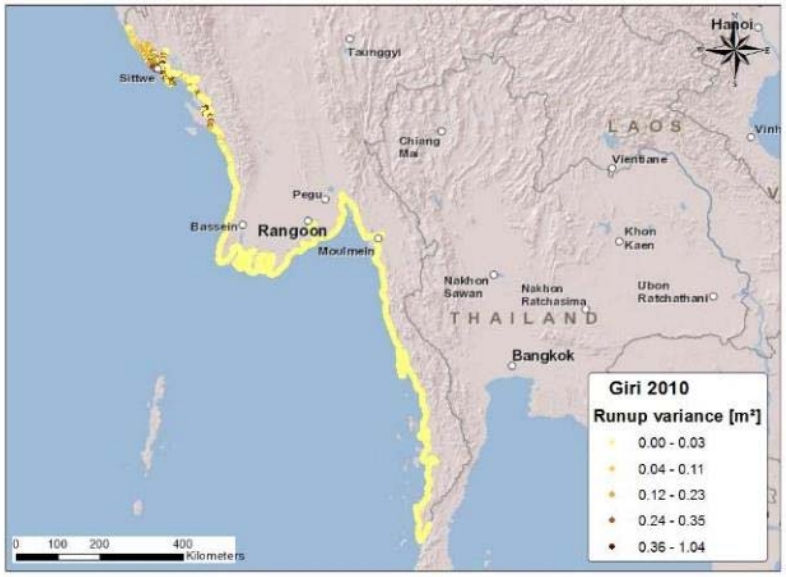


Figure 62. Variance of the storm surge run-up along the coast of Myanmar for 100 simulations of cyclone Giri (2010).

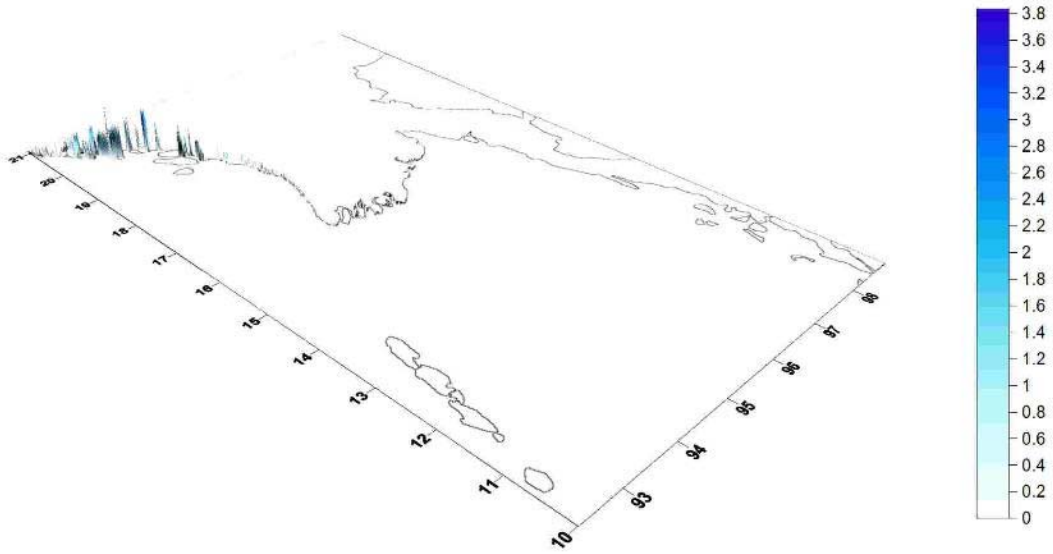


Figure 63. Mean storm surge coastal flood in Myanmar for 100 simulations of cyclone Giri (2010).

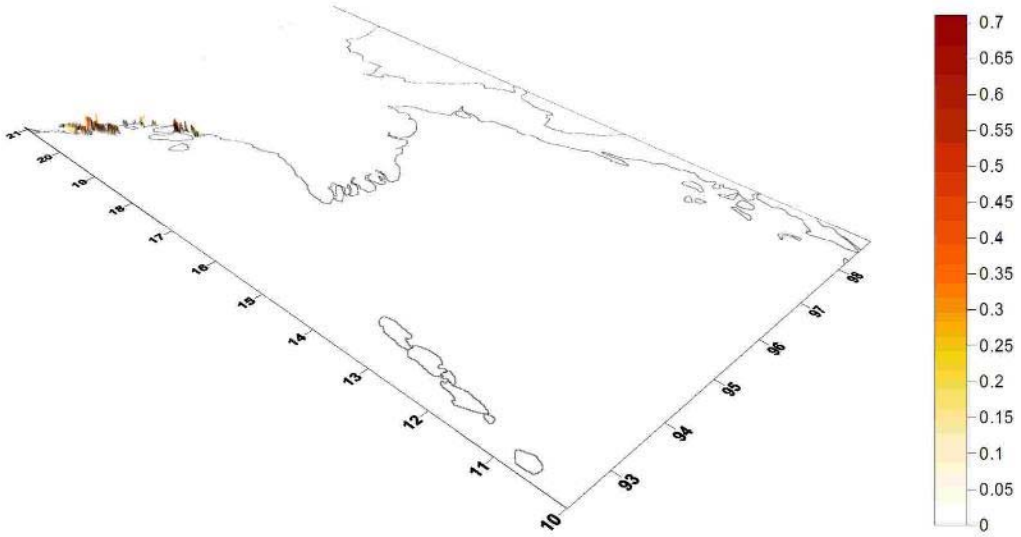


Figure 64. Variance of the storm surge coastal flood in Myanmar for 100 simulations of cyclone Giri (2010).

2.3.6.4 Typhoon Nesat (2011) in Philippines.

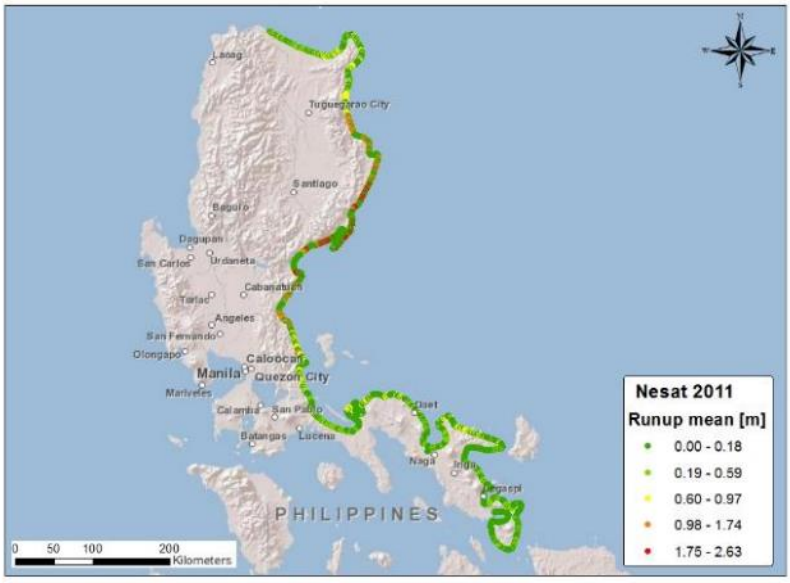


Figure 65. Mean value of the storm surge run-up along the coast of Philippines for 100 simulations of typhoon Nesat (2011).



Figure 66. Variance of the storm surge run-up along the coast of Philippines for 100 simulations of typhoon Nesat (2011).

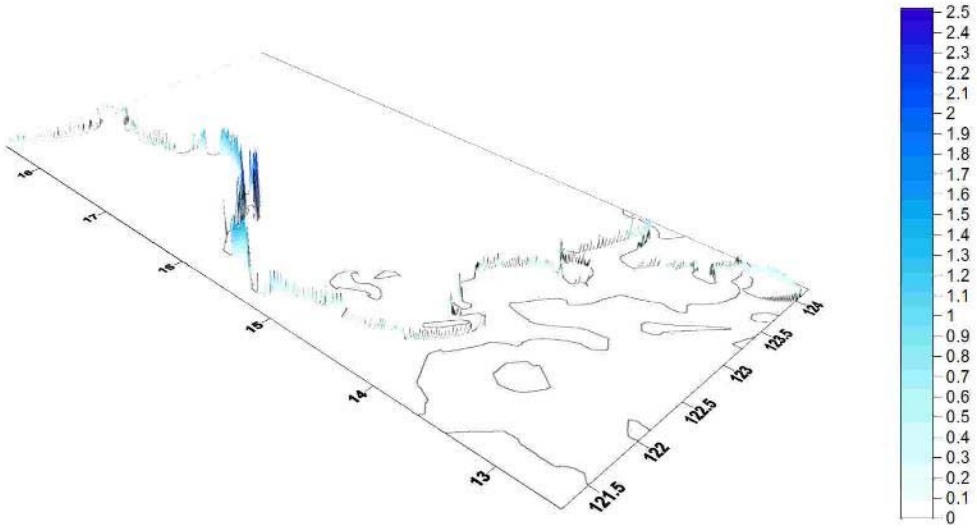


Figure 67. Mean storm surge coastal flood in Philippines for 100 simulations of typhoon Nesat (2011).

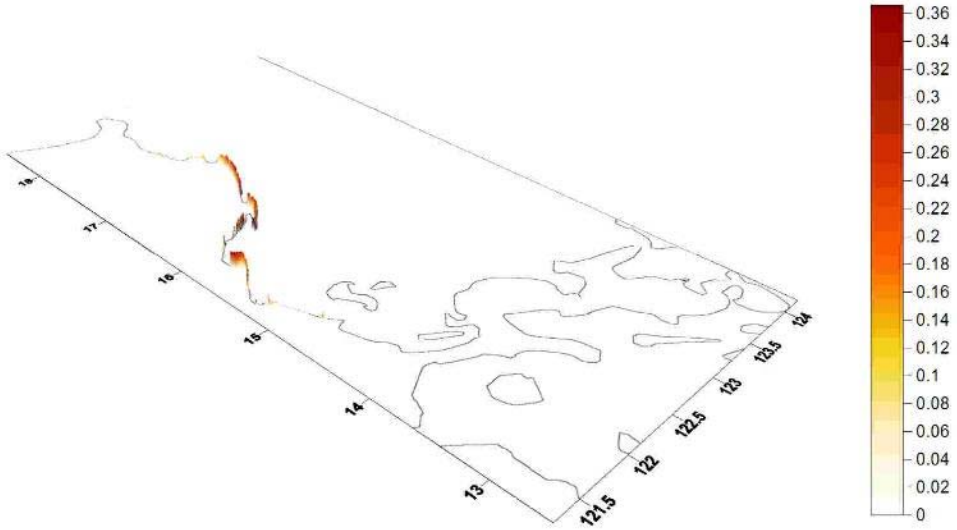


Figure 68. Variance of the storm surge coastal flood in Philippines for 100 simulations of typhoon Nesat (2011).

2.3.6.5 Hurricane Katrina (2005) in USA



Figure 69. Mean value of the storm surge run-up along the coast of USA for 100 simulations of hurricane Katrina (1961).

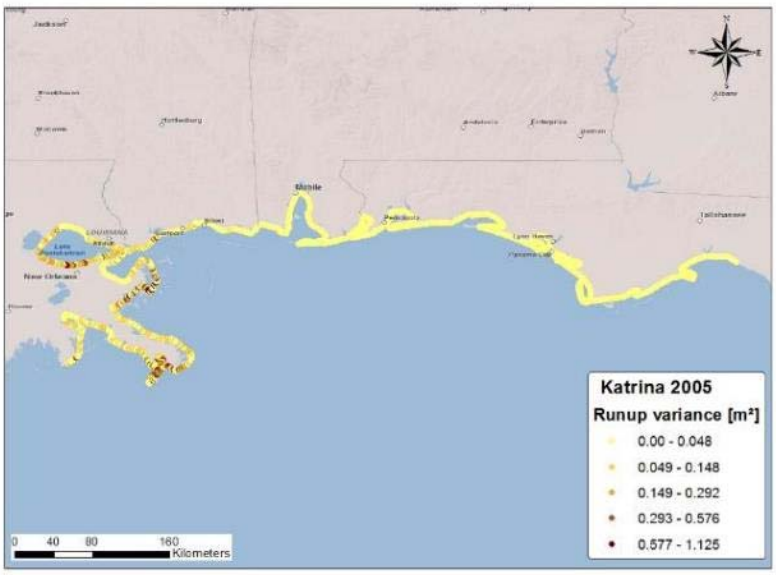


Figure 70. Variance of the storm surge run-up along the coast of USA for 100 simulations of hurricane Katrina (1961).

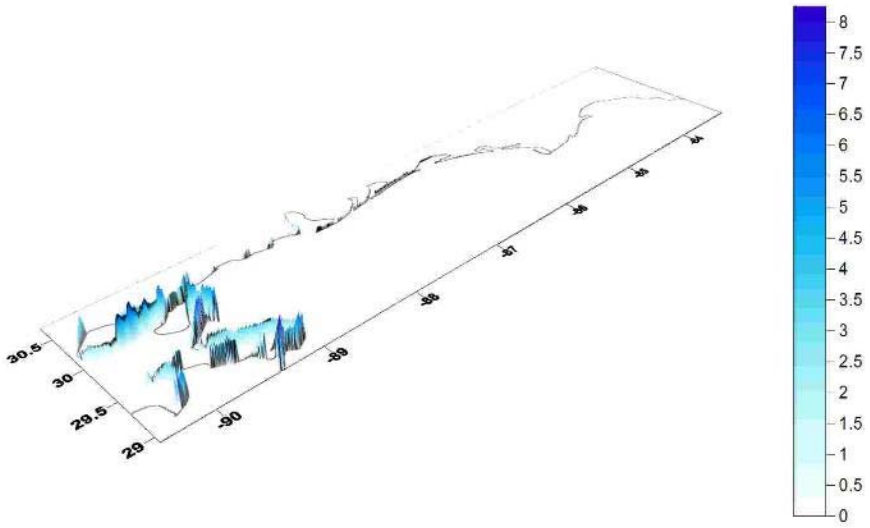


Figure 71. Mean storm surge coastal flood in USA for 100 simulations of hurricane Katrina (1961).

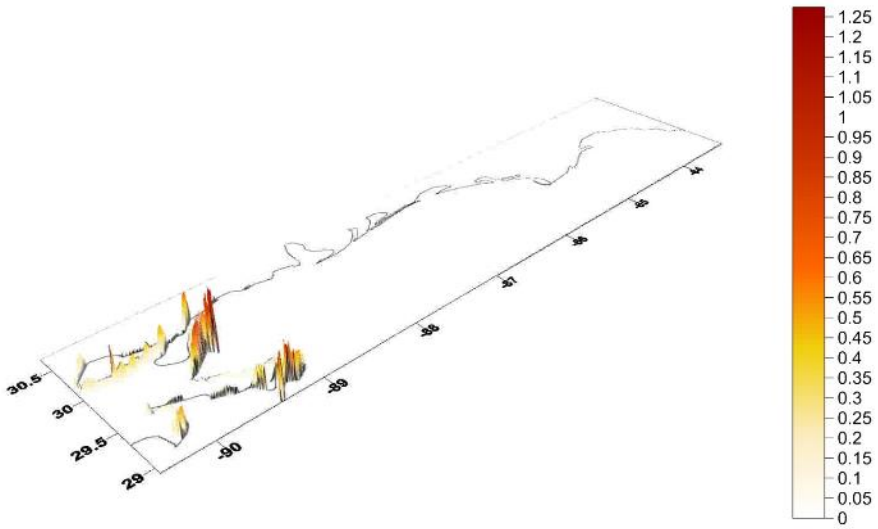


Figure 72. Variance of the storm surge coastal flood in USA for 100 simulations of hurricane Katrina (1961).

2.4 Strong Winds Hazard Assessment Considering Climate Change for the North Atlantic Basin

Global climate change is likely to modify the trends of occurrence of extreme meteorological events, such as tropical cyclones. The Intergovernmental Panel on Climate Change (IPCC), in its special report SREX_SPM (IPCC, 2012), provides a general framework associated with the effects of climate change in terms of observed and projected changes in cyclonic activity in the world:

- Observed changes: Given the changes made in the ability to observe the past, there is a low level of confidence regarding the observation of any increase in the long term (i.e. 40 years or more) of the activity tropical cyclones.

- Projected changes: Likely that the global frequency of tropical cyclones will decrease or remain essentially unchanged. Likely increase in average wind speed of tropical cyclones, although the increase may not occur in all ocean basins. Likely increase in heavy precipitation associated with tropical cyclones. It is expected that the increase of the sea level continue to enhance the adverse effects of tropical cyclones.

In this sense, we can expect an increase in the effects of cyclones (wind speed) in the Caribbean countries on behalf of increased intensity (Saffir-Simpson category) of North Atlantic hurricanes.

A special hazard assessment was included in this version of GAR, in which probable future cyclone tracks in the North Atlantic Ocean basin were used to perform hazard and risk calculations for the countries in the Caribbean region. The future tracks were obtained from the results of the Nested Regional Climate Model (NRCM) developed by the National Center for Atmospheric Research of the United States (NCAR). Annex 9 presents some general insights related to the main effects of Climate Change in the Caribbean, mainly the sea-level rise and the occurrence of extreme future events (such as hurricanes).

2.4.1 Catalogue of Future Tropical Cyclones

We used the set of simulations of possible future trajectories generated for the Inter-American Development Bank by NCAR using NRCM. These trajectories were simulated for the decades of 1995-2005 (control decade), 2020-2030 and 2045-2055. Annex 10 shows the tracks of the simulated cyclones for the both periods, all together and separated by Saffir-Simpson Category.

For the proper application of the hazard assessment model, and subsequent application of the results in a risk analysis, it is important to have a complete and continuous record of cyclones in the North Atlantic basin. Therefore, within the period to be characterized (2014-2055) the information gap for the periods 2014 - 2019 and 2031 - 2044 has to be filled.

The empty periods were completed using statistical techniques based on projections of the North Atlantic multi decadal variability (AMO for short- Atlantic Multidecadal Oscillation), which is a natural climate variability manifested as an oscillating change through time in the temperature of the ocean surface. This gap in the tropical cyclones catalog was completed taking into account the following criteria:

- One of the main causes of generation of hurricanes is the increasing of the Sea Surface Temperature (SST).
- The SST has a multidecadal variation (AMO), due to the thermohaline circulation of the oceans.

Figure 73 shows the time series of the SST anomaly for the North Atlantic Ocean, computed as an area weighed average of the values given by the Kaplan SST V2 dataset (ESRL PSD – NOAA). This SST index can be related to the number of highly intense hurricanes (Saffir Simpson categories 3, 4 and 5) per year that occur in the North Atlantic. Figure 74 shows this relation.

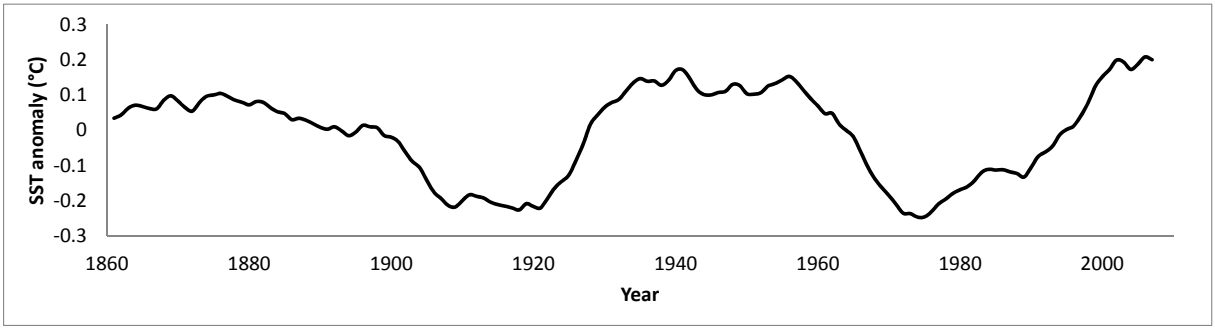


Figure 73. SST anomaly for the North Atlantic Ocean.

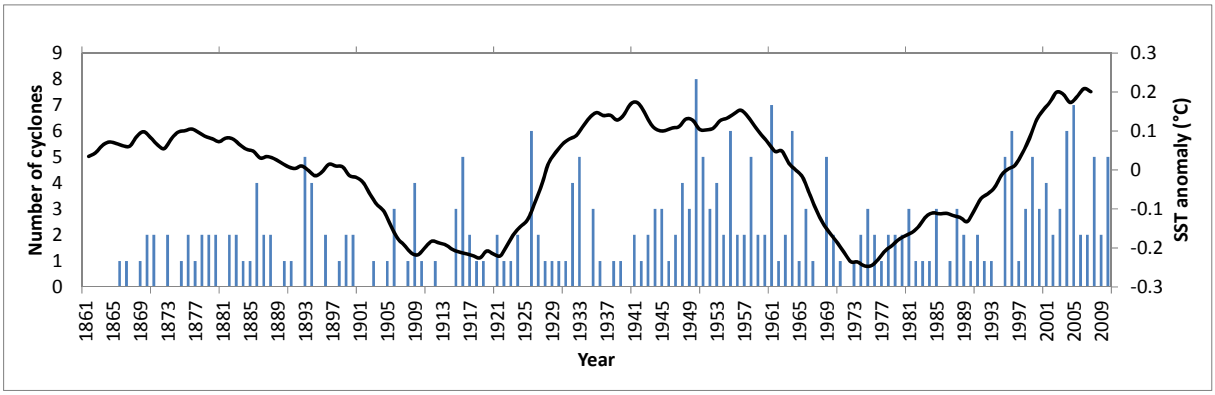


Figure 74. SST anomaly and number of SS 3, 4 and 5 cyclones per year in the North Atlantic Ocean.

Through the observation of the relationship of these two concepts with the historical frequency of occurrence of highly intense hurricanes, it is evident that in the phases of positive anomaly in the North Atlantic SST, a greater amount of hurricanes per year are observed, while the phases of the negative SST anomaly decreases the number of hurricanes per year.

This observed relationship is used to define a projection of the AMO index until 2055. This projection was made using a frequency analysis on the historical data of the SST anomaly. The Fourier transform of the time series of the anomaly, contains the fundamental frequencies and amplitudes of a large enough set of sine functions, whose sum represents, in the time domain, the values of the anomaly. By summing the sine functions mentioned, it is possible to estimate, at any point in time, the value of the anomaly. By performing this procedure it can be established that for the period 2000-2045 the North Atlantic SST would be in a phase of positive anomaly, while for 2045 to 2055 the anomaly would be negative.

The catalogue of future cyclone tracks was completed by adding disrupted version of historical hurricanes that have occurred during a positive phase of SST anomaly. The periods chosen are the

decade from 2004 to 2009, to complete the catalog for the period 2014-2019 and the period 1941-1954, to complete the catalog in the period between 2031 and 2044.

Because the probability that the historical trajectories chosen for the completeness of the catalog have the same path in the future is close to zero, the selected completion tracks were disrupted using a bi-dimensional Wiener process (see Equation 1). This in order to generate a comprehensive analysis that takes into account all possible paths that can affect the Caribbean in the analysis period between 2014 and 2055. Annex 4 shows the tracks of the simulated cyclones for the periods 2014-2019 and 2013-2044, all together and separated by Saffir-Simpson Category.

2.4.2 Wind Hazard Results

Figure 75 to Figure 77 present the hazard maps for 25, 50 and 100 years return period for the North Atlantic considering the effect of Climate Change. Annex 11 presents hazard curves (i.e. return period as a function of v_{10}) comparing the results with and without Climate Change for some cities in The Caribbean, Central America and North America. These hazard curves were computed at an arbitrary location inside each city.

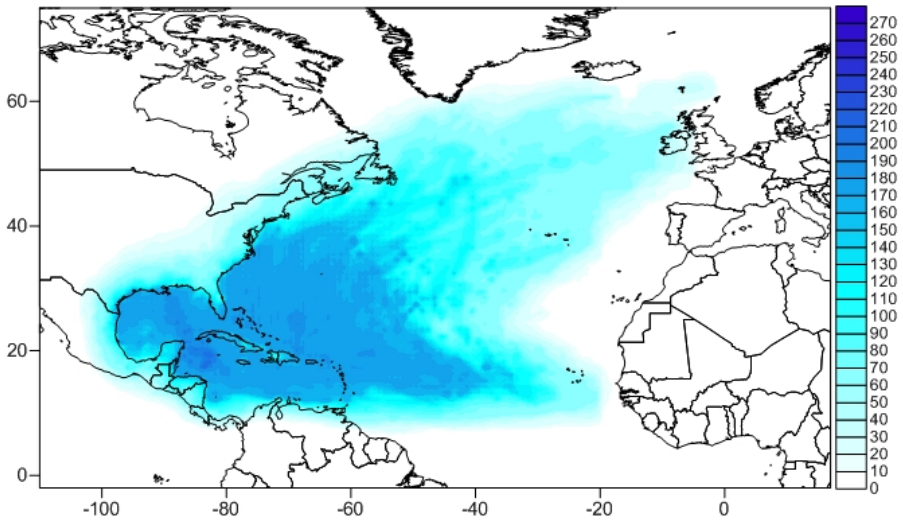


Figure 75. Strong winds hazard map for 25 years return period, for the North Atlantic Ocean considering Climate Change.

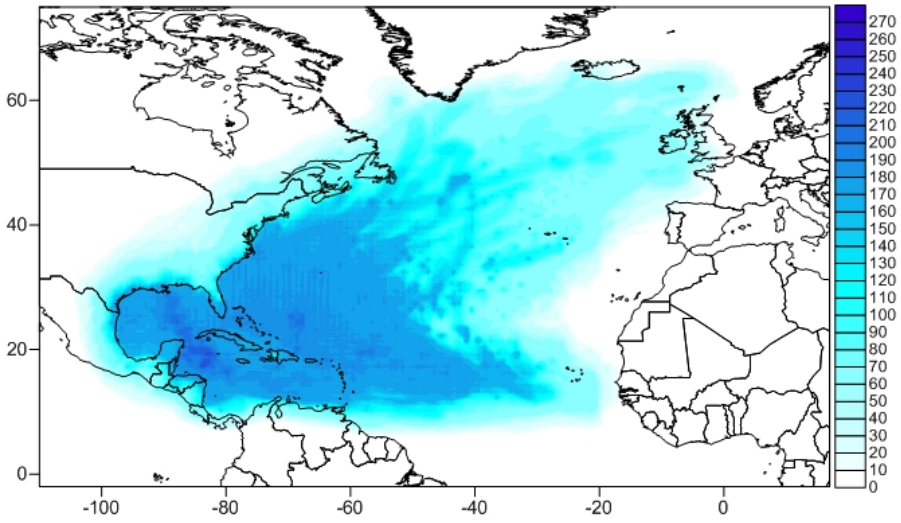


Figure 76. Strong winds hazard map for 50 years return period, for the North Atlantic Ocean considering Climate Change.

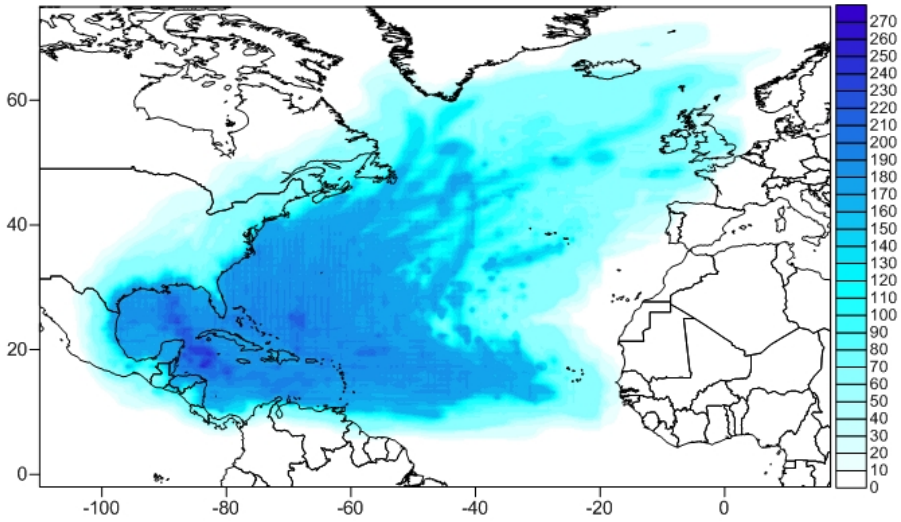


Figure 77. Strong winds hazard map for 100 years return period, for the North Atlantic Ocean considering Climate Change

3 Flood, Tsunami and Volcanic Ash Fall Hazards

For GAR15 several more hazards were included in comparison to GAR13. The complete set of hazards included in the Global Risk Model for GAR15 are Earthquake, TC Wind, TC Strom Surge, Floods (riverine), Tsunami and Volcanic Ash Fall. Earthquakes and TC wind and storm surge were already presented in the previous sections because they were modeled by this consulting group. Floods, tsunami and volcanic ash fall were modeled by other groups. In this section a general overview of the outcome generated by those groups as input for the risk assessment process is presented.

3.1 Flood Hazard

CIMA Foundation calculated the flood hazard for 143 countries by using its river overflow model and delivered flooding hazard maps for the following return periods: 25, 50, 100, 200, 500 and 1000 years. Each map is a raster grid where the water depth is indicated at each node. Given that this hazard representation is different to the one used for other hazards (see Annex 1), it has a limited applicability in risk assessment. In this case only the Average Annual Loss AAL can be computed, by following the procedure explained in section 7.2.2. To apply such procedure, hazard curves are required, which can be directly constructed from reading the hazard maps. Figure 78 shows the hazard maps of 25 and 1000 years for Thailand.

Hazard curves relate the intensity measure of the hazard (water depth for floods) with an exceedance rate, which is the number of times in a year that such water depth value is equaled or exceeded in a specific location. There is one hazard curve for each calculation point in the territory. The annual exceedance rate are the inverse of the return period, therefore it is possible to extract hazard curves directly from the return period hazard maps. As an example, Figure 79 presents two hazard curves, one computed for a location near Bangkok, Thailand, and another for a location near Bogotá, Colombia.

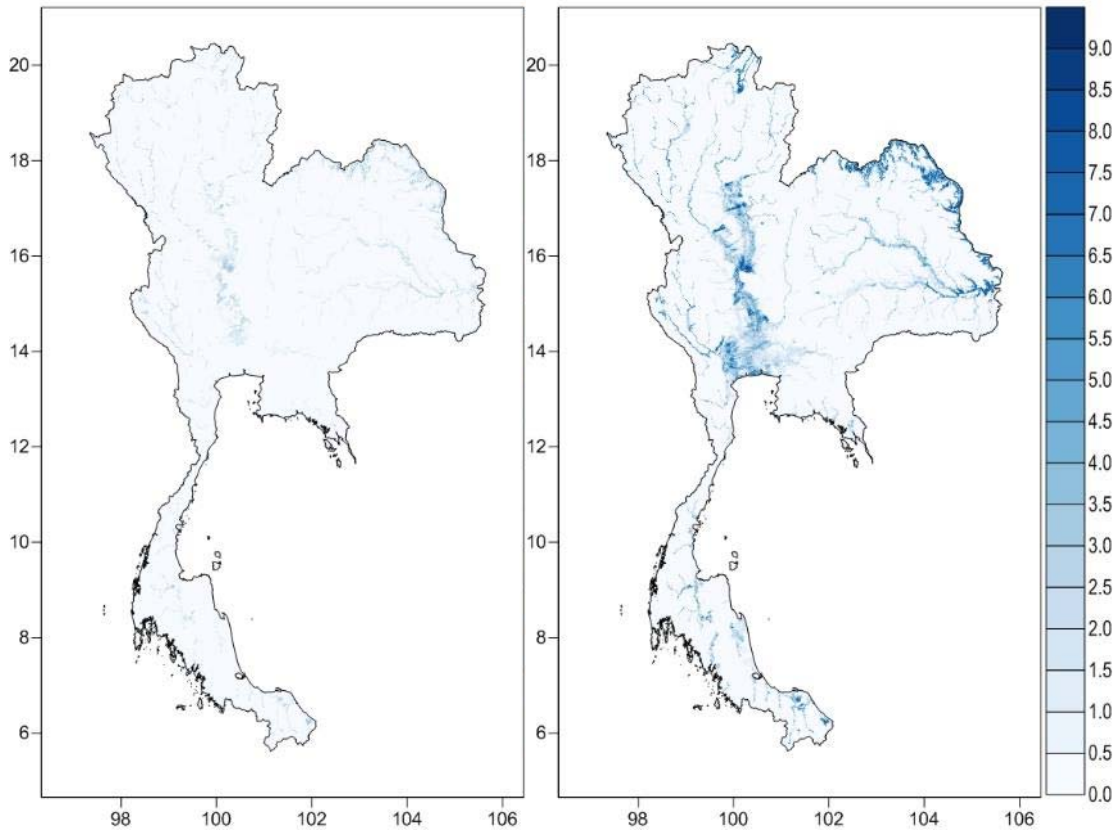


Figure 78. Flood maps for Thailand for 25 (left) and 1000 (right) years. Scale is water depth in meters. Delivered by CIMA

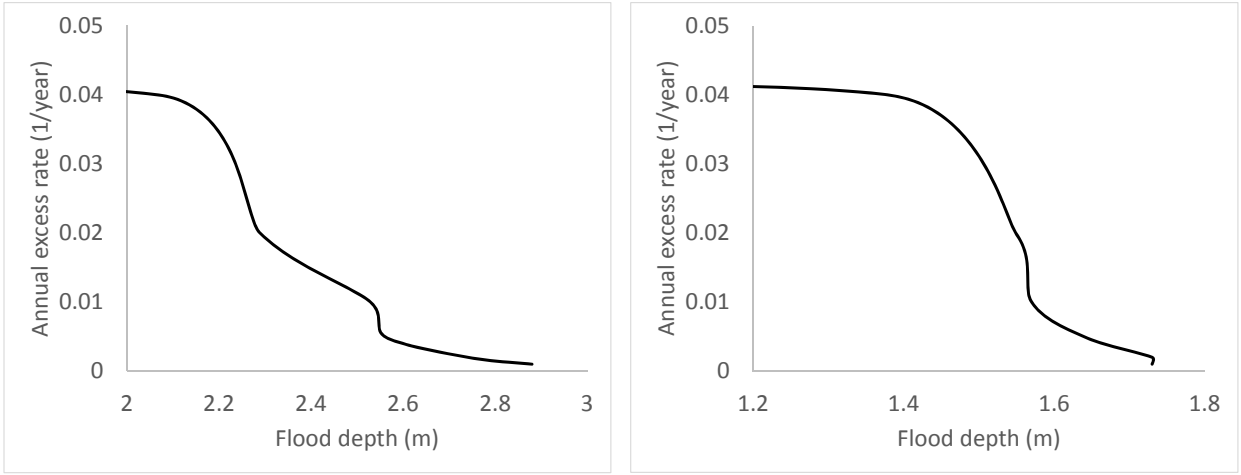


Figure 79. Flood hazard curves for arbitrary locations near Bangkok (left) and Bogotá (right).

3.2 Tsunami Hazard

Tsunami was modeled by NGI, based in a global model which takes into account the occurrence rate of earthquakes in major submarine seismic sources. Complete detail on the Probabilistic Tsunami Hazard Assessment (PTHA) method can be found on Løvholt et.al. (2014). NGI defined hazard scenarios for all tsunami-prone regions in the world, and constructed .AME files for the representation of the tsunami hazard. The .AME format is a collection of raster grids with georeferenced information which allows for a probabilistic representation of the recorded values. The hazard is thus presented in terms of a set of scenarios, where each one of these is characterized by an annual frequency of occurrence and the intensities are defined in terms of two parameters: the expected value and the standard deviation. The .AME format was created in order to fulfil with the hazard representation presented in Annex 1.

The coastal areas of the continents were divided into a total of 383 regions as shown in Figure 80. For each region, NGI generated an independent .AME file which contains all the different possibilities of tsunami events occurring in that region. Figure 81 presents a global tsunami hazard map for 500 years return period. Panels A to D shows close ups of Europe, North America, East Asia, and South America, respectively.

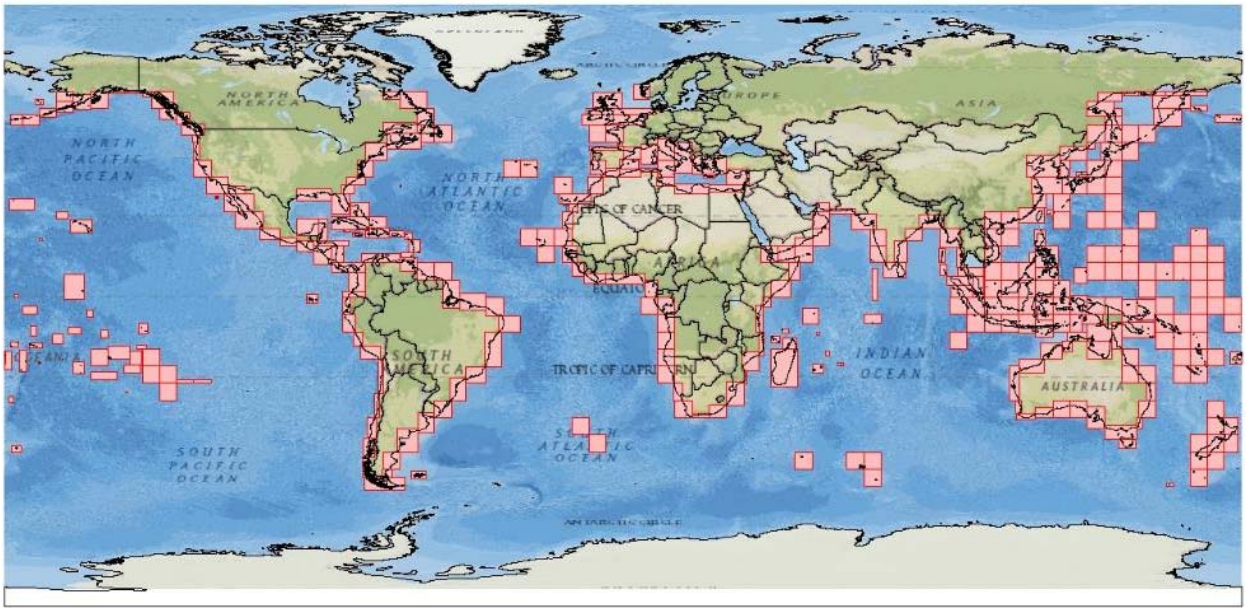


Figure 80. Regions with tsunami calculation

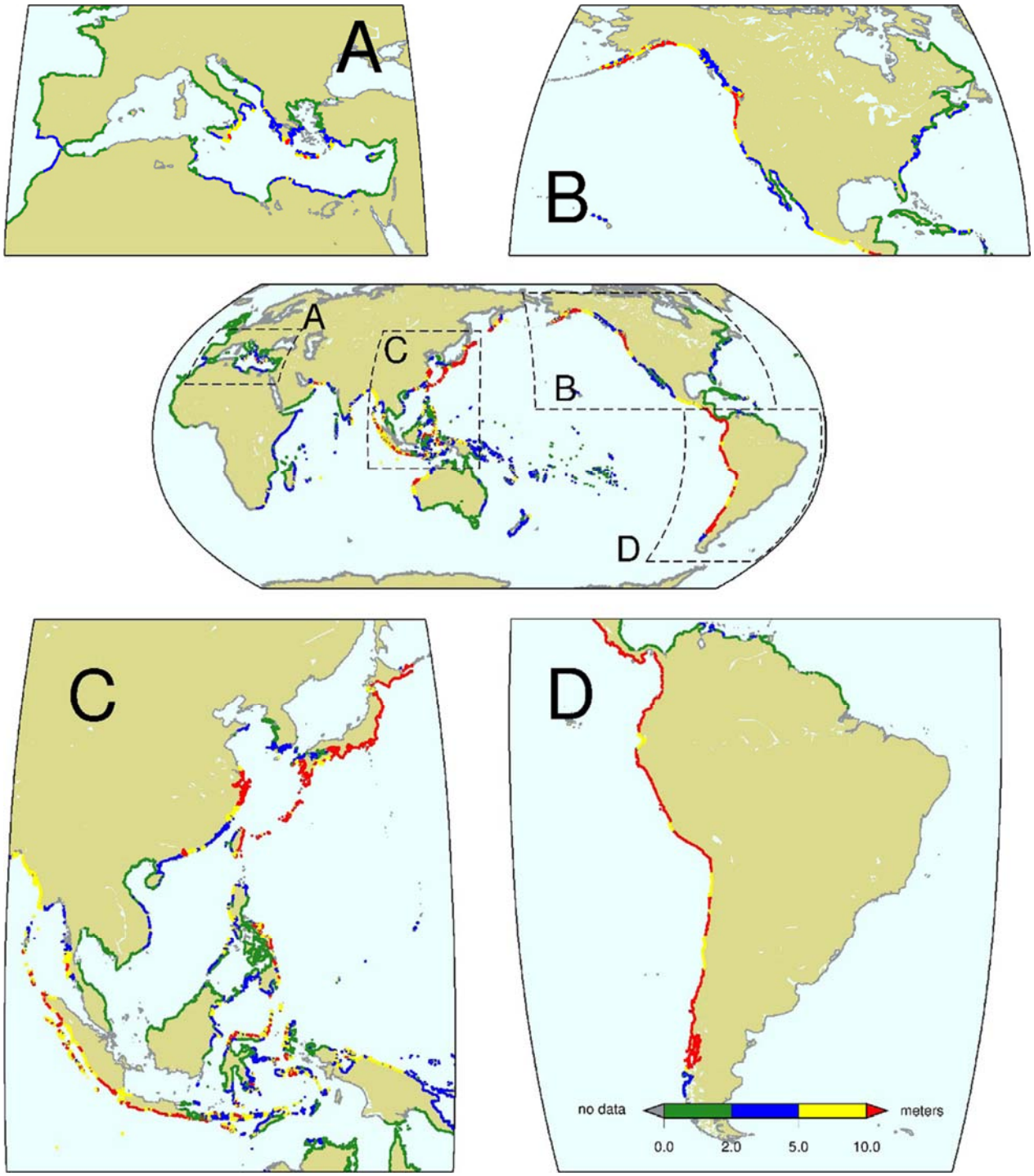


Figure 81. Global tsunami hazard map displaying the run-up height for a return period of 500 years. Taken from Løvholt et.al. (2014).

3.3 Volcanic Ash Fall Hazard

Geoscience Australia developed a volcanic ash fall hazard assessment for 276 volcanoes in the Asia-Pacific region. The hazard assessment was made following the Probabilistic Volcanic Hazard Assessment (PVHA) methodology and the VAPAHR software tool (Bear-Crozier et.al, 2014). The selected volcanoes are shown in Figure 82, with a 500 Km buffer used to define the extent of the site grid.

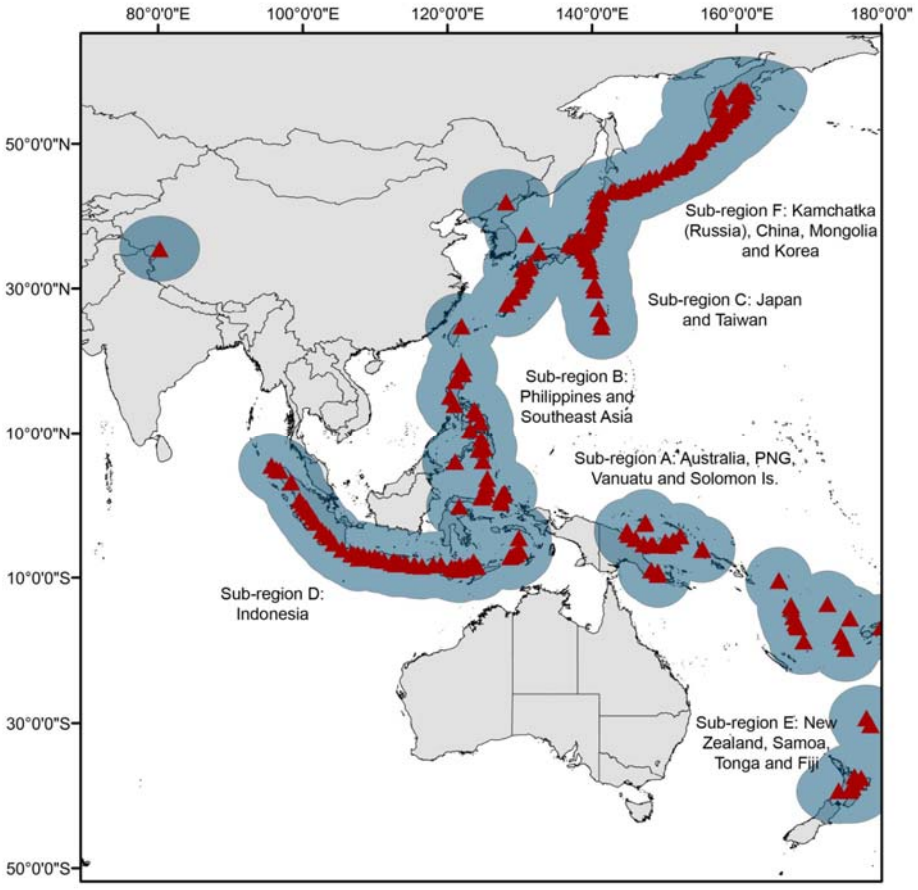


Figure 82. Volcanic sources and site grid buffers defined by Geoscience Australia. Taken from Bear-Cozier et.al. 2014.

The hazard analysis comprises the following countries: Indonesia, Papua New Guinea, Fiji, Japan, Korea, Philipines, New Zeeland, North Korea, Mongolia, Solomon Islands, Tonga, Taiwan, Vanuatu, Samoa and Rusia. Figure 83 and Figure 84 show the ash fall hazard maps for 100 and 1000 years return period respectively. The hazard maps are given in terms of the maximum ash load in kg/m^2.

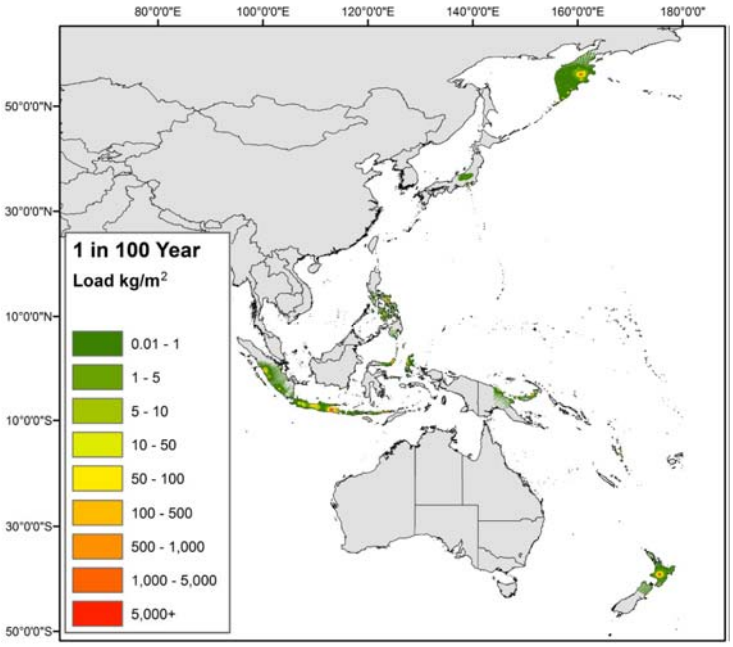


Figure 83. Estimated maximum volcanic ash load for the Asia-Pacific region at the 100 years return period. Taken from Bear-Crozier et.al, 2014.

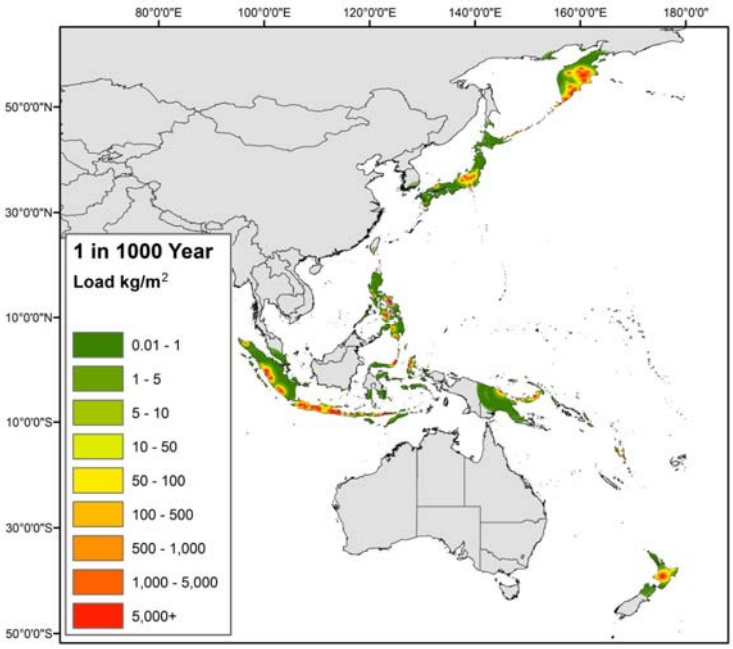


Figure 84. Estimated maximum volcanic ash load for the Asia-Pacific region at the 100 years return period. Taken from Bear-Crozier et.al, 2014.

As for floods, the risk assessment for volcanic ash fall is based on the hazard curves derived from the return period maps. Geoscience Australia delivered hazard maps for the following return periods: 50, 100, 500, 1,000, 5,000, 10,000, 50,000, 100,000, 500,000, 1,000,000, 5,000,000 and 10,000,000 years. Such long return periods are usually taken into account when modeling volcanic hazards due to the typically low recurrence rates of explosive volcanic eruptions. This effort has been a first step for a gross evaluation at regional level that can be improved in the next future.

4 Update on the Global Exposure Database

The exposed elements are essential in risk assessment, because they are the objects on which losses are evaluated, i.e., are the source of potential losses due to being exposed to a hazard and be susceptible of suffering damage. In mathematical terms, the exposed elements provide the maximum possible absolute value of the loss at their geographical location, as well as the summands of the probability density function of the loss of a hazard scenario. That is, they are the integrating element of hazard and vulnerability at each of their locations, and the integrator elements of the total losses for a given scenario. Its proper characterization is of great importance for the correct estimation of losses.

As part of the Global Risk Assessment for GAR13, a Global Exposure Database (GED) was generated by UNEP-GRID with the advice and collaboration of CIMNE & INGENIAR. This database was generated following a methodological procedure based on the distribution of population and on several socioeconomic indicators for each country. Details can be consulted on CIMNE et.al. (2012). For the GAR15, some modifications were introduced in the GED in order to better capture the exposure characteristics of the countries and refine the risk model. This work was also performed by UNEP-GRID. A summary of the modifications is presented here given its relevance in the risk assessment process.

4.1 Improvements on GED 2015

4.1.1 Population Data

The 2015 version of GED includes both urban and rural population. Recent LandScan population data was used (Oak Ridge National Laboratory, 2012), which provides the population estimate as of July 2011 at 30” resolution (approximately 1 km at the equator).

The LandScan cell values were recalculated using the World Population Prospects (UN DESA, 2013) in order to match them with UN official values for 2011.

4.1.2 Urban and Rural Settlements Delimitation

The urban masks to delimitate built-up areas were refined by using the dataset BUREF, developed by the Joint Research Center of the European Commission. This dataset was generated by exploiting the characteristics of LandScan (2010) and MODIS (2006). BUREF uses MODIS information as training set to estimate the best rescaling parameters between population and built-up areas. BUREF outputs include and estimation of the percentage of 1-km cell that is built-up. This estimation was used to define the urban masks for GED 2015. From the range of possible values (0 to 100), the urban mask was defined as the one grouping cells with at least 10 percent of built-up area. Figure 85 shows an example of the built-up percentage distribution for Mexico City and nearby areas in BUREF

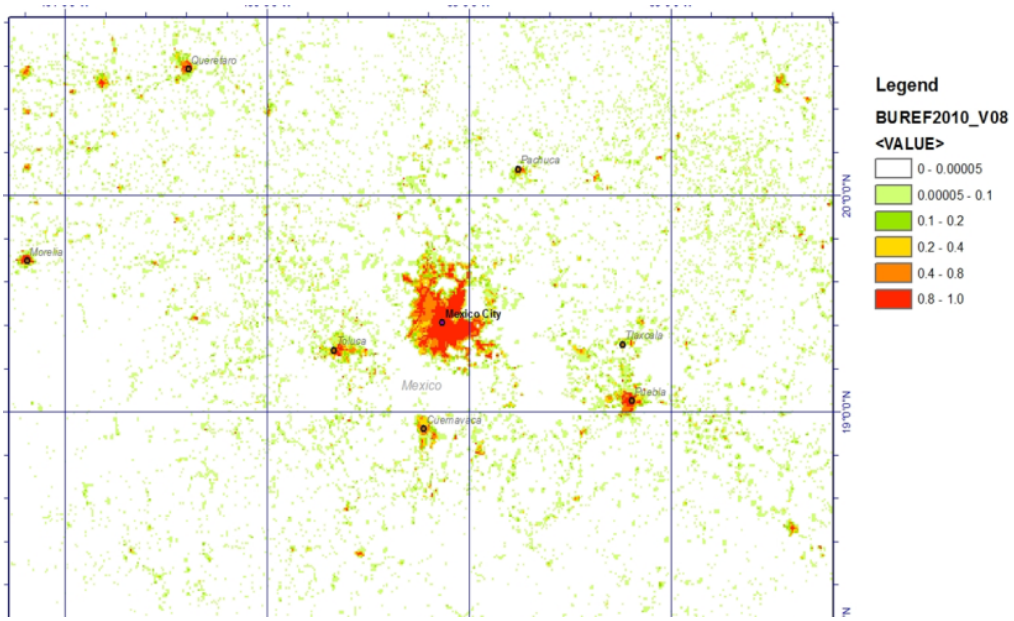


Figure 85. Built-up percentage for Mexico City and nearby areas as presented in BUREF.

Once the urban masks are defined, a level of complexity is assigned to urban agglomerations by following the classification proposed by Satterthwaite (2006). It is worth noting that such urban agglomerations are defined as a group of contiguous cells (sharing at least a vertex). Three complexity types are defined as follows:

- Complexity type 1 (cpx1): More than 20,000 people.
- Complexity type 2 (cpx2): Between 20,000 and 2,000 people.
- Complexity type 3 (cpx3): Less than 2,000 people.

In order to make the difference between rural and urban settlements, some rules were defined. A cell is defined as rural if it fulfils any of the following conditions:

1. It is located outside the urban mask, independently of the population size.
2. It is located inside the urban mask but has a built-up percentage below 10%.
3. It is located inside the urban mask, but belongs to an agglomeration having less than 2,000 inhabitants.

For all rural cells, complexity type 3 was assigned.

4.1.3 Aggregation on the 5x5 Km Reference Grid

The 5x5 Km reference grid of GED 2015 includes all the land surface of the Earth, including uninhabited land areas. The total number of cells of the grid is 9,008,829, with 4,574,010 inhabited cells.

In the aggregation process, it is usual to find a 5 Km cell that comprises 1 km cells of different complexity types (Figure 86). The values are then aggregated following the rules given in CIMNE et.al. (2012), for each complexity type. This means that each 5 Km cells has as many aggregations as complexity types. The aggregated data for the 5Km cell in Figure 86 may look as presented in

Table 6.

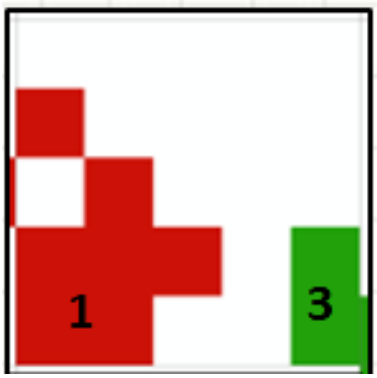


Figure 86. Example of a 5 Km cell (black square) containing 1 Km cells of both cpx1 (red) and cpx3 (green), in different proportions.

Table 6. Aggregated data on a 5 Km cell.

id_5x	iso3	cpx	sector	se_sismo	bs_value_r	bs_value_nr	VALHUM	VALFIS
3738020	CHE	1	ic_mlow	C2	0.369146	0.369146	79.8832	3.80412
3738020	CHE	1	ic_mlow	C3	0.101928	0.101928	22.0572	1.05039
3738020	CHE	1	ic_mlow	MS	0.146005	0.146005	31.5955	1.50461
3738020	CHE	1	ic_mlow	PC1	0.060606	0.060606	13.1151	0.624556
3738020	CHE	1	ic_mlow	RS	0.0550964	0.0550964	11.9229	0.567779
3738020	CHE	1	ic_mlow	S5	0.077135	0.077135	16.692	0.794891
3738020	CHE	1	ic_mlow	UFB3	0.12259	0.12259	26.5285	1.26331
3738020	CHE	1	ic_mlow	UFB4	0.0674932	0.0674932	14.6055	0.69553
3738020	CHE	1	ic_mlow	W	0	0	0	0
3738020	CHE	1	ic_mhigh	C2	0.369146	0.369146	227.837	16.8172
3738020	CHE	1	---	---	---	---	---	---
3738020	CHE	3	ic_mlow	C2	0.161194	0.161194	16.1194	0.759991
3738020	CHE	3	ic_mlow	C3	0.0477612	0.0477612	4.77612	0.225183
3738020	CHE	3	ic_mlow	MS	0.202985	0.202985	20.2985	0.957026
3738020	CHE	3	ic_mlow	PC1	0.0238806	0.0238806	2.38806	0.112591
3738020	CHE	3	ic_mlow	RS	0.155224	0.155224	15.5224	0.731844
3738020	CHE	3	ic_mlow	S5	0.0477612	0.0477612	4.77612	0.225183
3738020	CHE	3	ic_mlow	UFB3	0.0985075	0.0985075	9.85075	0.464439
3738020	CHE	3	ic_mlow	UFB4	0.0955224	0.0955224	9.55224	0.450365
3738020	CHE	3	ic_mlow	W	0.167164	0.167164	16.7164	0.788138
3738020	CHE	3	ic_mhigh	C2	0.161194	0.161194	45.9886	3.25238
3738020	CHE	3	---	---	---	---	---	---

4.1.4 GDP Base Map

A GDP base map was generated in order to moderate the influence of population on urban capital stock estimation and to distribute the wealth according to the sub-national variations inside a country. It was generated by integrating the regional GDP data within "high economic activity zones" (industrial and commercial) extrapolated using the nightlight satellite data that can be found in NOAA's VIIRS dataset.

The regionalization of GDP was possible for 71 countries only. The sources of information include Eurosat, OECD and World Bank DECRG. The remaining 181 countries were processed with national data. This process includes several statistical analyses including lights filtering, thresholds set-up and income regionalization. Finally normalized light intensities were combined with the regional values of GDP as shown in the Figure 87.

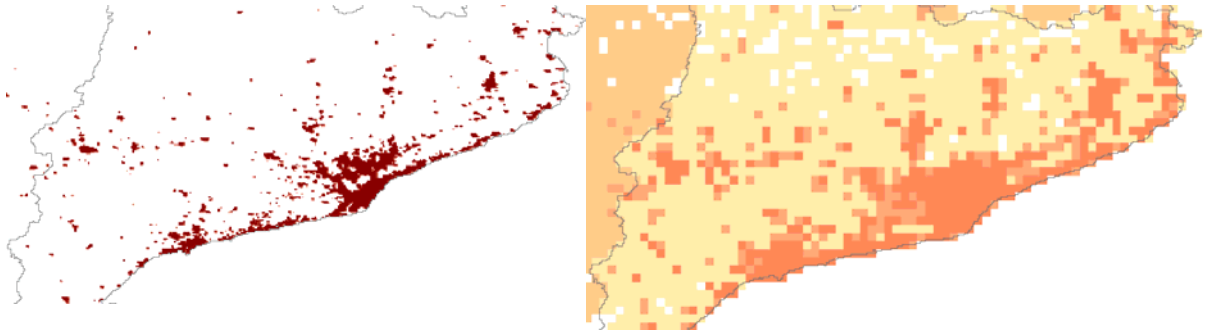


Figure 87. Economic activity intensity with resolution of 1 km (left) and economic activity intensity integrated with the regional GRD onto the 5x5 grid (right). Example of the Barcelona region

As a result, for each 5 Km cell a coefficient of variation from the national GDP is calculated (Figure 88). This coefficient is further multiplied by the urban capital stock of the cell. Capital stocks are then normalized in order to match with national totals.

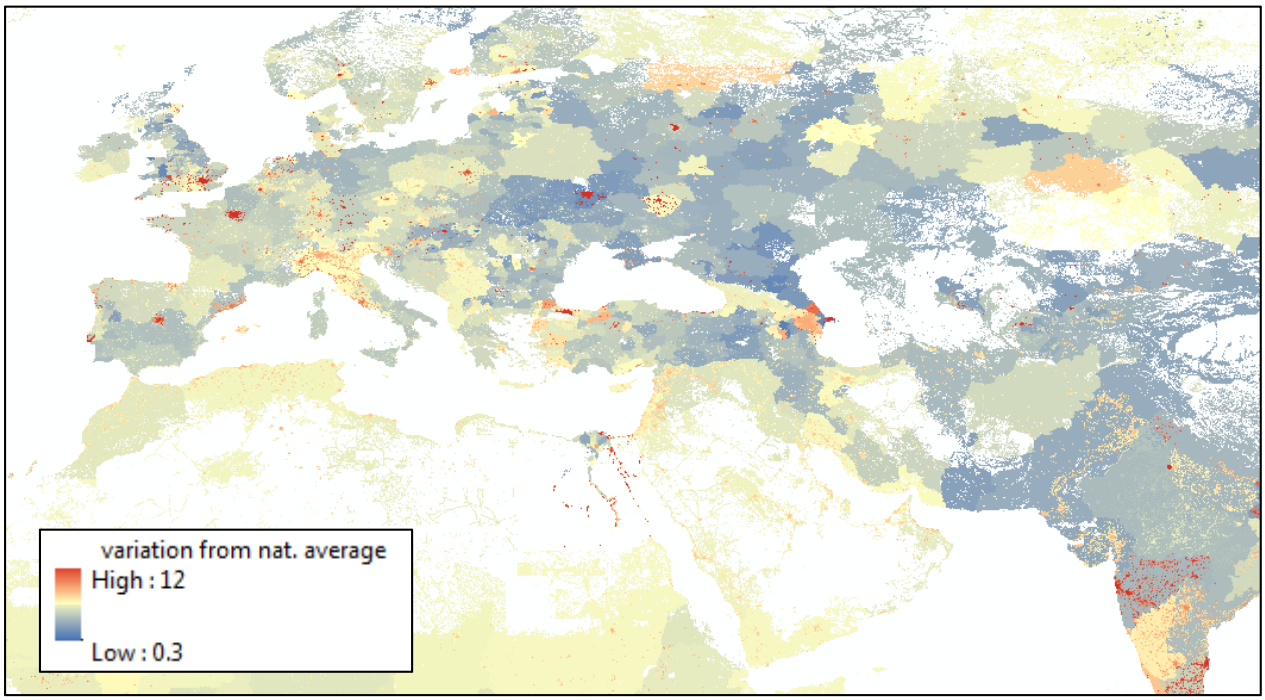


Figure 88. Coefficient of variation between the national values of GDP and those at subnational level

4.2 1x1 Km Exposure Database for the Coastal Areas

A 1x1 Km exposure database was constructed for the coastal areas of the world. For this database, the aggregation to the reference grid was not done, in order to have a higher exposure resolution for tsunami and storm surge calculations. Given the natural extent of the impact of these hazards, their computation is usually performed on higher resolution (lower grid size or characteristic length) grids than others. For comparison, Figure 89 and Figure 90 show the location of the exposure points on both 5x5 and 1x1 Km (coastal) grids, respectively, for Mexico. Figure 91 and Figure 92 show the same information for a coastal portion of the country.

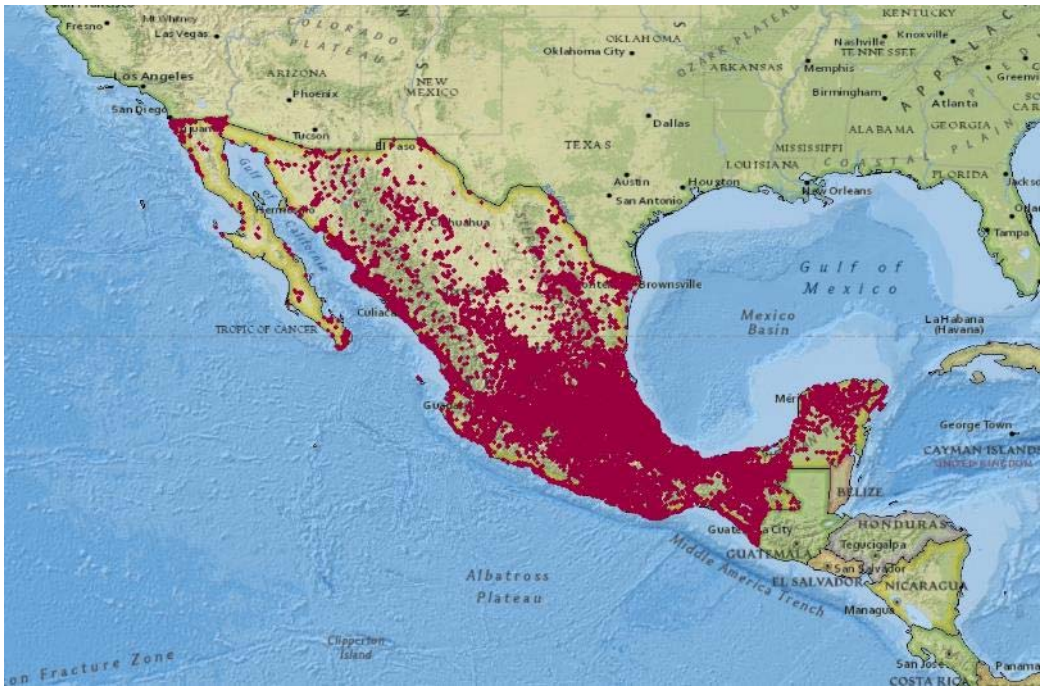


Figure 89. Exposure points on the 5x5 Km grid for Mexico.



Figure 90. Exposure points on the 1x1 Km coastal grid for Mexico.

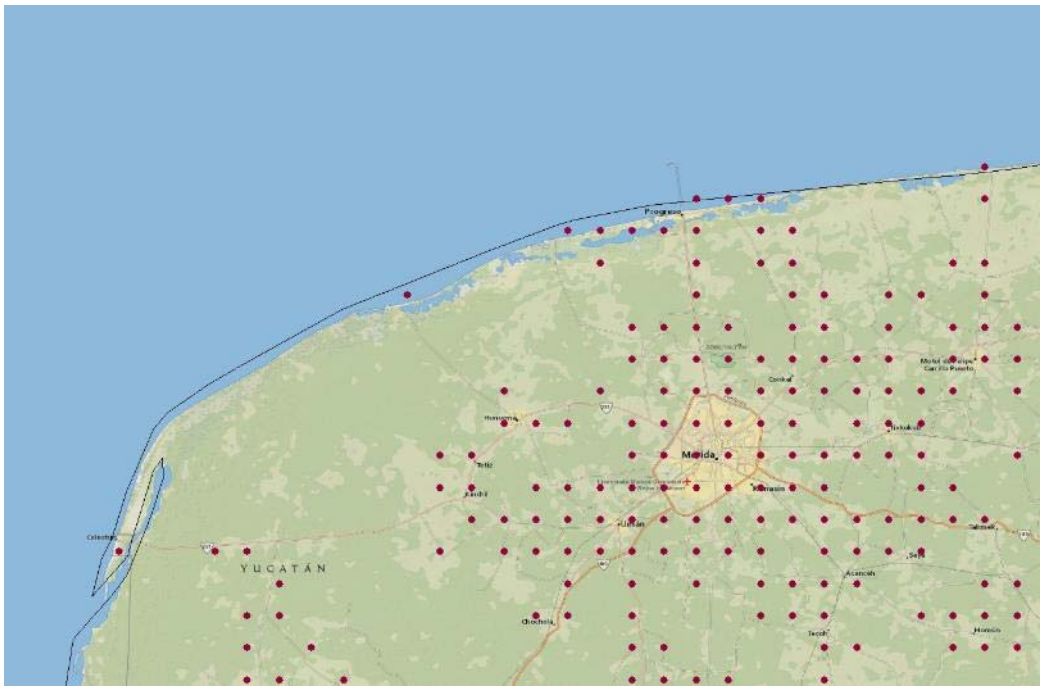


Figure 91. Exposure points on the 5x5 Km grid for a coastal zone of Mexico.

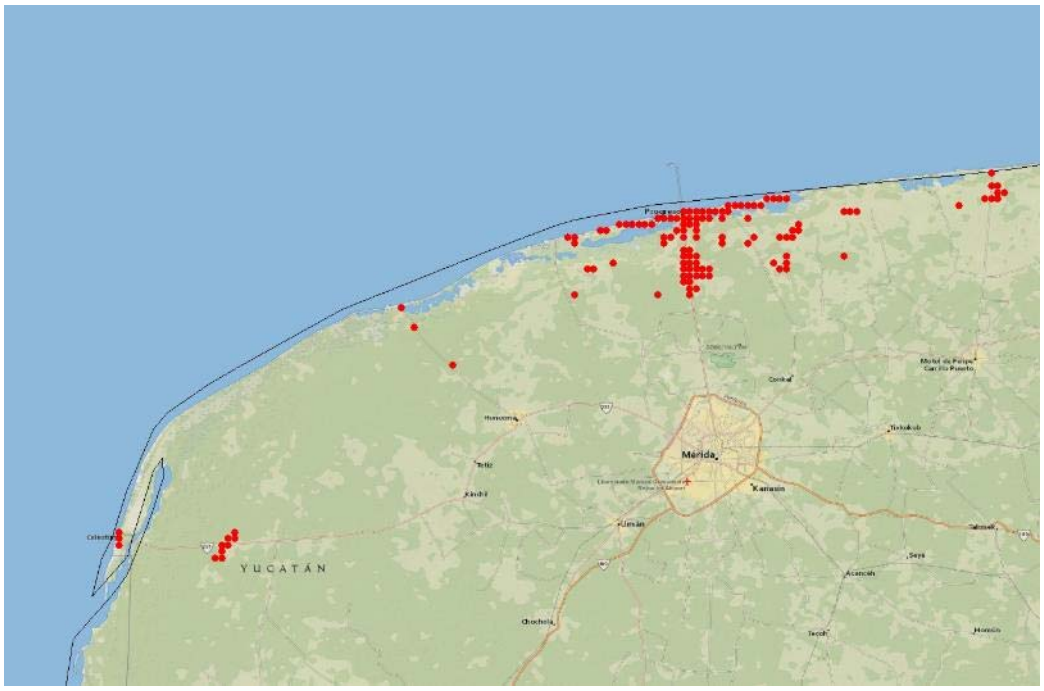


Figure 92. Exposure points on the 1x1 Km grid for a coastal zone of Mexico.

5 Physical Vulnerability of the Exposed Assets for the Considered Hazards

Global risk assessment for GAR13 took into account only the destructive effect on property of earthquakes and strong winds for all countries, and floods for selected countries. For GAR15, this scope was extended to include other hazards, particularly: tsunami, storm surge and volcanic ash fall (for some countries). Therefore, additional vulnerability functions had to be incorporated in order to respond to this extension.

5.1 Probabilistic Representation of Vulnerability

The damage susceptibility of every asset exposed to the considered natural hazards is modeled through vulnerability functions, which characterize the behavior of an element (i.e. building, bridge) during the occurrence of hazardous event. Vulnerability functions define the probability distribution of the loss as a function of the intensity produced for a specific scenario, i.e., conditional to the occurrence of a specific intensity level at the location of the exposed element. The loss is generally understood as the loss relative to the replacement value of the exposed element.

These functions are then defined by vulnerability curves relating the expected value and standard deviation of the damage to the intensity of the phenomenon (see Figure 93) in a continuous way. The loss is typically assumed to be Beta distributed with its probability density function shown in Equation 27 (Ordaz, 2008),

$$f(p\,|\,s)=\frac{\Gamma(a+b)}{\Gamma(a)\Gamma(b)}\,p^{a-1}(1-p)^{b-1} \qquad \textbf{(Eq. 27)}$$

where Γ is the Gamma function and parameters a and b are given by Equations 28 and 29.

$$a=\frac{1-\left(1+c^2(p\,|\,s)\right)\cdot E(p\,|\,s)}{c^2(p\,|\,s)} \qquad \textbf{(Eq. 28)}$$

$$b=a\cdot\frac{1-E(p\,|\,s)}{E(p\,|\,s)} \qquad \textbf{(Eq. 29)}$$

where E(p|s) is the expected value of the loss c(p|s) is the coefficient of variation, given the hazard intensity on the site. (c(p|s) = σ(p|s)/E(p|s) where σ(p|s) is the standard deviation of the loss).

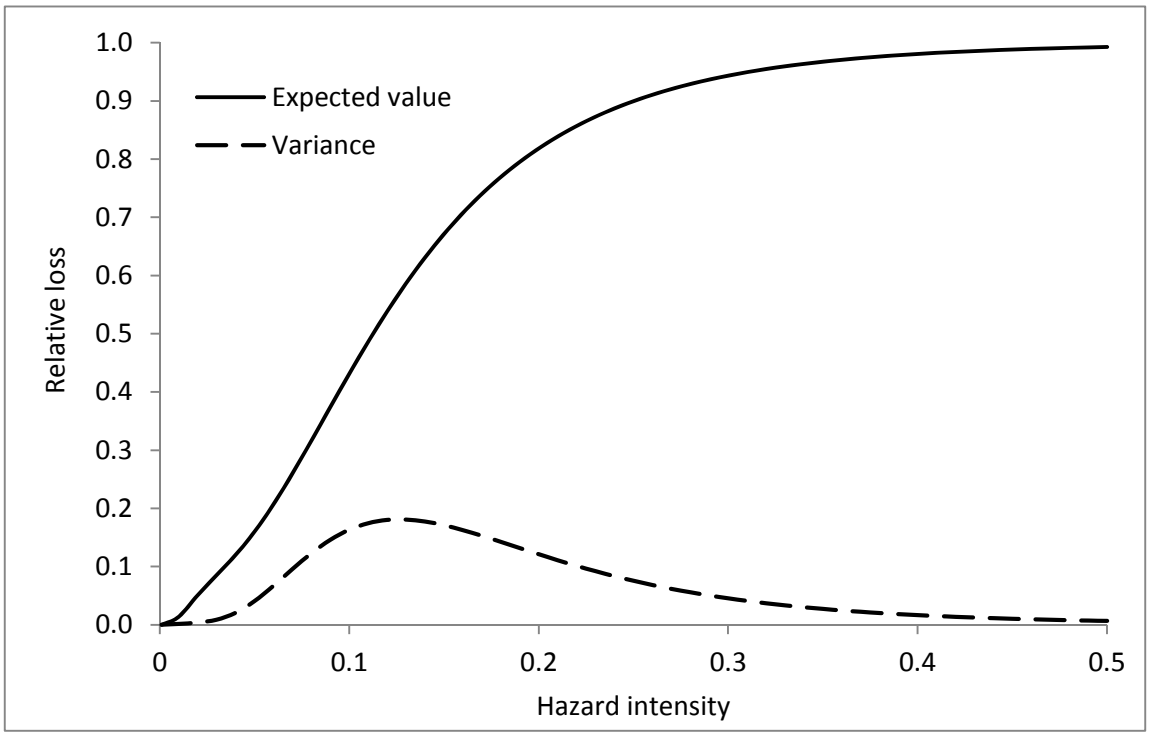


Figure 93. Example of a vulnerability function

5.2 Construction Classes

The construction classes remained the same as the ones for GAR13. Such classes were defined by the World Agency of Planetary Monitoring and Earthquake Risk Reduction (WAPMERR) for earthquake risk. Table 7 presents the list of construction classes. The participation of each of these construction classes on each region was also provided by WAPMERR.

Table 7. Construction classes.

Structural system	Description
A	Adobe block (unbaked dried mud block) walls
A1	Adobe block, mud mortar, wood roof and floors
A2	Same as A1, bamboo, straw, and thatch roof
A3	Same as A1, cement-sand mortar
A4	Same as A1, reinforced concrete bond beam, cane and mud roof
C	Reinforced Concrete
C1	Ductile Reinforced Concrete Moment Frame
C1H	High-Rise
C1L	Low-Rise

Structural system	Description
C1M	Mid-Rise
C2	Reinforced Concrete Shear Walls
C2L	Low-Rise
C3	Nonductile Reinforced Concrete Frame with Masonry Infill Walls
C3L	Low-Rise
C3M	Mid-Rise
C4	Nonductile Reinforced Concrete Frame without Masonry Infill Walls
CH	Reinforced Concrete High-Rise
CL	Reinforced Concrete Low-Rise
CM	Reinforced Concrete Mid-Rise
DS	Rectangular cut stone masonry block
DS1	Rectangular cut stone masonry block with mud mortar, timber roof and floors
DS2	Same as DS1 with lime mortar
DS3	Same as DS1 with cement mortar
DS4	Same as DS2 with reinforced concrete floors and roof
INF	Informal constructions (parts of slums/squatters)
M	Mud walls
M2	Mud walls with horizontal wood elements
MH	Mobile Homes
MS	Massive stone masonry in lime/cement mortar
PC	Precast Concrete
PC1	Precast Concrete Tilt-Up Walls
PC2	Precast Concrete Frames with Concrete Shear Walls
PC2L	Low-Rise
RE	Rammed earth/pneumatically impacted stabilized earth
RM	Reinforced Masonry
RM1	Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms
RM1L	Low-Rise
RM2	Reinforced Masonry Bearing Walls with Concrete Diaphragms
RM2H	High-Rise
RM2L	Low-Rise
RM2M	Mid-Rise
RS	Rubble stone (field stone) masonry
RS1	Local field stones dry stacked (no mortar). Timber floors. Timber, earth, or metal roof.
RS2	Same as RS1 with mud mortar.
RS3	Same as RS1 with lime mortar.
RS4	Same as RS1 with cement mortar, vaulted brick roof and floors

Structural system	Description
RS5	Same as RS1 with cement mortar and reinforced concrete bond beam.
S	Steel
S1	Steel Moment Frame
S1H	High-Rise
S1L	Low-Rise
S1M	Mid-Rise
S2	Steel Braced Frame
S2L	Low-Rise
S3	Steel Light Frame
S4	Steel Frame with Cast-in-Place Concrete Shear Walls
S4H	High-Rise
S4L	Low-Rise
S4M	Mid-Rise
S5	Steel Frame with Un-reinforced Masonry Infill Walls
S5L	Low-Rise
UCB	Unreinforced concrete block masonry, lime/cement mortar
UFB	Unreinforced fired brick masonry
UFB1	Unreinforced brick masonry in mud mortar without timber posts
UFB2	Unreinforced brick masonry in mud mortar with timber posts
UFB3	Unreinforced fired brick masonry, cement mortar, timber flooring, timber or steel beams and columns, tie courses (bricks aligned perpendicular to the plane of the wall)
UFB4	Same as UFB3, but with reinforced concrete floor and roof slabs
UNK	Unknown Category (Not specified)
W	Wood
W1	Wood Frame, Wood Stud, Wood, Stucco, or Brick Veneer
W2	Wood Frame, Heavy Members, Diagonals or Bamboo Lattice, Mud Infill
W4	Log building

5.3 Vulnerability Regionalization

In an attempt to capture the different characteristics of construction along the different regions of the world, a global vulnerability regionalization was defined taking as input regional an available studies and information. A different regionalization by hazard was defined given the scope of the available information sources. Those information sources are listed next.

- HAZUS: The HAZUS-MH System (FEMA, 2011) provides parameters to create fragility functions for different construction classes in the USA, for earthquake, cyclone wind and flood hazards. The procedure to transform such fragility functions into vulnerability

functions can be consulted on CIMNE et.al. (2012). This set of vulnerability functions was the only one used for all countries in the world for GAR13.

- CAPRA: The CAPRA Platform comes with a library of vulnerability functions generated specifically for the typical construction classes in the Latin-America and the Caribbean region. It comprises seismic, strong winds, storm surge and flood vulnerability functions. Further details may be consulted on ERN-AL (2009) and on the CAPRA website (www.ecapra.org)

- Geoscience Australia: As part of the efforts related to GAR15, Geoscience Australia developed vulnerability functions for the Asia-Pacific region, and for all the hazards involved in GAR (earthquake, wind, storm surge, flood, tsunami and ash fall), and for the typical constructions of that region (Maqsood et.al., 2014).

- Risk-EU: The European seismic risk evaluation project, Risk-EU, provides information on capacity curves for several construction classes typical of European countries. Those capacity curves were used to derive vulnerability functions by following the procedure described in ERN-AL (2009).

- Suppasri et.al. (2013): In attention to a suggestion from the tsunami modeling team at NGI[1], the main source of data for vulnerability modelling was the work by Suppasri et.al. (2013). This work defines fragility functions based on surveyed data from the 2011 Great East Japan tsunami. The fragility functions were converted into vulnerability by following the same procedure as for the HAZUS earthquake functions (CIMNE and Associates 2012).

Figure 94 to Figure 99 show the above mentioned regionalization for the entire Globe, for all six hazards considered for GAR15. The complete list of countries with the corresponding final vulnerability functions source for all hazards is presented in Annex 12.

[1] Personal communication with Finn Løvholt from NGI.

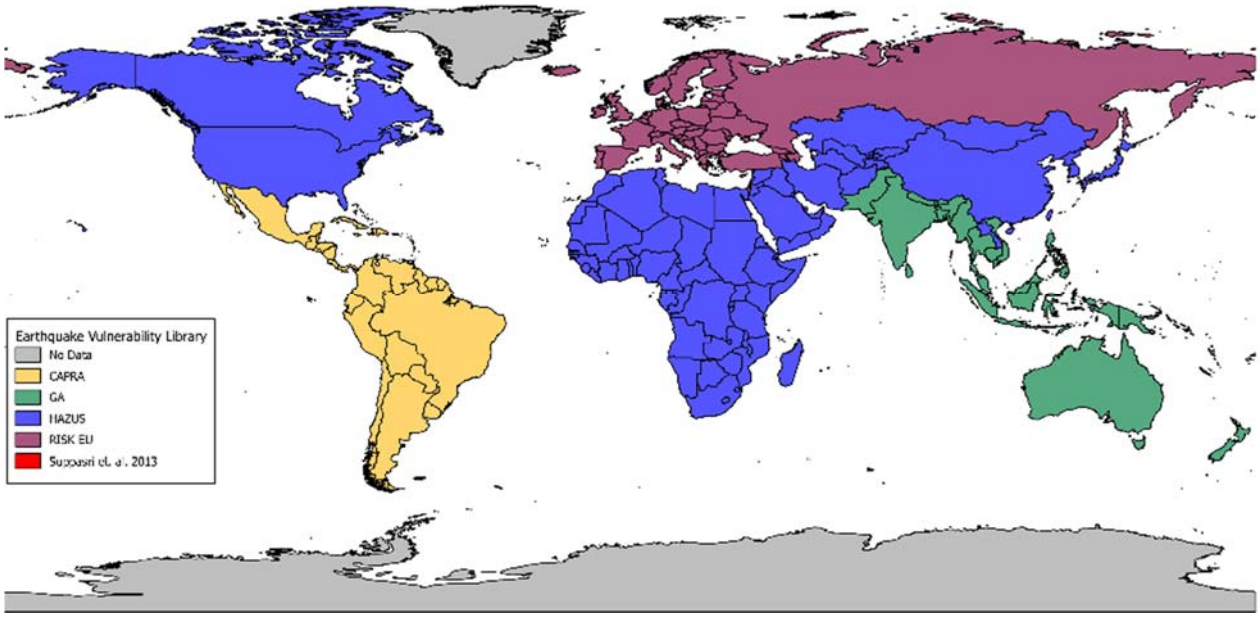


Figure 94. Source of information on vulnerability functions for seismic hazard

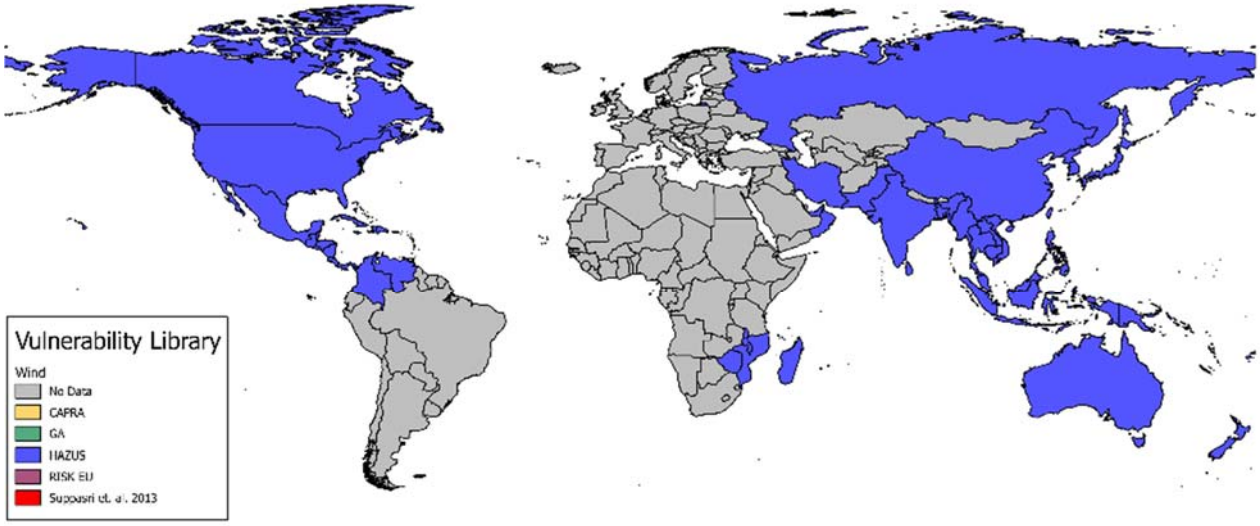


Figure 95. Source of information on vulnerability functions for TC wind hazard

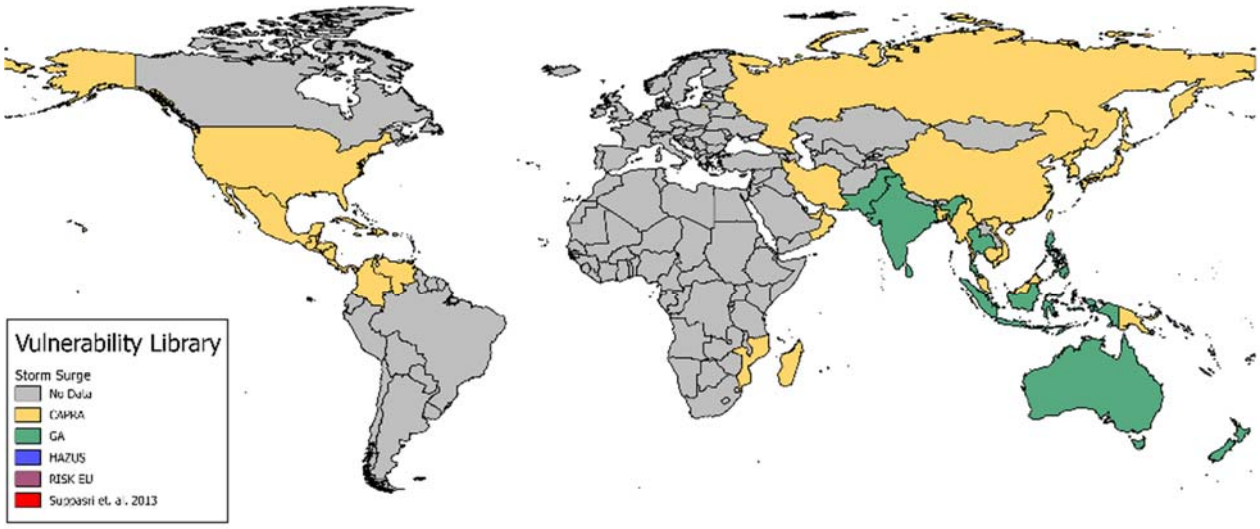


Figure 96. Source of information on vulnerability functions for TC storm surge hazard

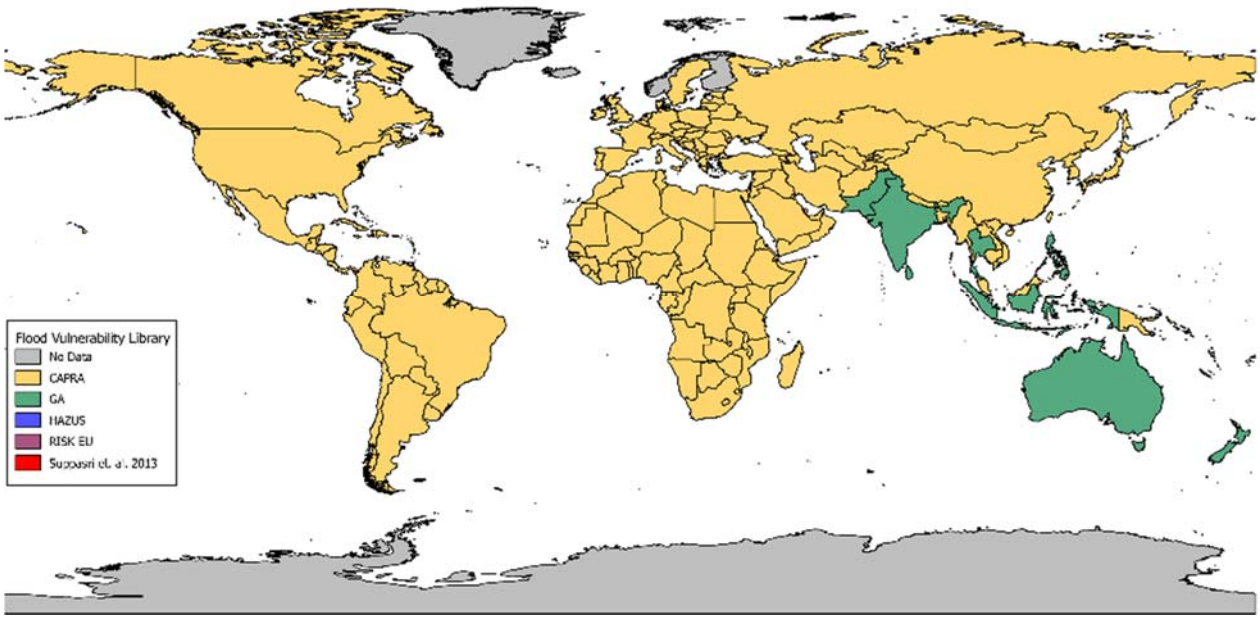


Figure 97. Source of information on vulnerability functions for flood hazard

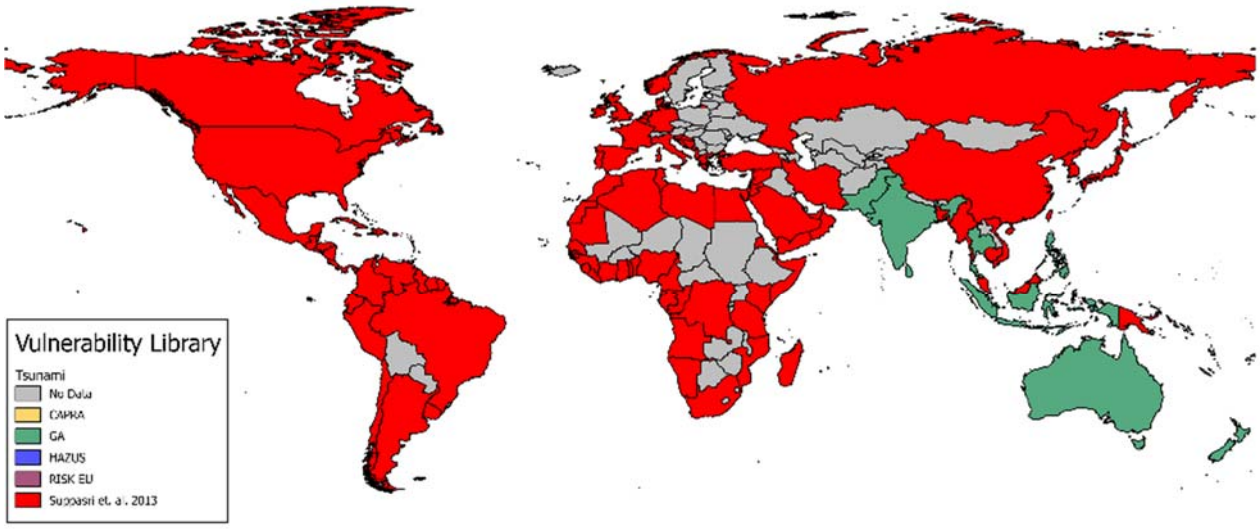


Figure 98. Source of information on vulnerability functions for tsunami hazard

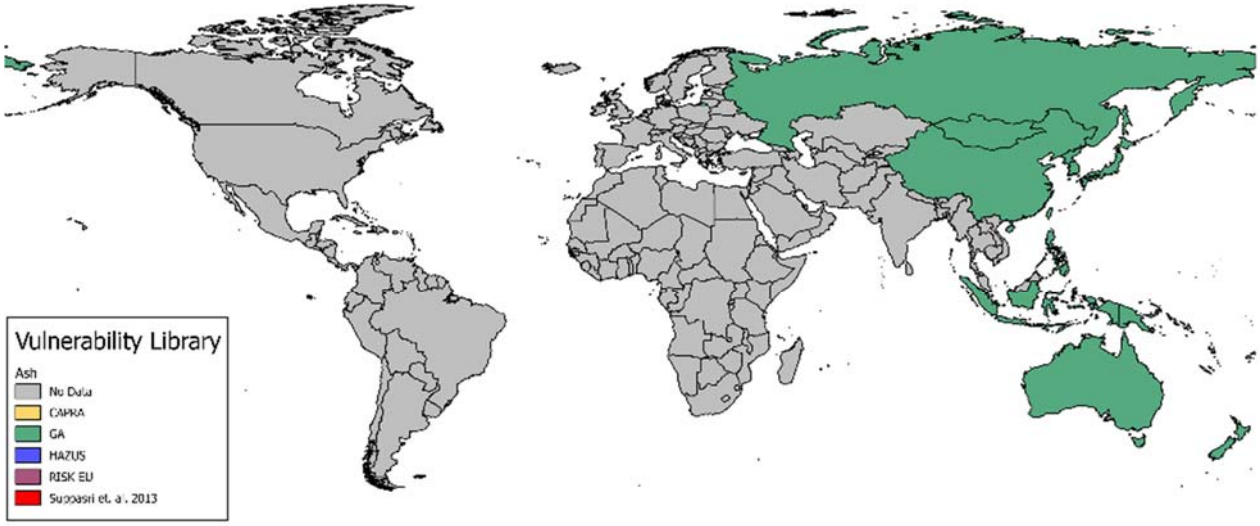


Figure 99. Source of information on vulnerability functions for volcanic ash fall hazard

Assignation matrices were defined for each vulnerability group (hazard and source of information). These matrices define which vulnerability function is to be used for each exposed element, as a

function of its construction class, the development level of the country, the hazard level at the element's location and the complexity level of the exposure agglomeration it belongs to. The complete set of vulnerability functions for GAR15, along with the corresponding assignation matrices are presented in Annex 13.

5.4 Geoscience Australia's Vulnerability Scope

Following a collaborative effort between experts on vulnerability to natural hazards in several countries of the Asia-Pacific region, Geoscience Australia developed vulnerability functions that were endorsed by consensus of such experts. Therefore, the group of countries attended by the scope of Geoscience Australia is different for each hazard as presented in Table 8. Further details may be consulted on Maqsood et.al. (2014).

Table 8. Geoscience Australia's vulnerability scope by country and hazard

Country		Hazard					
ISO	Name	Earthquake	Wind	Flood	Storm Surge	Ash	Tsunami
AUS	Australia	Yes	Yes	Yes	Yes	No	Yes
BGD	Bangladesh	Yes	Yes	No	No	No	No
BTN	Bhutan	Yes	Yes	No	No	No	No
CHN	China	No	No	No	No	Yes	No
COK	Cook Islands	Yes	Yes	Yes	Yes	No	Yes
FJI	Fiji	Yes	Yes	Yes	Yes	Yes	Yes
IDN	Indonesia	Yes	Yes	Yes	Yes	Yes	Yes
IND	India	Yes	Yes	Yes	Yes	No	Yes
JPN	Japan	No	No	No	No	Yes	No
KHM	Cambodia	Yes	Yes	No	No	No	No
KOR	Republic of Korea	No	No	No	No	Yes	No
LKA	Sri Lanka	Yes	Yes	Yes	Yes	No	Yes
MMR	Myanmar	Yes	Yes	No	No	No	No
MNG	Mongolia	No	No	No	No	Yes	No
MYS	Malaysia	Yes	Yes	No	No	No	No
NCL	New Caledonia	Yes	Yes	Yes	Yes	No	Yes
NPL	Nepal	Yes	Yes	No	No	No	No
NZL	New Zealand	Yes	Yes	Yes	Yes	Yes	Yes
PAK	Pakistan	Yes	Yes	Yes	Yes	No	Yes
PHL	Philippines	Yes	Yes	Yes	Yes	Yes	Yes
PNG	Papua New Guinea	Yes	Yes	No	No	Yes	No
RUS	Russian Federation	No	No	No	No	Yes	No

Country		Hazard					
ISO	**Name**	**Earthquake**	**Wind**	**Flood**	**Storm Surge**	**Ash**	**Tsunami**
SGP	Singapore	Yes	Yes	Yes	Yes	No	No
SLB	Solomon Islands	Yes	Yes	Yes	Yes	Yes	Yes
THA	Thailand	Yes	Yes	Yes	Yes	No	Yes
TON	Tonga	Yes	Yes	Yes	Yes	Yes	Yes
TWN	Taiwan	No	No	No	No	Yes	No
VNM	Viet Nam	Yes	Yes	No	No	No	No
VUT	Vanuatu	Yes	Yes	Yes	Yes	Yes	Yes
WSM	Samoa	Yes	Yes	No	No	Yes	Yes

In those cases where the countries in Table 8 are not in the scope (cells marked as "No"), other vulnerability functions were assigned as follows:

- Earthquake: HAZUS
- Strom Surge: CAPRA
- Flood: CAPRA
- Tsunami: Suppasri et.al. (2013).

In the case of volcanic ash fall, no other countries besides the ones in the scope of Geoscience Australia had hazard calculations, so there was no need to look for any other source of information. In the case of tropical cyclone wind, preliminary risk calculations showed that the results obtained using the functions generated by Geoscience Australia derived in loss estimations that were higher than the ones obtained with other functions (particularly HAZUS) by at least a factor of 10. It was then decided to use all the functions created by Geoscience Australia except for the ones for wind. All the other vulnerability functions provide a good representation of what is expected to occur at the exposed assets after the occurrence of a hazardous event. A comparison sheet was developed in order to compare the wind curves of Geoscience Australia with the ones obtained from HAZUS in order to justify the selection of the latest. Such comparison is presented in Annex 14.

6 Disaster Risk Assessment

6.1 Purpose and Scope

The Global Risk Assessment of GAR 13 had as main outcomes the Annual Average Loss (AAL) and the Probable Maximum Loss (PML) for a return period of 250 years. Risk indicators and rankings were defined based on those two risk metrics. For GAR 15, an improvement on the risk calculation outcomes allows to compute the complete Loss Exceedance Curve, which is the complete representation of risk and is directly related to any other risk metrics (AAL, PML, etc.). In this section, the general framework for probabilistic risk assessment is presented, as well as the mathematical definition of all risk metrics used to define indicators and rankings, as well as other metrics that advanced readers may find useful for purposes different than the once of GAR.

Risk assessment must be prospective, scientifically anticipating possible events that may occur in the future. For the case of seismic events, seismological and engineering bases are used to develop earthquake forecasting models that allow for the estimation of damages, losses and secondary effects as a result of catastrophic events. For the case of tropical cyclones, the hydro-meteorological information available of the historical tropical cyclones that have affected the area of study is used together with engineering methodologies. The effects of these phenomena upon the exposed assets are estimated. Due to the uncertainties inherent to the models of analysis regarding the severity and frequency of occurrence of the hazardous events, the risk model is based on probabilistic formulations incorporating these uncertainties in the risk assessment.

The evaluation of risk requires the three analytical steps described next:

- *Probabilistic hazard assessment:* For each of the hazards considered, a set of events (or scenarios) is defined along with their respective frequencies of occurrence. Each scenario contains spatial distribution parameters which will permit the construction of the distribution of probability of the hazard intensities produced by their occurrence.
- *Geo-referenced database of exposed elements*: A complete inventory of the exposed elements must be constructed. The database can have different resolution levels depending on the available information and the type of analysis that is intended to be conducted. Databases must include the geographical location of each one of the assets, as well as the following parameters (as a minimum):
  - Replacement cost as a physical appraisal
  - Construction class to which the assets belong to
- *Vulnerability of the exposed elements*: Each construction class contained in the inventory of exposed assets must be associated to an individual vulnerability function for each type of hazard. This function characterizes the expected structural behavior of the asset in terms of damage during the occurrence of the events that represent the hazard. Vulnerability functions are curves which define the probability distribution of damage as a function of the intensity produced by a specific scenario.

6.2 Methodological Approach

A probabilistic risk analysis is intended to determine the probability distribution of loss to which exposed assets may be subjected to, over a given period of time, as a consequence of the occurrence of natural hazards. The basic question that a probabilistic analysis attempts to answer is the following: given that there is a set of assets exposed to the effects of one or more natural perils, how often will losses over a certain value occur?

Given that the frequency of catastrophic events is particularly low, this question cannot be answered by purely empirical models that attempt to describe the process of occurrence of such events. Instead, probabilistic models that consider the uncertainties inherent to the nature of these events must be used.

The general procedure of a probabilistic calculation consists of an individual evaluation of losses in the exposure for each of the scenarios that represent the hazard, and a subsequent probabilistic integration of these results accounting for the frequency of occurrence of each scenario which is used as a weighting factor. The following section describes this process in more detail.

6.2.1 Analytical Procedure

Risk is determined by the convolution between hazard and vulnerability in the location occupied by the exposed elements and for all of them. As mentioned above, in the probabilistic calculation of losses, both hazard and vulnerability are also represented in a probabilistic manner. The hazard has both temporal and spatial probabilistic representations. The occurrence in time of hazard scenarios is modeled as a Poisson process, leading to model by an exponential probability distribution the time between the scenarios. Moreover, the measure of intensity at each location is modeled as a random variable, defined by its first two moments of probability. Vulnerability is also defined by two probability moments which define the Beta probability distribution assigned to the loss.

The uncertainties associated to the hazard and vulnerability are then defined in their own nature; temporal and spatial for the hazard, and intensity-dependent for the vulnerability. Therefore, the main outcome of the risk model is the probability distribution of the loss for each hazard scenario. As given by Ordaz (2000), the probability distribution of the loss in the j-th element, conditional to the occurrence of the i-th scenario, $f(p_j|E_i)$, is calculated as,

$$f(p_j \mid E_i) = \int_0^\infty f(p_j \mid s) f(s \mid E_i) ds \qquad \textbf{(Eq. 30)}$$

where the first term of the integral has to do with the vulnerability ($f(p_j|s)$, the probability density of the loss given an intensity s) and the second part has to do with the hazard ($f(s|E_i)$, de probability density of the intensity, given the occurrence of a scenario).

The total loss of the *i*-th scenario corresponds to the sum of the individual losses (p_j) in all the exposed elements. Given that in this operation the summands are random variables, the correct arithmetic must be used to determine the total loss of scenario *i*. Therefore, the sum is performed over the probability moments of the random variables p_j as follows.

$$E(p \mid E_i) = \sum_{j=1}^{NE} E(p_j) \qquad \textbf{(Eq. 31)}$$

$$\sigma^2(p \mid E_i) = \sum_{j=1}^{NE} \sigma^2(p_j) + 2 \sum_{\substack{k=1 \\ k<j}}^{NE-1} \sum_{j=2}^{NE} \operatorname{cov}(p_k, p_j) \qquad \textbf{(Eq. 32)}$$

where $E(p|E_i)$ is the expected value of the loss for scenario *i*, $\sigma^2(p|E_i)$ is its variance, *NE* is the total number of exposed elements in the analysis portfolio, $E(p_j)$ is the expected value of the loss in element *j*, $\sigma^2(p_j)$ its variance and $\operatorname{cov}(p_k,p_j)$ is the covariance of the loss for two different exposed elements. Given that in the practice is almost impossible to establish with full certainty the level of correlation of the loss for two different exposed elements, a correlation coefficient $\rho_{k,j}$ equal to 0.3 is assumed. Equation 29 can be then written as,

$$\sigma^2(p \mid E_i) = \sum_{j=1}^{NE} \sigma^2(p_j) + 2 \sum_{\substack{k=1 \\ k<j}}^{NE-1} \sum_{j=2}^{NE} \rho_{k,j} \sigma(p_k) \sigma(p_j) \qquad \textbf{(Eq. 33)}$$

The probability distribution of the loss for all scenarios is assumed Beta as well. So by obtaining the probability moments as shown above, the loss of any scenario is fully determined in terms of probability.

Natural disaster risk is commonly described by means of the *Loss Exceedance Curve*, which specifies the rates of occurrence of events in which a loss value is exceeded. The loss exceedance rates are calculated as follows,

$$\nu(p) = \sum_{i=1}^{N} \Pr(P > p \mid E_i) \cdot F_A(E_i) \qquad \textbf{(Eq. 34)}$$

where $\nu(p)$ is the loss exceedance rate of the loss *p*, *N* is the total number of hazard scenarios, $F_A(E_i)$ is the annual frequency of occurrence of the *i*-th scenario, and $\Pr(P>p|E_i)$ is the probability the loss *p* is exceeded conditional to the occurrence of scenario *i*. The inverse of $\nu(p)$ is the return period (*Tr*) of loss *p*. The loss exceedance curve contains all the required information to rigorously characterize, in terms of probability, the loss occurrence process. Note that equation 31 is merely an application of the total probability theorem.

It is worth noting that the loss exceedance curve has no uncertainty measure associated to it. It is common practice to associate the results of a probabilistic model with a level of confidence or variability of them. In this case, the loss exceedance rates directly incorporate the uncertainty of the loss in their value, so they cannot have an associated uncertainty. This is because, in mathematical terms, they are a probability measure calculated for a specific loss amount. In the framework of probabilistic risk assessment, the loss is the random variable, not its exceedance rates.

It is also worthy to note that in Equation 34 there is no distinction between events which belong to different hazards. Hence, the sum in this equation may include, for example, earthquakes and tropical cyclones or earthquakes and volcanic eruptions.

6.2.2 Risk Metrics

Directly from the loss exceedance curve, several risk metrics can be constructed, which are useful for different purposes in decision making and risk management. This metrics present a summarized vision of risk, in terms of one or a few numbers, instead of the complete set of probabilistic losses for all scenarios or the complete loss exceedance curve.

6.2.2.1 The Average Annual Loss (AAL)

The AAL is the expected value of the annual loss. It indicates the amount that needs to be paid in order to compensate, in the long term, all the future losses. In a simple insurance scheme, the AAL would be the pure premium. It is calculated as the integral of the loss exceedance curve as follows,

$$AAL = \int_0^\infty \nu(p)dp \qquad \textbf{(Eq. 35)}$$

It can also be calculated from the set of loss events as,

$$AAL = \sum_{i=1}^{N} E(P|E_i)F_A(E_i) \qquad \textbf{(Eq. 36)}$$

In addition, it can be calculated from the hazard curves over a territory. Being $\nu_j(s)$ the intensity excess rates (hazard curve) at the geographical location of exposed element *j,* then the expected value of the loss p caused at that element, $E_j(p)$, can be calculated as,

$$E_j(p) = \int_0^\infty -\frac{1}{\nu_j(0)}\frac{d\nu_j(s)}{ds}E_j(p|s)ds \qquad \textbf{(Eq. 37)}$$

The AAL is calculated by summing the individual expected losses,

$$AAL = \sum_{j=1}^{NE} E_j(p) \qquad \textbf{(Eq. 38)}$$

All the above mentioned are analytical ways to calculate AAL.

The AAL is an important risk metric because it integrates in a single number the effect, in terms of loss, of the occurrence of all hazard events over the exposed assets. It is considered the most robust risk indicator, not only for its capacity to summarize in a single number the loss generation process, but for being relatively insensitive to uncertainty.

6.2.2.2 The Probable Maximum Loss (PML)

In attention to its definition for the insurance market, the PML corresponds to a loss that occurs very infrequently, or in other words, that has a long return period. As was previously indicated, the return period is the inverse of the exceedance rate,

$$Tr(p) = \frac{1}{\nu(p)} \qquad \textbf{(Eq. 39)}$$

In reality, the PML is not a single value but a curve that relates loss amounts to their corresponding return periods. Nevertheless, it is common practice to define the PML as a single value. The selection of the return period of the PML depends exclusively of the type of decision that will be made, and on the risk aversion of the decision maker. For example, in the insurance industry the return period of the PML is usually selected between 200 and at least 1500 years. Further details on the definition and applications of the PML can be found in Marulanda (2013).

6.2.2.3 The Bankruptcy Probability (P_Q)

By assuming that the loss generation process follows a Poisson process, it is possible to determine the probability to exceed a loss amount, for a given exposure period,

$$\Pr(P > p)_T = 1 - e^{-\nu(p)T} \qquad \textbf{(Eq. 40)}$$

where $\Pr(P>p)_T$ is the probability of exceeding the loss p, along the time frame T (given in years). If the loss p corresponds to the PML, then the result is the bankruptcy probability (P_Q),

$$P_Q = 1 - e^{-T/Tr(PML)} \qquad \textbf{(Eq. 41)}$$

6.2.2.4 Other Useful Risk Metrics

As was above mentioned, the loss exceedance curve contains all the required information to rigorously characterize, in terms of probability, the loss generation process. It is possible to

determine directly from the function $\nu(p)$ other risk metrics that may become relevant and useful for decision making. A few examples are presented here (Bernal, 2014b).

The probability density function of the loss for the next event, or any event selected randomly, is obtained as,

$$f(p) = -\frac{1}{\nu(0)}\frac{d\nu(p)}{dp} \qquad \textbf{(Eq. 42)}$$

The probability of exceeding a loss amount after the occurrence of the next event, or any event selected randomly, is obtained as,

$$\Pr(P > p) = \frac{\nu(p)}{\nu(0)} \qquad \textbf{(Eq. 43)}$$

The time until the occurrence of the next event (t) is distributed exponential with a probability density function given by,

$$f(t) = \nu(p)e^{-\nu(p)t} \qquad \textbf{(Eq. 44)}$$

The number of events (N) that will occur along a time frame T, that exceed a loss amount p, is distributed Poisson, for which the probability of N being equal to n is,

$$\Pr(N = n) = \frac{(\nu(p)T)^n e^{-\nu(p)T}}{n!} \qquad \textbf{(Eq. 45)}$$

6.3 Risk Indicators

This report was aimed at obtaining risk results in each country for the entirety of the exposed elements in the country which includes the assets for the public and private sectors (national or total risk). Likewise, it is of interest to know the risk to exposed elements in each country; elements whose reconstruction cost would be the responsibility of the government in the case of a disaster. In other words, assets from the public sector that are property of the central government are fiscal goods, as well as those that, however their private characteristic, would need to be reconstructed using public funds because they belong to low income population. In other words, it is important to evaluate risk that falls under governmental responsibility (sovereign or fiscal risk) which should be a reference for ministries of economy and finance for example, among others. This report contributes useful information from the non-explicit contingent disaster liability for the balance in each nation (Marulanda 2013). For this purpose the results are expressed in terms of:

- The Average annual loss (AAL) or mean annual loss in monetary units and also relative to the total exposed value of the asset (also known as pure premium or risk technical premium). In probabilistic terms, the AAL is the mathematical mean value of the annual loss.
- Probable maximum loss (PML) for a return period of 250 years. For some countries the PML curve is shown in a graphical way that accounts for catastrophe risk.

Using the main two risk metrics, a series of indicators are generated allowing categorizing and rank countries in terms of the impact (Marulanda 2013). For this purpose, economic flow variables are used to normalize the risk values:

- AAL/GFCF: *Average annual loss* with respect to the *Gross Fixed Capital Formation*.
- AAL/GGC: *Average annual loss* with respect to the *General Government Final Consumption Expenditure*.
- AAL/GNE: *Average annual loss* with respect to the *Gross National Expenditure*
- AAL/PC: *Average annual loss* with respect to the *Produced Capital.*
- PML_{250}/GDP: *Probable maximum loss* (250 years) with respect to the *Gross Domestic Product*
- PML_{250}/GNI: *Probable maximum loss* (250 years) with respect to the *Gross National Income*
- PML_{250}/PC: *Probable maximum loss* (250 years) with respect to the *Produced Capital.*

In addition to the ones above presented, new indicators were developed for GAR15. It is the case of the Disaster Risk Development Implications Index (DRDI). This index is useful to provide a ranking of the countries based on the ratio of the AAL regarding a set of relevant economic, financial, and social development variables. This index attempts to reveal the load of the AAL to the social expenditure (social spending), the capital formation (domestic investment) and reserves (financial capacity), and the produced capital or capital stock (assets at risk) and savings (treasury) of each country. It would reflect, in adverse conditions, growth and social constraints for the country as results of potential future disasters.

What the index shows is that if disaster risk in terms of the division of the AAL by the produced capital (relevant capital stock) is meaningful due to either the levels of hazard, exposure's vulnerability as well as the country's economic and financial capacity to cope with future disasters (i.e. investment and social expenditure, reserves and savings). Higher values of the index reflect that disaster risk could represent stress on these budgets. The DRID index is calculated based on three subindicators: The Disaster Risk Social Implications (DRSI), obtained from the ratio of the AAL with the Social Expenditure (SE),

$$DRSI = \frac{AAL}{SE} \qquad \textbf{(Eq. 46)}$$

the Disaster Risk Growth and Financial Implications (DRGI), obtained from the average of the ratio of the AAL with Gross Fixed Capital Formation (GFCF) and the Total Reserves (TR),

$$DRGI = \frac{1}{2}\left(\frac{AAL}{GFCF} + \frac{AAL}{TR}\right) \quad \textbf{(Eq. 47)}$$

and the Disaster Risk Economic Implications (DREI), obtained from the average of the ratio of the AAL with exposed Produced Capital (PC) and the Gross Savings (GS).

$$DREI = \frac{1}{2}\left(\frac{AAL}{PC} + \frac{AAL}{GS}\right) \quad \textbf{(Eq. 48)}$$

This approach is simple and the indicators used reflect a simple way to provide a general view of the implications of disaster risk for socioeconomic development of countries. The DRID index is then obtained as,

$$DRID = \frac{1}{3}\left(DRSI + DRGI + DREI\right) \quad \textbf{(Eq. 49)}$$

These indicators have been normalized using the logarithms of values (x-min/max-min).

6.4 Probabilistic Risk Results

Applying the above mentioned methodology, risk metrics and indicators were calculated for 216 countries, for 6 different natural hazards. The following sections present world maps of AAL and PML values (the latest for return periods of 250, 500, 1000 and 1500 years), for each of the hazards. It is reminded that in the case of floods and volcanic ash fall only the AAL was calculated given the way the hazard outputs were generated. Therefore, PML values are presented only for the remaining 4 hazards. The risk indicators are presented as countries rankings in the following sections, only for the highest ranked countries. Additional rankings for countries grouped by region, economy and SIDS are presented in Annex 22. The complete set of indicators and rankings are presented in Annex 23. Figure 100 and Figure 101 present the maps of distribution of the National (total assets) and Fiscal (public assets) exposed values by countries. Figure 102 shows the relative participation of the Fiscal portfolio in the National portfolio.

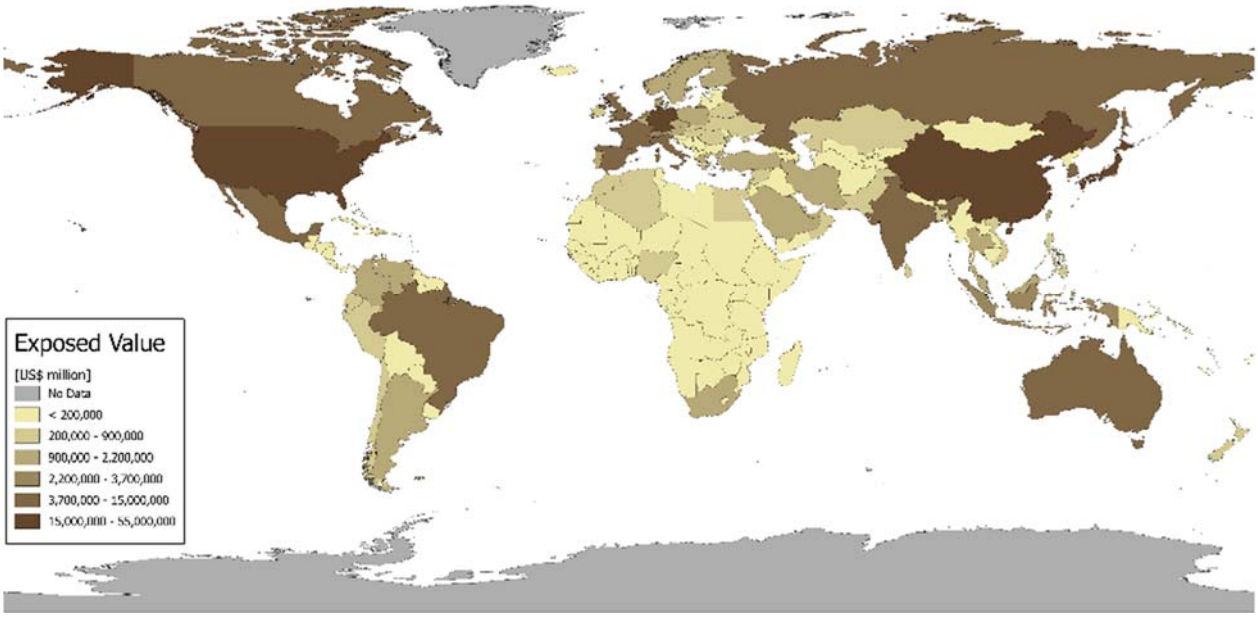


Figure 100. Distribution of the National exposed value by country

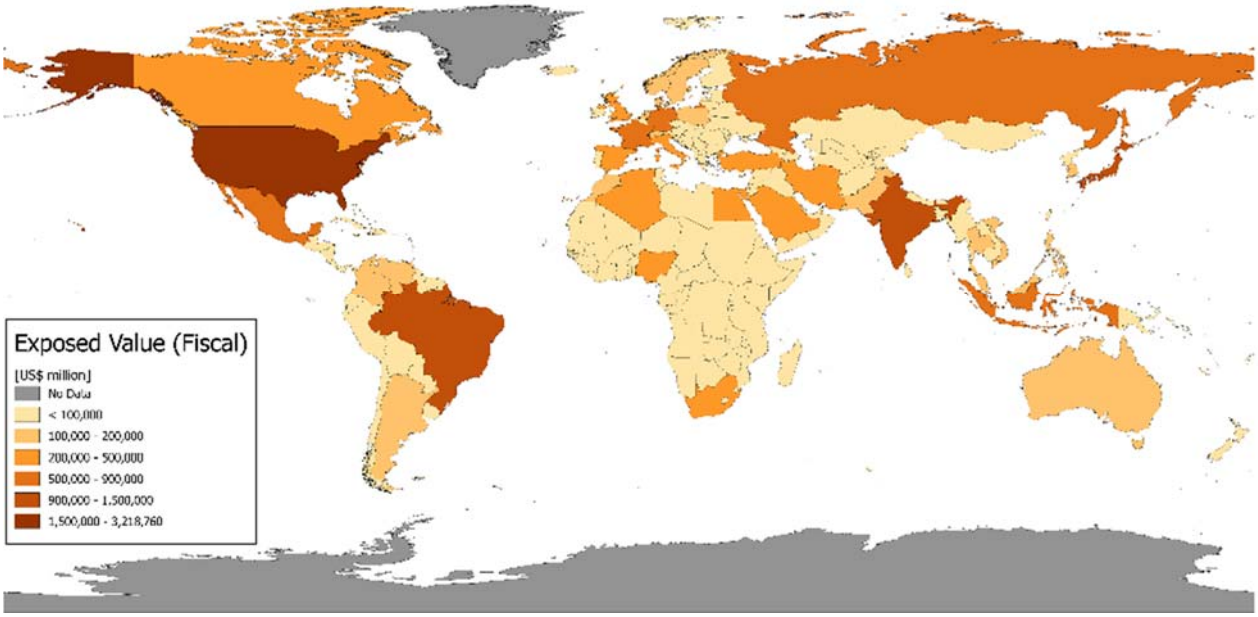


Figure 101. Distribution of the Fiscal exposed value by country

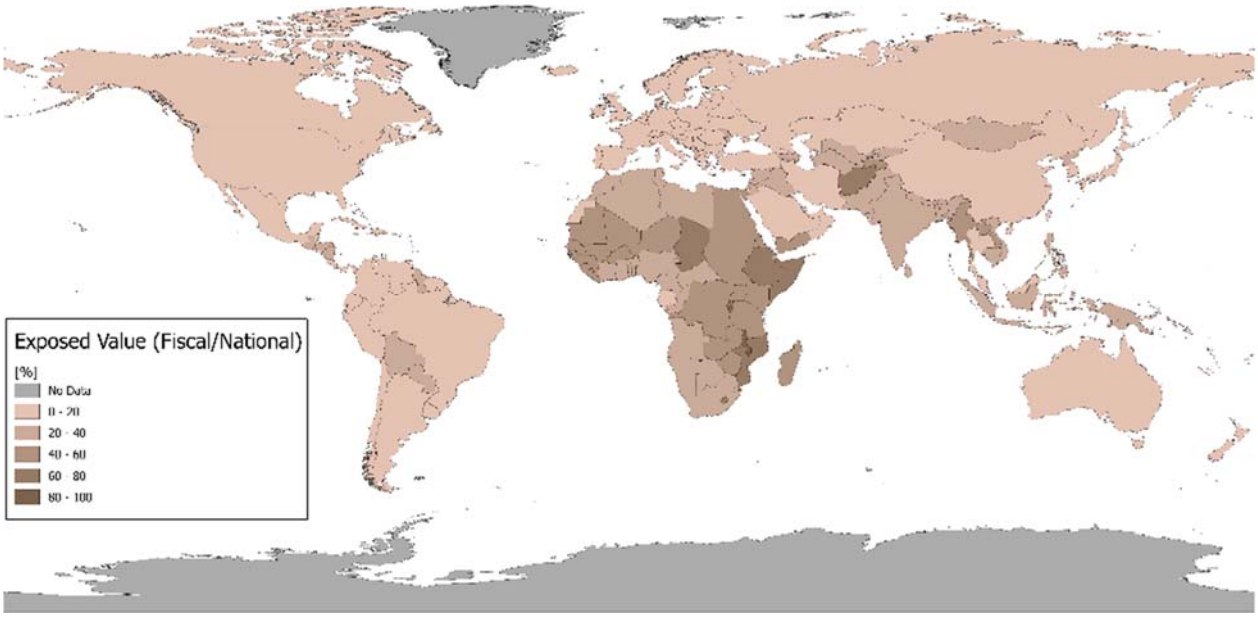


Figure 102. Participation of the Fiscal portfolio in the National portfolio

6.4.1 Seismic Risk

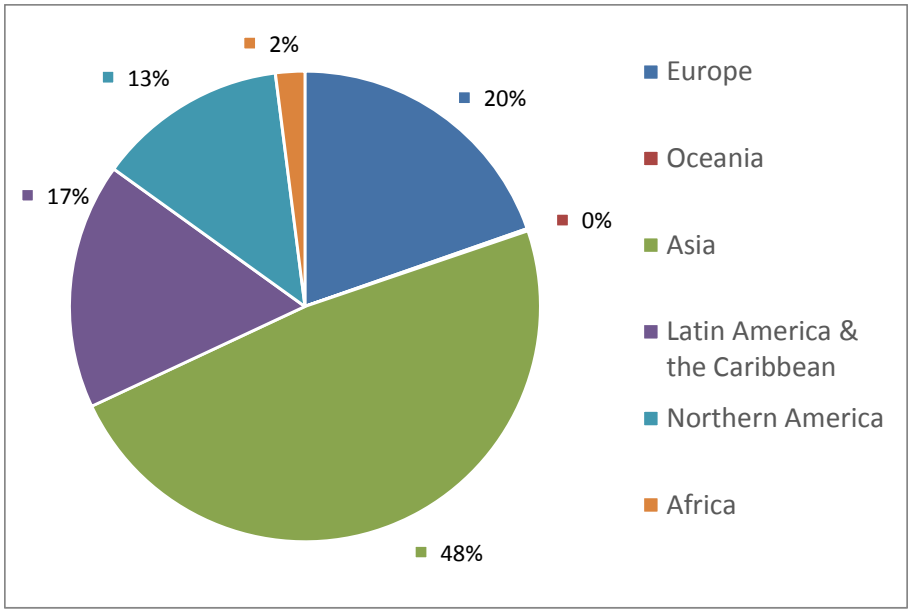


Figure 103. Distribution of the world total earthquake AAL by region

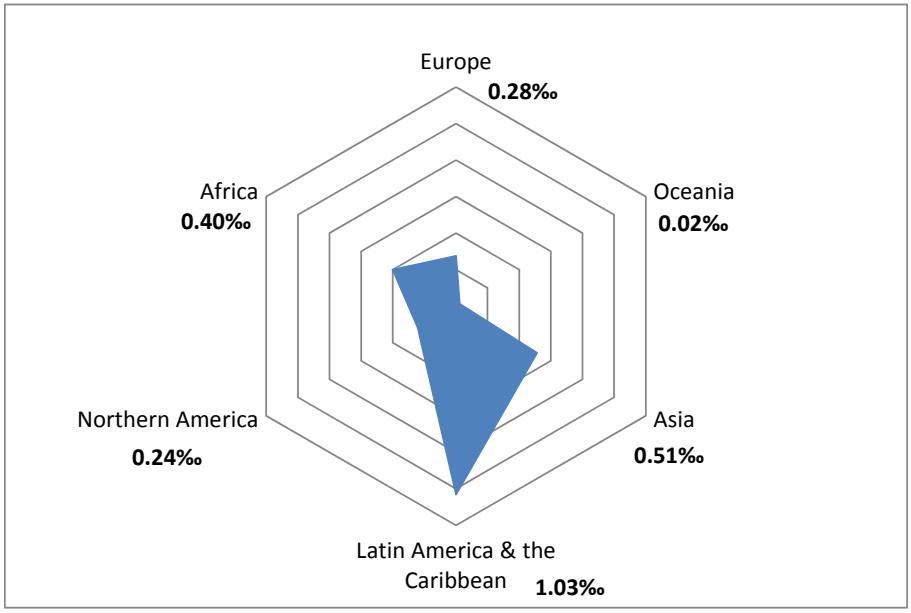


Figure 104. Comparison of earthquake AALs by region (presented as relative to the total exposed value of the region)

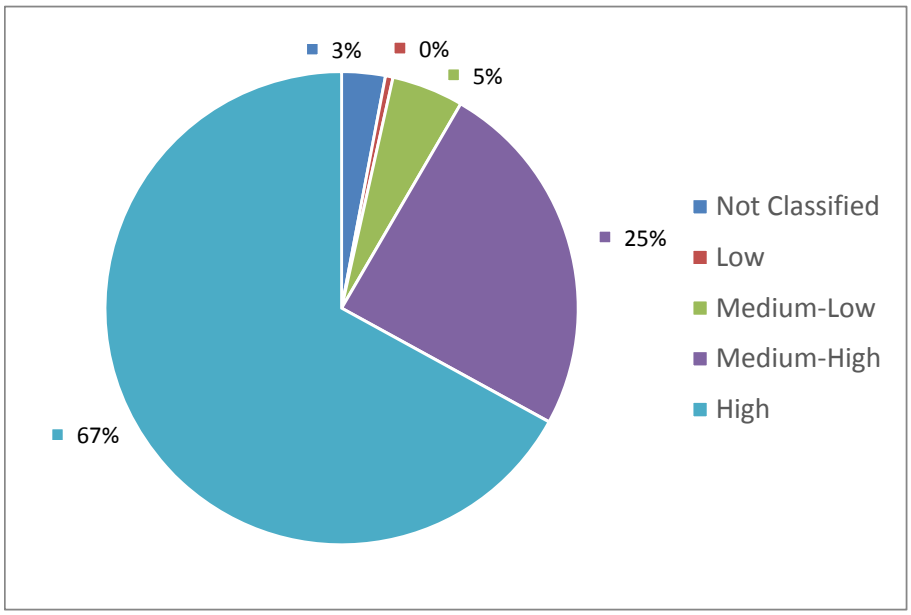


Figure 105. Distribution of the world total earthquake AAL by economy

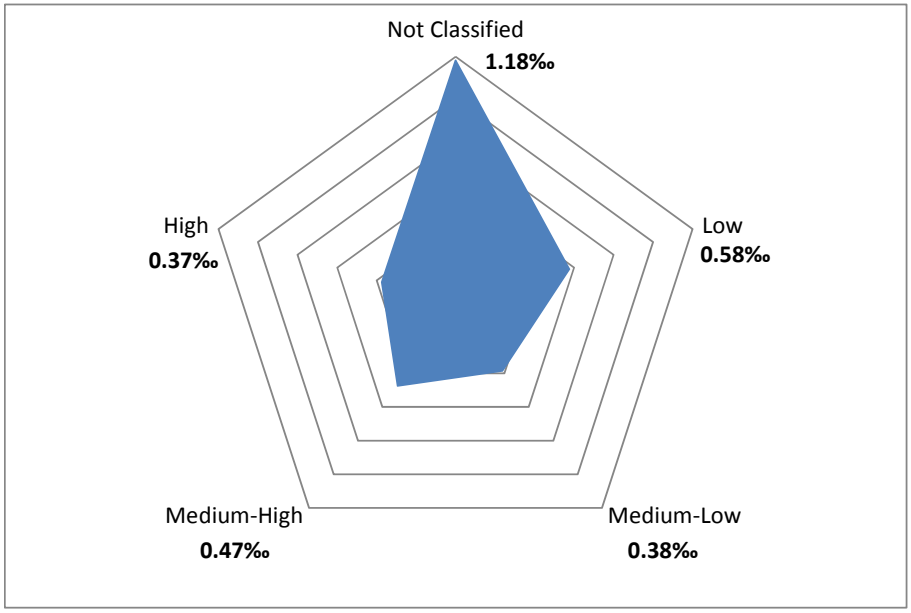


Figure 106. Comparison of earthquake AALs by economy (presented as relative to the total exposed value of the economy)

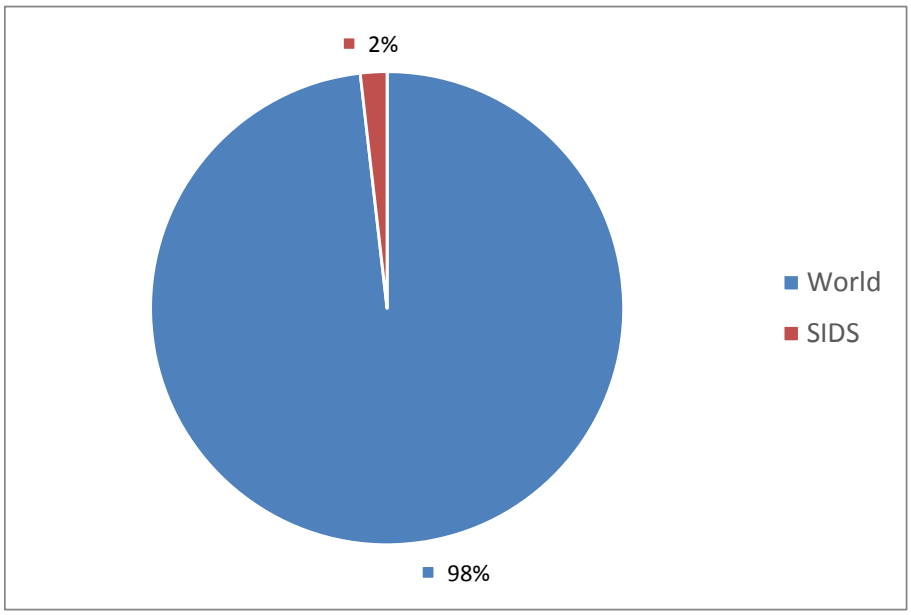


Figure 107. Distribution of the world total earthquake AAL between SIDS and other countries

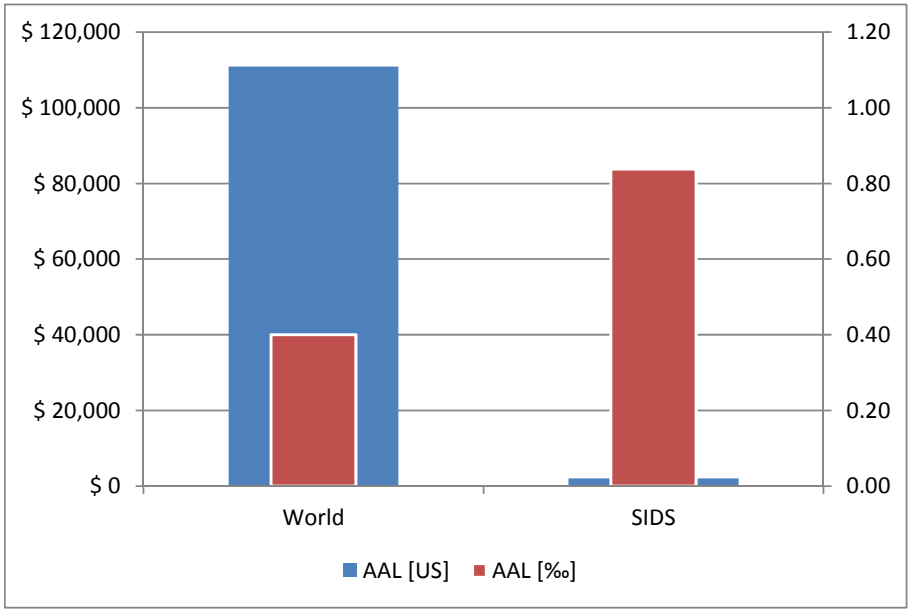


Figure 108. Comparison of earthquake AALs between SIDS and other countries (presented as relative to the total exposed value of the countries aggrupation)

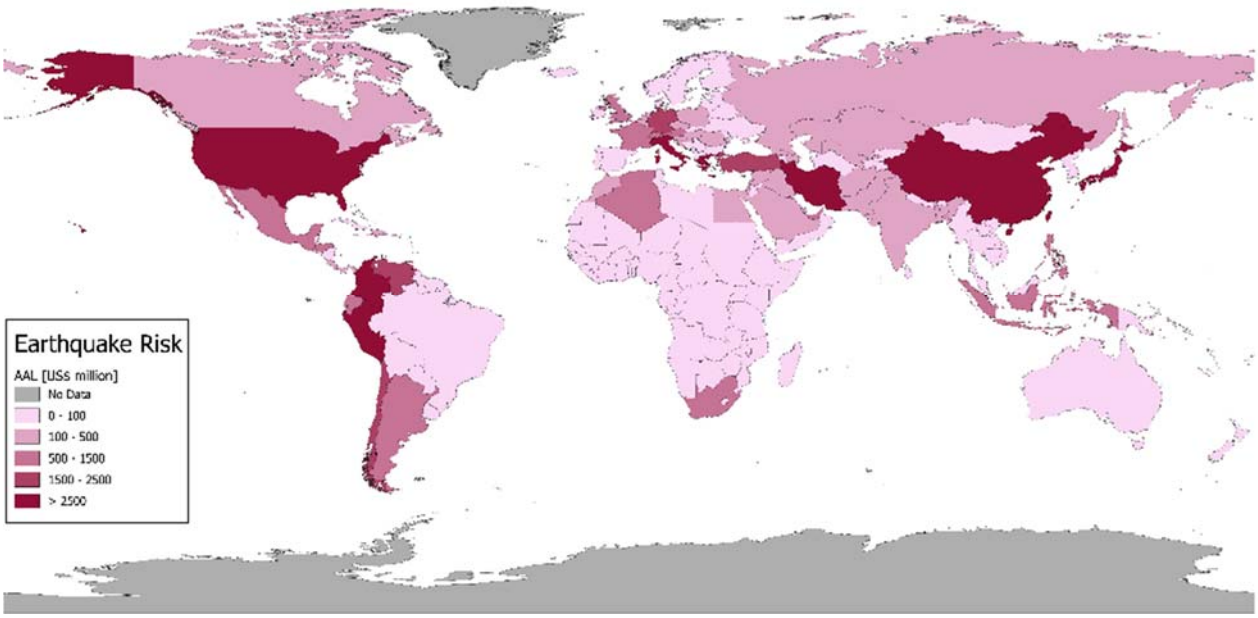


Figure 109. Distribution of AAL for earthquake by country

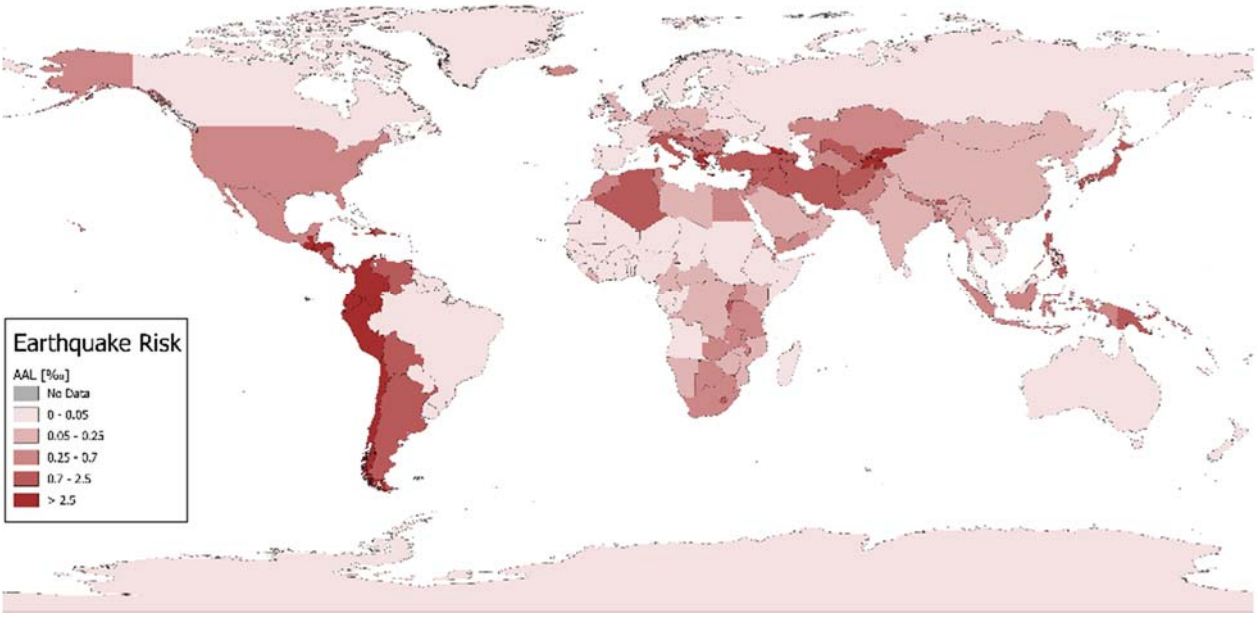


Figure 110. Distribution of AAL for earthquake relative to the exposed value by country

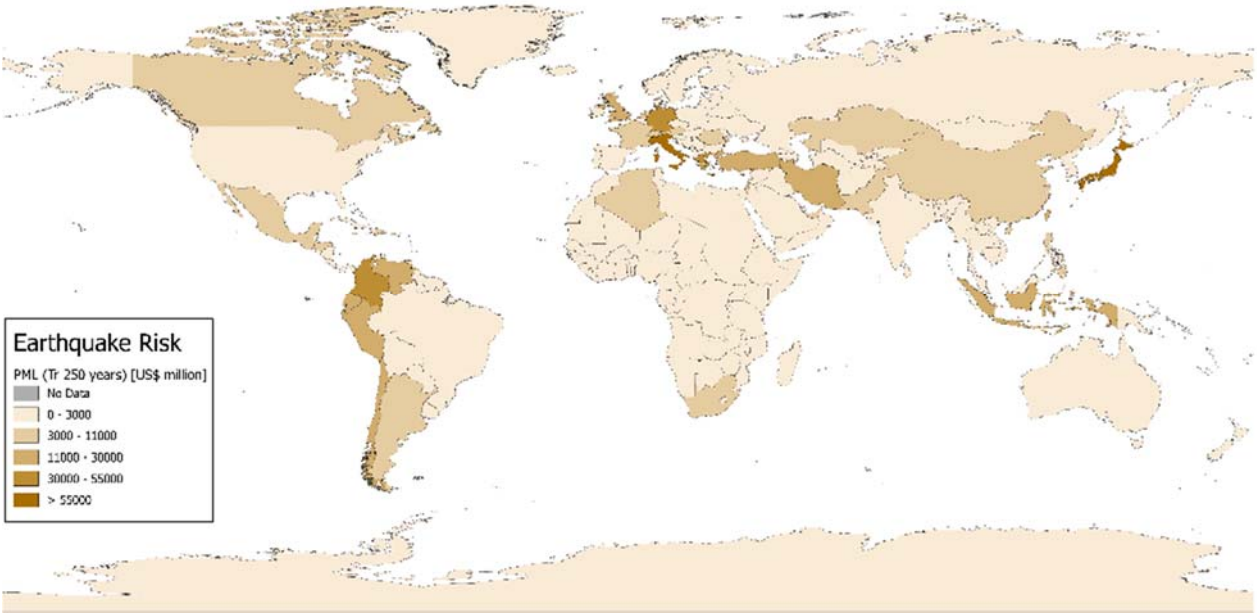


Figure 111. Distribution of PML (250 years) for earthquake by country

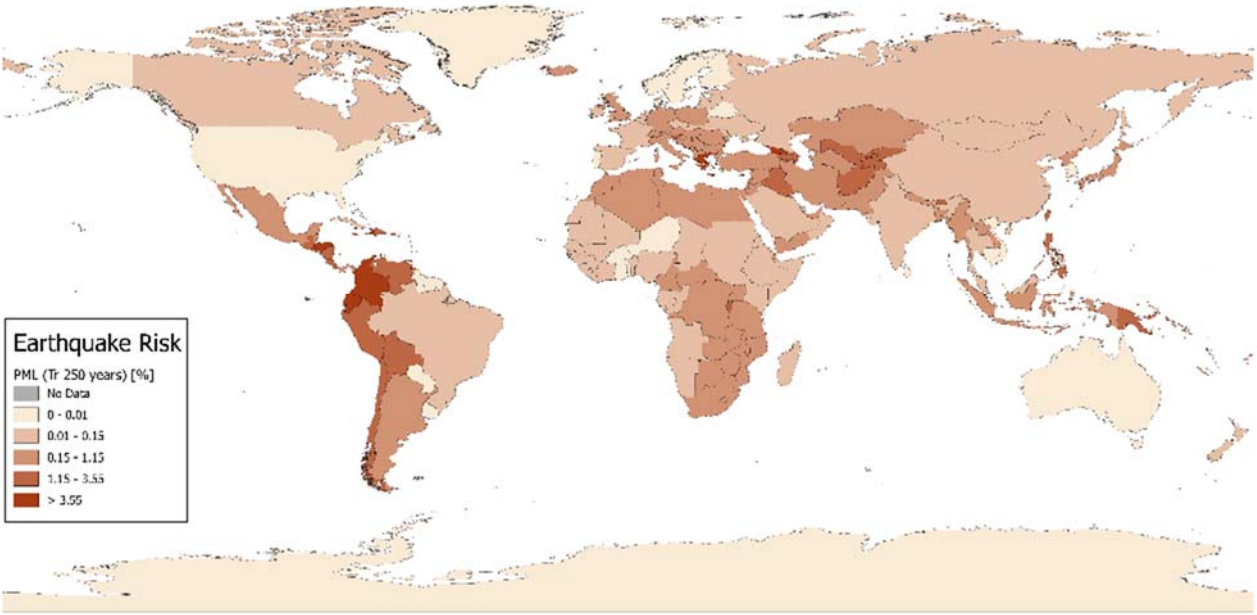


Figure 112. Distribution of PML (250 years) for earthquake relative to the exposed value by country

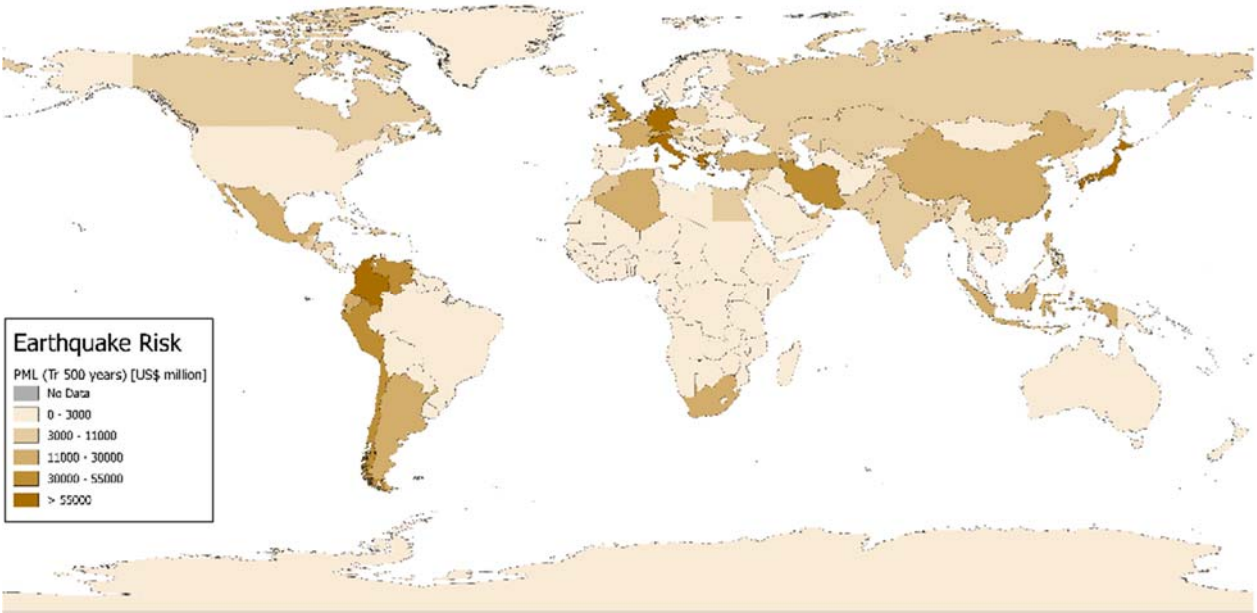


Figure 113. Distribution of PML (500 years) for earthquake by country

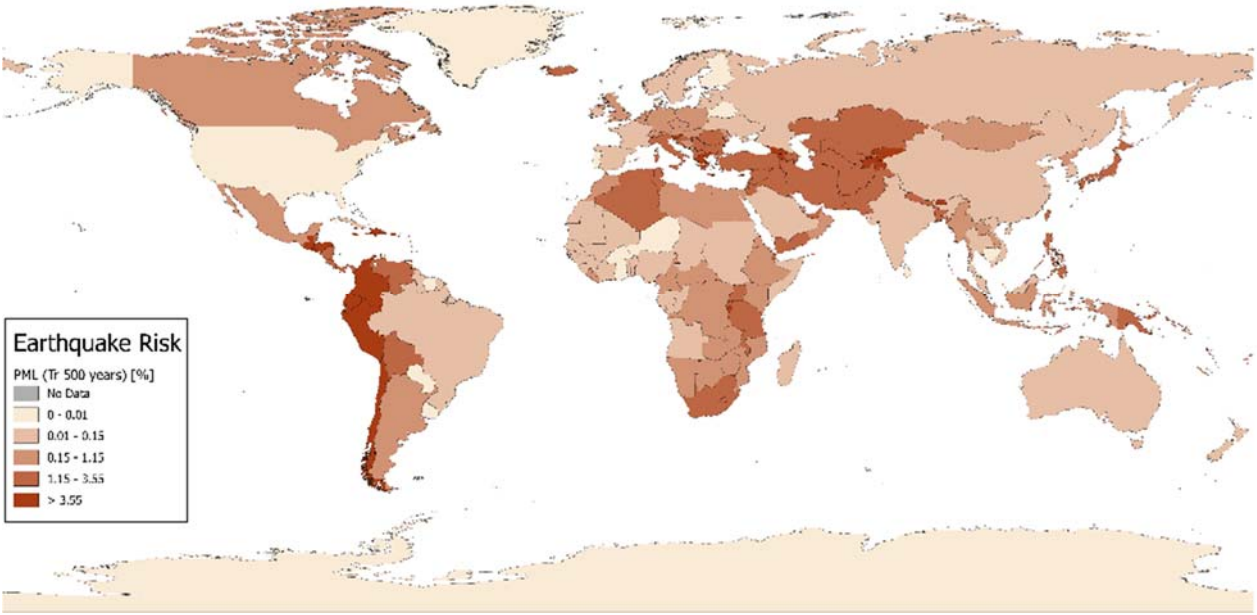


Figure 114. Distribution of PML (500 years) for earthquake relative to the exposed value by country

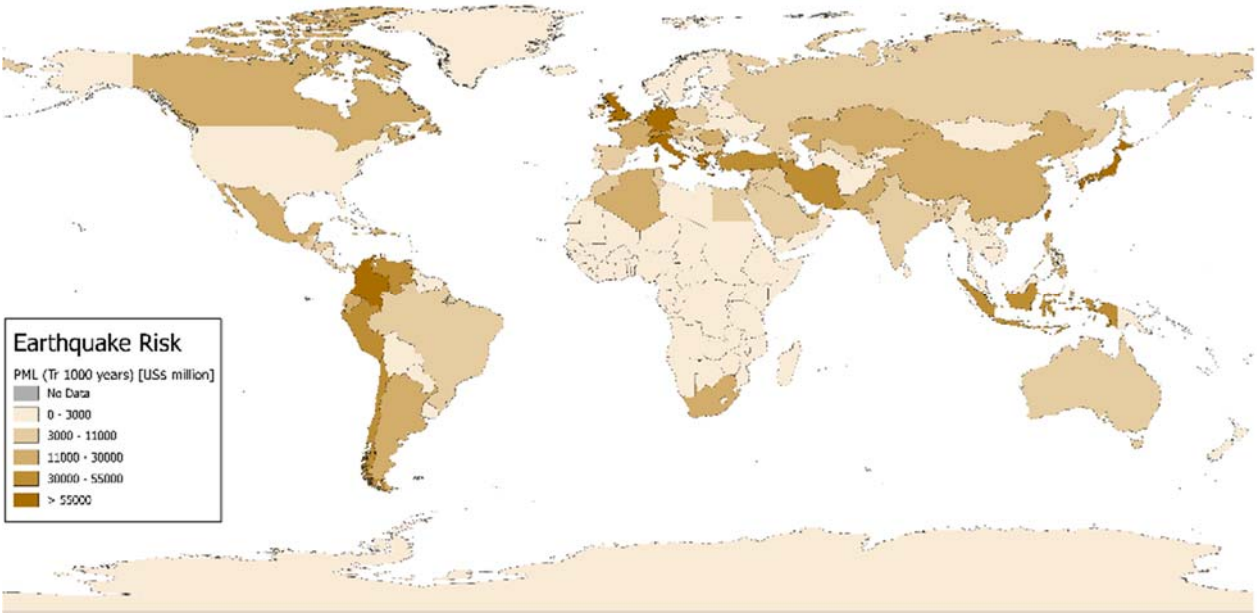


Figure 115. Distribution of PML (1000 years) for earthquake by country

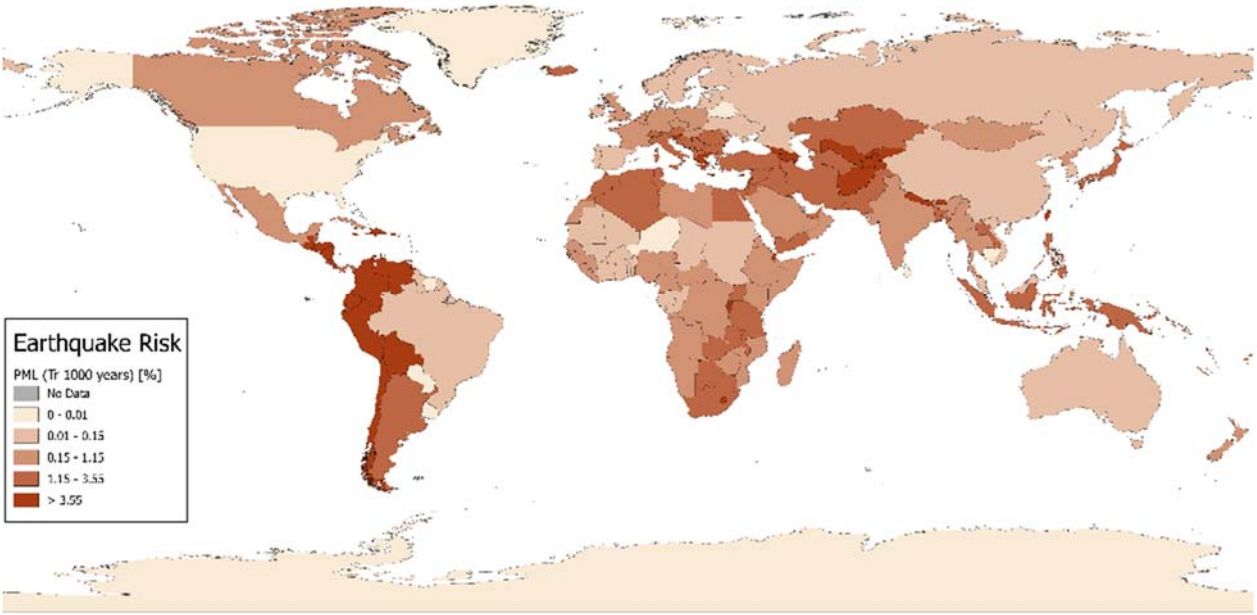


Figure 116. Distribution of PML (1000 years) for earthquake relative to the exposed value by country

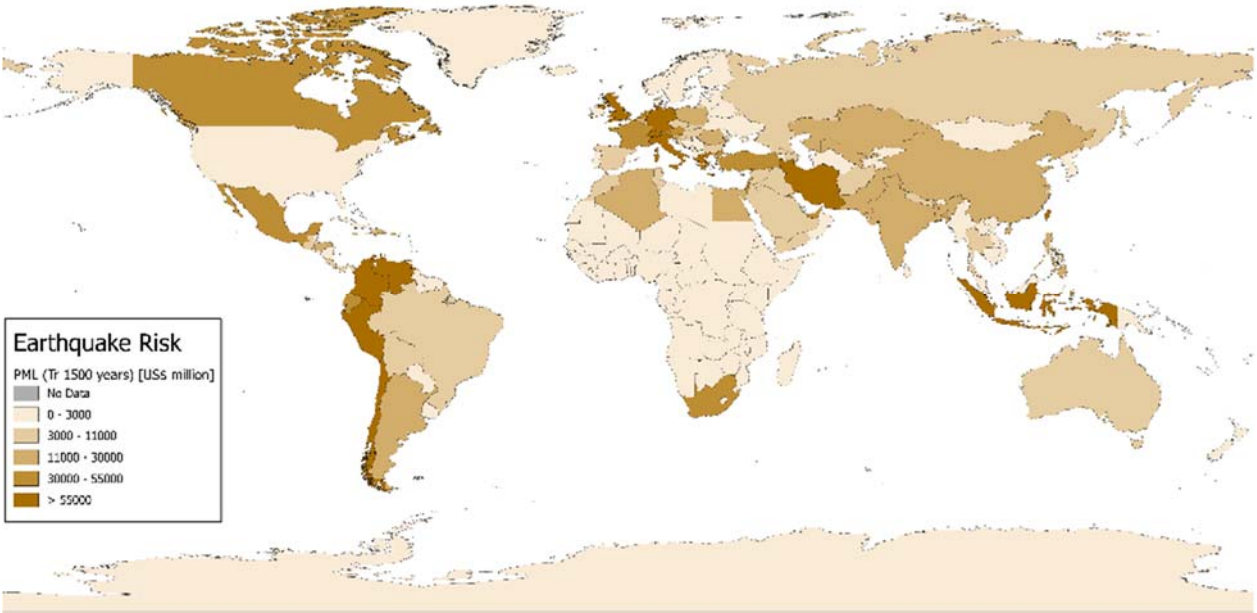


Figure 117. Distribution of PML (1500 years) for earthquake by country

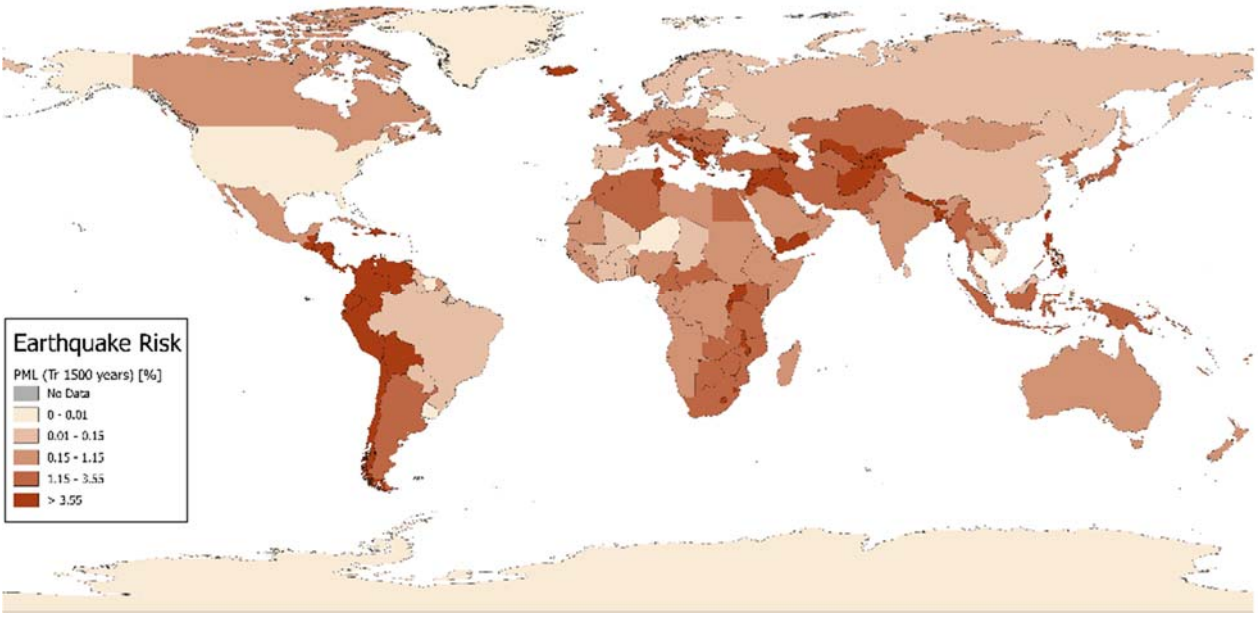


Figure 118. Distribution of PML (1500 years) for earthquake relative to the exposed value by country

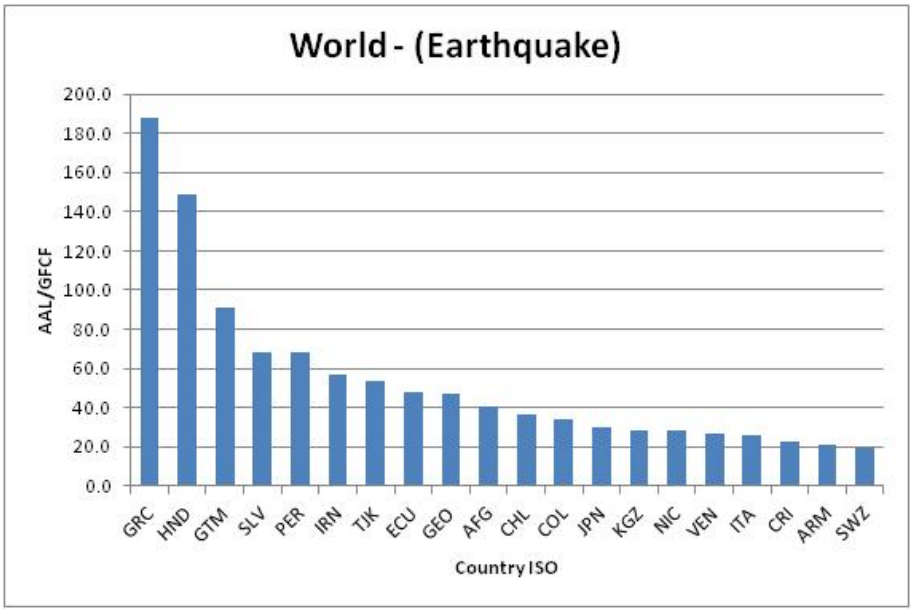


Figure 119. AAL/ GFCF (National) by country (Earthquakes)

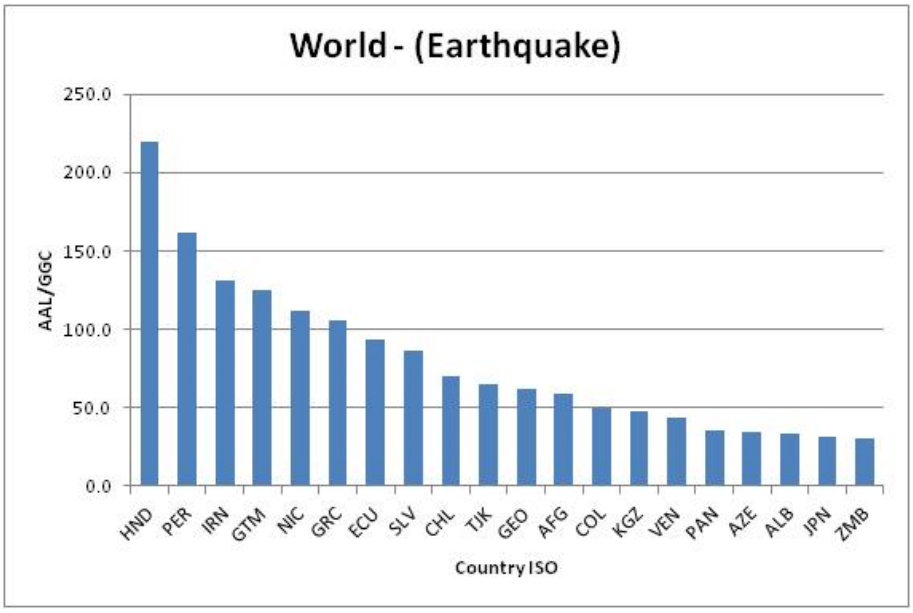


Figure 120. AAL/ GGC (National) by country (Earthquakes)

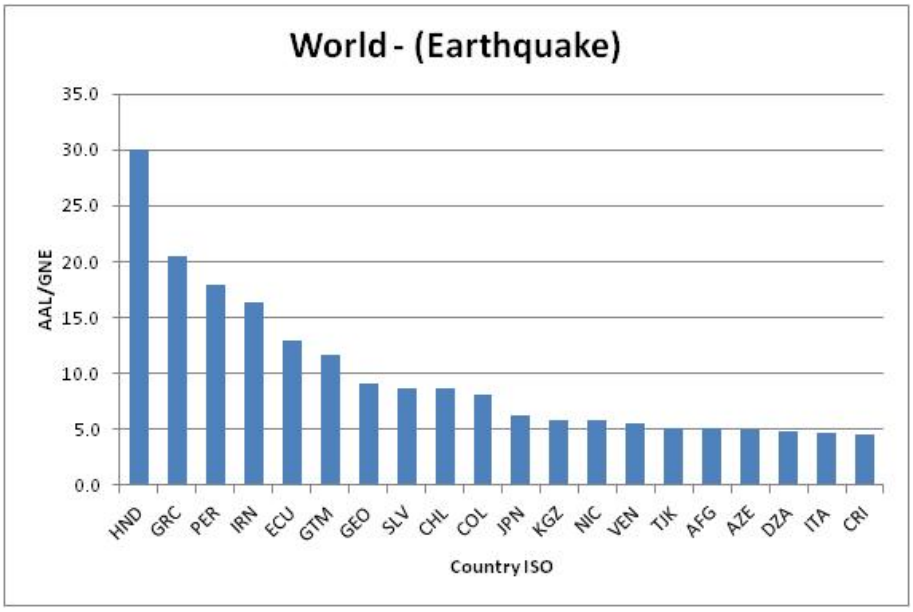


Figure 121. AAL/GNE (National) by country (Earthquakes)

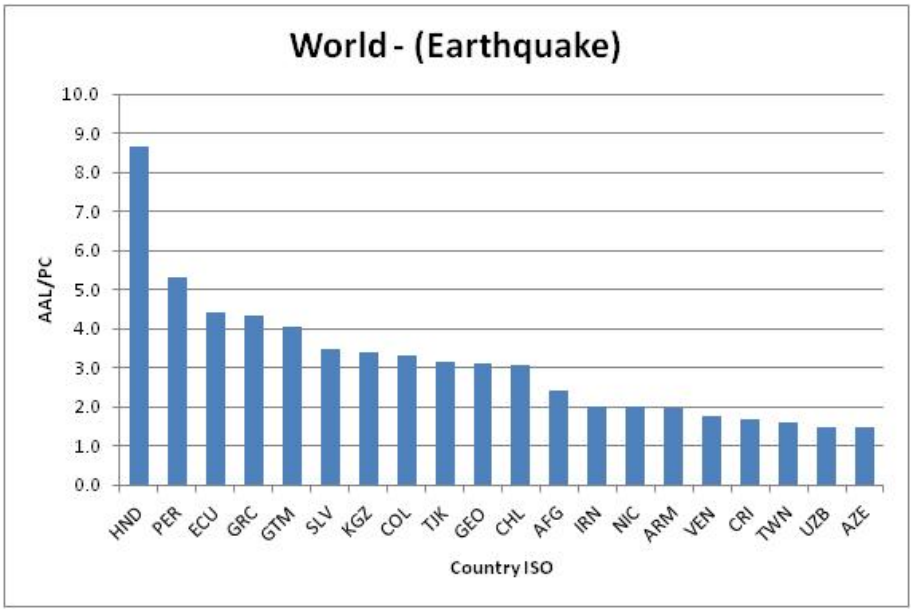


Figure 122. AAL/PC (National) by country (Earthquakes)

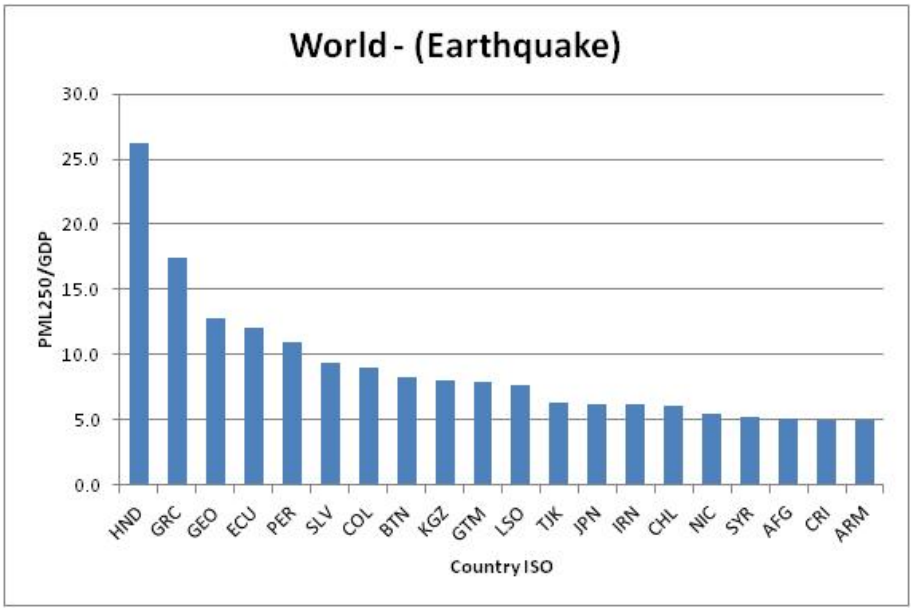


Figure 123. PML (250 years)/ GDP (National) by country (Earthquakes)

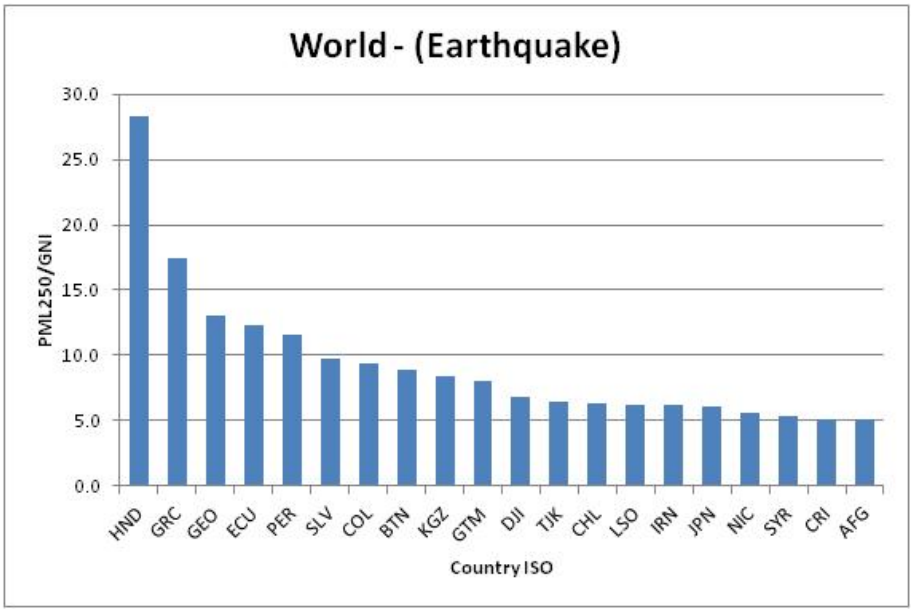


Figure 124. PML (250 years)/ GNI (National) by country (Earthquakes)

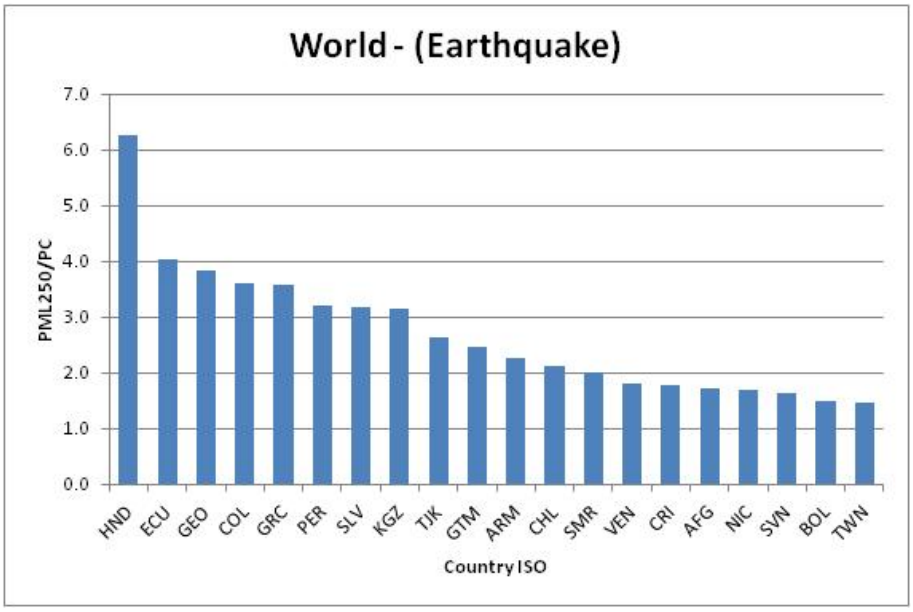


Figure 125. PML (250 years)/ PC (National) by country (Earthquakes)

6.4.2 Tropical Cyclone Risk (Wind Speed)

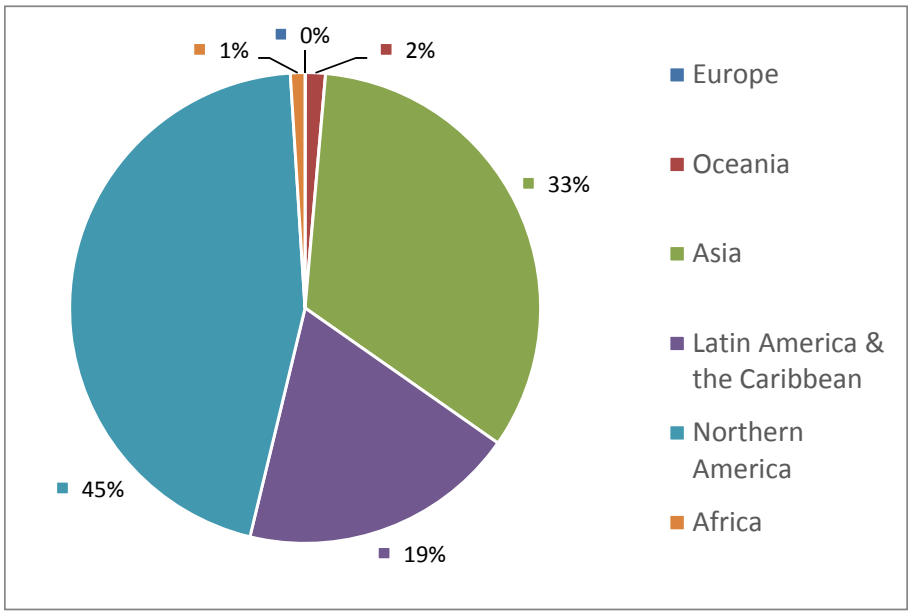


Figure 126. Distribution of the world total TC wind AAL by region

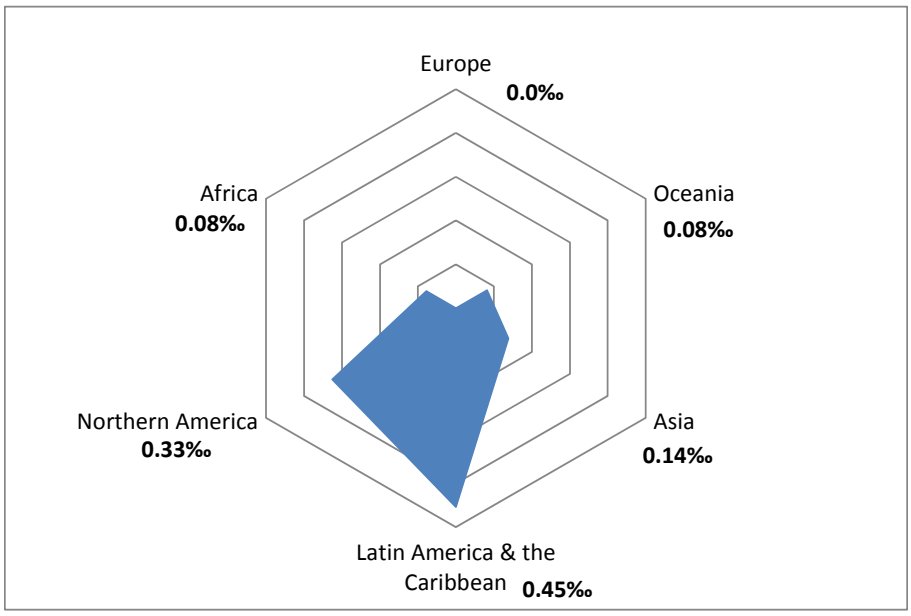


Figure 127. Comparison of TC wind AALs by region (presented as relative to the total exposed value of the region)

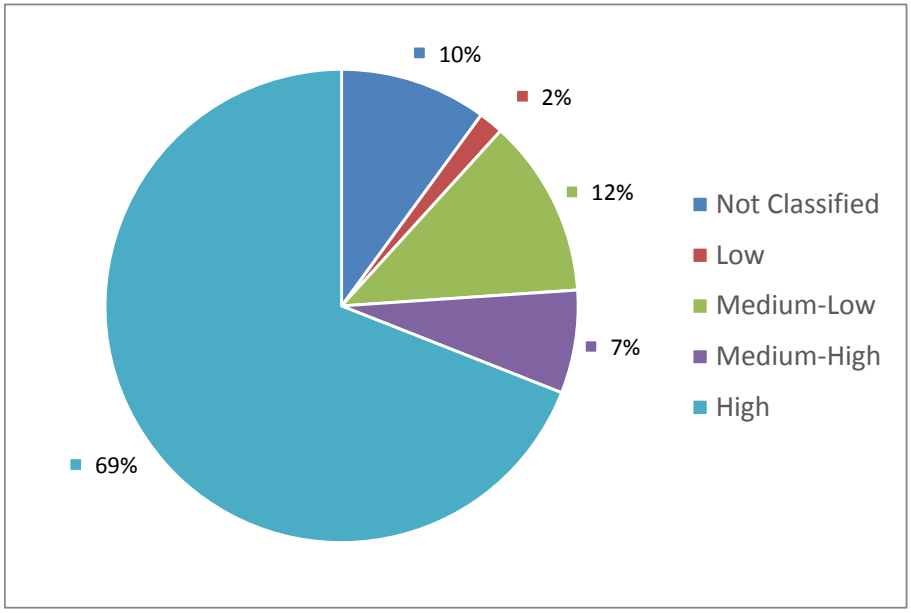


Figure 128. Distribution of the world total TC wind AAL by economy

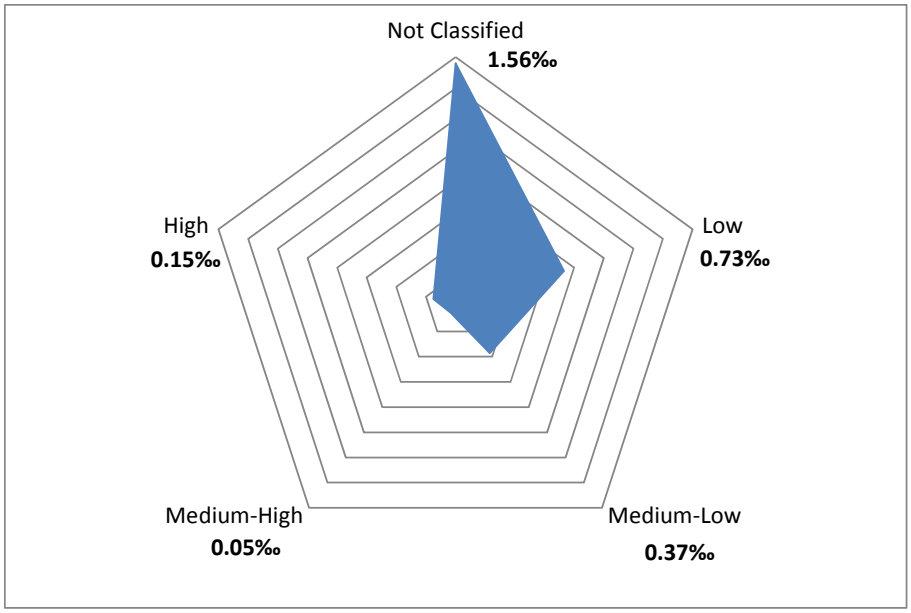


Figure 129. Comparison of TC wind AALs by economy (presented as relative to the total exposed value of the economy)

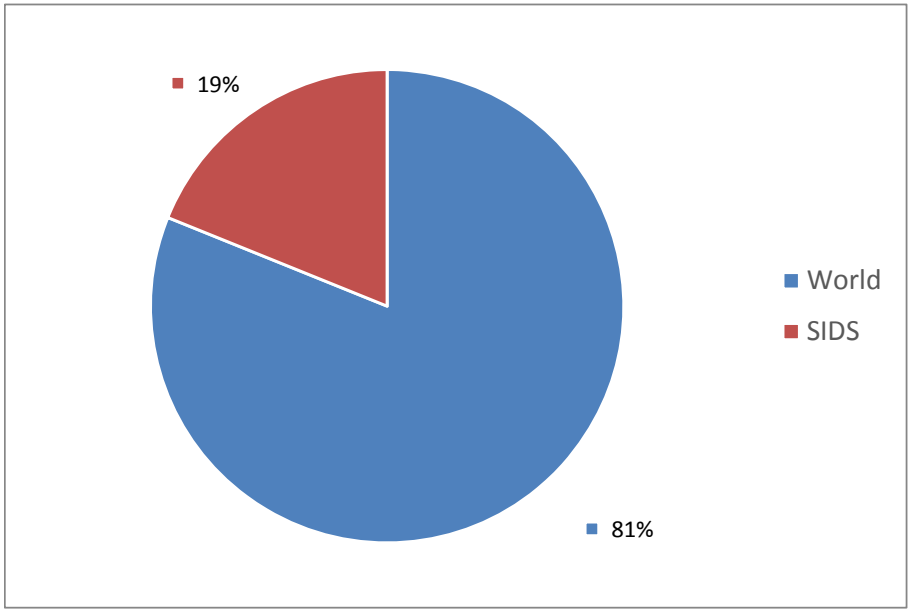


Figure 130. Distribution of the world total TC wind AAL between SIDS and other countries

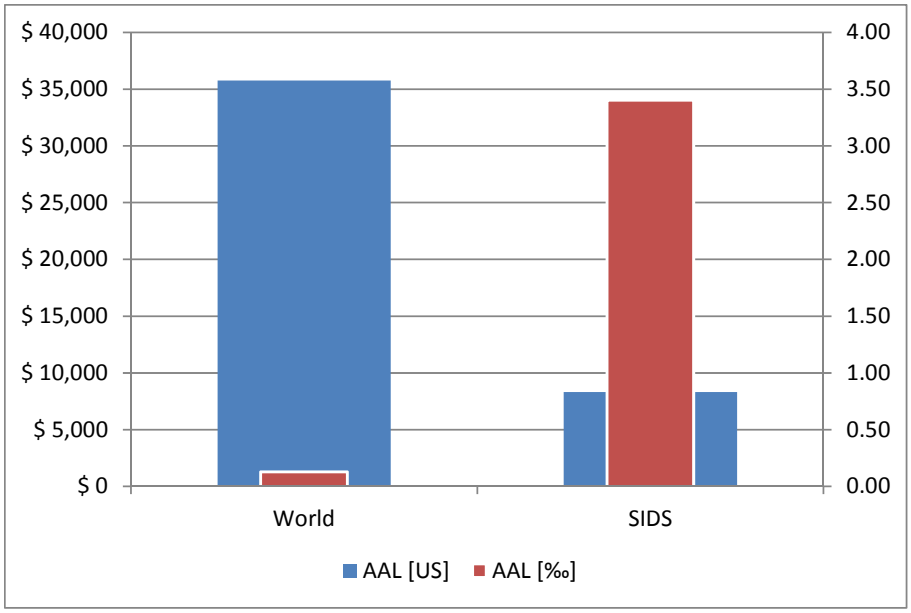


Figure 131. Comparison of TC wind AALs between SIDS and other countries (presented as relative to the total exposed value of the countries aggrupation)

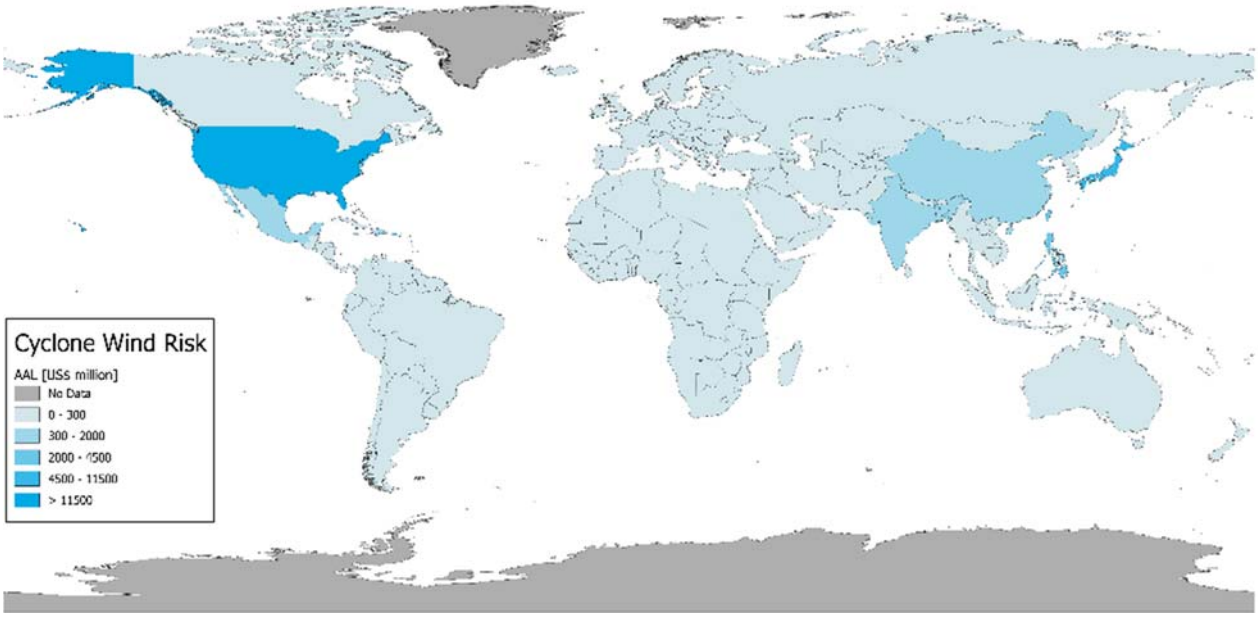


Figure 132. Distribution of AAL for TC wind by country

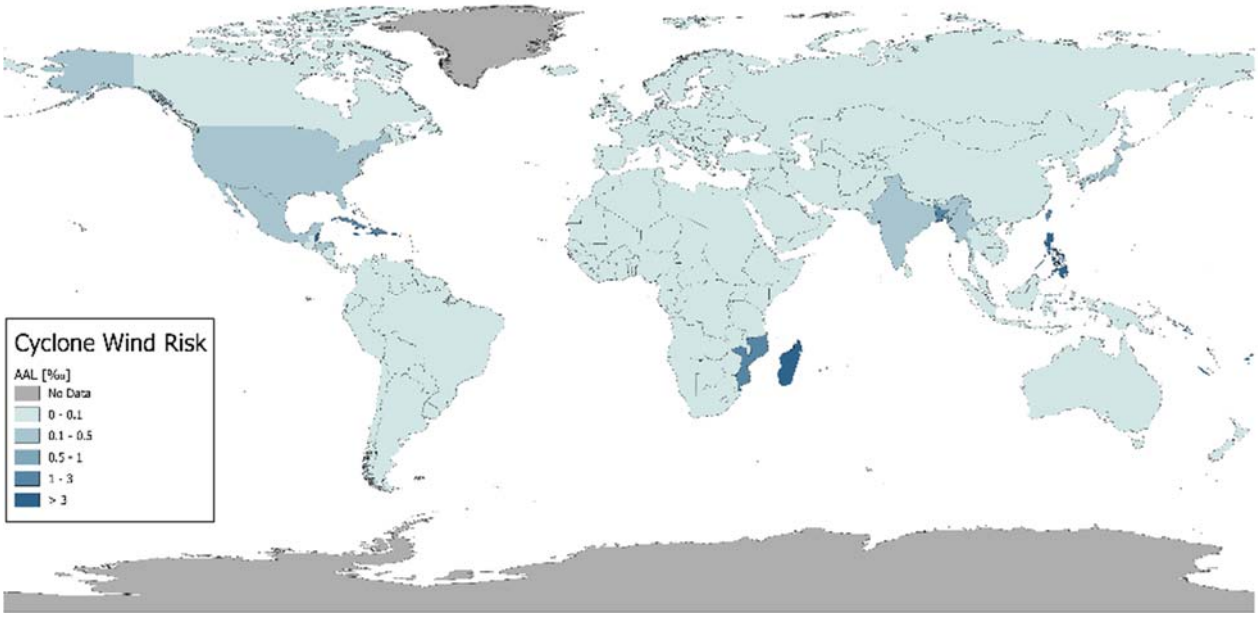


Figure 133. Distribution of AAL for TC wind relative to the exposed value by country

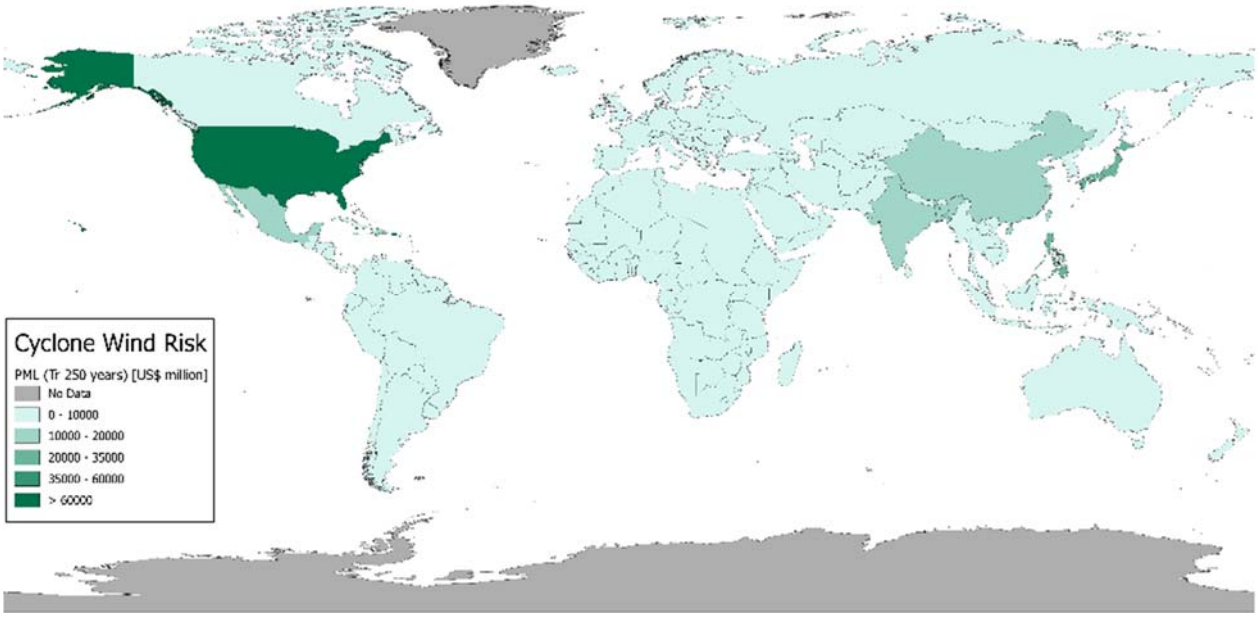


Figure 134. Distribution of PML (250 years) for TC wind by country

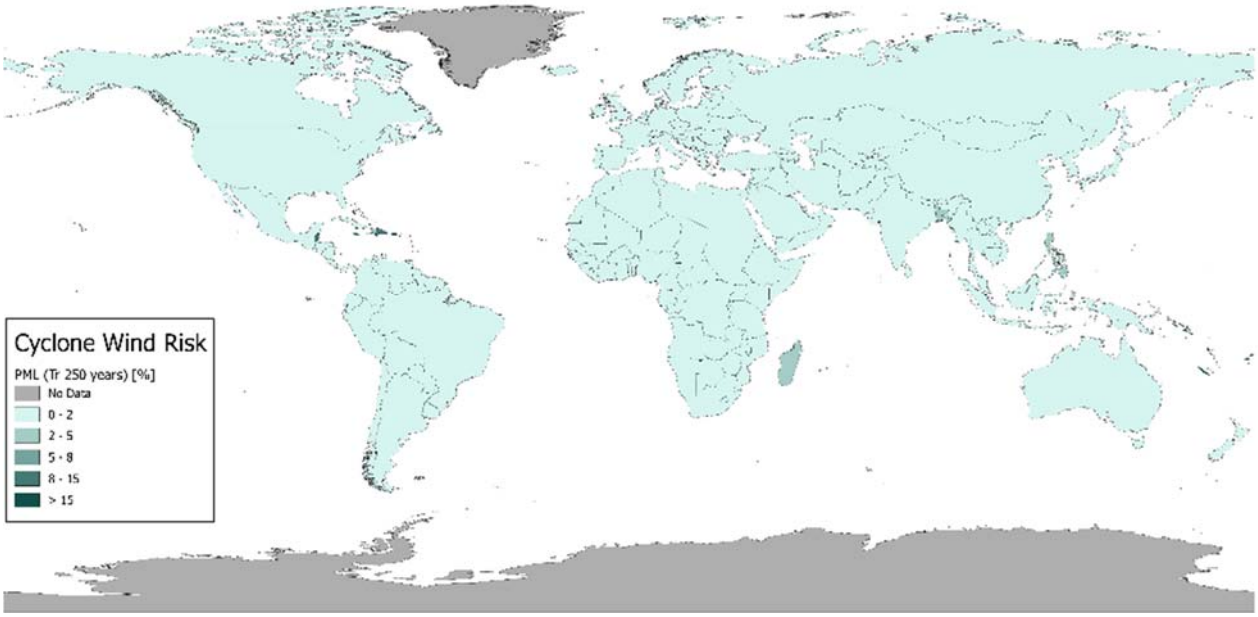


Figure 135. Distribution of PML (250 years) for TC wind relative to the exposed value by country

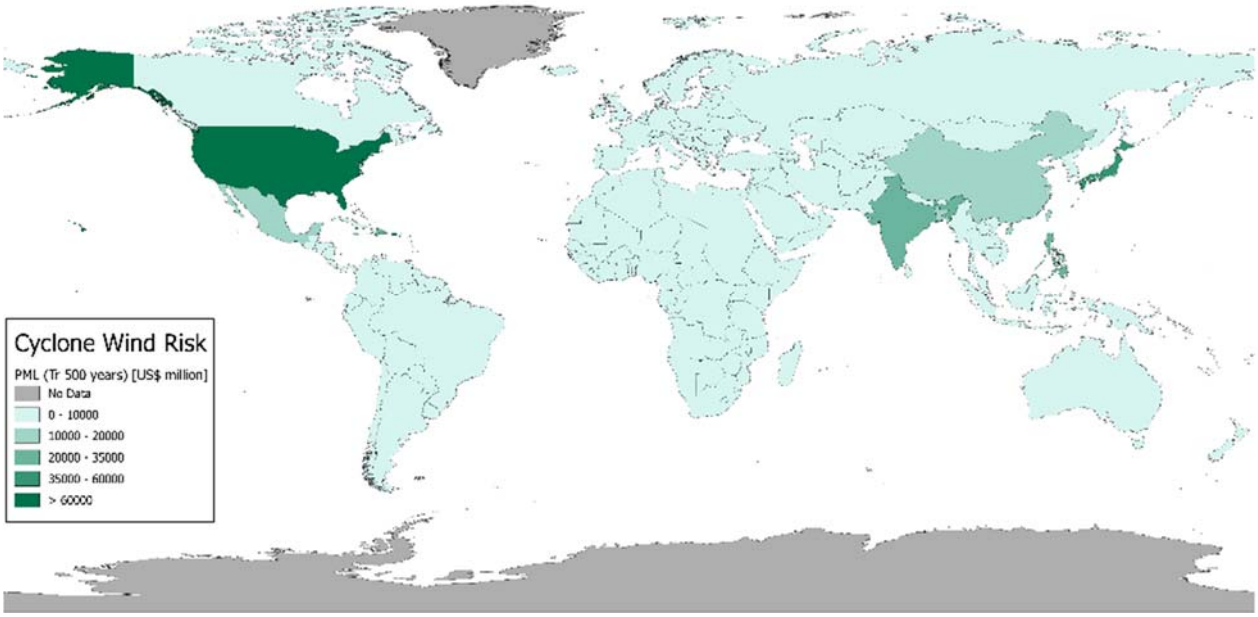


Figure 136. Distribution of PML (500 years) for TC wind by country

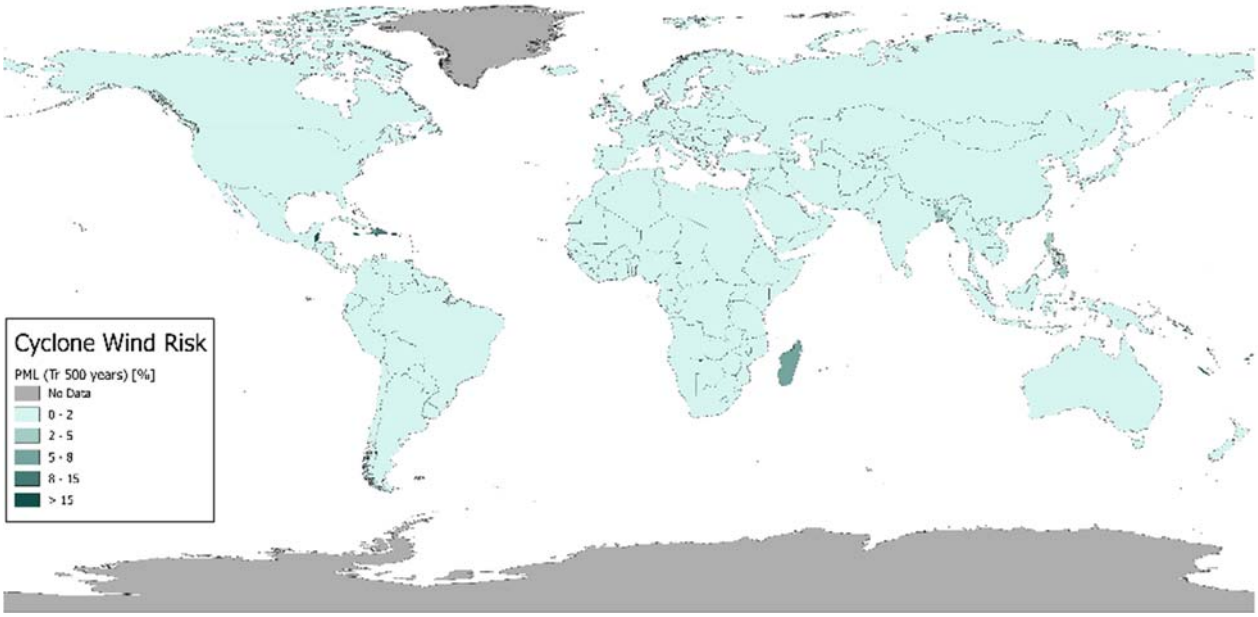


Figure 137. Distribution of PML (500 years) for TC wind relative to the exposed value by country

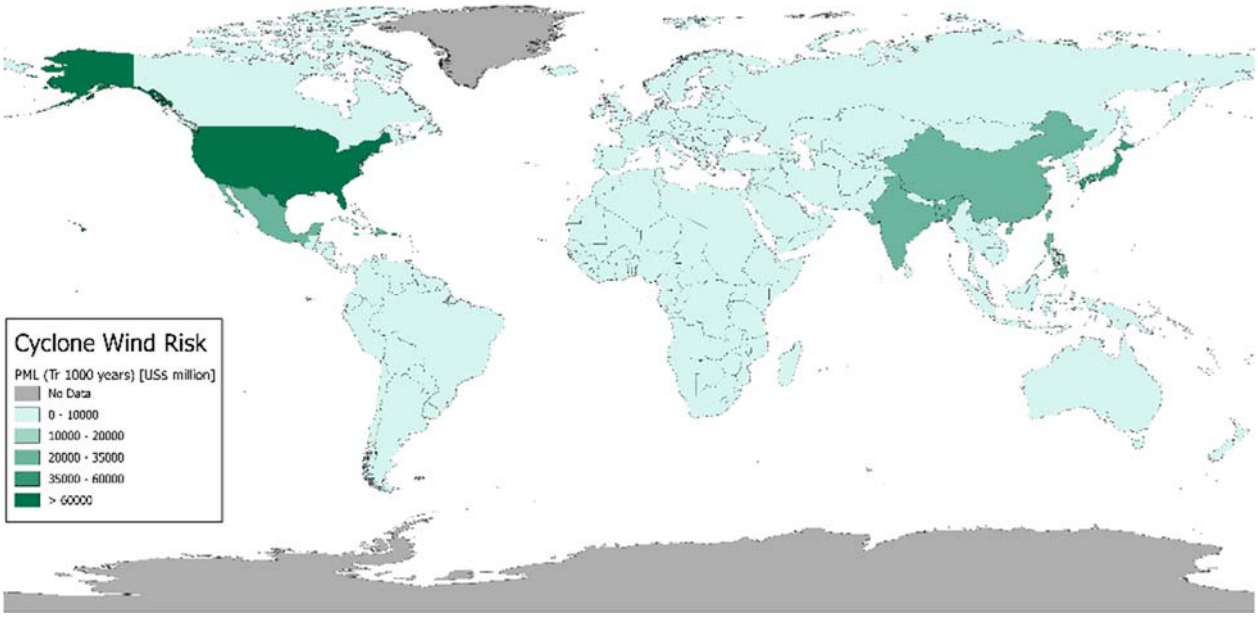


Figure 138. Distribution of PML (1000 years) for TC wind by country

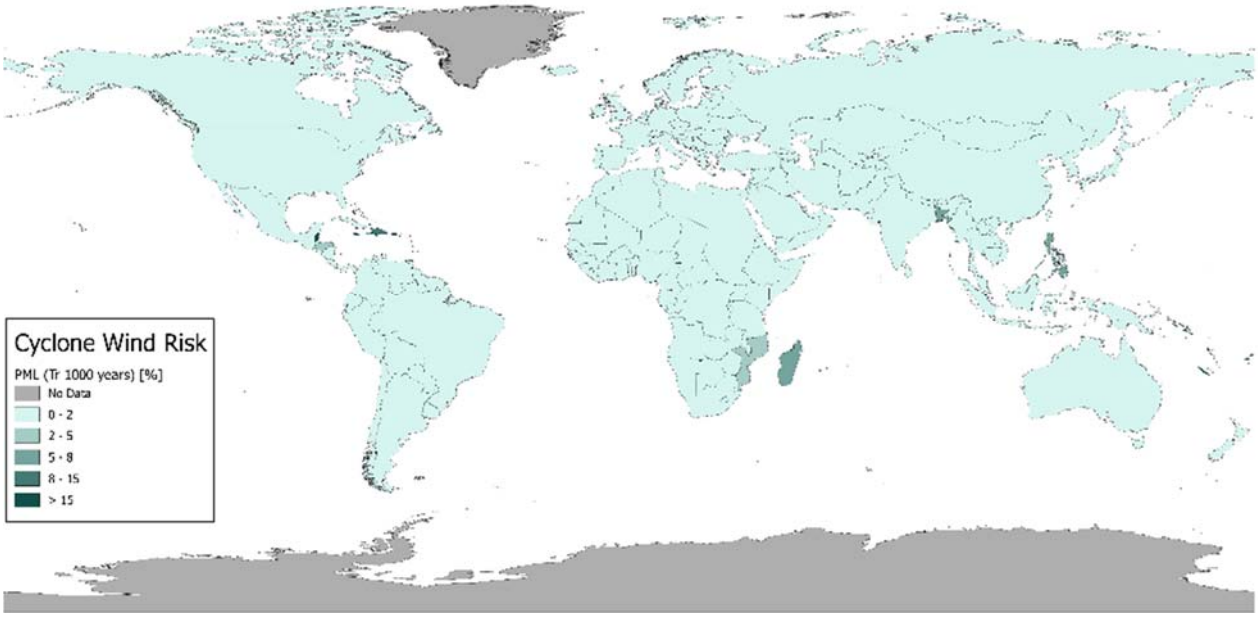


Figure 139. Distribution of PML (1000 years) for TC wind relative to the exposed value by country

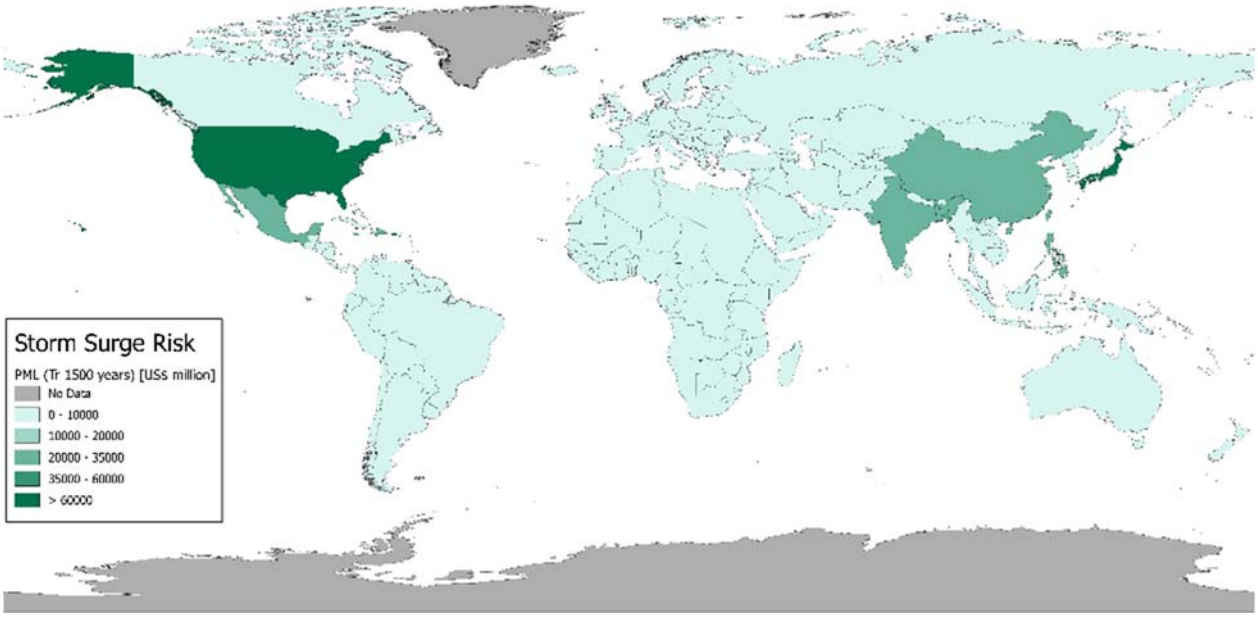


Figure 140. Distribution of PML (1500 years) for TC wind by country

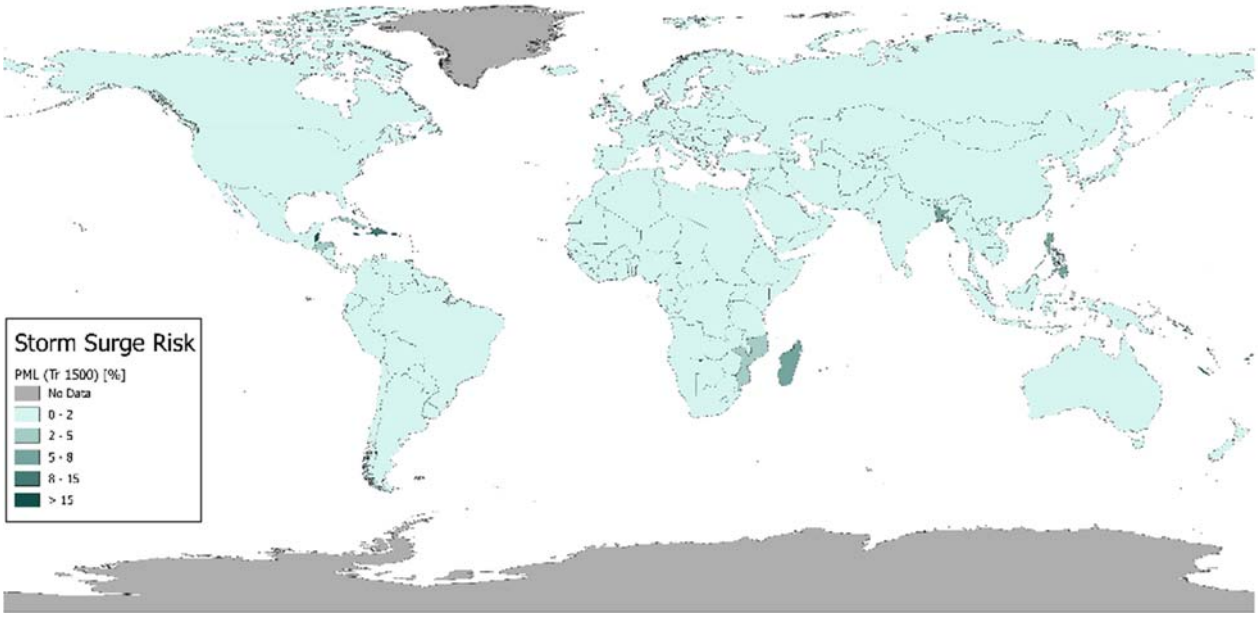


Figure 141. Distribution of PML (1500 years) for TC wind relative to the exposed value by country

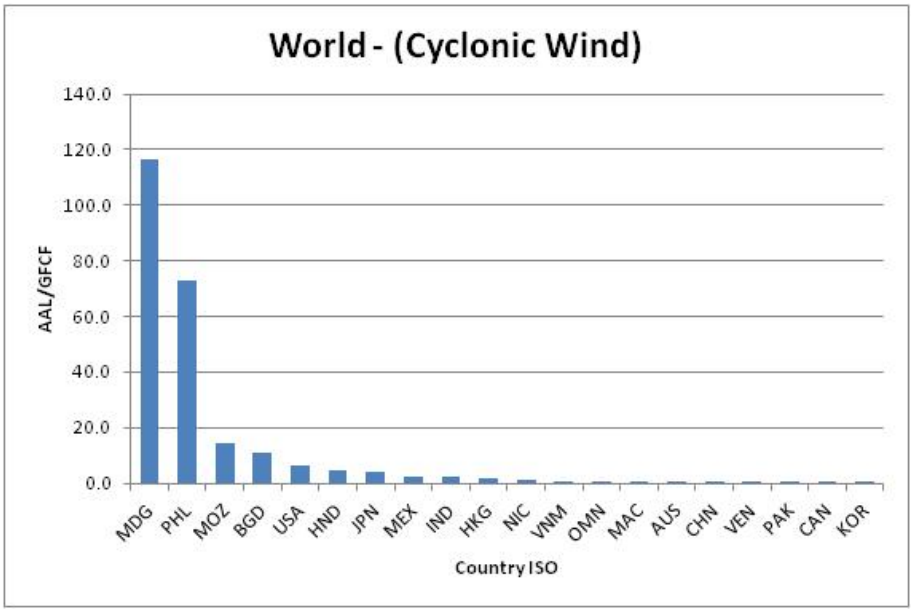


Figure 142. AAL/ GFCF (National) by country (TC wind)

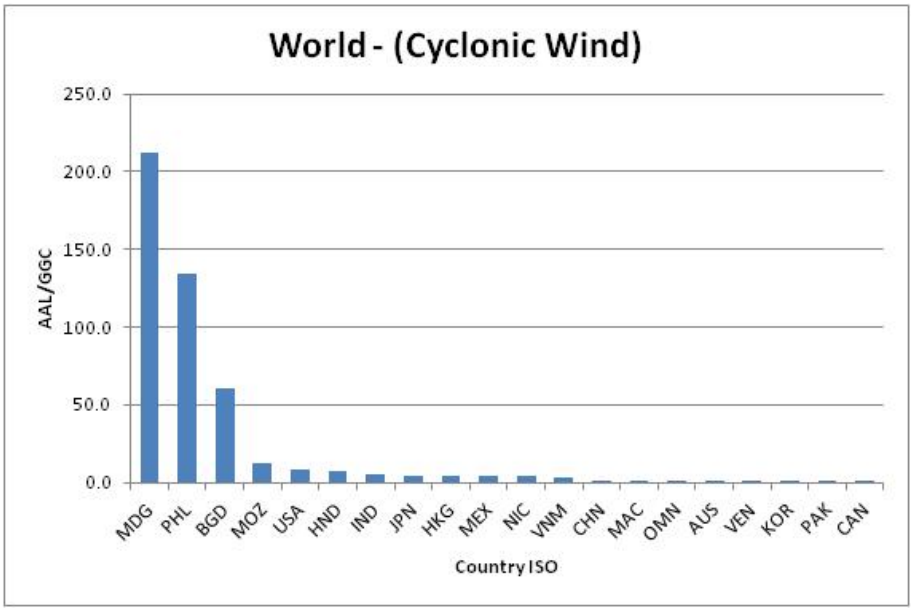


Figure 143. AAL/ GGC (National) by country (TC wind)

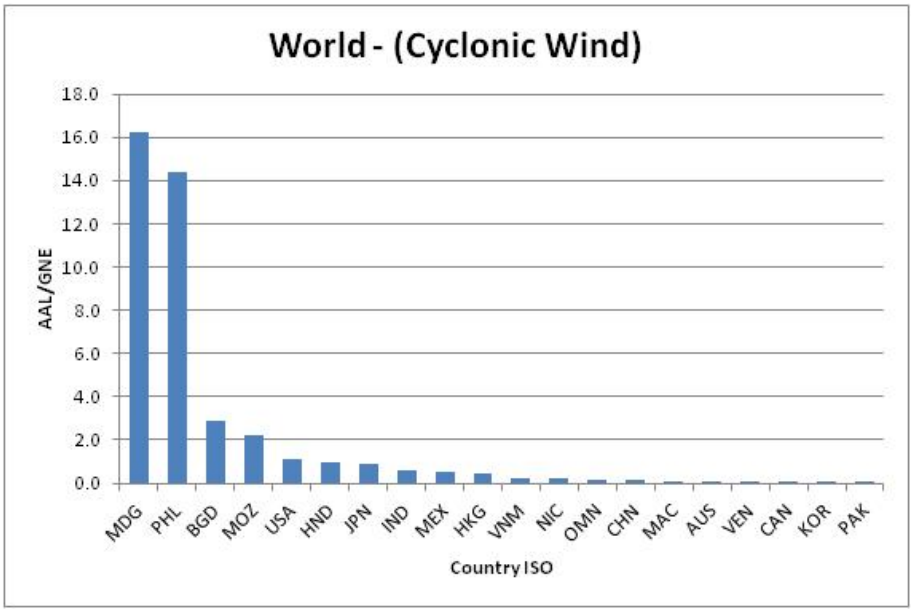


Figure 144. AAL/GNE (National) by country (TC wind)

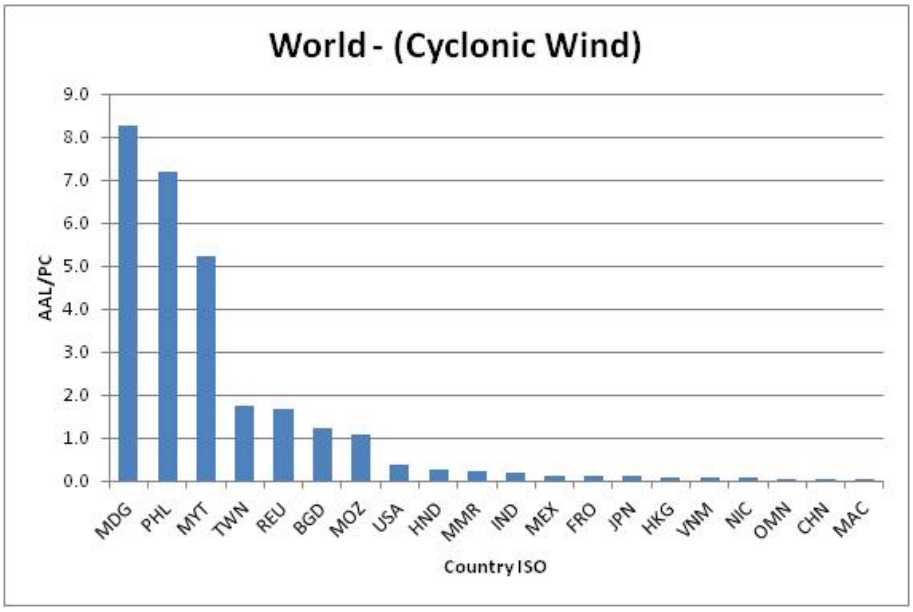


Figure 145. AAL/PC (National) by country (TC wind)

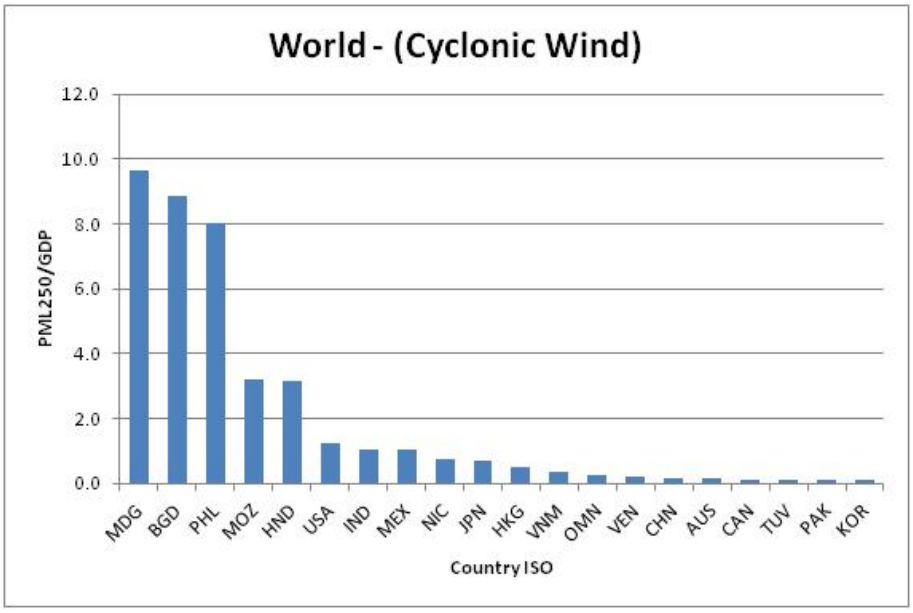


Figure 146. PML (250 years)/ GDP (National) by country (TC wind)

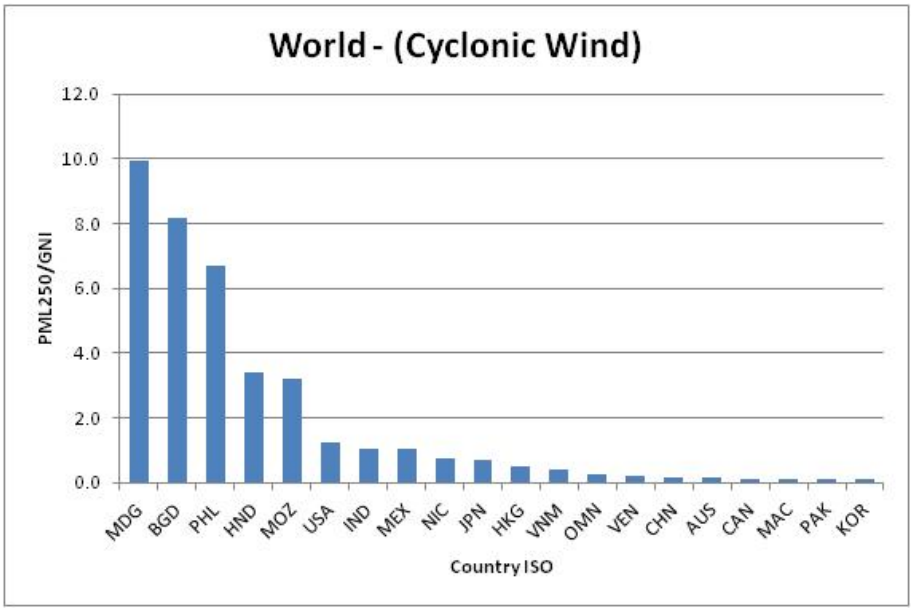


Figure 147. PML (250 years)/ GNI (National) by country (TC wind)

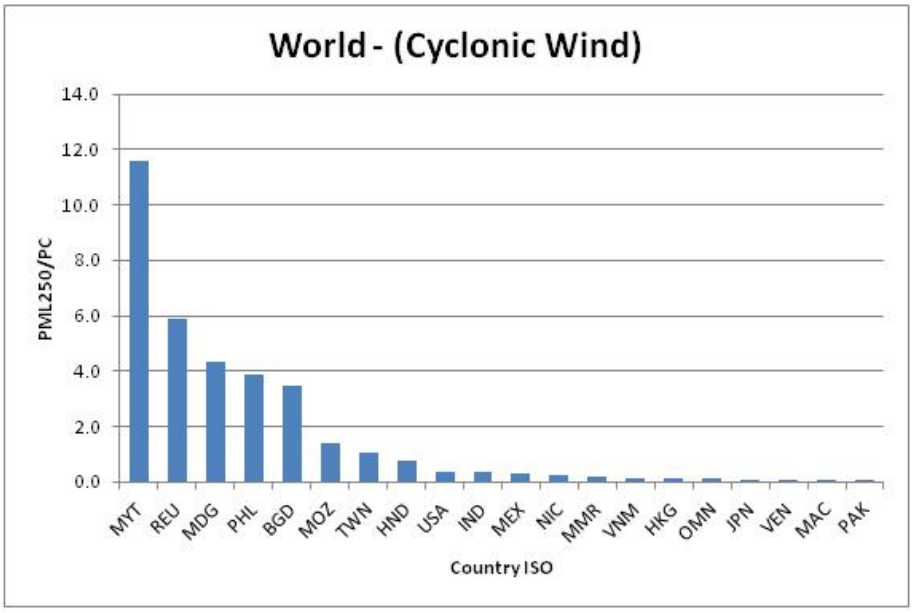


Figure 148. PML (250 years)/ PC (National) by country (TC wind)

6.4.3 Tropical cyclone risk (storm surge)

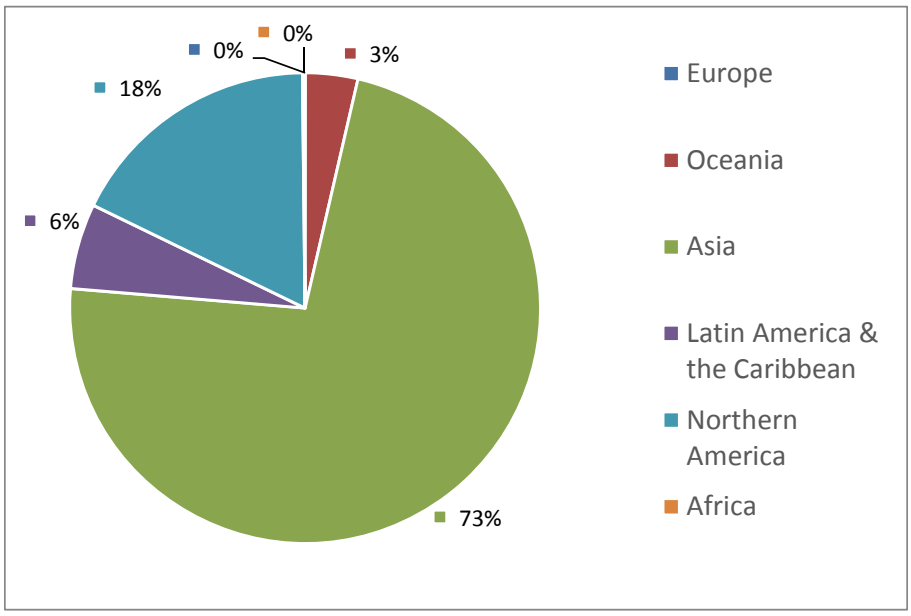


Figure 149. Distribution of the world total TC storm surge AAL by region

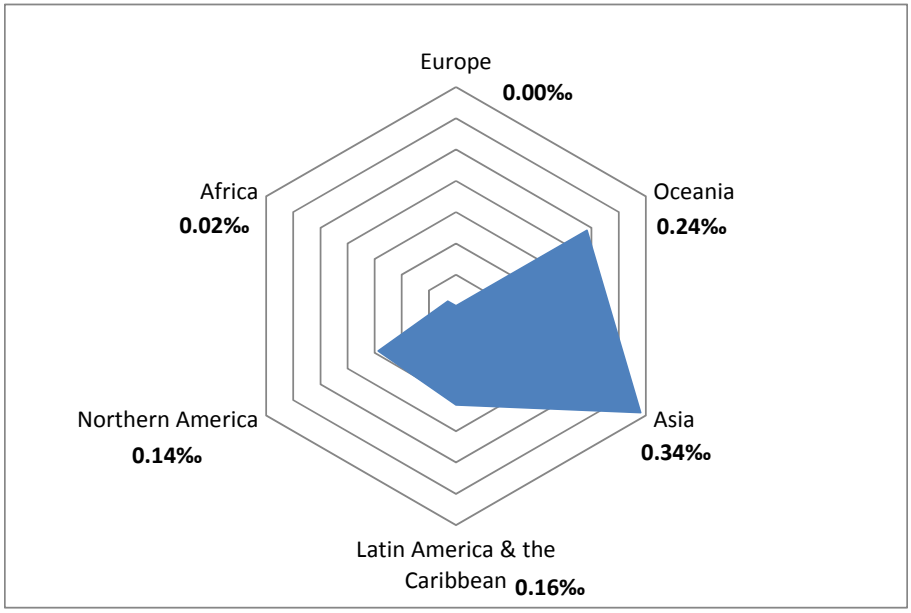


Figure 150. Comparison of TC storm surge AALs by region (presented as relative to the total exposed value of the region)

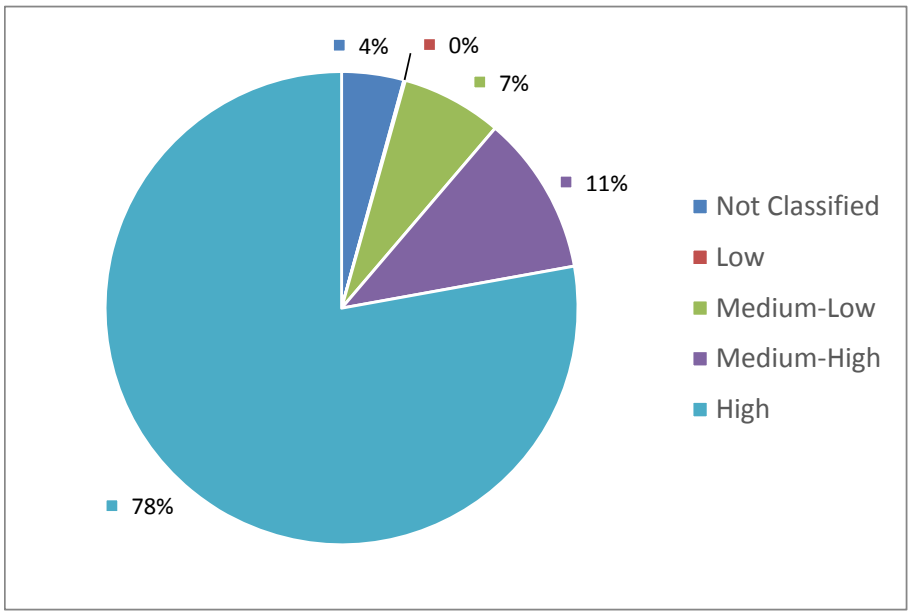


Figure 151. Distribution of the world total TC storm surge AAL by economy

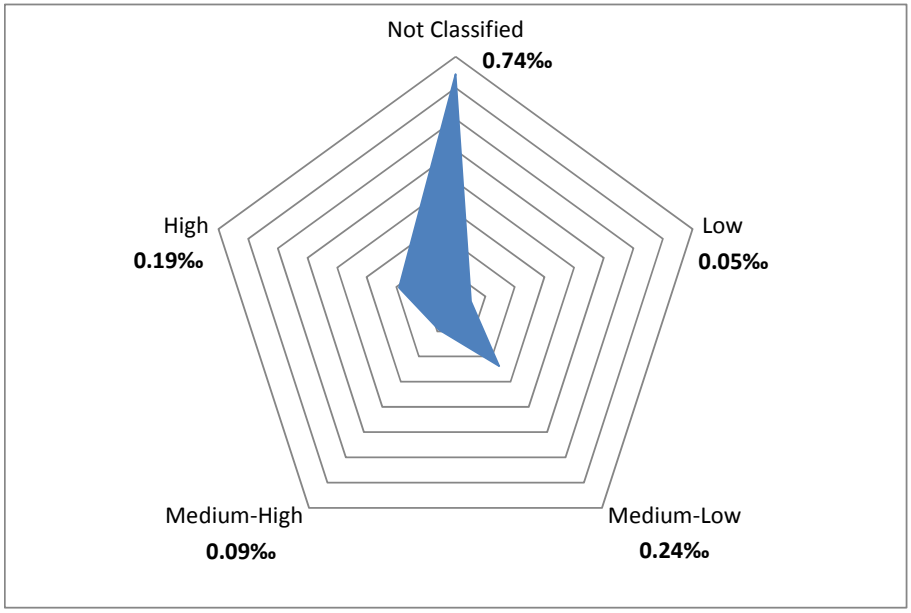


Figure 152. Comparison of TC storm surge AALs by economy (presented as relative to the total exposed value of the economy)

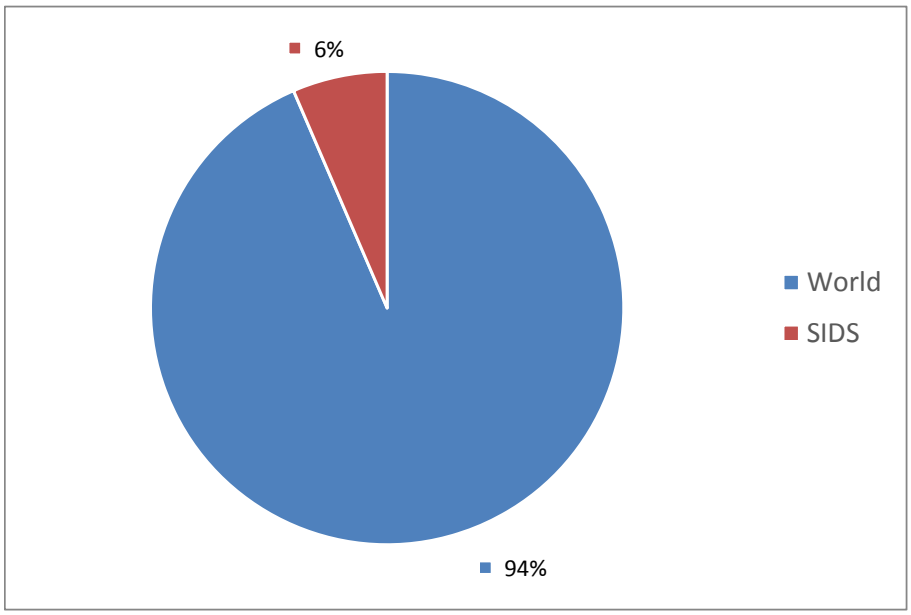


Figure 153. Distribution of the world total TC storm surge AAL between SIDS and other countries

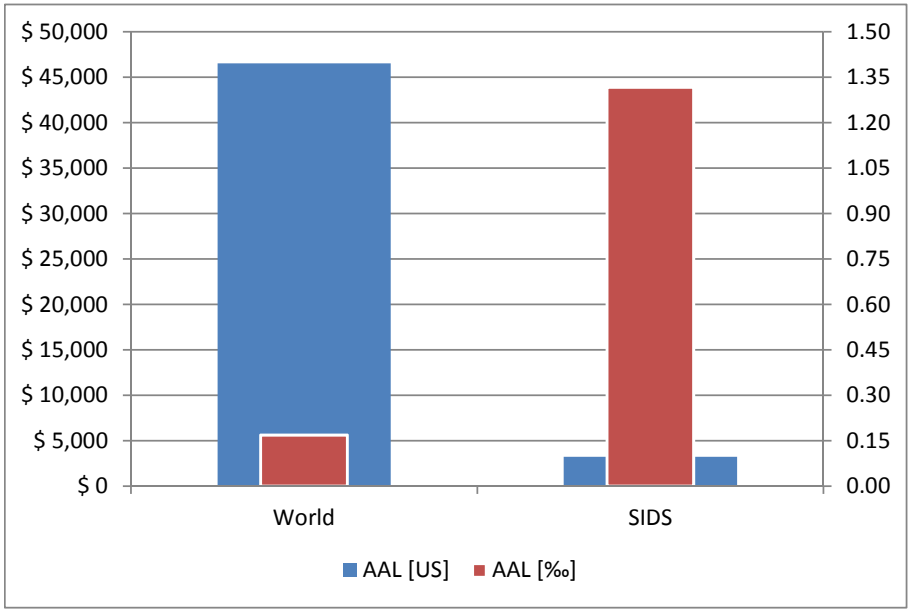


Figure 154. Comparison of TC storm surge AALs between SIDS and other countries (presented as relative to the total exposed value of the countries aggrupation)

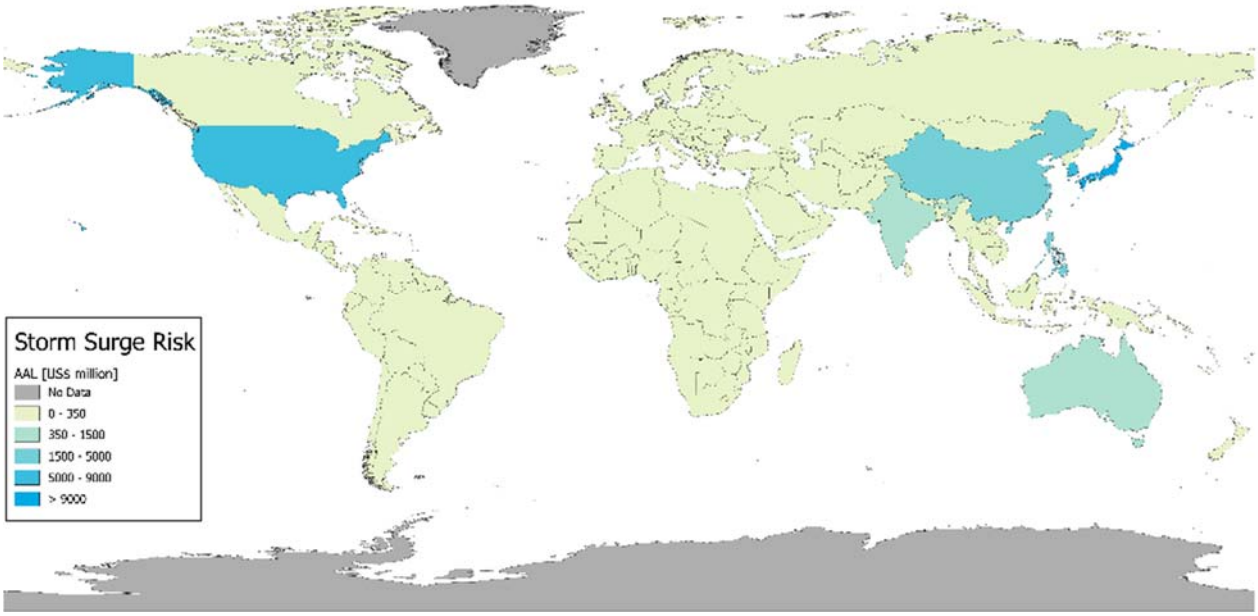


Figure 155. Distribution of AAL for TC storm surge by country

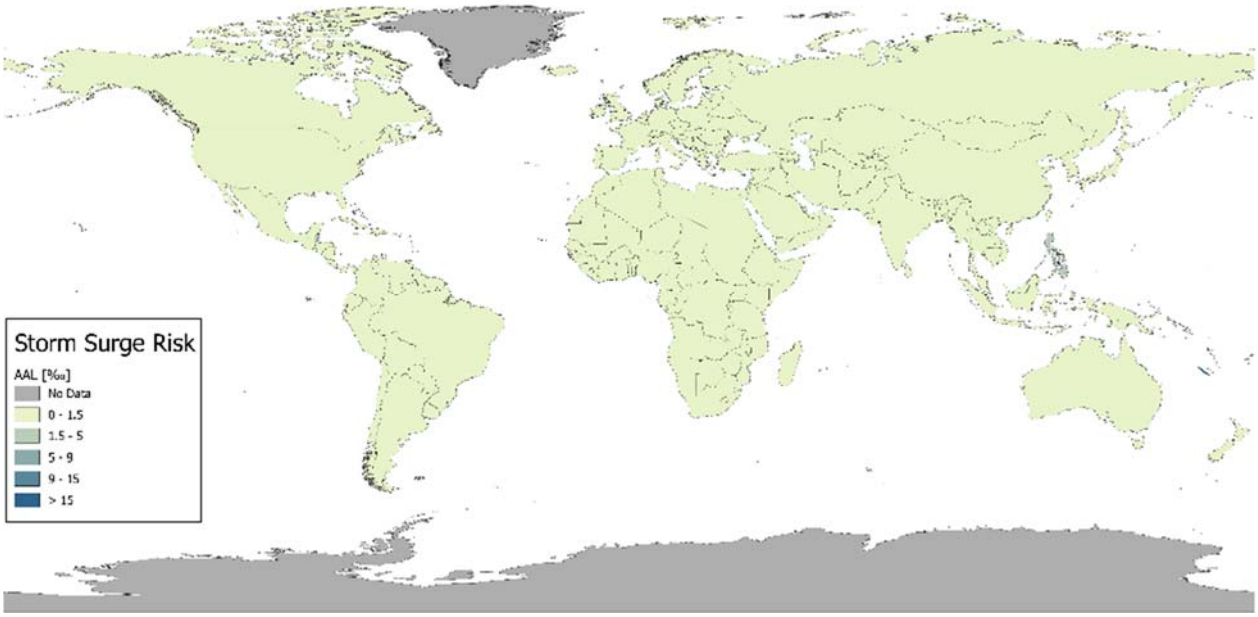


Figure 156. Distribution of AAL for TC storm surge relative to the exposed value by country

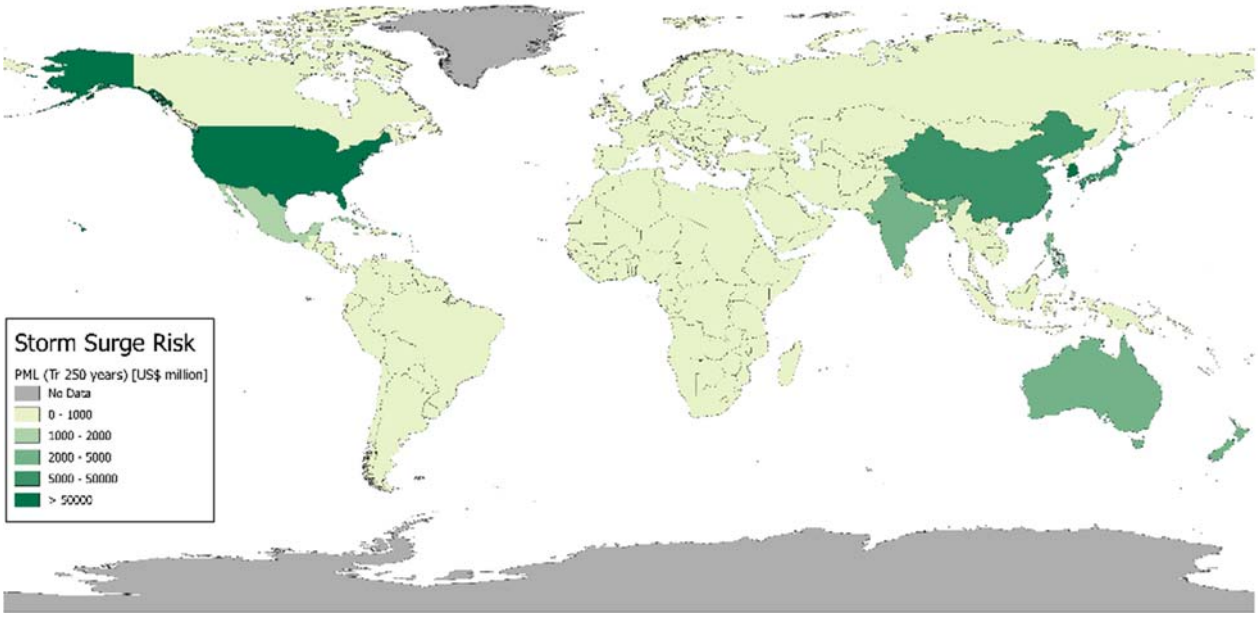


Figure 157. Distribution of PML (250 years) for TC storm surge by country

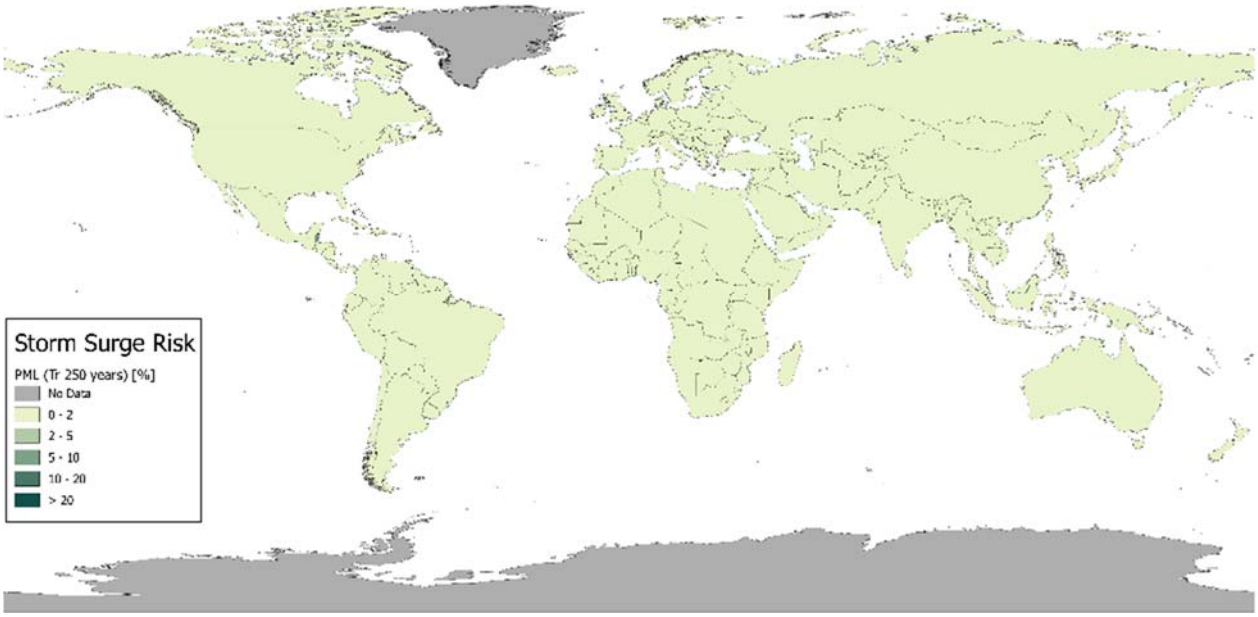


Figure 158. Distribution of PML (250 years) for TC storm surge relative to the exposed value by country

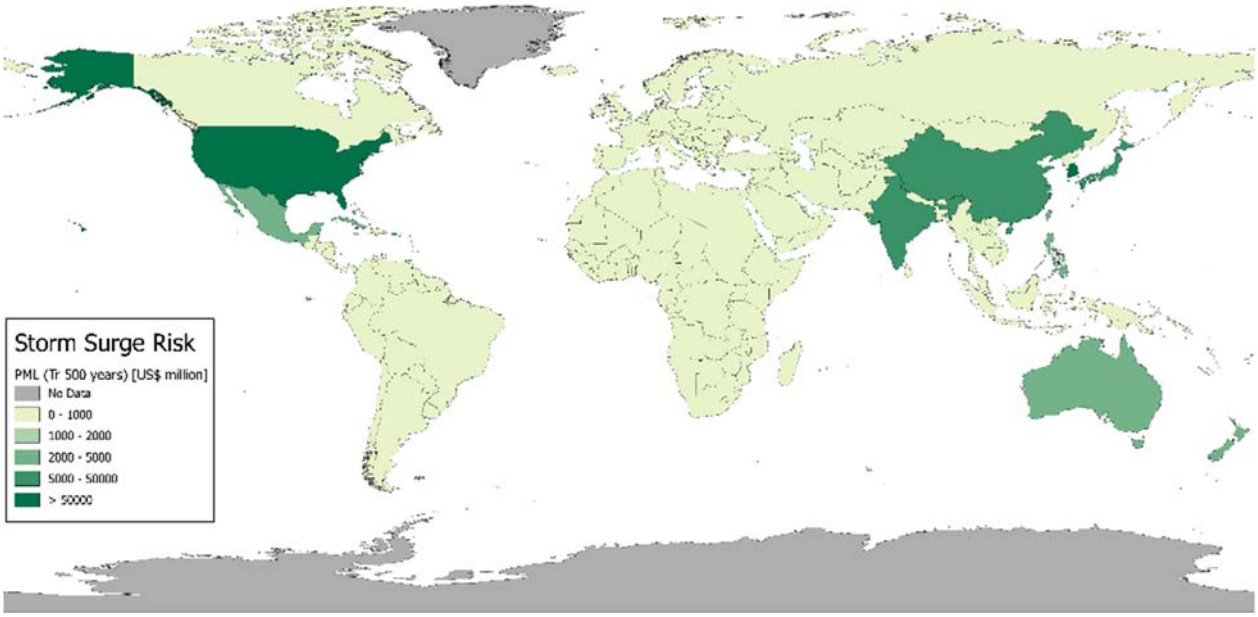


Figure 159. Distribution of PML (500 years) for TC storm surge by country

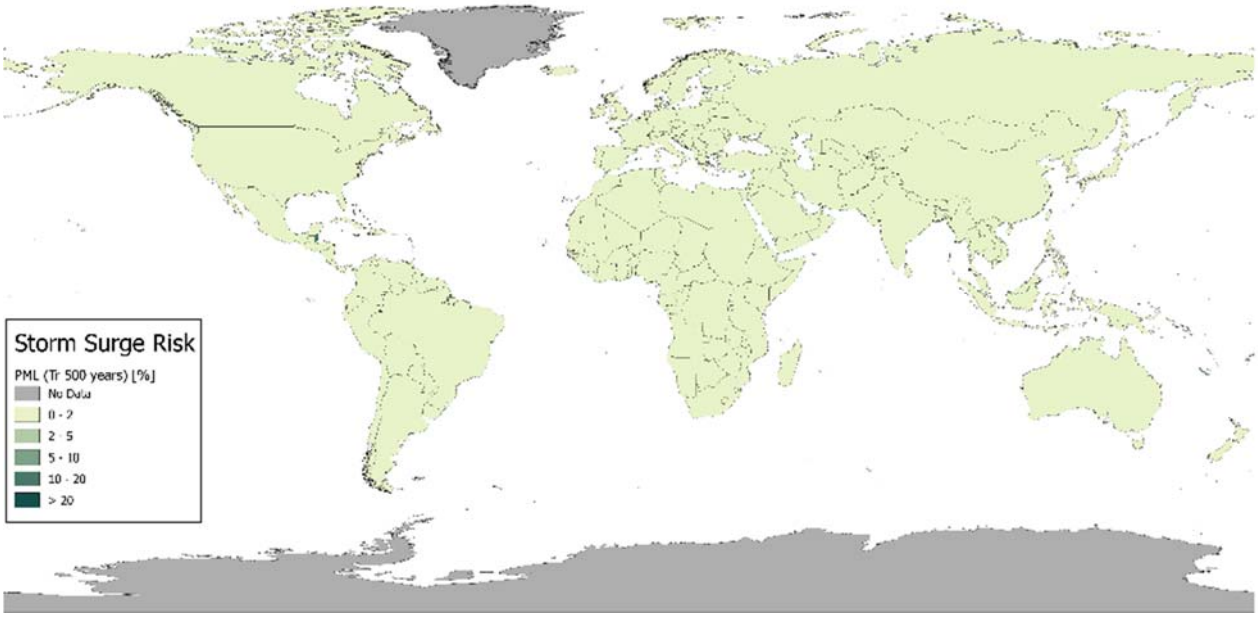


Figure 160. Distribution of PML (500 years) for TC storm surge relative to the exposed value by country

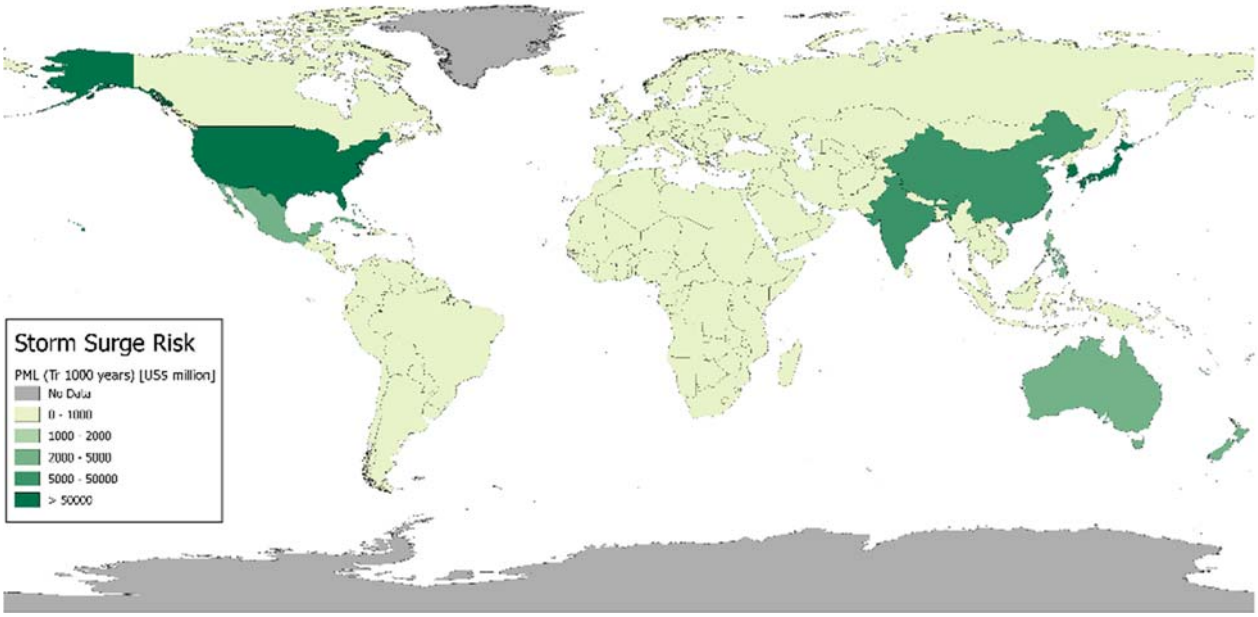


Figure 161. Distribution of PML (1000 years) for TC storm surge by country

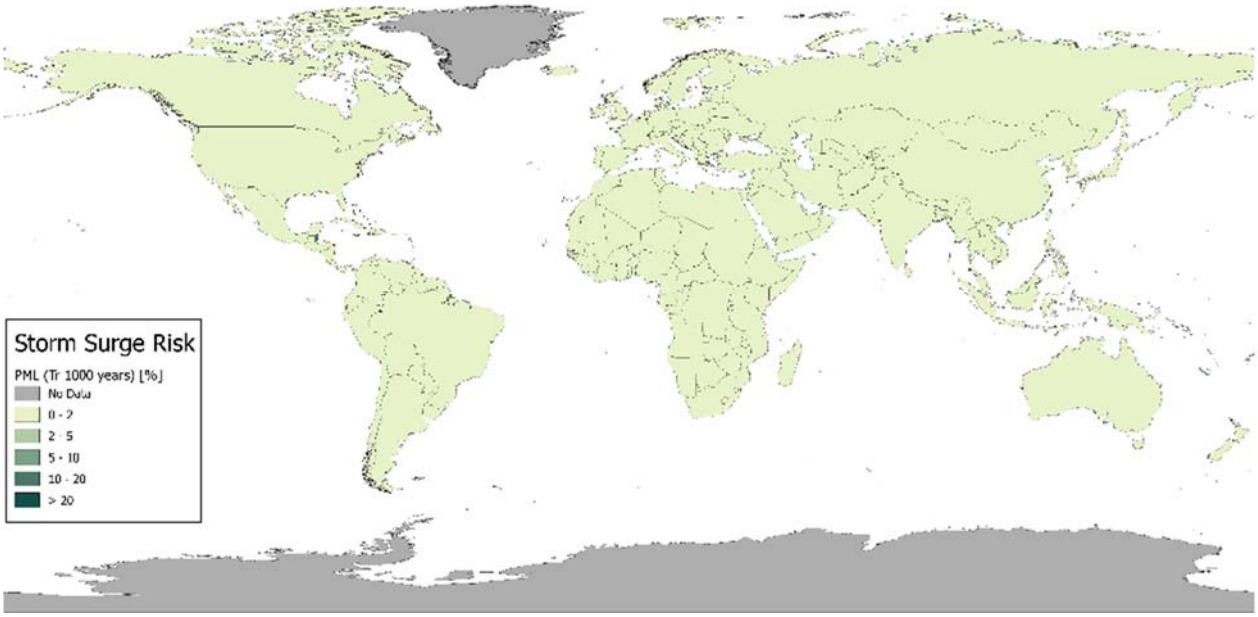


Figure 162. Distribution of PML (1000 years) for TC storm surge relative to the exposed value by country

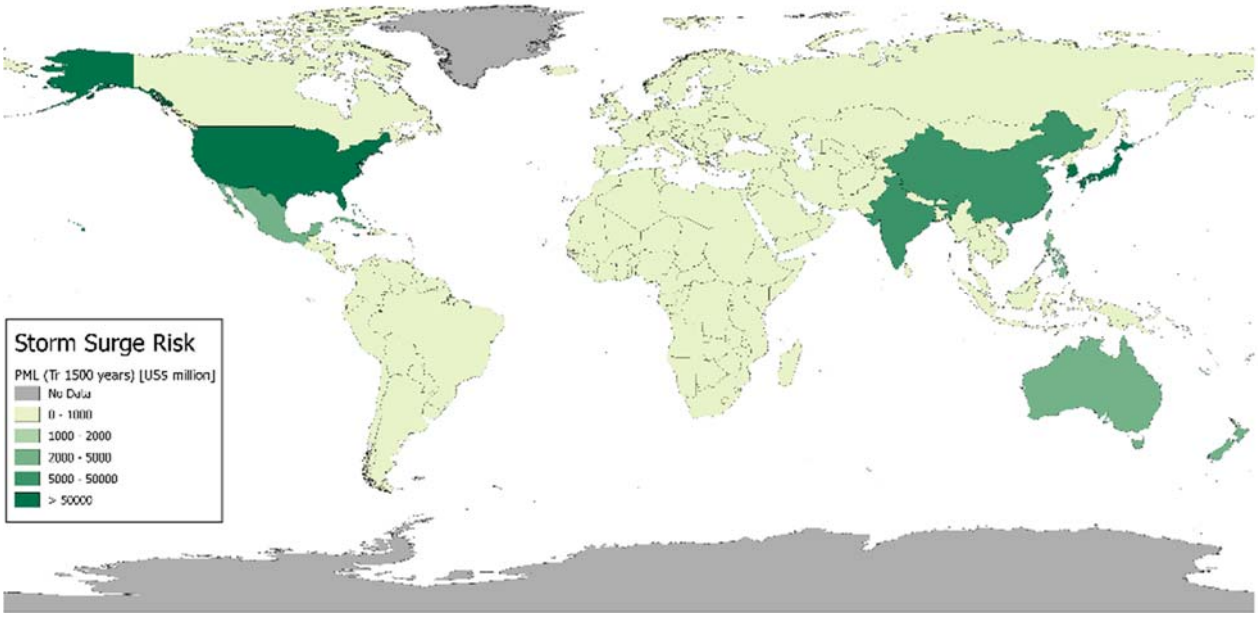


Figure 163. Distribution of PML (1500 years) for TC storm surge by country

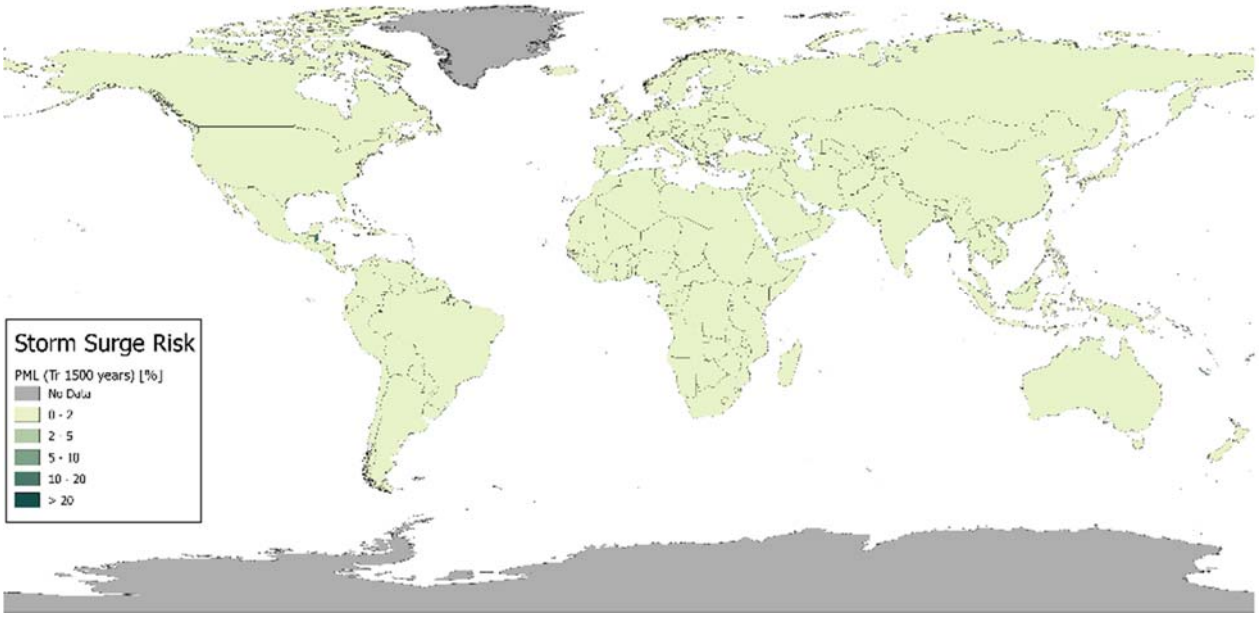


Figure 164. Distribution of PML (1500 years) for TC storm surge relative to the exposed value by country

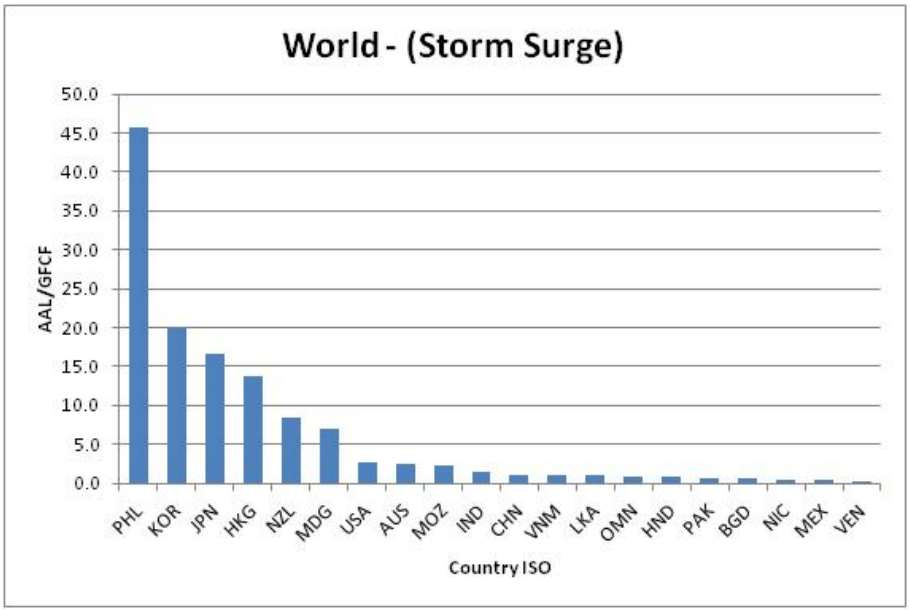


Figure 165. AAL/ GFCF (National) by country (TC storm surge)

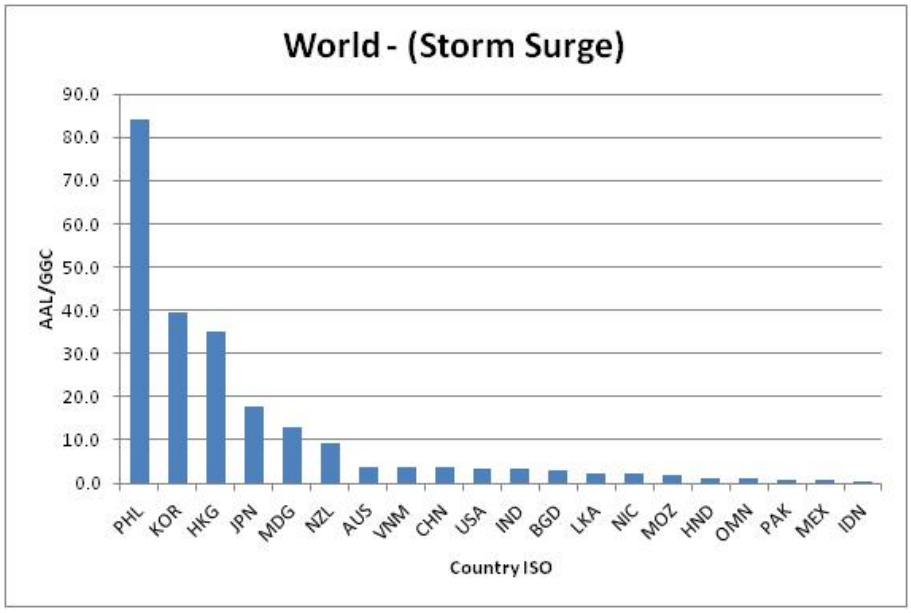


Figure 166. AAL/ GGC (National) by country (TC storm surge)

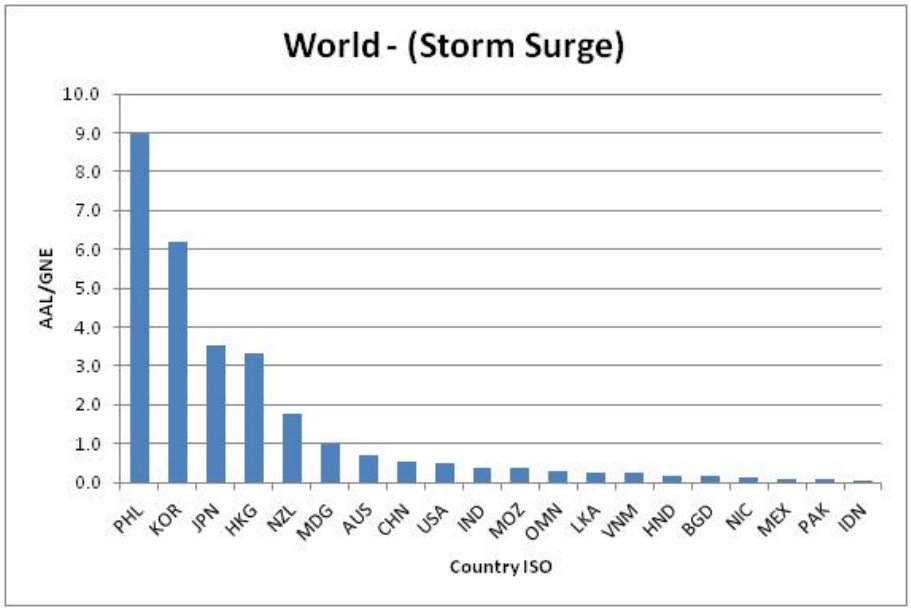


Figure 167. AAL/GNE (National) by country (TC storm surge)

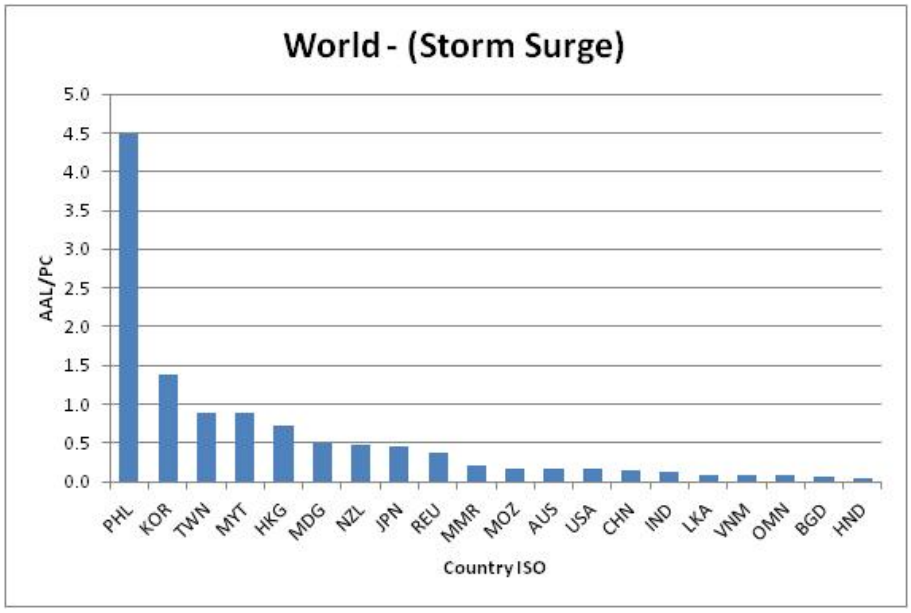


Figure 168. AAL/PC (National) by country (TC storm surge)

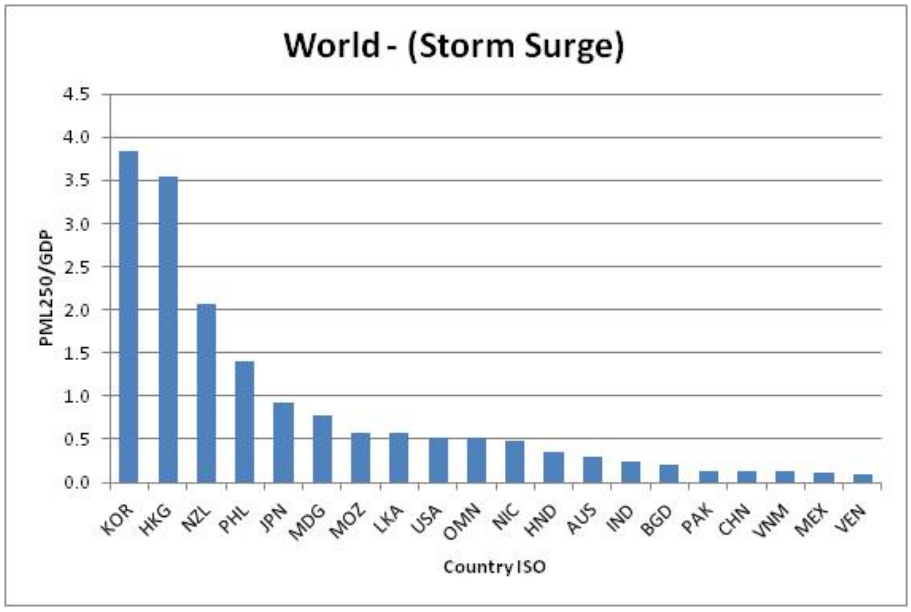


Figure 169. PML (250 years)/ GDP (National) by country (TC storm surge)

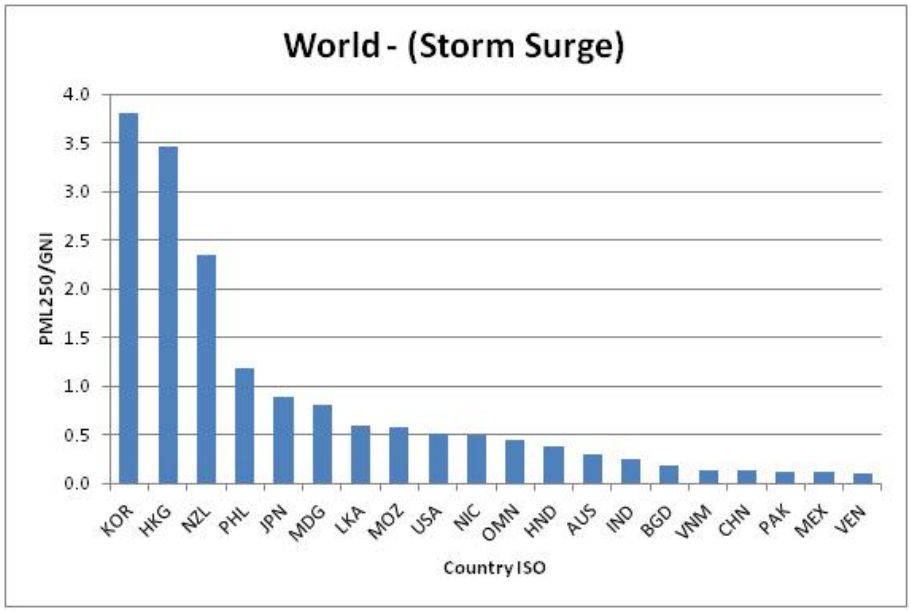


Figure 170. PML (250 years)/ GNI (National) by country (TC storm surge)

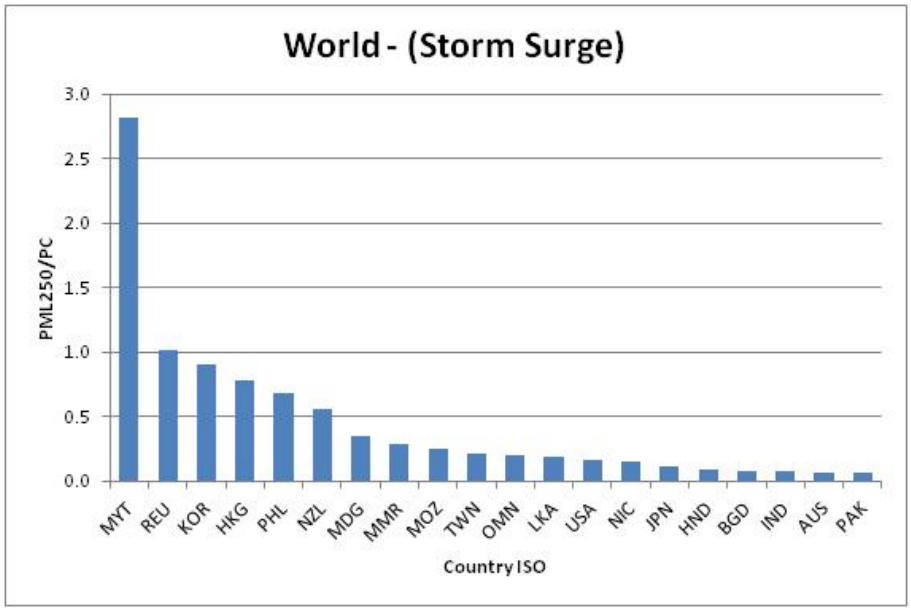


Figure 171. PML (250 years)/ PC (National) by country (TC storm surge)

6.4.4 Tsunami Risk

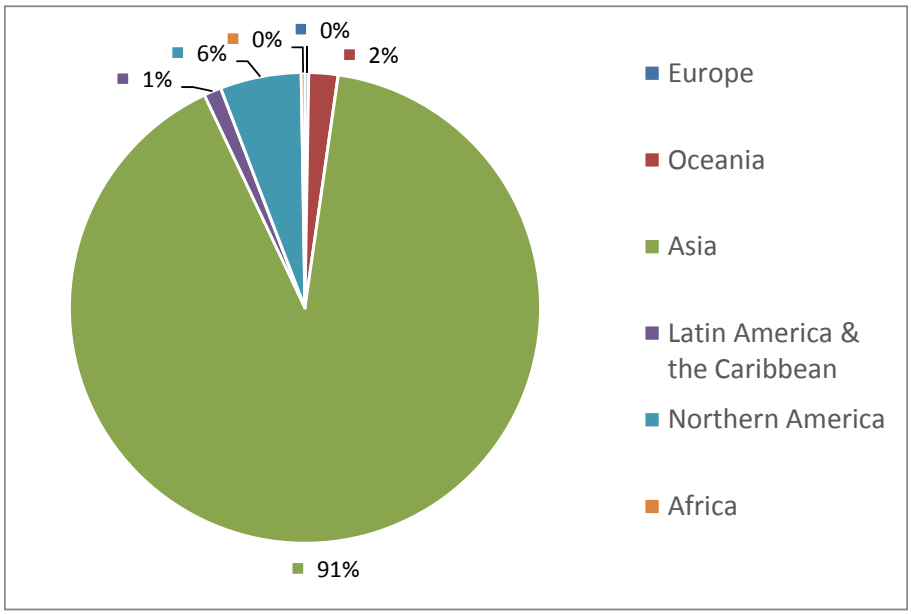


Figure 172. Distribution of the world total Tsunami AAL by region

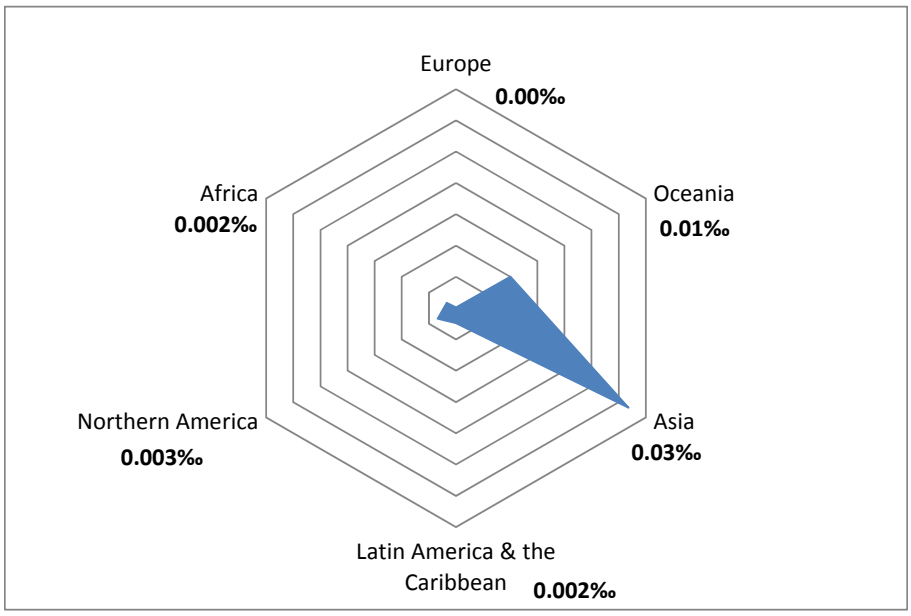


Figure 173. Comparison of Tsunami AALs by region (presented as relative to the total exposed value of the region)

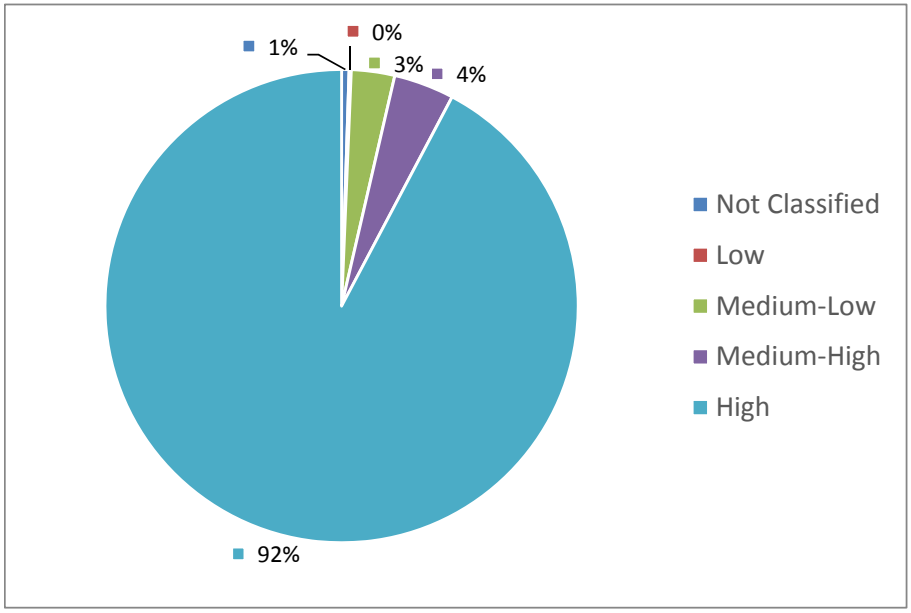


Figure 174. Distribution of the world total Tsunami AAL by economy

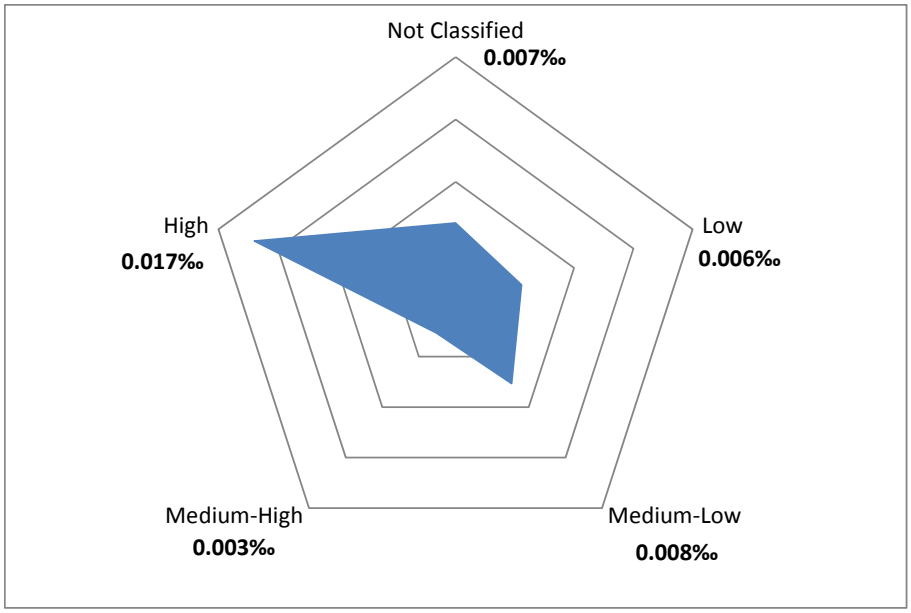


Figure 175. Comparison of Tsunami AALs by economy (presented as relative to the total exposed value of the economy)

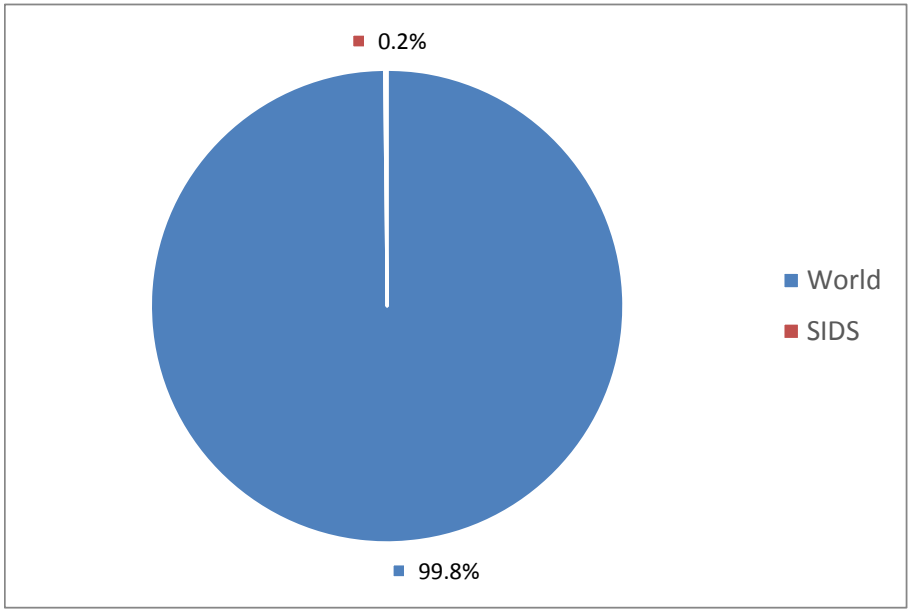


Figure 176. Distribution of the world total Tsunami AAL between SIDS and other countries

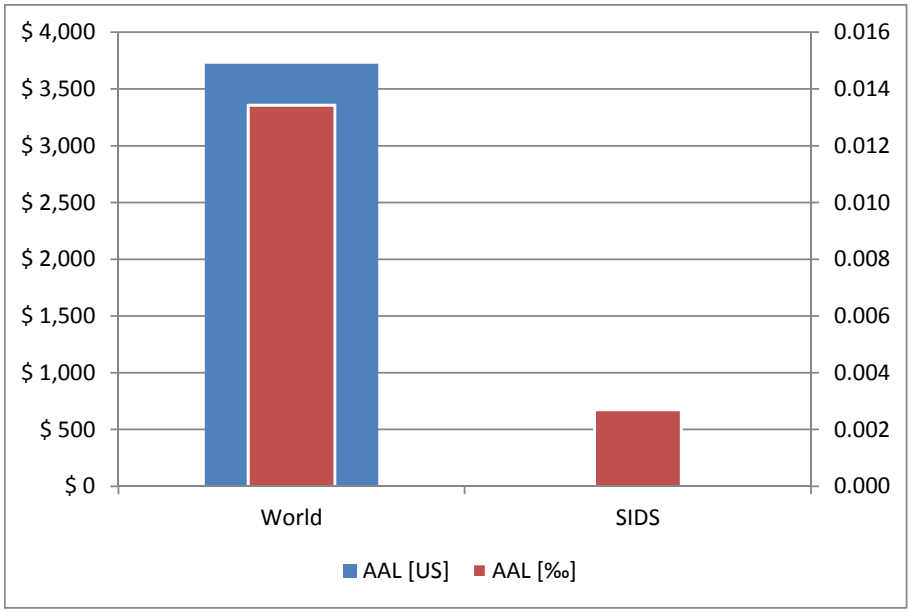


Figure 177. Comparison of Tsunami AALs between SIDS and other countries (presented as relative to the total exposed value of the countries aggrupation)

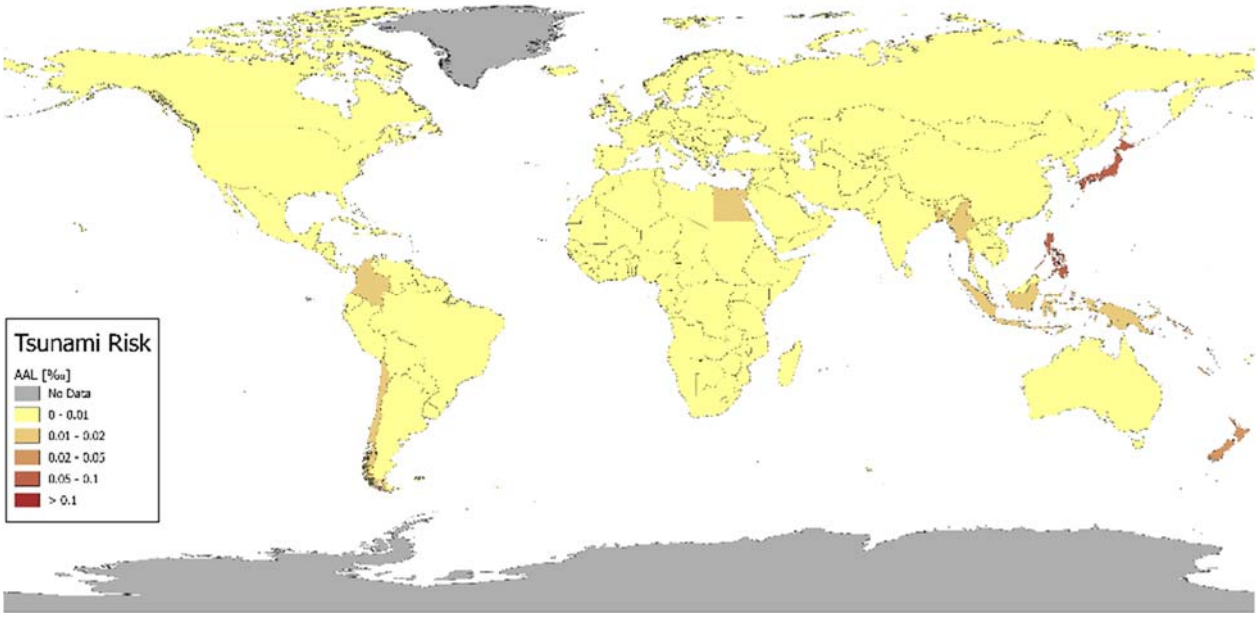


Figure 178. Distribution of AAL for Tsunami by country

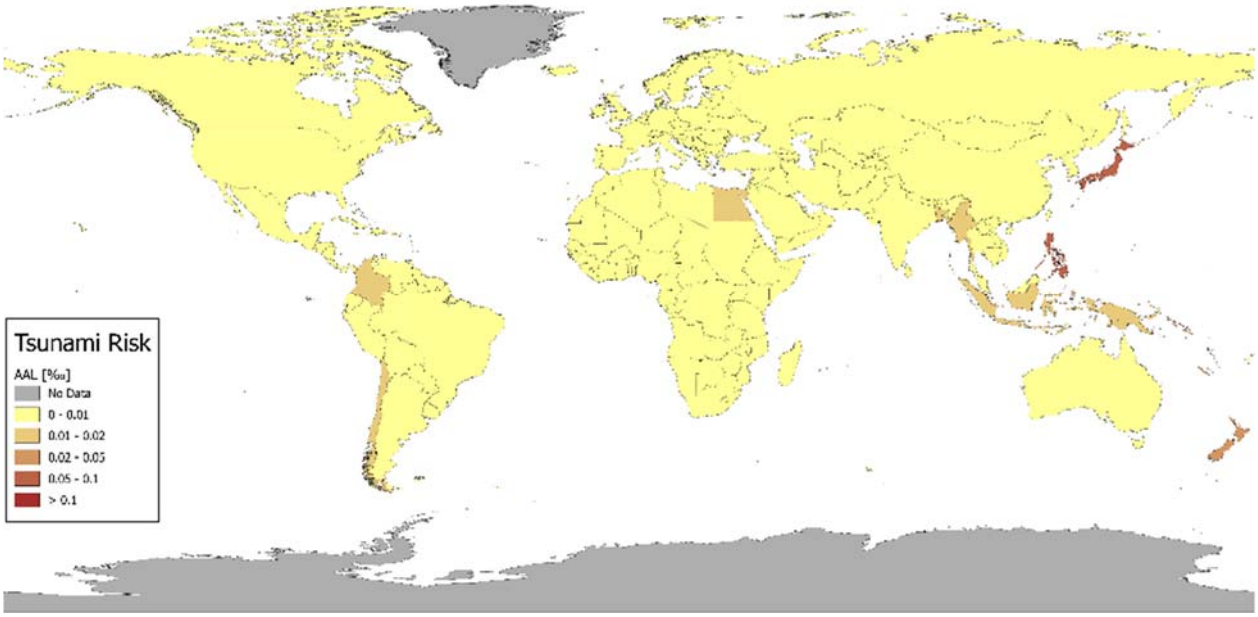


Figure 179. Distribution of AAL for Tsunami relative to the exposed value by country

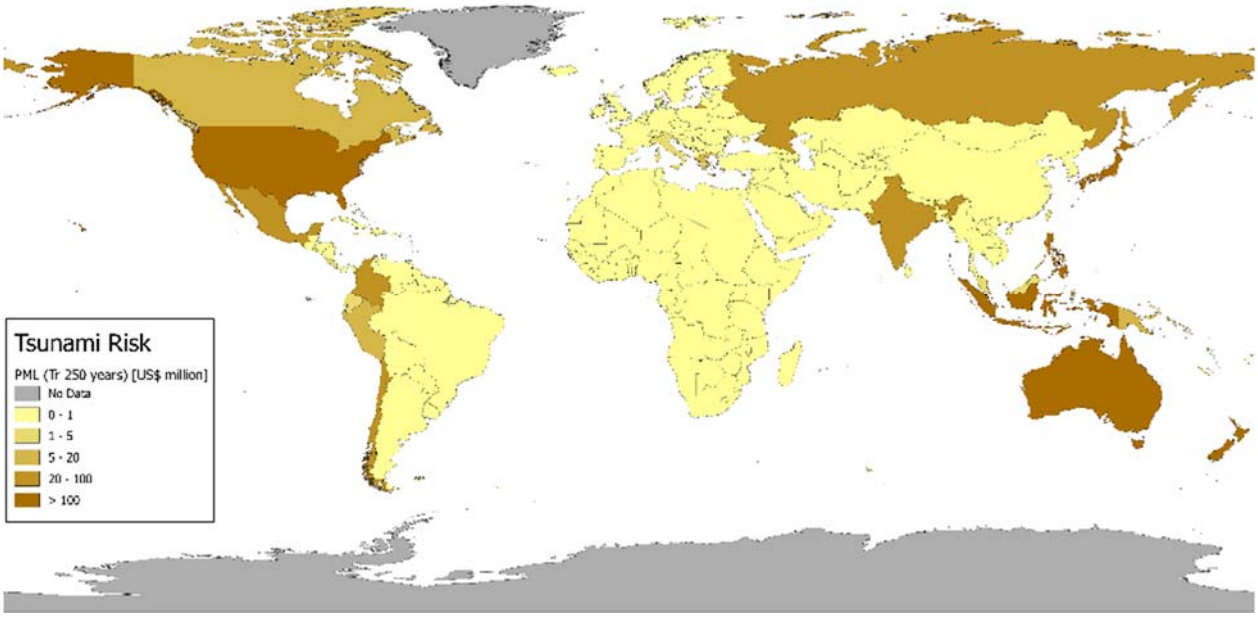


Figure 180. Distribution of PML (250 years) for Tsunami by country

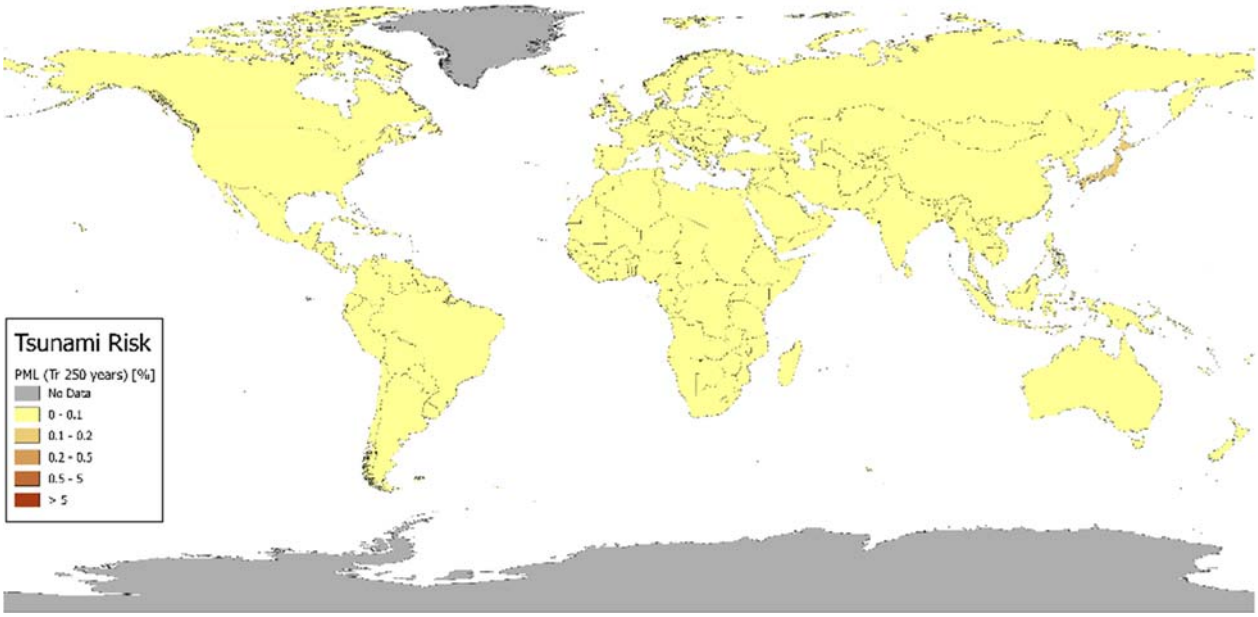


Figure 181. Distribution of PML (250 years) for Tsunami relative to the exposed value by country

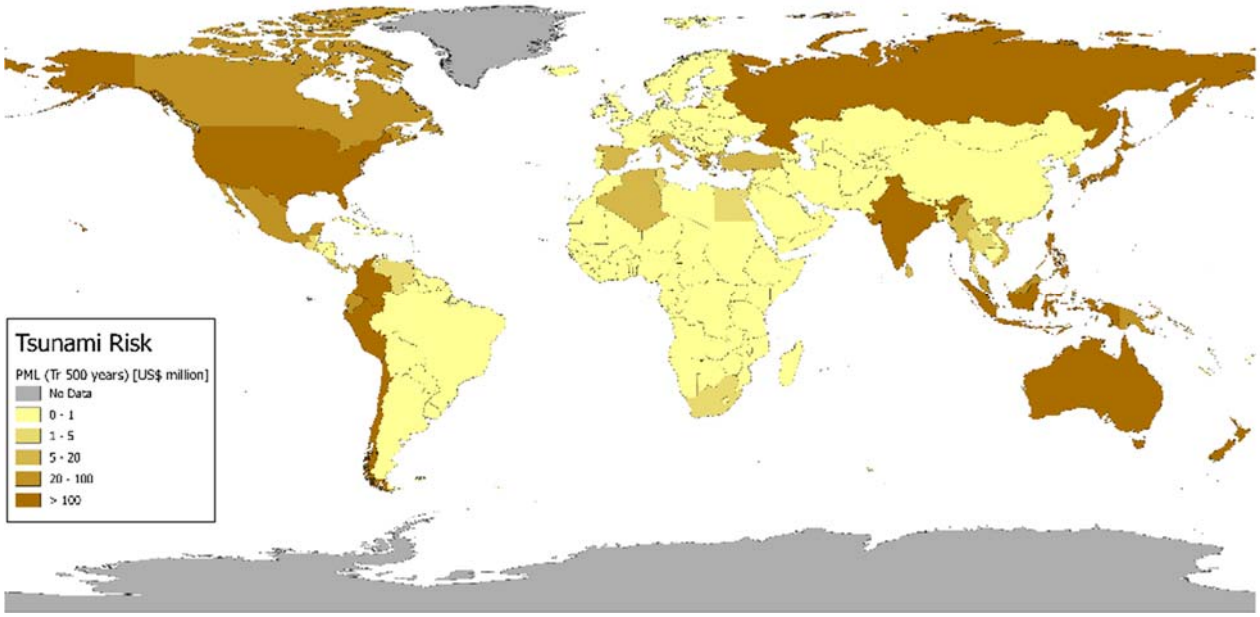


Figure 182. Distribution of PML (500 years) for Tsunami by country

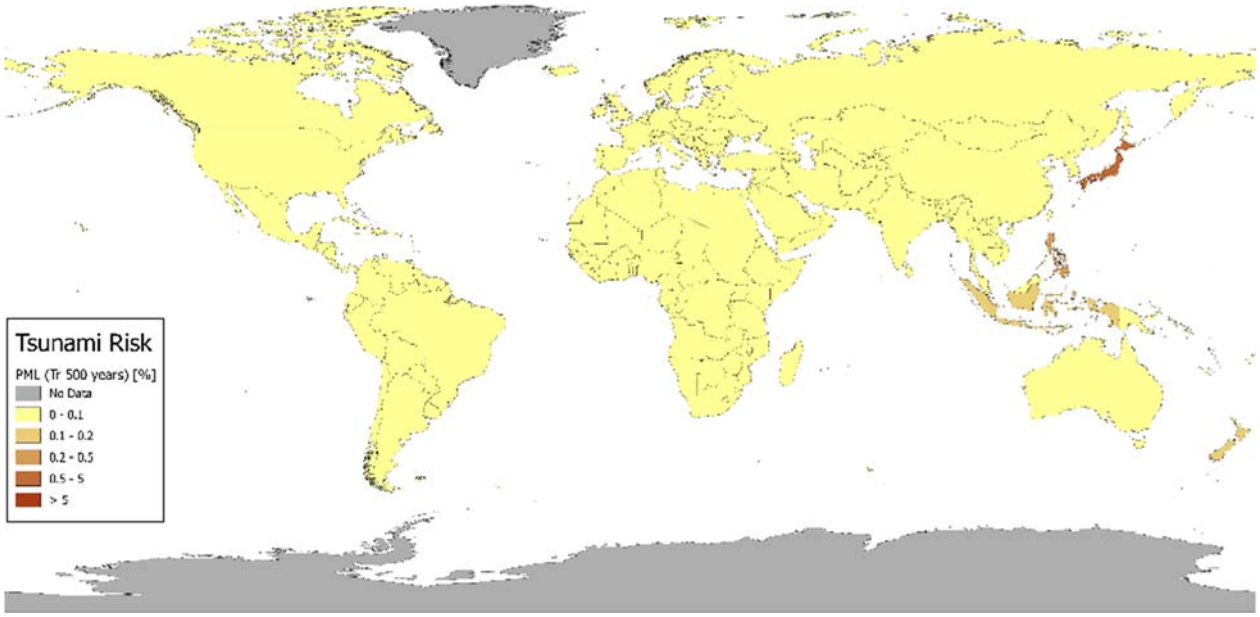


Figure 183. Distribution of PML (500 years) for Tsunami relative to the exposed value by country

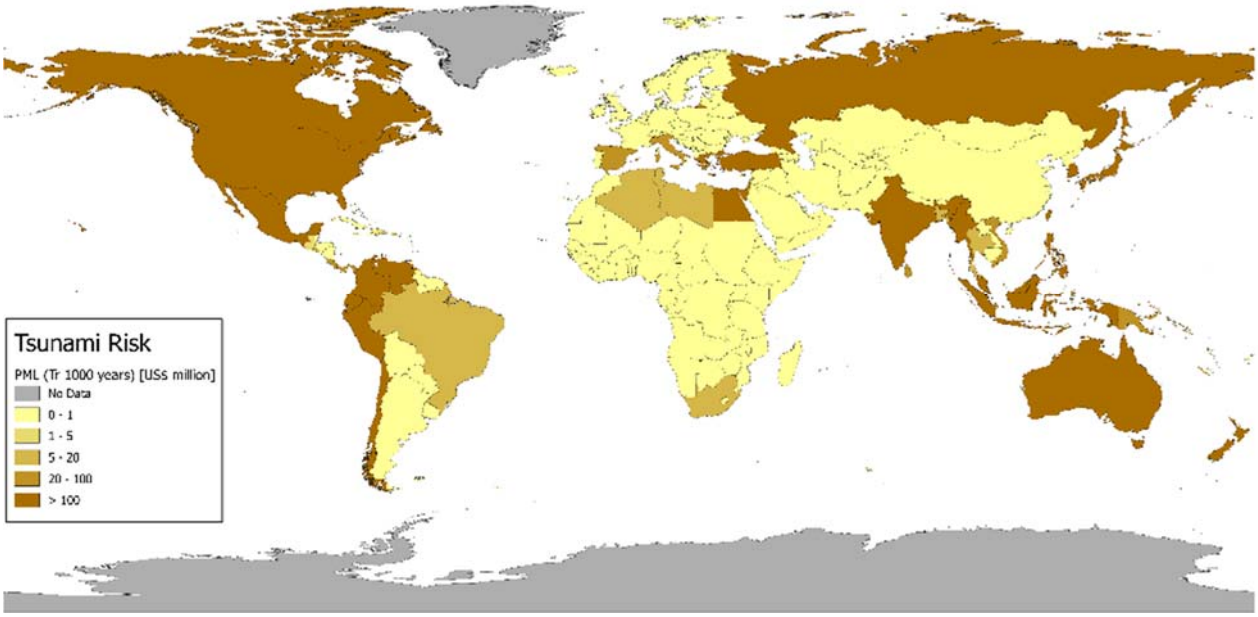


Figure 184. Distribution of PML (1000 years) for Tsunami by country

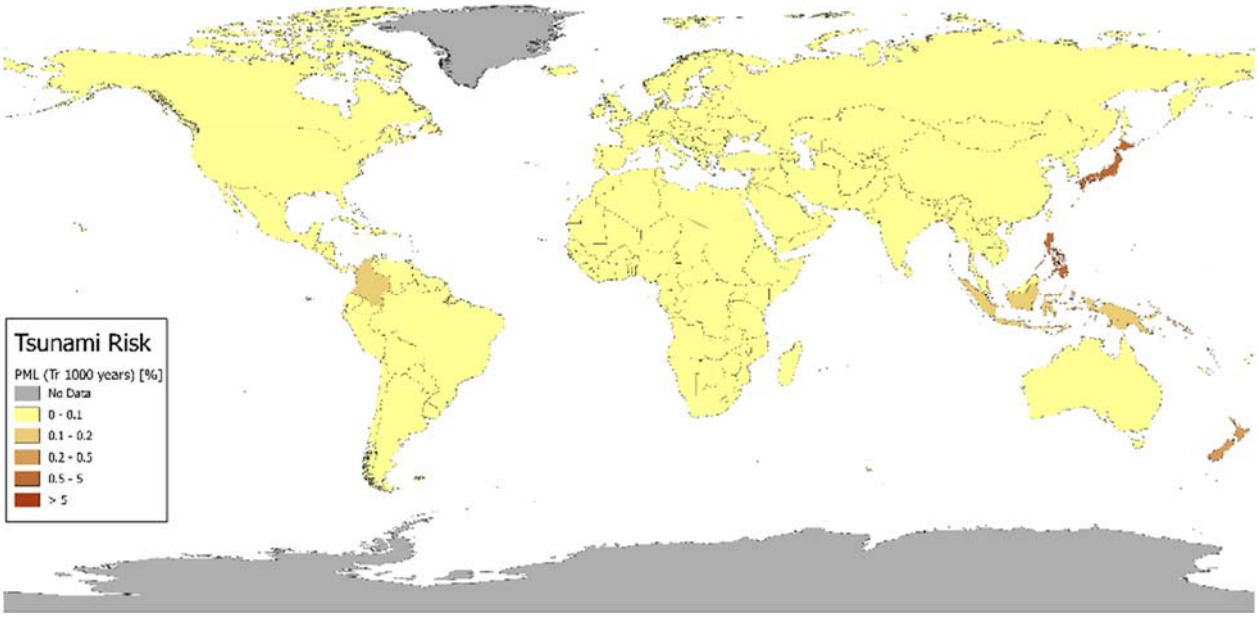


Figure 185. Distribution of PML (1000 years) for Tsunami relative to the exposed value by country

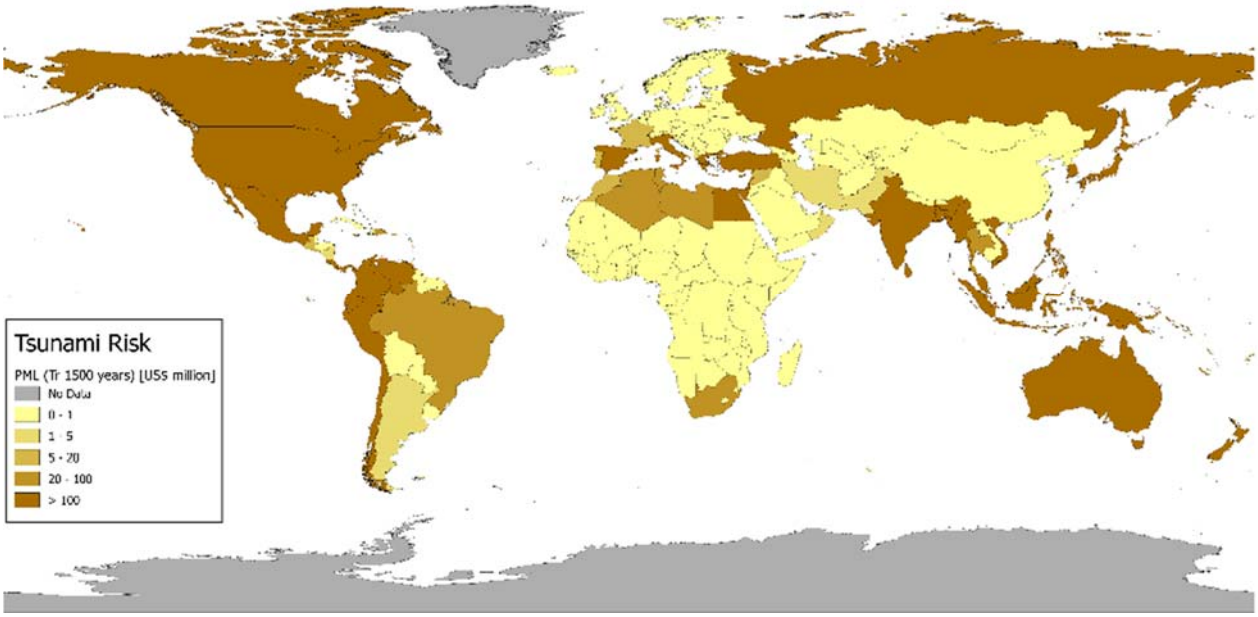


Figure 186. Distribution of PML (1500 years) for Tsunami by country

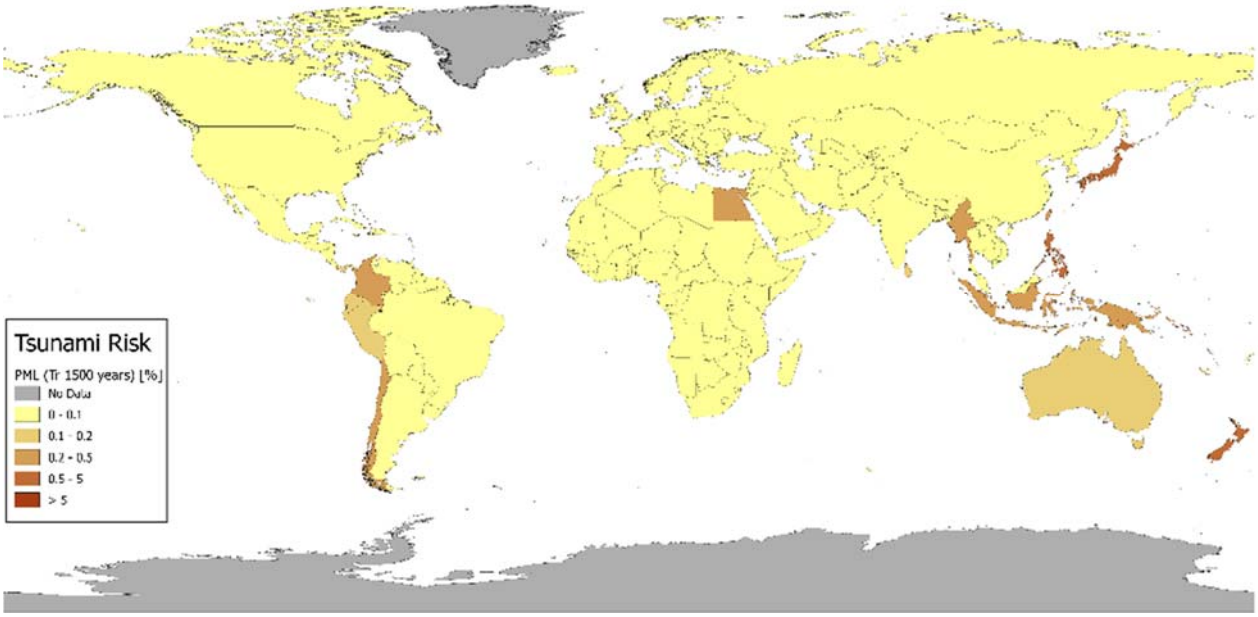


Figure 187. Distribution of PML (1500 years) for Tsunami relative to the exposed value by country

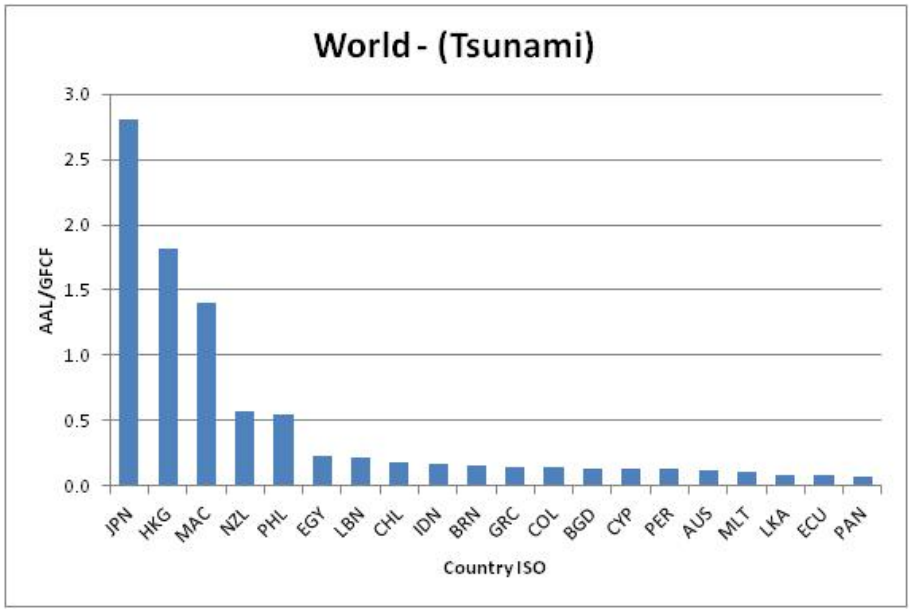


Figure 188. AAL/ GFCF (National) by country (Tsunami)

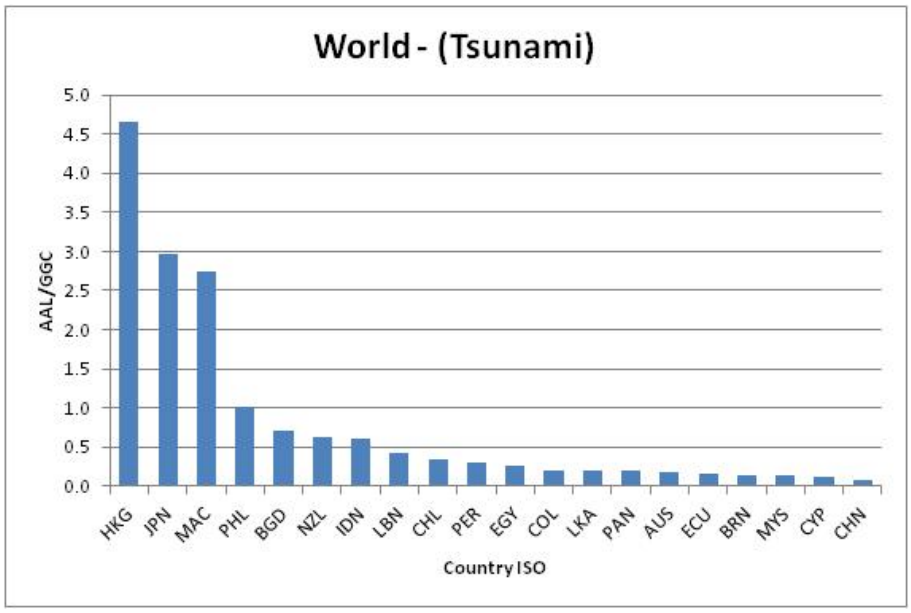


Figure 189. AAL/ GGC (National) by country (Tsunami)

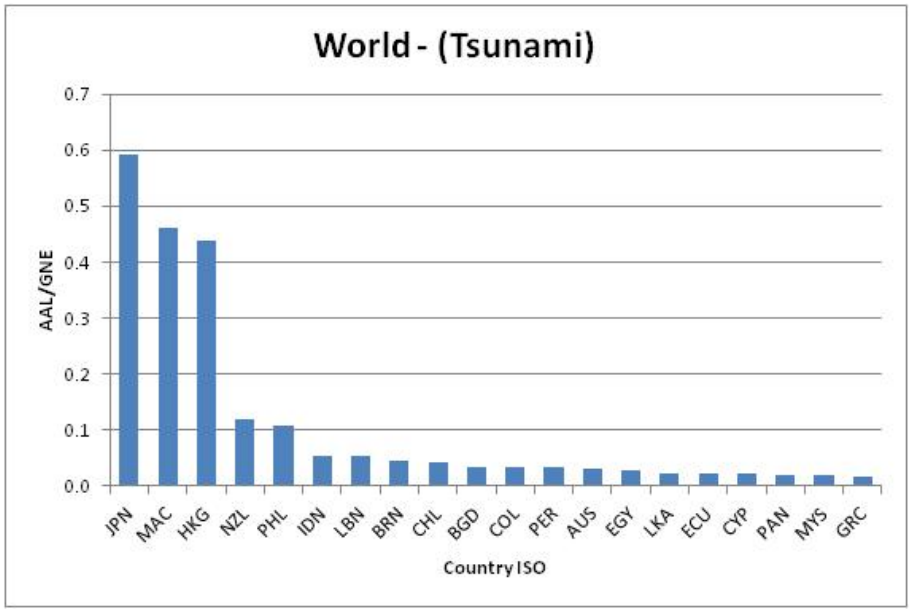


Figure 190. AAL/GNE (National) by country (Tsunami)

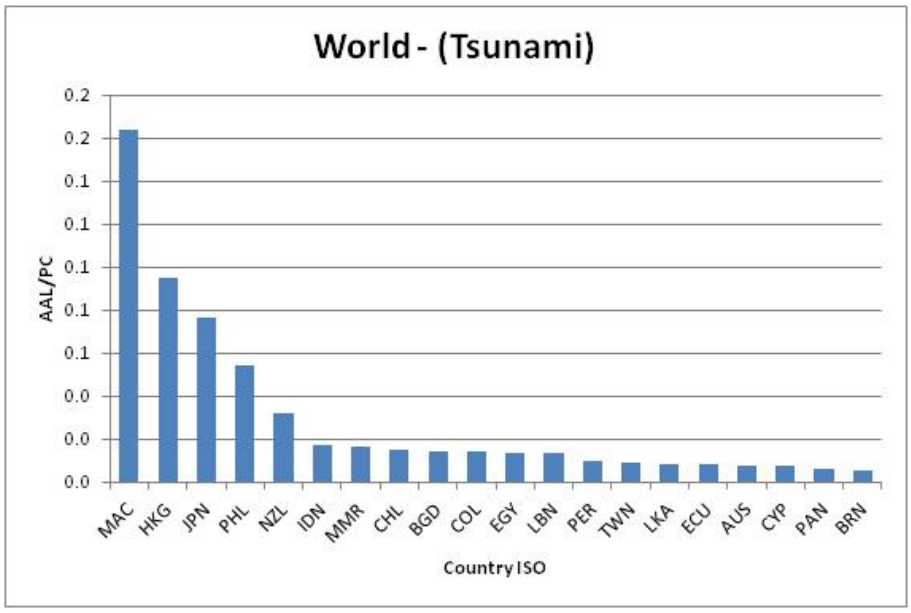


Figure 191. AAL/PC (National) by country (Tsunami)

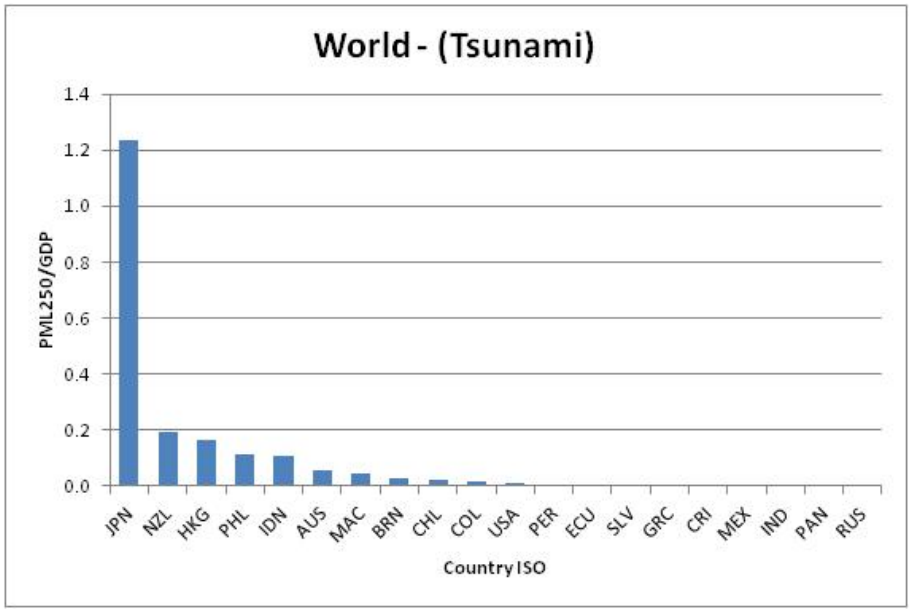


Figure 192. PML (250 years)/ GDP (National) by country (Tsunami)

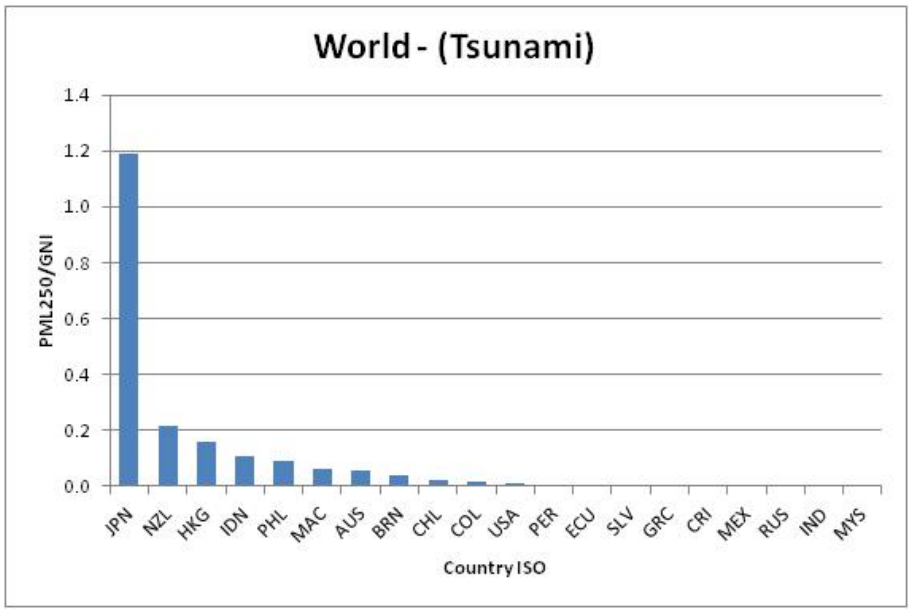


Figure 193. PML (250 years)/ GNI (National) by country (Tsunami)

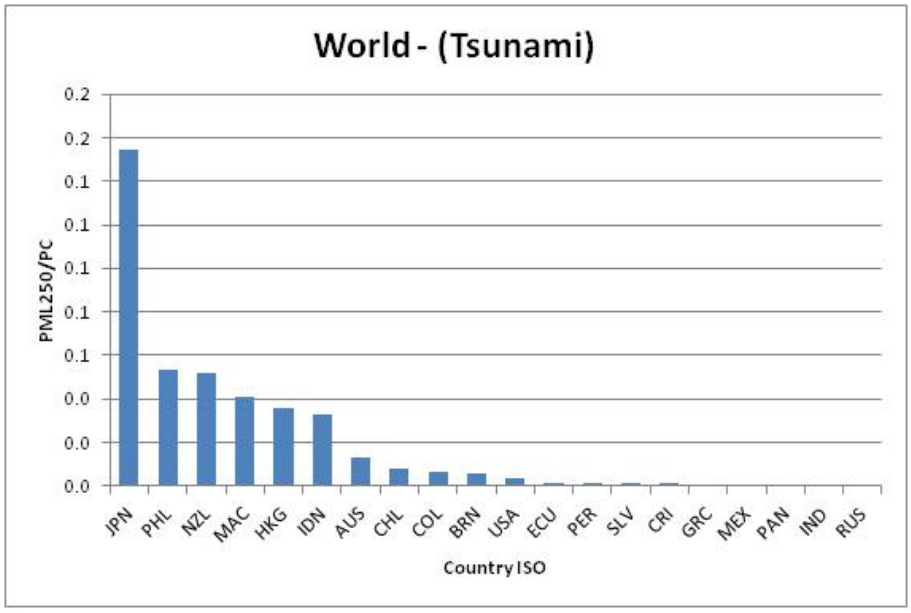


Figure 194. PML (250 years)/ PC (National) by country (Tsunami)

6.4.5 Flood Risk

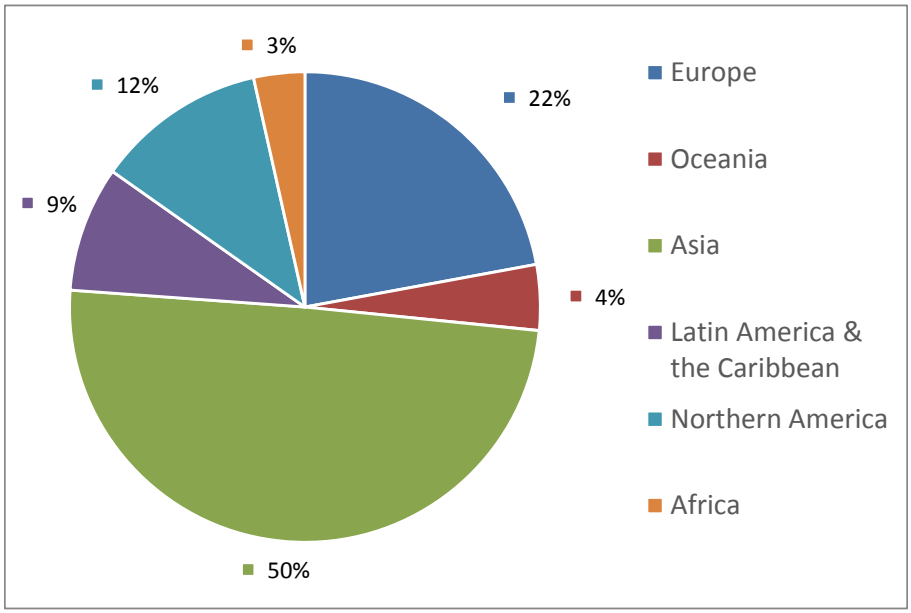


Figure 195. Distribution of the world total Flood AAL by region

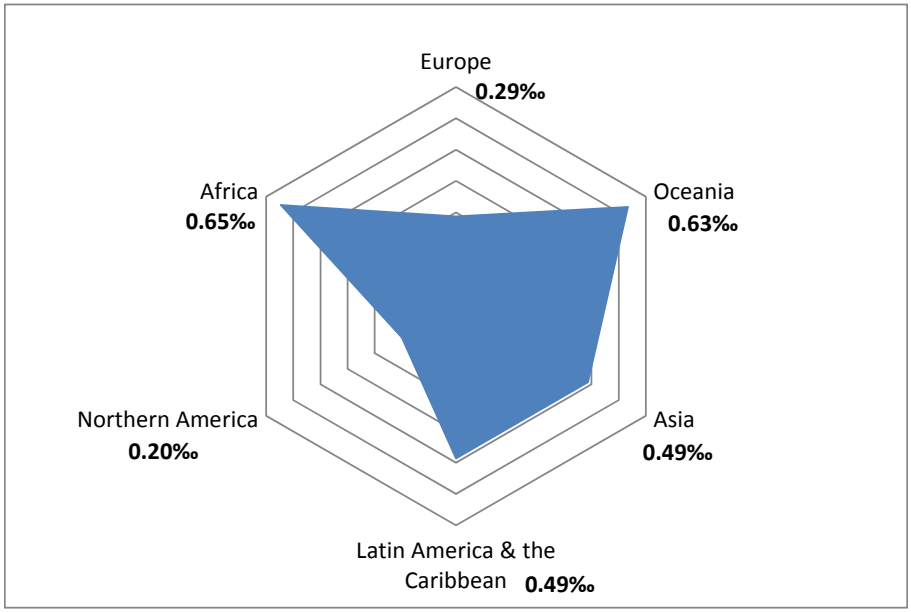


Figure 196. Comparison of Flood AALs by region (presented as relative to the total exposed value of the region)

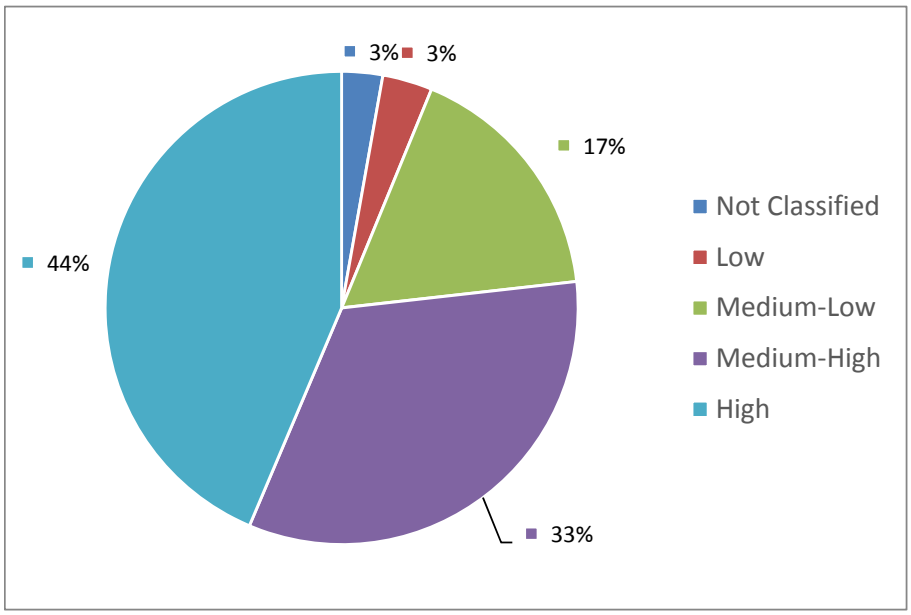


Figure 197. Distribution of the world total Flood AAL by economy

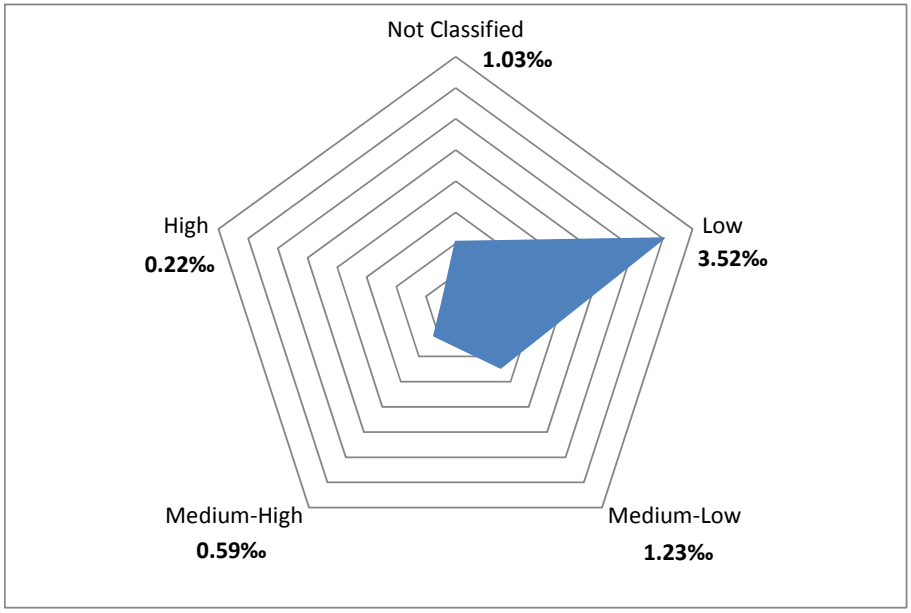


Figure 198. Comparison of Flood AALs by economy (presented as relative to the total exposed value of the economy)

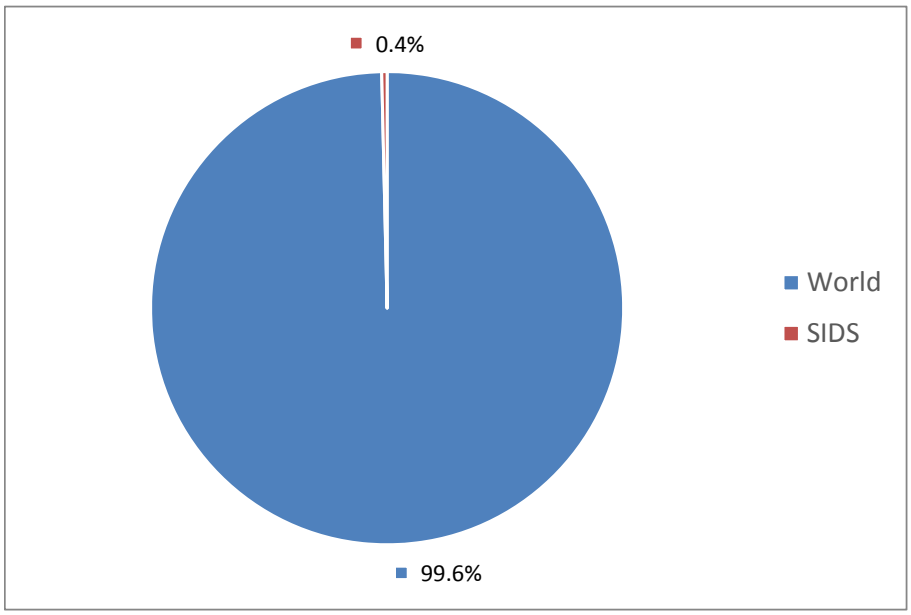


Figure 199. Distribution of the world total Flood AAL between SIDS and other countries

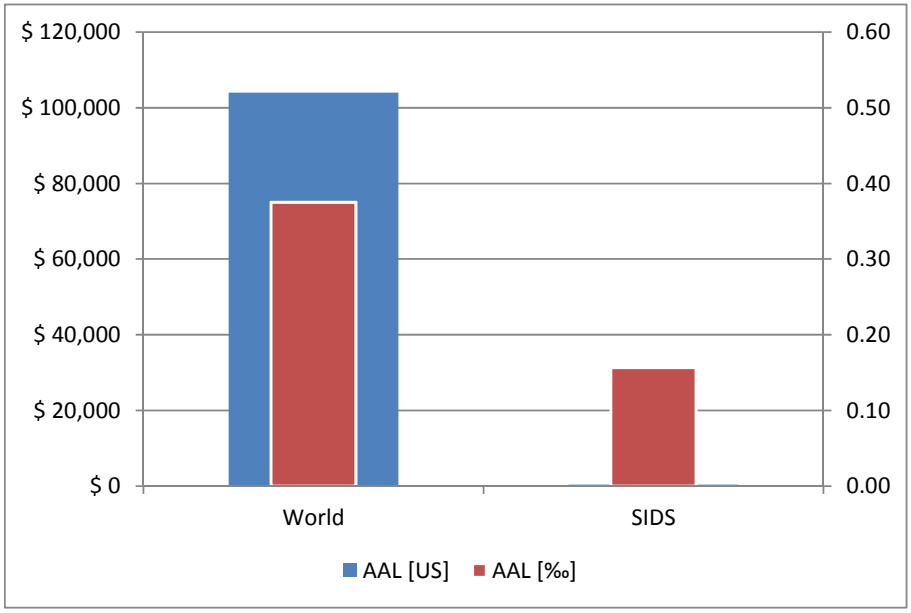


Figure 200. Comparison of Flood AALs between SIDS and other countries (presented as relative to the total exposed value of the countries aggrupation)

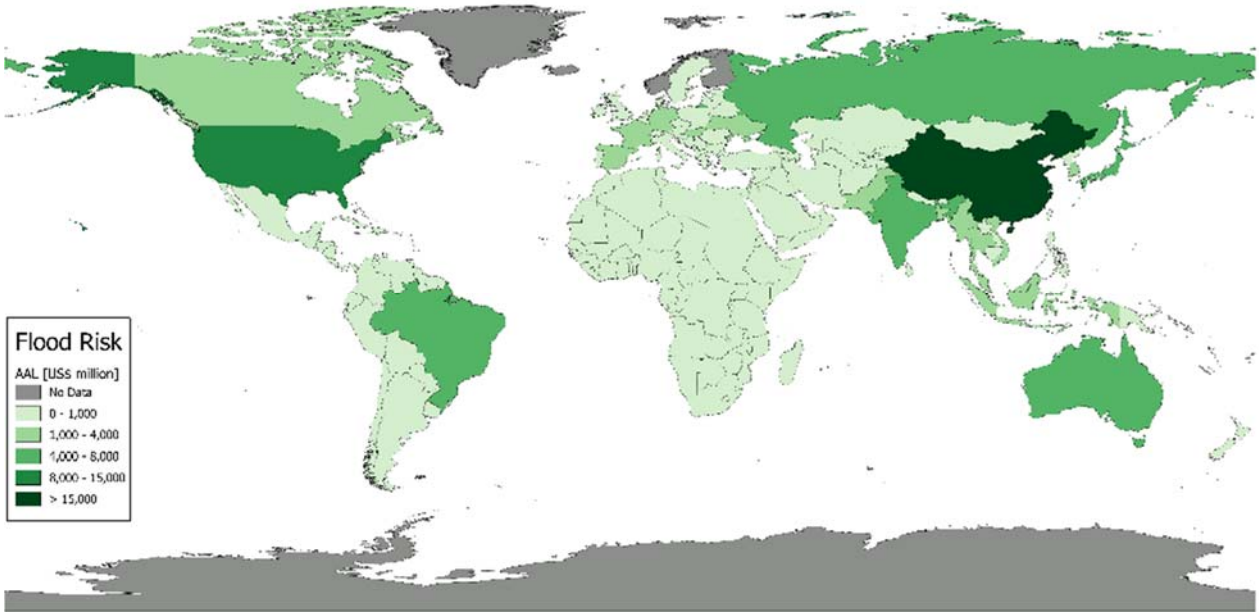


Figure 201. Distribution of AAL for flood by country

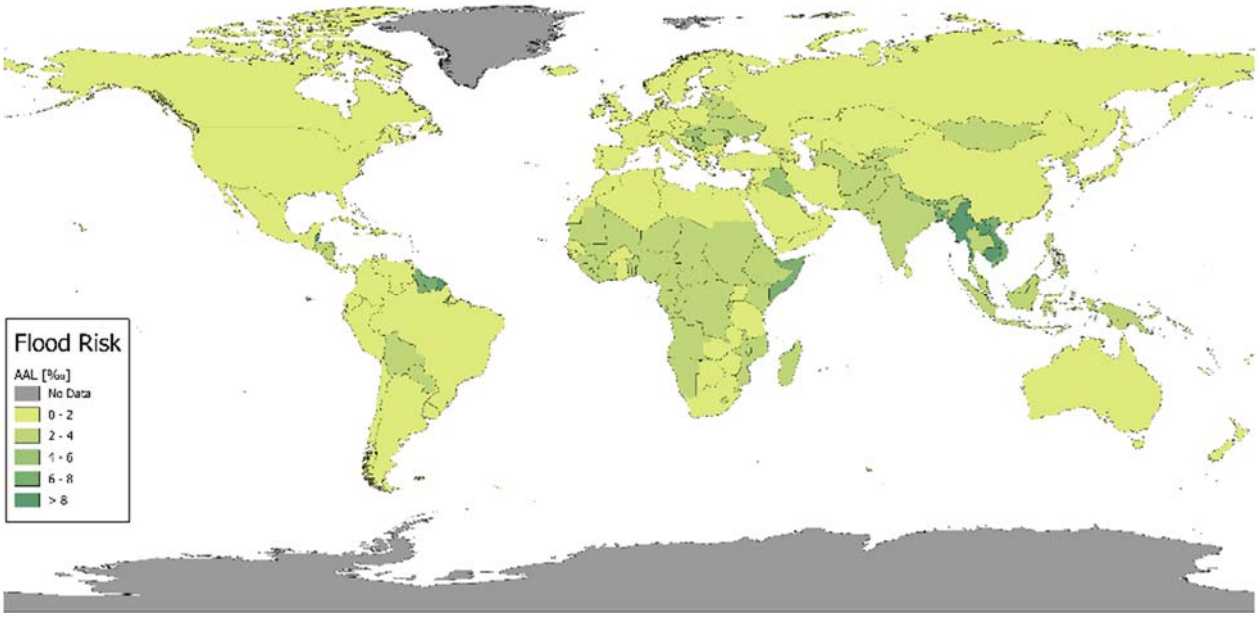


Figure 202. Distribution of AAL for flood relative to the exposed value by country

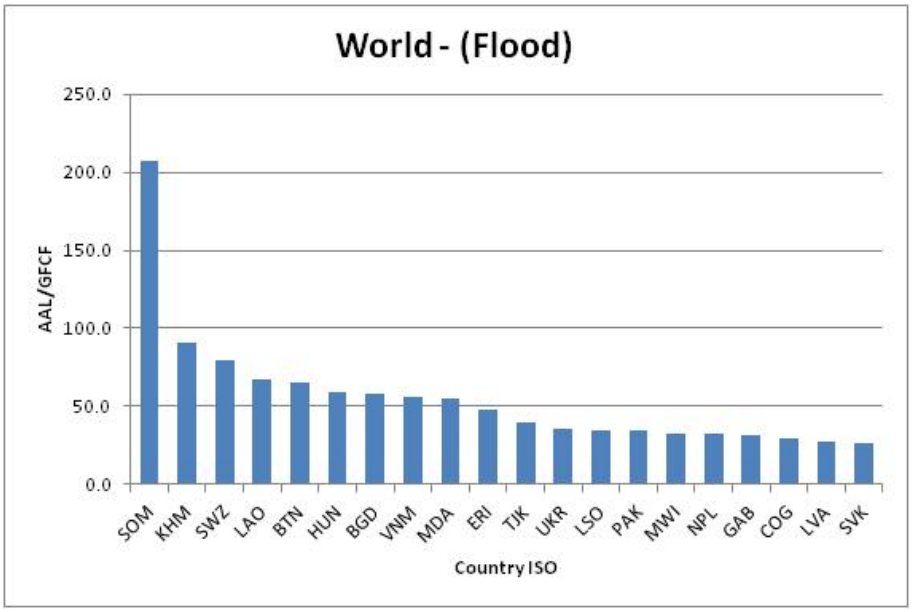


Figure 203. AAL/ GFCF (National) by country (Flood)

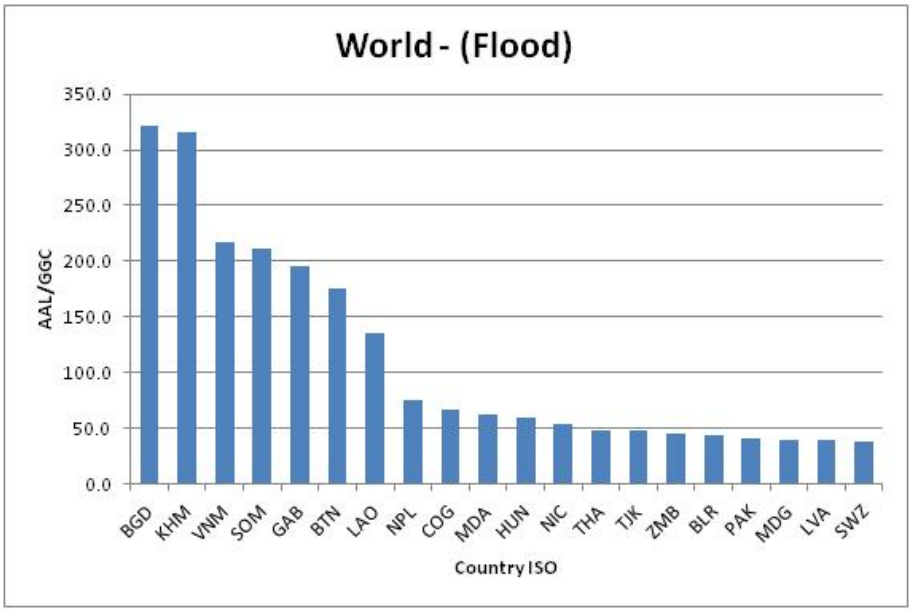


Figure 204. AAL/ GGC (National) by country (Flood)

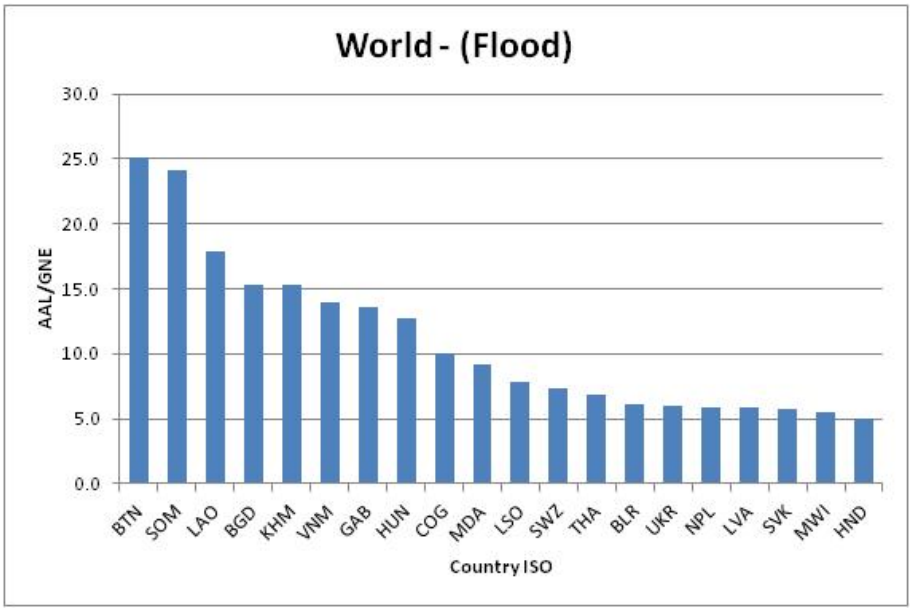


Figure 205. AAL/GNE (National) by country (Flood)

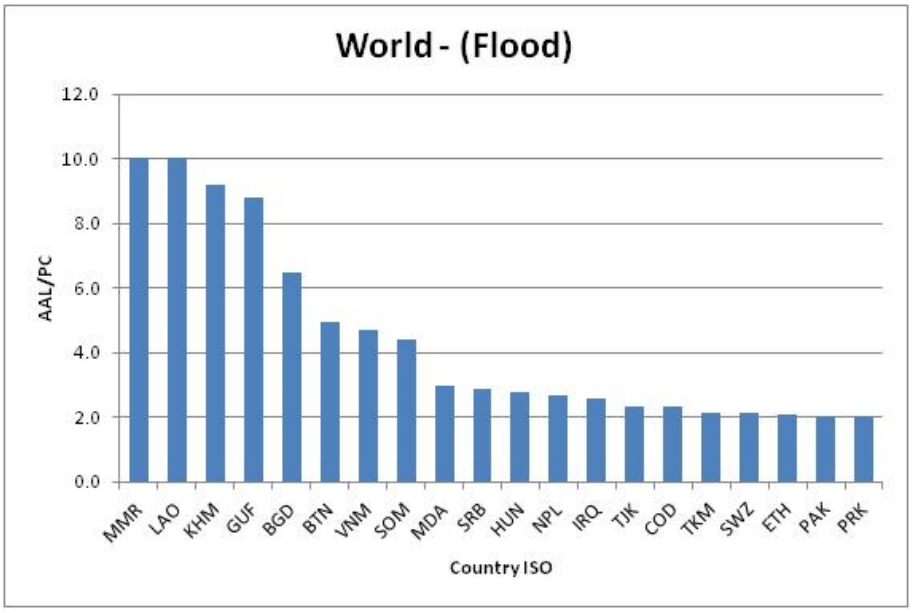


Figure 206. AAL/PC (National) by country (Flood)

6.4.6 Volcanic Ash Fall Risk

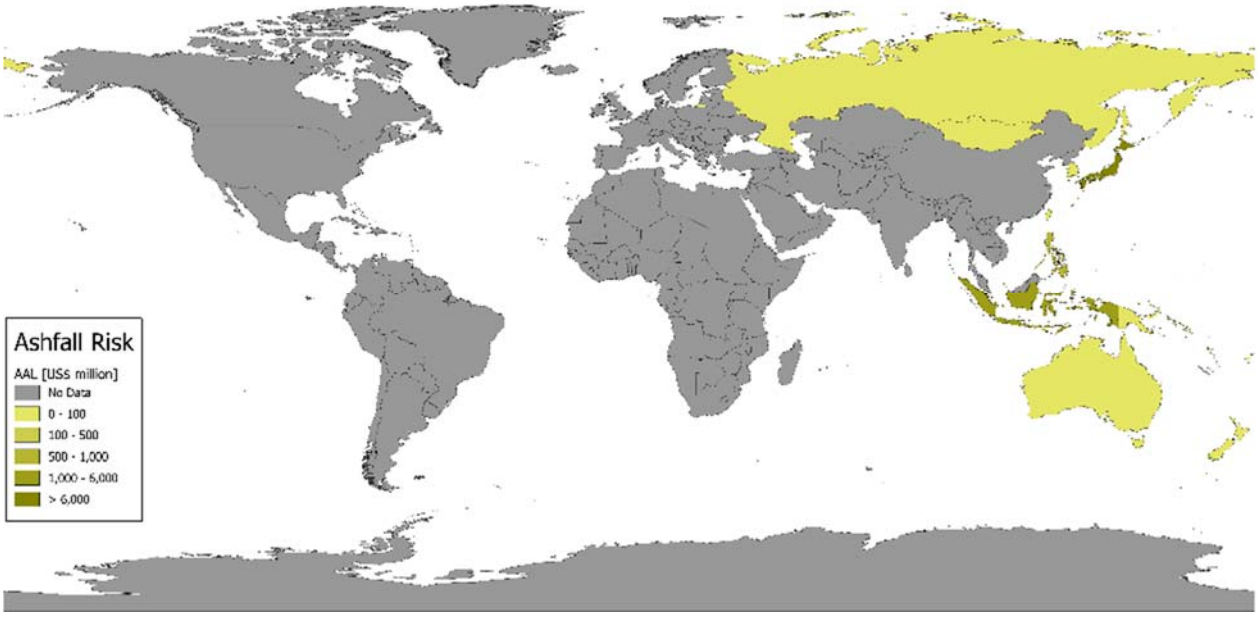


Figure 207. Distribution of AAL for volcanic ash fall by country

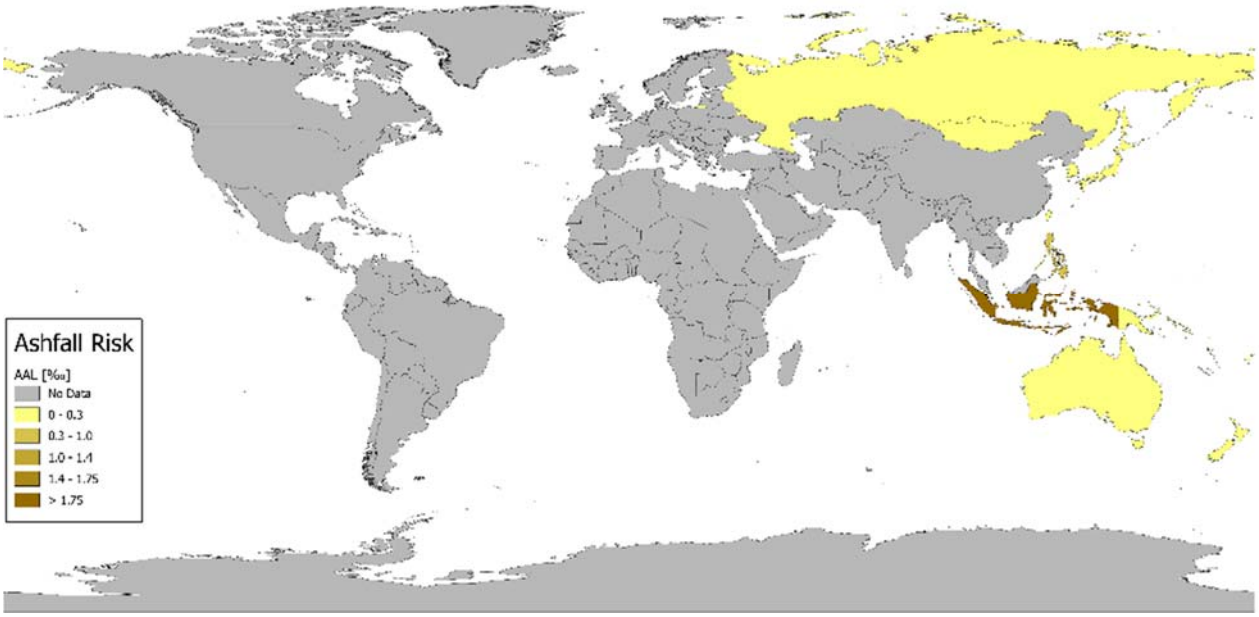


Figure 208. Distribution of AAL for volcanic ash fall relative to the exposed value by country

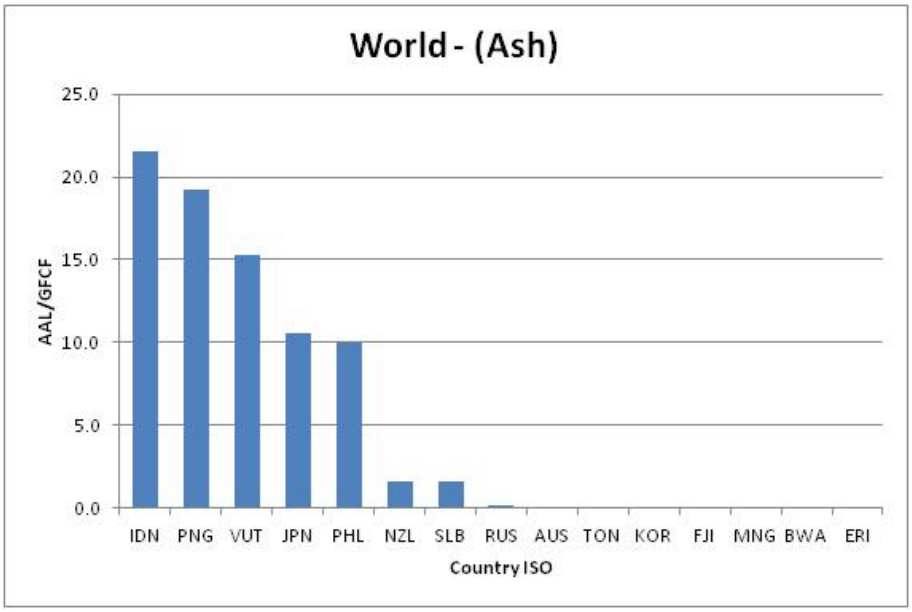


Figure 209. AAL/ GFCF (National) by country (Volcanic ash fall)

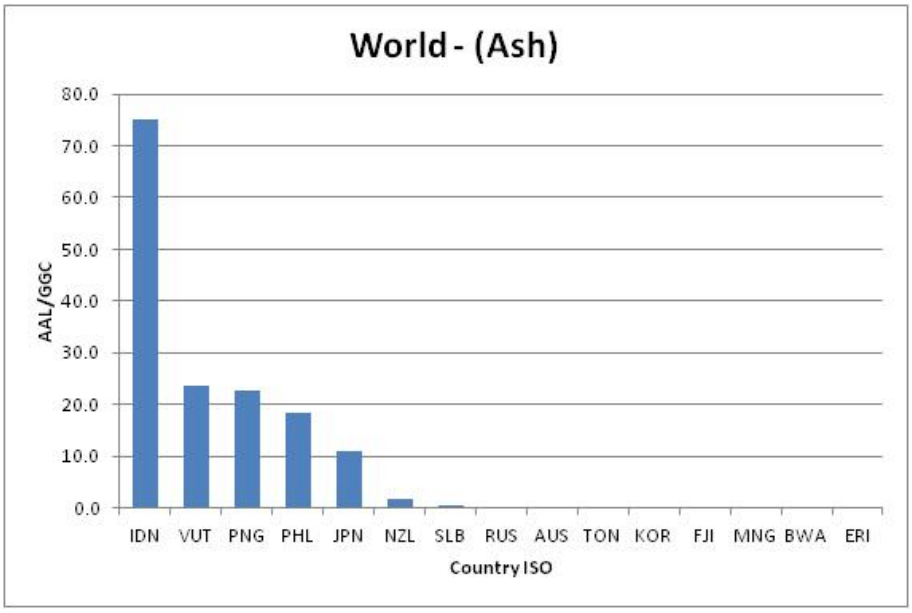


Figure 210. AAL/ GGC (National) by country (Volcanic ash fall)

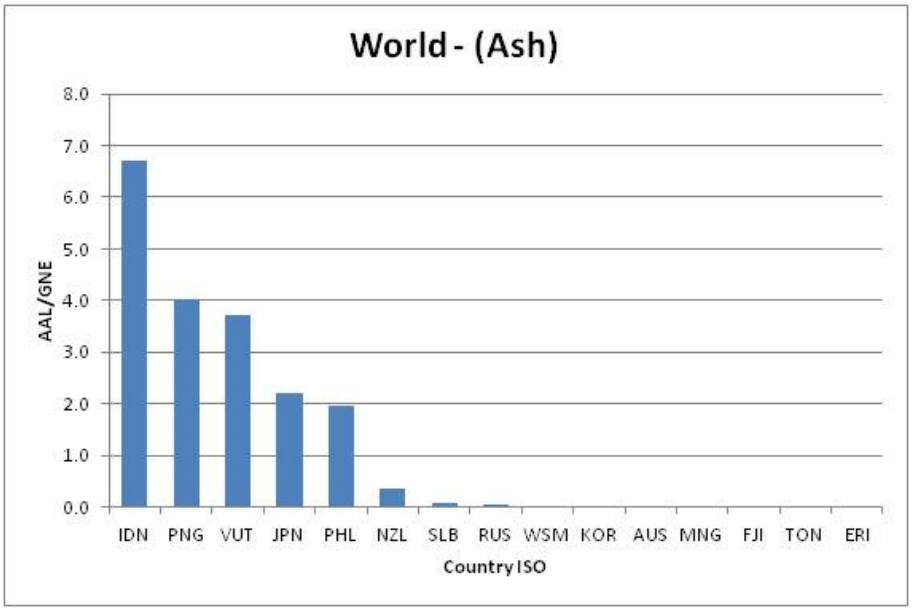


Figure 211. AAL/GNE (National) by country (Volcanic ash fall)

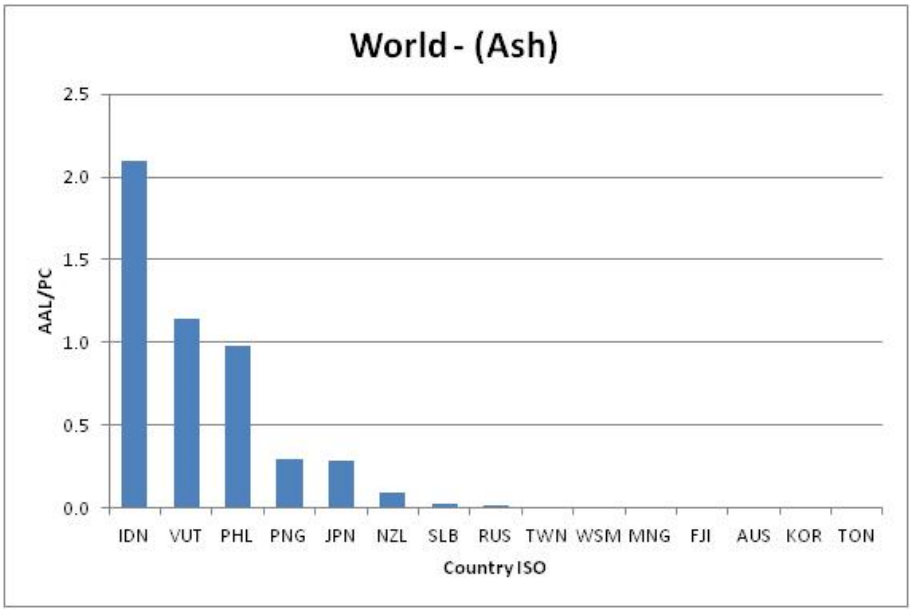


Figure 212. AAL/PC (National) by country (Volcanic ash fall)

6.4.7 Disaster Risk Development Implications

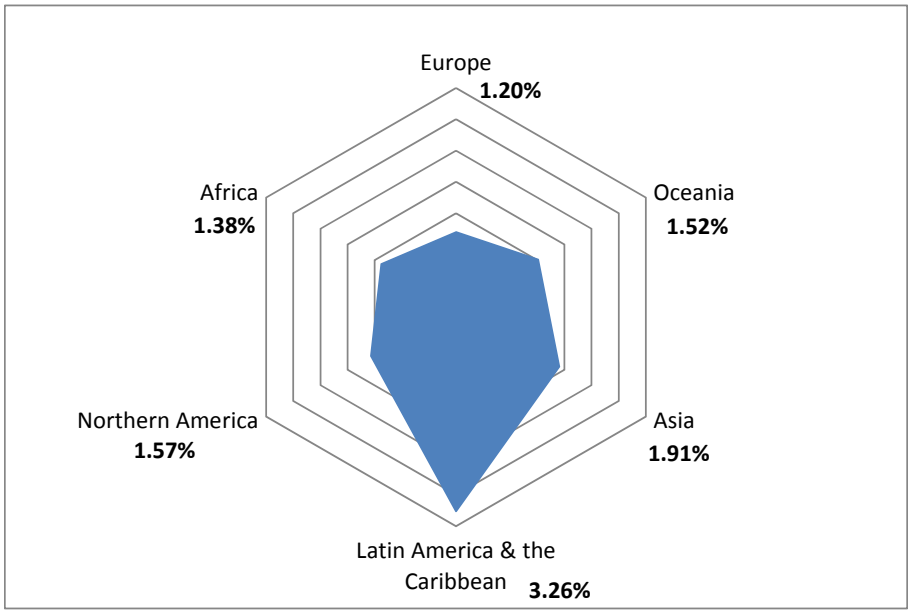


Figure 213. Comparison of total AALs by region, normalized by the Gross Fixed Capital Formation

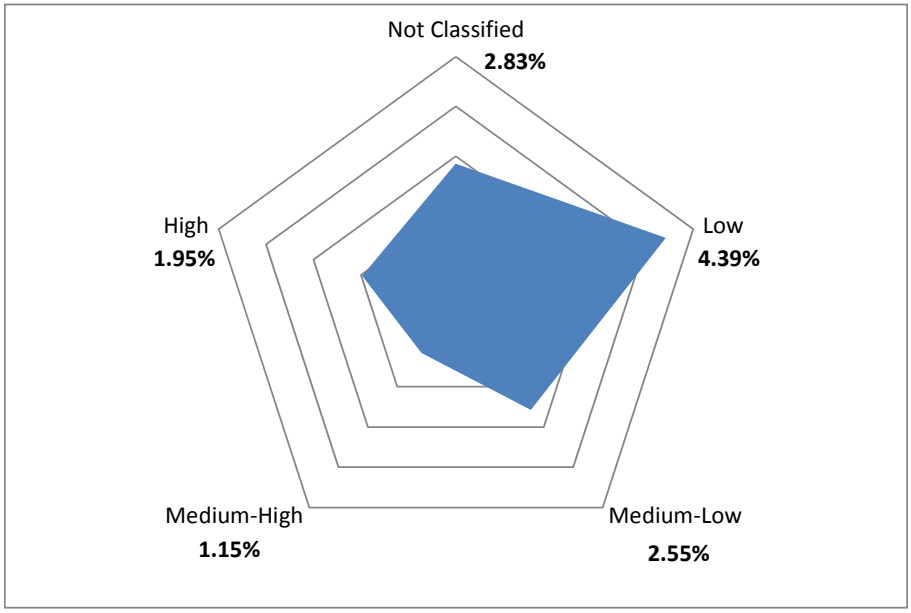


Figure 214. Comparison of total AALs by economy, normalized by the Gross Fixed Capital Formation

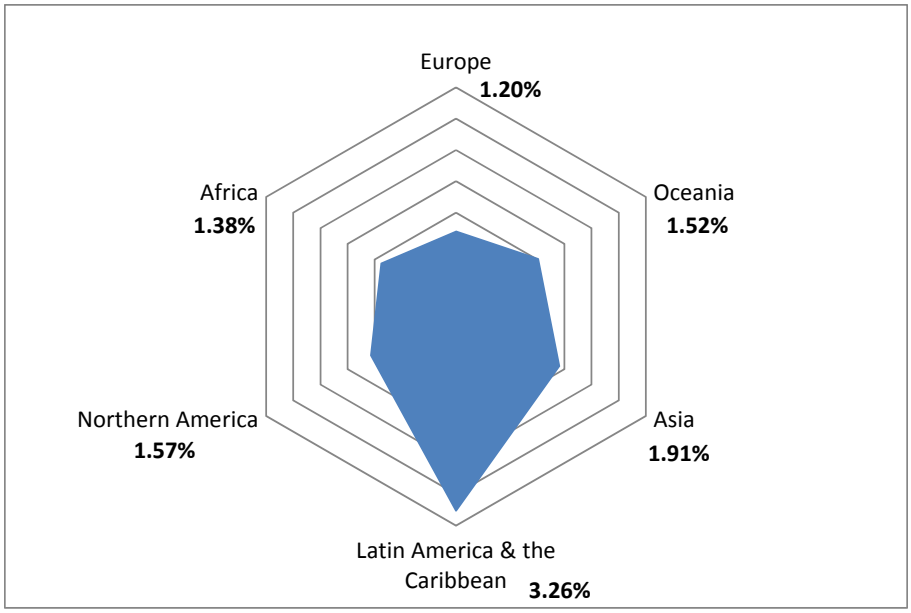


Figure 215. Comparison of total AALs by region, normalized by the Social Expenditure

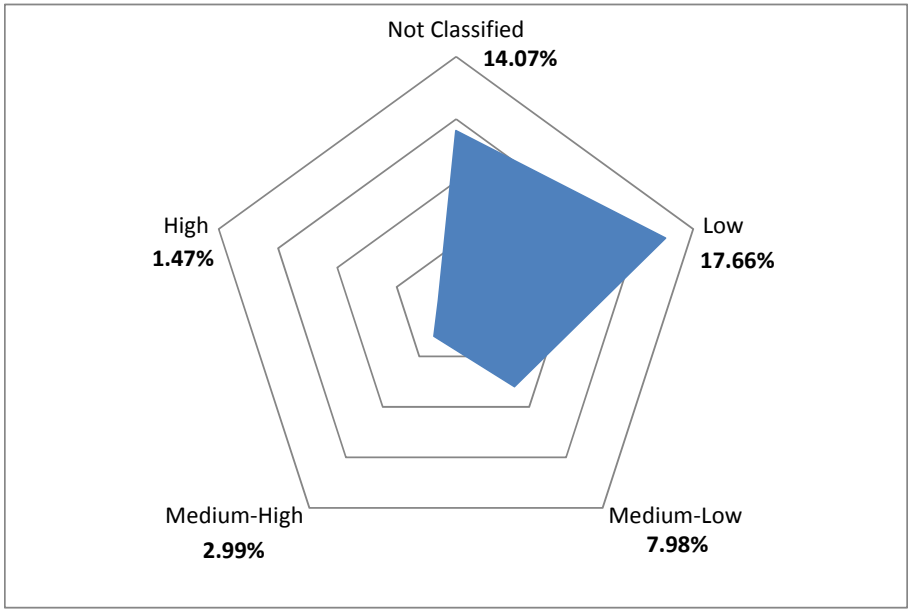


Figure 216. Comparison of total AALs by economy, normalized by the Social Expenditure

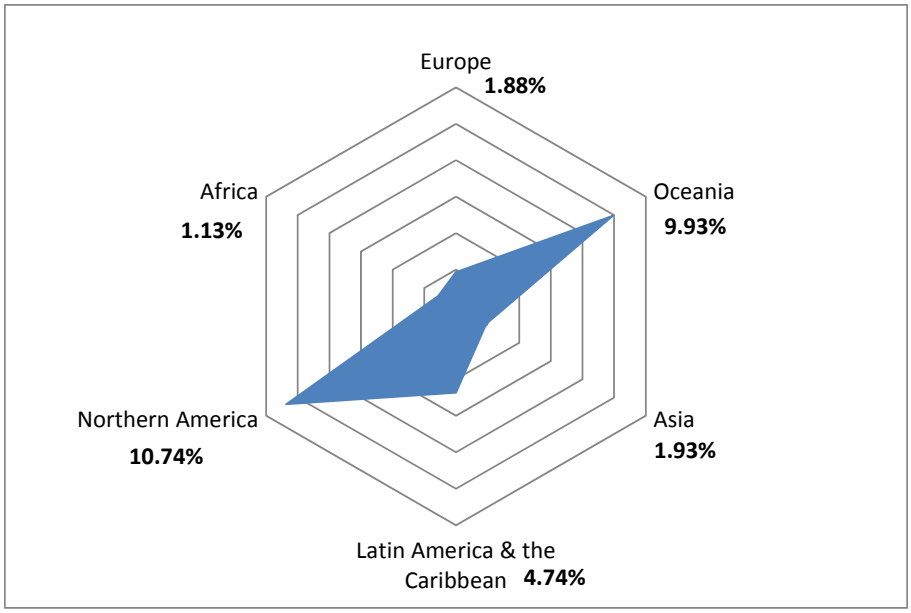


Figure 217. Comparison of total AALs by region, normalized by the Total Reserves

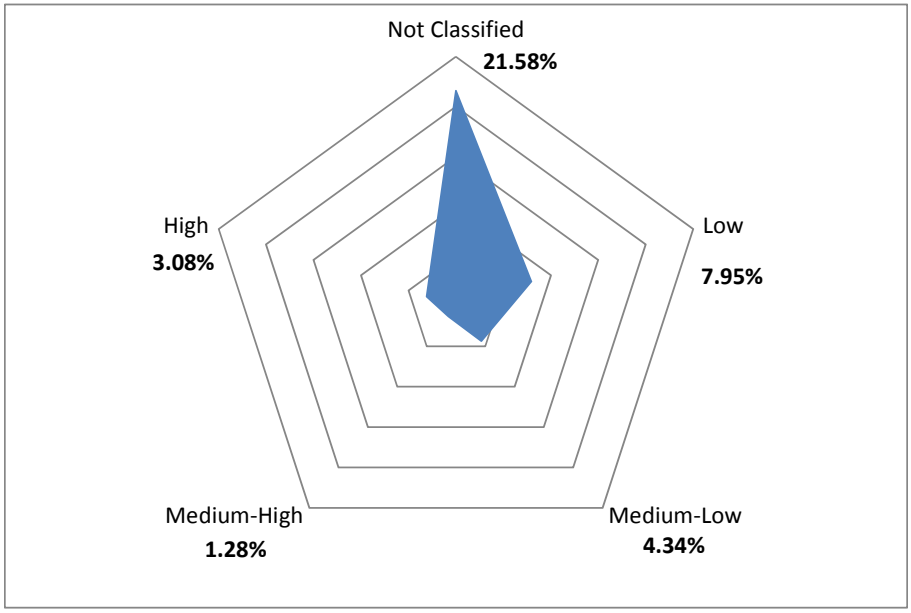


Figure 218. Comparison of total AALs by economy, normalized by the Total Reserves

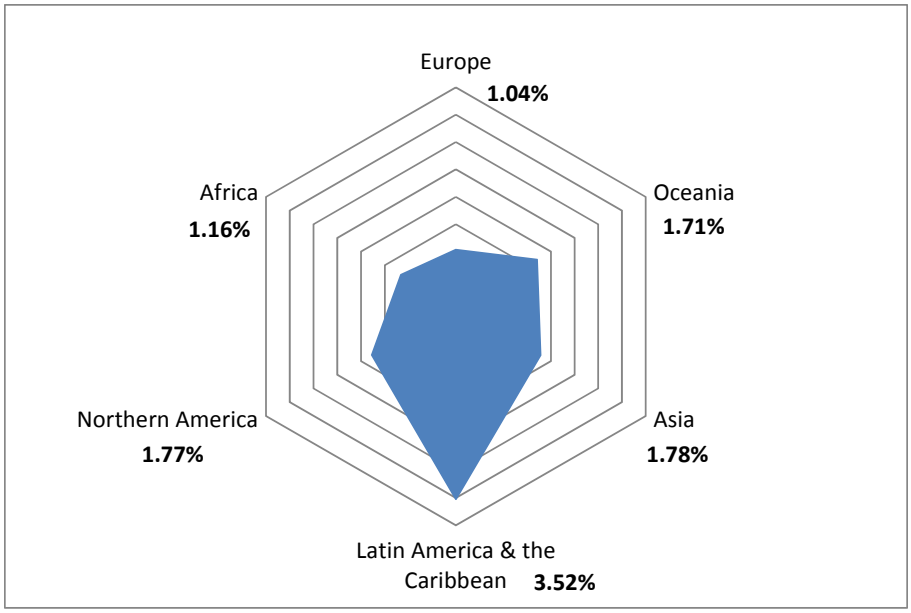


Figure 219. Comparison of total AALs by region, normalized by the Gross National Savings

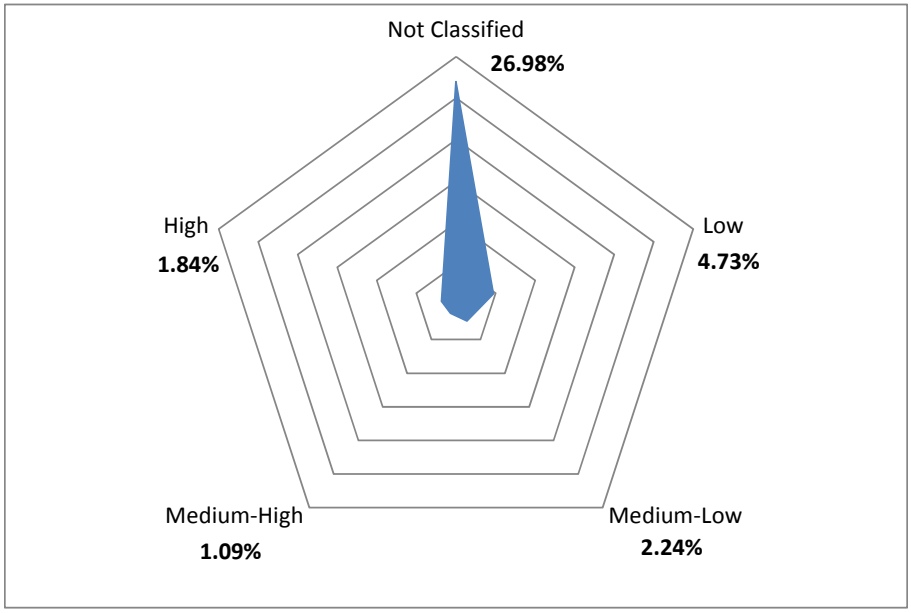


Figure 220. Comparison of total AALs by economy, normalized by the Gross National Savings

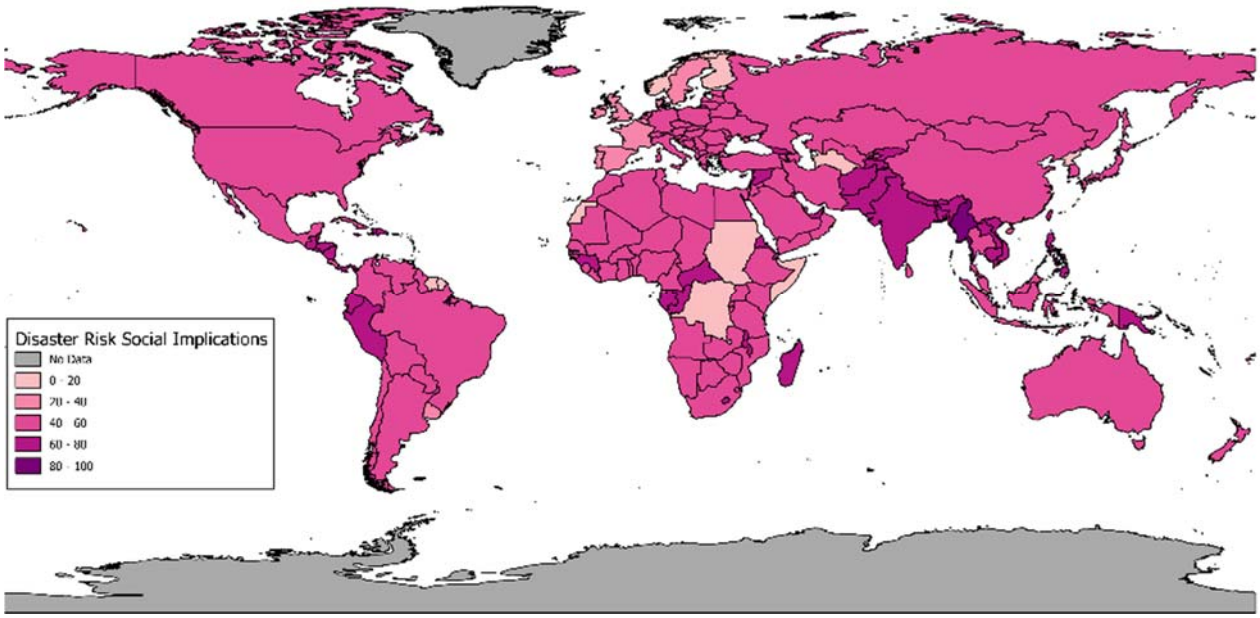


Figure 221. Distribution of the Disaster Risk Social Implications sub-index (DRSI) by country

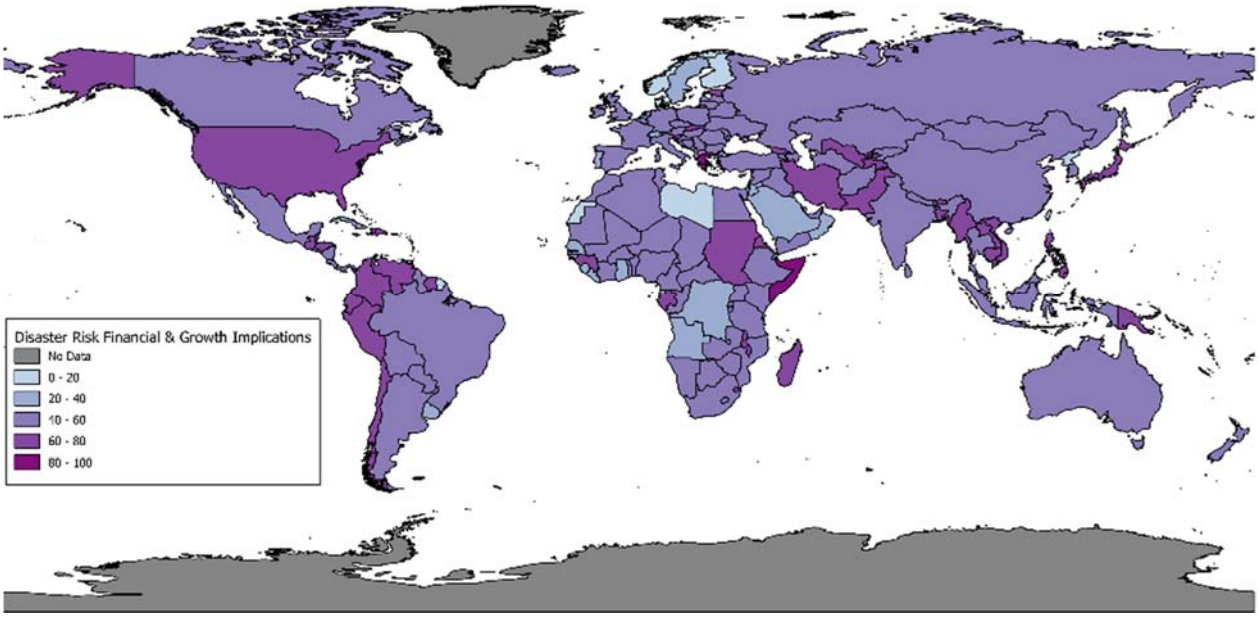


Figure 222. Distribution of the Disaster Risk Growth & Financial Implications sub-index (DRGI) by country

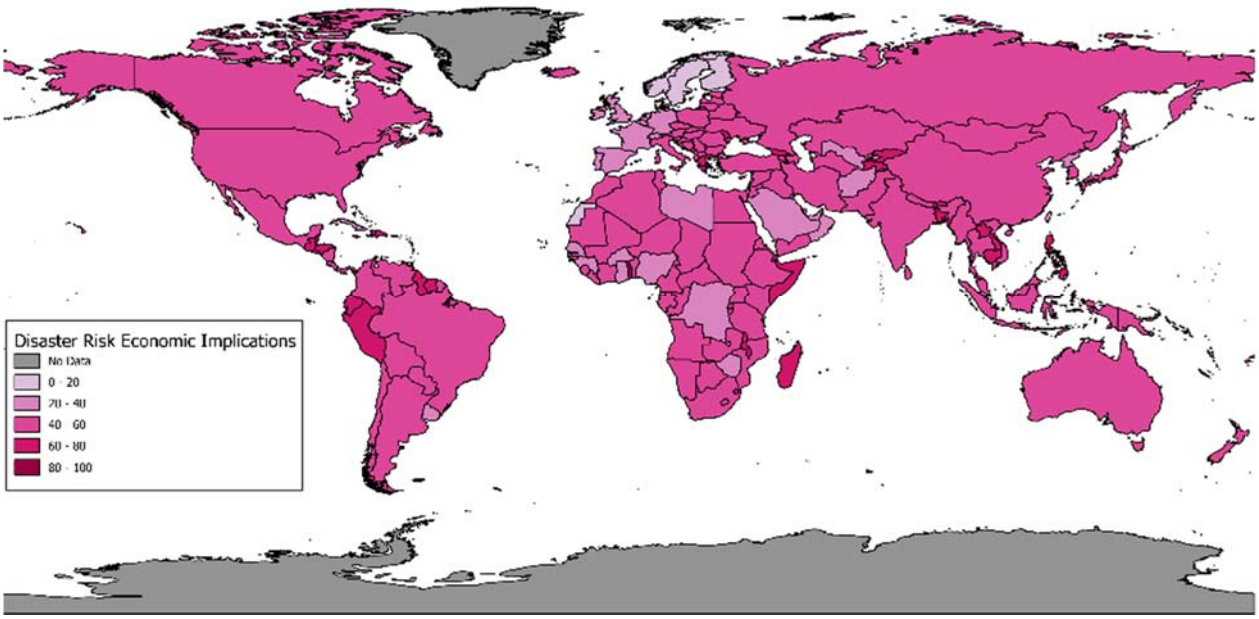


Figure 223. Distribution of the Disaster Risk Economic Implications sub-index (DREI) by country

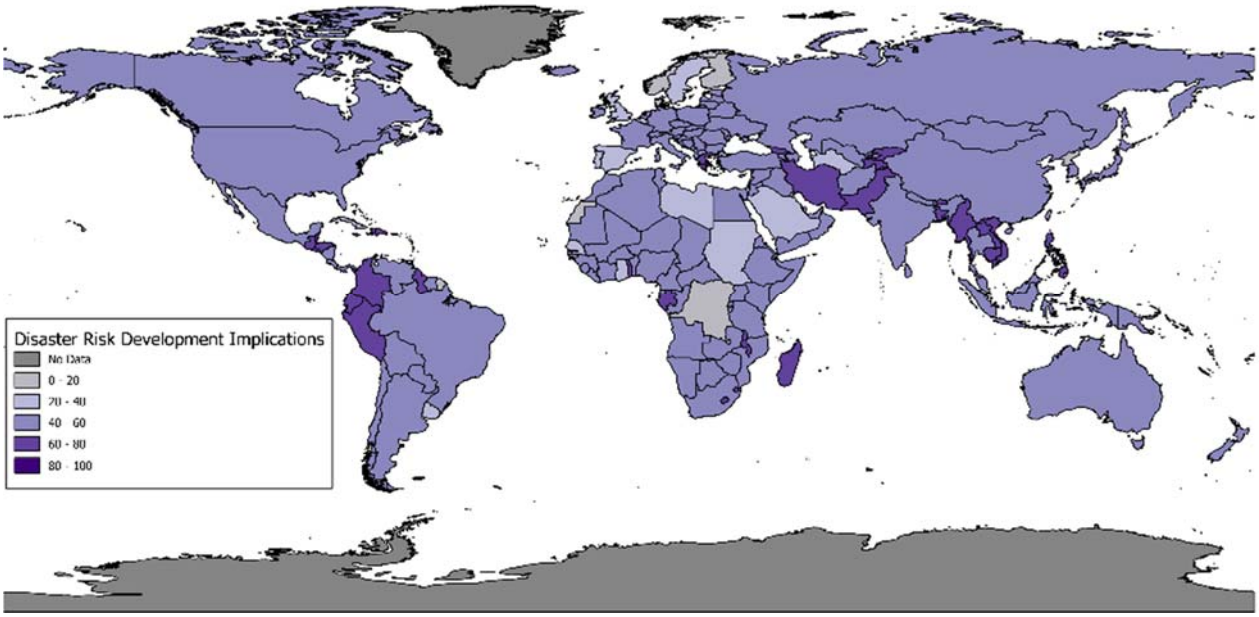
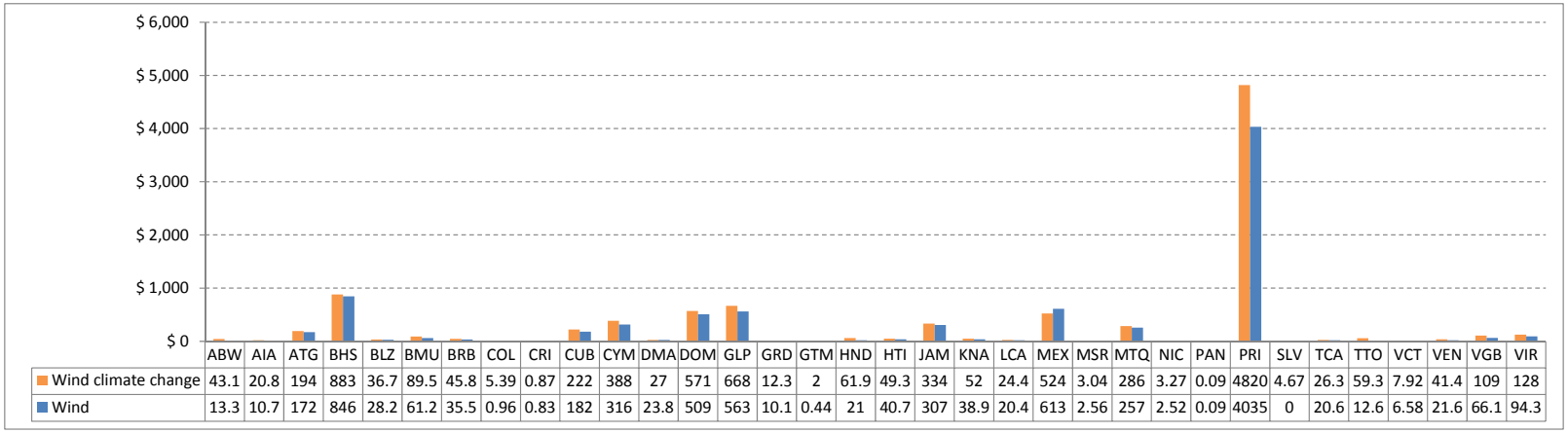


Figure 224. Distribution of the Disaster Risk Development Implications index (DRSI) by country

6.5 Wind Risk Results in the Caribbean Including Climate Change

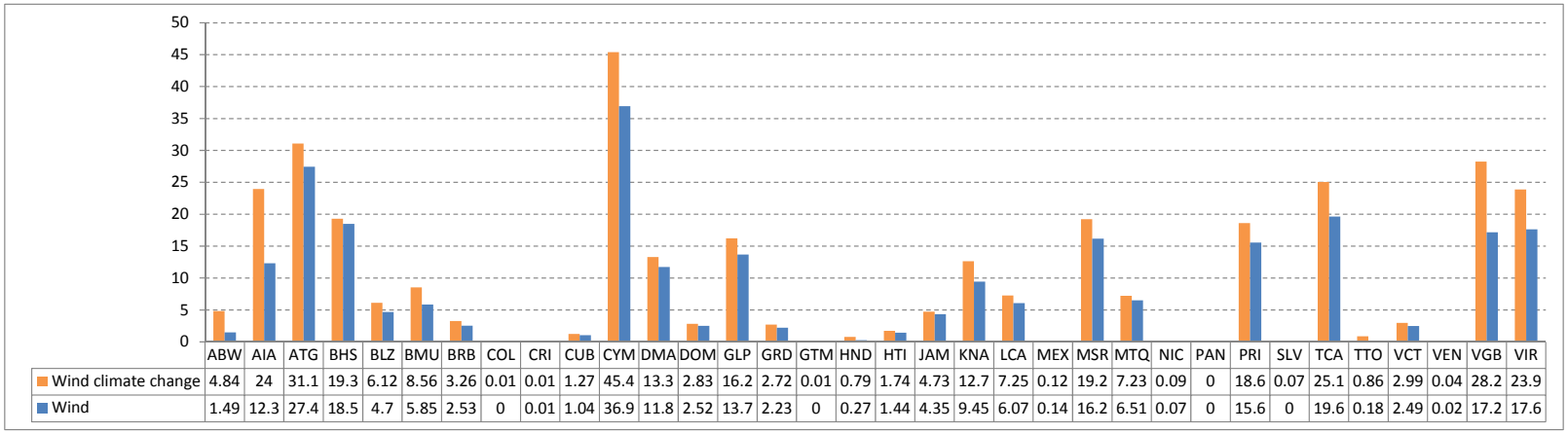
As explained in chapter 2 of this report, a hazard assessment of strong winds of tropical cyclones including the effect of Climate Change was performed for the Caribbean Region. Such assessment took into account simulations of future cyclone tracks obtained by NCAR up to 2055. It is worthy to note that only the hazard was changed for this assessment. The exposed elements and the vulnerability functions don't include any consideration on how they would be for 2055. In this section, comparative results for all countries in the region are presented, in terms of AAL and PML amounts.

Figure 225 and Figure 226 show the comparison of the AAL with and without Climate Change in absolute value and relative to the country exposed value, respectively. Figure 227 show the ratio of both AAL results. It can be seen that in general for all countries the AAL is increased by including the effect of climate. However the ratio varies from country to country and for many of them it is close to 1. Mexico is the only country in which the effect of climate change derives in a decrease in AAL. Figure 228 show the PML curves for both conditions (with and without Climate Change) for several countries in the Caribbean. As can be seen, there are cases in which the effect of Climate Change increases the PML curve, and others in which both curves are practically the same. In any case, this illustrates the importance of treating disaster risk management and Climate Change adaptation as development strategies that should share the same long-term objective.



	ABW	AIA	ATG	BHS	BLZ	BMU	BRB	COL	CRI	CUB	CYM	DMA	DOM	GLP	GRD	GTM	HND	HTI	JAM	KNA	LCA	MEX	MSR	MTQ	NIC	PAN	PRI	SLV	TCA	TTO	VCT	VEN	VGB	VIR
Wind climate change	43.1	20.8	194	883	36.7	89.5	45.8	5.39	0.87	222	388	27	571	668	12.3	2	61.9	49.3	334	52	24.4	524	3.04	286	3.27	0.09	4820	4.67	26.3	59.3	7.92	41.4	109	128
Wind	13.3	10.7	172	846	28.2	61.2	35.5	0.96	0.83	182	316	23.8	509	563	10.1	0.44	21	40.7	307	38.9	20.4	613	2.56	257	2.52	0.09	4035	0	20.6	12.6	6.58	21.6	66.1	94.3

Figure 225. Comparison of the AAL with and without Climate Change for all countries in the Caribbean



	ABW	AIA	ATG	BHS	BLZ	BMU	BRB	COL	CRI	CUB	CYM	DMA	DOM	GLP	GRD	GTM	HND	HTI	JAM	KNA	LCA	MEX	MSR	MTQ	NIC	PAN	PRI	SLV	TCA	TTO	VCT	VEN	VGB	VIR
Wind climate change	4.84	24	31.1	19.3	6.12	8.56	3.26	0.01	0.01	1.27	45.4	13.3	2.83	16.2	2.72	0.01	0.79	1.74	4.73	12.7	7.25	0.12	19.2	7.23	0.09	0	18.6	0.07	25.1	0.86	2.99	0.04	28.2	23.9
Wind	1.49	12.3	27.4	18.5	4.7	5.85	2.53	0	0.01	1.04	36.9	11.8	2.52	13.7	2.23	0	0.27	1.44	4.35	9.45	6.07	0.14	16.2	6.51	0.07	0	15.6	0	19.6	0.18	2.49	0.02	17.2	17.6

Figure 226. Comparison of the AAL with and without Climate Change for all countries in the Caribbean (relative to the exposed value of the countries)

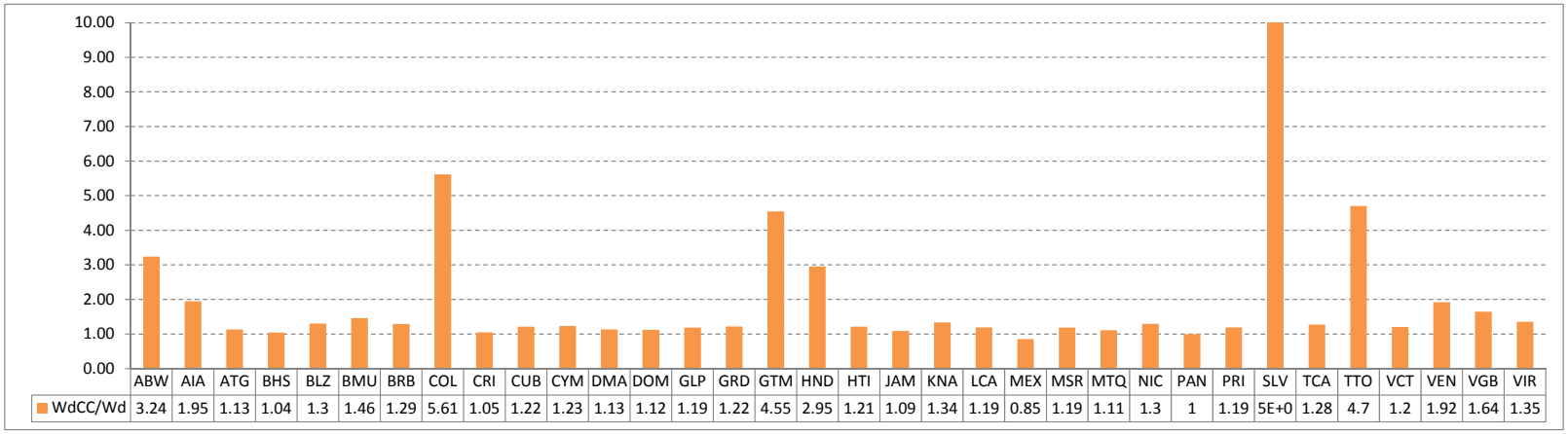


Figure 227. Ratio of the AAL computed with Climate Change and the AAL computed without.

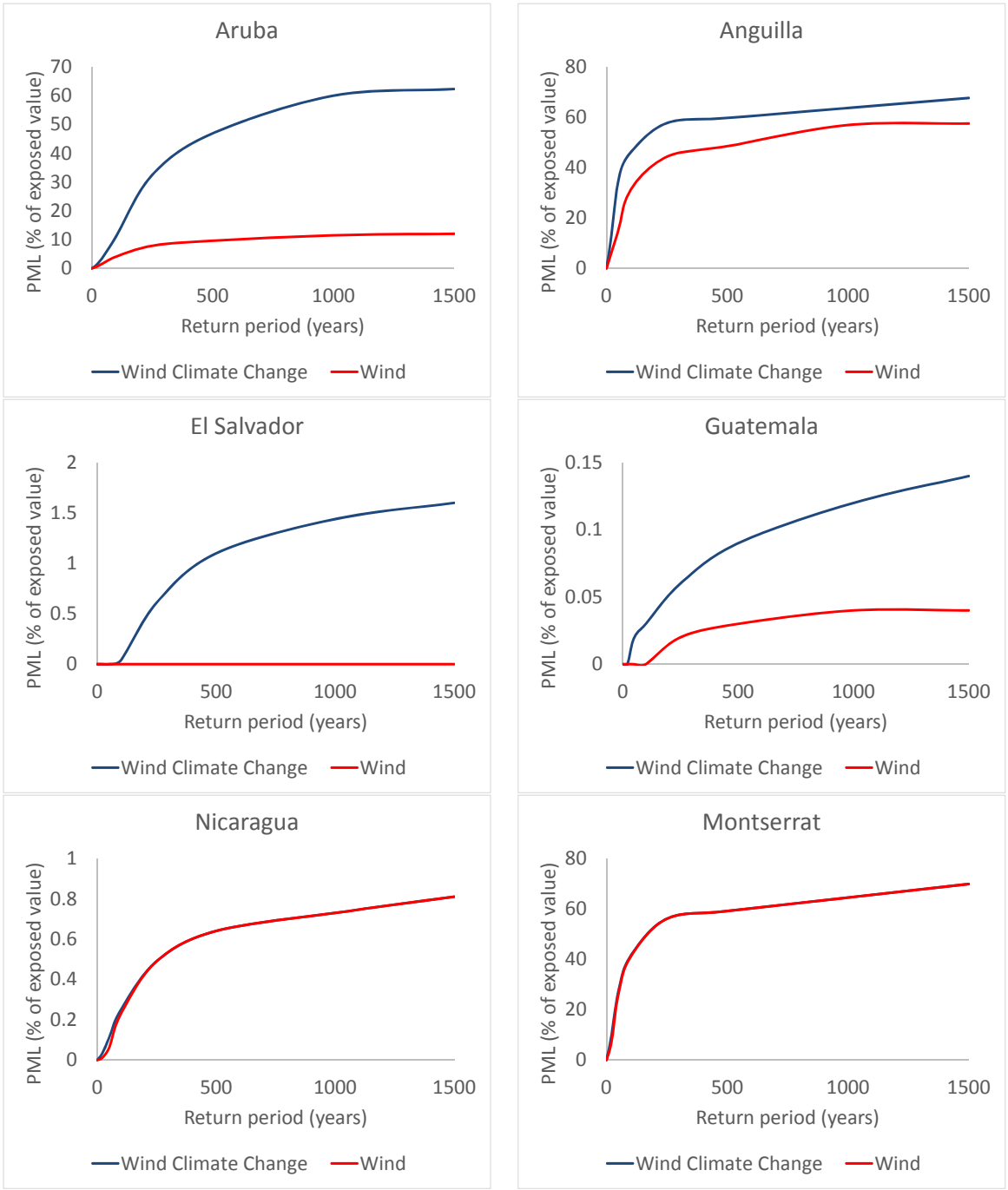


Figure 228. Comparison of the PML curves for the countries in the Caribbean region.

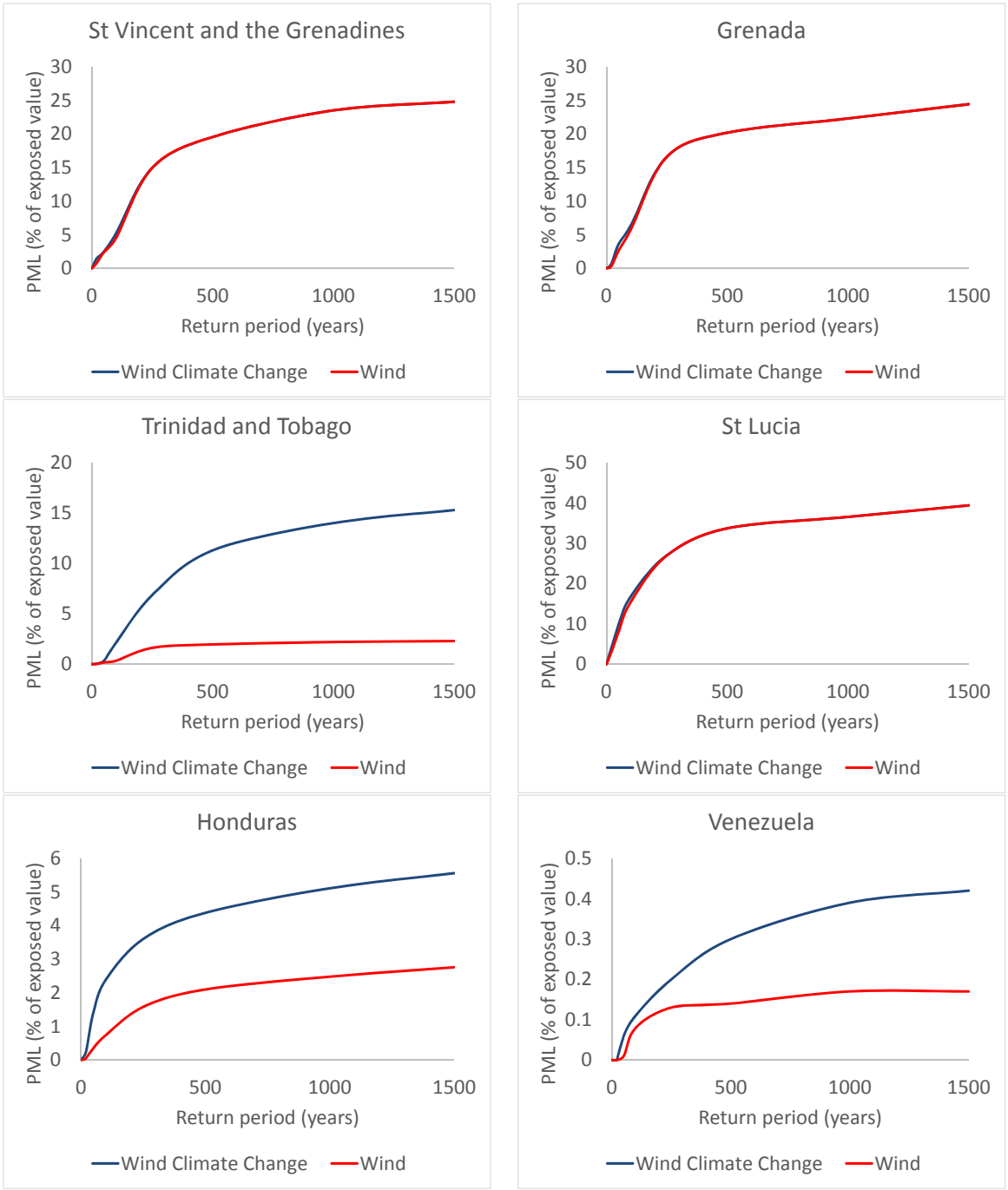


Figure 228 (continued). Comparison of the PML curves for the countries in the Caribbean region.

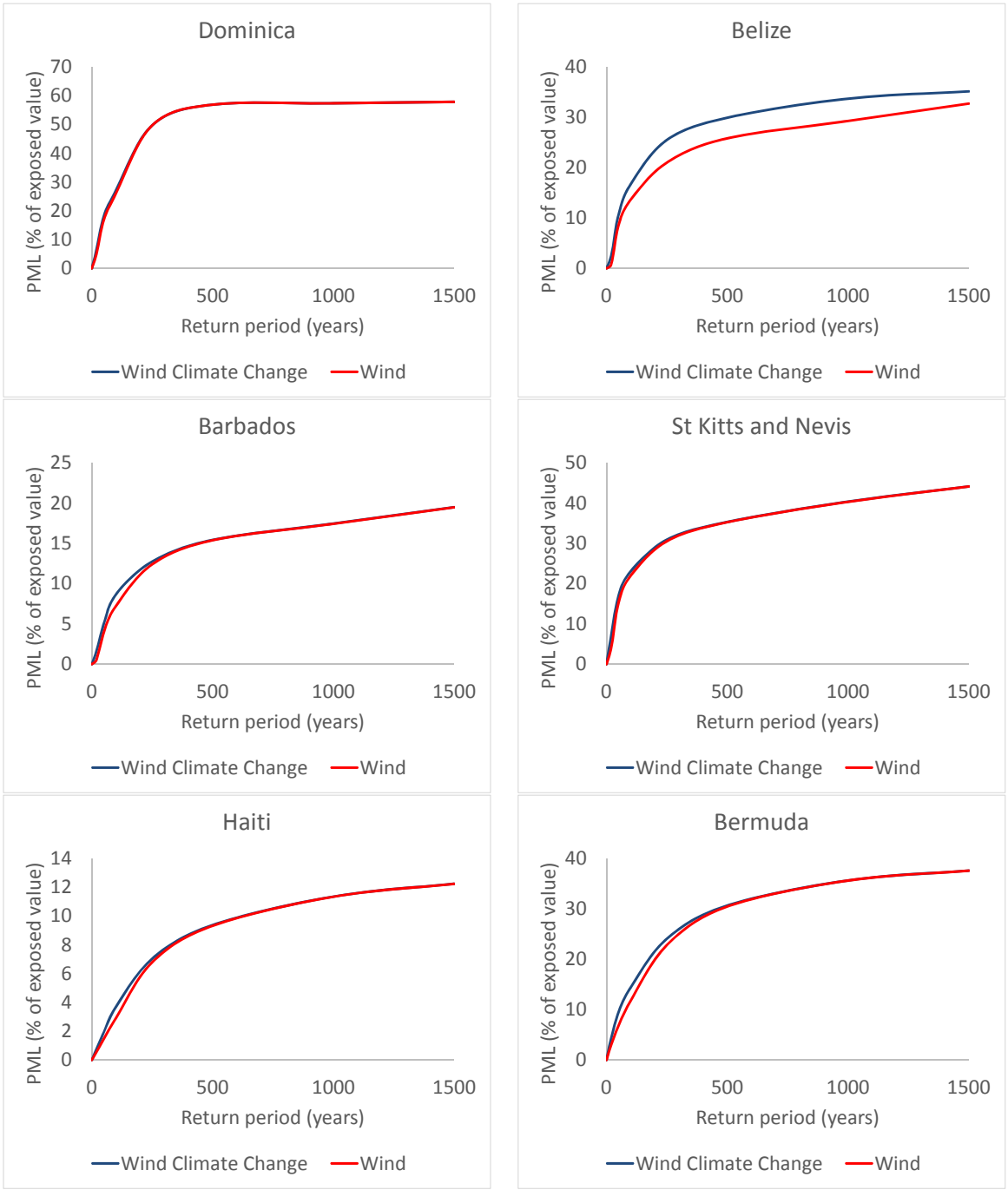


Figure 228 (continued). Comparison of the PML curves for the countries in the Caribbean region.

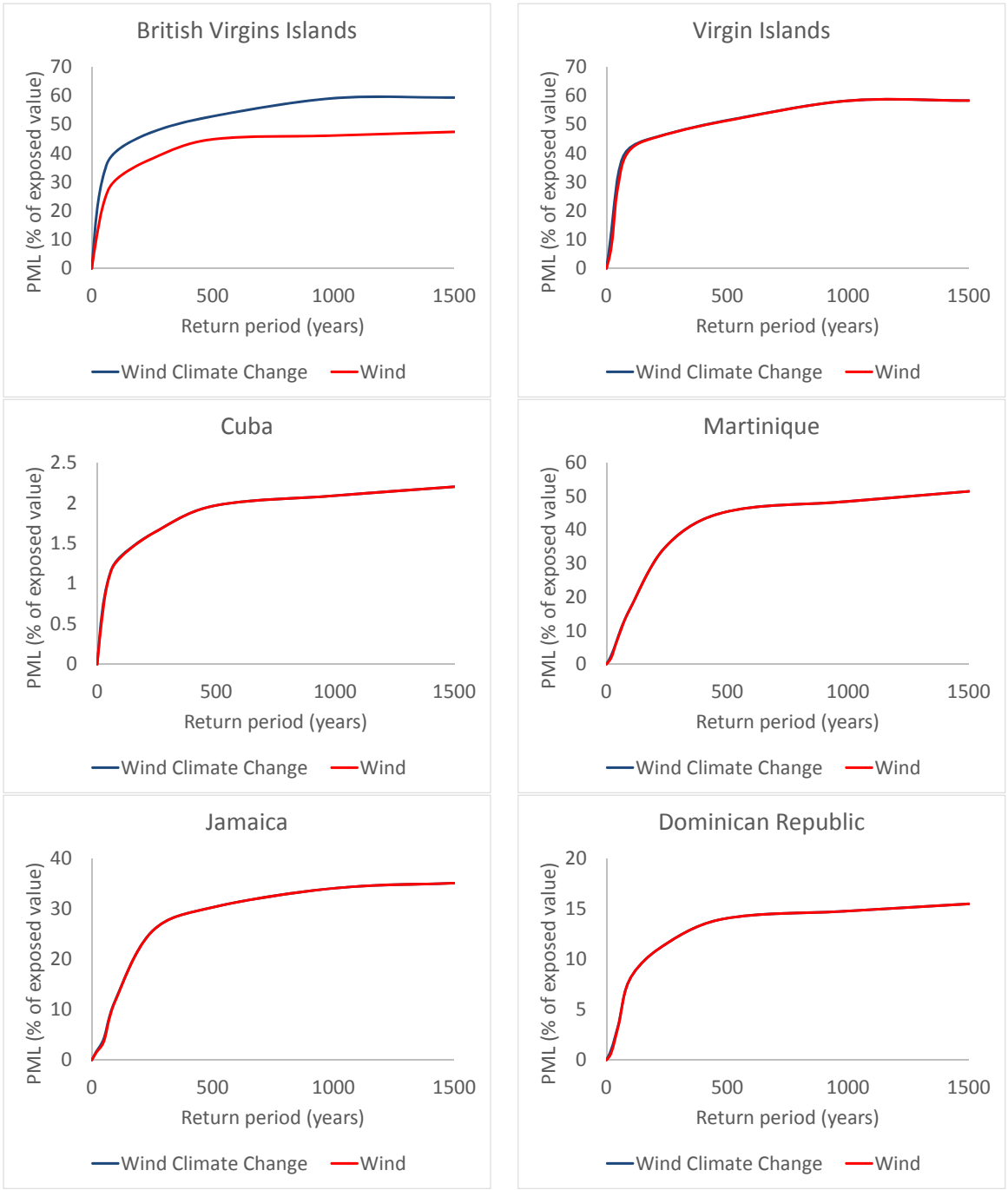


Figure 228 (continued). Comparison of the PML curves for the countries in the Caribbean region.

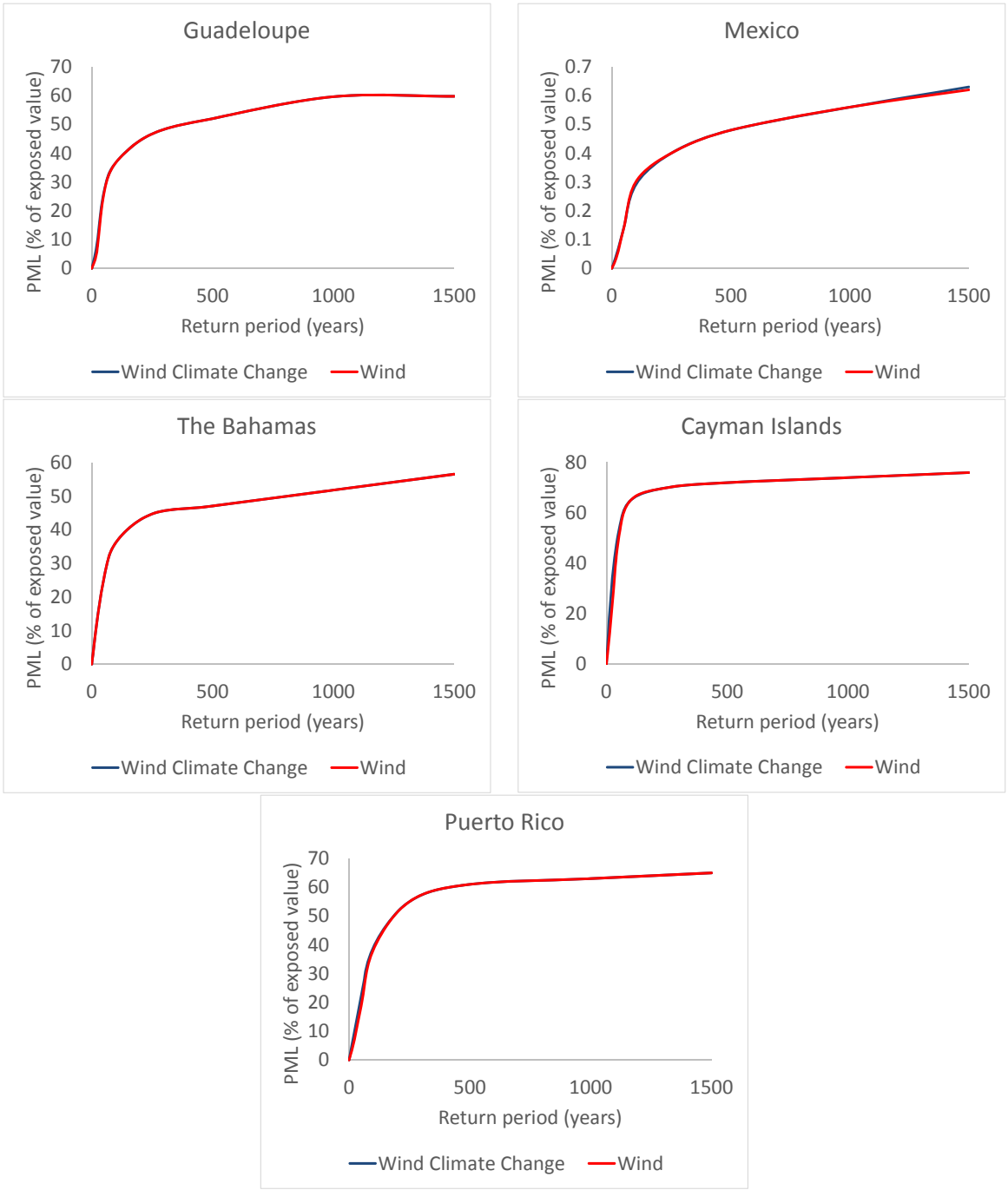


Figure 228 (continued). Comparison of the PML curves for the countries in the Caribbean region.

6.6 Catastrophe Risk Profiles

As one of the main outcomes for GAR15, a set of summarized catastrophe risk profiles for all the countries was developed in which the main risk results are presented along with the above mentioned indicators and some other relevant variables for understanding risk. Such profiles are compiled in a separate report (see CIMNE & INGENIAR 2015 Background Paper for GAR 15: World Summarized Catastrophe Risk Profiles).

7 Compilation of Local Fully Probabilistic Hazard and Risk Assessment Cases

7.1 Overview

For the Global Risk Assessment of the UNISDR's Global Assessment Report on Disaster Risk Reduction 2015 (GAR15), a coarse grain fully probabilistic risk assessment has been conducted at country level, obtaining in this version the full loss exceedance curve (LEC) from where relevant risk metrics such as the average annual loss (AAL) and probable maximum loss (PML), among others, can be derived. What is also important to highlight, is that following the exact same arithmetic, physical risk can be also assessed at higher resolution levels such as sub-national level using a proxy exposure database and even at city level using detailed building by building information. The selection of the resolution level lies, besides the available information, on if the question that is to be answered requires a detailed approach (e.g. for insurance, cost-benefit of retrofitting, emergency response and land-use planning).

Since physical risk is being calculated as the convolution of the hazard and vulnerability the selection of a higher resolution level may have influence in the way the exposure and in some cases the hazard are modelled. That may imply an abrupt change in scope, approach and resources associated to the risk assessment, especially in countries and regions where there is little information.

By increasing the resolution level, it is also possible to consider other hazards such as floods and landslides that have a more relative punctual affection whilst also allowing considering more details that are relevant such as the site effects (due to the dynamic soil response) in the seismic hazard and risk analysis.

This background paper presents a selection of fully probabilistic hazard and risk assessments conducted at local (city) level where the same methodology and model used for the GAR13 and GAR15 have been followed; that is, hazard is represented through a set of stochastic scenarios and physical vulnerability is quantified by means of probabilistic vulnerability functions. Even more, all the cases have been calculated using the CAPRA Platform (Cardona et al. 2010; 2012) the same used for the Global Risk Model of UNISDR's GAR from 2013. The information presented in each case is a summary of the complete studies and/or reports. Many of them have also been associated with peer-reviewed papers and proceedings of international conferences and all the relevant references are given in case the reader wants to know more details about any of them.

For all the cases, physical risk, in terms of the same metrics obtained for the 216 countries, is assessed, but in some cases, in addition, those physical risk results have been used as the input data for holistic risk assessments to include risk and resilience drivers. These local cases have been calculated in the framework of both, consultancy activities and academic research. For each case a brief description of the area under analysis and the question that is attempting to answer is presented. Each of these studies constitutes a base for future updates and recalculation since many

of the aspects considered in this kind of modelling, especially those related to the exposure and the socioeconomic conditions are dynamic and should be evaluated on a regular basis. Therefore, all these results may be different if evaluated later, for example in 5 or 10 years.

7.2 Medellín, Colombia

7.2.1 Introduction

Medellín is the second largest city of Colombia with more than 2 million inhabitants; it is an important trading center and it is highly relevant for the country's economy (DANE, 2014). It lies on an intermediate seismic hazard zone according to the Colombian earthquake resistant building code as shown in Figure 229 and has not been affected by earthquakes in the recent times; anyhow, it does not mean that this is a negligible risk though its perception is low for most of its citizens.

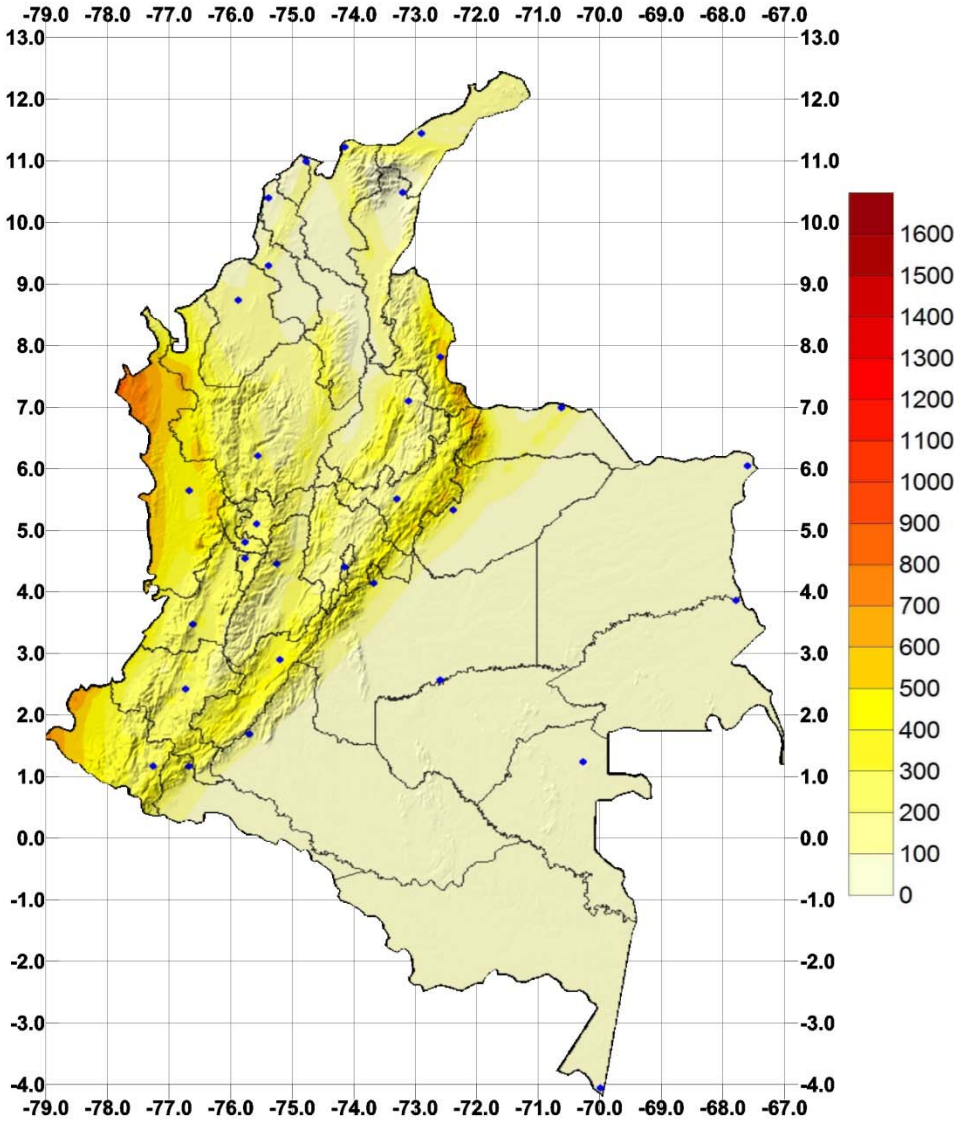


Figure 229. Seismic hazard map of Colombia. PGA, 1000 years – cm/s^2 (From AIS, 2010)

The city has suffered important changes in terms of the building stock characteristics driven by the socio economic conditions, more reflected in the middle and high income areas where low rise houses have been demolished to give space to high rise buildings, generating important challenges not only in terms of the structural engineering but in urban planning.

The city is divided, for administrative purposes, into 16 counties (*comunas*), each of them with approximately area but with important differences not only from the building stock point of view

but for the socioeconomic one. Physical risk has been assessed in this study in a building by building resolution but the results have been later aggregated by county.

From a socioeconomic perspective the city has become a prosperous business center but social inequalities still exist among the inhabitants. Violence and its associated consequences still play an important role in the performance of the city and, acknowledging many improvements have occurred in the past years, there is still a long road to transit. The past local governments have invested remarkable resources into education and that is something which results are expected to be observable in the long-medium term.

7.2.2 Purpose of the Risk Assessment and Resolution Level

The purpose of this fully probabilistic seismic risk assessment, conducted in 2013, was to calculate the expected damage and losses in terms of probabilistic risk metrics such as the LEC, the AAL and the PML. On the other hand, because the available information for socio economic data is of high quality, complete and disaggregated by county, the possibility to adopt a holistic risk assessment approach was feasible and then, taking into account social fragility and lack of resilience conditions an aggravating factor was obtained to calculate what is known as the Urban Seismic Risk Index (USRi) (Carreño et al., 2007; 2012).

The assessment was intended to be performed only in the portfolio of buildings, both public and private and account for the direct damages and losses that they are subjected to in case earthquakes strike the city. Though calculation of indirect losses can be performed using as input data some of the results obtained in this assessment, they are out of the scope of this analysis.

An added value of this assessment was the calculation of the casualties in terms of injured and death that the city could face in case that an earthquake occurs. This analysis was performed for a single scenario where a deterministic approach was selected for the occurrence of it but a probabilistic approach was followed to estimate damages in the buildings and their correspondent consequences to the occupants.

A holistic risk assessment approach admits disaggregating the results by descriptor (risk driver) and then it is possible to identify which of them are most contributing to the overall results allowing highlighting the most critical risk drivers that should be intervened in a comprehensive disaster risk management scheme. More details of this analysis can be found in Salgado et al. (2014a; 2014b).

The resolution level of the analysis in terms of exposure can be classified as high since a building by building database is being used for the analysis; from the hazard perspective it is also classified as detailed since local site effects have included in the hazard assessment and also, local faults and their correspondent feasible stochastic scenarios, have been considered and generated respectively. USRi has been calculated at county level since, according to the available socioeconomic it was the unit of analysis for which the descriptors were compiled and also, because that kind of risk

index is useful at said scale both, for comparative purposes and to plan strategies that aim to reduce risk not on an individual dwelling but on a community basis.

7.2.3 Hazard Assessment

A fully probabilistic seismic hazard assessment has been conducted for the city using as a base the latest national seismic hazard study (AIS, 2010). The calculations were performed in the software CRISIS 2007 V7.6 (Ordaz et al., 2007) and then, in this case hazard is represented through stochastic scenarios, associated to all the seismogenetic sources that contribute to the overall seismic hazard at bedrock level whilst also considering the effects of the dynamic soil response through spectral transfer functions since the city has a seismic microzonation study (SIMPAD et al., 1999). Figure 230 presents the hazard, considering the site effects for peak ground acceleration (PGA) and 475 years return period; polygons denote the 16 counties of the city.

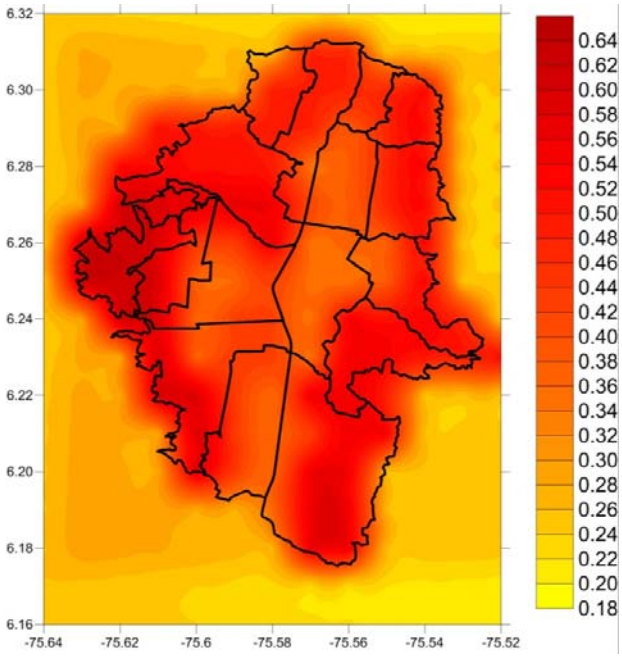


Figure 230. Seismic hazard map considering site effects for Medellín. PGA, 475 years (g)

7.2.4 Exposed Assets

For this local assessment the exposed assets in Medellín consist in the public and private buildings that all together account for more than 240,000 dwellings. The information is based on cadastral databases (Alcaldía de Medellín, 2010) from where information related to the plan area, number of stories, building class, construction year and main used can be derived, allowing a building by building characterization.

Figure 231 and Figure 232 the characterization of the dwellings in terms of building class and main use respectively. Annex 15 presents more details in terms of other relevant attributes from the exposure perspective.

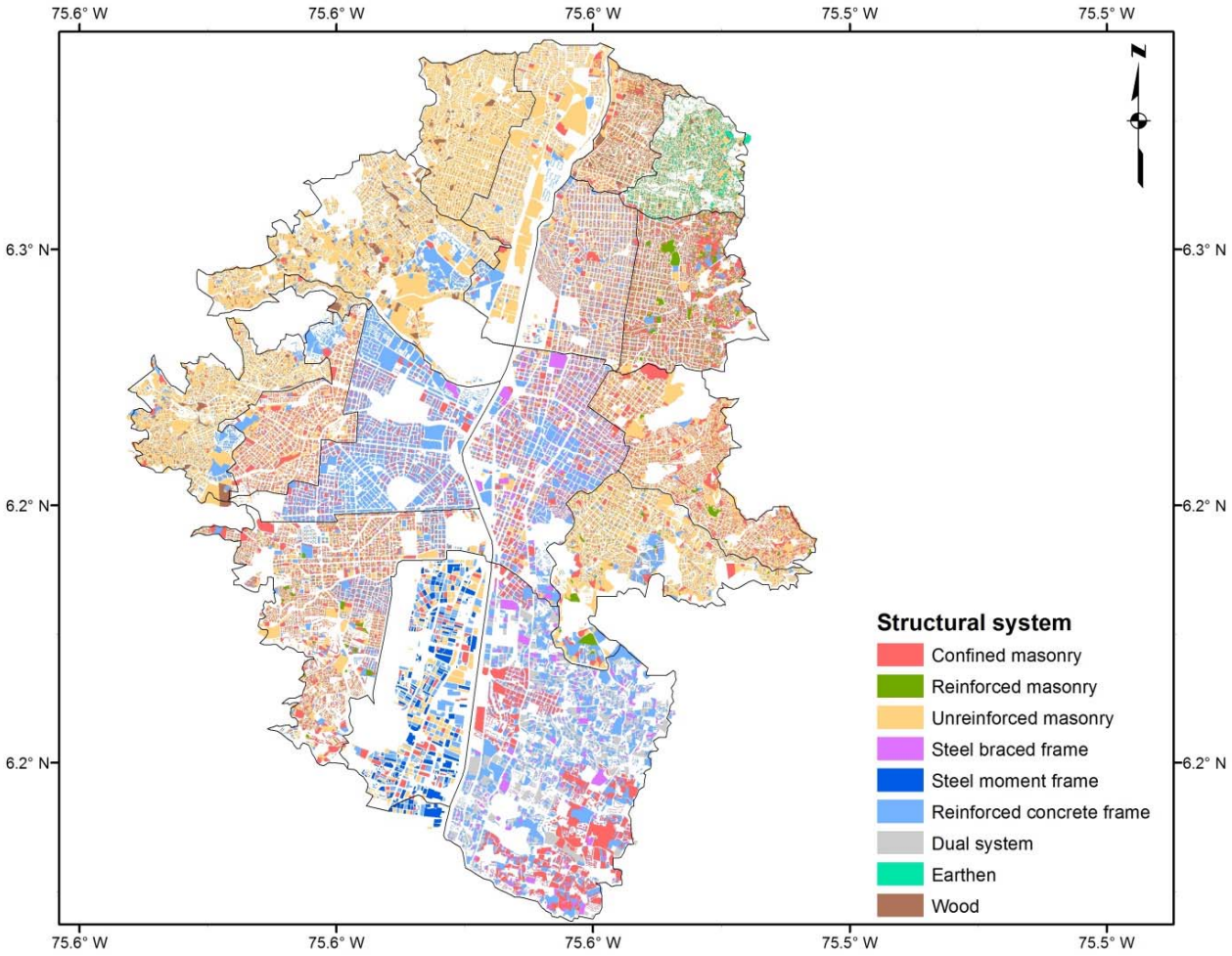


Figure 231. Building class distribution for Medellín

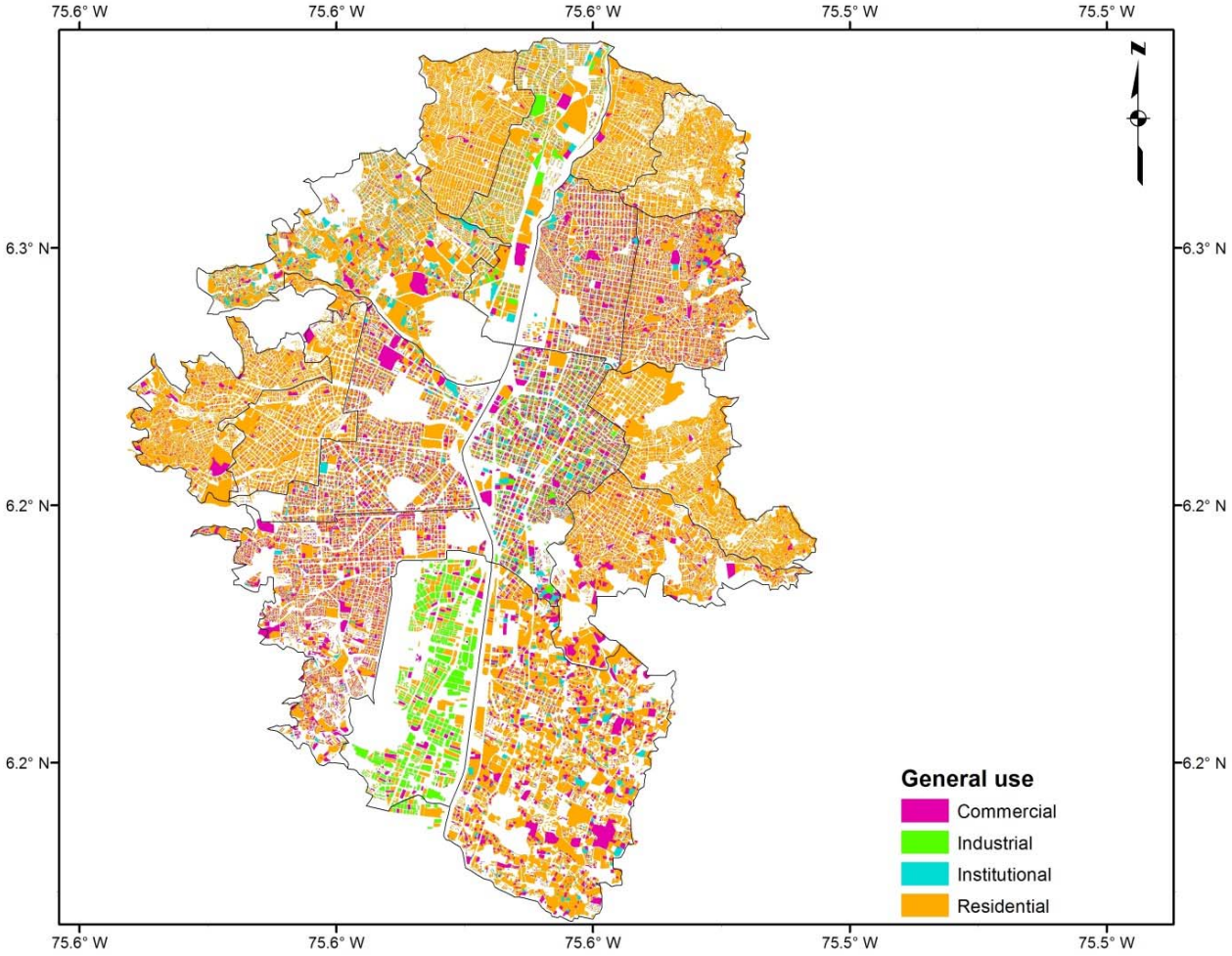


Figure 232. Main use distribution for Medellín

7.2.5 Vulnerability of the Exposed Assets

Given that a probabilistic risk assessment was performed for Medellín, the representation of the seismic physical vulnerability was done through vulnerability functions that besides allowing a continuous representation of the damages and losses account for the associated uncertainties. The set of vulnerability functions in this case were calculated using the ERN AL-Vulnerability module (ERN-AL, 2009) having in mind that in this case they are only intended to capture the direct physical damage of the dwellings due to seismic forces. Dwellings have been grouped according to building classes (typologies) and for each of them a unique vulnerability function has been assigned. In addition, since the hazard representation considers different spectral ordinates and acknowledging that different structures respond differently even when subjected to the same event, a fundamental vibration period has been calculated for each typology and then, the hazard intensities have been associated to them. Figure 233 presents the vulnerability functions for unreinforced masonry units in Medellín. More details about the vulnerability functions for other building classes can be found in Salgado et al. 2014a.

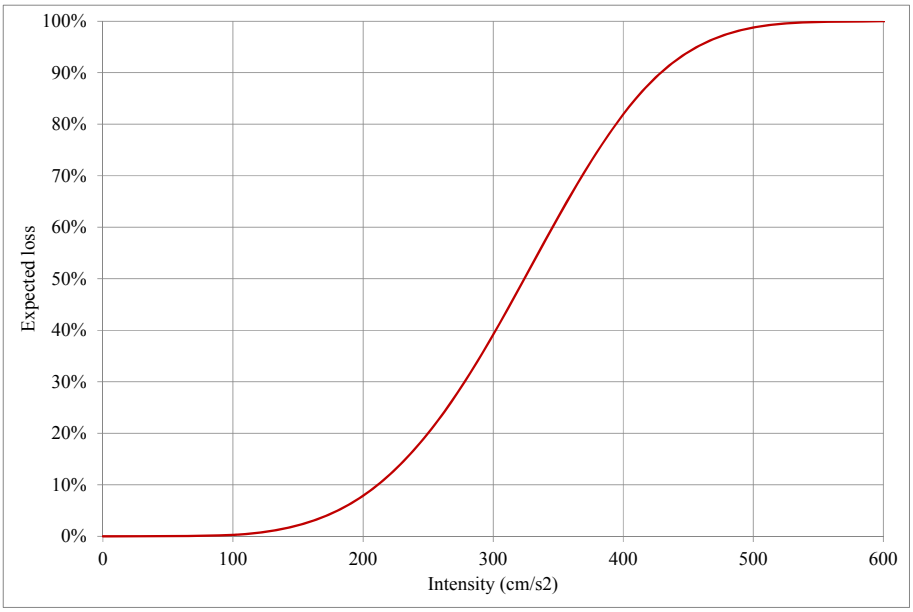


Figure 233. Vulnerability function for unreinforced masonry dwellings

7.2.6 Physical Risk Results

Physical risk results were calculated using CAPRA-GIS (ERN-AL, 2010) and have been obtained after convoluting hazard and vulnerability of the exposed assets and also, since hazard has been represented through a set of stochastic scenarios, then the feasible losses can be quantified in terms of exceedance rates for different levels. This risk results representation is known as the loss

exceedance curve (LEC) from where other relevant probabilistic risk metrics such as the average annual loss and probable maximum losses can be derived. Figure 234 presents the LEC whilst Table 9 presents a summary of the risk results in terms of AAL and PML.

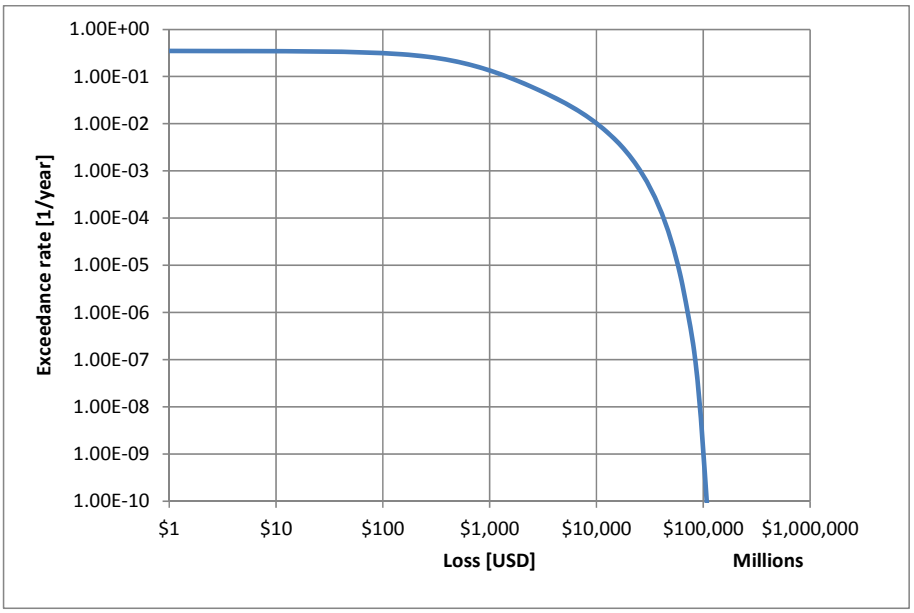


Figure 234. Earthquake loss exceedance curve for Medellín

Table 9. Summary of physical seismic risk results for Medellín

Results		
Exposed value	USD$ x10^6	146,608
Average annual loss	USD$ x10^6	604.6
	‰	4.1
PML		
Return period	Loss	
years	USD$ x10^6	%
100	$10,033	6.8
250	$15,716	10.7
500	$20,356	13.9
1000	$24,930	17.0

Seismic risk results for Medellín display a medium-high category and can be understood that, a loss that occurs on average each 500 years corresponds to almost 14% of the total exposed value. Since the exposed assets database is geo-referenced it is also possible to display in a graphical way the physical risk results. Having in mind that there are several possibilities to choose the risk metric to do so, it has been seen that it is more convenient in terms of relative (to the exposed asset of

each dwelling) AAL since it gives the possibility of directly comparing the results and identify which are the elements that are concentrating the most the seismic risk. It is interesting to note that the areas with the higher expected damages and losses are the ones where masonry units constitute the majority of the building stock; its vulnerability, combined with the dynamic soil response. Figure 235 presents the geographical distribution by dwelling of the AAL in Medellín. Annex 15 presents the AAL results in terms of absolute monetary values that are not that representative of the overall risk levels and therefore may not be that useful for comparison purposes.

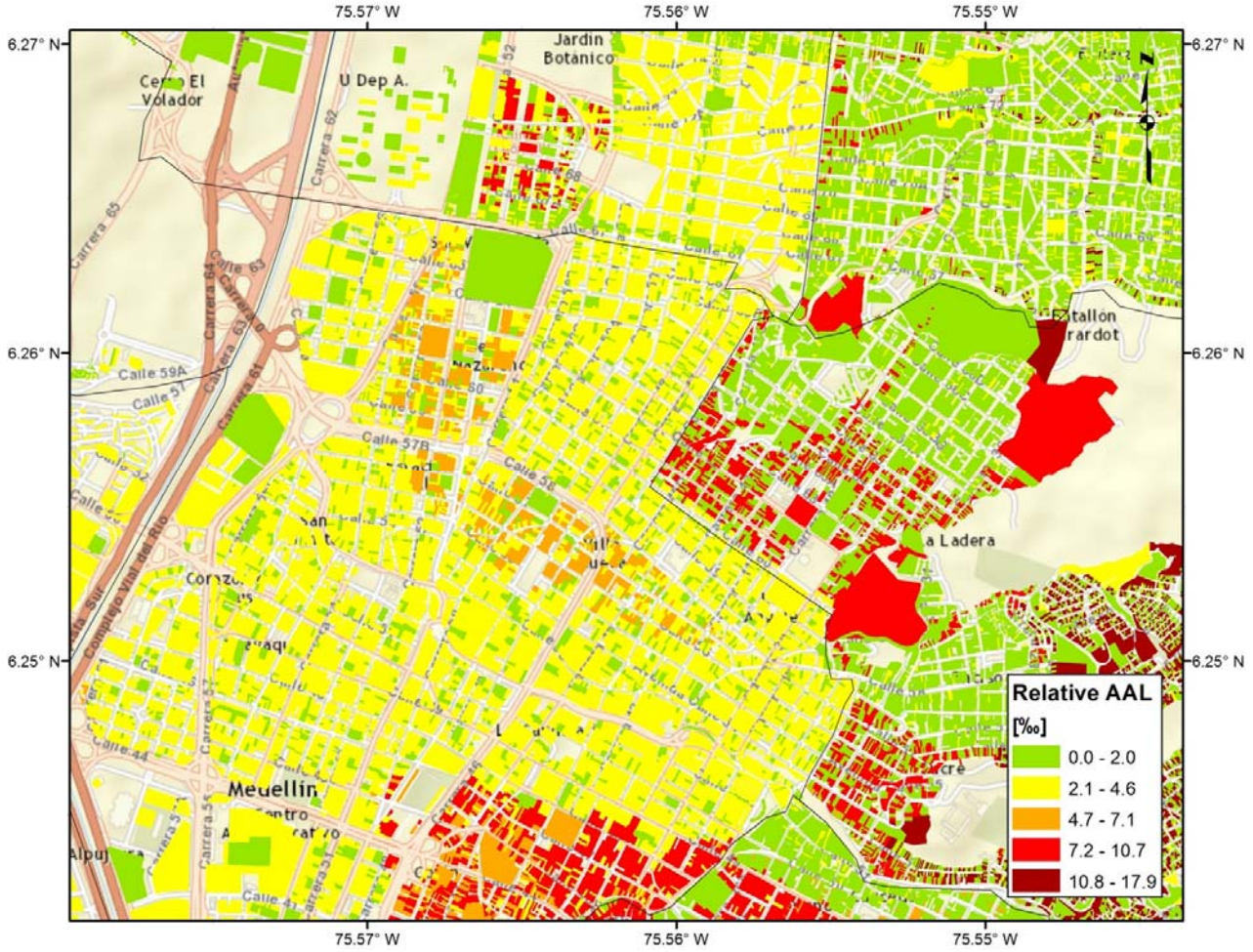


Figure 235. Relative (‰) AAL loss distribution by dwelling in Downtown Medellín (From Salgado et al., 2014a)

7.2.7 Casualties Estimation

By selecting a scenario that generated losses with order of magnitude as the 500 years PML, a casualties' estimation was performed in Medellín. In this case, injured and death vulnerability functions were defined (Coburn and Spence, 2002) according the building classes and an extra attribute, related to the occupancy of the buildings was included in the exposure database. Figure 236 and Figure 237 present the maps, grouped by county, of the number of injured and deaths respectively. These figures are later used as descriptors for the calculation of the physical risk index in the holistic seismic risk assessment.

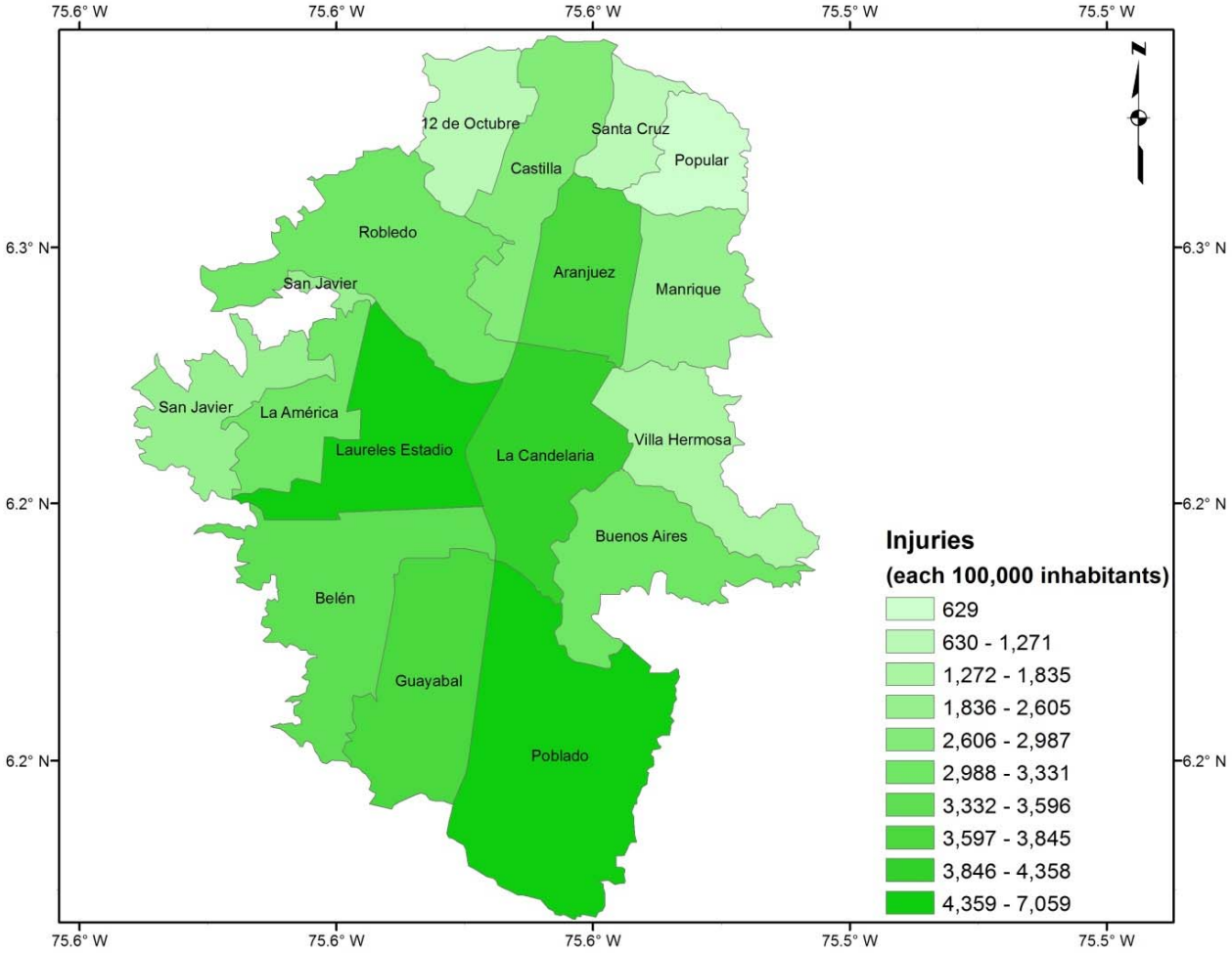


Figure 236. Injuries estimation by county

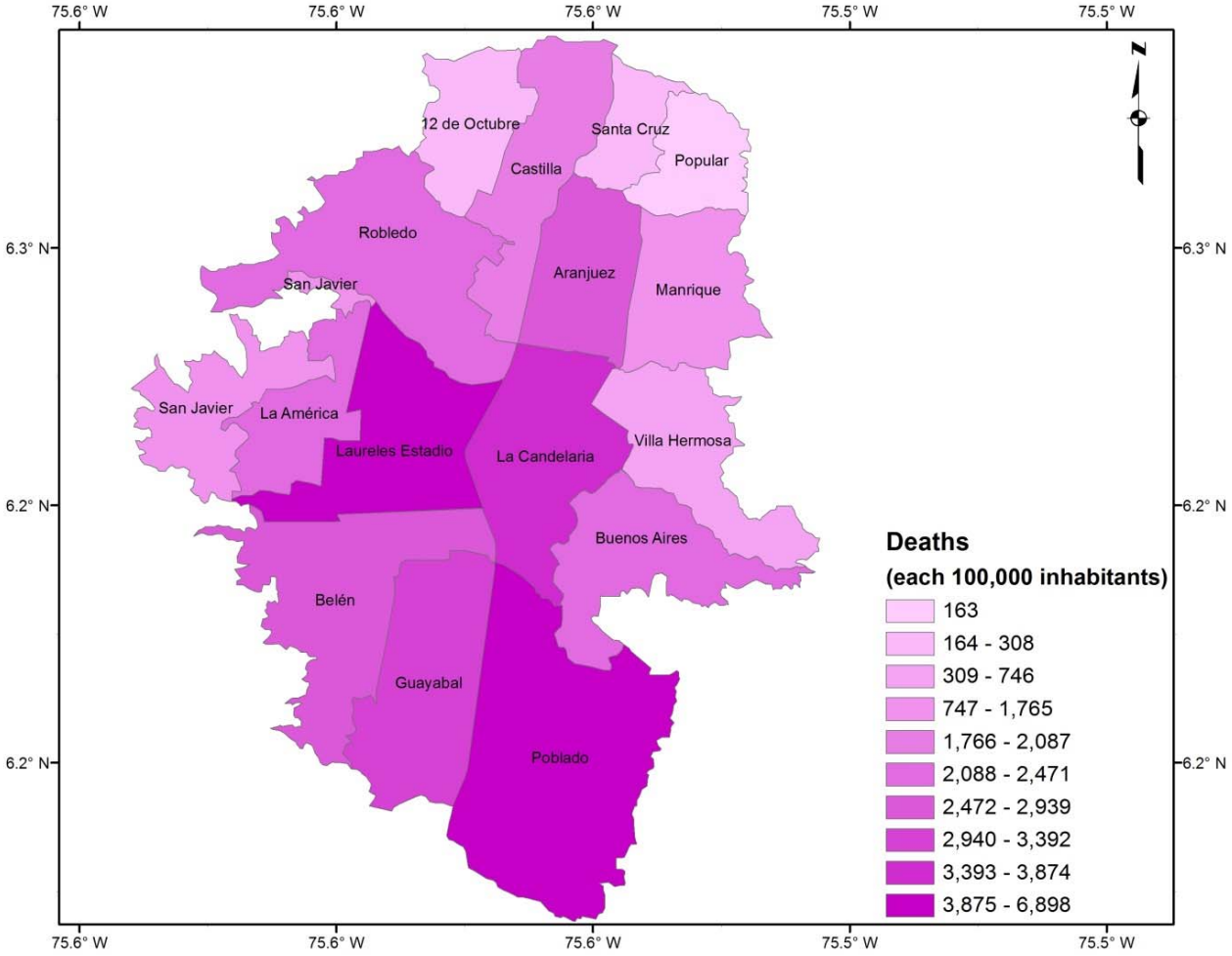


Figure 237. Deaths estimation by county

7.2.8 Holistic Risk Assessment

Though quantifying physical risk constitutes an unavoidable step into the risk identification process, it is not the only dimension that may be of interest in a comprehensive disaster risk management scheme and because of that, approaches to include socioeconomic aspects, such as the one presented in this chapter are relevant. This assessment is based on the approach proposed by Cardona (2001) and later improved by Carreño et al. (2007; 2012) that uses as an input the physical losses and aggravate them by a coefficient that accounts for social fragility and lack of resilience issues. Physical risk, social fragility and lack of resilience indexes are obtained by selecting a set of descriptors that are then aggregated using a weighting procedure. The full list of descriptors and their associated categories can be found in Annex 15. This requires a multidisciplinary approach of the risk assessment that ends in a set of results that constitute a common language for stakeholders and decision-makers. This assessment also allows quantifying both vulnerability and resilience at different dimensions. The robustness of this holistic risk approach has been assessed using Monte Carlo techniques for the definition of the weighting values (Marulanda et al., 2009).

Part of the physical risk index calculation needed the estimation of homeless and jobless. For this case, using the same scenario as for the injured and deaths estimation, calculation of the mean damage ratio (MDR) by dwelling was performed. Given that the use of each element was included, defining a threshold damage level, the unit was considered habitable or not. Annex 15 presents the estimation of said values by county. The holistic risk analysis was performed using the tool EvHo (CIMNE-RAG, 2014) that is the module for said evaluations in the CAPRA Platform.

Figure 238 presents the map in terms of USRi by county in Medellín whilst Table 10 presents a disaggregation, again by county not only in terms of the USRi but in terms of the physical risk index and the aggravating coefficient. In Annex 15 the physical risk index and aggravating coefficient distribution by county can be found.

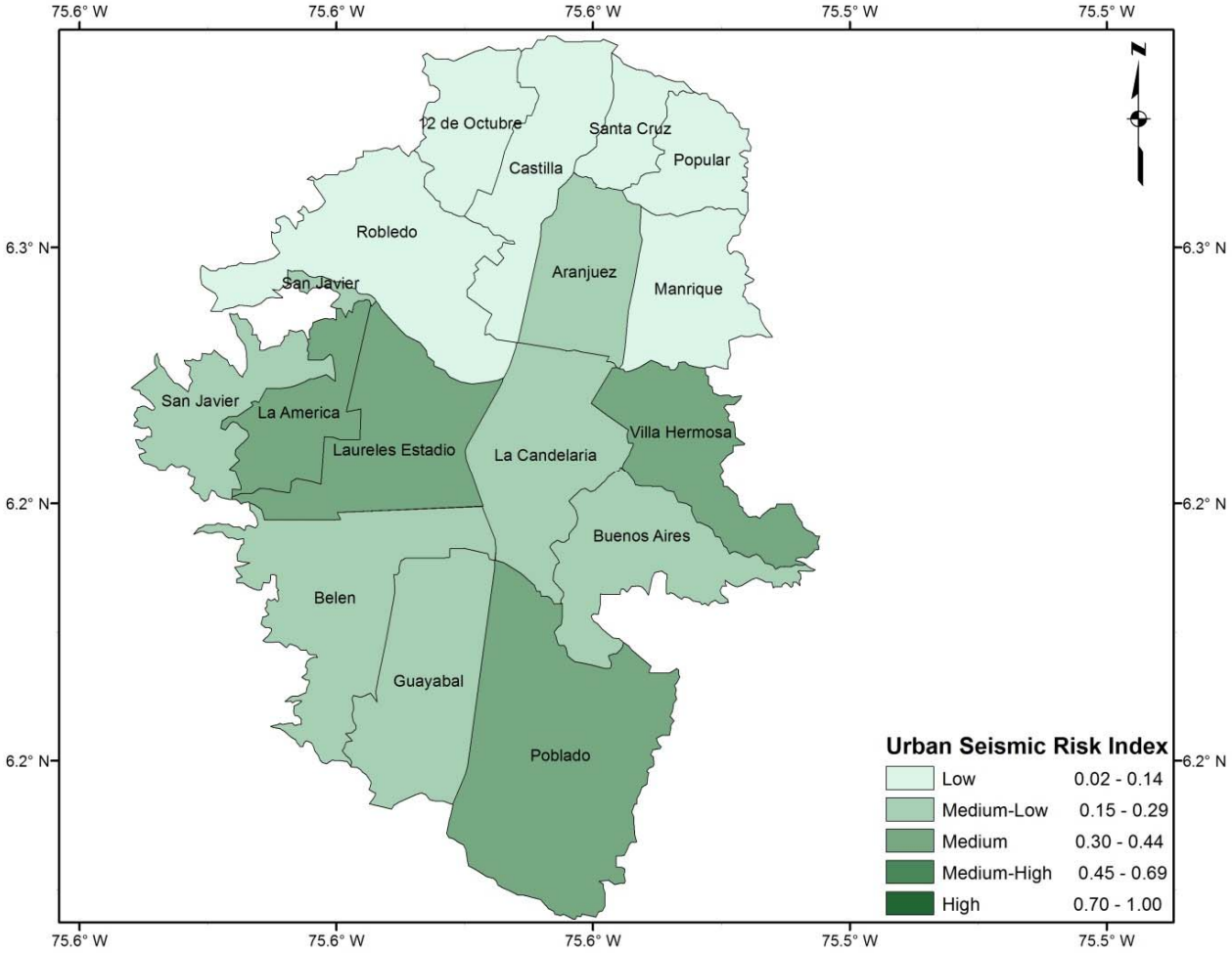


Figure 238. Urban Seismic Risk Index of Medellín at county level (from Salgado et al., 2014b)

Table 10. USRi results by county for Medellín

County	R_F	*F*	*USRi*
8 - Villa Hermosa	0.31	0.28	0.39
12 - La América	0.28	0.32	0.37
14 - Poblado	0.28	0.20	0.34
11 - Laureles Estadio	0.24	0.27	0.31
10 - La Candelaria	0.22	0.33	0.29
9 - Buenos Aires	0.22	0.28	0.28
15 - Guayabal	0.18	0.29	0.23
16 - Belén	0.17	0.20	0.21
4- Aranjuez	0.12	0.32	0.16
13 - San Javier	0.10	0.41	0.15
5 - Castilla	0.10	0.30	0.13
7 - Robledo	0.09	0.31	0.12
3 - Manrique	0.08	0.33	0.10
6 - Doce de Octubre	0.07	0.28	0.08
1- Popular	0.06	0.34	0.08
2 - Santa Cruz	0.02	0.29	0.02

An interesting finding in this assessment is that two of the counties with the higher income levels (Poblado and Laureles Estadio) have a high USRi that is related both to physical risk conditions in terms of expected injured and death since high-rise buildings such as the ones that exist in said areas are far more vulnerable in that dimension if compared with masonry units and to urban planning characteristics such as the availability of public space. In other counties such as Popular and San Javier, the aggravating coefficient is controlled by high violence rates. In Popular, the low physical risk index can be explained by the characteristics of the non-engineered dwellings that in overall terms, do not have large vulnerability when subjected to earthquakes and, generally speaking, do not cause important harm to its occupants. From this can be concluded that being poor does not necessarily mean being vulnerable, notwithstanding that poverty is a very important risk driver.

This holistic approach of risk has been useful not only to identify the concentration of physical risk but also the social and resilience conditions that aggravate the physical risk in the different counties of the city. Distinct stakeholders and actors from different sectorial and institutional point of views, both from public than private sector, have the underlying information that reflects socioeconomic causes, governance absences, drivers of vulnerability that should be intervened to reduce risk from a multidisciplinary and comprehensive perspective. This approach is a key technique to facilitate both to prospective and corrective disaster risk management taking into account the risk reduction as a component of the socio-economic development planning.

7.3 Barcelona, Spain

7.3.1 Introduction

Barcelona is the second largest city of Spain lying on the Mediterranean with almost 2 million inhabitants. Although located in a low-to-moderate seismic hazard area, the study of seismic risk constitutes an interesting case since, associated to the low seismic risk awareness, the building stock of the city can be classified, in general terms, as highly vulnerable. Most of the buildings belong to the pre-code period and, if combined with high population density values, the potential effects both in the elements and their occupants are not negligible. There have been several seismic hazard assessments of the Iberian Peninsula and using that base information for the definition of seismogenetic sources and seismicity parameters a probabilistic seismic hazard assessment was performed using CRISIS 2007 V7.6 (Ordaz et al., 2007) from where integrated hazard maps for a selected return period can be obtained, such as the one shown in Figure 239.

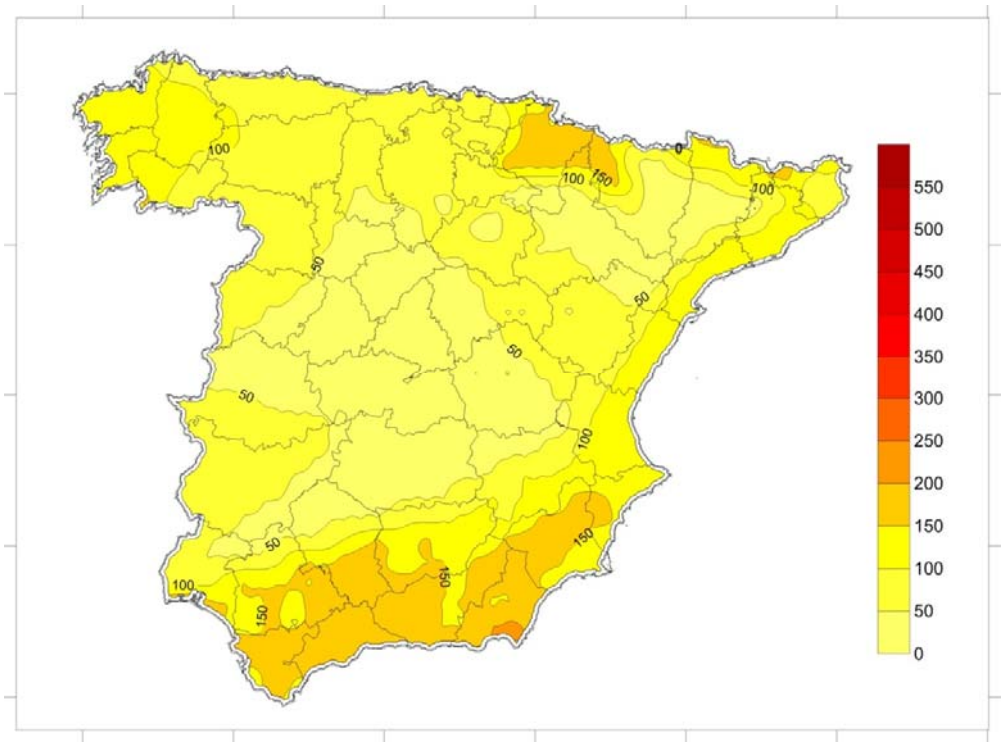


Figure 239. Seismic hazard map of Spain. PGA, 475 years (cm/s^2)

Mainly for taxing purposes, the city has very detailed and high quality information about the buildings, both public and private and relevant characteristics from the structural point of view such as age, number of stories and building classes are available.

This study did not constitute the first seismic risk assessment of the city, but, in fact, this was the first time that it was assessed in a probabilistic manner, accounting for a fully probabilistic representation of the hazard in terms of stochastic scenarios and considering the physical

vulnerability of the buildings and its occupants through vulnerability functions. This led to obtaining the risk results in terms of probabilistic risk metrics such as the LEC from, as was explained before, other indicators such as the AAL or the PML can be derived.

Finally, keeping in mind that vulnerability has different dimensions, besides obtaining only the physical one, accounting for issues related to social fragility and lack of resilience, a holistic risk assessment, following the methodology proposed by Carreño et al. (2007) was performed. For administrative purposes, Barcelona is divided into 10 districts that subsequently are divided into 233 Basic Statistical Areas (*Áreas Estadísticas Básicas* – AEB).

7.3.2 Purpose of the Risk Assessment and Resolution Level

The purpose of this study, finished in 2012, was to conduct the first fully probabilistic risk assessment using the CAPRA Platform in Europe. Barcelona constituted a very interesting case since, located in an area of low seismic activity (though not negligible or nonexistent) and having a building stock with high vulnerability since many of the dwellings were constructed before the existence of any building code, rose the interest of quantifying, in a probabilistic way, the losses that may occur in the city.

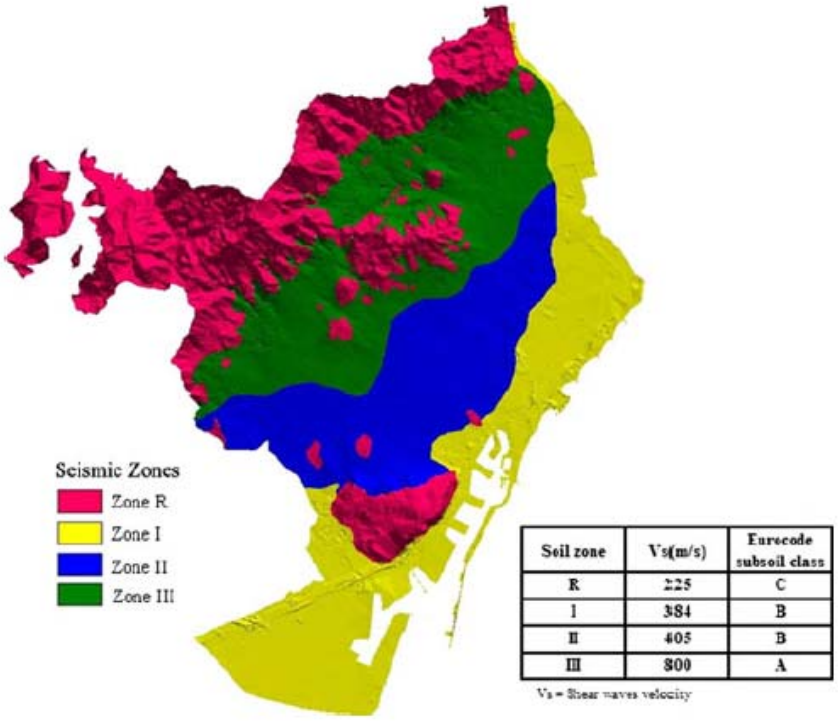
In addition, accounting that physical risk results could be low if compared with other major cities in the world located in more active seismic environments, the interest to calculate an USRi that also considered socioeconomic affairs that consequently could aggravate the conditions in case earthquakes strike the city.

The availability and quality of the data to model all the aspects of seismic risk in Barcelona was high and even allowed selecting a detailed resolution level in terms of hazard and exposure. For the first, different seismogenetic sources were identified and modelled to generate a set of stochastic scenarios, accounting not only for a historical approach in the hazard assessment and, in the other hand, local site effects were considered by identifying homogeneous soil zones and assigning to them unique spectral transfer functions. For the exposure, based on cadastral information a building by building database was assembled with detailed information in all the relevant aspects from a structural, economic and social perspective. Given that USRi is calculated for comparative purposes but also to identify which are the aspects to be intervened in a community basis, socioeconomic information was derived from basic statistical areas and districts; therefore, the results for this aspect are presented at said resolution level.

7.3.3 Hazard Assessment

A fully probabilistic hazard assessment was performed using the software CRISIS 2007 V7.6 (Ordaz et al. 2007). For this case, 10 seismogenetic sources that cover the Mediterranean area as well as the north of Spain were defined. Each of them was modelled as area-sources accounting for a full description of them in terms of geometry. Besides obtaining results in terms of hazard maps such as the one presented in Figure 11, a set of stochastic scenarios was generated to conduct later the probabilistic risk assessment. A total of 15 spectral ordinates were considered to account that, buildings with different structural characteristics, respond in a different manner even when subjected to the same earthquake.

Based on a study of Cid et al. (2001), four homogeneous soil zones were identified in the urban area of the city to account for the dynamic soil response. For each of those zones, a mean Vs30 speed was defined also, the zones were classified in terms of soil classes according to the Eurocode-8. Figure 240 presents the homogeneous soil zones of Barcelona.



Soil zone	Vs(m/s)	Eurocode subsoil class
R	225	C
I	384	B
II	405	B
III	800	A

Vs = Shear waves velocity

Figure 240. Homogeneous soil zone areas for Barcelona (from Cid et al., 2001)

7.3.4 Exposed Assets

A building by building exposure database with more than 70,000 dwellings was developed for Barcelona. Based on cadastral information, all the relevant parameters in terms of constructed area, number of stories and replacement values were derived. For information about structural characteristics and building classes, information about previous studies of CIMNE in the city was used. More details can be found in Marulanda et al. (2013).

Figure 241 and Figure 242 present the characterization of the dwellings in terms of building class and replacement cost respectively. Annex 16 presents more details in terms of other relevant attributes from the exposure perspective.

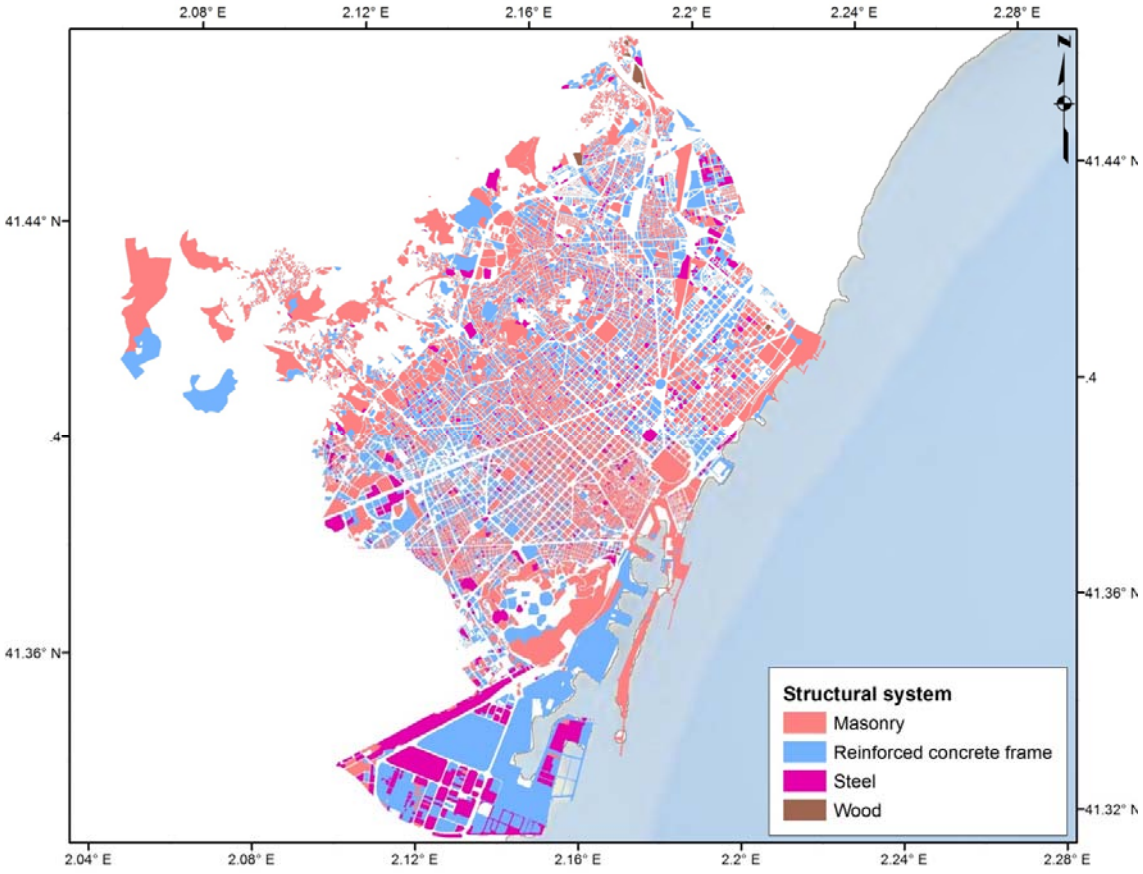


Figure 241. Building class distribution for Barcelona

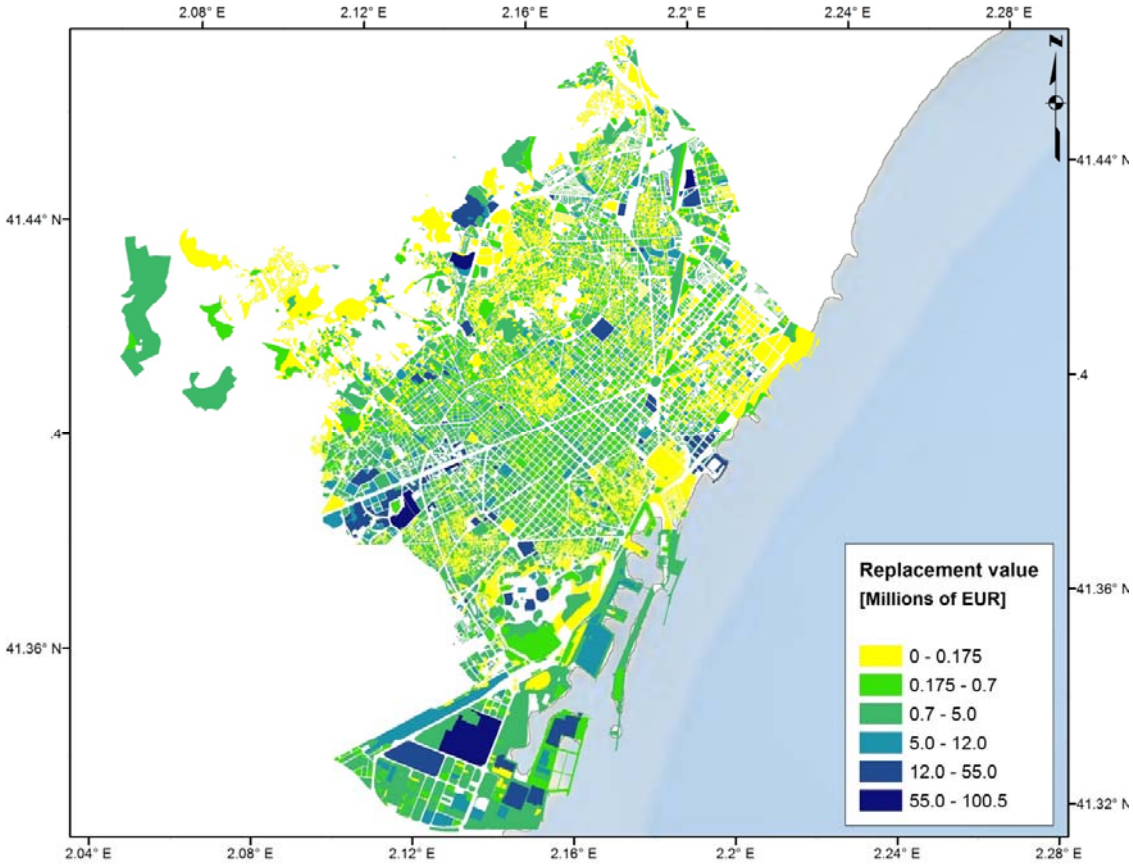


Figure 242. Replacement value by dwelling in Barcelona

7.3.5 Vulnerability of the Exposed Assets

A set of vulnerability functions for the building stock of Barcelona was developed. In general terms, it can be said the building stock is comprised by masonry and wooden dwellings, reinforced concrete frames and steel (moment resistant and braced) frames. Figure 243 presents a vulnerability function for the wooden dwellings. Details about the rest of vulnerability functions used in this analysis can be found in Marulanda et al. (2013) and Annex 16.

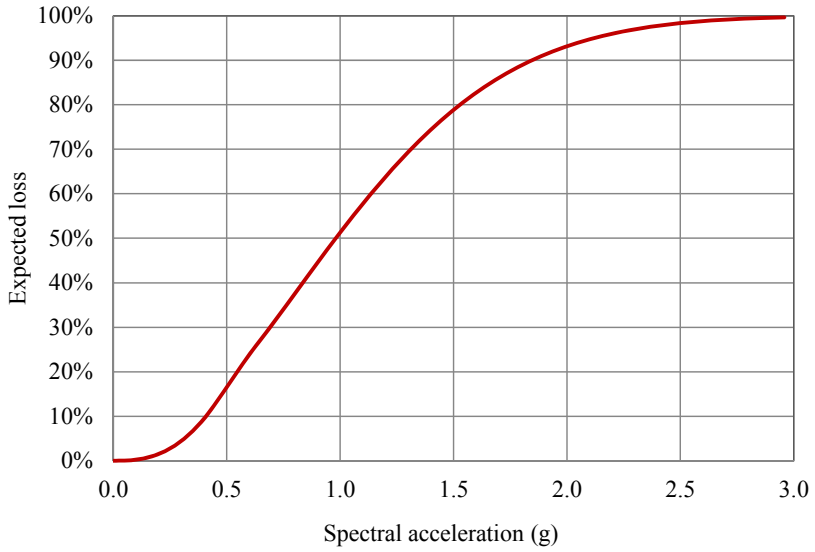


Figure 243. Vulnerability function for unreinforced masonry dwellings

7.3.6 Physical Risk Results

Since a probabilistic risk analysis approach was followed, risk results were obtained in terms of probabilistic risk metrics such as the LEC, AAL and PML. The latest can be represented through a plot where in the horizontal axis the return period is included whilst in the vertical, the monetary losses are shown. As can be seen, that is exactly the same information included in the LEC with the difference that, instead of exceedance rates being presented in number of times per year, they were presented in terms of return periods which are its inverse values. Figure 244 presents the PML plot for Barcelona.

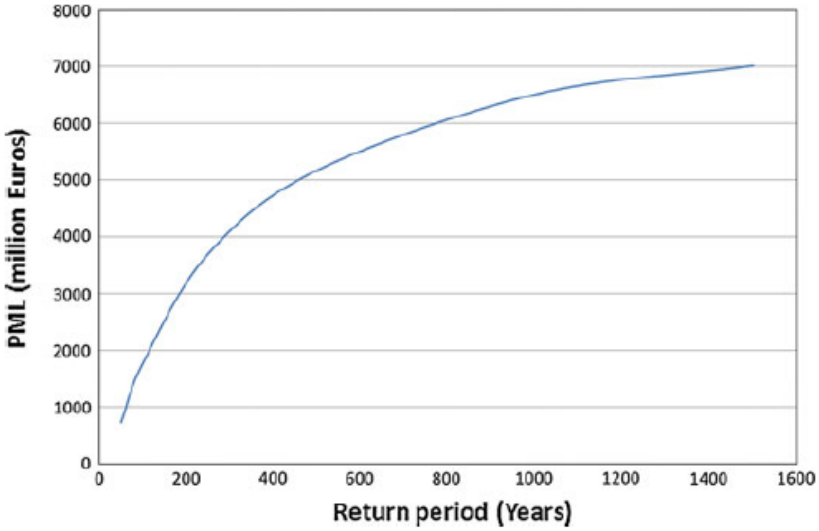


Figure 244. Earthquake PML plot for Barcelona

Table 11 presents the summary of the physical risk results in terms of AAL and PML for selected return periods.

Table 11. Summary of physical seismic risk results for Barcelona

Results		
Exposed value	€ x10^6	31,522
Average annual loss	€ x10^6	72.1
	‰	2.3
PML		
Return period	Loss	
years	€ x10^6	%
100	$1,770	5.6
250	$3,699	11.7
500	$5,172	16.4
1000	$6,510	20.6

From the results it can be concluded that seismic risk in Barcelona is not negligible at all and that, even if the seismic hazard can be classified as low and even more, perceived as not relevant by many of its citizens, the high vulnerability of the portfolio of buildings constitute an important risk driver. On average, it can be seen from the results, that each 1000 years, a loss equivalent to the 20% of the exposed value is likely to occur.

As in the case of Medellín, the cadastral database has been arranged in a GIS platform that allows a geographical representation of the expected damage and losses. For this case, the relative AAL has been selected for said representation and Figure 245 presents the results. From it, is evident that the higher expected losses are located in the oldest areas of the city, that is

Ciutat Vella and Eixample districts. Newer areas of the city such as Les Corts and Sant Marti have a considerable lower seismic vulnerability and consequently, lower seismic risk.

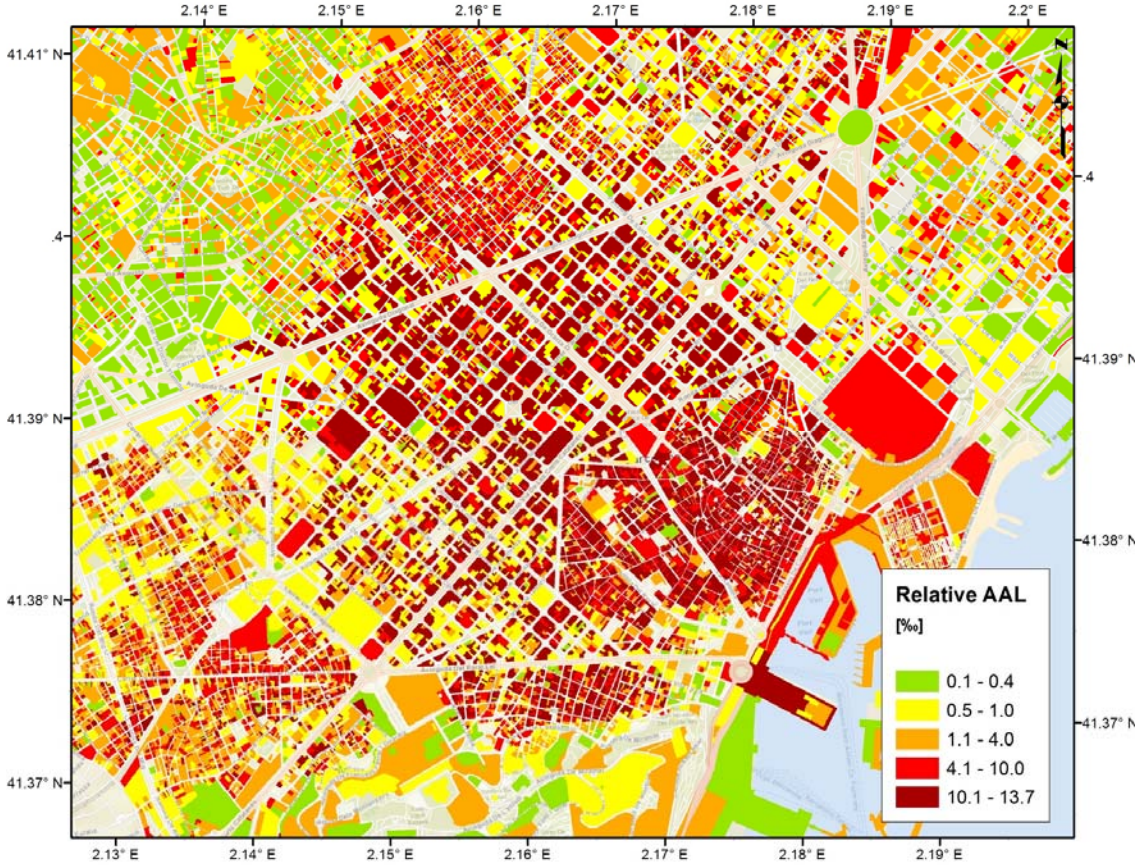


Figure 245. Relative (‰) AAL loss distribution by dwelling in downtown Barcelona (From Marulanda et al., 2013)

7.3.7 Casualties Estimation

Given that casualties in terms both of injured and death are important physical risk descriptors in a holistic seismic risk assessment framework, they were estimated for Barcelona. In this case the results were obtained in terms of annual average values such as the ones presented in Table 12 and Table 13.

Table 12. Average annual deaths by earthquakes in Barcelona

Dead people		
Exposed value	Inhabitants	1,639,880
Average annual loss	Inhabitants	28.3
	‰	0.017

Table 13. Average annual injured by earthquakes in Barcelona

Injured people		
Exposed value	Inhabitants	1,639,880
Average annual loss	Inhabitants	113.6
	‰	0.07

7.3.8 Holistic Risk Assessment

For the reasons presented before, Barcelona constitutes a very interesting case of urban areas where seismic risk can be evaluated considering not only the physical dimension but the socioeconomic one. Following the methodology proposed by Carreño et al. (2007), an Urban Seismic Risk index was calculated both at AEB and district level. Several descriptors were considered for the calculation of aggravating coefficient and a full description of them is presented in Annex 16.

Figure 246 presents the USRi by district from where it can be seen that those areas that have higher AAL correspond also to the ones with higher USRi after a holistic risk assessment.

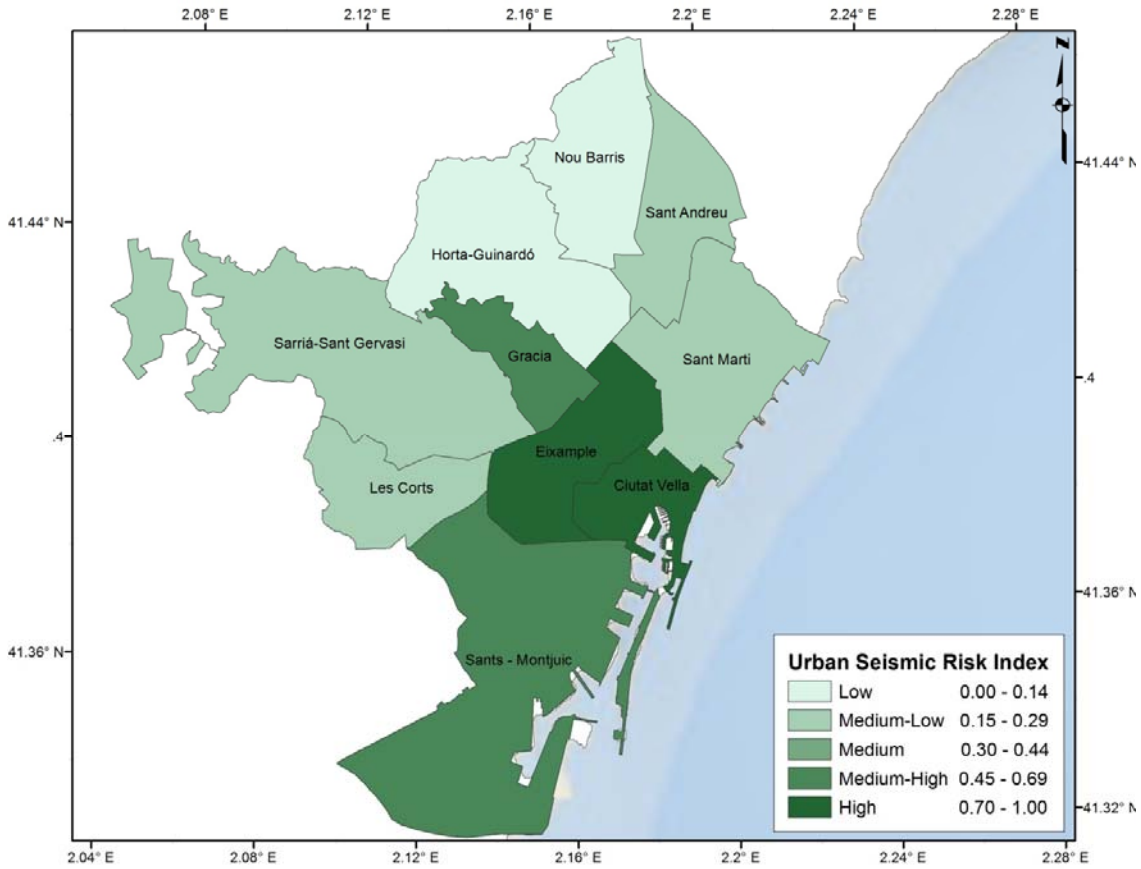


Figure 246. Urban Seismic Risk Index of Barcelona at district level (from Marulanda et al., 2013)

Table 14 presents the USRi results by district for Barcelona from where it is possible to see how the combination of both, physical risk index and aggravating coefficient lead to a more comprehensive overview of the overall results.

Table 14. USRi results by district for Barcelona

District	R_F	F	*USRi*
Ciutat Vella	0.68	0.44	0.99
Eixample	0.55	0.28	0.70
Gracia	0.39	0.29	0.50
Sants-Montjuic	0.37	0.25	0.46
Sant Martí	0.11	0.66	0.19
Sarriá - Sant Gervasi	0.14	0.17	0.17
Sant Andreu	0.10	0.50	0.15
Les Corts	0.11	0.23	0.14
Horta-Guinardó	0.09	0.39	0.13
Nou Barris	0.03	0.62	0.05

This assessment constitutes another example where integrated and multidisciplinary research on disaster risk reduction has helped to reduce the gap between the risk assessments per se and the decision-making process to be carried on by different stakeholders (Carreño et al., 2014).

7.4 Bogotá, Colombia

7.4.1 Introduction

Bogotá is the main city in Colombia with more than nine million inhabitants according to the projection of the latest census (DANE, 2005) holding also the main business district in the country comprised by industries of different sectors that altogether have the largest urban participation in terms of GDP (DANE, 2014). The city is located in an intermediate seismic hazard zone according to the Colombian earthquake resistant building code as shown in Figure 1 and, also, because some zones lie on what used to be lakes, soft soil characteristics are predominant in many areas.

The building stock of the city is, as any other Latin American urban center, mainly comprised by masonry dwellings with another characteristic that is that more than 60% of the dwellings were built following informal and non-engineered building practices, even when building codes exist and are mandatory in the country since 1984.

The city is divided for administrative purposes into 20 localities and covers a vast area of more than 308 km^2 in the urban area. From south to north, the extension of the city is of more than 40km.

7.4.2 Purpose of the Risk Assessment and Resolution Level

Having in mind that different probabilistic risk assessments had been previously performed in Bogotá following similar methodologies (CEDERI, 2004; 2005; Acevedo, 2005; ODCA-ITEC, 2008; ODCA-INGENIAR-ITEC, 2008), given that updates on the cadastral database in terms of dwellings' values were available in 2011, a seismic risk assessment, now using different modules of the CAPRA Platform was performed. The base hazard model corresponded to the one developed in the framework of the update of the national building code (AIS, 2010; Salgado et al., 2010).

In addition, in 2011 after a meeting of the American Geological Society in Manizales, the proposal of a new lithospheric interpretation that modified the seismic hazard in the city (Salgado et al., 2011; 2013) lead to a new hazard model which effects wanted to be evaluated in terms of physical risk in the city.

The exposure database has a building by building resolution level with more than 860,000 elements; the most challenging in urban assessments so far in the CAPRA Platform that based on previous studies were characterized in terms of structural, social and economic characteristics.

This study was not intended to determine if the new tectonic proposal was right or not, but to assess in a counterfactual way, the effects in terms of physical risk through the appropriate metrics the variations due to the changes in the hazard model, that is, keeping exposure and vulnerability constant.

Finally, it is worth to stress that in cases when different interpretations exist about a factor that can determine several and important modifications in the risk results, in this case the base seismic hazard model, it is relevant to at least, assess the impact and make that information available to the public.

7.4.3 Hazard Assessment

Two separate probabilistic seismic hazard assessments were performed at national level accounting for more than 35 seismogenetic sources. The first one, as mentioned before, corresponded to the one developed by the Colombian Association for Earthquake Engineering (AIS) in the framework of the update of the national earthquake resistant building code (NSR-10), whilst the second one corresponds to the new lithospheric proposal (Vargas and Mann, 2013) that proposed the existence of a seismogenetic source denoted as *Caldas Tear*, that would modify the hazard levels in some main cities of Colombia (Salgado et al., 2013), in the case of Bogotá, decreasing it. The outputs of both hazard models correspond to separate sets of stochastic scenarios that were later used to calculate physical seismic risk in fully probabilistic terms.

Bogotá has had several microzonation studies (CEDERI, 2006) as well as other soil exploration projects that allow the identification of several homogeneous soil zones and then take them into account in the hazard and risk assessment as presented in Figure 247.

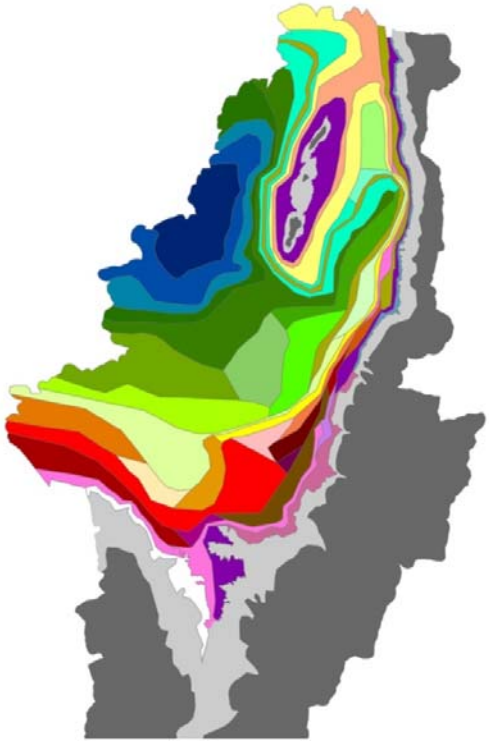


Figure 247. Homogeneous soil zones for Bogotá (From CEDERI, 2006)

Because many dwellings of the city lie on what used to be lakes 60 or 70 years ago, there is a strong presence of soft soils that may have strong influence on the hazard levels and also increase the expected damage and losses in the buildings according to their structural characteristics as can be seen in Figure 248 where spectral transfer functions for soft soil areas for different intensities at bedrock level to account for the non-linearity of the soil response.

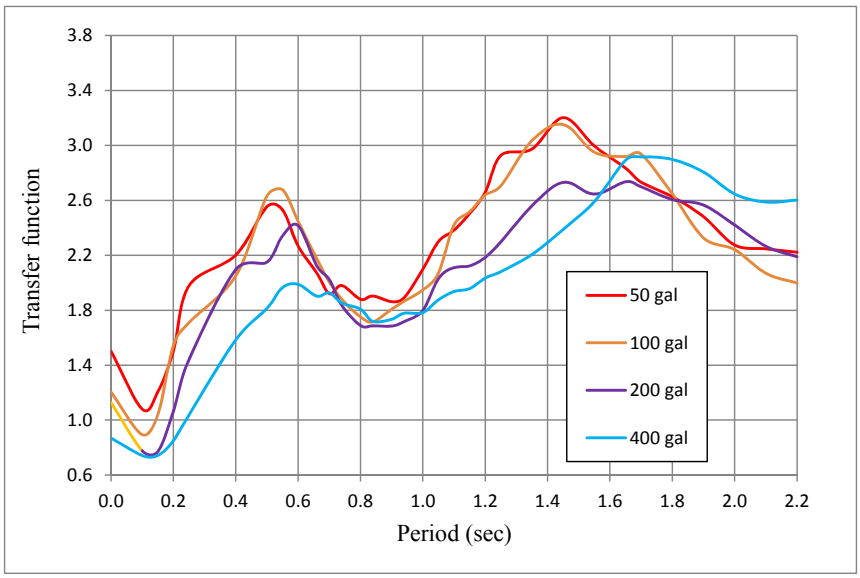


Figure 248. Soft soil spectral transfer functions

Figure 249 presents the hazard, considering the site effects for peak ground acceleration (PGA) and 475 years return period using the official seismic hazard model.

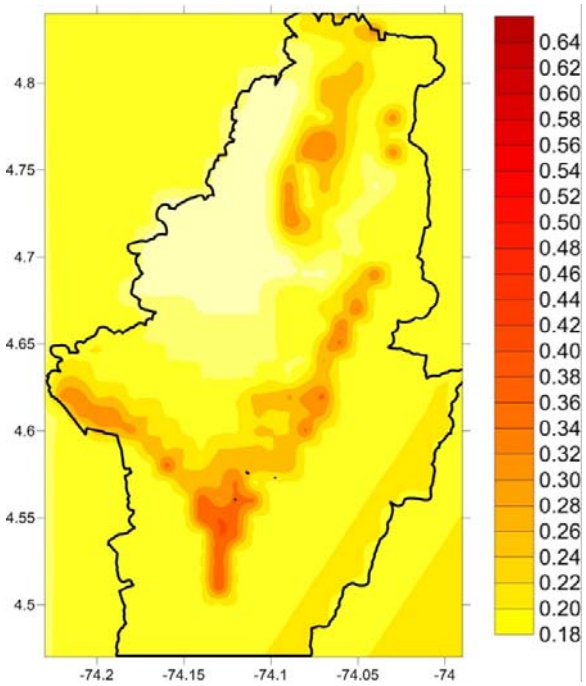


Figure 249. Seismic hazard map considering site effects for Bogotá. PGA, 475 years (g)

7.4.4 Exposed Assets

The building's exposure database of Bogotá has more than 860,000 dwellings that becomes a challenge not only in computational requirements but in the data needed to identify and characterize them in a proper manner to conduct a risk assessment. Based on the cadastral information the location and geometry of each element was captured and then, knowing also the number of stories the total constructed area was inferred.

In Colombia, for taxing purposes there are six socioeconomic levels being 1 the poorest and 6 the richest; for the case of Bogotá this information is associated to each element in the database and, combining said value with the main use of each element, a base index replacement cost per constructed square meter was derived. More details about this can be found in Zuloaga (2011).

The quality of completeness of the data can be classified as high since the existing information; all the relevant characteristic of the elements could be captured. Figure 250 presents the building class distribution along the city while Figure 251 presents the main use distribution. It can be seen that most of the elements have associated a masonry building class while the predominant use for many parts of the city is the residential.

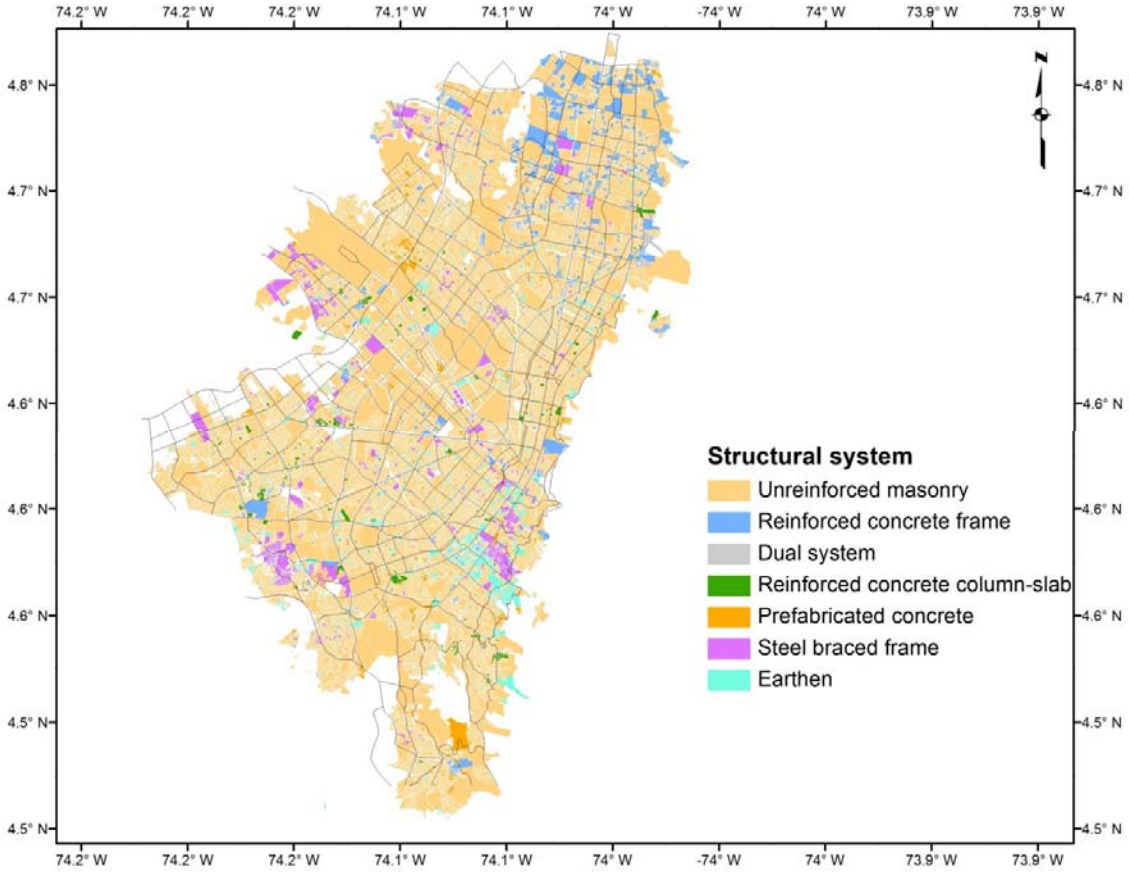


Figure 250. Building class distribution for Bogotá

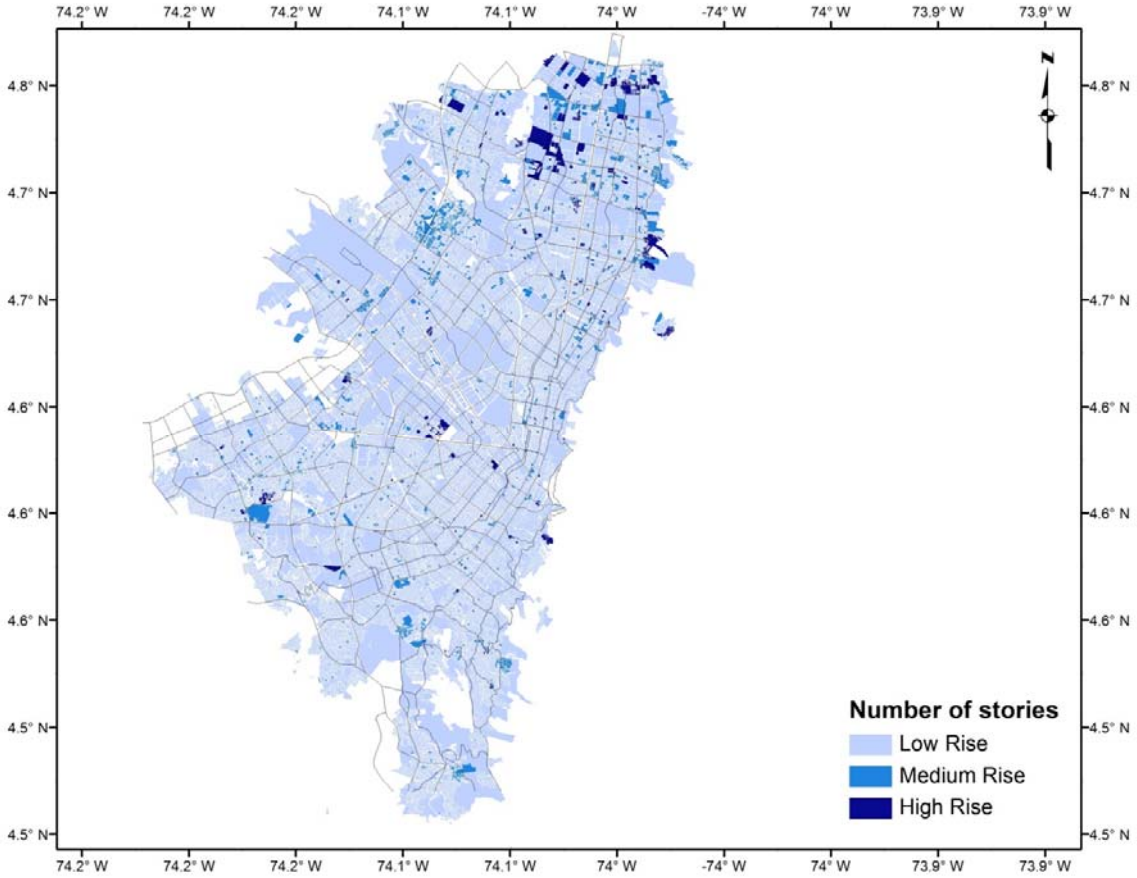


Figure 251. Number of stories distribution for Bogotá

7.4.5 Vulnerability of the Exposed Assets

Seismic physical vulnerability was characterized in terms of vulnerability functions that, as explained before accounts for both a continuous and probabilistic representation. Considering the characteristics of the dwellings and based in previous studies of the city and other Latin American cities with similar building stock characteristics (ERN-AL Consortium, 2009) a set of vulnerability functions was developed.

The vulnerability functions used in this study are intended only to capture the direct damage associated to the ground shaking and other indirect effects such as building interruption or fires ignited after the quake are not considered and are out of the scope of the assessment.

Figure 252 presents the vulnerability function assigned to the mid-rise reinforced concrete frames, very common in middle and high income areas of the city. More details about the vulnerability functions for the rest of building classes can be found in Annex 17 and Zuloaga (2011).

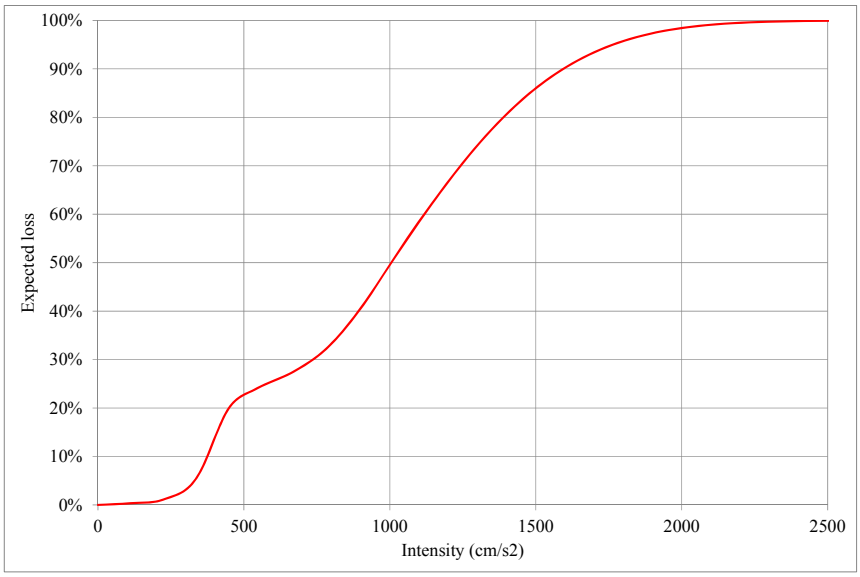


Figure 252. Vulnerability function for unreinforced masonry dwellings

7.4.6 Physical Risk Results

After convoluting hazard and vulnerability of the exposed elements in Bogotá following a fully probabilistic approach such as the one adopted by the CAPRA Platform, results in terms of LEC for both hazard models were obtained. Though slight, there are relevant changes in terms of AAL and PML for certain return periods when considering the hazard model that includes the *Caldas Tear* seismogenetic source. Figure 253 presents the comparison risk results using both hazard models in terms of LEC.

To have a better understanding of the relevance and implications of changing the hazard model, Table 15 compares the risk results as a summary from where it can be seen that a decrease of

around 23% exists in terms of AAL. That can have several implications in the definition of risk premiums and is of high relevance among the insurance and reinsurance sector.

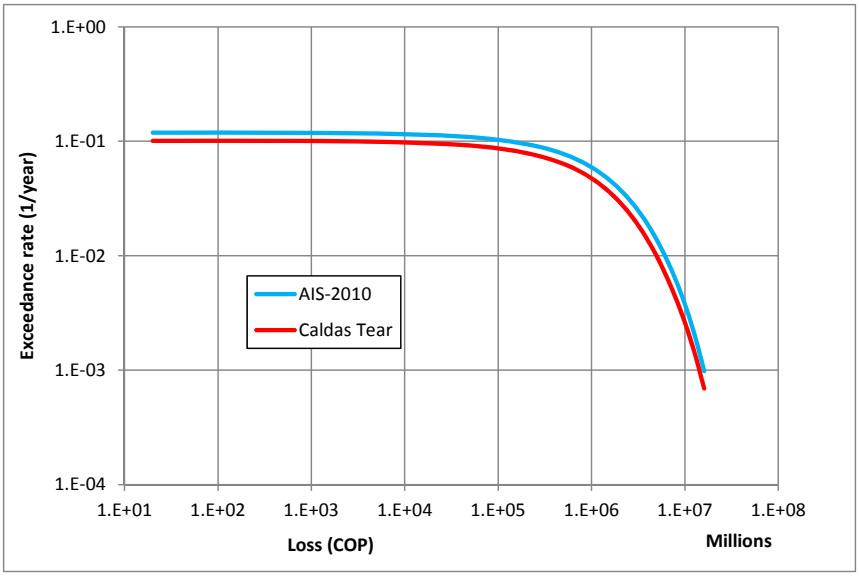


Figure 253. Earthquake loss exceedance curves for Bogotá[2]

Table 15. Summary and comparison of physical seismic risk results for Bogotá

Hazard model	AIS-2010		Caldas Tear	
Exposed value	COP$ x10^6	100,316,000	COP$ x10^6	100,316,000
AAL	COP$ x10^6	252,350	COP$ x10^6	194,006
	‰	2.516	‰	1.934
PML				
Return period	Loss		Loss	
years	COP$ x10^6	%	COP$ x10^6	%
100	$6,041,078	6.02	$4,921,600	4.91
250	$9,617,823	9.59	$8,102,422	8.08
500	$12,623,801	12.58	$10,958,366	10.92
1000	$15,970,367	15.92	$13,973,154	13.93

As in the previous cases, since the exposure database has been developed on a GIS environment, it is possible to develop and generate risk maps to observe the geographical distribution of the

[2] 1USD is approximately 1,950 COP

expected damages and losses such as the one presented for the AIS-2010 model in Figure 254 and for the Caldas Tear model in Figure 255. When interpreting these maps, the reader should be careful of understanding that they have been developed under a probabilistic framework, and, therefore, results should be seen in aggregated terms and so the values. That is that, for example, reading the AAL of a single element is not adequate but to read the AAL of the building class that element belongs to (Salgado et al., 2014c). Risk maps in absolute terms for both hazard models are presented in Annex 17.

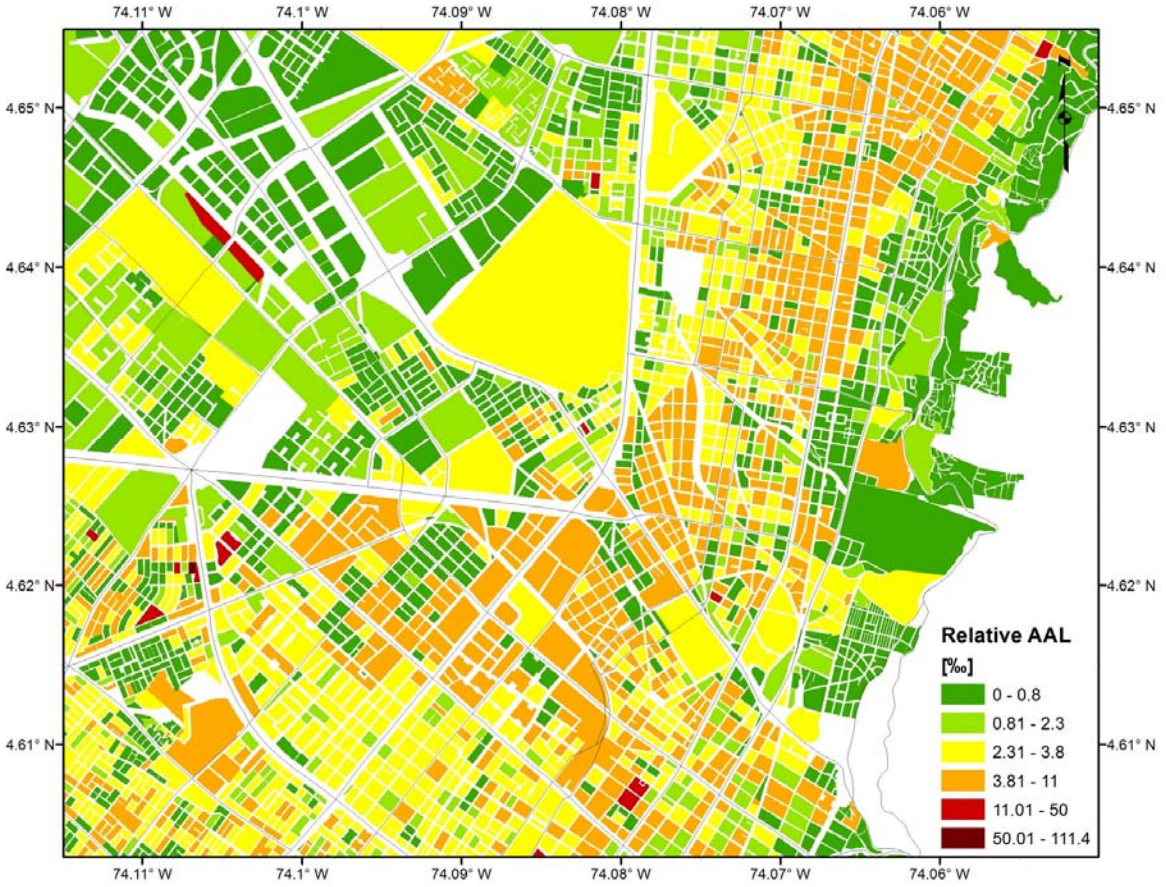


Figure 254. Relative (‰) AAL loss distribution by block in Bogotá with AIS-2010 Model (From Zuloaga, 2011)

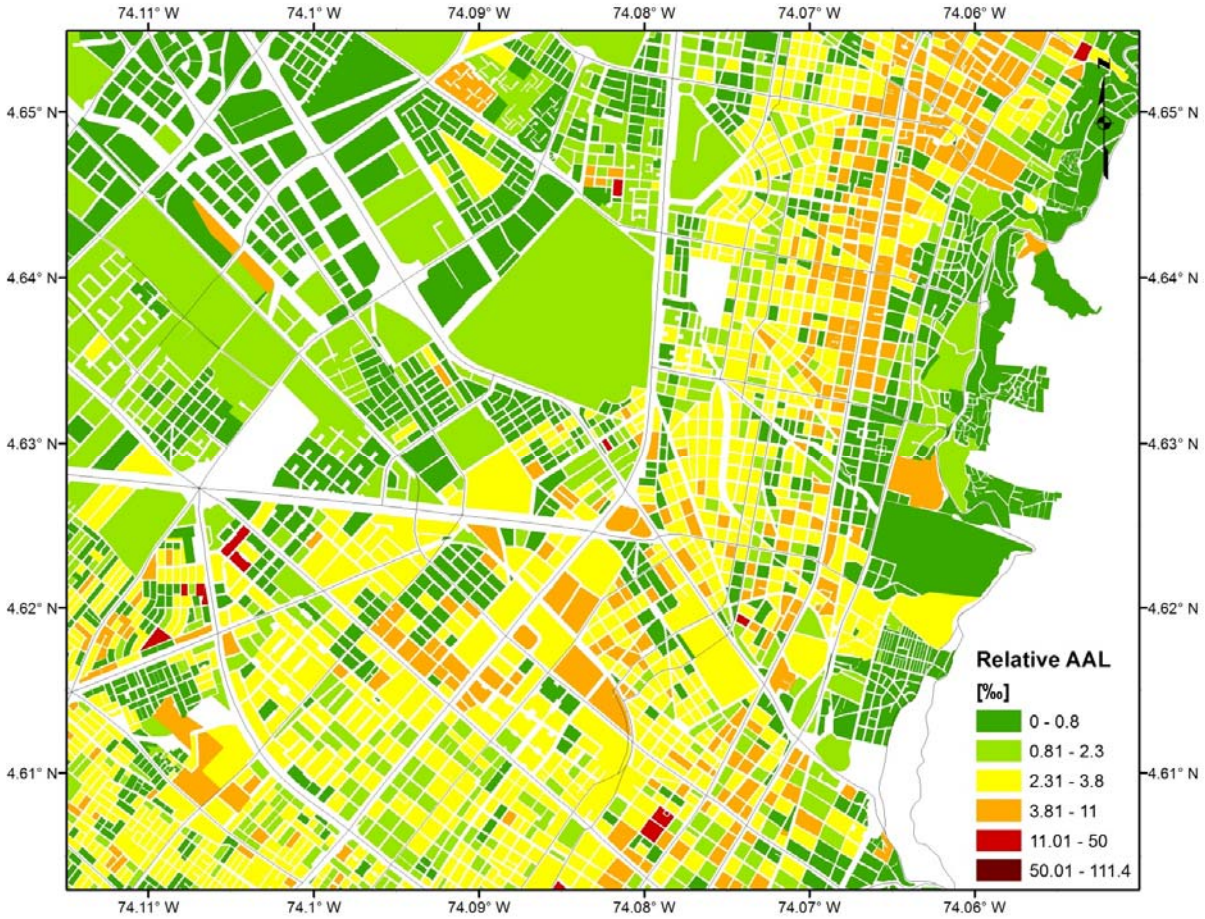


Figure 255. Relative (‰) AAL loss distribution by block in Bogotá with Caldas Tear Model (From Zuloaga, 2011)

7.5 Belize City, Belize

7.5.1 Introduction

Belize City is the largest city of Belize and used to be the administrative center until 1970 when, after different political events and being severely affected by different tropical cyclones, the National Government made the decision of locating the offices in Belmopan, approximately 50 kilometers inland to the west.

The city is located on the Caribbean Coast as presented in Figure 256 and most of its economic activity largely depends on tourism and commercial activities, for example from cruises that frequently stop there. Because its location, Belize City may be affected by tropical cyclones occurring in the North Atlantic Basin that, as is well known, is one of the most active worldwide in terms of this hazard.

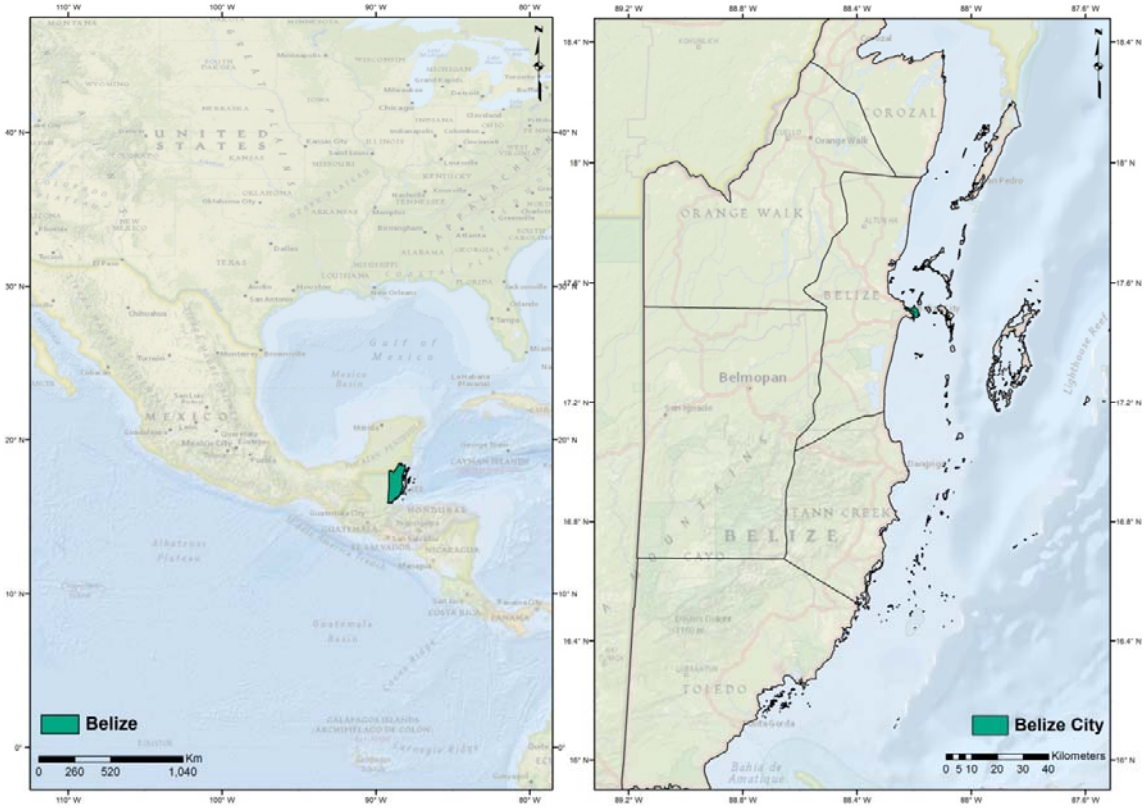


Figure 256. Geographical location of Belize City

This example shows how, when having detailed information not only in terms of the exposed assets but on the topographical and bathymetry data, hazards such as the storm surge can be modelled with a higher resolution than in the Global Risk Model, leading then to more accurate results.

This assessment also constitutes an interesting case since as it is well known, associated to the occurrence of a tropical cyclone there can be different intensities occurring, approximately, at the same time, such as strong winds and storm surge. A detailed tropical cyclonic hazard and risk assessment should account for both of them especially in cases like Belize City when, because of the location of the elements, can all be affected by any of the above mentioned ways that the hazard may manifest.

7.5.2 Purpose of the Risk Assessment and Resolution Level

The purpose of this risk assessment was to quantify in probabilistic terms and metrics the feasible losses in the building stock of Belize City for the tropical cyclonic hazard. This, considering all three intensities that may damage the elements being them strong winds, storm surge and flood associated with the hurricane rainfall.

The analysis was conducted under the framework of the Project "*Country Risk Evaluations and Indicators of Disaster Risk and Risk Management for Belize, El Salvador and Guatemala – RME2039/C0031-08*" funded by the Inter-American Development Bank (IDB) which comprised besides a national hazard assessment, the development of local studies considering the most relevant natural hazards for each case in Belize. Besides being an example of how a local assessment could be conducted on a building by building resolution level, this study generated interest among the institutions related to the topic (i.e. NEMO) that led to a capacity building process where specialists in meteorological data and modelling participated in a set of trainings aimed to make them able to replicate and update this kind of analysis when new information in terms of hazard, exposure and/or vulnerability is available.

The resolution level in terms of hazard and exposure can be classified as high because detailed information relevant for the calculation of the first and the identification and characterization of the second. For the hazard mainly the use of detailed bathymetric information as well as de definition of closely spaced points along the shore to calculate those intensities constitute a major improvement if compared with other resolution level analyses.

7.5.3 Hazard assessment

As mentioned in the introduction of this case study, when detailed information in terms of the base data for the hazard modelling is available, it is possible to conduct said analysis at a higher resolution level, increasing the accuracy of the results both in terms of the expected hazard intensities in each calculation point and in the definition of the areas that may be affected given the occurrence of a tropical cyclone, this latest, especially related to the storm surge. An update on the hazard model, using the tropical cyclonic model developed for GAR15 was used, making use of detailed information mostly in terms of bathymetry and land roughness; the first one with direct effect in the quantification of the hazard for the storm surge and the second one with direct effect in the wind speed estimation using the CAPRA Team TCHM software (Bernal, 2014). Details about that methodology can be found in Chapter 3 of the report of the Global Risk Model by CIMNE-INGENIAR (2014).

As in the previous cases, given that the aim of the study is related to a probabilistic risk assessment, a set of stochastic scenarios, in this case, storms, was generated, complying with the exact same requirements as before:

- Mutually exclusive
- Collectively exhaustive
- Admit a probabilistic representation

Since each scenario is characterized in terms of its frequency of occurrence and on the other hand, intensities are calculated through the first two probabilistic moments, it is possible to integrate the hazard and obtain intensity exceedance curves for any point of interest. When those point of interest constitute a grid (each then, being a node), by selecting the same return period for each of them, it is possible to generate hazard maps. Figure 257 and Figure 258 present the intensity exceedance plots for strong winds and storm surge in Belize City

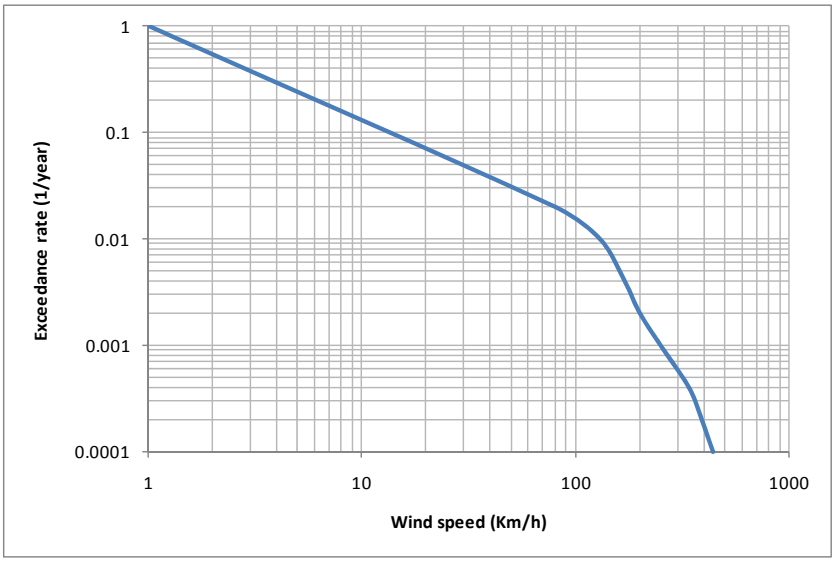


Figure 257. Strong wind exceedance rates for Belize City

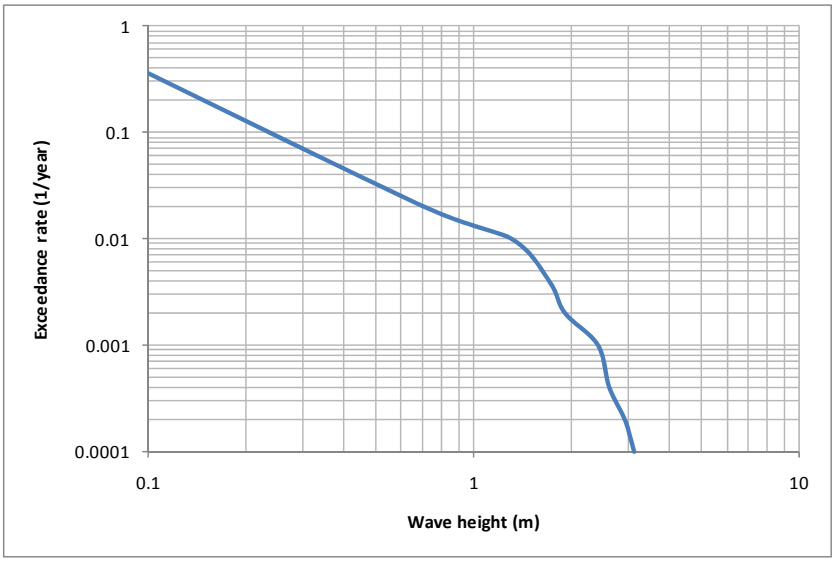


Figure 258. Storm surge exceedance rates for Belize City

Whilst small variations occur for the wind speed estimation in the urban area of Belize City, for the case of the storm surge it is evident that the geographical dependency for it is important; that is, only elements located within certain distance from the shore may be affected by said hazard and it explains why a detailed approach in the exposure in hazard and exposure is needed.

Though quantified at a global level for GAR15, it is clear that for a better understanding of this hazard and its relevance in the risk results, a more detailed approach should be selected and therefore, that kind of assessments should be promoted to derive in comprehensive disaster risk management schemes.

7.5.4 Exposed Assets

For this local assessment the exposed assets in Belize City consist in the building stock on an element by element resolution level based on official information (BGOP, 2011; SIB, 2011; MHUD, 2011) that besides location and geometry data has characteristics in terms of age, main use, number of stories and building class.

Most of the dwellings in Belize City are made out of wood which is a very common building class in the Caribbean region. Though located in Central America, Belize has more common characteristics with the Caribbean countries than with neighboring ones such as Guatemala or Mexico.

Figure 259 and Figure 260 present the characterization of the dwellings in terms of building class and main use respectively. Annex 18 presents more details in terms of other relevant attributes from the exposure perspective.

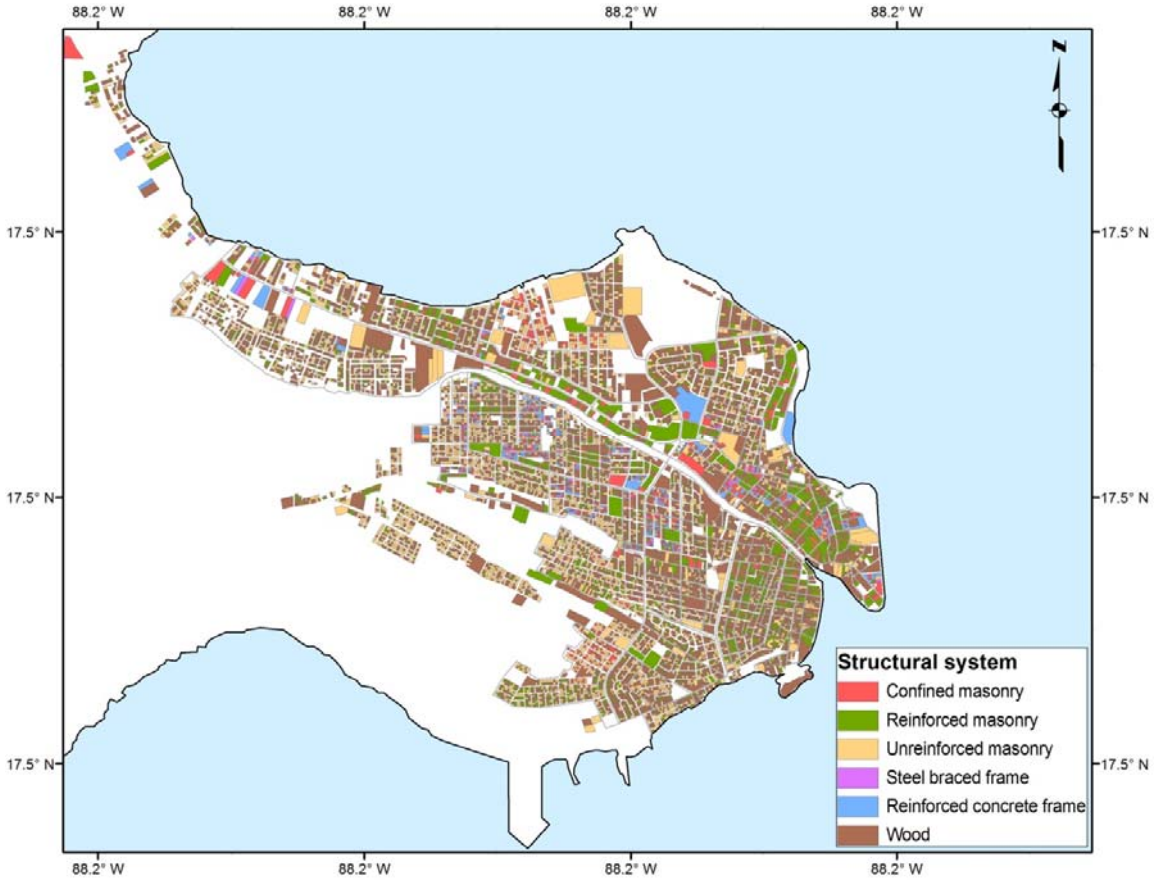


Figure 259. Building class distribution for Belize City

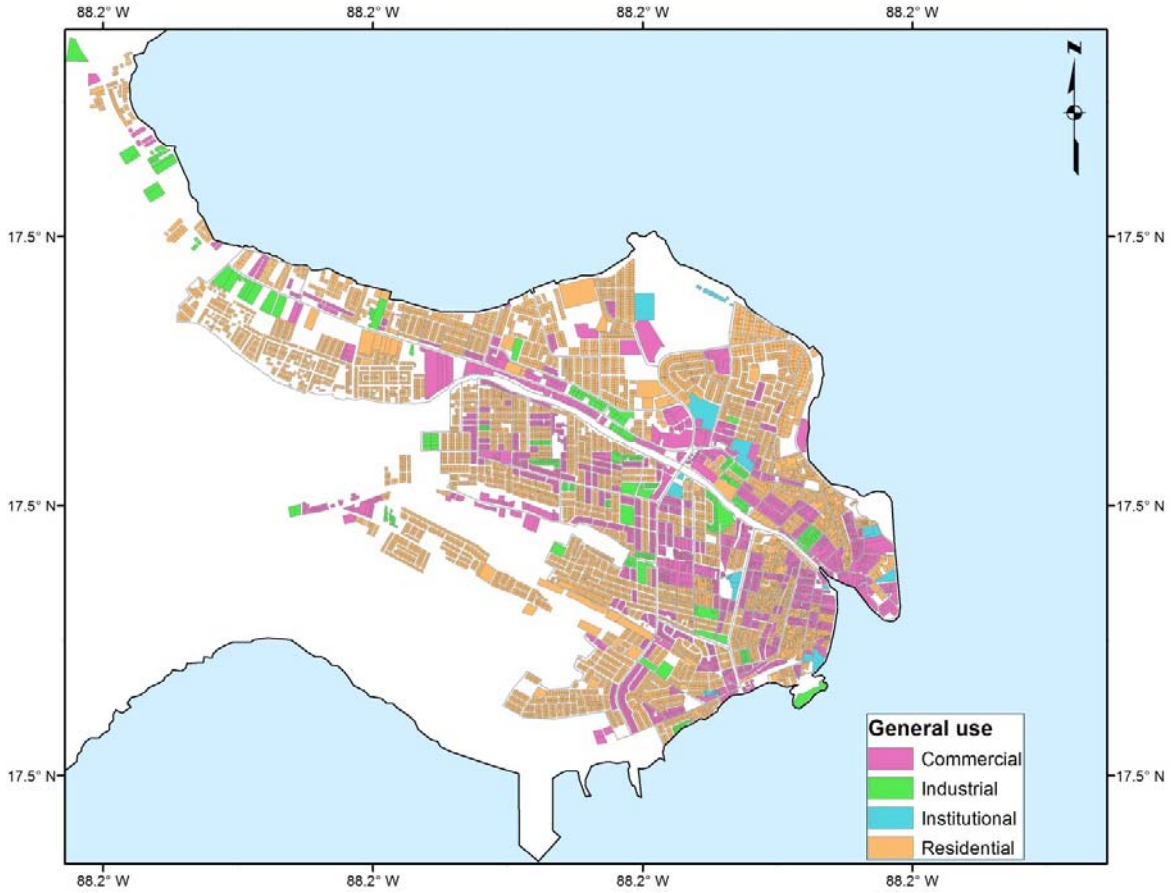


Figure 260. Main use distribution for Belize City

7.5.5 Vulnerability of the Exposed Assets

For this assessment two different sets of vulnerability functions were developed. The first one corresponded to vulnerability functions in terms of wind speed and the second one in terms of water depth, used for the storm surge assessment. As in previous cases, for each building class, a unique vulnerability function is assigned for each intensity. Figure 261 presents the vulnerability function wooden structures for wind speed, while Figure 262 presents the vulnerability function for steel frame buildings for flood and storm surge.

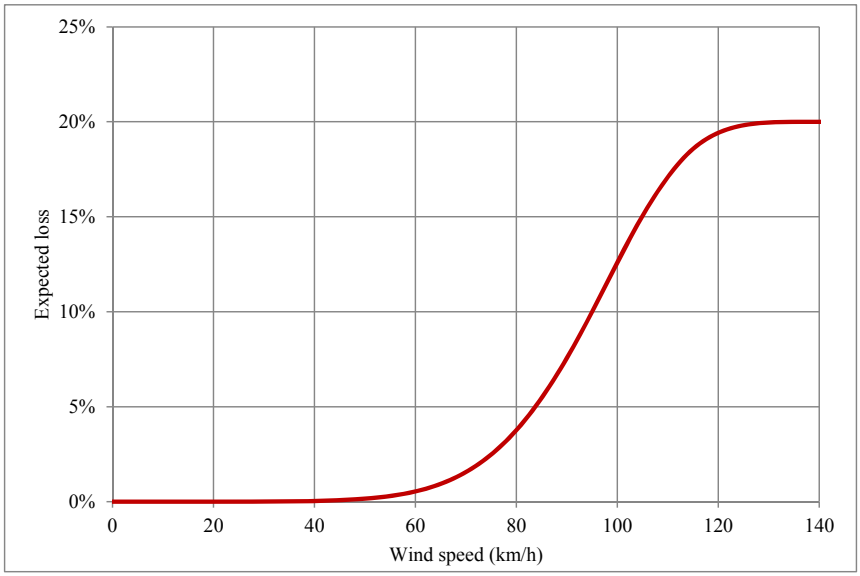


Figure 261. Wind vulnerability function for wooden dwellings

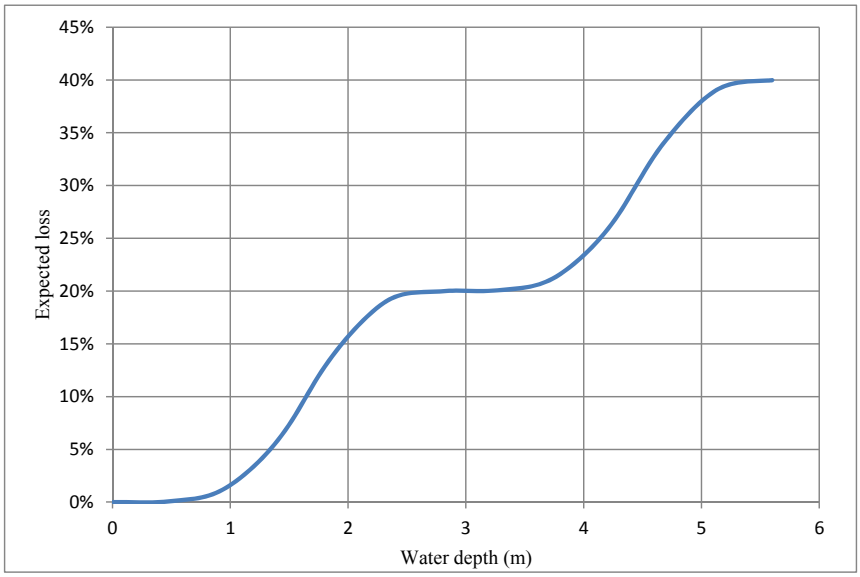


Figure 262. Flood vulnerability function for reinforced concrete framed dwellings

More details about the vulnerability functions for the rest of building classes for strong winds, and storm surge can be found in ERN-AL Consortium (2009) and Annex 18.

7.5.6 Physical Risk Results

Physical risk results in Belize City consider the effects of strong winds, storm surge and floods associated to hurricane rainfall at the same time. To consider that, all the intensities are considered in the same temporality for which in this case the same number of scenarios are required for the hazard representation in each case. The loss calculation follows a cascade process and therefore, the results can be obtained in terms of the same probabilistic risk metrics as presented before, that is the LEC from where AAL and PML can be derived.

Figure 263 presents the PML plot for Belize City that considers the influence of all the intensities, which is the appropriate way to represent them since the effects are not independent among them.

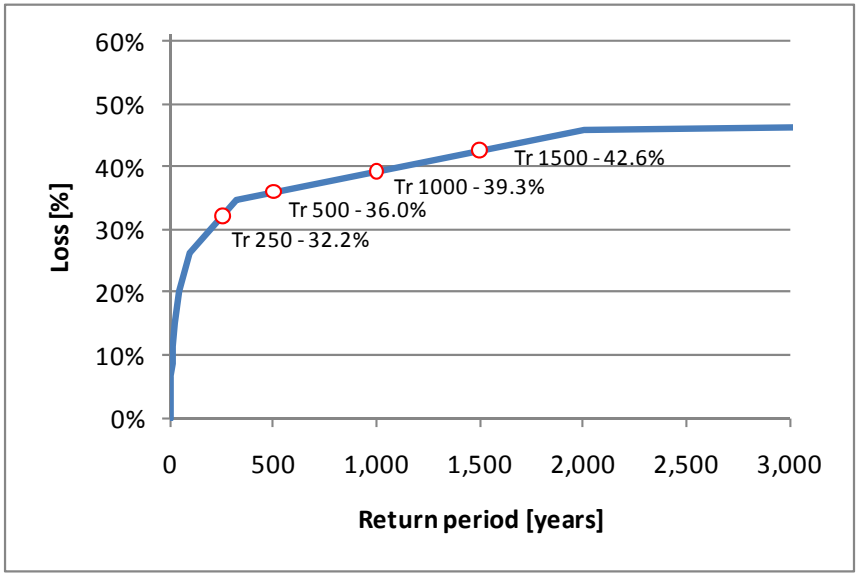


Figure 263. PML plot for tropical cyclones (wind and storm surge) for Belize City

On the other hand, Table 16 presents the summary of the risk results now in terms of AAL and PML for selected return periods from where it can be seen that the risk level can be considered as high since for a return period of 250 years, a loss equivalent to more than 30% of the total exposed value is expected.

Table 16. Summary of tropical cyclonic risk in Belize City

Results		
Exposed value	US$ x10^6	1,280.48
Average annual loss	US$ x10^6	37.36
	‰	29.18 ‰
PML		
Return period	**Loss**	
Years	**US$ x10^6**	**%**
250	412.59	32.22%
500	461.10	36.01%
1,000	503.18	39.30%
1,500	545.25	42.58%

When conducting risk analysis considering different hazard intensities, it is possible to disaggregate the results by intensity; that is in this case, checking if the strong winds, storm surge or flood are most contributing to the overall risk. The best indicator to make this verification is the AAL since it accounts for all the events, ranging from small and frequent to intense and extreme.

Finally, Figure 264 presents the geographical distribution of the expected damage and losses in terms of relative AAL for strong winds. On the other hand, Figure 265 presents the geographical distribution of the expected losses, again in terms of AAL for storm surge. For the latest, as mentioned in the hazard section, it is evident that only places located within certain distance from the shore or lying in lowlands, may be affected by those effects and this could only be determined by having detailed hazard and exposure information.

These results have been very useful for the emergency response plan lead by the National Emergency Management Organization, NEMO. In addition, training activities have been implemented with many institutions to evaluate the separated hazards and the multi-hazard risk assessment using CAPRA. They have been evaluated taking into account the current level of hazard and also future scenarios of climate change.

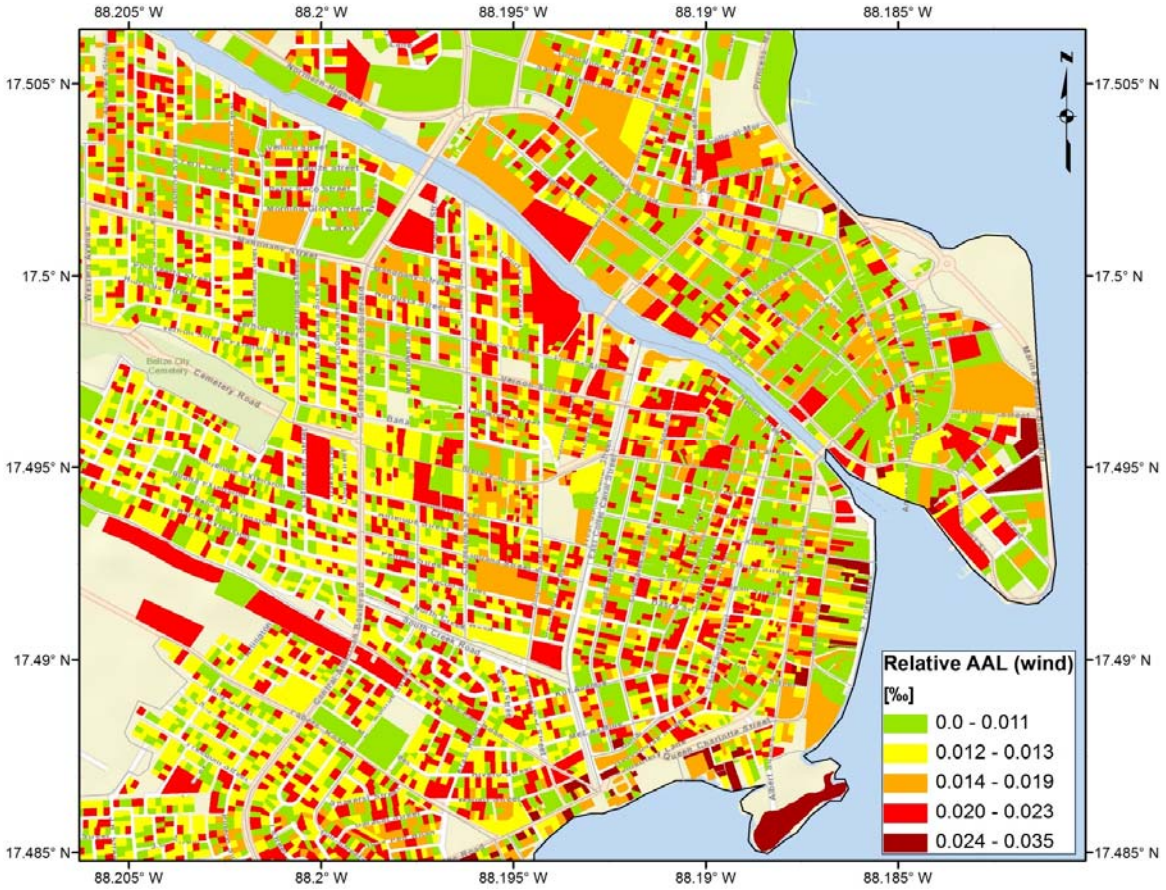


Figure 264. Tropical cyclone relative AAL by dwelling in Belize City due to strong winds

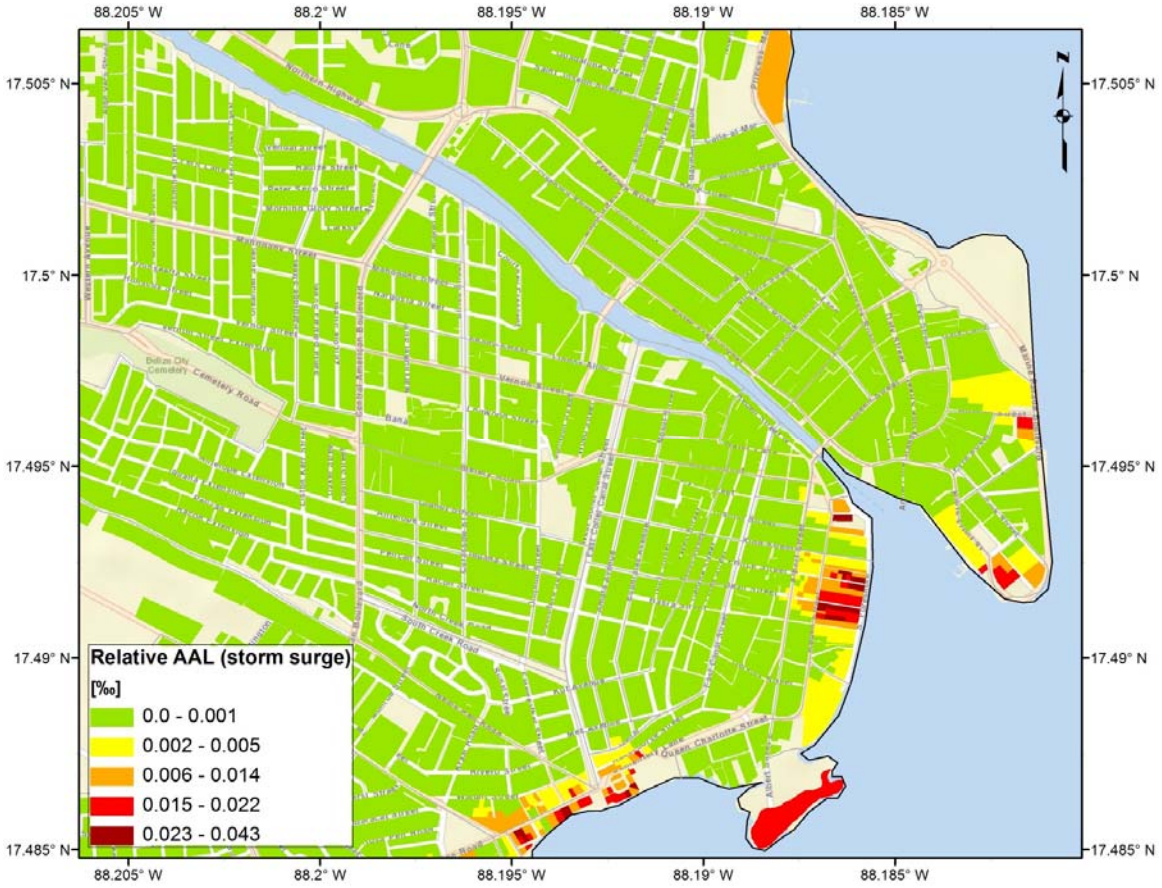


Figure 265. Tropical cyclone relative AAL by dwelling in Belize City due to storm surge

7.6 Galeras Volcano, Colombia

7.6.1 Introduction

Galeras Volcano is located at approximately 10 kilometers west from the urban area of Pasto, the capital city of Nariño Department in Colombia. It is one of the most active volcanoes in the area and has been studied in different opportunities by national and international researches. The volcano has an observatory with permanent personnel and state-of-the--art equipment with real time and telemetric data to feed the warning systems.

This assessment was part of a technical assistance project (TAP) funded by the World Bank where the main objective was to involve local experts in the volcanic hazard assessment into the probabilistic risk assessment to complement, integrate and further develop applications related to disaster risk management and reduction.

7.6.2 Purpose of the Risk Assessment and Resolution Level

The main objective of this probabilistic volcanic risk assessment was not to determine the possible damages and losses but to make the CAPRA tool and methodology known and available to local experts in the volcanic hazard modelling and, based on previous studies for the hazard side, and existent information in terms of exposure and vulnerability (mainly due to ash fall), have a case study where the capacity on risk assessment was to be built and that knowledge applicable to be replicated in future studies. The institution involved in the assessment was the Colombian Geological Survey.

The volcanic hazard was quantified in terms of three intensities; ash fall, pyroclastic and lava flows. The last two require detailed topographical information in terms of a digital elevation model. The risk assessment was performed on the municipalities that lie around the volcano which are the ones that could result heavily damaged in case a strong eruption takes place.

7.6.3 Hazard Assessment

Whilst not being the objective of this project to develop a methodology to assess the volcanic hazard, an innovative scenario based approach with the aim of obtaining physical risk results through a fully probabilistic methodology was followed. The hazard assessment was performed using existing information and studies that were used as input to obtain this probabilistic representation. A challenge existed in defining the frequency of occurrence of the eruption events that were classified according to the volcanic explosivity index (VEI). Figure 266 presents the hazard map in terms of pyroclastic flows for the Galeras Volcano obtained through this hazard assessment methodology as programmed in the software VHAST (Bernal, 2012), used for hazard calculations.

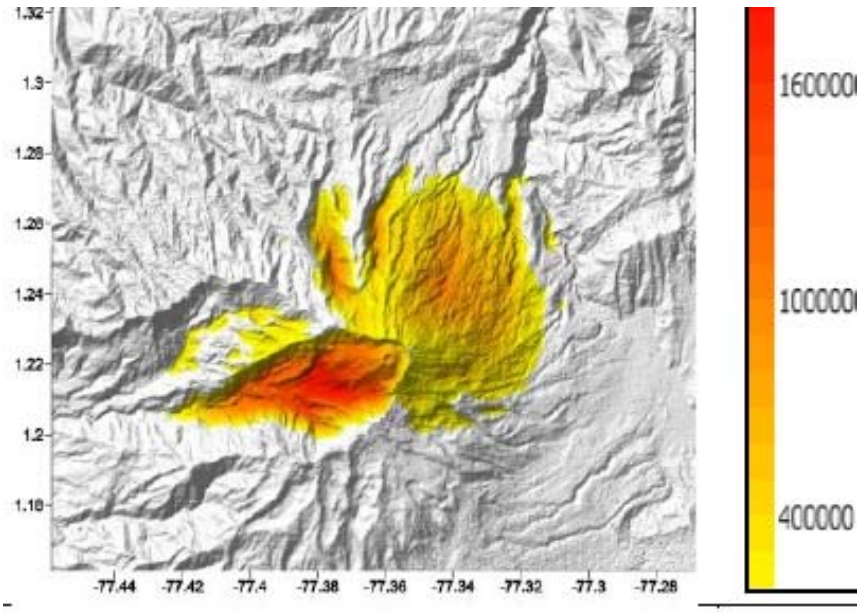


Figure 266. Pyroclastic flows hazard map for Galeras Volcano

7.6.4 Exposed Assets

Figure 267 and Figure 268 present the characterization of the assets in terms of actual condition and roof type; this last a very relevant parameter when assessing risk associated to ash fall. Annex 19 presents more details about the characteristics of the exposed assets in the region.

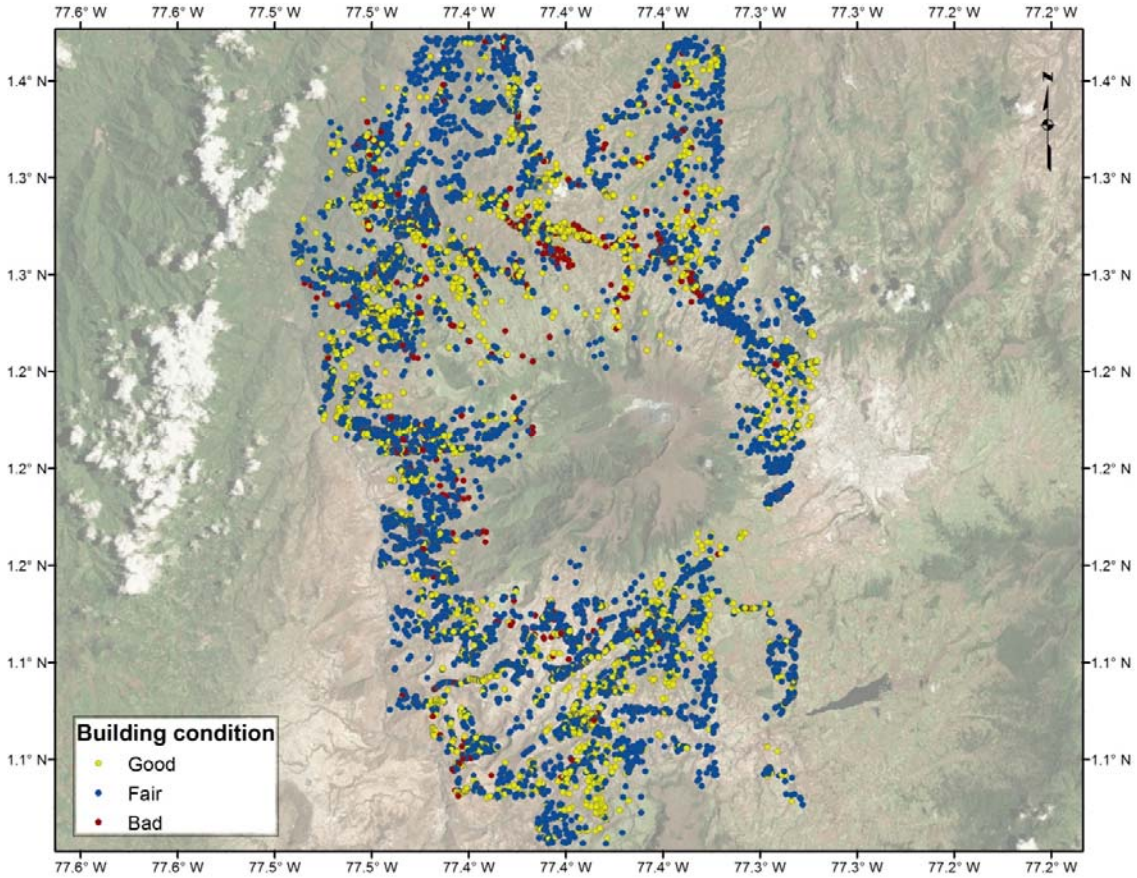


Figure 267. Building condition

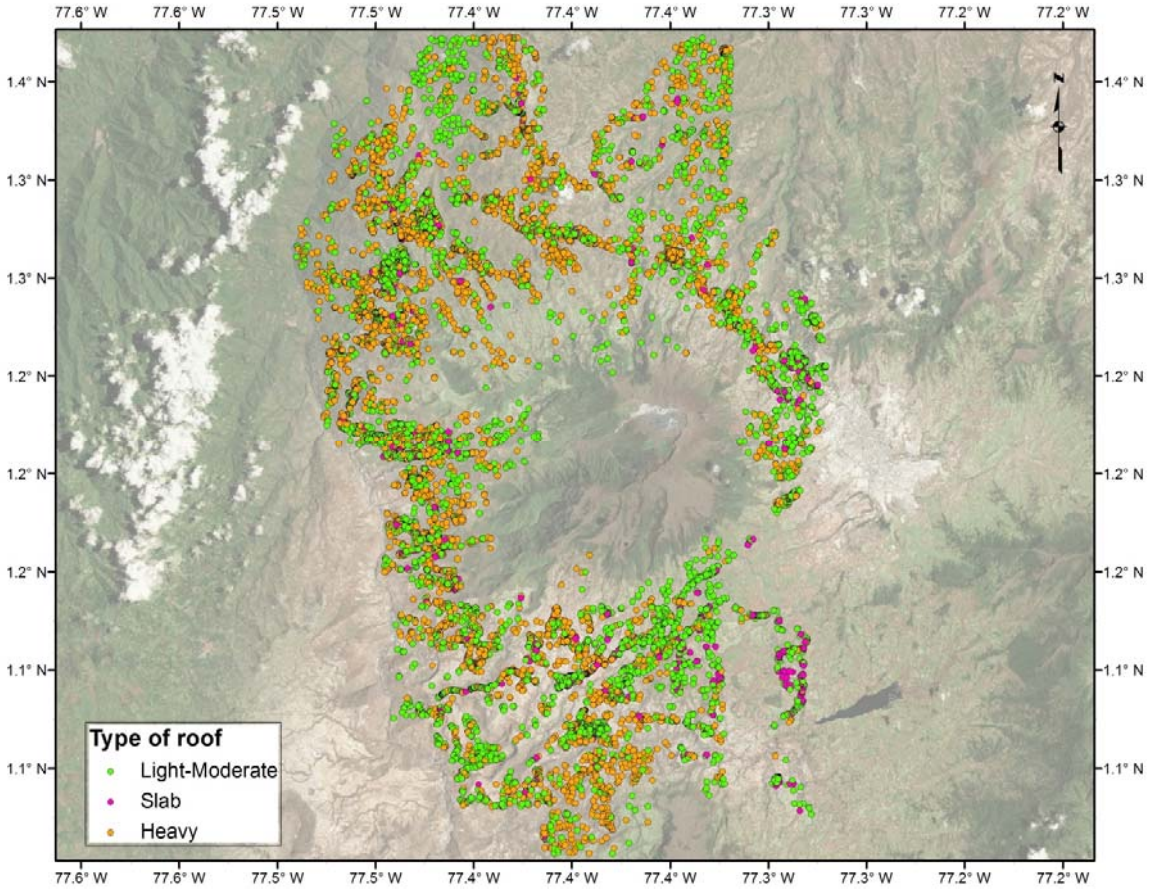


Figure 268. Roof type

7.6.5 Vulnerability of the Exposed Assets

Vulnerability functions for pyroclastic and lava flows have a unique characteristic and it is that they can be classified as binary; that is, if the element is affected, at any level by the hazardous event, the associated loss is complete. The opposite occurs with the ash fall since the affection on the surrounding elements depends heavily on the accumulated thickness on the roofs and its characteristics. Figure 269 presents the vulnerability function in terms of ash thickness for light roofs.

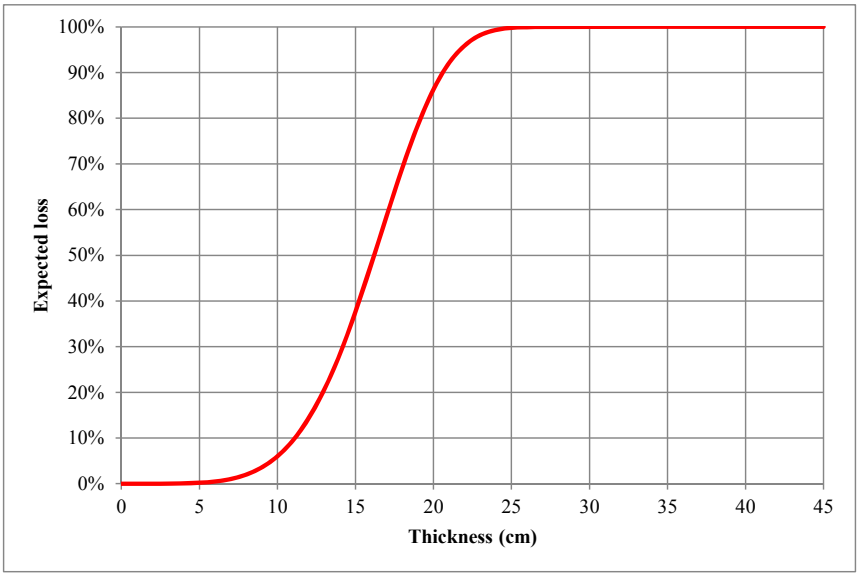


Figure 269. Vulnerability function for light roof structures

7.6.6 Physical Risk Results

Risk results have been obtained in terms of a loss exceedance curve since a scenario representation was selected for the hazard, as well as by location, for each of the exposed elements. Figure 270 presents the risk results through a map in terms of relative AAL due to ash fall in the portfolio of exposed elements. Absolute AAL distribution can be found in Annex 19.

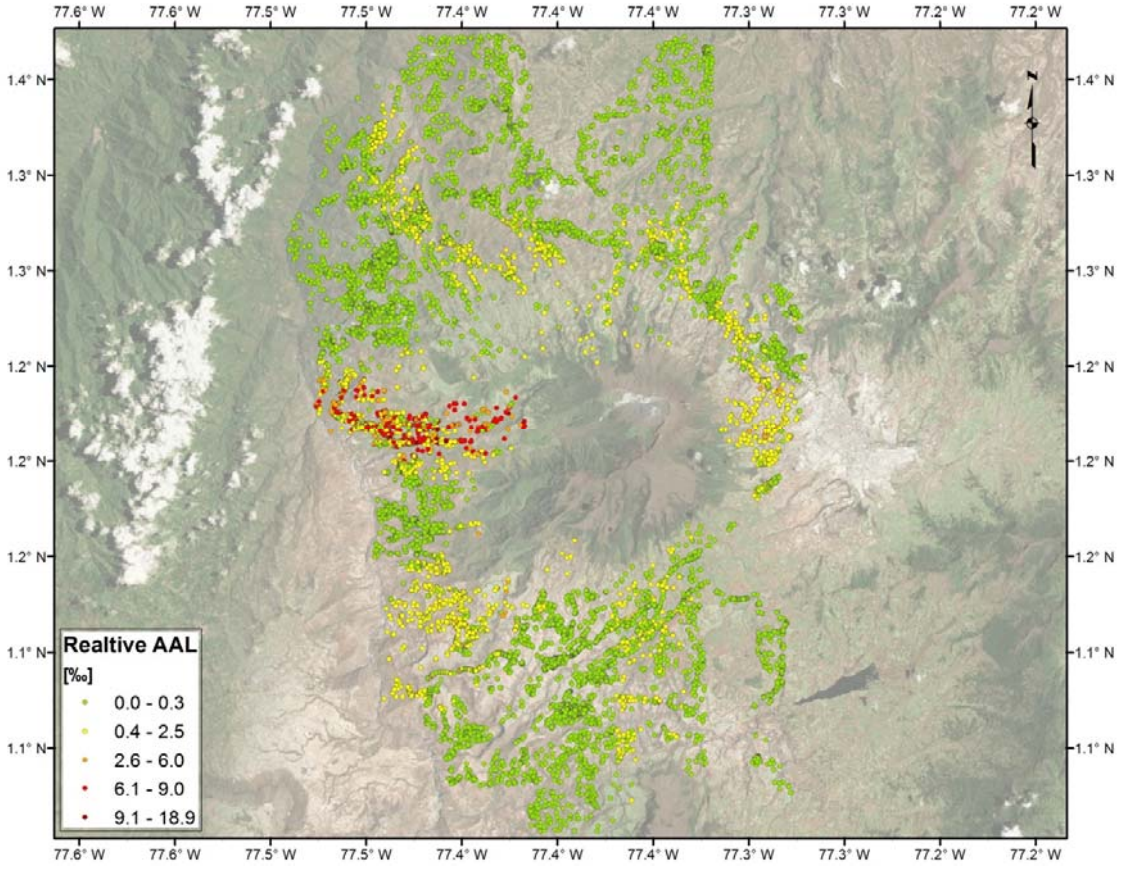


Figure 270. Relative (‰) AAL loss distribution by element in the Galeras Volcano surrounding buildings

7.7 Lorca, Spain

7.7.1 Introduction

On May 11th 2011 a 5.1 (Mw) earthquake stroke the Murcia region in south-eastern Spain, where the city of Lorca, with almost 60,000 inhabitants, was the most affected and damaged place. The epicentre was located 5 km north of Lorca and the depth of the event was estimated at 5 km. In spite of the moderate magnitude of the event, 9 casualties occurred, more than 300 people were injured and around 10,000 people could not return to their houses after the event due the damage to their homes. Two health centres suffered severe structural damage that endangered the security of the patients and medical staff, and were therefore evacuated. According to the damage surveys, around 80% of the inspected buildings presented some degree of damage, though it was generally classified as slight. The damage generated a chaotic situation in the post-disaster phase since there was no prior experience in implementing an emergency plan, and many of the response actions took longer than what was expected by the community (Barbat et al., 2011).

According to the post-earthquake damage assessment made by the local municipality, 19% of the existing 7,852 buildings were not inspected given that they suffered only very slight damage, 52% of the buildings were inspected and classified as habitable because of the lack of significant damage, 16% had no significant structural damage but limited access because of non-structural damage, 9% had forbidden access because of high structural damage, and for 4% of the buildings a mandatory demolition order was given (Ayuntamiento de Lorca, 2012).

7.7.2 Purpose of the Risk Assessment and Resolution Level

The purpose of this study was to compare the observed losses, based on the official post-earthquake survey conducted by the local authorities with the modeled ones using the CAPRA Platform where a hazard scenario with similar characteristics in terms of magnitude, location, depth and ground accelerations and a building by building resolution level exposure database were available. To quantify the physical vulnerability of buildings, vulnerability functions that take into account the uncertainties related to the accuracy of building data and seismic structural behaviour were used. A unique vulnerability function was assigned to each building class identified in Lorca. The convolution between the hazard and the vulnerability provides the expected losses. Only direct physical losses were accounted for in the analysis by calculating the mean damage ratio (MDR) of each building of the exposure database. More details about this study can be found in Salgado et al. (2014c).

7.7.3 Hazard Assessment

To represent the seismic hazard in this way, the best approach was to conduct a probabilistic and spectral seismic hazard analysis in the Iberian Peninsula and its neighbouring regions. Accordingly, a seismic hazard assessment is performed considering different seismogenetic sources that were characterized by a Gutenberg-Richter (G-R) (1944) model. The employed tectonic zonation corresponds to the one proposed in the framework of the SHARE project (GRCG, 2010) where 51 seismogenetic sources were defined. An additional source was located

in northern Africa to account for the seismicity occurring in that area which may affect the Peninsula. Since the occurrence of earthquakes over the time cannot be predicted, and a complete time window is an unknown quantity, a set of 1,991 stochastic events was generated using the CRISIS 2007 software (Ordaz et al., 2007). To characterize the seismicity occurrence process at each source, a Poisson model was selected. Seismic activity is determined based on the magnitude recurrence rates, relating the frequencies with which earthquakes with a given magnitude occur at each seismogenetic source.

Once the set of stochastic scenarios was generated, an event with similar characteristics in terms of location and magnitude was selected to conduct the damage analysis on the buildings of Lorca. Figure 271 shows the shakemap of the selected event which is associated to the *ESAS250* seismogenetic source (GRCG, 2010) which is located beneath the city of Lorca. Intensities are computed at bedrock level and no local site-effects are taken into account in the analysis since no information to generate spectral transfer functions was available for the city.

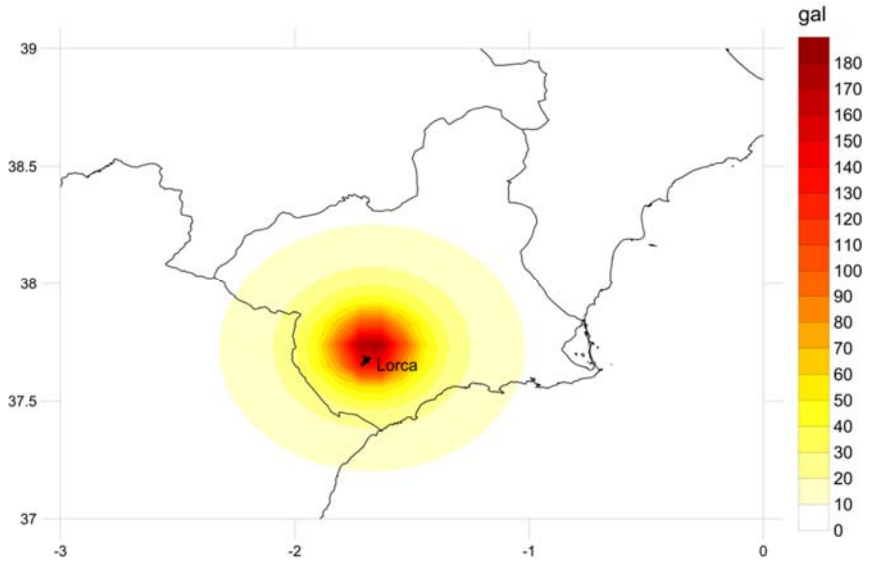


Figure 271. PGA (cm/s2) for the selected scenario

7.7.4 Exposed Assets

Updated cadastral information is available for Lorca (MHAP, 2013) with a building by building resolution level. Since the information was generated for cadastral and tax purposes, several properties other than buildings such as terraces, squares and balconies are originally included. Initially, a total of 42,062 elements were included in the database. After a depuration process, intended to include only the buildings, only 17,017 elements remained; in this process, the buildings classified as ruins (before the 2011 earthquake) by the cadastral office were also removed. The cadastral information contains data about the geographical location and number of stories of each building. Building footprints were compared with an aerial image and 599 additional elements were included in the database for a total of 17,616 buildings. Most of the buildings in Lorca are classified as low-rise from a structural point of view; i.e., buildings of 1 to 3 stories. Figure 272 presents the geographical distribution of the number of stories attribute

while Figure 273 presents the building classes. More maps with information related to exposure characteristics are presented in Annex 20.

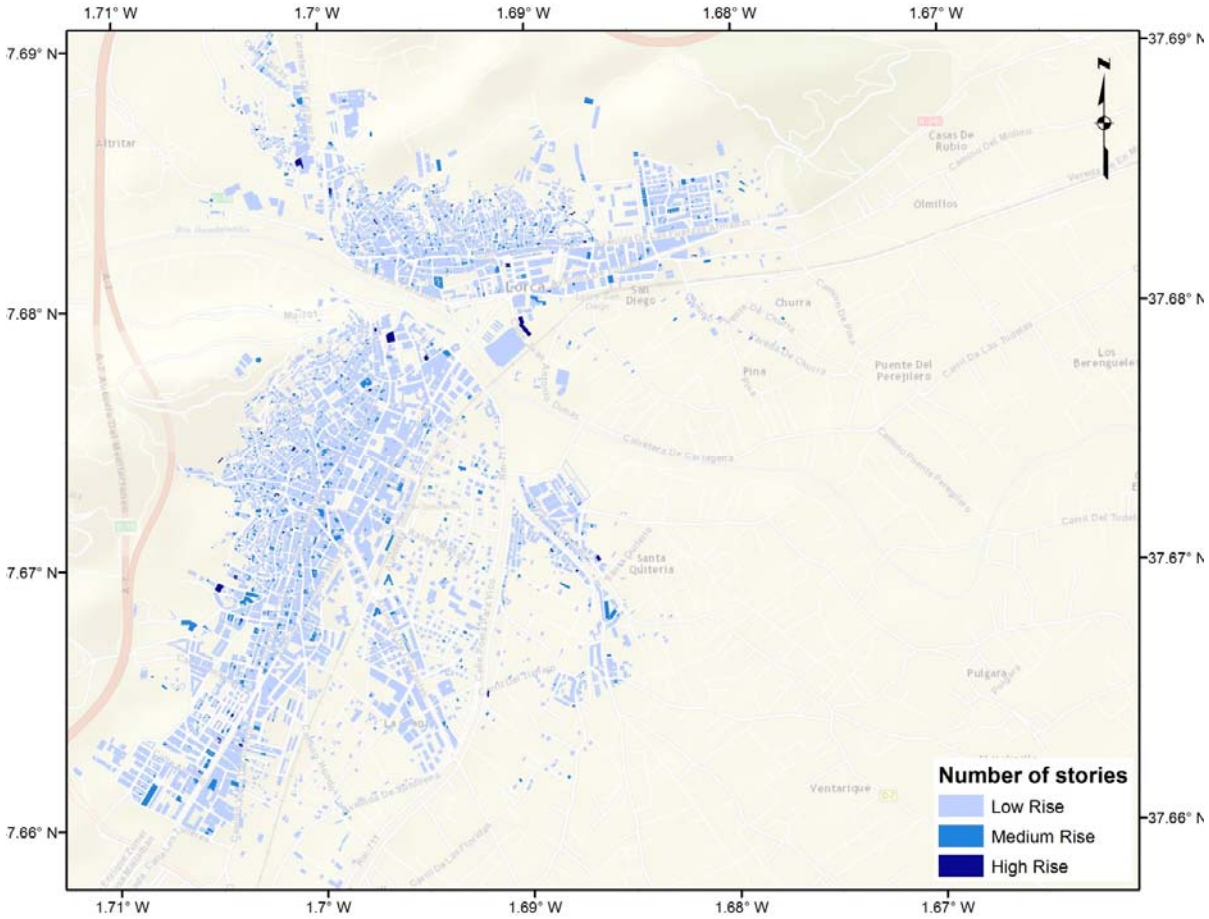


Figure 272. Number of stories distribution for Lorca

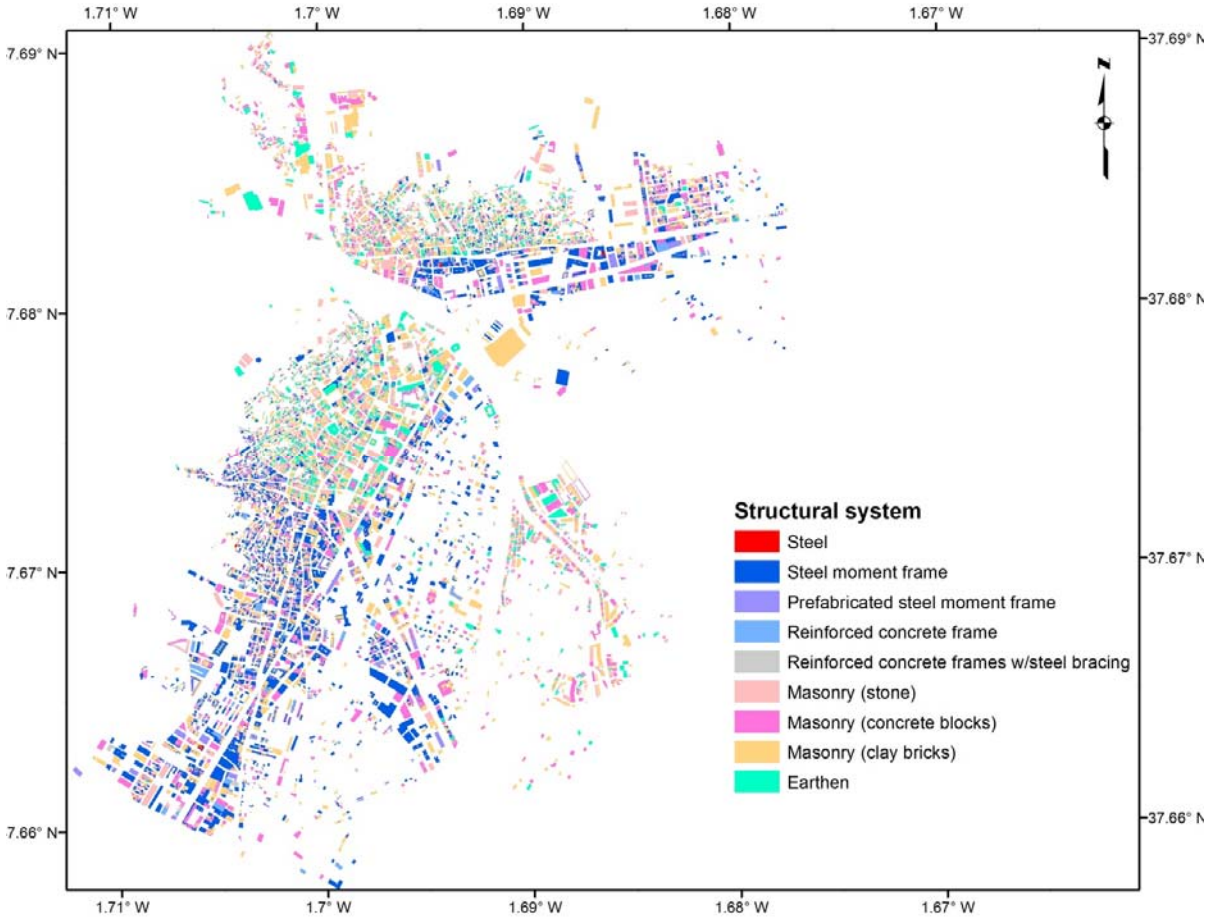


Figure 273. Building class distribution for Lorca

From Table 17 it can be seen that most of the buildings in Lorca are made of masonry, concentrating more than 60% of the total both in number and in exposed value. Moreover, waffle slab buildings constitute the majority of the R/C structures in the city (more than 20% of the buildings in the city).

Table 17. Summary of exposed assets statistics for Lorca, Spain

Building class	Number of elements	% of dwellings	Exposed value	% of exposed value
Earthen	1,972	11.19	774.1 €	11.63
Stone masonry	1,777	10.09	620.1 €	9.31
Brick masonry	3,757	21.33	1,347.1 €	20.23
Masonry walls and R/C slabs	3,514	19.95	1,352.1 €	20.31
Stone and brick blocks	1,953	11.09	739.7 €	11.11
Steel buildings	177	1.00	103.0 €	1.55
R/C frames with steel braces	170	0.97	86.9 €	1.30
Pre 1995 R/C frames	2,346	13.32	846.4 €	12.71
Prefabricated R/C structures	703	3.99	255.5 €	3.84
Post 1995 R/C frames	1,247	7.08	533.5 €	8.01
TOTAL	**17,616**	**100**	**6,658.2 €**	**100**

7.7.5 Vulnerability of the Exposed Assets

Vulnerability functions are a description of the variation of the first two statistical moments of loss with respect to the hazard intensity. A Beta probability distribution function is assigned and, in this case, the mean value and the standard deviation correspond to the mentioned statistical moments. Once this distribution function is computed, all the parameters required to compute risk in a probabilistic way are available (Ordaz, 2000). This approach is compatible with the probabilistic risk assessment approach selected for the study. Each of the building classes has an associated vulnerability function. The replacement cost of each asset is needed to quantify the expected losses in monetary units since what it is obtained at each intensity level is the ratio of the repair cost relative to the total value of the building. A total of 22 vulnerability functions were used in the analysis, which have been developed for the Global Risk Model by CIMNE et al. (2013) and included in the Global Assessment Report on Disaster Risk Reduction 2013 (UNISDR, 2013).

Figure 274 shows the different vulnerability functions from where it is clear that some building classes, especially those made of unreinforced masonry, are far more vulnerable in seismic terms than others, having for the same intensity level a higher associated MDR. The height of the structures is included in the analysis through three different categories: low-rise (L) for buildings between 1 and 3 stories, medium-rise (M) for those that have 4 to 7 stories and high-rise (H) for 8 and more.

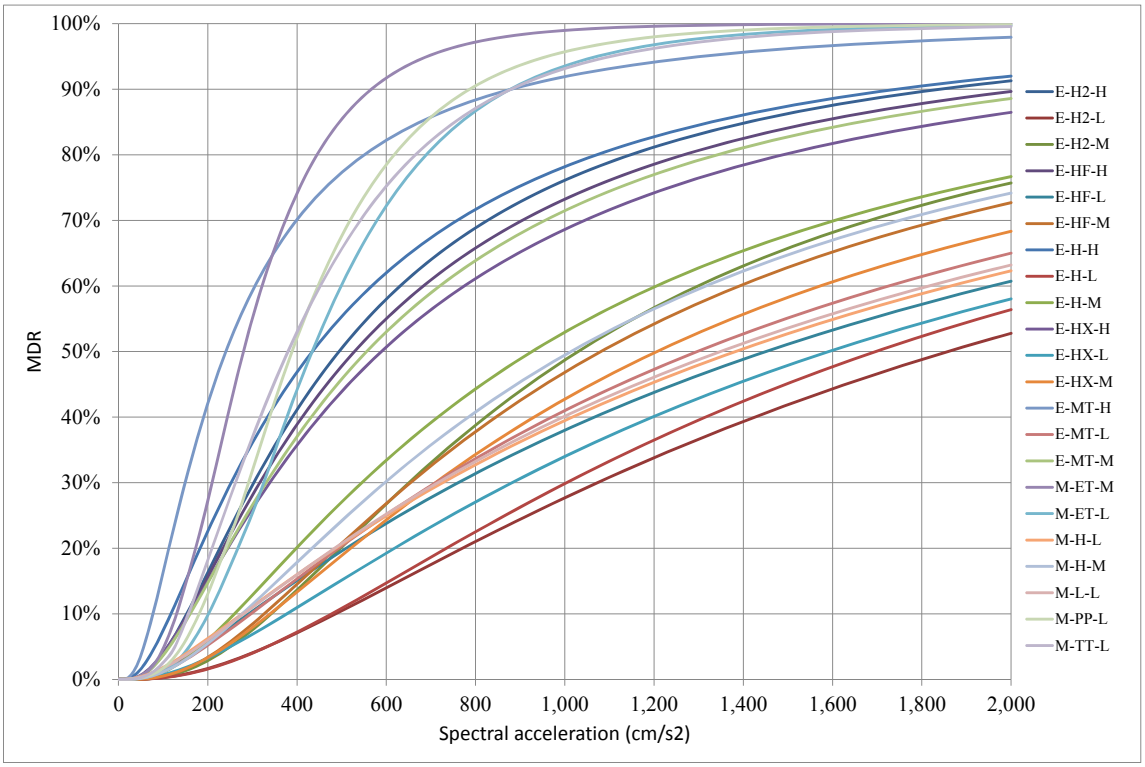


Figure 274. Seismic vulnerability functions used in Lorca

7.7.6 Physical Risk Results

In the case of a single scenario approach, the mean damage ratio (MDR) for each building is obtained and aggregated for all the buildings of the city. Results can be disaggregated in terms of building classes to see which classes concentrate higher risk levels.

Table 18 shows the risk results in terms of the aggregated MDR for all the building classes of Lorca considered in this study; from this, it is clear that the masonry building classes concentrate the higher physical risk values. Furthermore, it can be seen that the building class with higher MDR corresponds to earthen structures, which have proven to have poor performance under the seismic demand due to the poor construction practices and materials. Masonry structures have the highest MDR values, showing the fact that the stone masonry buildings present the highest risk. R/C slabs also have an important contribution to the modeled losses due to their high seismic vulnerability. According to the simulated scenario, a global MDR equal to 8.2% is expected for the buildings of Lorca, which in monetary units and using the replacement cost approach selected for this study corresponds to a total 546.5 million of euros of direct losses.

Table 18. MDR by building class in Lorca

Building class	Damage cost (millions €)	MDR
Earthen	172.8	22.3%
Stone masonry	79.4	12.8%
Brick masonry	75.0	5.6%
Masonry walls and R/C slabs	94.7	7.0%
Toledo masonry	73.8	10.0%
Steel buildings	3.2	3.1%
R/C frames with steel braces	3.2	3.6%
Pre 1995 R/C frames	21.7	2.6%
Prefabricated R/C structures	13.2	5.2%
Post 1995 R/C frames	9.4	1.8%
TOTAL	**546.5**	**8.2%**

According to the official post-earthquake survey, the damaged buildings were classified in four categories: 1) habitable, without significant damage; 2) with restricted access due to non-structural damage endangering the safety of the occupants; 3) with forbidden access because retrofitting actions were required; and 4) buildings with mandatory demolition orders. A total of 7,852 buildings were inspected, accounting for 44.5% of the buildings in Lorca, and it was observed that 19% of those did not suffer any significant damage.

In order to compare the observed with the simulated damage, MDR levels were set for the different damage categories. It is assumed that buildings need a demolition order if MDR is higher than 40%; have forbidden access if MDR is between 20 and 39.9%; have restricted access if MDR is between 10 and 19.9%; are habitable if MDR is between 6 and 9.9%; and have no damage if MDR is lower than 6%. According to these levels, the statistics for all buildings in Lorca is presented in Table 19. Figure 275 presents the geographical distribution of the MDR along Lorca.

Table 19. Damage categories statistics from the simulated scenario

Damage category	MDR (%)	Number of buildings	% of buildings
No damage	0.0 - 5.9	3,206	18.2
Habitable	6.0 - 9.9	8,904	50.5
Non-structural damage	10.0 - 19.9	3,606	20.5
Structural damage - forbidden access	20.0 - 39.9	1,897	10.8
Demolition order	>40.0	3	0.0
TOTAL		**17,617**	**100**

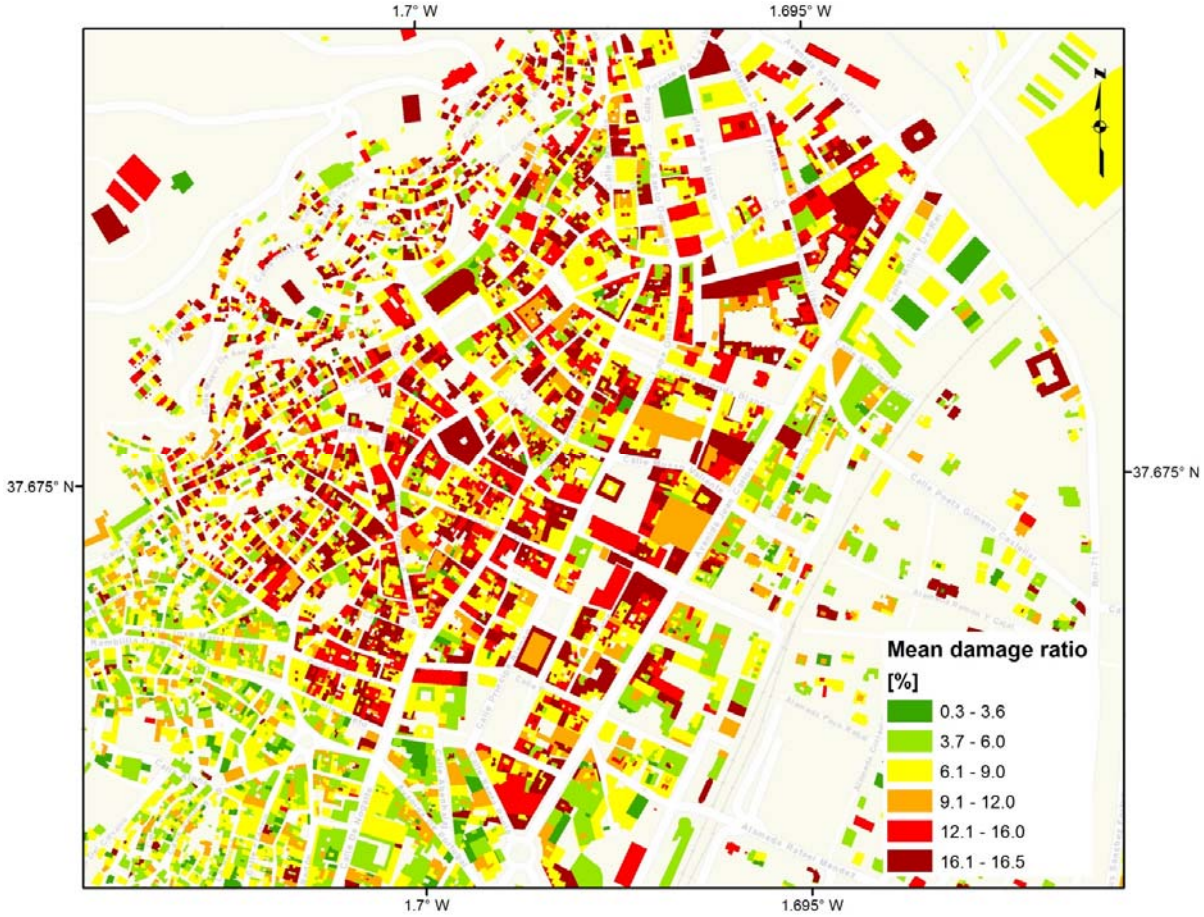


Figure 275. MDR distribution in Lorca's historical center

The percentage values of the simulated scenario are similar in all damage categories with the exception of the buildings with demolition order. In Lorca many buildings were not demolished because they presented a high level of damage but due to social, institutional and insurance reasons. This is important to bear in mind since after a disaster event there are decisions made not necessarily following technical reasons but economic and urban planning ones. Disaster events may trigger economic boost initiatives, generate new open public space areas and/or stock replacement (even more when resources are available through an insurance consortium). Those actions are not predictable since they depend in each case on the economic circumstances of the event's occurrence.

Finally, earthquake risk models at urban level provide overall estimations that can be useful for decision-makers in terms of required resources and expected damage of the portfolio even if the exact location cannot be established. Therefore, if the results are mapped, a building by building resolution level risk assessment can be misleading since the simulated results could be interpreted as an exact prediction for each building, whilst they only represent mean values. Therefore, results in the best case should be grouped by categories, such as building classes, neighborhoods, counties, etc.

7.8 Manizales, Colombia

7.8.1 Introduction

This final case study constitutes the most complete and updated local case that has been calculated using the CAPRA Platform. Located in the Central Cordillera, Manizales has high level hazard not only in terms of seismic hazard but in terms of floods, volcanoes and landslides where a comprehensive and detailed approach was selected.

This section presents a summary of a set of studies developed under the framework of an Inter-institutional project where also, the Universidad Nacional de Colombia in Manizales has been a center of excellence of the Integrated Research of Disaster Risk, IRDR program. The aim of the project was to quantify in probabilistic terms, the physical risk not only to know the value of AAL or PML but to develop tasks associated to the hazard and risk assessment. For example, a local seismic hazard assessment has been conducted at bedrock level to update and harmonize the seismic microzonation of Manizales to the national earthquake resistant building code (NSR-10), but, besides this, both inputs (hazard at bedrock level and the seismic microzonation) were later used for a fully probabilistic risk analysis in both, the building stock and the water and sewage network with the purpose of financial risk transfer through insurance or another risk mechanisms (Cardona, 2009; Marulanda et al., 2008; SELA, 2010). Another interesting and innovative application has been the developing of land use planning measures that directly and implicitly account for the risk level, in this case for the case of landslides.

7.8.2 Purpose of the Risk Assessment and Resolution Level

As mentioned in the introduction, all the results presented in this section are part of a detailed study in terms of hazard, exposure and risk conducted in Manizales, Colombia. The city can be seen as a worldwide example in disaster risk management because, since a tax of 2.5‰ of the property value is paid by its citizens for disaster risk mitigation studies or works. Though it has not been easy to achieve, it presents a clear example of political will, gained only by making understandable the risk that the city faces. This constitutes a very interesting case when the expected outputs of the project in terms both of selected methodology and expected results were defined before starting it; that is, the question to be answered by the risk analysis was previously asked and understood, one of the key aspects of successful risk assessments (GFDRR, 2014).

Topography in Manizales is a challenge and most of the buildings and infrastructure is either located in or exposed to high slope areas; to account for this in a proper manner in the hazard and subsequent risk studies, a high resolution level is needed to be chosen which, of course, requires detailed base information.

Urban planning had a very relevant role in this project and the landslide hazard and risk assessment was directly related to the topic. The results obtained in the framework of this project were used in the land use planning through the Territorial Ordering Plan (POT) of Manizales and constitutes the first known case where, risk, has been directly addressed and quantified while implicitly regulated through a mandatory document with the aim of reduce future risk by addressing which areas can be used and more interesting, which ones need to be intervened and improved for allowing it future use.

The purpose of part of study consists on the detailed evaluation of natural risk in the city for developing a comprehensive disaster risk reduction strategy covering topics such as retrofitting of existing structures, update of the current subsidized earthquake insurance scheme (Marulanda et al., 2014), probabilistic benefit/cost analysis of structural interventions and land use planning.

Additional to this, through a set of training sessions in the different modules related to the hazards, exposure, vulnerability and risk of the CAPRA Platform, a group of both experts and students became familiarized with the concepts and tools related to probabilistic risk analysis; this with the aim of having a center of excellence in the topic within the National University and expand the experts' community on the topic so that future assessments and updates can be easily conducted in the short and medium term.

7.8.3 Hazard Assessment

7.8.3.1 Seismic Hazard

A probabilistic seismic hazard assessment at bedrock level to be later used as part of the input data for the seismic microzonation of the city has been conducted at local level in Manizales following the requirements included in the national earthquake resistant building code NSR-10 (MAVDT, 2010). For this case, local calibrated ground motion prediction equations (GMPE) were used in the analysis (Bernal et al., 2014a) and the output results consisted on a set of stochastic scenarios from where besides being later used in the risk analysis, hazard maps for different return periods, such as the one shown in Figure 276 were obtained.

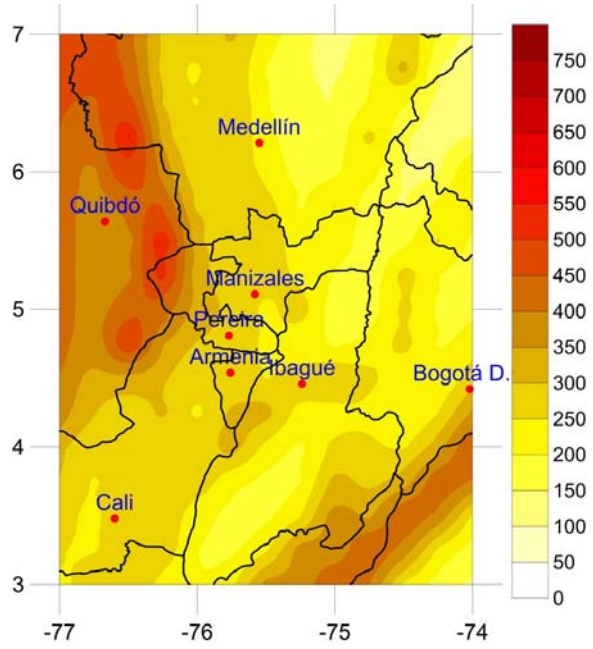


Figure 276. Seismic hazard map for Manizales; RT: 975 years, PGA (cm/s^2)

Following the procedure proposed by Bernal et al. (2014b), different homogeneous soil zones were identified and for each of them a unique spectral transfer function was defined. Figure 277 presents the fundamental vibration period of each soil zone in Manizales.

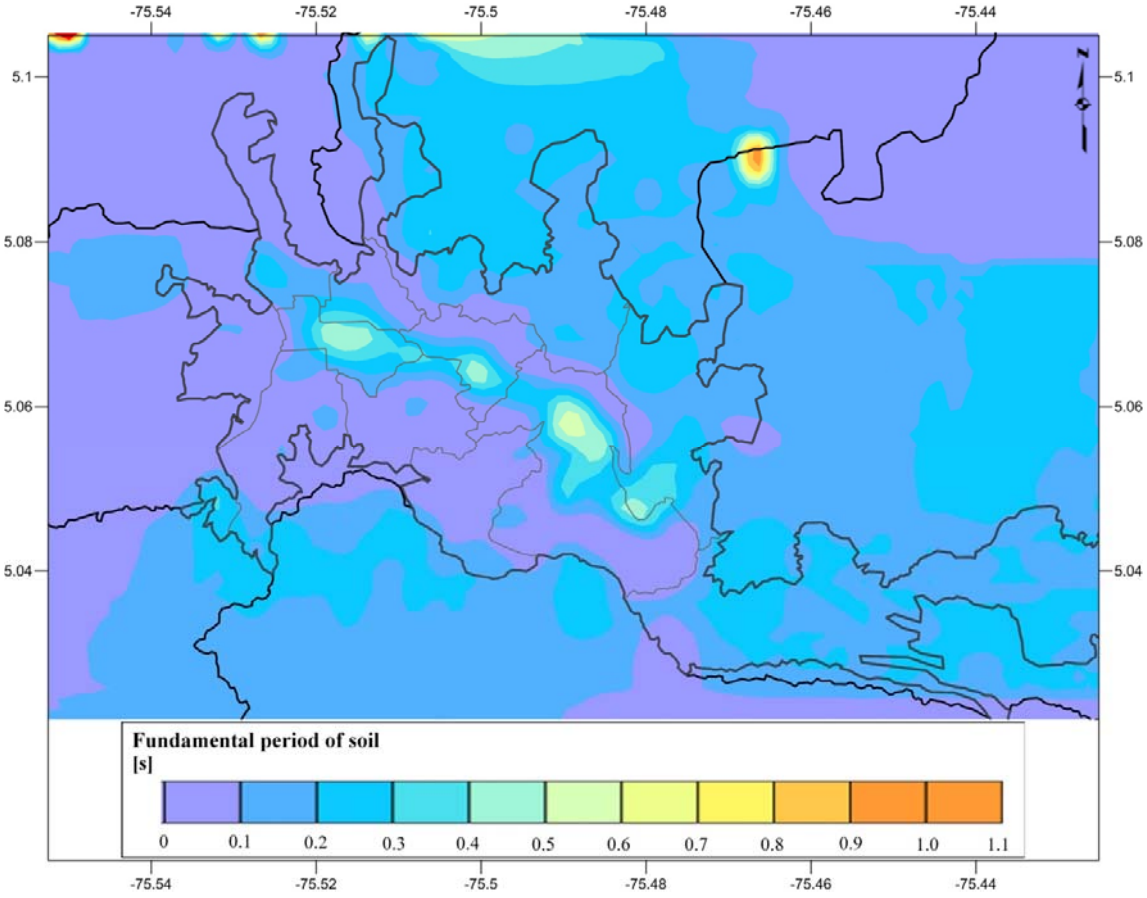


Figure 277. Fundamental vibration period of the soil zones in Manizales (sec)

7.8.3.2 Rainfall and Flood Hazard

A detailed rainfall analysis was performed for the Chinchiná basin where, from rain gauge records for more than 30 years in several meteorological stations, precipitation-area-duration-frequency (PADF) curves were generated. From them, a set of stochastic rainfall scenarios was generated such as the ones presented in Figure 278.

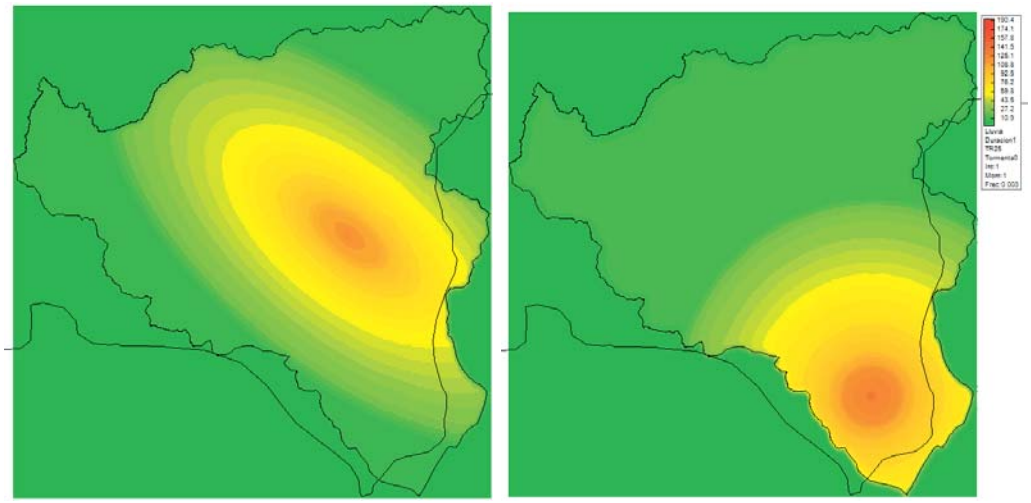


Figure 278. Stochastic rainfall scenarios (mm)

Using the rainfall scenarios, hazard maps for any return period and for selected rainfall duration were generated such as the one presented in Figure 279.

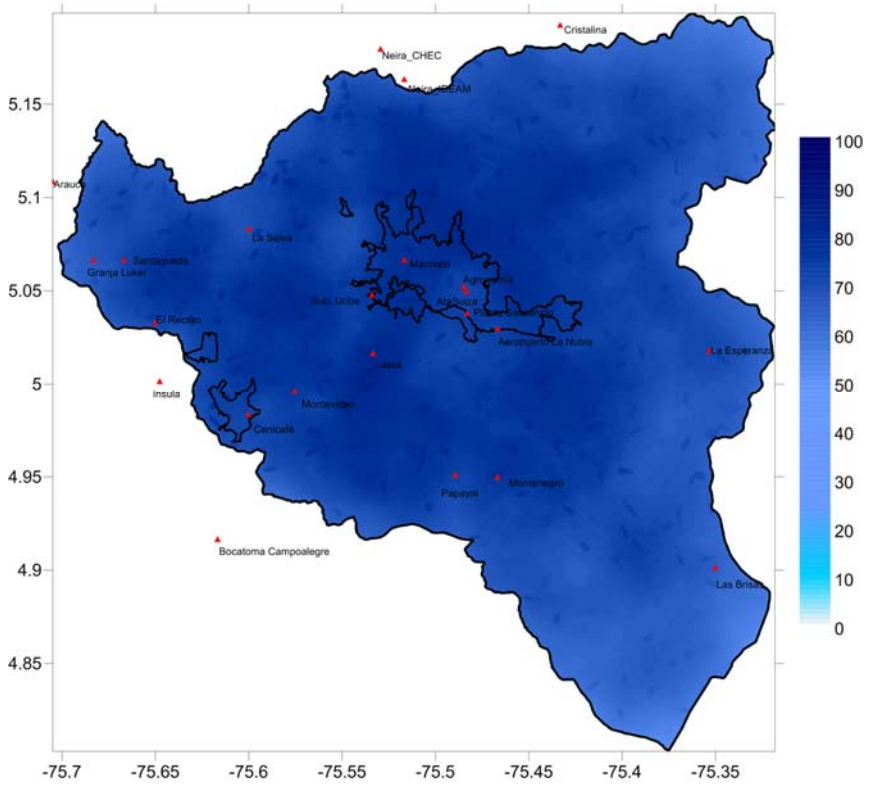


Figure 279. Rainfall hazard map. TR: 75 years; 1 day (mm)

7.8.3.3 Volcanic Hazard

Ruiz Volcano is located 30 kilometers south east away from Manizales and several historical eruptions have affected and reflected through disruptions in the city. Because of the characteristics of the volcano, the effects that may affect Manizales are mostly related to the ash fall. Following an innovative probabilistic volcano hazard analysis, a set of stochastic scenarios for ash fall was generated based on historical information and activity indexes. The geographical coverage, pitch and extent of each scenario, considers in a comprehensive manner the wind effects that, together with the eruption magnitude, has to do with the way this hazard intensity manifests. Hazard calculations were done using the software VHAST (Bernal, 2012)

Figure 280 presents a ash hazard map for Manizales where can be seen, that the expected ash thickness in the city is between 10 and 1 centimeters, that in terms of vulnerability can be translated in moderate-high risk for light cover/roof buildings and have consequences in public health issues.

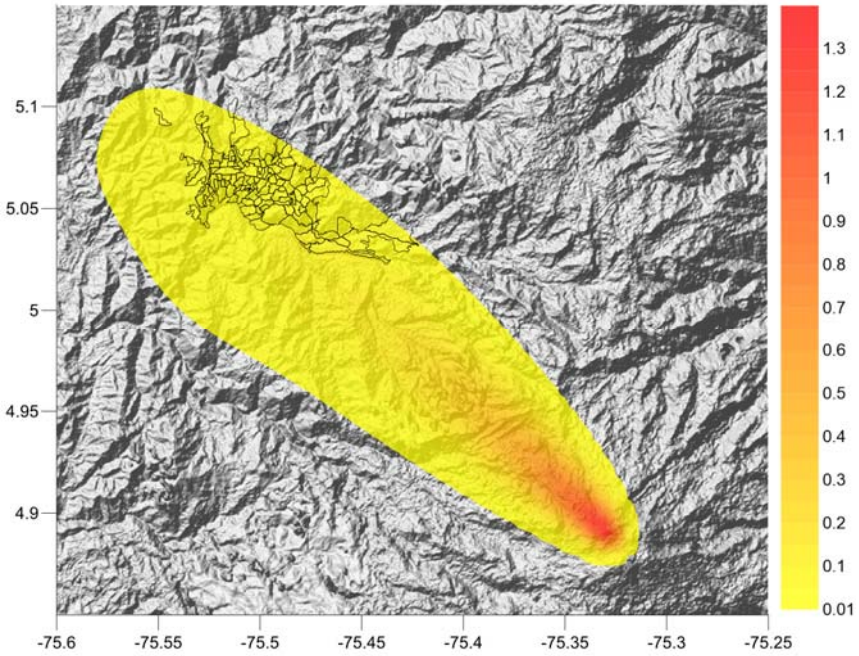


Figure 280. Volcanic ash thickness hazard map (m)

7.8.3.4 Landslide Hazard

A landslide hazard and risk analysis was performed using detailed information in terms of input data such as land use, topography and geological information for the city. Hazard was quantified in terms of susceptibility both at geographical (polygons) and exposed dwellings that can be mapped with purposes of urban planning. Hazard has been also quantified in terms of probability of occurrence in 100 years. On the other hand, risk in terms of economic losses due to direct damages was quantified with a detailed resolution of 5 by 5 meters as presented in Figure 281.

The concept of implicit and explicit risk was addressed in this study and, because of the characteristics of the hazard and its level of affection it can be classified in the first category. Figure 282 shows this classification.

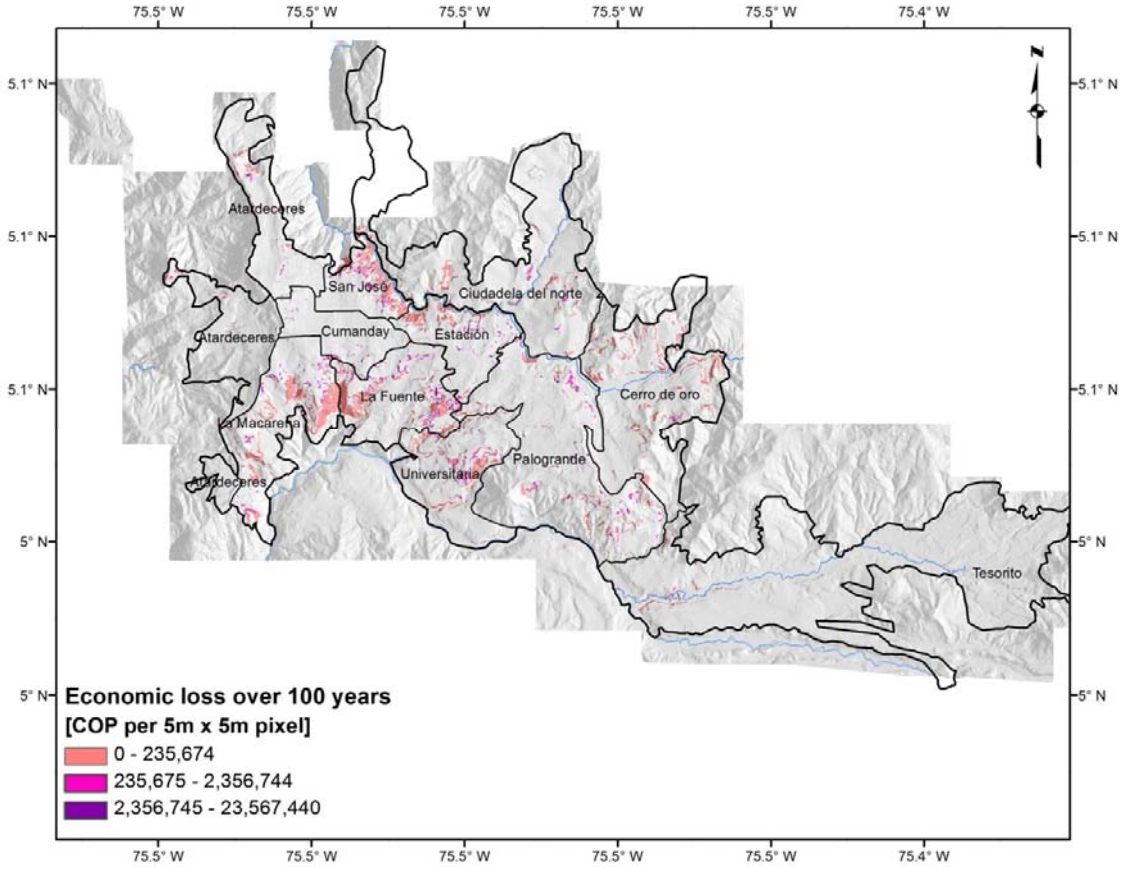


Figure 281. Expected losses due to landslides in Manizales

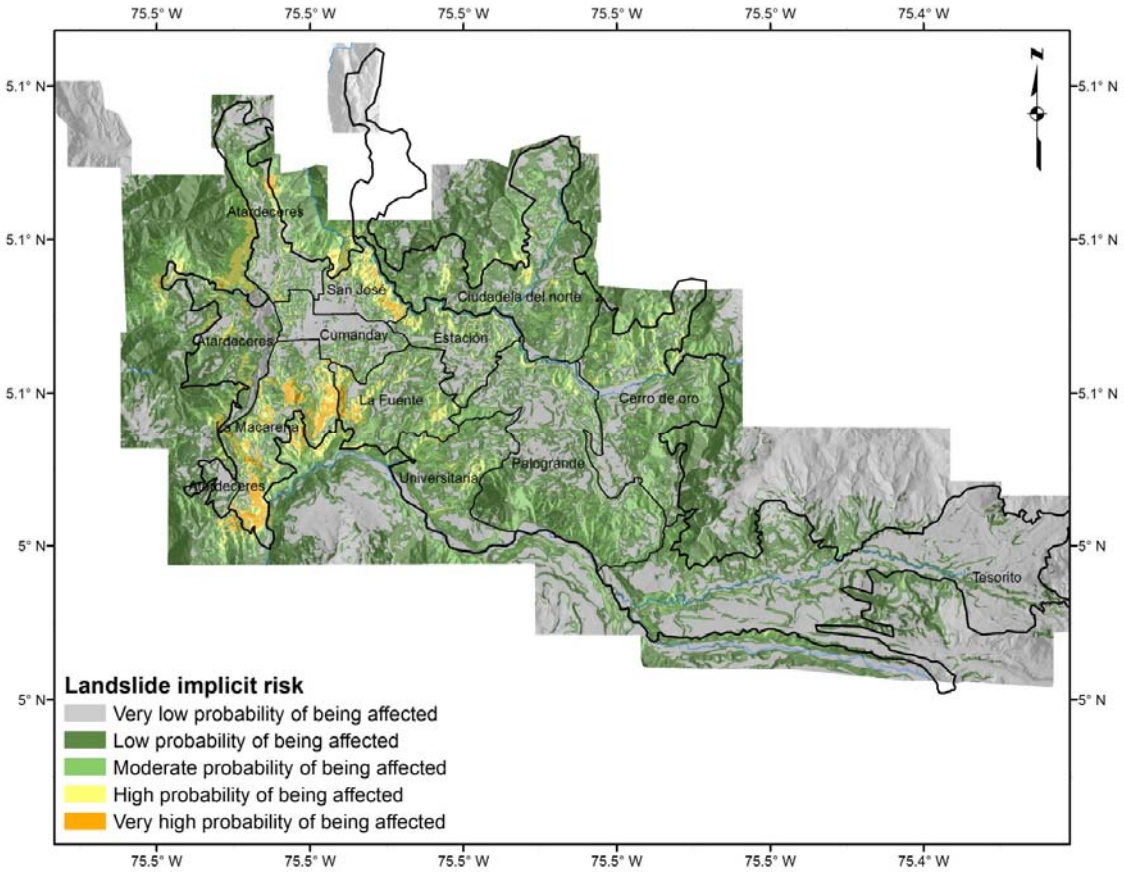


Figure 282. Landslide implicit risk level for Manizales

From the results it is clear that this is a very relevant hazard and its consideration through planning measures is important for Manizales in terms of risk reduction. More results of this landslide hazard and risk assessment for Manizales can be found in Annex 21.

7.8.4 Exposed Assets

7.8.4.1 Building Stock

The building stock in the urban area of Manizales is comprised by around 85,000 dwellings. Cadastral information is up to date both in terms of economic appraisal of each element and in terms of relevant structural characteristics. Most of the elements in the database have residential use, not ignoring an important participation of the commercial elements in some important areas of the city. Figure 283 presents the geographical distribution of the exposed elements classified by main use while Figure 284 presents the same information in terms of number of stories.

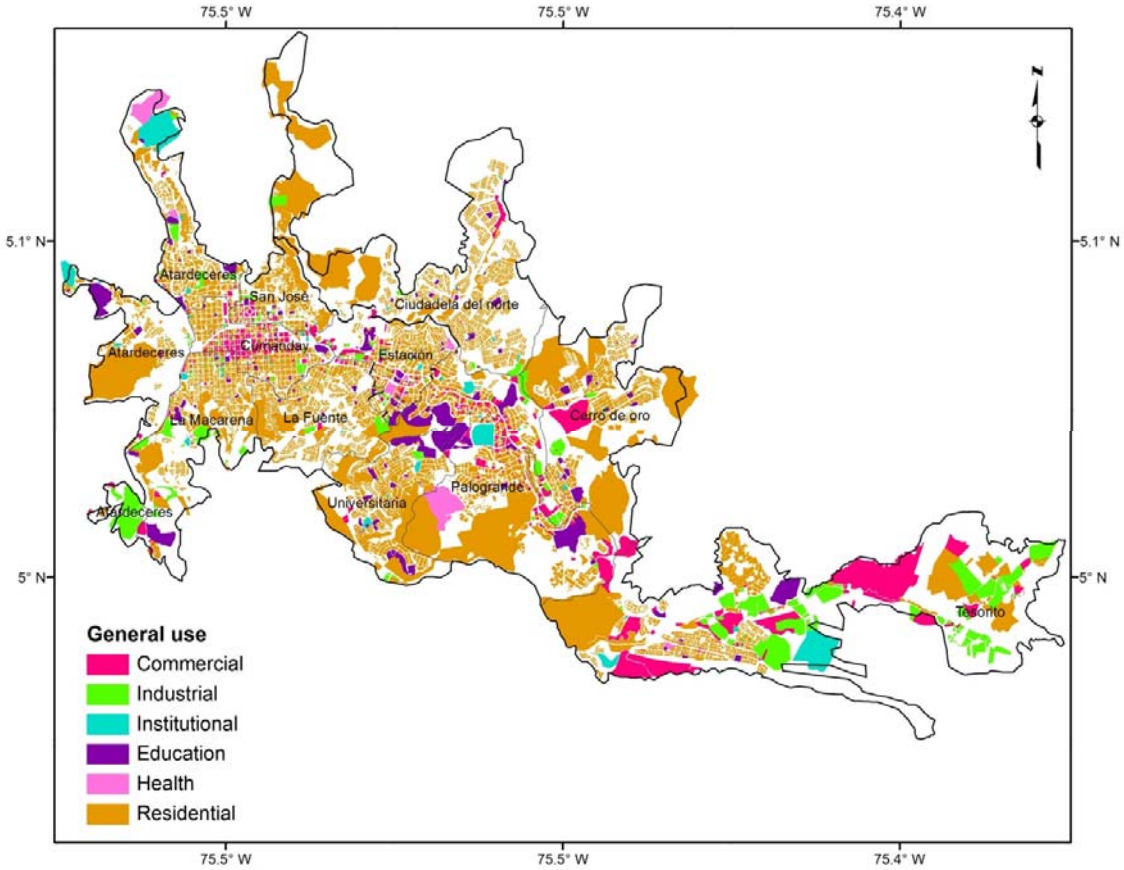


Figure 283. Main use of the building stock of Manizales

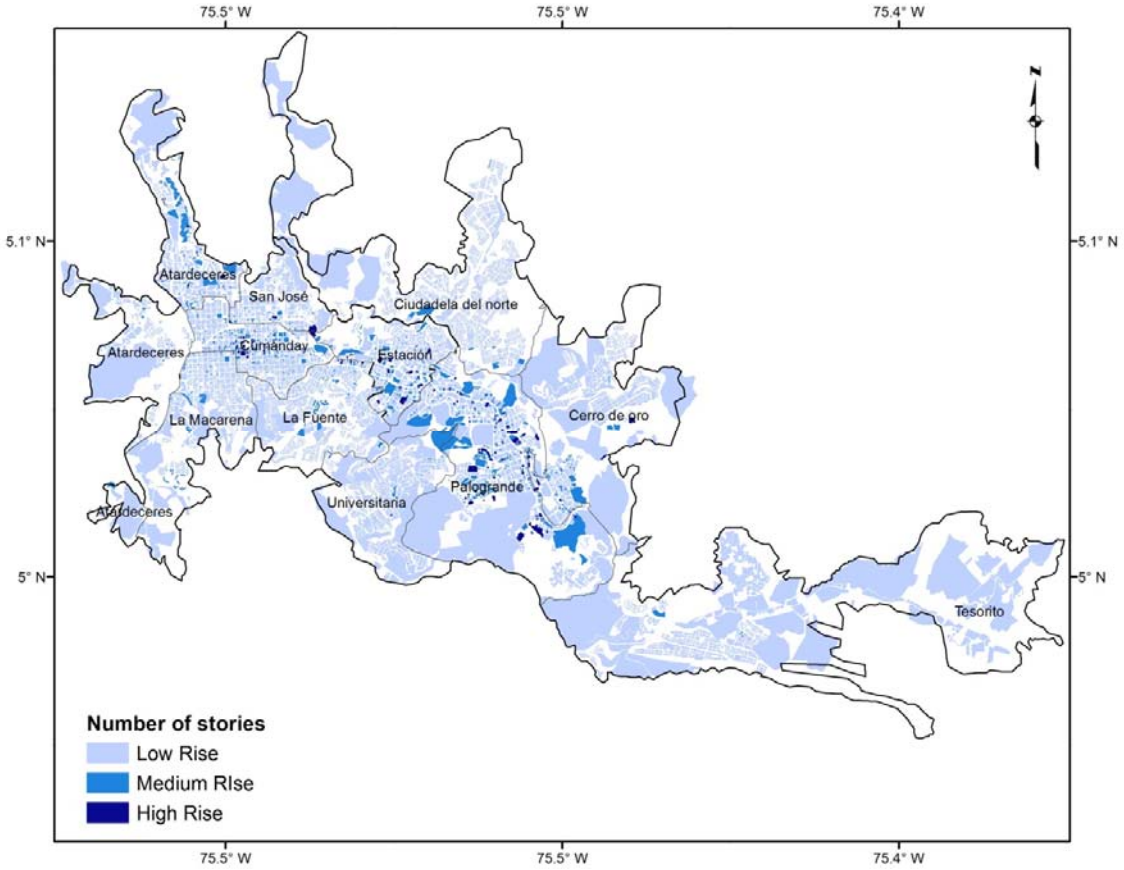


Figure 284. Number of stories category for the building stock of Manizales

7.8.4.2 Water and Sewage Network

For the probabilistic seismic risk assessment of the water and sewage network of Manizales, a database of exposed assets was developed using the information of *Aguas de Manizales* which allowed an identification and characterization of the elements through information related to their material, diameter and age among others. This was later used for the assignation of a unique vulnerability function, defined in terms of peak ground velocity which has been observed to be the physical parameter that best correlates the seismic damage for this kind of elements. Figure 285 presents the geographical distribution for the main water network in terms of material.

The same identification and characterization of other elements of the network ranging from storage tanks to administrative buildings is also available and was considered in the analysis.

Seismic risks results for the water and sewage network of Manizales besides quantifying risk in a rigorous manner, gave important information to the company in the framework of exploring other alternative risk transfer mechanisms to be able to put into consideration, other available options different to the traditional insurance policies.

Finally, knowing not only the risk results in terms of monetary losses but in terms of repair rates per kilometer for the pipeline network, helped to design maintenance and expanding plans of the company by deciding which are the more convenient material and construction practices in terms of seismic risk; this, not only to have lower monetary losses but to guarantee that the service is available to the citizens in case an strong earthquake strikes the city.

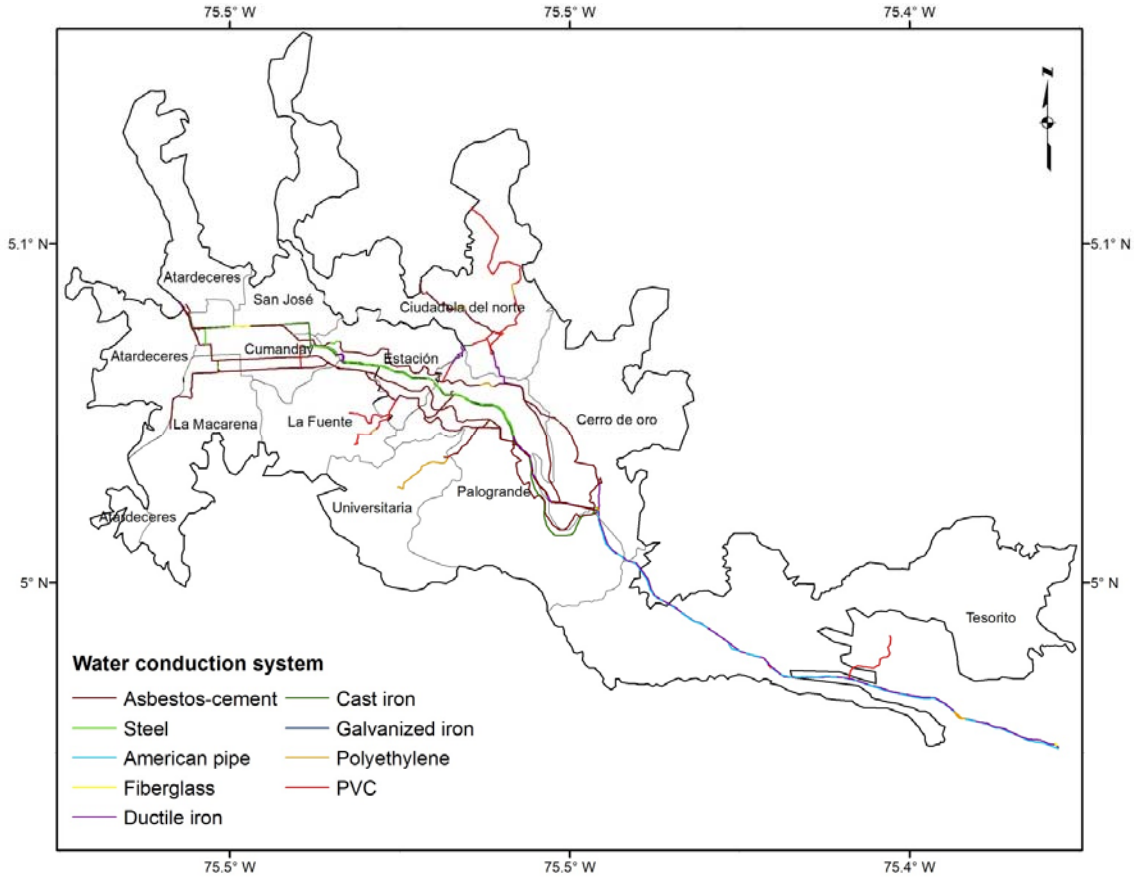


Figure 285. Pipe material for the main water network of Manizales

7.8.5 Vulnerability of the Exposed Assets

The development of vulnerability functions in Manizales represented a big challenge since they needed to be associated to different hazards in order to correctly make estimations of the possible future losses in the city due to the occurrence of natural events. Even more, since different infrastructure elements were considered at different stages of the analysis, for example buildings, tanks and pipelines, specific functions were required.

It is important to mention that depending the kind of element for which the physical vulnerability is being assessed, even when dealing with the same hazard, the physical measure (intensity) that better correlates the expected damage. An example of this can be shown through the seismic vulnerability functions of reinforced concrete frames, which damage is better correlated through the spectral acceleration as presented in Figure 286 while for the pipelines, the seismic vulnerability functions are defined in terms of the peak ground velocity as presented in Figure 287. It is evident that, of course, the hazard needs to be quantified in terms of the relevant and better correlating physical measures of each hazard.

Vulnerability functions for the pipelines of the water and sewage network take into account different characteristics in terms of age, material, diameter and soil conditions where the pipe lie; Annex 21 presents example of this changes in the parameters for concrete pipelines. All this information was possible to gather due to the excellent and updated database of exposed elements collected and continuously updated by *Aguas de Manizales*. This is a clear example of how, data gathering and update constitute a first and very important step in risk assessment. Even more, in this case where the information was not gathered specifically for this study but for the normal operating conditions of the Company.

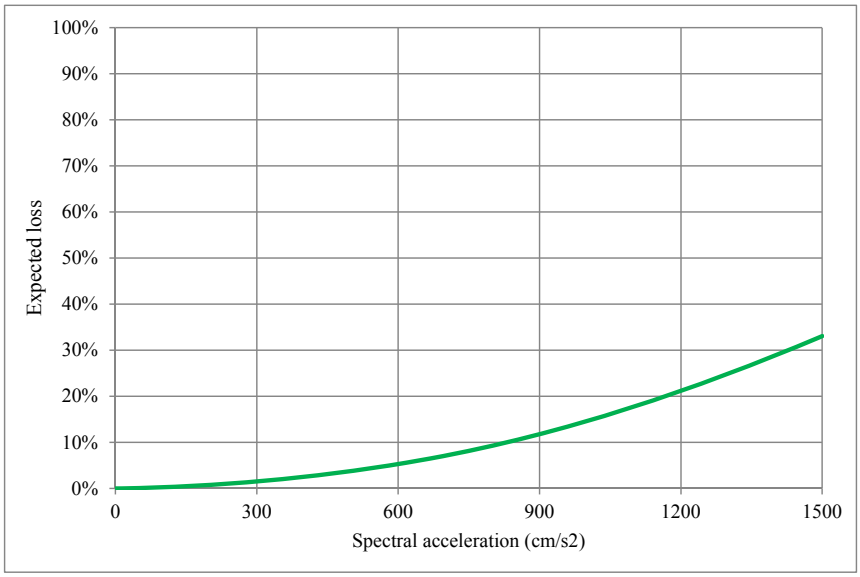


Figure 286. Vulnerability function for 5 stories reinforce concrete buildings

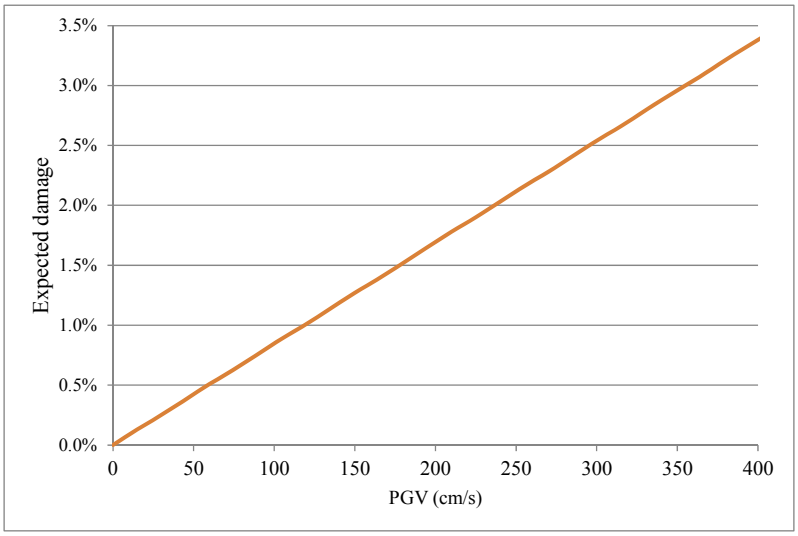


Figure 287. Seismic vulnerability function for concrete pipelines

7.8.6 Physical Risk Results

Figure 288 presents the LEC for seismic risk considering the building stock of Manizales, while Table 20 presents a summary of the results showing also the AAL and PML for selected return periods.

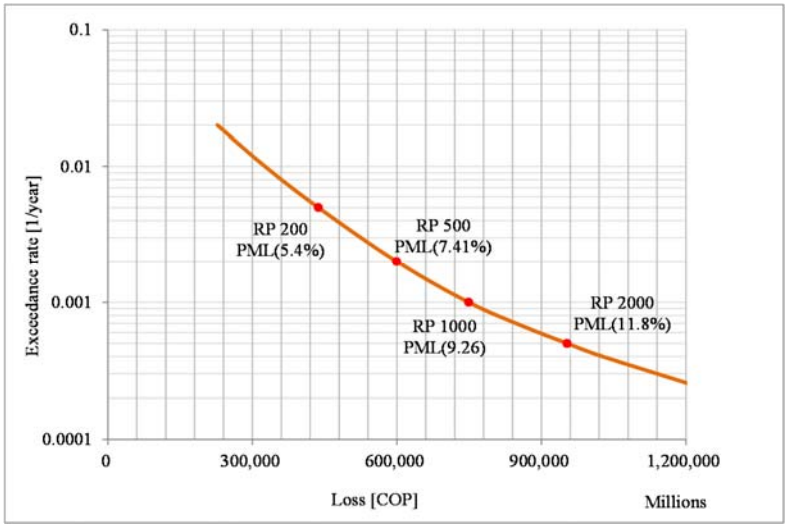


Figure 288. Earthquake loss exceedance curves for Manizales[3]

[3] 1USD is approximately 1,950 COP

Table 20. Summary of physical seismic risk results for Manizales

Results		
Replacement value	COP x10^6	8,090,792.54
Average annual loss	COP x10^6	19,479.87
	‰	2.408
PML		
Return period	Loss	
years	COP x10^6	%
200	$436,872.23	5.40
500	$599,641.24	7.41
1000	$749,084.37	9.26
2000	$953,506.42	11.79

On the other hand, Figure 289 and Figure 290 present the geographical distribution of the expected damages and losses in the building stock and main sewage pipeline system in the city center. For the first, results are presented in terms of relative AAL as in the previous cases while for the second one, results are presented in terms of repair rate by kilometer (RR/Km) that is a useful metric in said field.

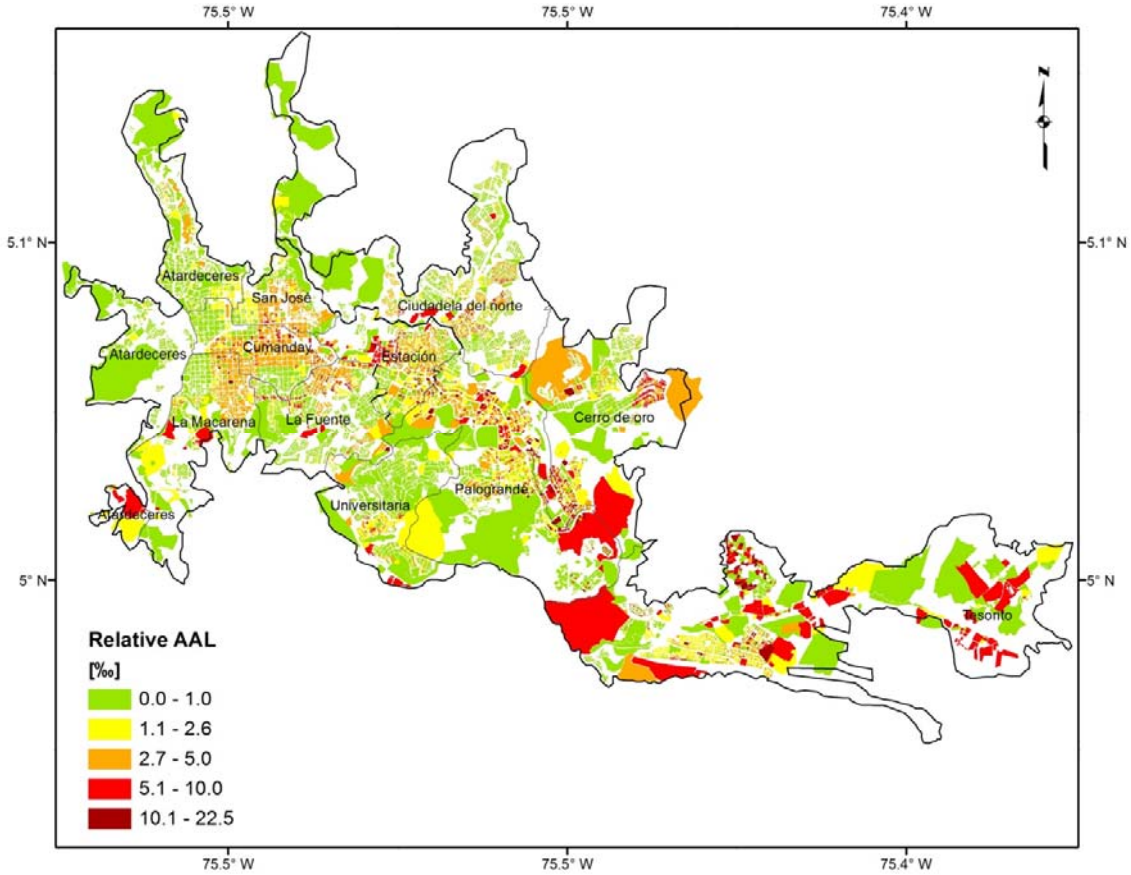


Figure 289. Relative (‰) AAL loss distribution for the building stock of Manizales

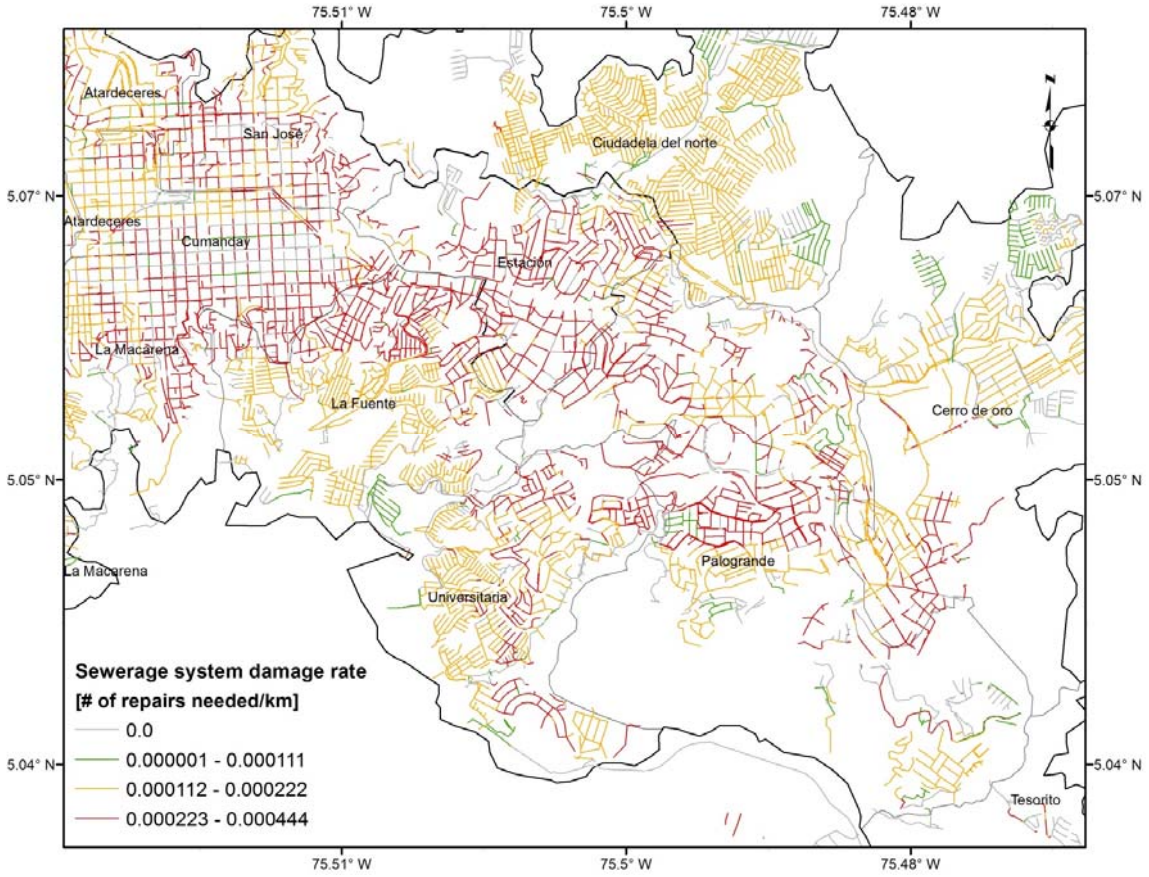


Figure 290. Average annual repair rate by kilometer distribution for the sewage network in downtown Manizales

7.8.7 Cross Subsidy Insurance Scheme

Manizales has one of the real application and results' use from probabilistic risk assessment that has been used and promoted from over 5 years. This case is related to the insurance of the private buildings where, using the results of a fully probabilistic risk assessment a subsidized scheme exists where, owners that voluntarily underwrite policies to cover their assets, also pay for the insurance of those owners who, because of their economic conditions, are not in the position to pay for it. Insurance premiums are charged together with the property taxes in the city, which are charged on an annual basis and, of course, are related to its cadastral value. If a homeowner wants to buy the insurance, has to acquire also the portion that covers the poorest socio-economic layers.

In this case, the local government is not insuring the citizens but serving as an intermediate in the acquisition of said instrument. Of course, the local government is a beneficiary of this scheme by knowing that a good part of the possible losses in case of an earthquake occurring in the city are covered. On the other hand, this scheme constitutes an interesting case from the homeowner perspective since when insurance is underwritten in this form the premiums are lower if compared with the traditional individual basis. As was explained in the case of Bogotá, zones and assets in Colombia are classified for socioeconomic purposes in 6 layers; 1 being the poorest and 6 being the richest. In general terms, 1 and 2 layers correspond to the low income group, 3 and 4 layers correspond to the middle income group and 5 and 6 layers correspond to the high income group. The subsidize scheme is intended to cover the future losses of the low income group by the participation of the middle and high income ones. Figure 291 presents a summary of the insurance scheme from where it can be seen that in all cases exist a retention level captured trough a deductible that for the low income group is to be covered by the Municipality (local government); then, from that deductible level to a defined PML, risk is transferred in a classical insurance scheme with the only difference that, even by not underwriting any policy, the low income layer transferred losses are covered. For this scheme to work, a minimum participation (having again in mind that is a voluntary insurance) of the medium and high income level is required, and also, the higher the participation, the lower the overall risk premium. More details about this scheme can be found in Marulanda et al. (2014).

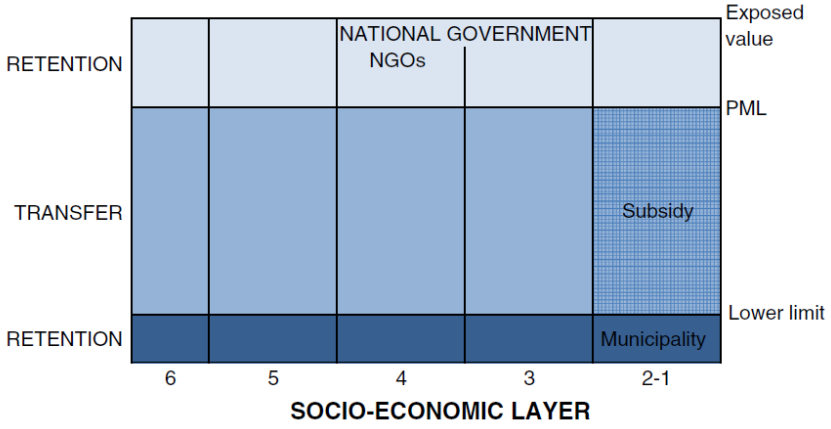


Figure 291. Subsidized insurance financial scheme for Manizales (From Marulanda et al. 2014)

Because building stock suffers changes with the time and the overall characteristics of the exposed elements and of course its characteristics are dynamic, it is important to update these studies on a regular basis when new information in terms either of hazard, exposure and/or vulnerability becomes available. In this case it is clear those important changes in terms of the hazard are mostly related to the inclusion of a new, updated and harmonized microzonation study not leaving aside, the improvements and refinements in the exposure database that consider more than 5 more extra years if compared with the original one used to develop and implement for the first time this subsidized insurance scheme.

8 References

Abrahamson N. A., and Silva W. J. (1997), Empirical response spectral attenuation relations for shallow crustal earthquakes. Seismological Research Letters, 68 (1)

Acevedo, L. M. (2005). Escenarios de daño en Bogotá para un evento sísmico bajo un modelo probabilístico. Bogotá: Universidad de los Andes.

Aktinson G., and Boore, D. (2006), Earthquake Ground-Motion Prediction Equations for Eastern North America; Bulletin of the Seismological Society of America, Vol. 96

Alcaldía de Medellín. (2010). Geonetwork. . http://poseidon.medellin.gov.co/geonetwork/srv/es/main.home. Accessed January 12th 2013.

Amante C., Eakins B.W. (2009) ETOPO1-1 Arc-Minute Global Relief Model: Procedures, Data Sources and Analysis. NOAA Technical Memorandum NESDIS NGDC-14.

Asociación Colombiana de Ingeniería Sísmica-AIS, (2010). Estudio General de Amenaza Sísmica de Colombia. Comité AIS-300.

Ayuntamiento de Lorca (2012) "Visor geográfico seismo de Lorca del 11 de mayo de 2011", http://www.lorca.es/seismo11demayo/seismo11demayo.asp?id=1540. Accessed on January 03, 2014.

Barbat A, Carreño M, Figueras S, Goula X, Irizarry J, Lantada N, Macau A, Valcárcel J (2011a) El terremoto de Lorca del 11 de mayo de 2011. Institut Geològic de Catalunya-IGC. Barcelona.

Bear-Crozier, A. N., Miller, V., Newey, V., Horspool, N. and Weber, R. (2014). Emulating volcanic ash fall for multi-scale analysis: Development of the VAPAHR tool and application for the Asia-Pacific region for the United Nations Global Assessment Report 2015. Record 2014/36. Geoscience Australia, Canberra. http://dx.doi.org/10.11636/Record.2014.36

Bernal G. (2012). CAPRA Team VHAST. Volcanic Hazard Analysis and Simulation Tool. Part of the CAPRA Team Software Suite for natural hazards and risk assessment. http://www.vhast.org

Bernal G., Cardona O.D., Barbat A., Salgado M. (2014a). Strong motion attenuation relationships for Colombia. Proceedings of the Second European Conference on Earthquake Engineering and Seismology. Istambul, Turkey.

Bernal G., Cardona O.D., Barbat A., Salgado M. (2014b). Comprehensive site effects evaluation approach for cities and its application in Bogotá. Proceedings of the Second European Conference on Earthquake Engineering and Seismology. Istambul, Turkey.

Bernal, G. (2014a). CAPRA Team TCHM. Tropical Cyclones Hazard Modeler. Part of the CAPRA Team Software Suite for natural hazards and risk assessment.

Bernal, G. (2014b). Metodología para la modelación, cálculo y calibración de parámetros de la amenaza sísmica para la evaluación probabilista del riesgo. Tesis doctoral. Universitat Politécnica de Catalunya. Barcelona, España.

Berz, G., Kron, W., Loster, T., Rauch, E., Schimetschek, J., Schmieder, J., Siebert, A., Smolka, A., Wirtz, A. (2001) World Map of Natural Hazards – A Global View of the Distribution and Intensity of Significant Exposures. Natural Hazards 23: 443-465, 2001.

Cardona O. (2009). La gestión financiera del riesgo de desastres: Instrumentos financieros de retención y transferencia para la Comunidad Andina. PREDECAN. Lima, Perú.

Cardona O., Ordaz M., Mora M., Salgado M., Bernal G., Zuloaga D., Marulanda M., Yamín L., González D. (2014) Global risk assessment: A fully probabilistic seismic and tropical cyclone wind risk assessment. International Journal of Disaster Risk Reduction.

Cardona O., Ordaz M., Reinoso E., Yamín L., Barbat A. (2010). Comprehensive Approach to Probabilistic Risk Assessment (CAPRA). International initiative for disaster risk management effectiveness. Procedures of the 14th European conference on earthquake engineering, Ohrid, Macedonia.

Cardona O., Ordaz M., Reinoso E., Yamín L., Barbat A. (2012). CAPRA – Comprehensive Approach to Probabilistic Risk Assessment: International Initiative for Risk Management Effectiveness. Procedures of the 15th World Conference on Earthquake Engineering. Lisbon, Portugal.

Cardona O.D. (2001). Estimación holística del riesgo sísmico utilizando sistemas dinámicos complejos. Doctoral Thesis. Universidad Politécnica de Cataluña. Barcelona, Spain.

Carreño M., Cardona O., Barbat A. (2007). Urban seismic risk evaluation: a holistic approach. Nat. Hazards. 40(1): 137-172.

Carreño M., Cardona O., Barbat A. (2012). Holistic evaluation of the seismic urban risk using the fuzzy sets theory. Bull. of earthq. eng. 10(2): 547-565.

Carreño M.L., Barbat A.H., Cardona O.D., Marulanda M.C. (2014). Holistic Evaluation of Seismic Risk in Barcelona. Assessment of Vulnerability to Natural Hazards: A European Perspective. pp. 21-52. Edited by Joern Birkmann, Stefan Kienberger and David Alexander. ISBN: 978-0-12-410528-7.

Cauzzi C., and Faccioli E. (2008), Broadband (0.05 to 20s) prediction of displacement response spectra based on worldwide digital records. Journal of Seismology 12(4).

CEDERI - Universidad de los Andes. (2004). Estrategia para transferencia, retención, mitigación del riesgo sísmico en edificaciones indispensables y de atención a la comunidad del Distrito Capital. Proyecto de Reducción de la Vulnerabilidad del Estado ante Desastres Naturales . Bogotá, Colombia.

CEDERI-Universidad de los Andes. (2005). Escenarios de riesgo y pérdidas por terremoto para Bogotá D.C. Bogotá D.C, Colombia: DPAE.

CEDERI-Universidad de los Andes. (2006). Capítulo 5: Microzonificación sísmica y espectros de diseño. En Innovación e investigación tendientes a la actualización de la información sísmica de la ciudad de Bogotá (págs. 5-1 - 5-35). Bogotá, Colombia.

Center for International Earth Science Information Network (CIESIN), Columbia University, International Food Policy Research Institute (IFPRI), The World Bank, and Centro Internacional de Agricultura Tropical (CIAT). (2011). Global Rural-Urban Mapping Project, Version 1 (GRUMPv1): Urban Extents Grid. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC). http://sedac.ciesin.columbia.edu/data/set/grump-v1-urban-extents

Chiou B., Youngs R. (2008). An NGA model for the average horizontal component of peak ground motion and response spectra. Earthquake Spectra. 24(1):173-215.

Church, J. A., White N.J. (2011). Sea-Level Rise from the Late 19th to the Early 21st Century. Surveys in Geophysics, This paper is published as "Open Access" and is available as a pdf from http://link.springer.com/article/10.1007%2Fs10712-011-9119-1.

Church, J. A., White, N.J. (2006). A 20th Century Acceleration in global Sea Level Rise, Geophysical Research Letters, 33, L01602.

Church, J.A., White, N.J., Coleman, R., Lambeck, K., Mitrovica, J.X. (2004). Estimates of the Regional Distribution of Sea level Rise over the 1950 to 2000 Period. Journal of Climate, 17, pp 2609-2625.

Cid J., Susagna T., Goula X., Chavarria L., Figueras S., Fleta J., Casas A., Roca A. (2001). Seismic zonation of Barcelona based on numerical simulation of site effects. Pure Applied Geophysics. 158 (12): 2559-2577.

CIMNE, ITEC S.A.S., INGENIAR LTDA., EAI S.A. (2012) Probabilistic modelling of natural risks at the global level: Global Risk Model. Background paper for the GAR13.

CIMNE-RAG (2014). Holistic risk evaluation tool EvHo V1.0. Program for computing holistic risk at urban level. Centro Internacional de Métodos Numéricos en Ingeniería, CIMNE, Risk Assessment Group, RAG, Barcelona, Spain.

Coburn A., Spence R. (2002). Earthquake protection. Wiley. ISBN: 978-0-470-84923-1.

Cornell C, and Van Marke E. (1969) The major influences on seismic risk, in Procedures of the Third World Conference on Earthquake Engineering, Santiago, Chile.

Departamento Administrativo Nacional de Estadística – DANE (2005). Censo General 2005. Colombia.

Departamento Administrativo Nacional de Estadística - DANE (2014). Cuentas anuales de bienes y servicios – Colombia. Producto Interno Bruto (PIB). Comportamiento 2011 definitivo y 2012 provisional. Available at: https://www.dane.gov.co/files/investigaciones/pib/anuales/ccrg_base2005/Bol_Cuentas_Anuales_2011def-2012prov.pdf

Domingues, C.M., Church, J.A., White, N.J., Gleckler, P.J., Wijffels, S.E., Barker, P.M., Dunn, J.R. (2008). Improved Estimates of Upper-Ocean Warming and Multi-Decadal Sea-Level Rise. Nature, 453, pp 1090-1094.

ESDU (1983). Strong winds in the atmospheric boundary layer, part 2: discrete gust speeds. Engineering Sciences Data Unit Item No. 83045, London, England.

Evaluación de Riesgos Naturales América Latina-ERN-AL, (2009). Informe Técnico ERN-CAPRA-T1-5. Vulnerabilidad de edificaciones e infraestructura.

Evaluación de Riesgos Naturales América Latina-ERN-AL, (2010). CAPRA-GIS v2.0. Program for the probabilistic risk assessment. Available at: www.ecapra.org. Accessed May 15th 2013.

Evaluación de Riesgos Naturales América Latina-ERN-AL, (2011). Disaster Risk Assessment for Belize City. Technical Report Subtask 4.2B.

Federal Emergency Management Agency FEMA (2011). HAZUS-MH MR3. Multi-hazard Loss Estimation Methodology. Hurricane Model. FEMA, 2011.

Flinn E.A., and Engdahl E.R., (1965), A proposed basis for geographical and seismic regionalization, Reviews of Geophysics, v. 3, p. 123-149.

German Research Center for Geosciences – GRCG (2010) Seismic Hazard Harmonization in Europe SHARE. Development of a common methodology and tools to evaluate earthquake hazard in Europe. Theme 6: Environment. German Research Center for Geosciences.

Global Facility for Disaster Risk Reduction and Recovery – GFDRR (2014). Understanding Risk: The evolution of disaster risk assessment. Washington, USA.

Gornitz, V., Lebedeff, S. (1987). Global Sea Level Changes during the Past Century. In: Nummedal, D., Piltney, O. H., Howard, J. D., (Eds.), Sea Level Fluctuation and Coastal Evolution. SEPM Special Publication 41.

Gualdi S., Scoccimarro E., Navarra A., (2008). “Changes in tropical cyclone activity due to global warming: Results from a high-resolution coupled general circulation model”. Journal of Climate 21, pp: 5204–5228

Gutenberg R, Richter C.F (1944) Frequency of earthquakes in California. Bulletin of the Seismological Society of America 34:185-188.

Holland, G. J. (1980). An analytical model of wind and pressure profiles in hurricanes. Mon. Wea. Rev., 108, 1212–1218.

IPCC - Intergovernmental Panel on Climate Change. (2007). Climate change 2007: The physical science basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. In: Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K. B., Tignor, M., Miller, H. L. (Eds.) Cambridge University Press, Cambridge-New York, 996 p.

IPCC - Intergovernmental Panel on Climate Change. (2012). Special report on managing the risks of extreme weather events and disasters to improve adaptation to climate change. Summary for Policymakers. IPCC 2012.

Kaplan SST V2. Data provided by the NOAA/OAR/ESRL PSD, Boulder, Colorado, USA, from their Web site at http://www.esrl.noaa.gov/psd/

Kepert, J. (2001). The dynamics of boundary layer jets within the tropical cyclone core. Part I: linear theory. J. Atmos. Sci. 58, 2469–2484.

Knapp, K. R., Kruk M.C., Levinson D.H., Diamond H.J., Neumann C.J. (2010). The International Best Track Archive for Climate Stewardship (IBTrACS): Unifying tropical cyclone best track data. Bulletin of the American Meteorological Society. 91, 363-376.

Losada, I. J., Reguero, B. G., Méndez, F. J., Castanedo, S., Abascal, A.J., Mínguez, R. (2013). Long-Term Changes in Sea-Level Components in Latin America and The Caribbean. Global and Planetary Change, 104, pp 34-50.

Løvholt F., Glimsdal, S., Harbitz, C., Horspool, N., Smebye, H., Del bono, A., Nadim, F. (2014). Global tsunami hazard and exposure due to large co-seismic slip. International Journal of Disaster Risk Reduction, Volume 10, Part B, December 2014, Pages 406–418. doi:10.1016/j.ijdrr.2014.04.003.

Marulanda M., Cardona O., Ordaz M., Barbat A. (2008). La gestión financiera del riesgo desde la perspectiva de los desastres: evaluación de la exposición fiscal del estado y alternativas de instrumentos financieros de retención y transferencia del riesgo. Monografía, CIMNE IS-61. Barcelona, Spain.

Marulanda M.C., Cardona O.D., Barbat A.H. (2009). Robustness of the holistic seismic risk evaluation in urban centers using the USRi. Nat. Hazards. 49(3):501-516.

Marulanda M., Carreño M., Cardona O., Ordaz M., Barbat A. (2013) Probabilistic earthquake risk assessment using CAPRA: application to the city of Barcelona, Spain. Nat. Hazards. DOI: 10.1007/s11069-013-0685-z.

Marulanda, M. (2013). Modelación probabilista de pérdidas económicas por sismo para la estimación de la vulnerabilidad fiscal del estado y la gestión financiera del riesgo. Tesis doctoral. Universitat Politécnica de Catalunya. Barcelona, España.

Marulanda M., Cardona O.D., Mora M., Barbat A. (2014). Design and implementation of a voluntary collective Earthquake insurance policy to cover low-income homeowners in a developing country. Natural Hazards. DOI: 10.1007/s11069-014-1291-4.

Maqsood, T., Wehner, M., Ryu, H., Edwards, M., Dale, K. and Miller, V. (2014). GAR15 Vulnerability Functions: Reporting on the UNISDR/GA SE Asian Regional Workshop on Structural Vulnerability Models for the GAR Global Risk Assessment, 11–14 November, 2013, Geoscience Australia, Canberra, Australia. Record 2014/38. Geoscience Australia: Canberra. http://dx.doi.org/10.11636/Record.2014.038

Maul G.A. (1989). Implications of Climate Changes in the Wider Caribbean Region. CEP Technical Report. 3, 22 pp.

McGuire, R.K., and Arabasz, W.J. (1990). An introduction to probabilistic seismic hazard analysis. In S.H. Ward (Ed.), Geotechnical and Environmental Geophysics, 3, 333-353. Society of Exploration Geophysicist.

Ministerio de Ambiente, Vivienda y Desarrollo Territorial - MAVDT, (2010). Reglamento Colombiano de Construcción Sismo Resistente, NSR-10.

Ministerio de Hacienda y Administración Pública – MHAP. (2013). Dirección General del Catastro. http://www.catastro.meh.es/. Accessed on September 15, 2013.

Ministry of Housing and Urban Development – MHUD (2011).

National Earthquake Information Center-NEIC, (2014). Earthquake catalogue search. United States Geological Survey.

Oak Ridge National Laboratory (2010). LandScan digital raster data.

Ordaz M (2000) Metodología para la evaluación del riesgo sísmico enfocada a la gerencia de seguros por terremoto. Universidad Nacional Autónoma de México, México D.F.

Ordaz M, Aguilar A, Arboleda J, (2007). CRISIS, Program for computing seismic hazard. Instituto de Ingeniería. Universidad Nacional Autónoma de México.

Ordaz, M. (2008). Relaciones entre curvas de fragilidad, matrices de probabilidad y funciones de vulnerabilidad. Nota técnica ERN Ingeniaros Consultores S.C.

Ordaz M., Cardona O., Salgado M., Bernal G., Singh K., Zuloaga D. (2014a). Probabilistic seismic hazard assessment at global level. International Journal of Disaster Risk Reduction.

Ordaz M., Martinelli F., Aguilar A., Arboleda J., Meletti C., D'Amico V. (2014b). CRISIS 2014 V1.2. Program for computing seismic hazard. Insitituto de Ingeniería. Universidad Nacional Autónoma de México.

RISK-EU project. An advanced approach to earthquake risk scenarios with applications to different European towns.

Salgado M., Bernal G., Yamín L., Cardona O. (2010). Evaluación de la amenaza sísmica de Colombia. Actualización y uso en las nuevas normas colombianas de diseño sismo resistente NSR-10. Rev. de Ing. 32: 28-37. Universidad de Los Andes, Bogotá, Colombia.

Salgado M., Bernal., Cardona O.D. (2011). Seismic hazard of Colombia including the Caldas Tear. Comparison to the 2009 Colombian seismic hazard map.

Salgado M, Zuloaga D, Cardona O. (2013). Evaluación probabilista del riesgo sísmico de Bogotá y Manizales con y sin la influencia de la Caldas Tear. Revista de Ingeniería 38:6-13.

Salgado M.A., Carreño M.L., Barbat A.H., Cardona O.D. (2014c). Comparing a simulated loss scenario with the observed Earthquake damage: The Lorca 2011 case study. Proceedings of the second European conference on earthquake engineering and seismology. Istambul. August 25-28.

Salgado M.A., Zuloaga D., Bernal G.A:, Mora M.G., Cardona O.D. (2014a). Fully probabilistic seismic risk assessment considering local site effects for the portfolio of buildings in Medellín, Colombia. Bull. of earthq. Eng. doi: 10.1007/s10518-013-9550-4.

Salgado M.A., Zuloaga D., Velásquez C., Carreño M.L., Cardona O.D. Barbat A.H. (2014b). Urban seismic risk index for Medellín, Colombia: A probabilistic and holistic approach. Proceedings of the second European conference on earthquake engineering and seismology. Istambul. August 25-28.

Satterthwaite, D. (2006). Outside the Large Cities: The demographic importance of small urban centers and large villages in Africa, Asia and Latin America. Human Settlements Working Paper. International Institute for Environment and Development, 2006.

SIMPAD, Universidad EAFIT, Integral, INGEOMINAS, Universidad Nacional de Colombia Sede Medellín, (1999). Instrumentación y microzonificación sísmica del área urbana de Medellín.

Singh, B. (1997). Climate Changes in the Greater and Southern Caribbean. International Journal of Climatology. 1997.

Singh, B. (1997). Climate-Related Global Changes in the Southern Caribbean: Trinidad and Tobago. Global and Planetary Change, 15, pp 93-111.

Sistema Económico Latinoamericano y del Caribe – SELA (2010). Mecanismos financieros, seguro y reaseguro contra desastres en América Latina y el Caribe: Experiencias recientes. Caracas, Venezuela.

Sparks, P.R., Huang,Z. (1999). Wind speed characteristics in tropical cyclones. In: Proceedings of 10th International Conference on Wind Engineering, Copenhagen, pp. 343–350.

Statistical Institute of Belize – SIB (2011).

Stewart J., Douglas J., Javanbarg M., Bozorgnia Y., Abrahamson N., Boore D., Campbell K., Delavaud E., Erdik M., Stafford P. (2013). Selection of ground motion prediction equations for the Global Earthquake Model. Earthquake Spectra.

Storchak D.A., D. Di Giacomo I., Bondár E. R., Engdahl J., Harris W.H.K. Lee, A. Villaseñor and P. Bormann (2013). Public Release of the ISC-GEM Global Instrumental Earthquake Catalogue (1900- 2009). Seismological Research Letters.

Suppasri, A.,Mas, E., Charvet, I., Gunasekera, R., Imai, K., Fukutani, Y., Abe, Y., Imamura F. (2013). Building damage characteristics based on surveyed data and fragility curves of the 2011 Great East Japan tsunami. Nat Hazards (2013) 66:319–341. DOI 10.1007/s11069-012-0487-8

The Belize Government Official Portal – BGOP (2011). Available at: www.belize.gov.bz

Tinti S., Mulargia F. (1985) An improved method for the analysis of the completeness of a seismic catalogue. Lettere Al Nuovo Cimento Series 2.

Torres, M. A., Jaimes, M. A., Reinoso, E., Ordaz, M. (2013). Event-based approach for probabilistic flood risk assessment. Intl. J. River Basin Management. iFirst, 2013, pp. 1–13.

UN-ECLAC. 2010. Regional Climate Modeling in The Caribbean. Subregional Headquarters for the Caribbean.

Unión Temporal ODCA-ITEC Consultores en Riesgos y Desastres. (2008). Fundamento teórico, técnico y metodología. Diseño de la estrategia de aseguramiento, para la protección financiera de las edificaciones privadas establecidas en la ciudad de Bogotá D.C, en el caso de la ocurrencia de un desastre natural. Bogotá.

Unión Temporal ODC-INGENIAR-ITEC Consultores en Riesgos y Desastres. (2008). Fundamento teórico, técnico y metodología. Diseño de la estrategia de aseguramiento para la protección financiera de las edificaciones públicas distritales establecidas en la ciudad de Bogotá D.C, en el caso de desastres por eventos naturales . Bogotá.

United Nations International Strategy for Disaster Risk Reduction-UNISDR (2013) Global Assessment Report on Disaster Risk Reduction 2013. Geneva, Switzerland.

Vargas C, Mann P. (2013). Tearing and breaking off of subducted slabs as the result of collision of the Panama Arc-Indenter with northwestern South America. Bulletin of the Seismological Society of America. 100(3):2025-2046.

Vickery, P. J., Masters, F. J., Powell, M. D, Wadhera, D. (2009). Hurricane hazard modeling: The past, present, and future. J. Wind Eng. Ind. Aerodyn. 97 (2009) 392–405.

Vickery, P. J., Skerlj, P. F. (2005). Hurricane gust factors revisited. J. Struct. Eng. 131, 828–832.

Vickery, P. J., Wadhera, D. (2008). Statistical models of Holland pressure profile parameter and radius to maximum winds of hurricanes from flight level pressure and H* Wind data. J. Appl. Meteorol. 47, 2417–2497.

Vickery, V. J., Masters, F. J., Powell, M. D., Wadhera, D. (2009a). Hurricane hazard modeling: The past, present, and future. J. Wind Eng. Ind. Aerodyn. 97, 392–405.

Vickery, V. J., Wadhera, D., Powell, M. D., Chen, Y. (2009b). PA hurricane boundary layer and wind field model for use in engineering applications. J. Appl. Meteorol. 48, 381–405.

Walsh K., Lavender S., Murakami H., Scoccimarro E., Caron L.P., Ghantous M., (2010). "The Tropical Cyclone Climate Model Intercomparison Project". Chapter 1 in: Hurricanes and Climate Change, Volume 2. (Edited by Elsner J.B., Hodges R.E., Malmstadt J.C., Scheitlin K.N. Springer Dordrecht Heidelberg London New York. 255 p.), pp. 1-24.

Wigley, T. M. L., Raper, S. C. B. (1993). Future Changes in Global Mean Temperature and Sea Level. In: Warrick, R. R., Barrow, E. M., Wigley, T. M. L., (Eds.), Climate and Sea Level Change: Observations, Projections and Implications. Cambridge University Press, Cambridge, pp 111-133.

WMO (2010). Guidelines for converting between various wind averaging periods in tropical cyclone conditions. World Meteorological Organization. WMO/TD-No. 1555.

Woo, G. (1996). Kernel Estimation Methods for Seismic Hazard Area Source Modeling. Bulletin of the Seismological Society of America, Vol 68, No.2 pp. 353-362.

Youngs, R., Chiou, S.-J., Silva, W., Humphrey, J. (1997). Strong ground motion attenuation relationships for subduction zone earthquakes, Seismological Research Letters, vol. 68, No. 1, pp. 58-73.

Zhao M., Held I., Lin S.-J., Vecchi G.A., (2010). Simulations of global hurricane climatology, interannual variability, and response to global warming using a 50km resolution GCM. Journal of Climate. 22, pp: 6653–6678.

Zhao, J. X.; Zhang, J.; Asano, A.; Ohno, Y.; Oouchi, T.; Takahashi, T.; Ogawa, H.; Irikura, K.; Thio, H.K.; Somerville, P.G. y Fukushima, Y. (2006). Attenuation relations of strong ground motion in Japan using site classification based on predominant period. Bulletin of the Seismological Society of America, 96(3), pp. 898-913.

Zuloaga D. (2011). Implicaciones de la estimación del riesgo sísmico de Bogotá como resultado de una nueva interpretación sismo-tectónica. Universidad de Los Andes, Bogotá, Colombia.

Annex 1. Hazard Representation for Probabilistic Risk Assessment

The hazard associated with a natural phenomenon is measured using its frequency of occurrence and its severity, where the latter is characterized through a parameter of intensity computed at specific geographical locations. The hazard assessment is thus based on the historical frequency of occurrence of the phenomenon and its various degrees of intensity. Once the parameters that characterize the occurrence of the phenomenon are defined from a physical point of view, it is necessary to generate a set of stochastic events – through the simulation of a series of random events – which, analytically speaking, define all possible ways in which said phenomenon may manifest itself in the region under analysis, in terms of its frequency and severity.

The hazard is thus characterized at each point in a certain territory, through the probability distribution of the associated intensities, defined in terms of its central value and its measure of dispersion which accounts for the uncertainty associated with the occurrence of said degree of intensity. It is important to point out that regarding the study of catastrophic risk, it is relevant to study those cases where the phenomena can cause a correlation of loss; in other words, simultaneous damages in an extensive area.

Event Based Approach

The purpose of a probabilistic risk analysis is the characterization of the losses on a set of exposed elements, given the occurrence of hazardous events. As mentioned above, given that there are uncertainties in the estimation, the loss is modeled as a random variable. Overall, one would be interested to know the following about the loss:

- The universe of all possible losses (i.e, the domain of the random variable describing the loss)
- The probability density function of the loss, which is defined within the domain of the variable

A loss event, **A**, defined within the universe of all possible losses (or sampling space) **S**, can be represented in a diagram of sets as shown in Figure A1-1. Event **A** is a subset of **S**, and is defined in a completely arbitrary way, ie, its definition depends exclusively to what question wants to be answered. In this regard, the event **A** may be defined, for example, as the set of losses greater than 10 million, or the set of losses lower than 100 million, or even as the losses between 10 and 100 million. This means that **A** is defined by the decision maker, depending on the type of decision to make. However, the definition of **A** in itself is not of interest; we are interested to know the probability of **A**, denoted **P(A)**. So if, for example, **A** is defined as the set losses greater than 10 million, we are really interested in knowing the probability that the loss is greater than 10 million, ie **P(A)**.

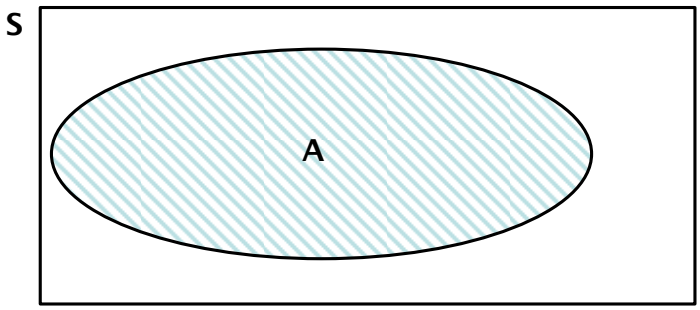


Figure A1-1. Graphical representation of an arbitrary event A within the sampling space of the loss S.

Given than **A** is defined arbitrarily, it is inconvenient to perform an individual risk analysis for each specific event **A**. We need to find a way through which **P(A)** can be determined for any event **A** of interest. This is achieved by subdividing the sample space **S** by a finite number of known base events, **B** (Figure A1-2).

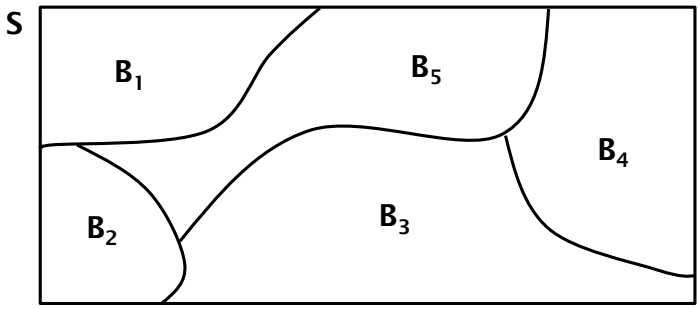


Figure A1-2. Subdivision of the sampling space S into base events B.

The base events B must comply with the following characteristics:

- Be mutually exclusive. Mathematically this means that they never intersect, that is, their intersection is the void set. In terms of risk analysis, this means that the loss events B cannot occur simultaneously.
- Be collectively exhaustive. In mathematical terms this means that the union of all sets B equals the sample space S. In terms of risk analysis, this means that the B events, seen as a whole, integrally represent the universe of all possible losses.

In order to determine **P(A)** for any event **A**, we use the intersections that occur between event **A** and events **B** (Figure A1-3).

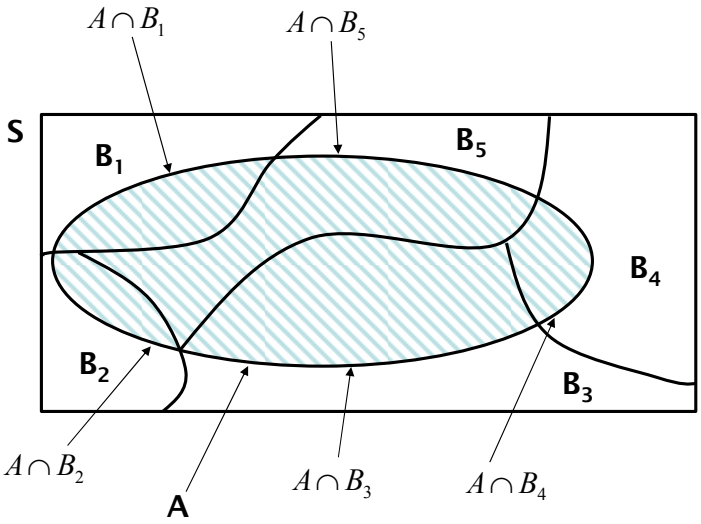


Figure A1-3. Intersection between event A and base events B.

Given that the event **A** can be defined as the union of its intersections with the base events **B**, and making use of the third axiom of probability theory[4], we can define **P(A)** as the sum, for all base events **B,** of the probability of occurrence of the intersections:

$$P(A) = \sum_{j=1}^{n} P(A \cap B_j) \qquad \textbf{(Eq. A1-1)}$$

For any base event $\mathbf{B_j}$, we define the probability $\mathbf{P(A|B_j)}$ as the conditional probability of **A**, given that $\mathbf{B_j}$ has occurred. This conditional probability is given by:

$$P(A \mid B_j) = \frac{P(A \cap B_j)}{P(B_j)}, \quad P(B_j) \neq 0 \qquad \textbf{(Eq. A1-2)}$$

Thus, substituting Equation A1-2 into Equation A1-1, we arrive at the solution of **P(A)** shown in Equation A1-3, which is simply the definition of the total probability theorem:

[4] The third axiom of probability states that, for a countable set of mutually exclusive events, the probability of their union is equal to the sum of the individual probabilities.

$$P(A) = \sum_{j=1}^{n} P(A \mid B_j) \cdot P(B_j) \qquad \textbf{(Eq. A1-3)}$$

Equation A1-3, applied in the context of risk assessment is essentially the same as Equation 31. This equation indicates the probability of occurrence of any event of loss of the space **S**.

In summary, within the context of risk assessment, the definition of the events of interest **A** is completely arbitrary, so its probability **P(A)** is calculated as a function of the probability distribution of the loss base events **B**. This implies that the base events **B** cannot be defined arbitrarily.

In risk analysis, the collection of base events **B** is constructed from the definition of hazard scenarios. A collection of hazard scenarios is generated, usually in a stochastic way, which integrally represent all ways in which the hazard may manifest itself in the territory under analysis. These scenarios must meet the following characteristics:

- Be mutually exclusive.
- Be collectively exhaustive.
- Admit a temporary probability, commonly through the annual frequency of occurrence.
- Admit a measure of spatial probability by calculating its intensity measure as a gridded random variable.

The intensity measure referred to corresponds to the physical variable representing the severity of the phenomenon in the area under analysis.

Annex 2. Maps of the Seismic Parameters to Assess the Seismic Hazard

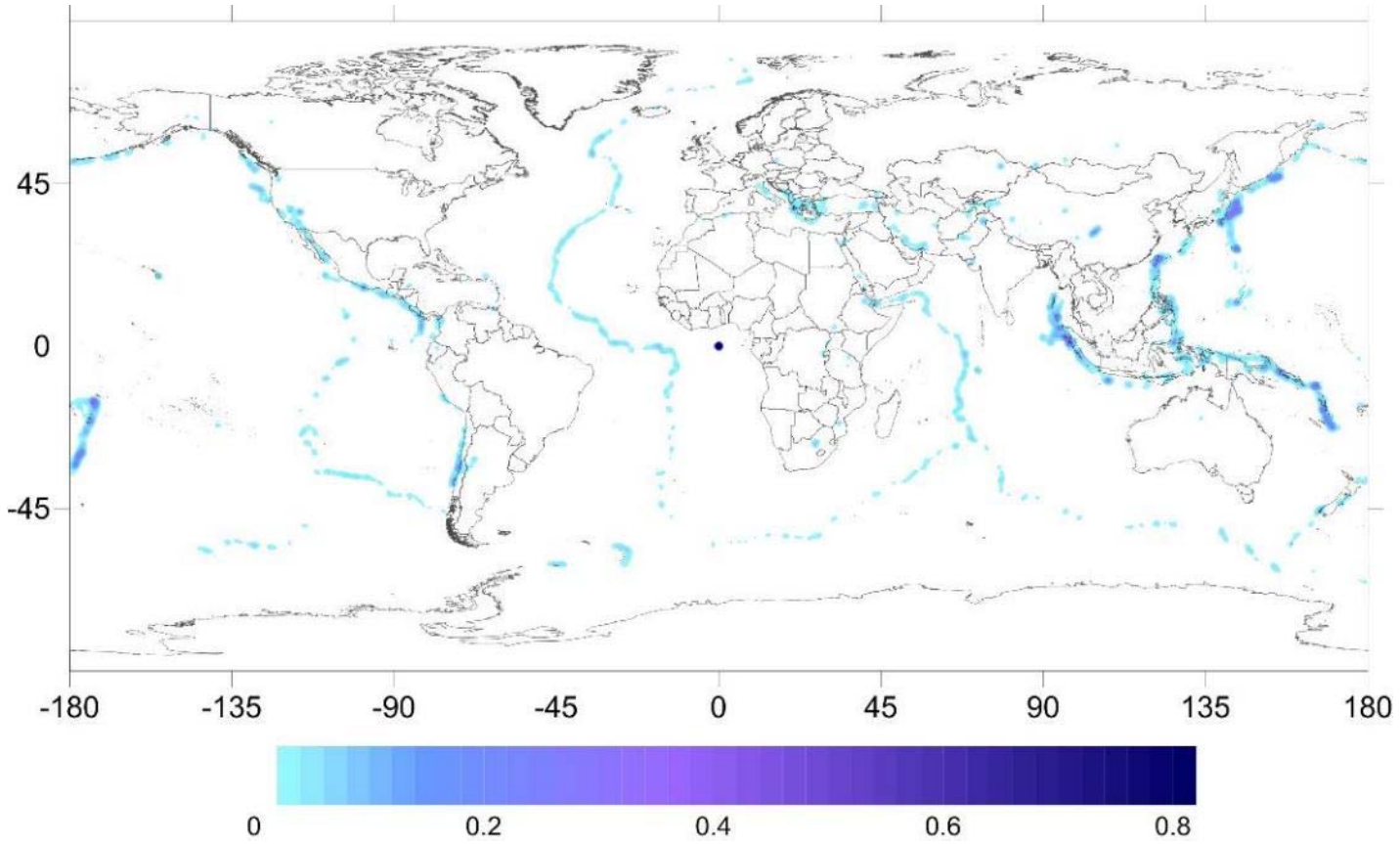


Figure A2-1. λ0 (1/year) grid for 0-30km depth range

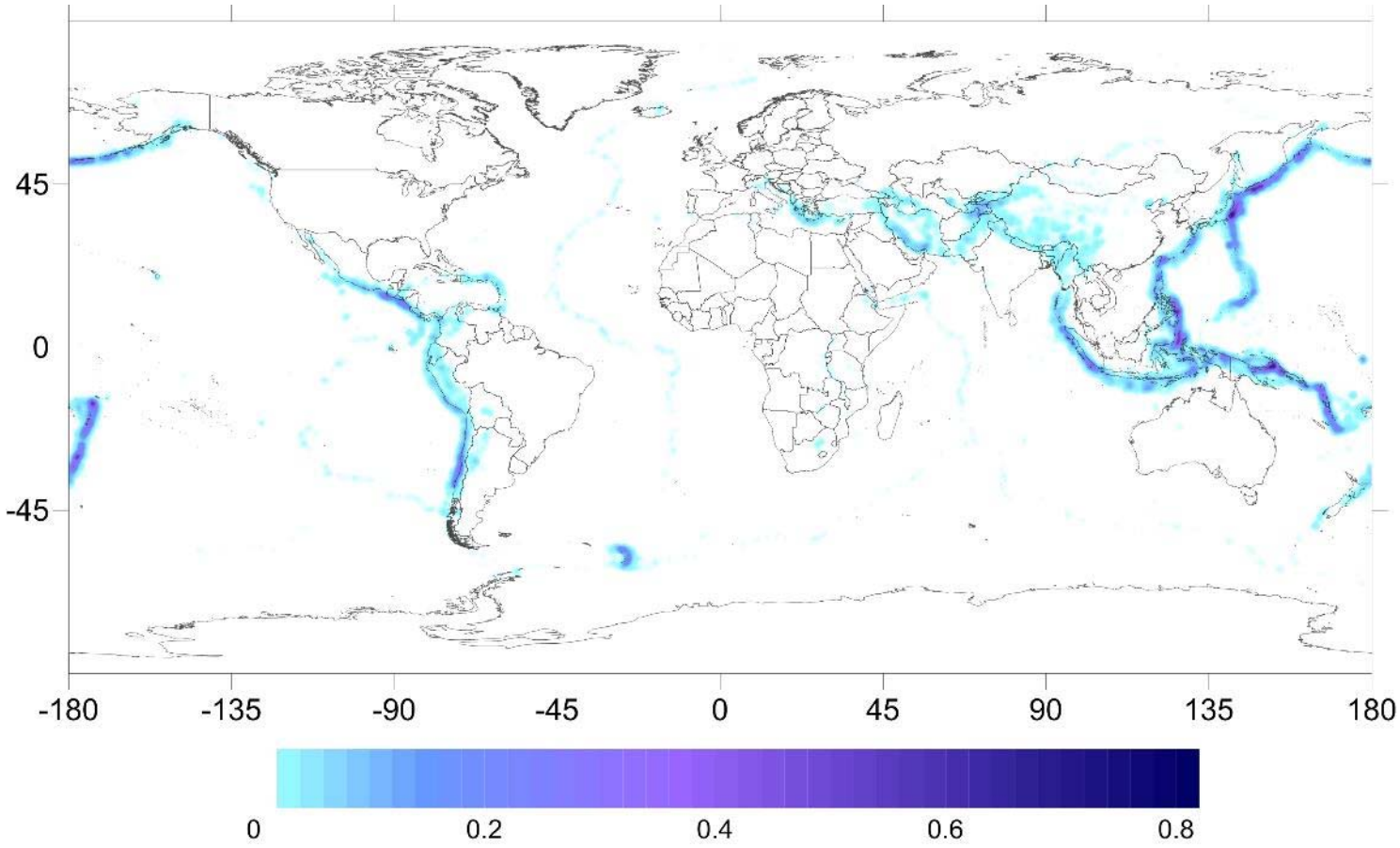


Figure A2-2. λ0 (1/year) grid for 30-60km depth range

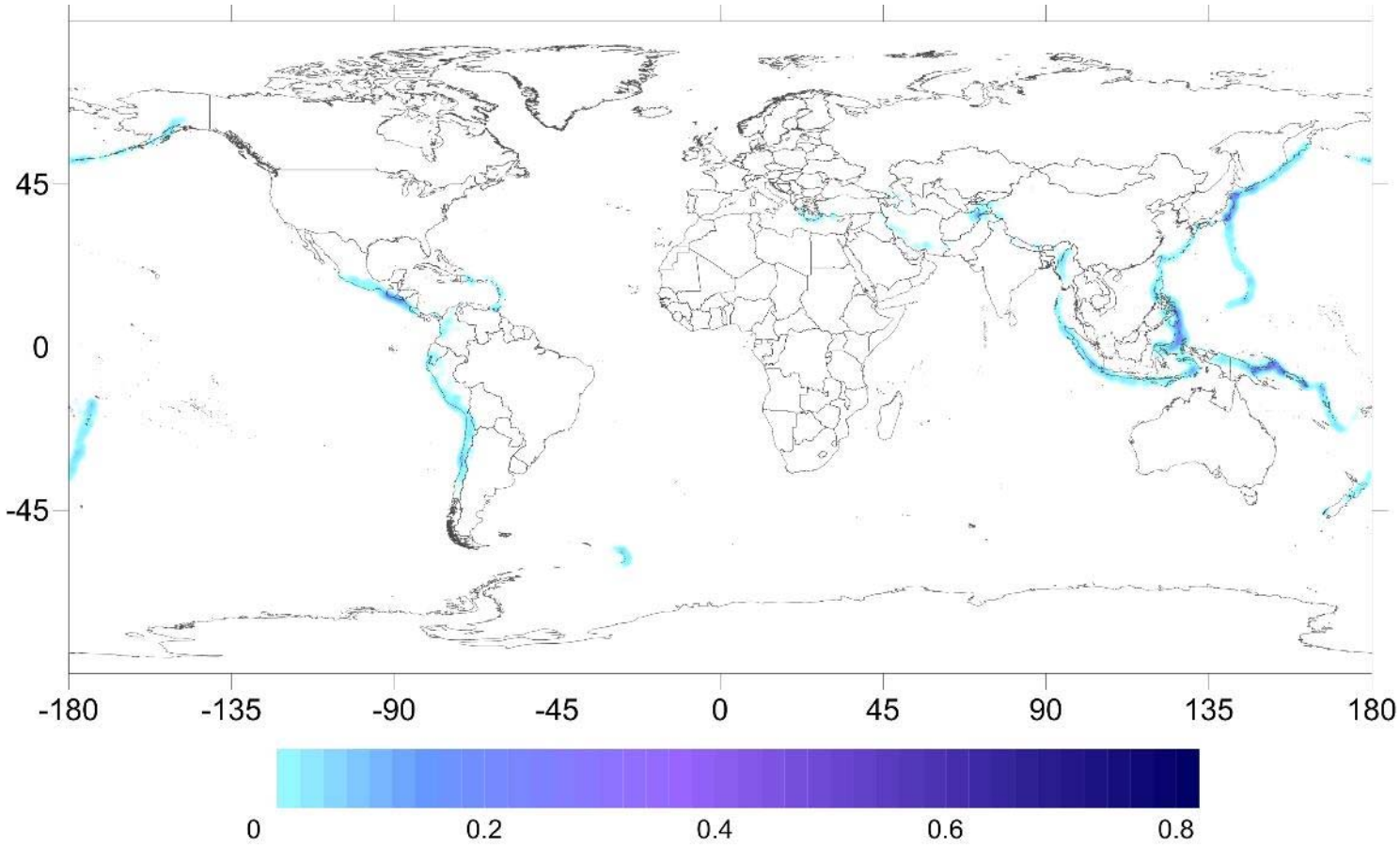


Figure A2-3. λ0 (1/year) grid for 60+km depth range

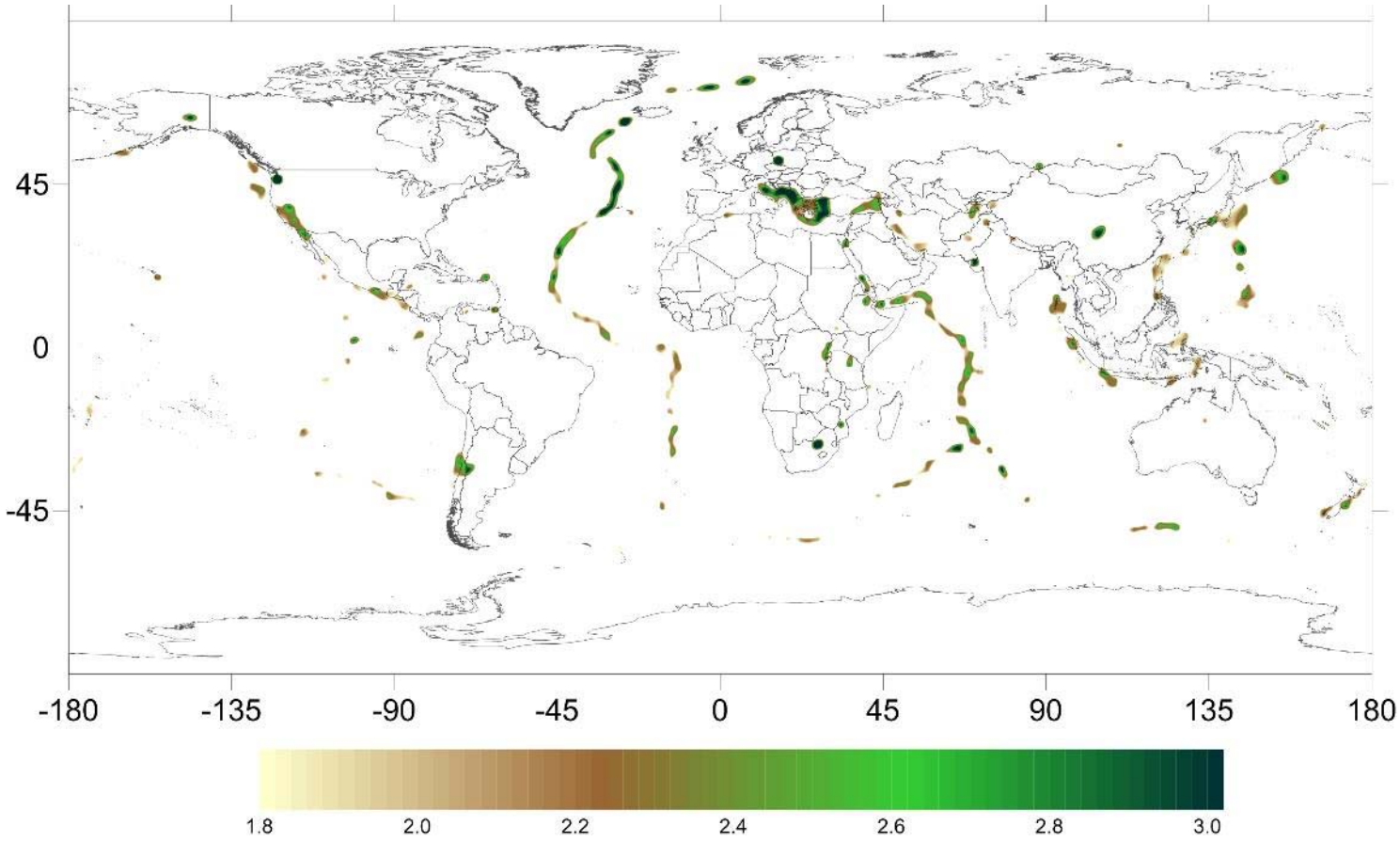


Figure A2-4. Expected value of β grid for 0-30km depth range

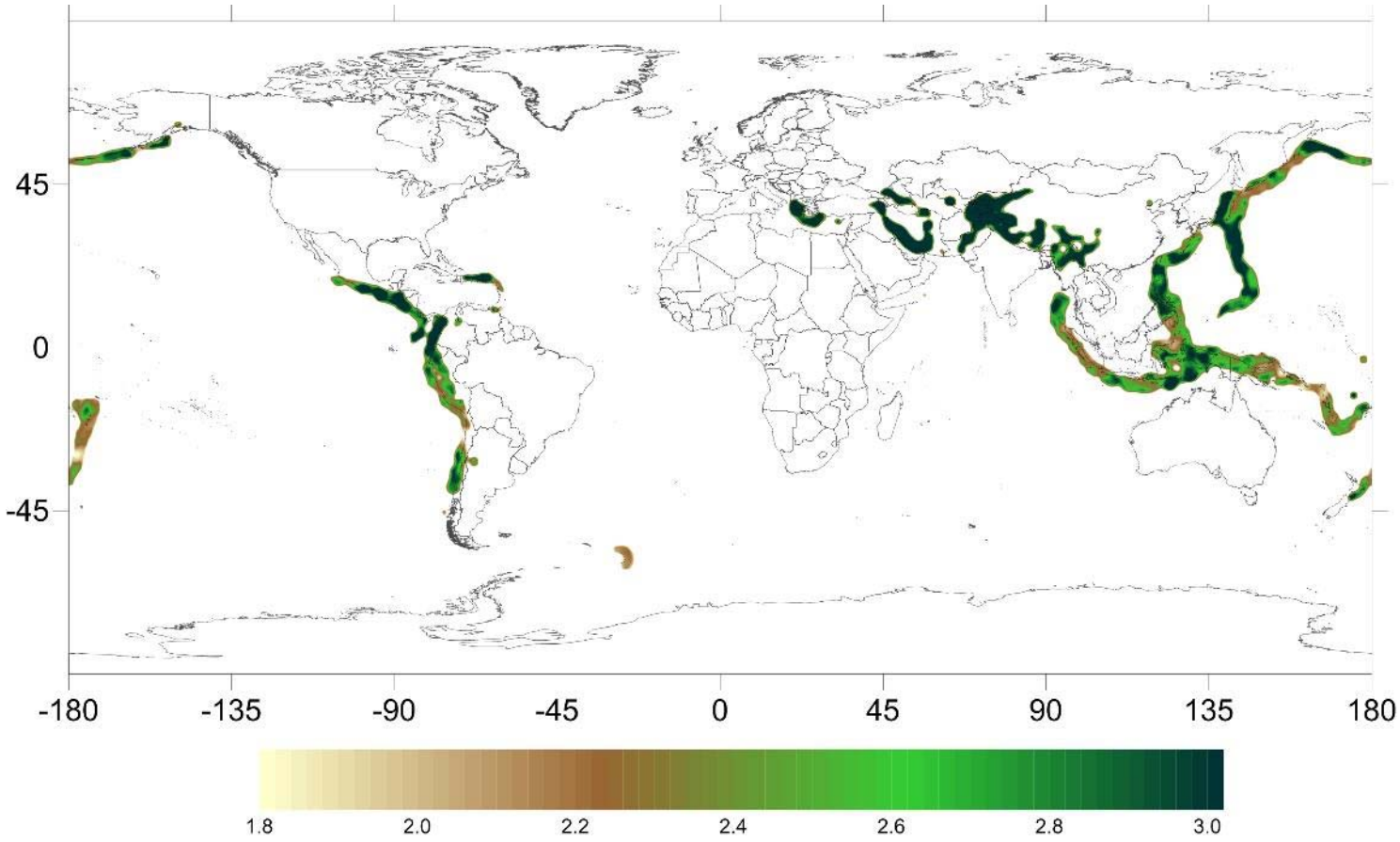


Figure A2-5. Expected value of β grid for 30-60km depth range

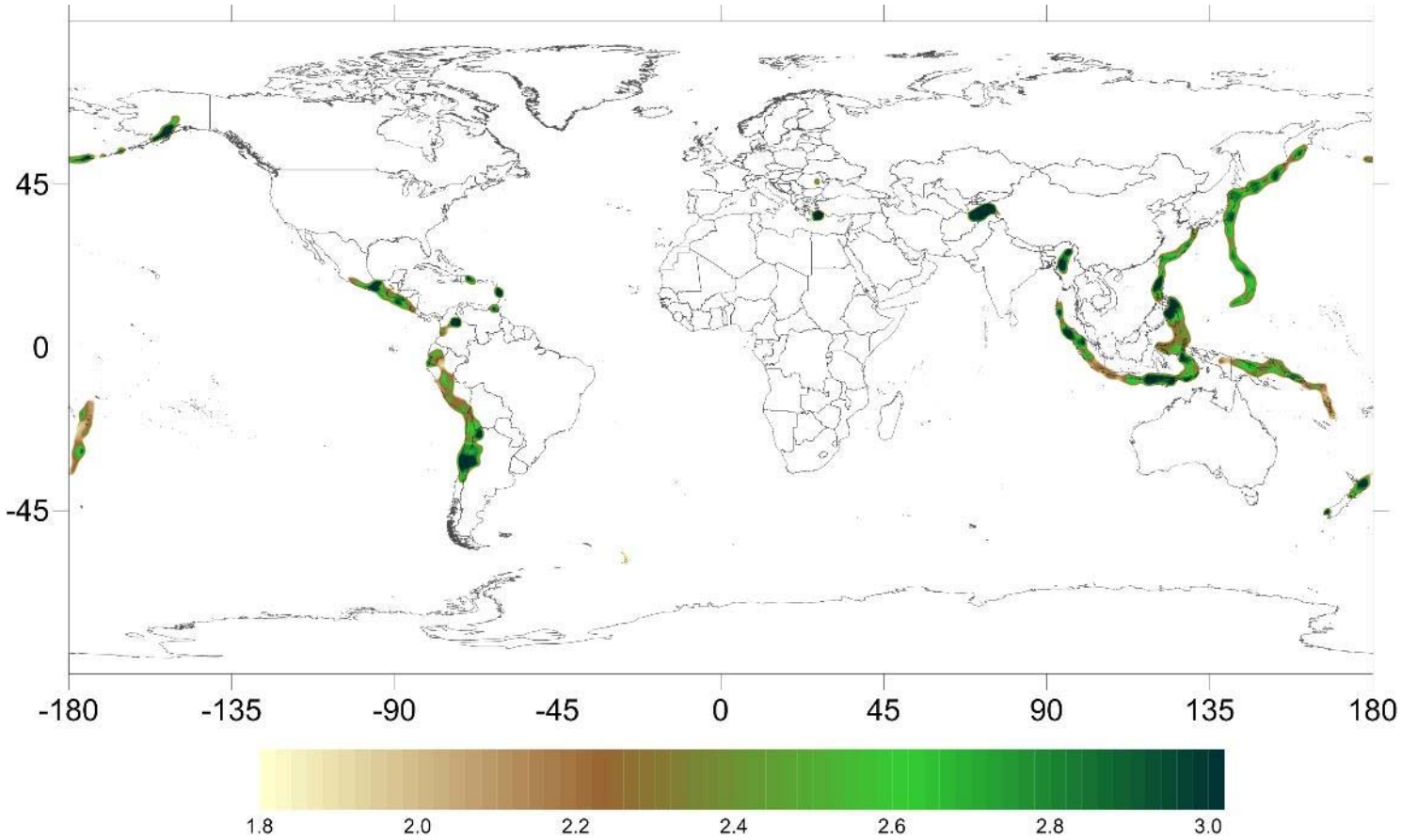


Figure A2-6. Expected value of β grid for 60+km depth range

Annex 3. Seismic Hazard Maps Calculated with CRISIS 2014 (CAPRA)

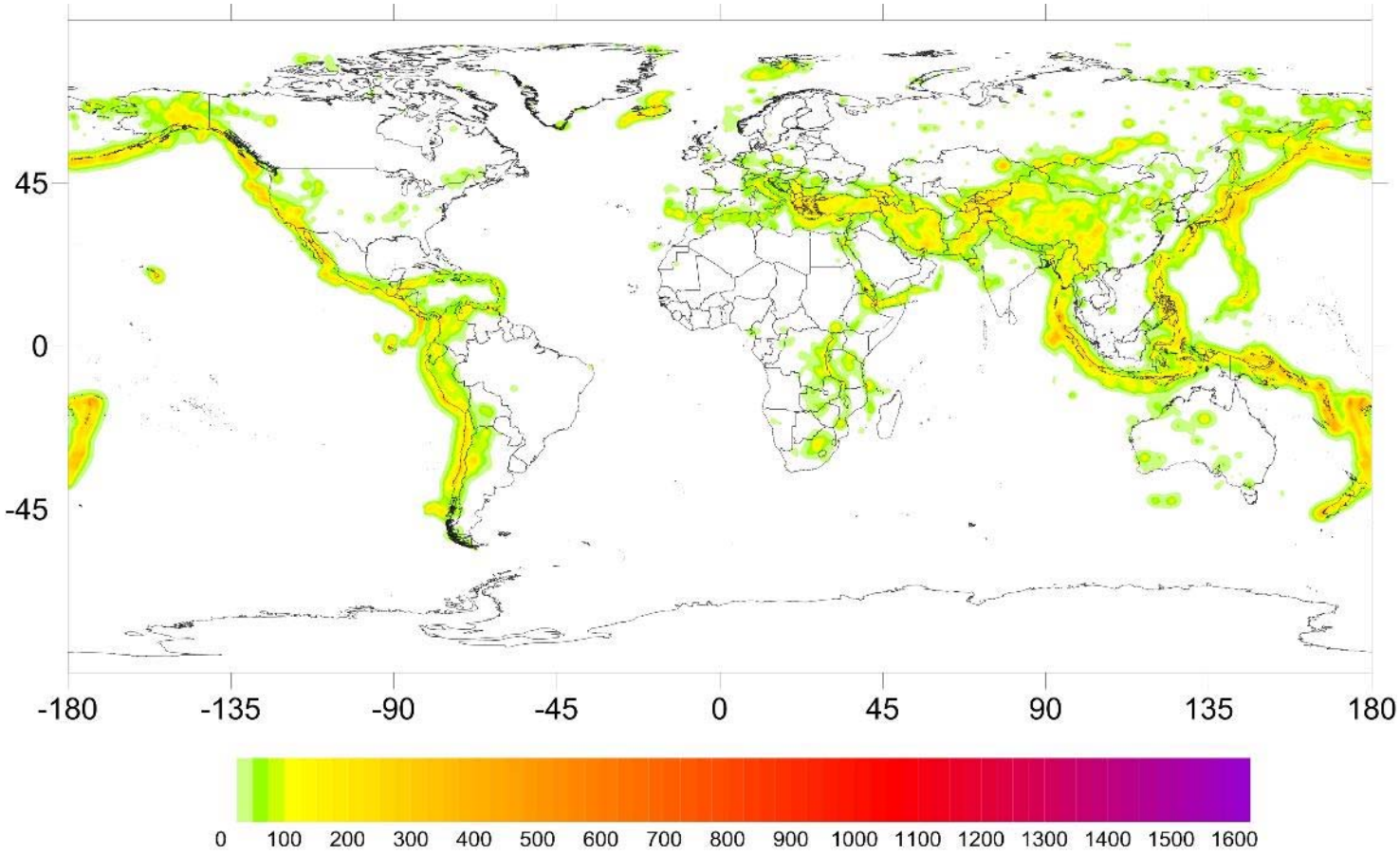


Figure A3-1. Hazard map for 0.0 sec (PGA), RT=225 years. Units of acceleration are cm/s^2

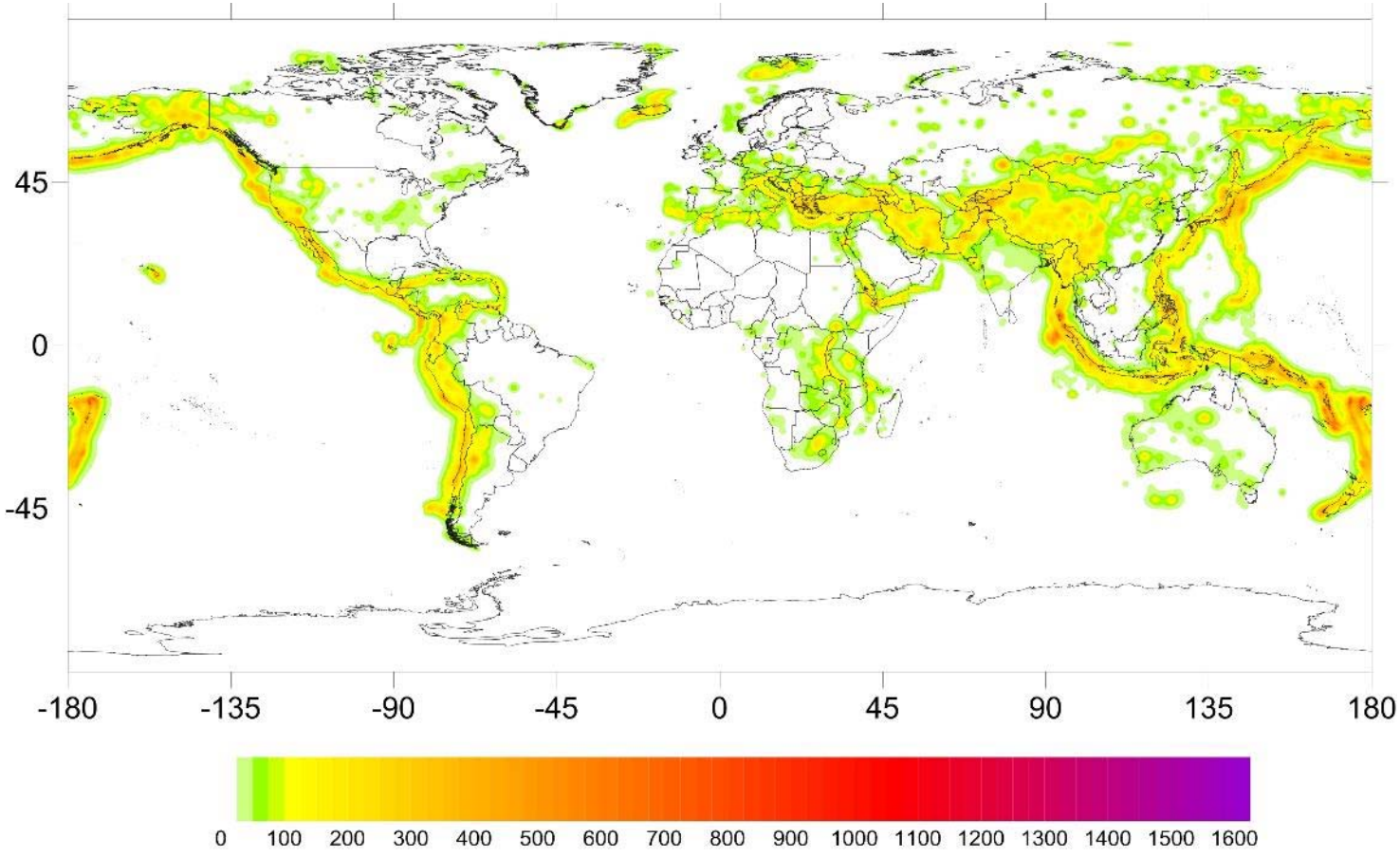


Figure A3-2. Hazard map for 0.0 sec (PGA), RT=475 years. Units of acceleration are cm/s^2

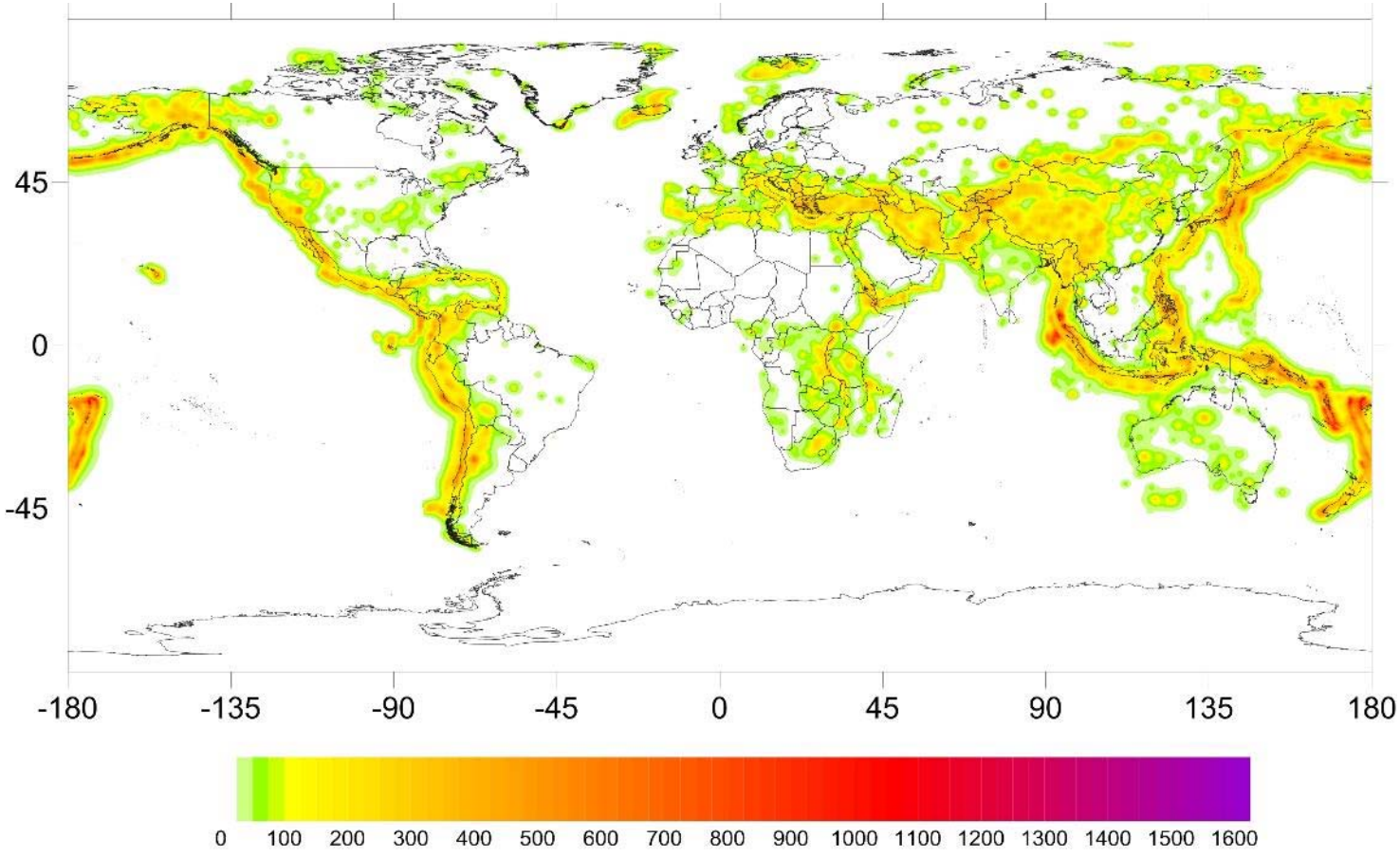


Figure A3-3. Hazard map for 0.0 sec (PGA), RT=975 years. Units of acceleration are cm/s^2

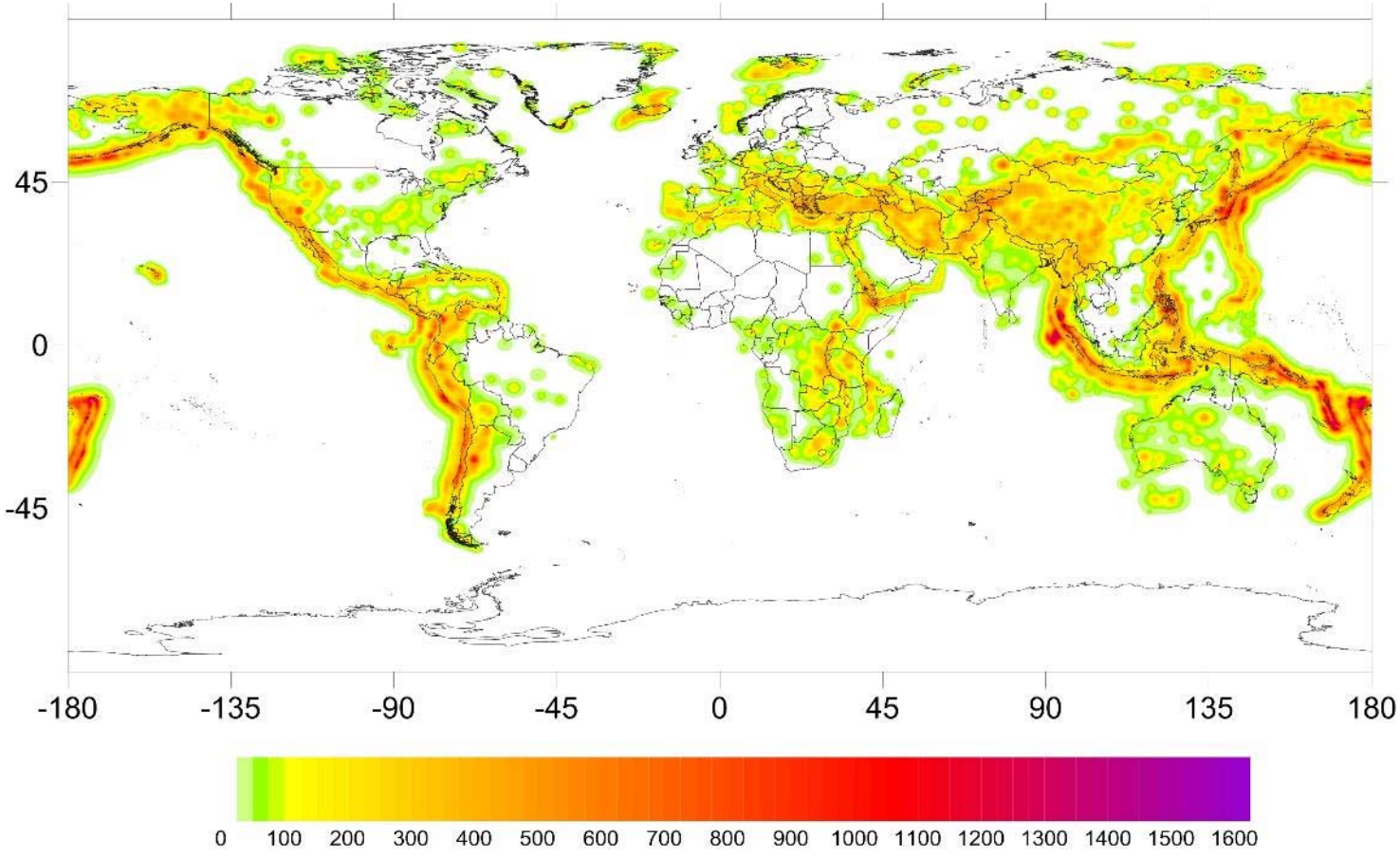


Figure A3-4. Hazard map for 0.0 sec (PGA), RT=2,475 years. Units of acceleration are cm/s^2

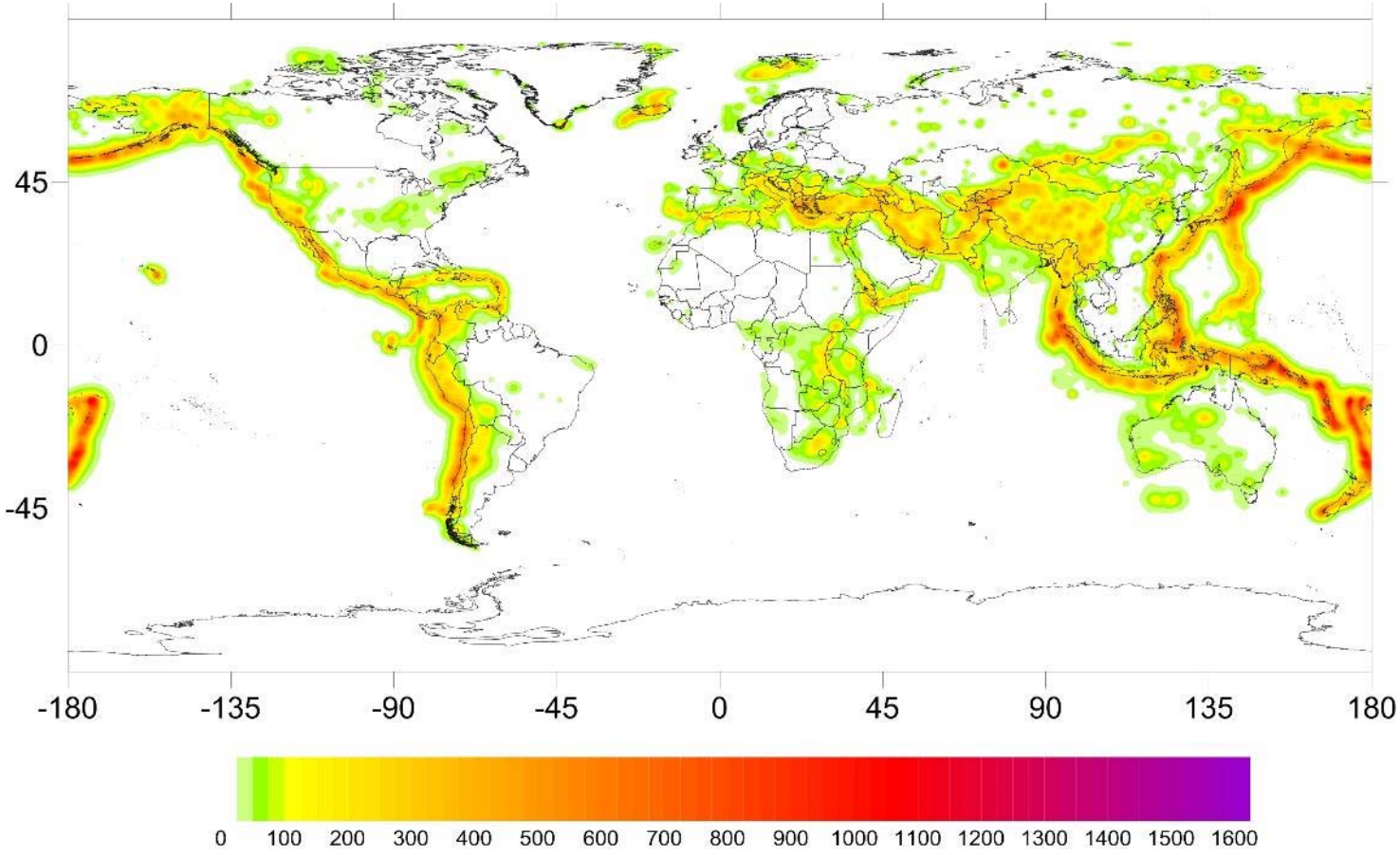


Figure A3-5. Hazard map for 0.2 sec, RT=225 years. Units of acceleration are cm/s^2

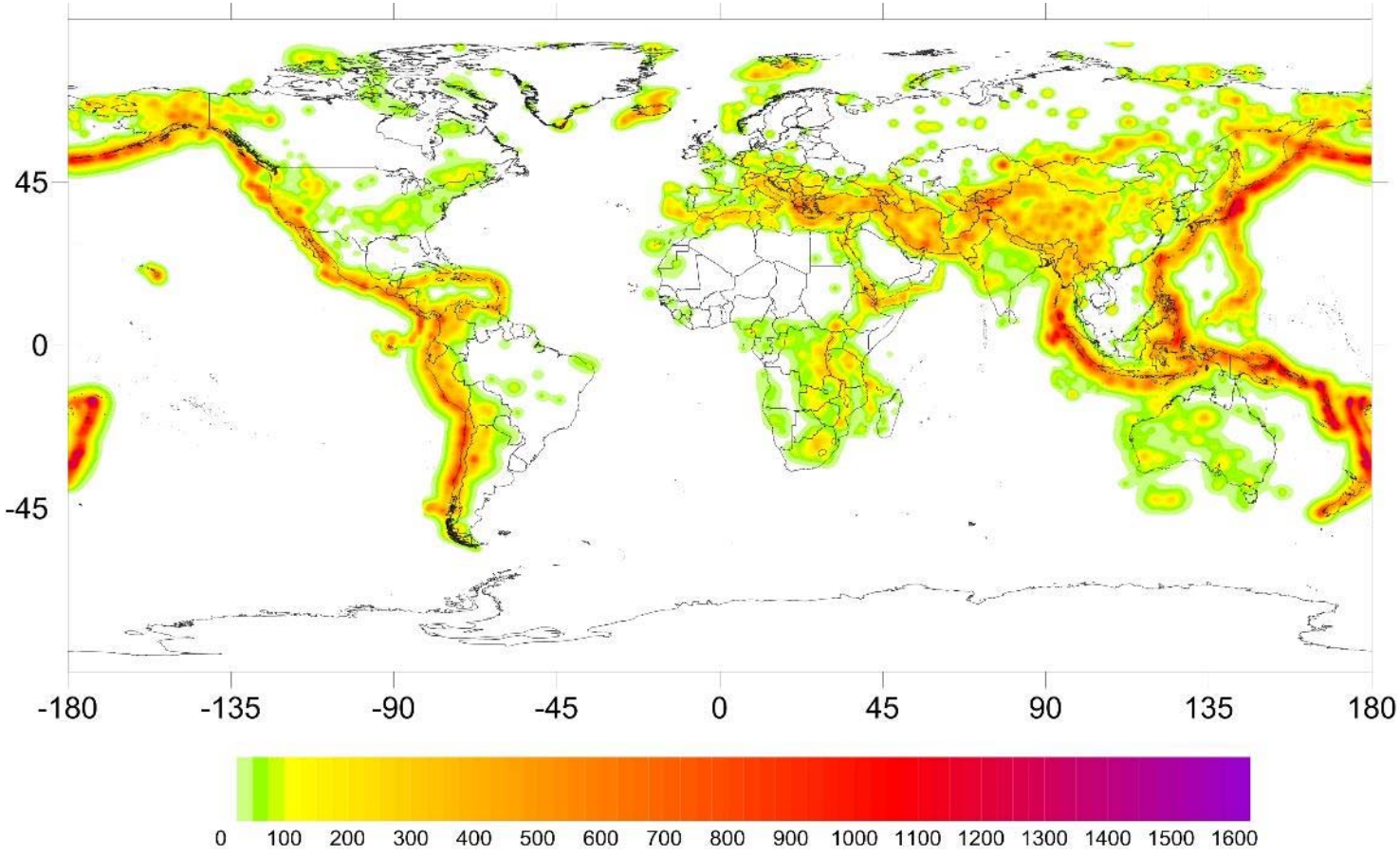


Figure A3-6. Hazard map for 0.2 sec, RT=475 years. Units of acceleration are cm/s^2

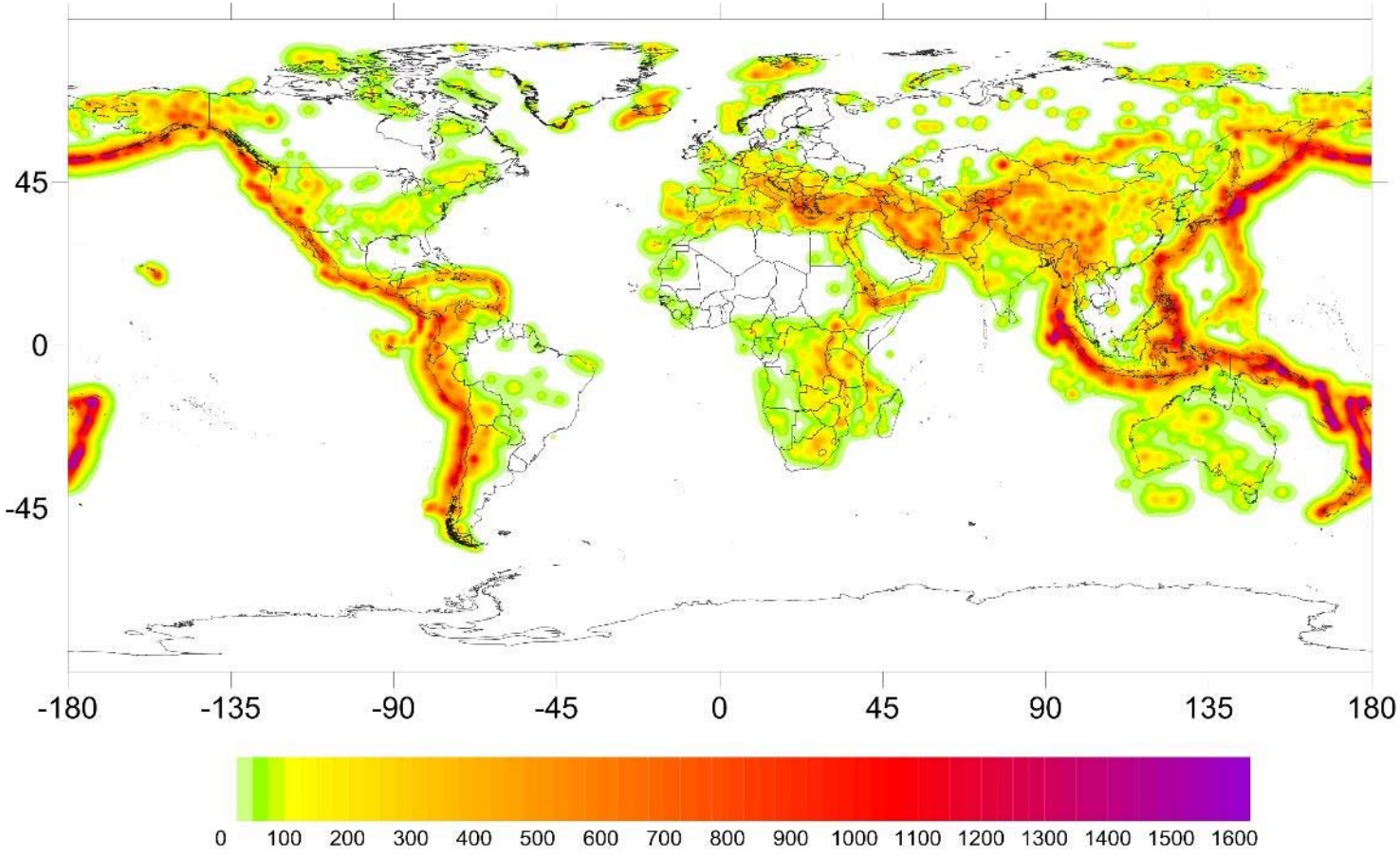


Figure A3-7. Hazard map for 0.2 sec, RT=975 years. Units of acceleration are cm/s^2

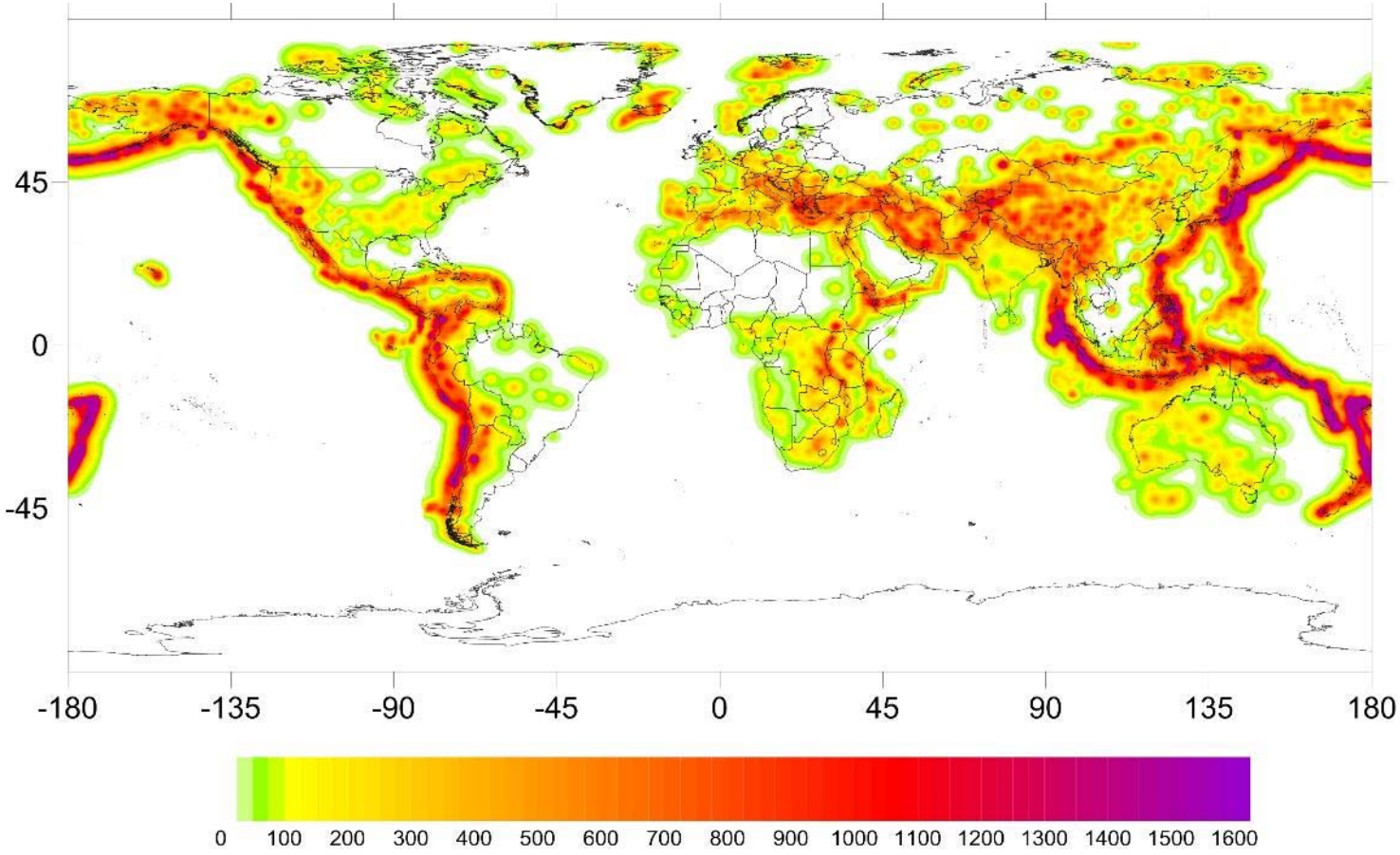


Figure A3-8. Hazard map for 0.2 sec, RT=2,475 years. Units of acceleration are cm/s^2

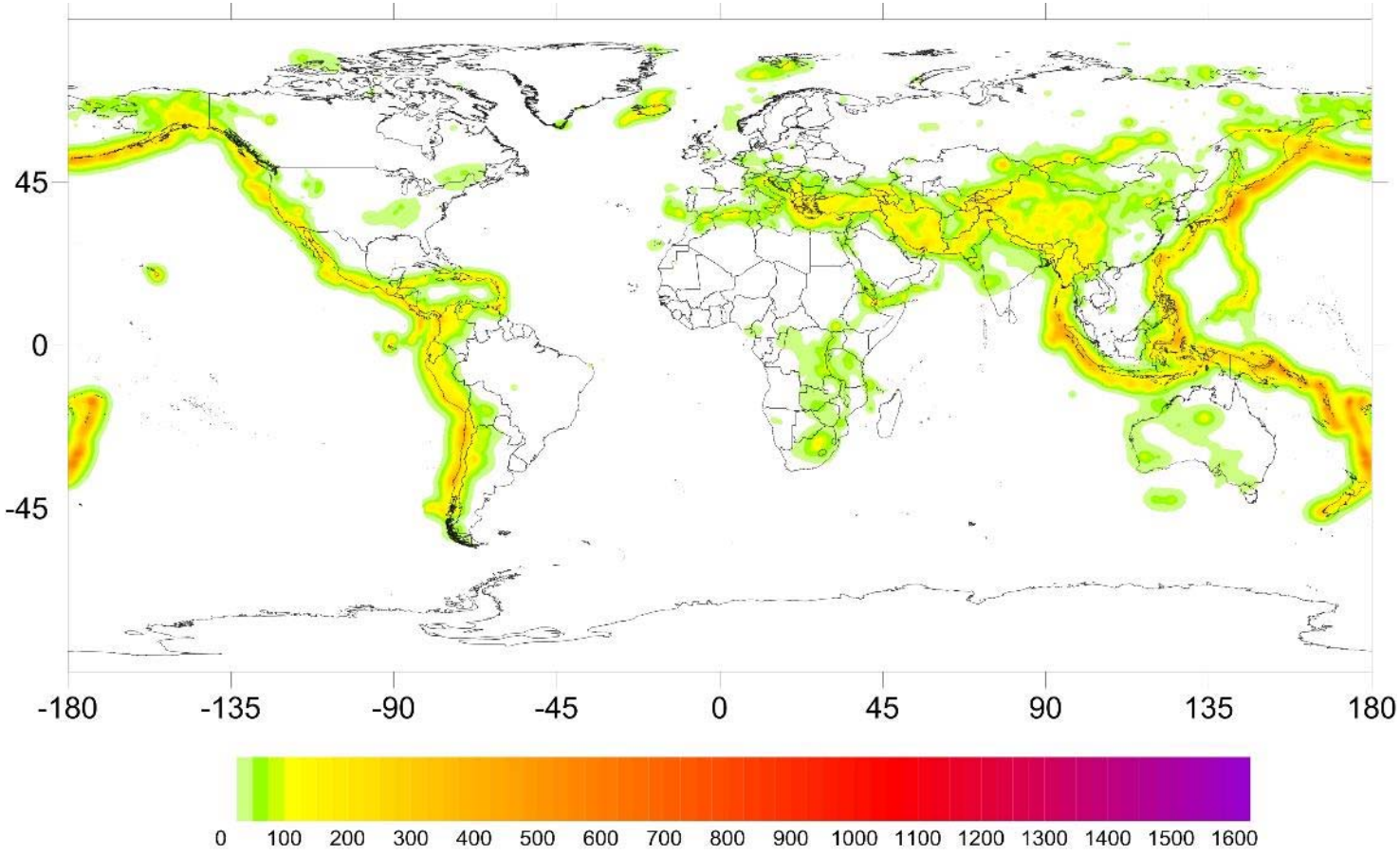


Figure A3-9. Hazard map for 0.5 sec, RT=225 years. Units of acceleration are cm/s^2

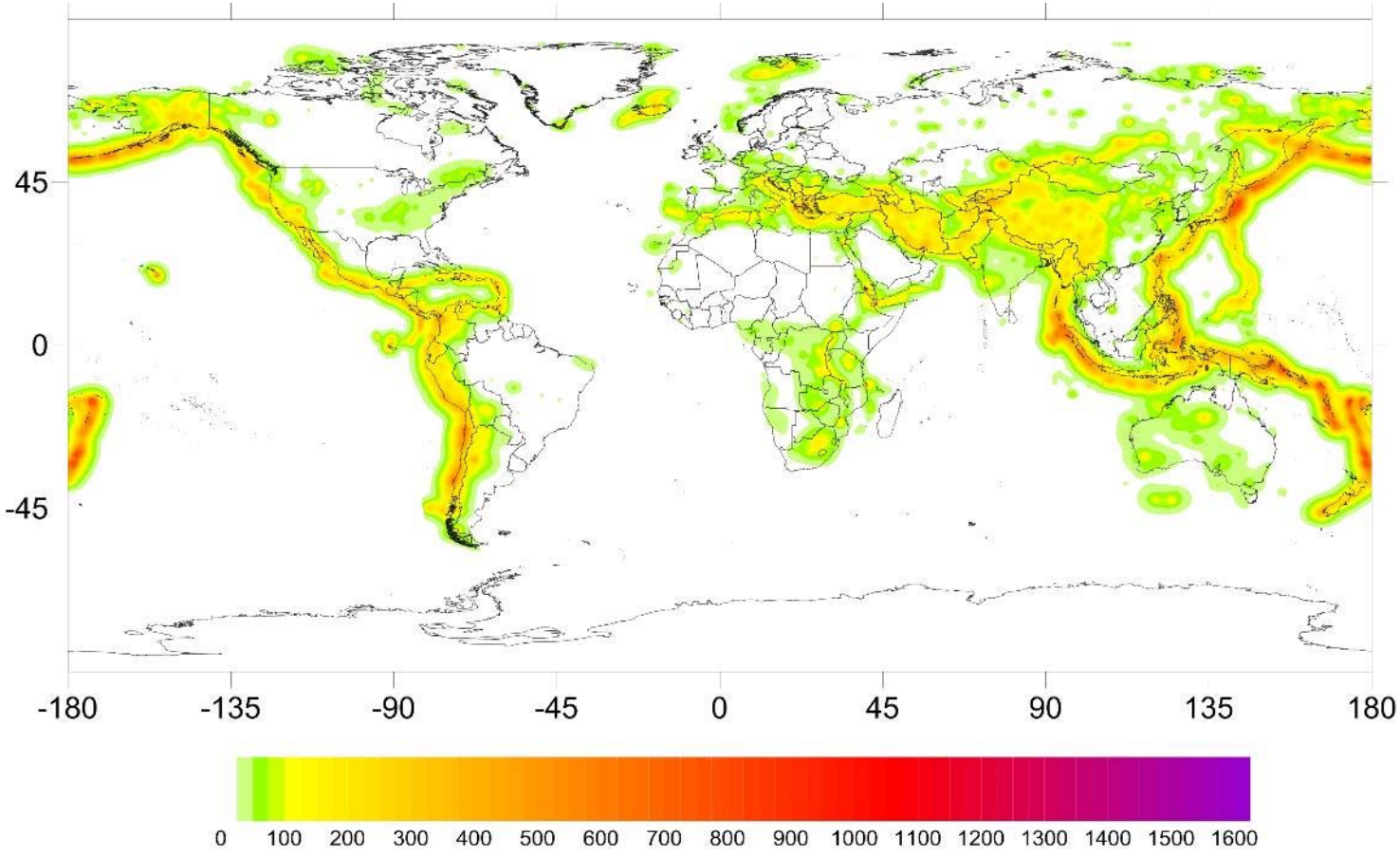


Figure A3-10. Hazard map for 0.5 sec, RT=475 years. Units of acceleration are cm/s^2

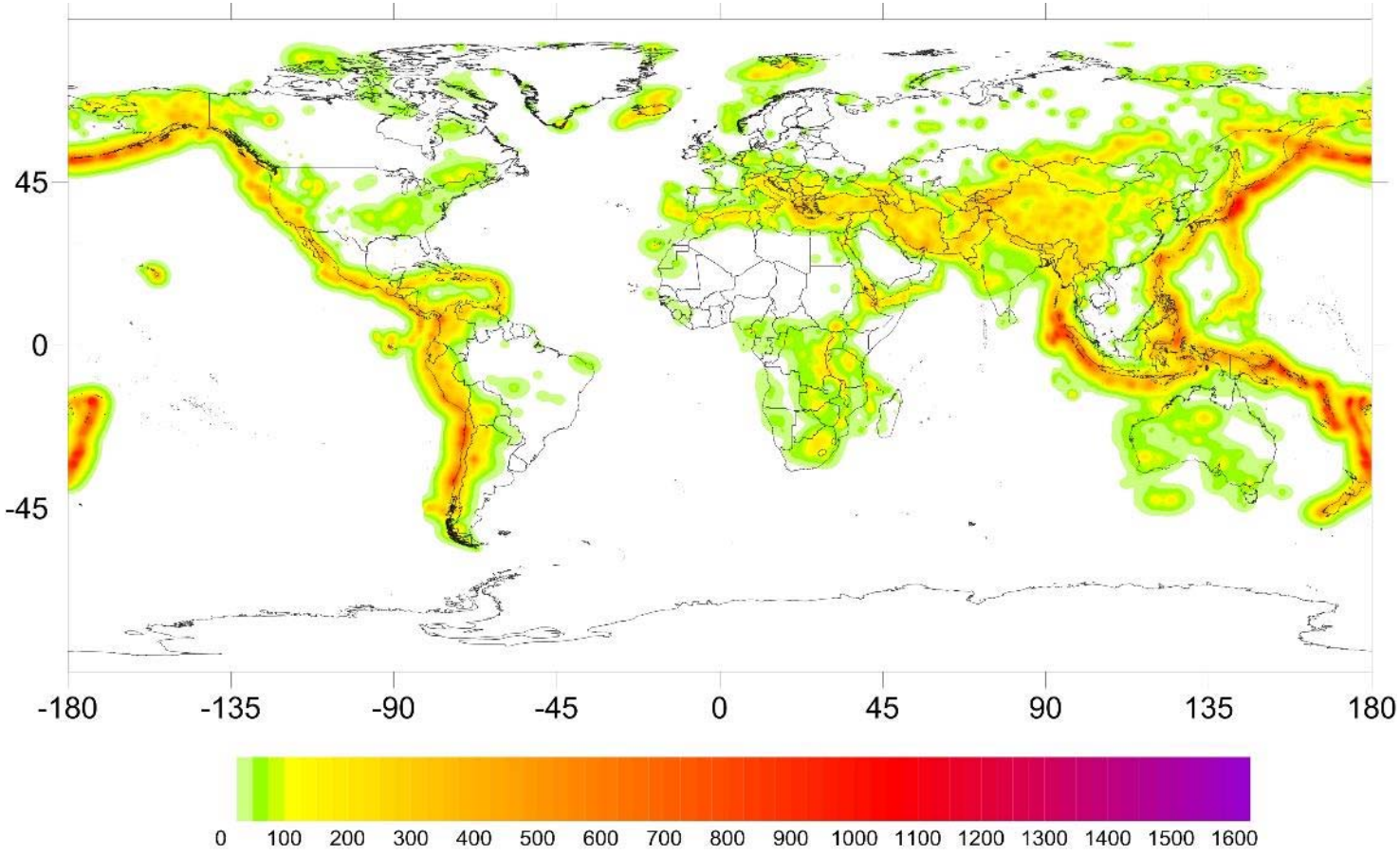


Figure A3-11. Hazard map for 0.5 sec, RT=975 years. Units of acceleration are cm/s^2

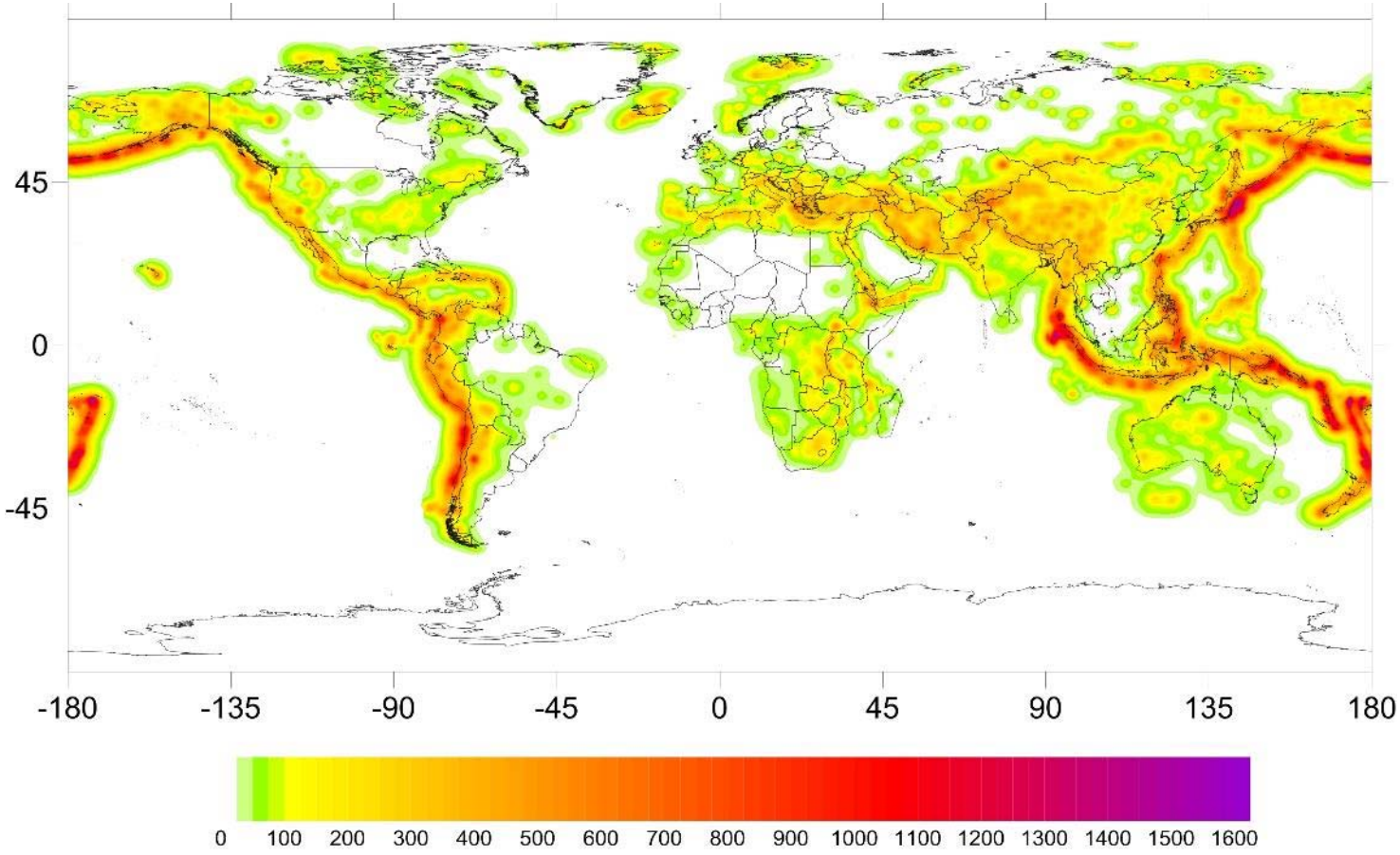


Figure A3-12. Hazard map for 0.5 sec, RT=2,475 years. Units of acceleration are cm/s^2

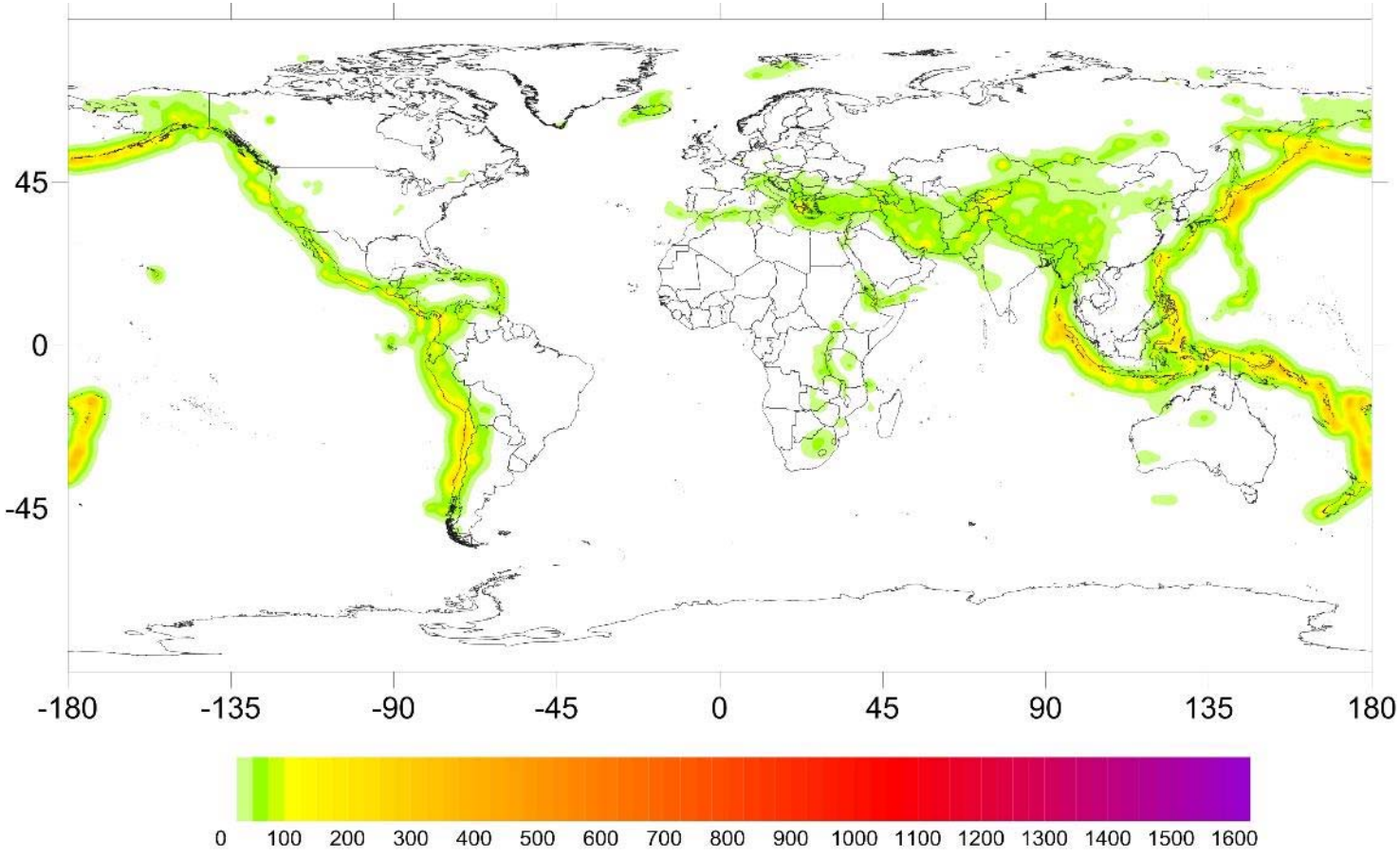


Figure A3-13. Hazard map for 1.0 sec, RT=225 years. Units of acceleration are cm/s^2

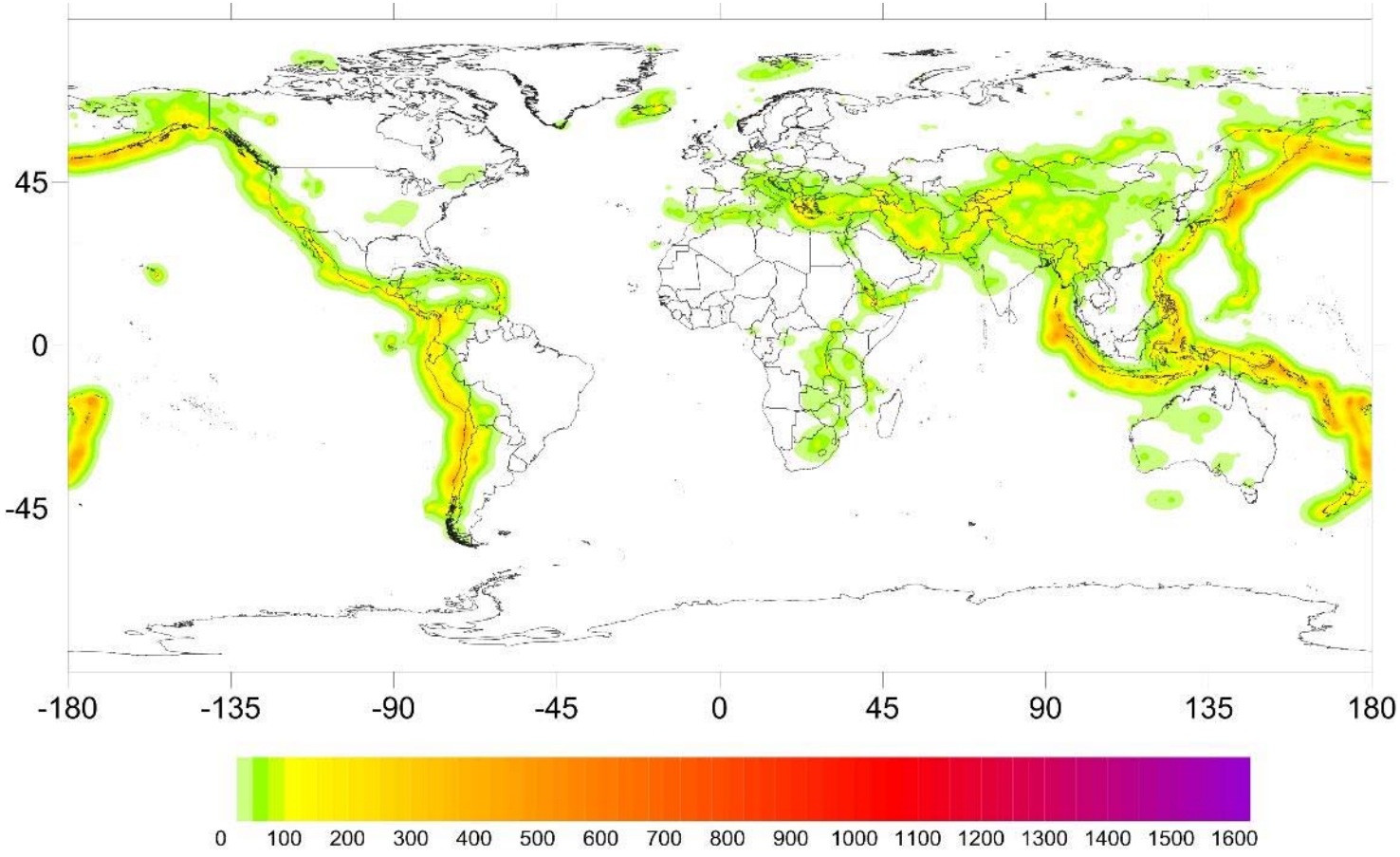


Figure A3-14. Hazard map for 1.0 sec, RT=475 years. Units of acceleration are cm/s^2

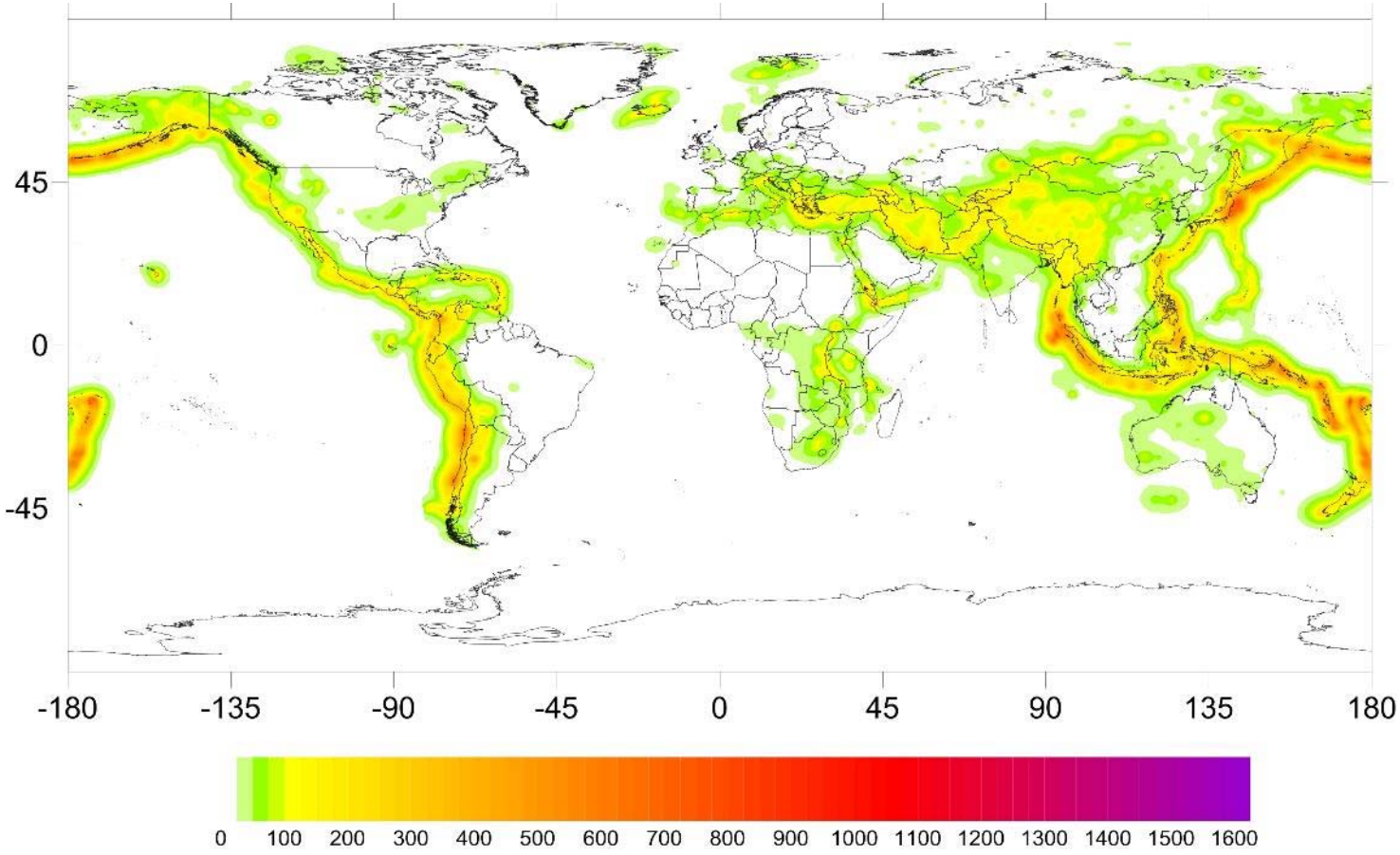


Figure A3-15. Hazard map for 1.0 sec, RT=975 years. Units of acceleration are cm/s^2

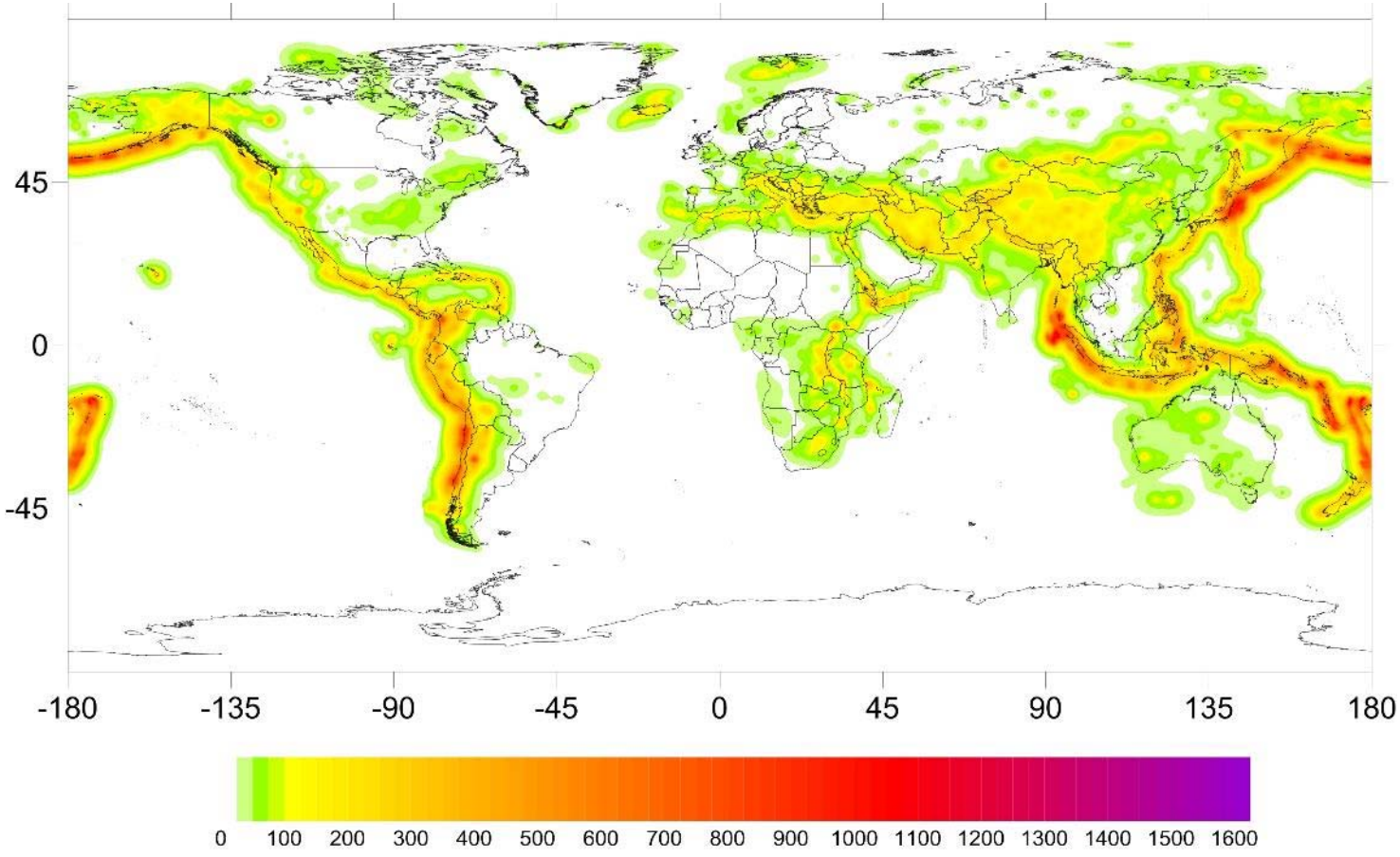


Figure A3-16. Hazard map for 1.0 sec, RT=2,475 years. Units of acceleration are cm/s^2

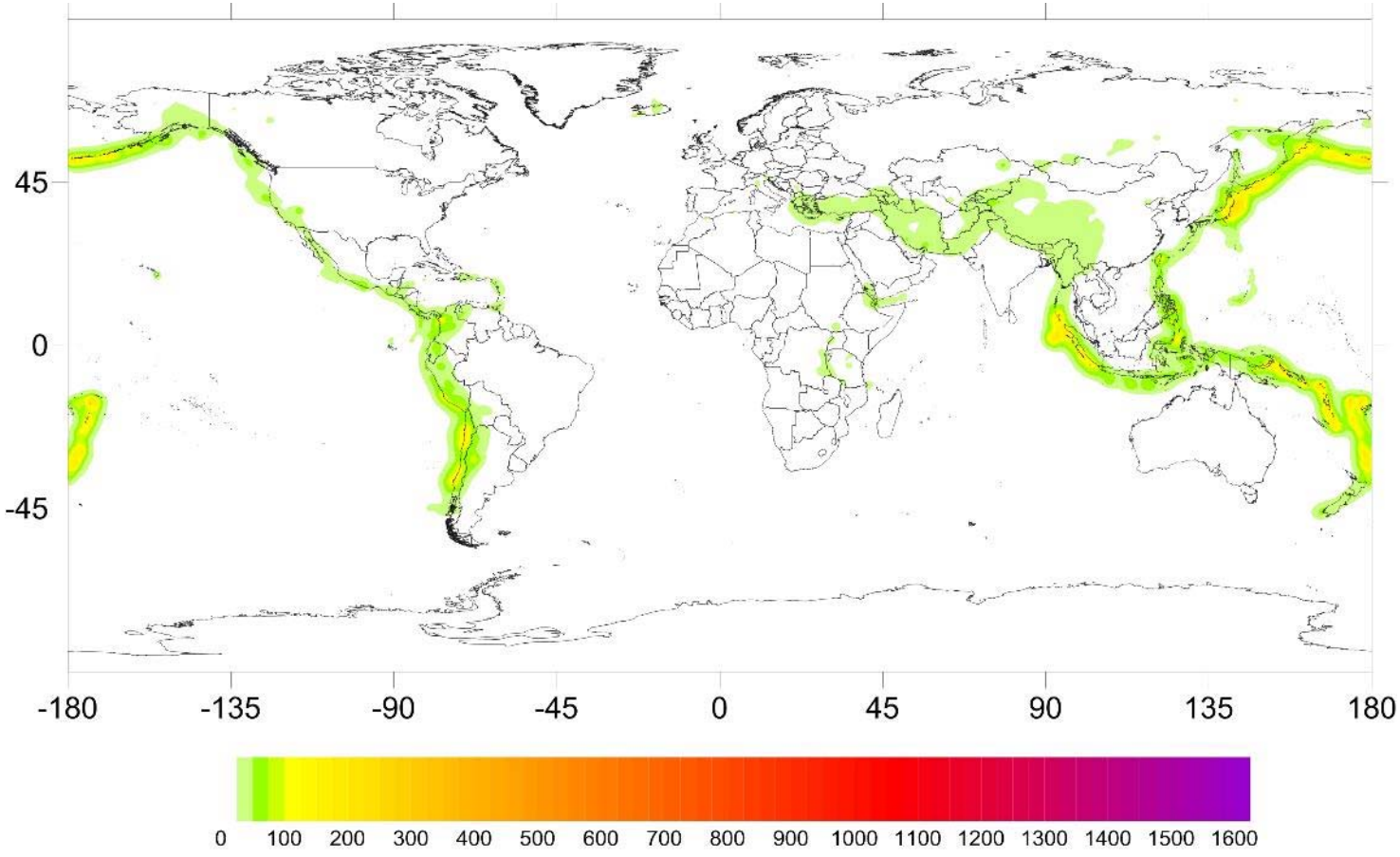


Figure A3-17. Hazard map for 2.0 sec, RT=225 years. Units of acceleration are cm/s^2

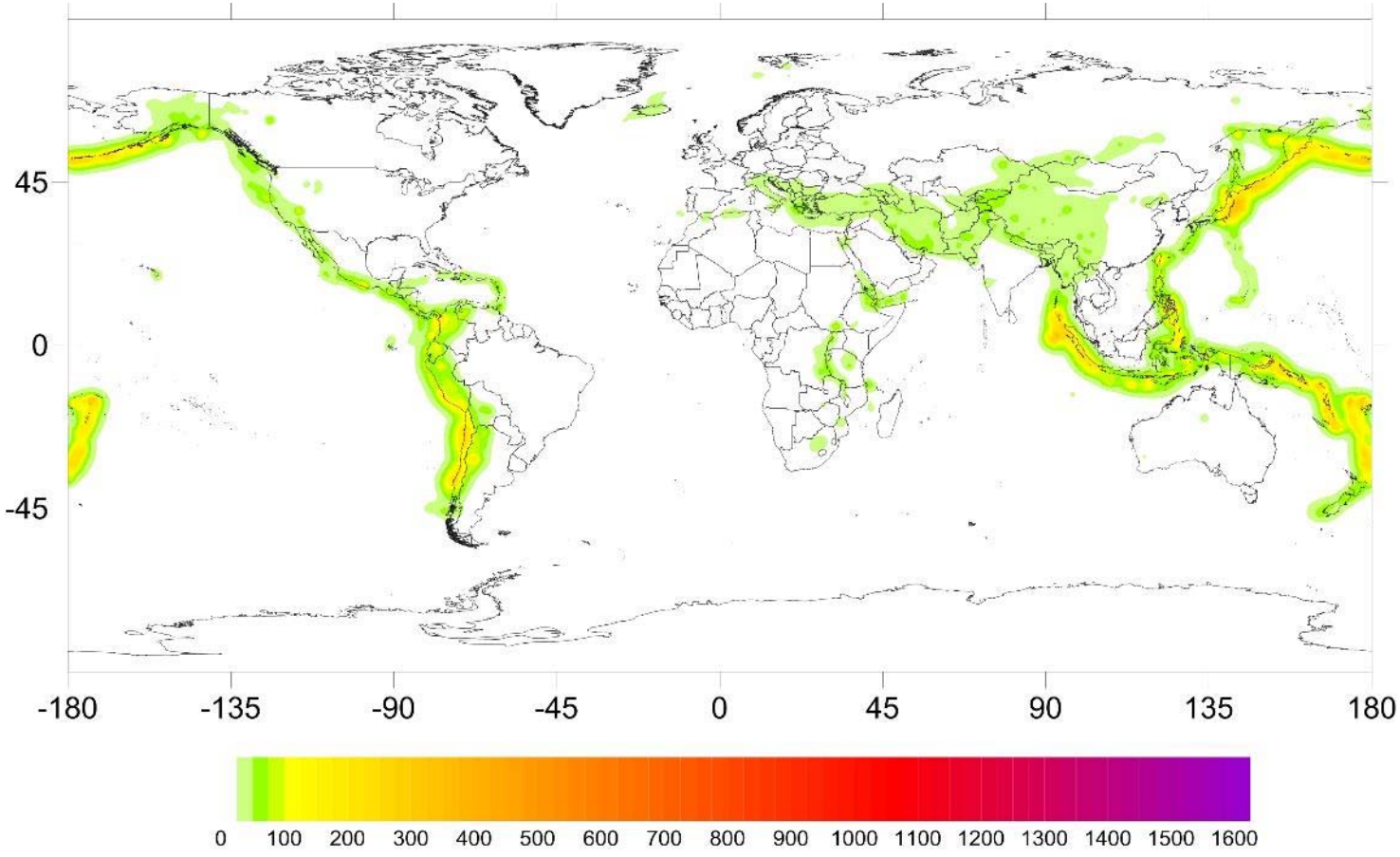


Figure A3-18. Hazard map for 2.0 sec, RT=475 years. Units of acceleration are cm/s^2

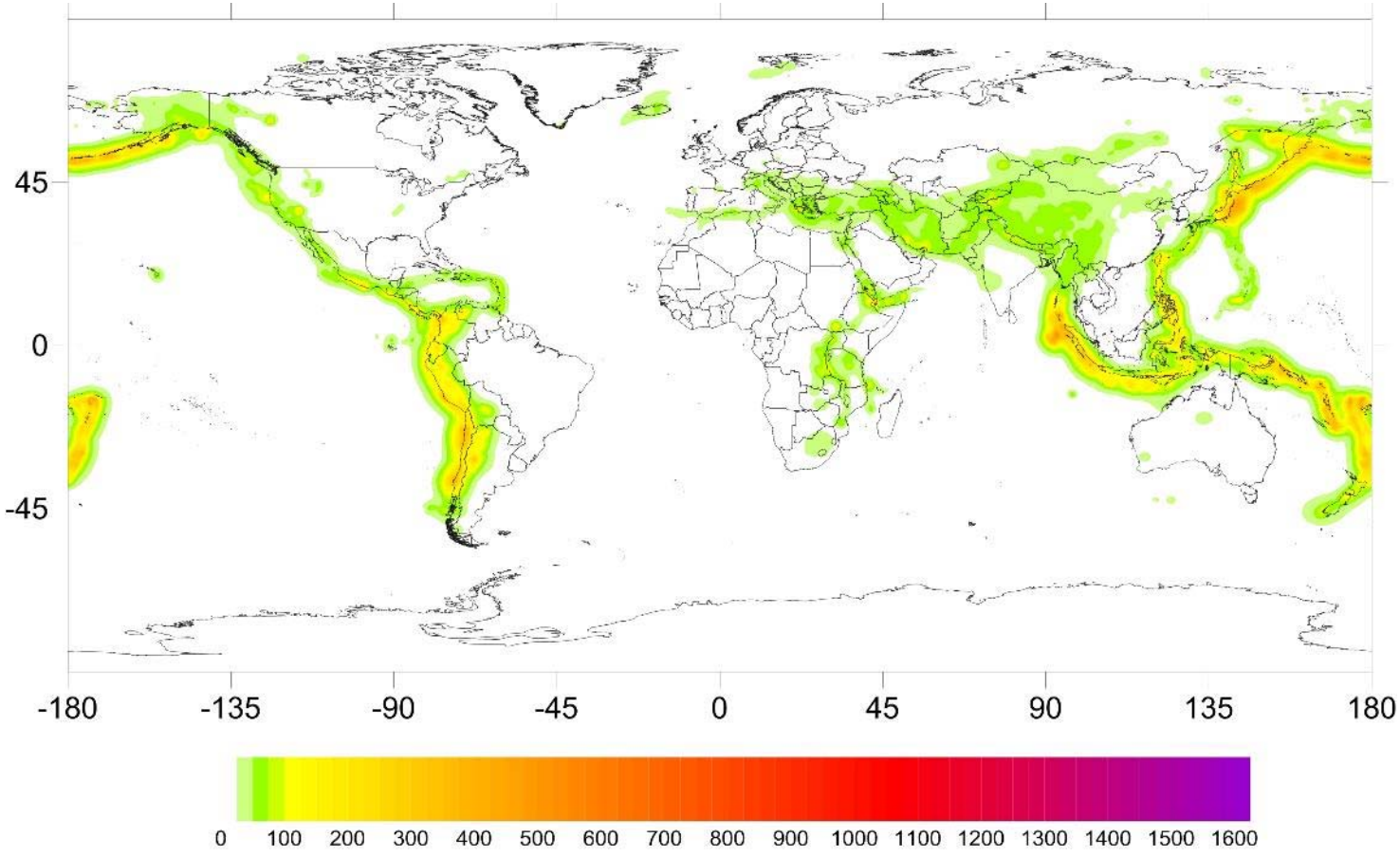


Figure A3-19. Hazard map for 2.0 sec, RT=975 years. Units of acceleration are cm/s^2

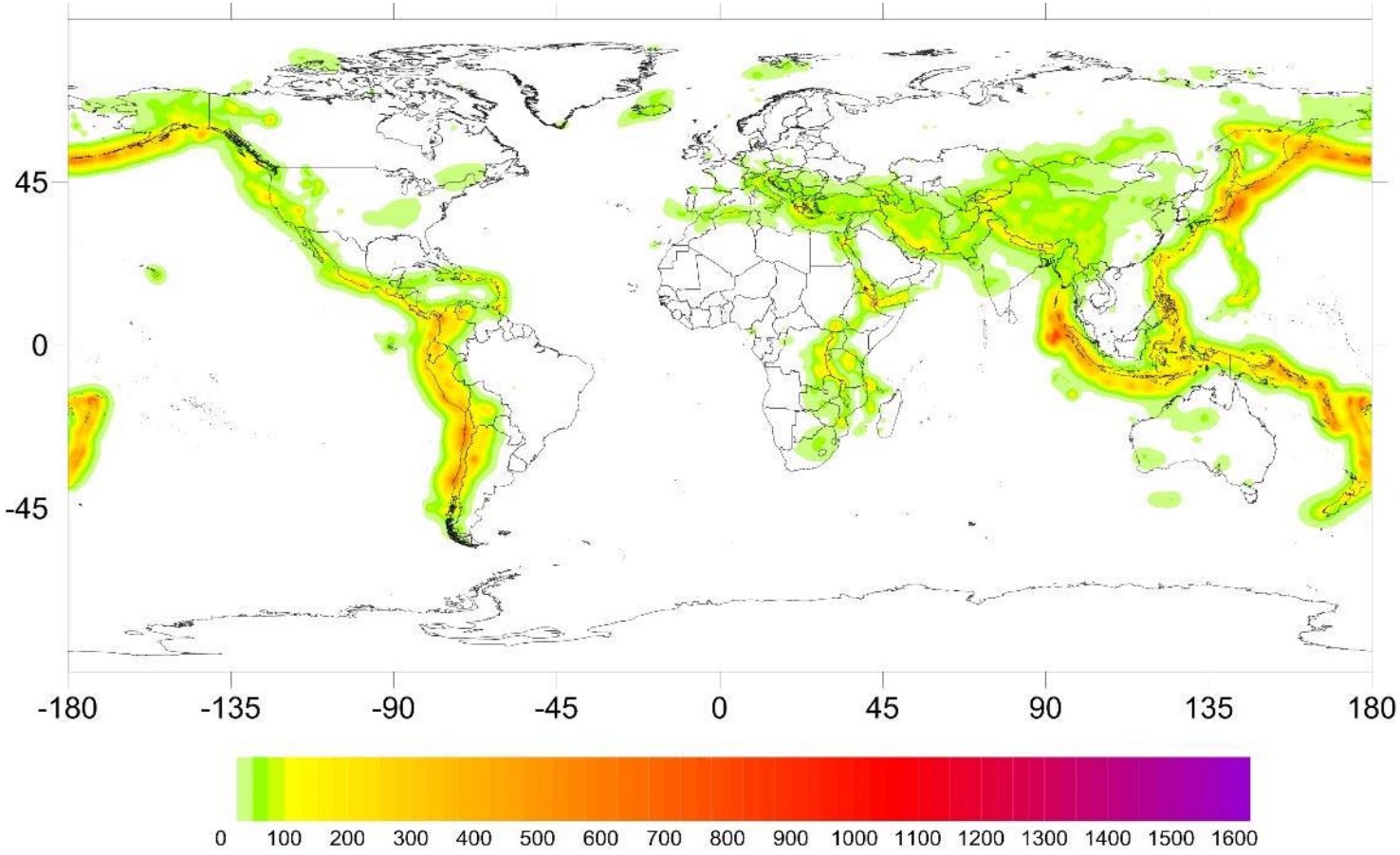


Figure A3-20. Hazard map for 2.0 sec, RT=2,475 years. Units of acceleration are cm/s^2

Annex 4. Seismic Hazard Curves for Some Selected Cities

As in GAR13, seismic hazard curves for 18 cities are calculated along different regions of the World. The curves are presented in terms of annual exceedance rates as a function of PGA. The selected cities are presented in Table A4-1.

Table A4-1. Selected cities

Country	City	Longitude (°)	Latitude (°)	Region
Argelia	Argel	3.05	36.76	Africa
Kenia	Nairobi	36.83	-1.28	Africa
China	Shanghai	121.47	31.25	Asia
Japón	Tokio	139.70	35.69	Asia
Taiwán	Taipei	121.57	25.08	Asia
Indonesia	Yakarta	106.86	-6.19	Asia
Pakistán	Islamabad	73.08	33.70	Asia
Filipinas	Manila	120.98	14.59	Asia
Dominican Republic	Santo Domingo	-69.97	18.49	Caribbean
Jamaica	Kingston	-76.79	17.99	Caribbean
Colombia	Bogota	-74.07	4.59	South America
Perú	Lima	-77.06	-12.03	South America
Nicaragua	Managua	-86.24	12.15	Central America
El Salvador	San Salvador	-89.16	13.73	Central America
Mexico	México D.F	-99.12	19.42	North America
EEUU	Los Angeles	-118.26	33.99	North America
New Zealand	Wellington	174.76	-41.28	Oceania
New Zealand	Christchurch	172.63	-43.53	Oceania

Cities in Africa

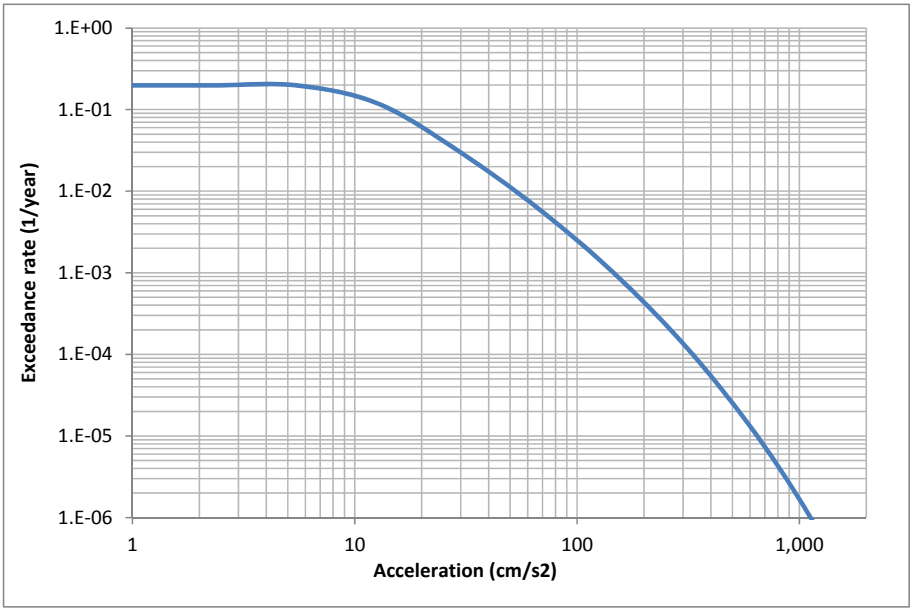


Figure A4-1. Hazard curve (PGA) for Argel

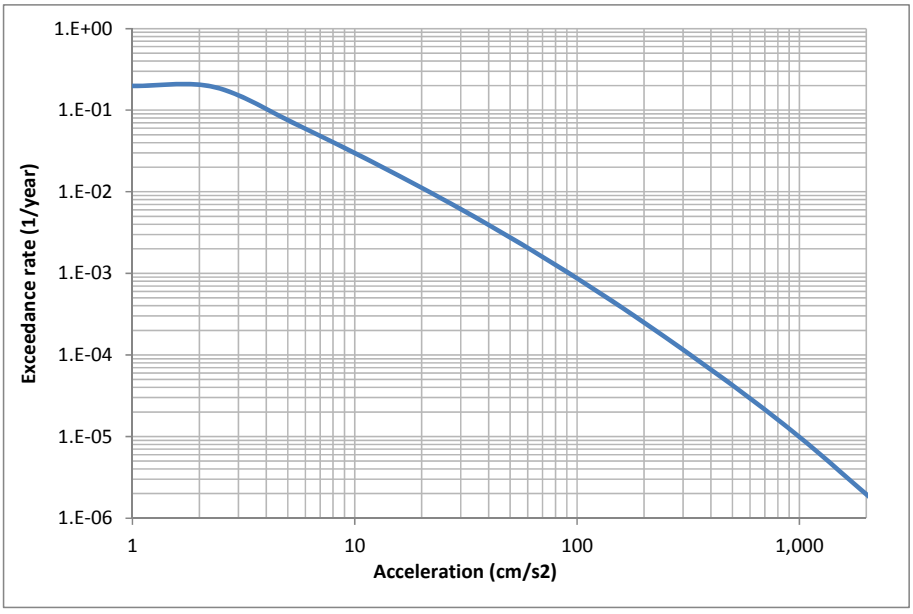


Figure A4-2. Hazard curve (PGA) for Nairobi

Cities in Asia

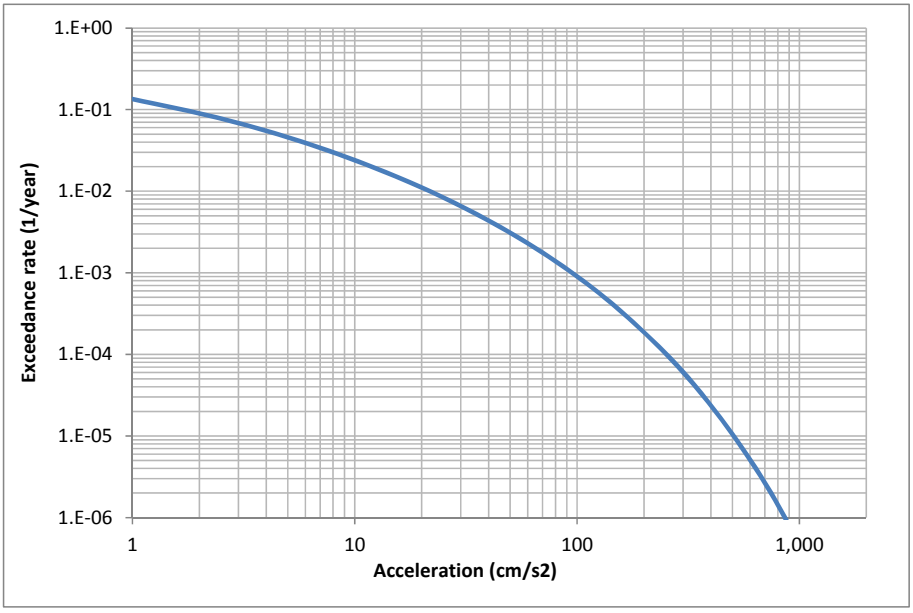


Figure A4-3. Hazard curve (PGA) for Shanghai

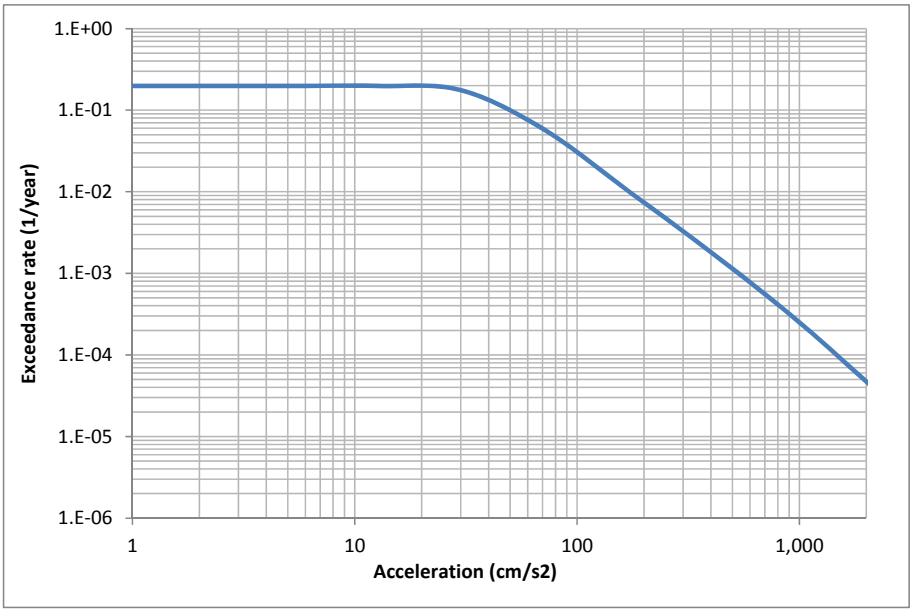


Figure A4-4. Hazard curve (PGA) for Tokyo

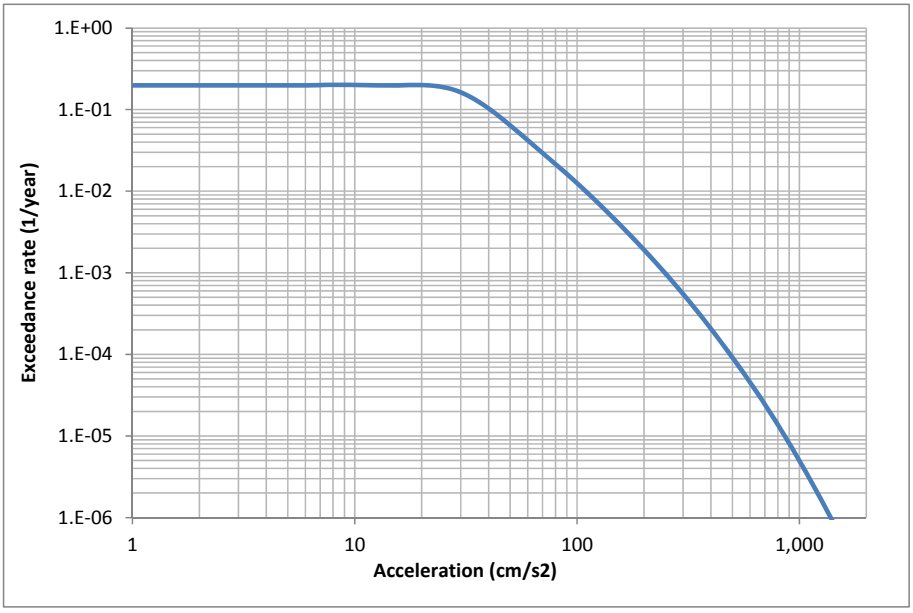


Figure A4-5. Hazard curve (PGA) for Taipei

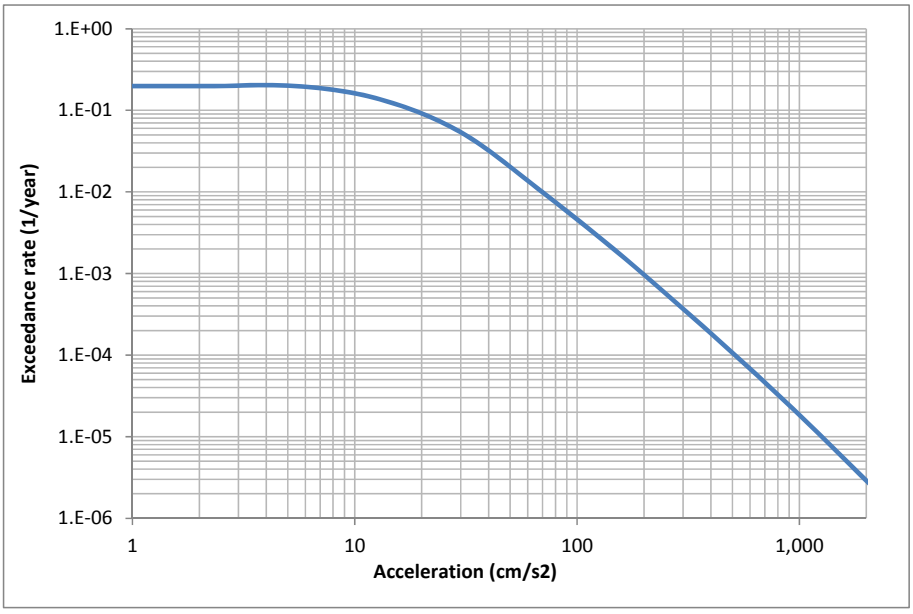


Figure A4-6. Hazard curve (PGA) for Jakarta

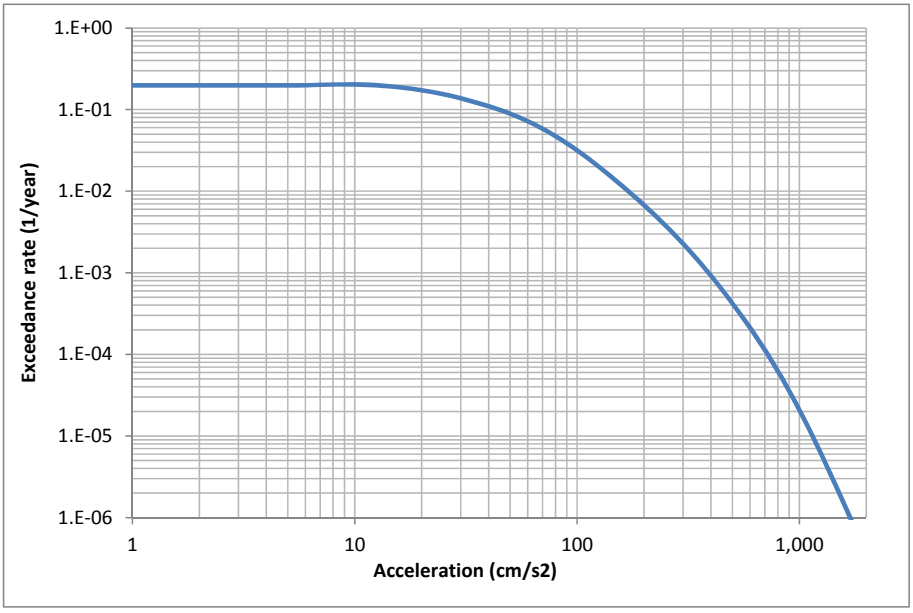


Figure A4-7. Hazard curve (PGA) for Islamabad

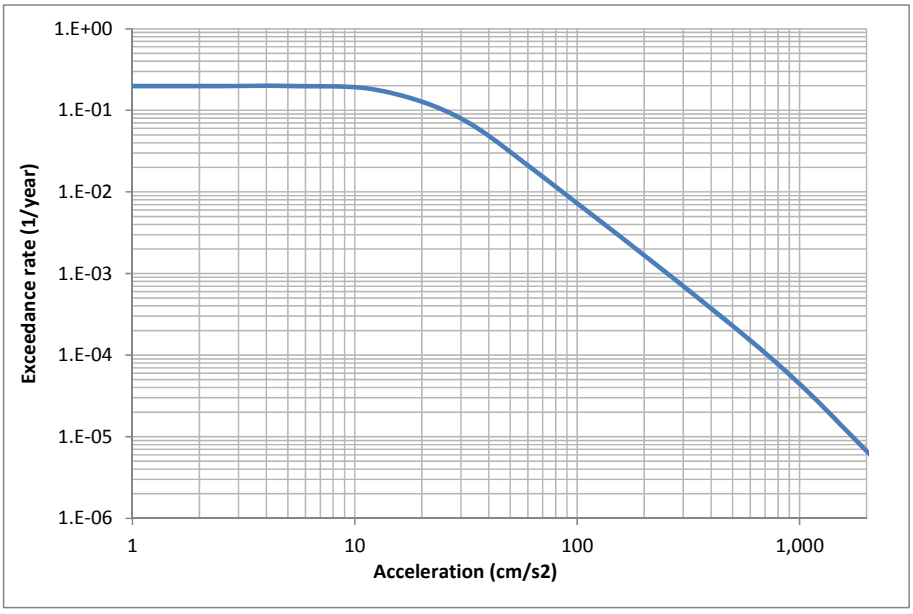


Figure A4-8. Hazard curve (PGA) for Manila

Cities in the Caribbean

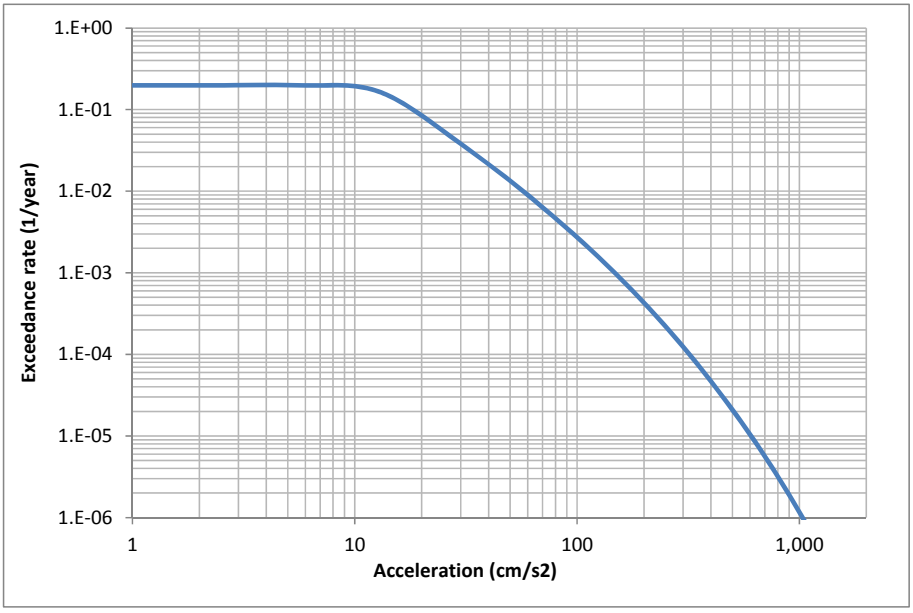


Figure A4-9. Hazard curve (PGA) for Santo Domingo

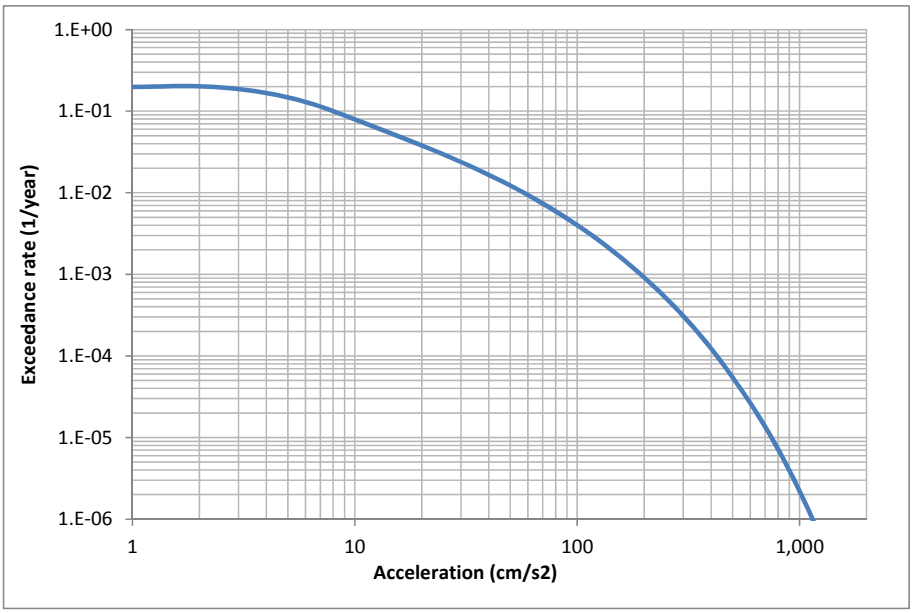


Figure A4-10. Hazard curve (PGA) for Kingston

Cities in South America

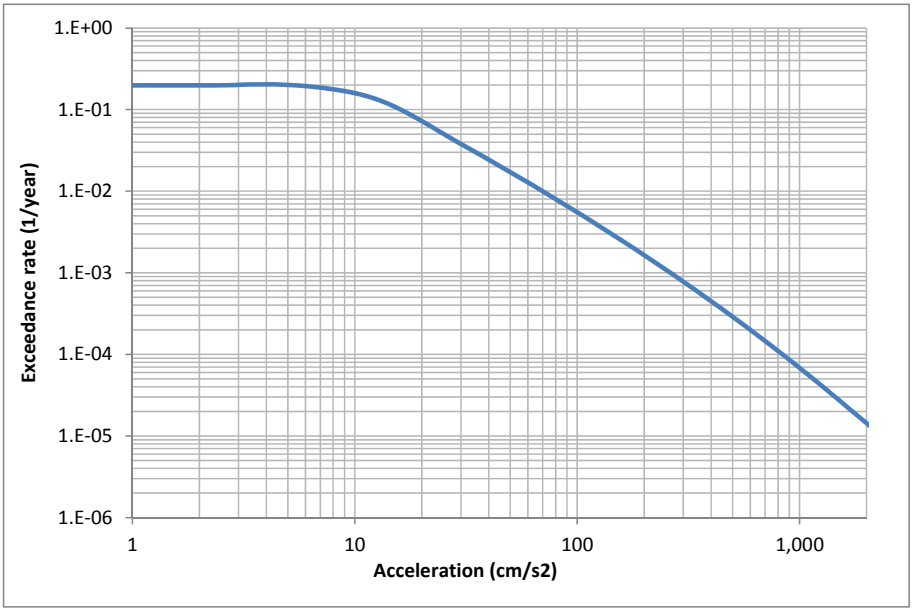


Figure A4-11. Hazard curve (PGA) for Bogotá

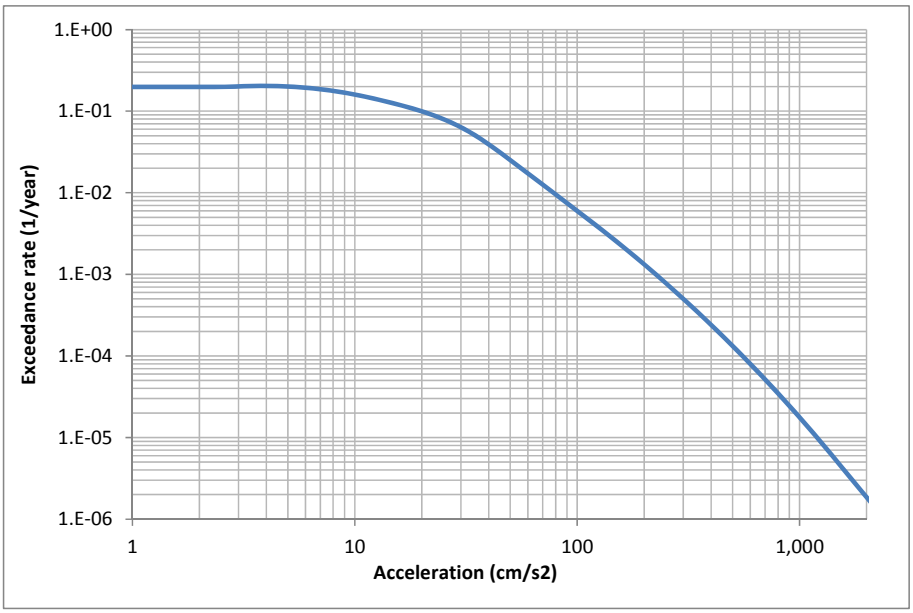


Figure A4-12. Hazard curve (PGA) for Lima

Cities in Central America

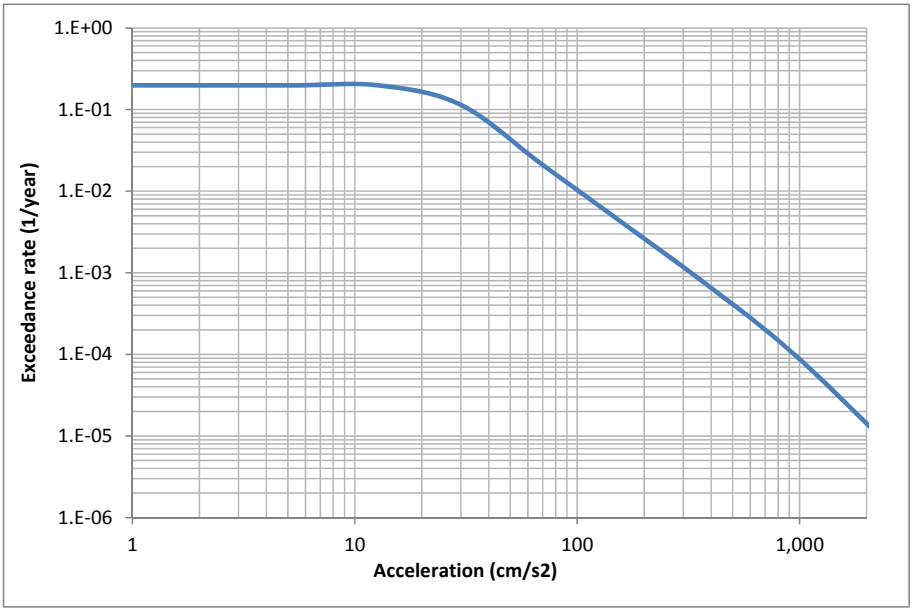


Figure A4-13. Hazard curve (PGA) for Managua

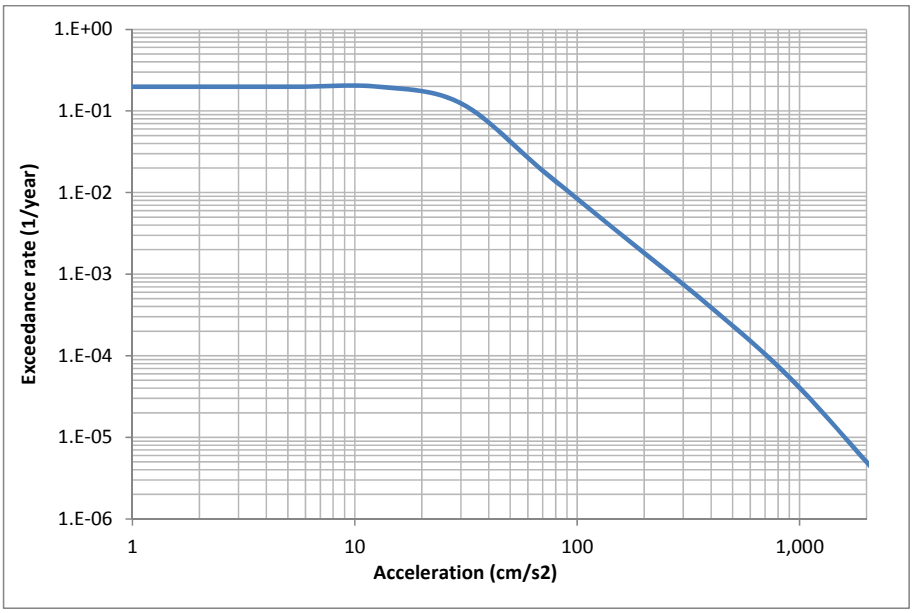


Figure A4-14. Hazard curve (PGA) for San Salvador

Cities in North America

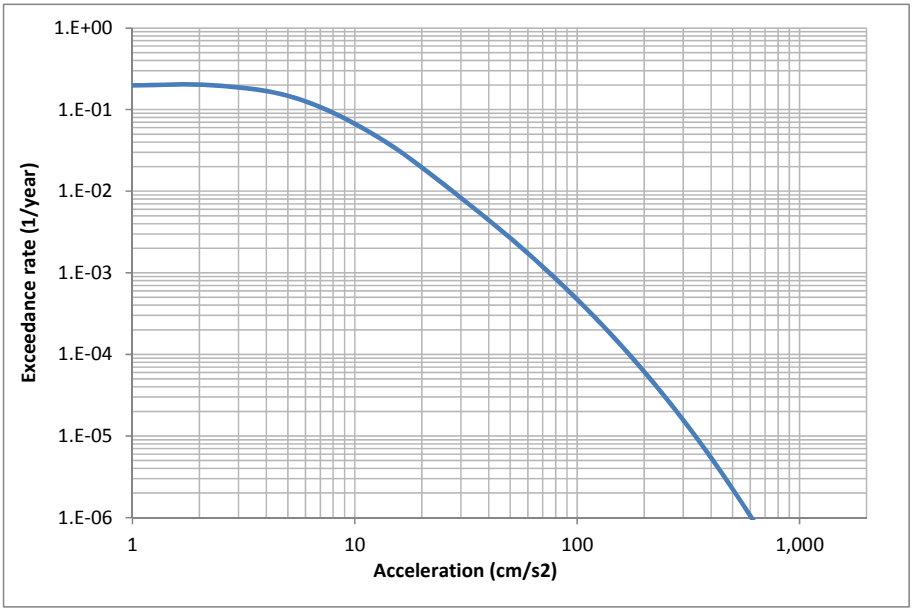


Figure A4-15. Hazard curve (PGA) for Mexico City

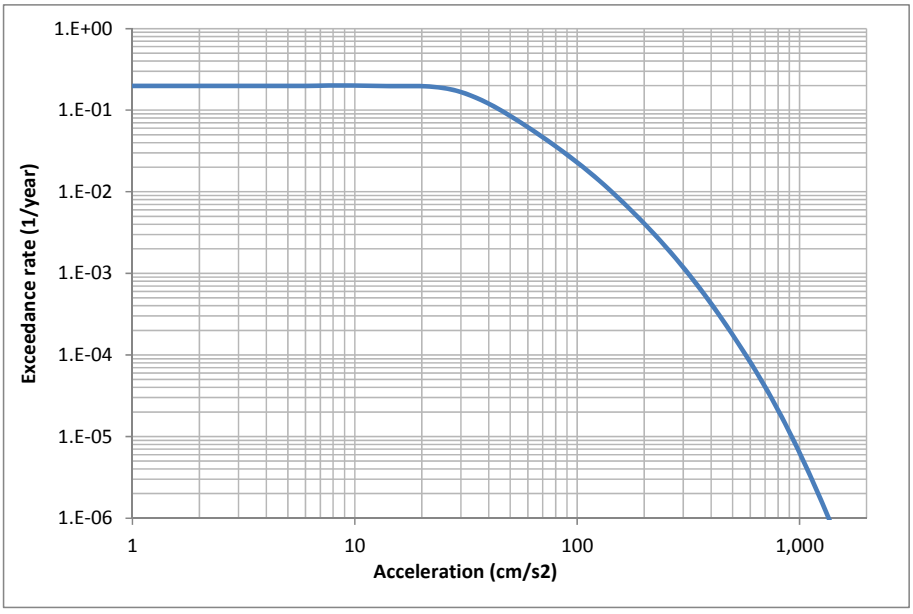


Figure A4-16. Hazard curve (PGA) for Los Angeles

Cities in Oceania

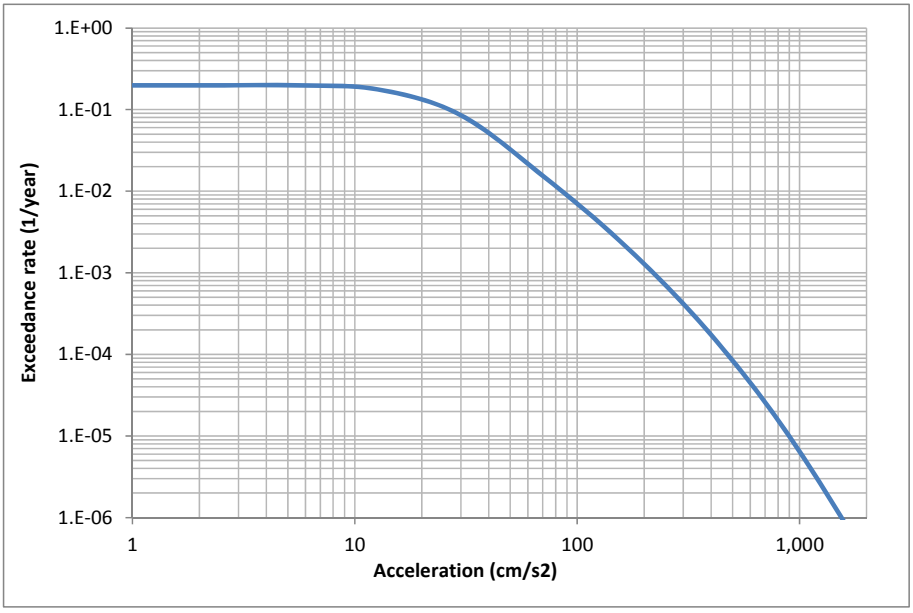


Figure A4-17. Hazard curve (PGA) for Wellington

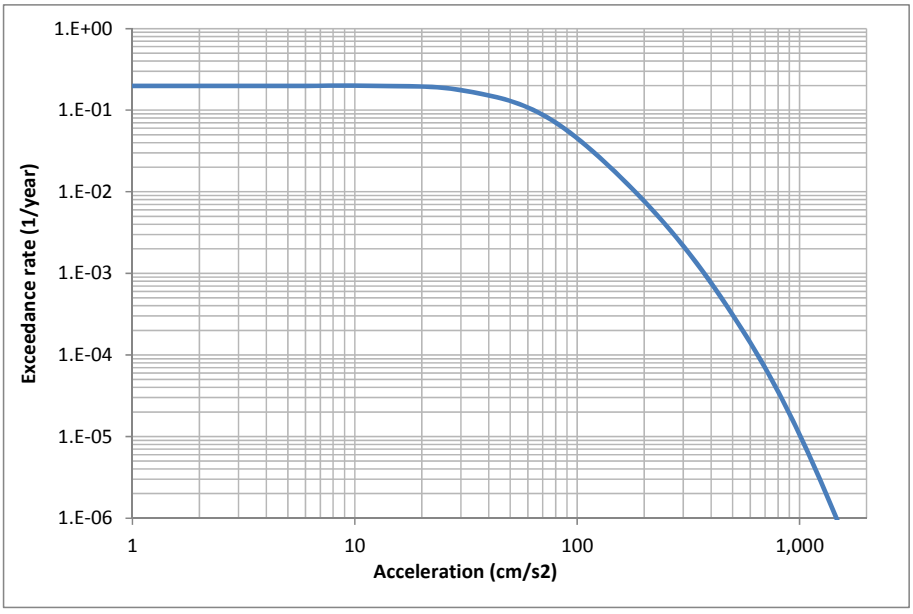


Figure A4-18. Hazard curve (PGA) for Christchurch

Annex 5. Uniform Hazard Spectra for some Selected Cities

Uniform hazard spectra (UHS) for 475 years return period (10% probability of exceedance in 50 years) are calculated for some cities. Comparison between the results of GAR15 and GAR13 are shown.

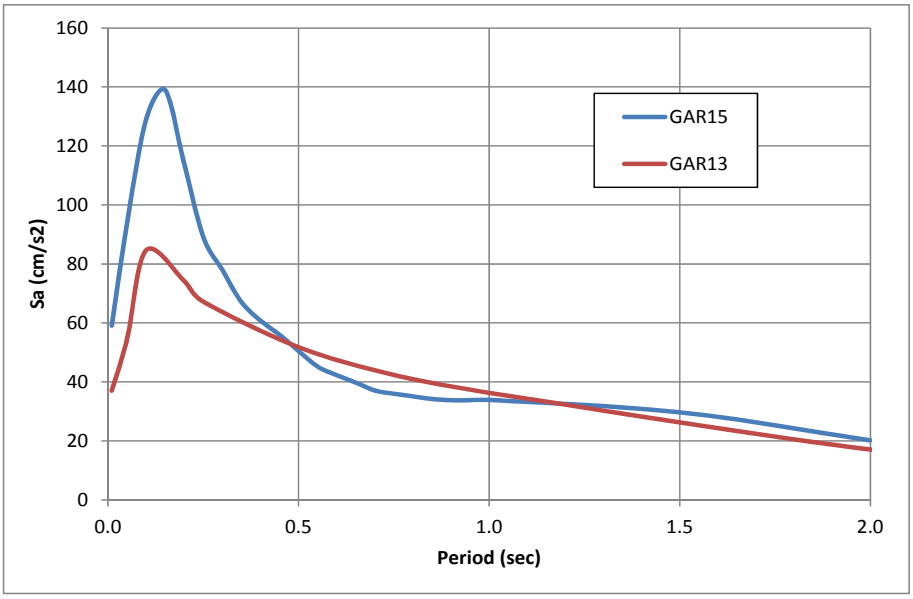


Figure A5-1. UHS (475 years) for Nairobi

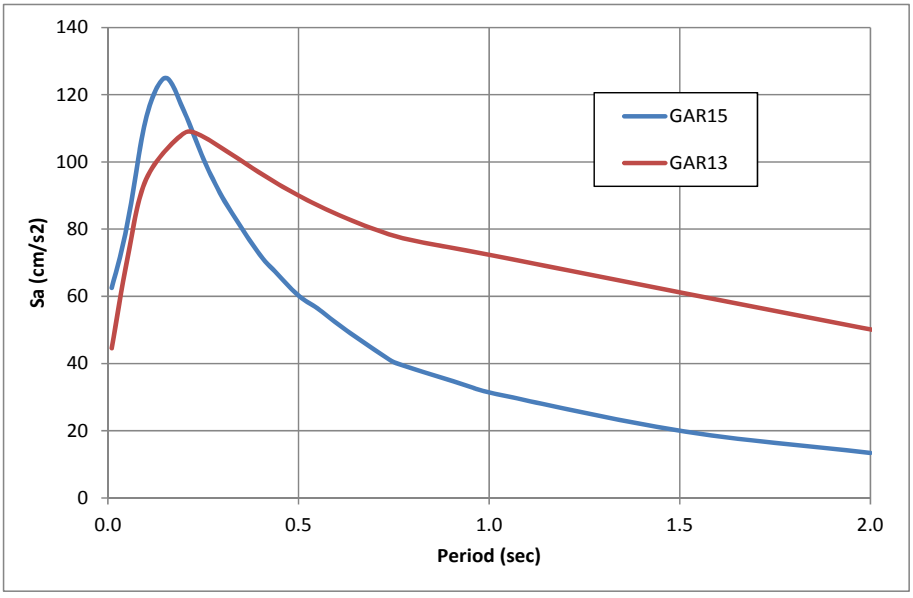


Figure A5-2. UHS (475 years) for Shanghai

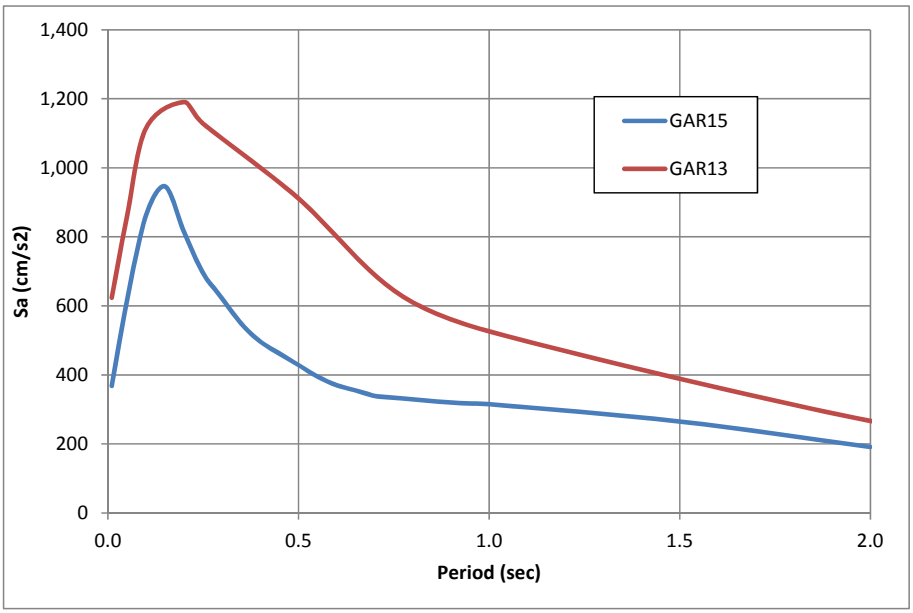


Figure A5-3. UHS (475 years) for Tokyo

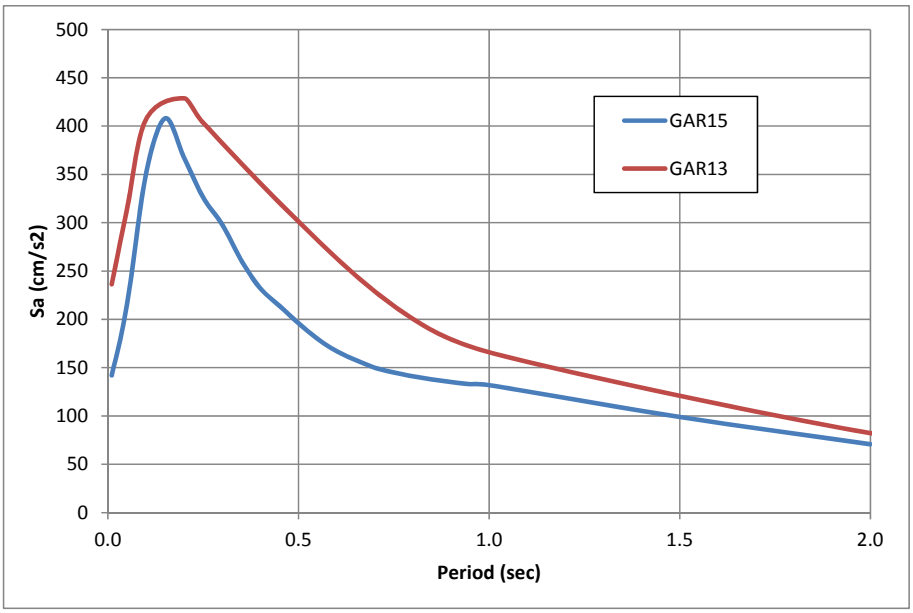


Figure A5-4. UHS (475 years) for Jakarta

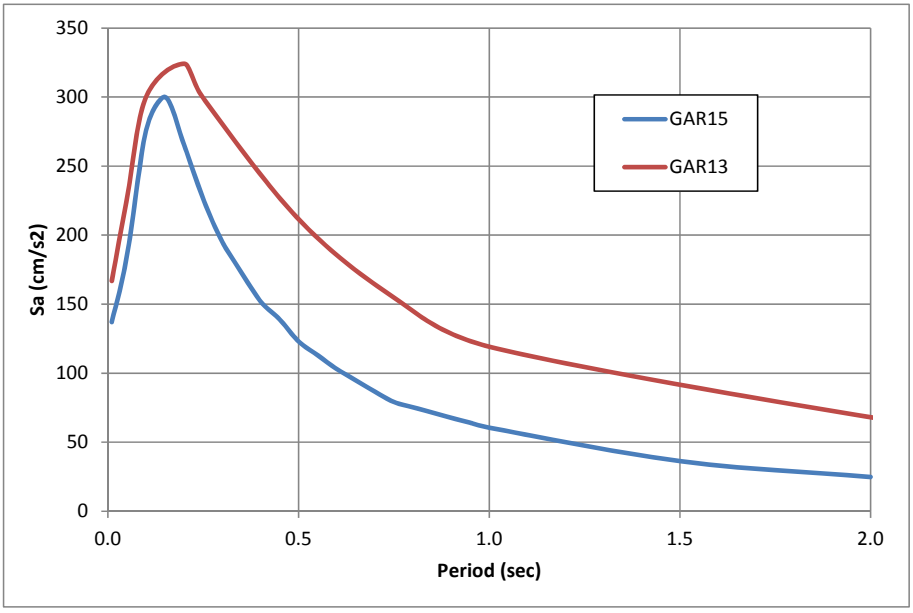


Figure A5-5. UHS (475 years) for Kingston

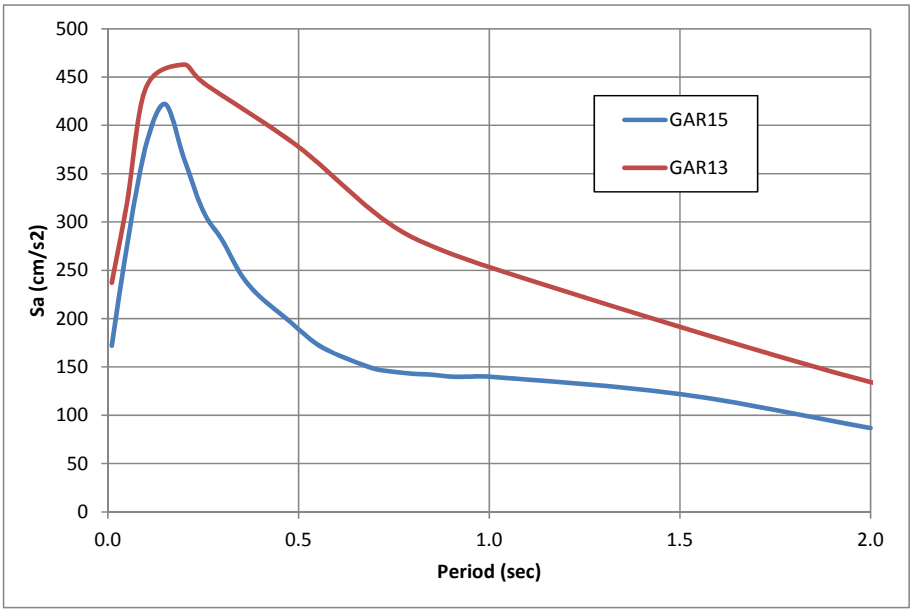


Figure A5-6.. UHS (475 years) for Bogotá

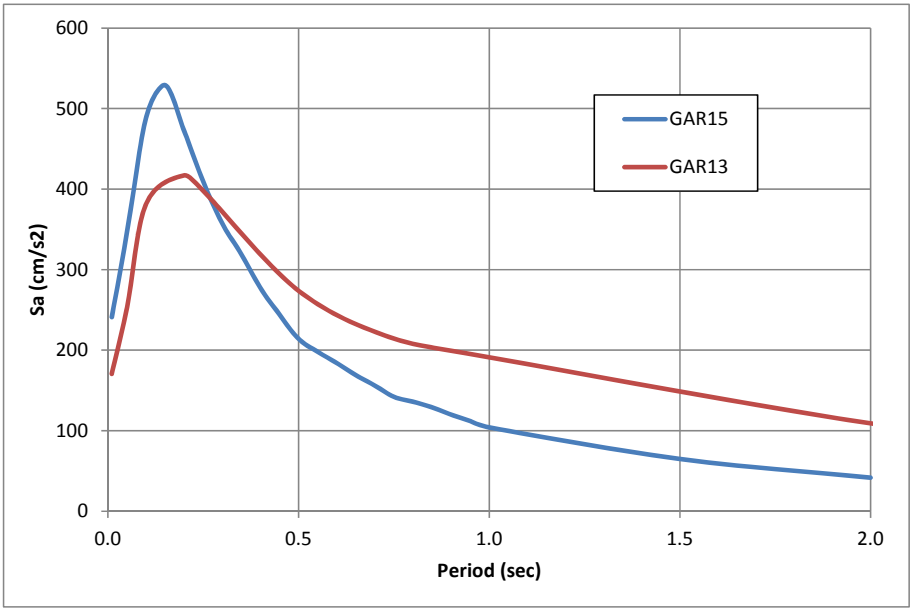


Figure A5-7. UHS (475 years) for Los Angeles

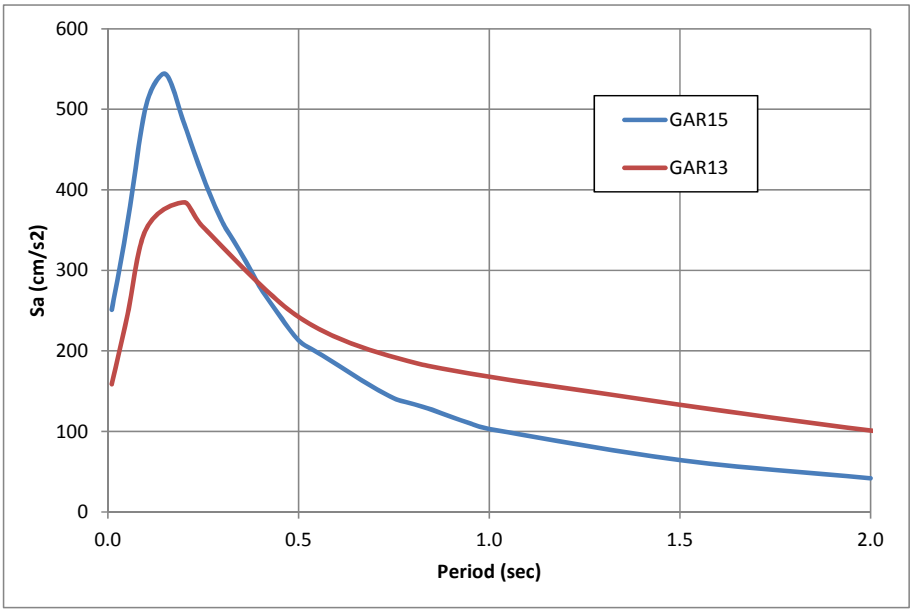


Figure A5-8. UHS (475 years) for San Francisco

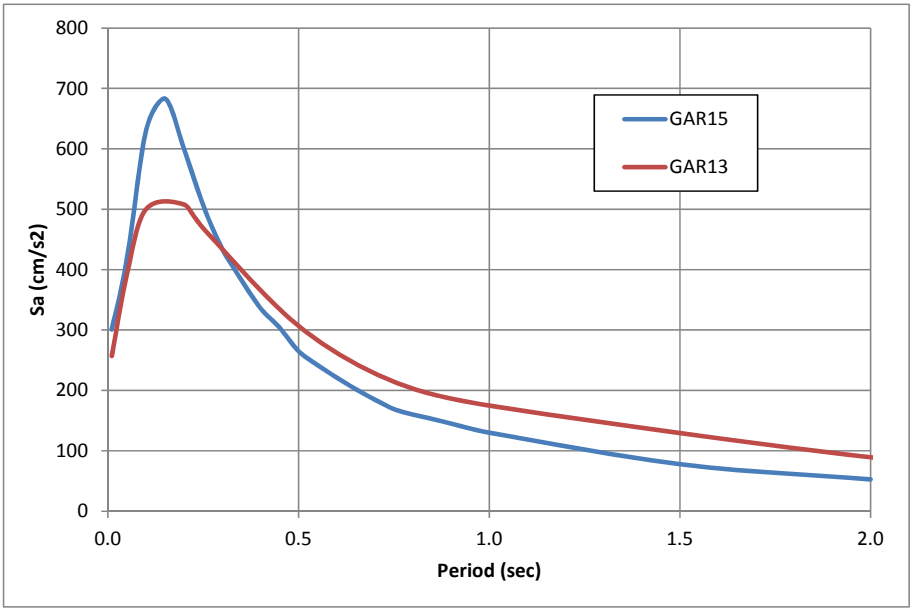


Figure A5-9. UHS (475 years) for Christchurch

Annex 6. Changes from GAR13 Results

To verify the implication of the changes in input data in terms of seismicity and GMPEs, a set of comparisons are presented in this section. All comparisons in this report are in terms of PGA and a 475 year return period. With this said, the residual was calcualted in the following way:

$$R = Ln\left(\frac{A}{B}\right) \qquad \textbf{(Eq. A6-1)}$$

where A corresponds to the results with the modification and B results using the base data of GAR13. It is important to know what the implications of the changes due to modifications on the input data are, especially since the same calculation methodology has been followed, a set of comparisons among the results were performed.

Changes due to the Seismicity Update

In this case A represents the results obtained using the seismicity values and GMPEs of GAR15, while B represents the results obtained using the seismicity values of GAR13 and GMPEs of GAR15 (changing only the seismicity). Figure A6-1 presents the results.

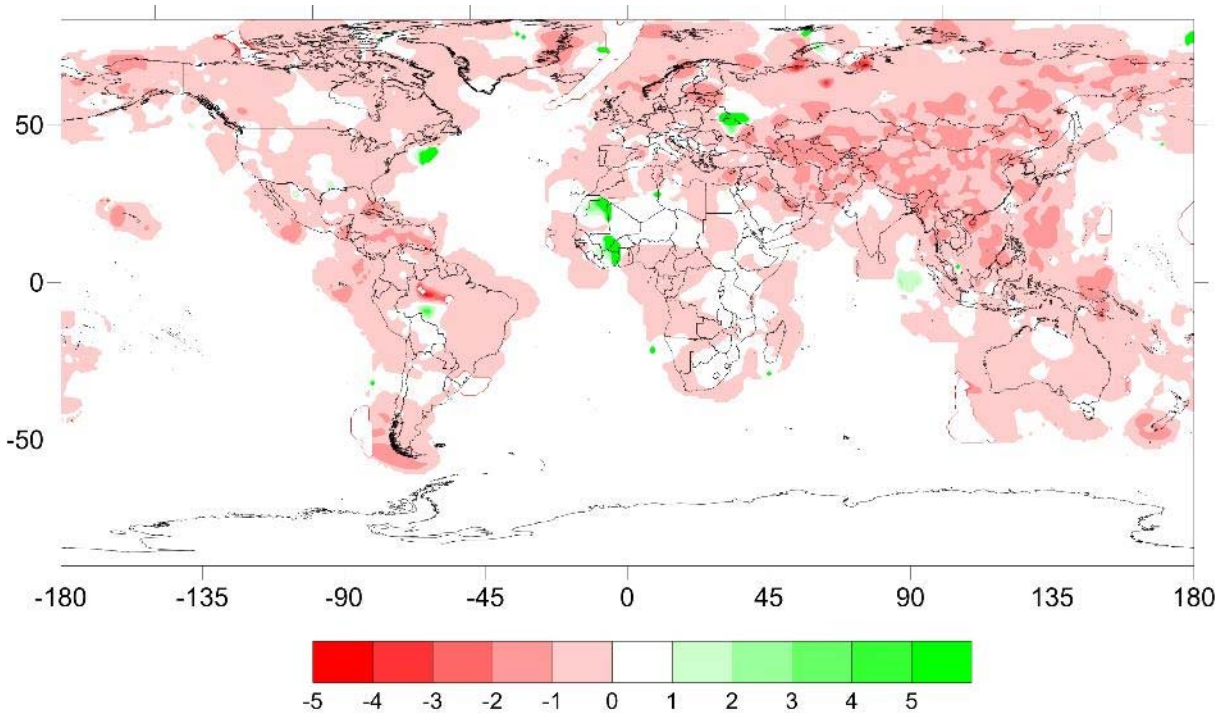


Figure A6-1. Changes due to seismicity (PGA and 475 years return period)

From the previous figure it can be seen that the variation is very little, as expected.

Changes due to the GMPE Assignation

Since all the tectonic environments (1 through 6) suffered changes either because of the assignation of a different GMPE or by the modification of the parameters needed in each of these tectonic provinces (such as the Vs30), it is important to identify specifically what the changes are. Hence, two sets of comparisons were made; in the first one individual comparisons were perfomed for each tectonic environment, changing the GMPEs only for one environment at a time, and in the second one the GMPEs for all environments were changed at the same time.

For Zone 1, corresponding to interplate subduction thrust, the Zhao et al. - interface (2006) GMPE has been assigned for GAR15 instead of the Youngs - interface (1997). In this case A represents the results obtained using the seismicity and GMPEs of GAR13 with exception of those zones classified as "1" where the GMPEs of GAR15 were used, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-2 shows the changes that exist in said zone due to the change on the GMPE assignation.

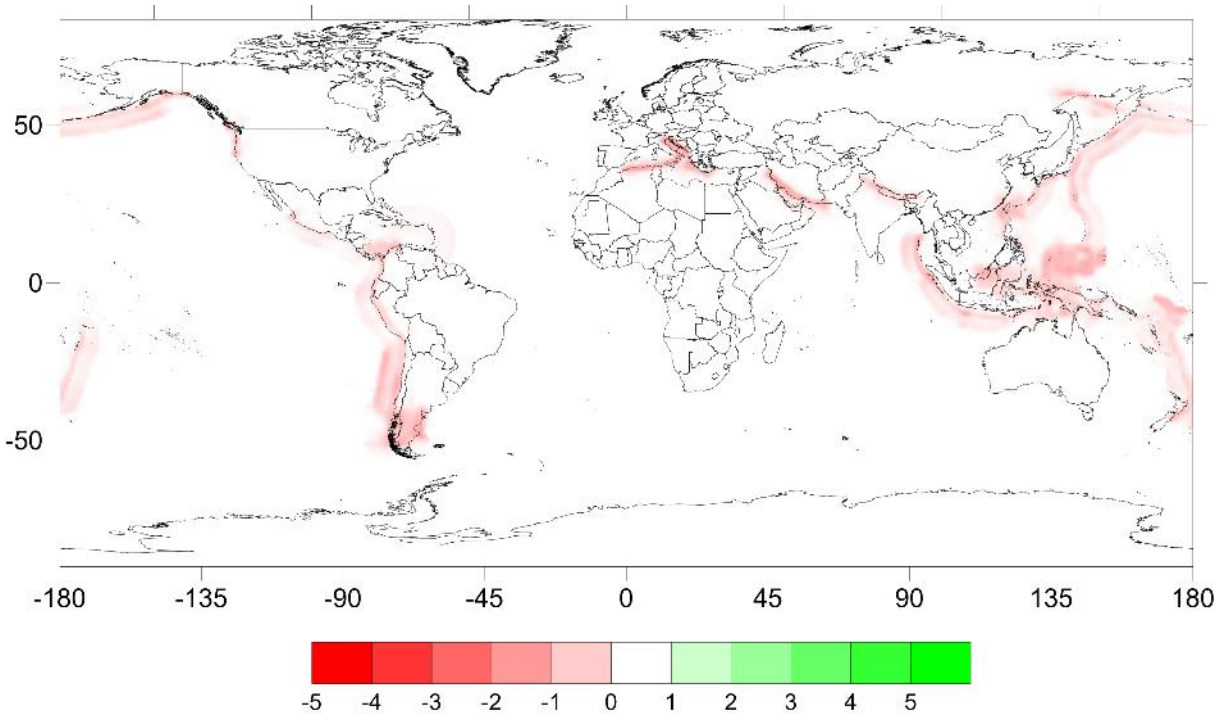


Figure A6-2. Changes due to GMPE assignation in Zone 1 (PGA and 475 years return period)

From the previous figure it can be seen that a slight decrease in the interplate subduction thrust zones occurs.

For Zone 2, corresponding to intraslab in the subducting plate, the Zhao et al. - intraslab (2006) GMPE has been assigned for GAR15 instead of the Youngs - intraslab (1997). In this case A represents the results obtained using the seismicity and GMPEs of GAR13 with exception of those zones classified as "2" where the GMPEs of GAR15 were used, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-3 shows the changes that exist in said zone due to the change on the GMPE assignation.

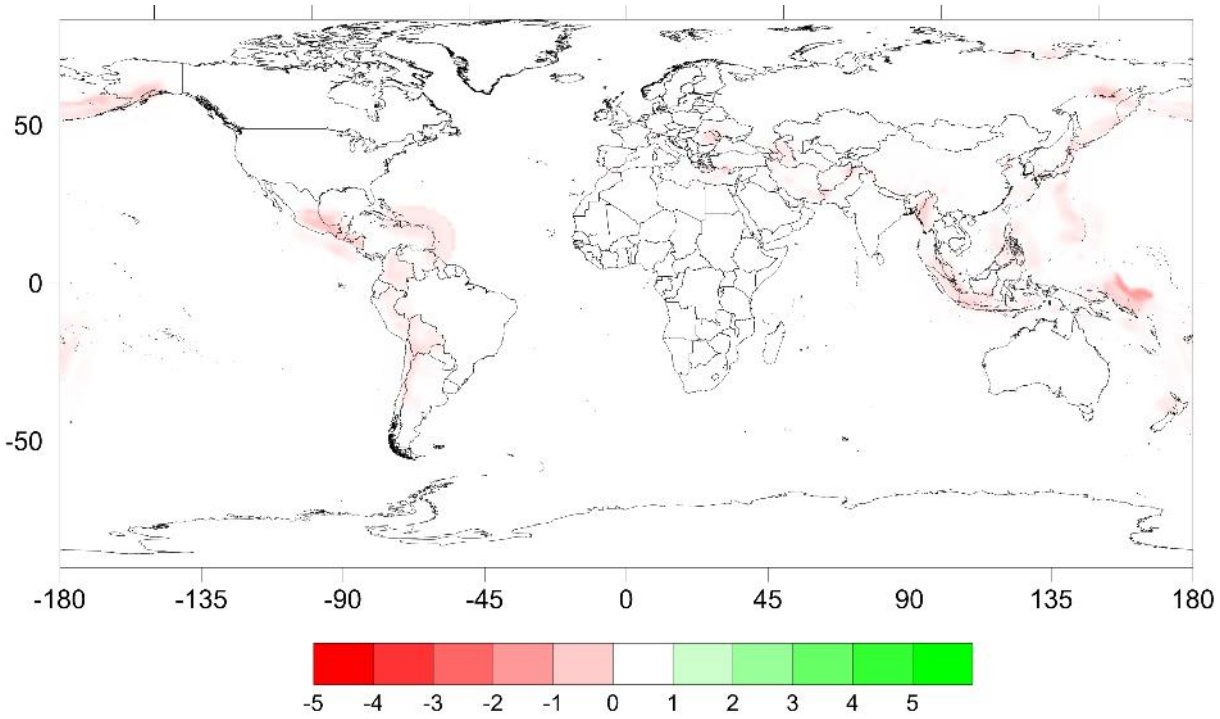


Figure A6-3. Changes due to GMPE assignation in Zone 2 (PGA and 475 years return period)

From the previous figure it can be seen that a slight decrease in the intraslab subducting in the plate zones occurs.

For Zone 3, corresponding to stable continental, the Atkinson and Boore – explicitly Vs30 (2008) GMPE has been assigned for GAR15 instead of the Atkinson and Boore (2008). In this case A represents the reults obtained using the seismicity and GMPEs of GAR13 with exception of those zones classified as "3" where the GMPEs of GAR15 were used, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-4 shows the changes that exist in said zone due to the change on the GMPE assignation.

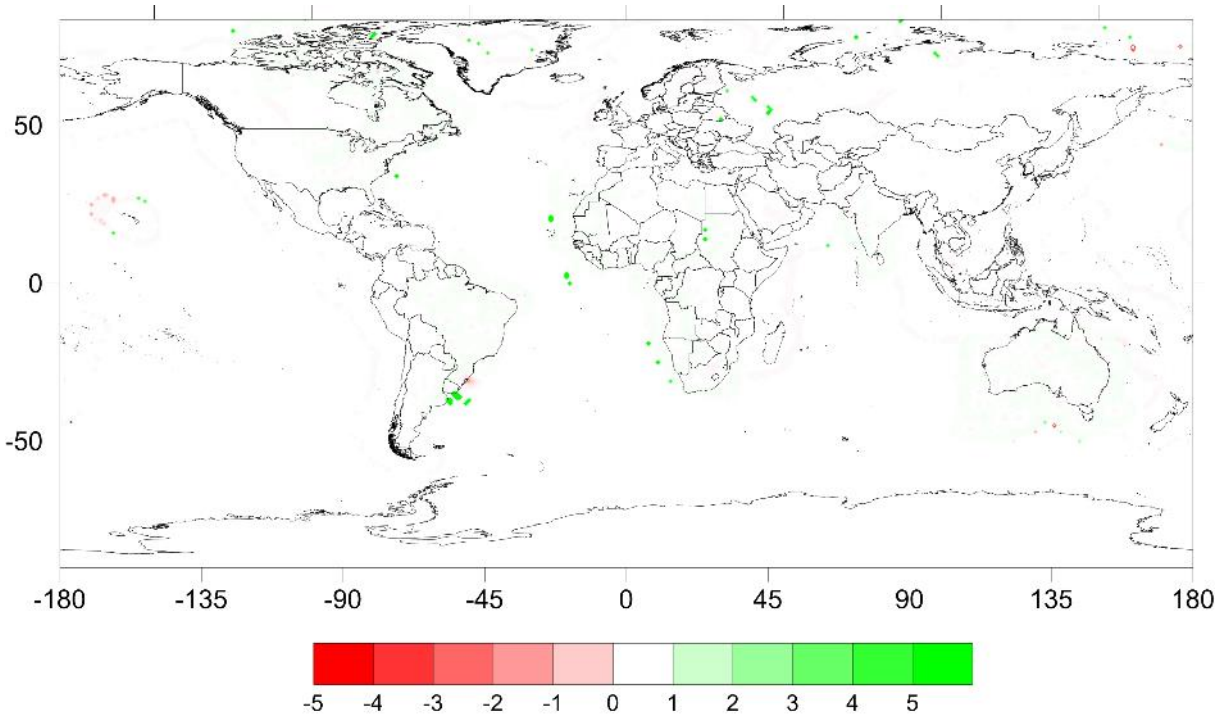


Figure A6-4. Changes due to GMPE assignation in Zone 3 (PGA and 475 years return period)

From the previous figure it can be seen that a slight increase in some stable continental areas can occur.

For Zones 4 and 6, corresponding to active crustal (not plate boundary) and off shore, respectively, the Cauzzi and Faccioli – explicity Vs30 (2008) GMPE has been assigned for GAR15 instead of the Cauzzi and Faccioli (2008). In this case A represents the results obtained using the seismicity and GMPEs of GAR13 with exception of those zoness classified as “4” and “6” where the GMPEs of gAR15 were used, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-5 shows the changes that exist in said zone due to the change on the GMPE assignation.

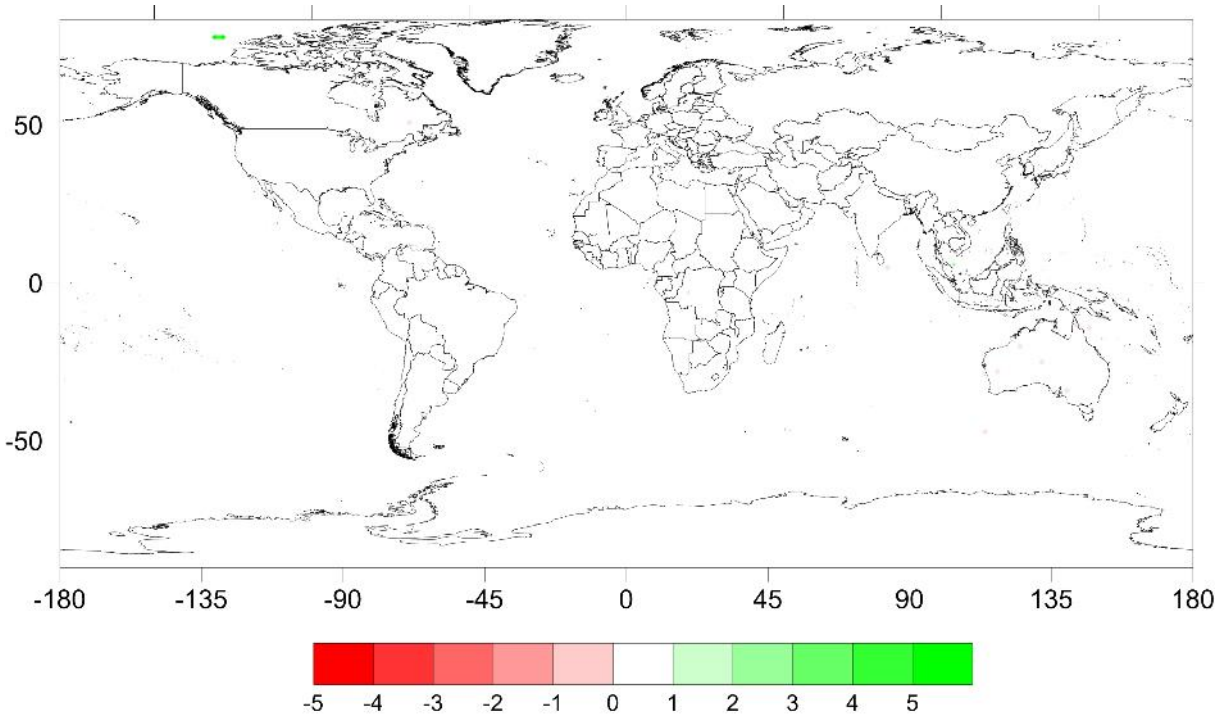


Figure A6-5. Changes due to GMPE assignation in Zones 4 and 6 (PGA and 475 years return period)

From the previous figure it can be seen that almost no changes occur because of the inclusion of the Vs30 parameter in an explicit way.

For Zone 5, corresponding to active crustal (plate boundaries), the Chiou and Youngs (2008) GMPE has been assigned for GAR15 instead of the Abrahamson and Silva (1997). In this case A represents the results obtained using the seismicity and GMPEs of GAR13 with exception of those zones classified as "5" were the GMPEs of GAR15 were used, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-6 shows the changes that exist in said zone due to the change on the GMPE assignation.

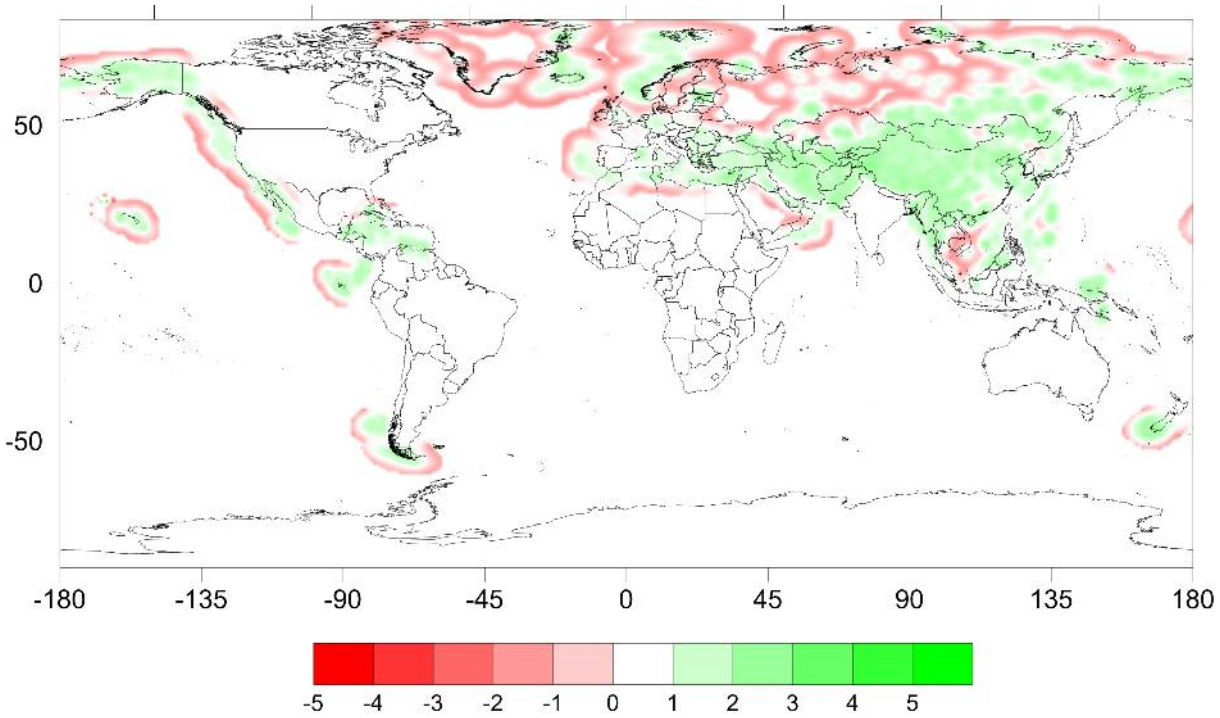


Figure A6-6. Changes due to GMPE assignation in Zone 5 (PGA and 475 years return period)

For the final comparison, the GMPEs for all the tectonic environemnts were changed at the same time, keeping the same seismicity input data as was done for the previous comparisons. In this case A represents the results obtained using the seismicity and GMPEs of GAR15, while B respresents the results obtained using the seismicity of GAR15 and GMPEs of GAR13. Figure A6-7 shows the changes.

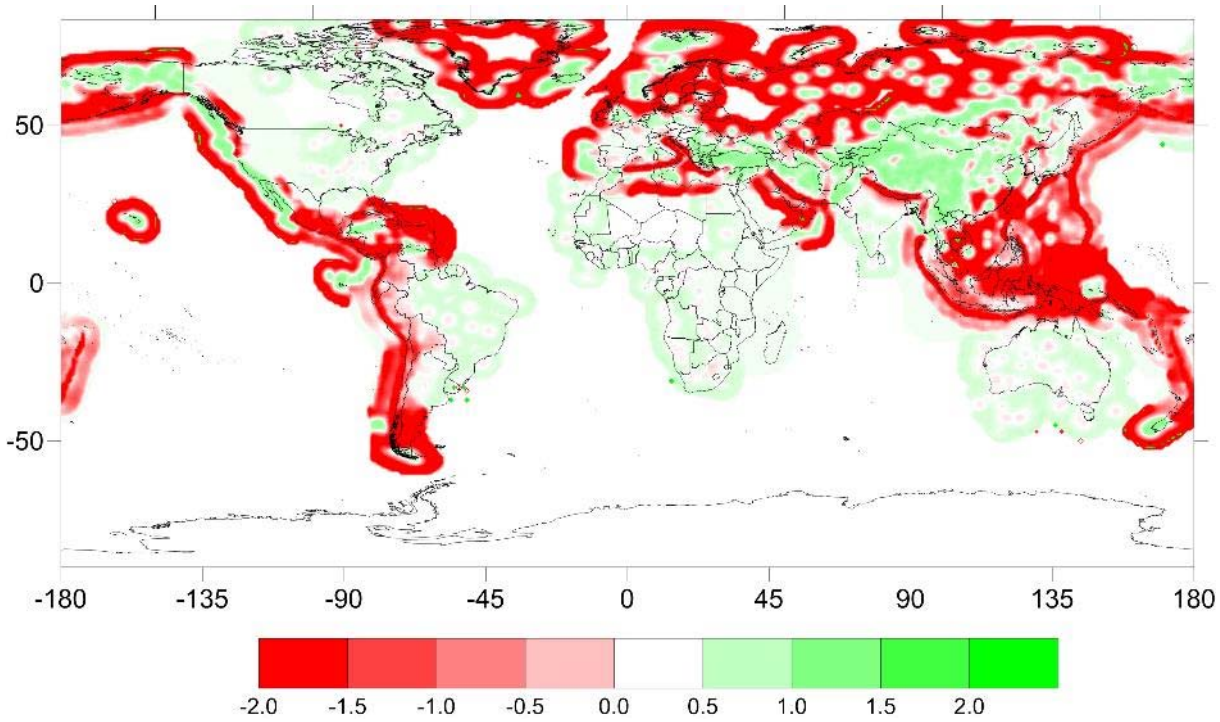


Figure A6-7. Changes due to GMPE assignation in all zones (PGA and 475 years return period)

Overall Changes

Finally, the changes caused both by the update on the seismicity parameters (a and b-values) and the GMPEs assignation are evaluated. In this case A represents the results obtained using the seismicity and GMPEs of GAR15, while B represents the results obtained using the seismicity and GMPEs of GAR13. Figure A6-8 shows these changes; from this figure it is evident that the majority of the changes are due to the modification of the GMPEs' assignation.

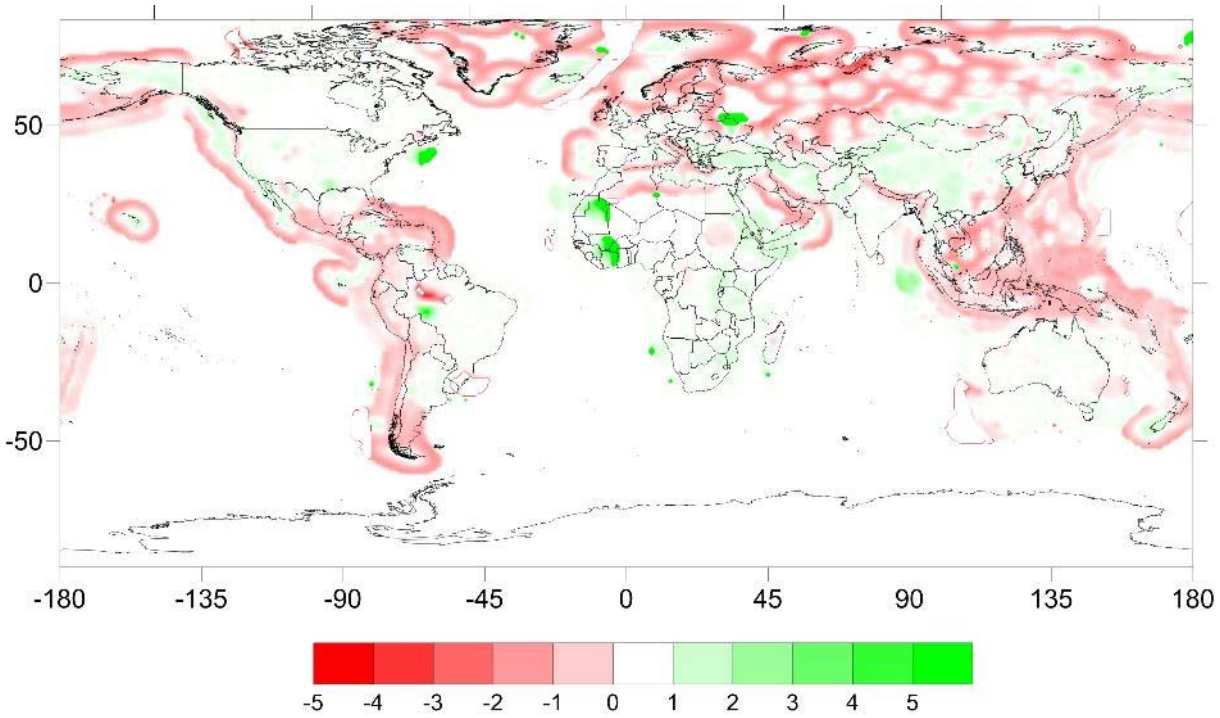


Figure A6-8. Changes due to seismicity parameters and GMPE assignation in all zones (PGA and 475 years return period)

Annex 7. Historical Tracks of Cyclones for Different Categories

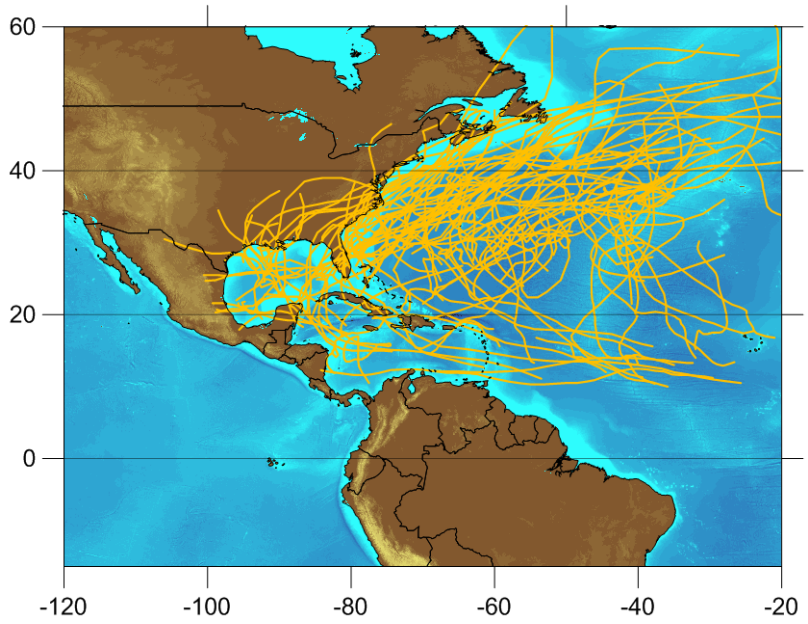


Figure A7-1. Tracks for the North Atlantic basin. Category SS=1

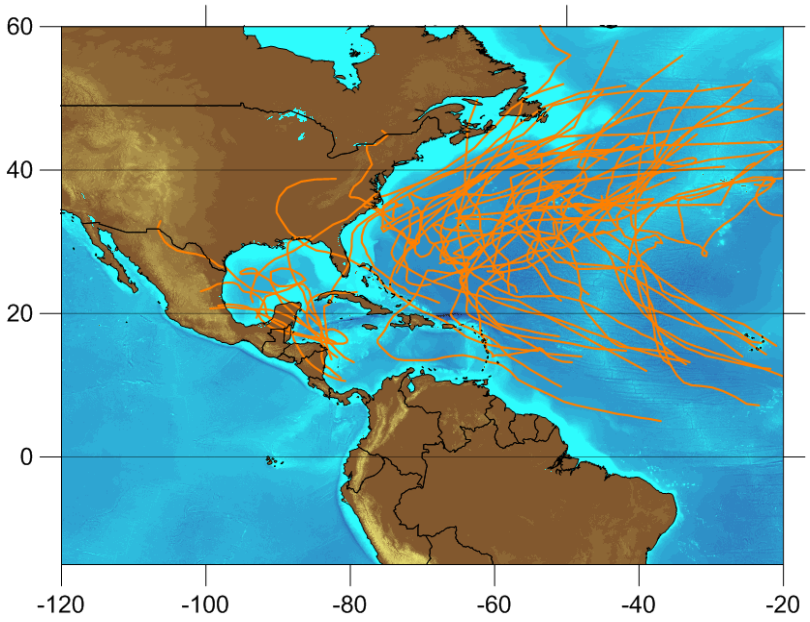


Figure A7-2. Tracks for the North Atlantic basin. Category SS=2

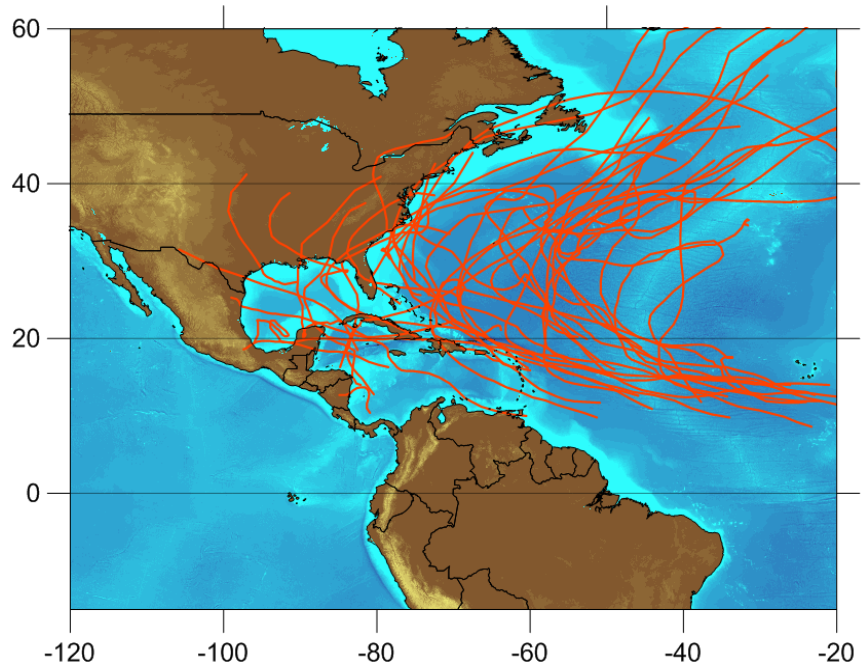


Figure A7-3. Tracks for the North Atlantic basin. Category SS=3

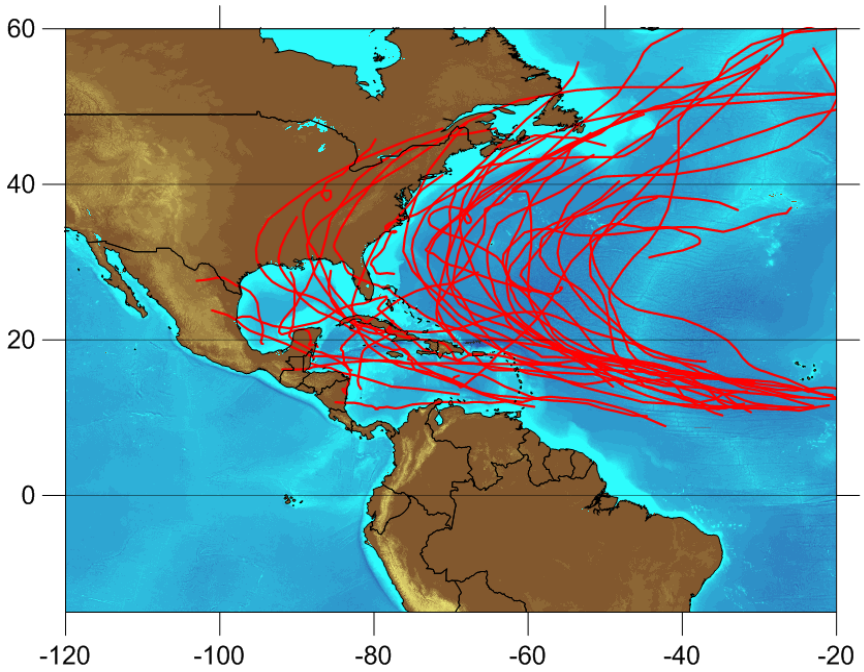


Figure A7-4. Tracks for the North Atlantic basin. Category SS=4

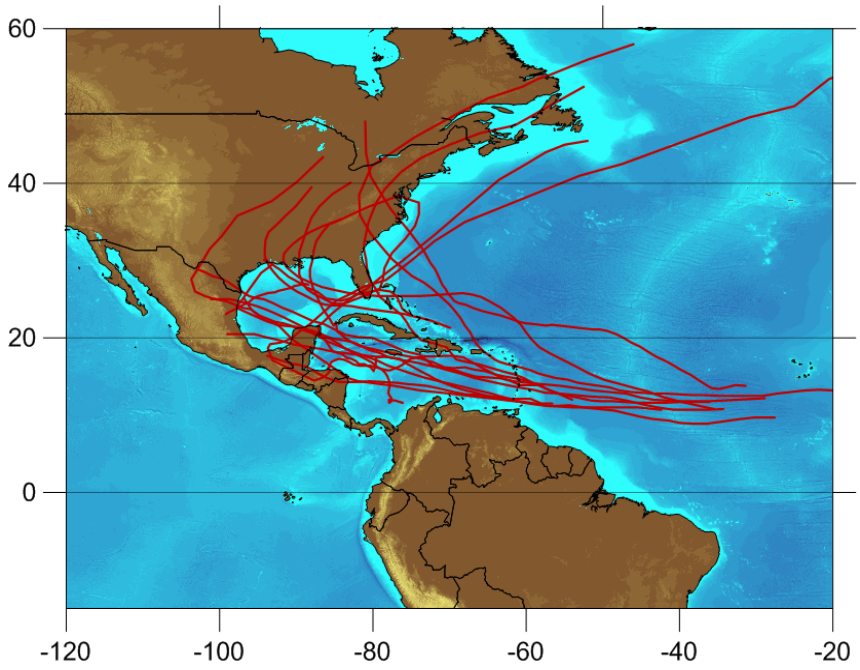


Figure 1. Tracks for the North Atlantic basin. Category SS=5

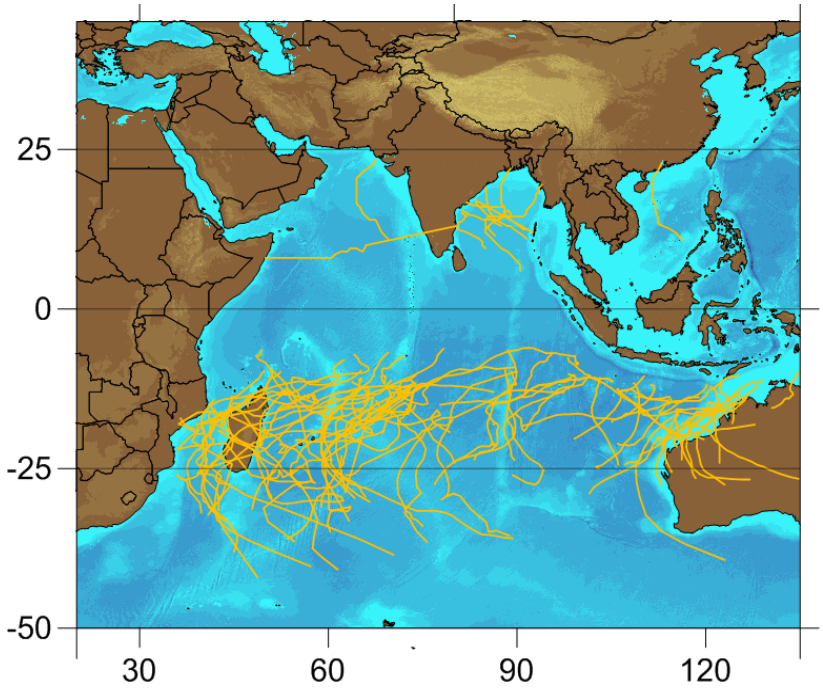


Figure A7-5. Tracks for the Indian Ocean. Category SS=1

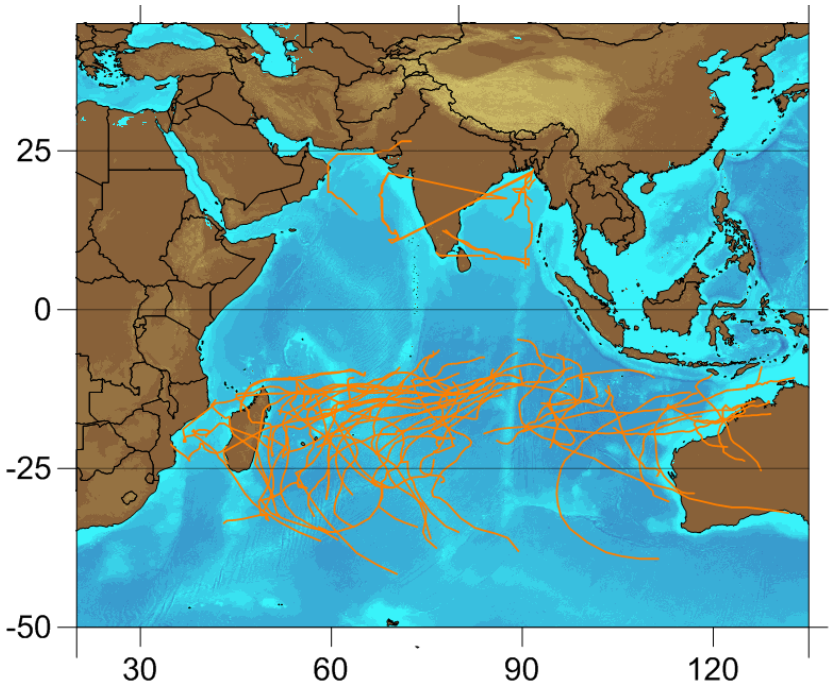


Figure A7-6. Tracks for the Indian Ocean. Category SS=2

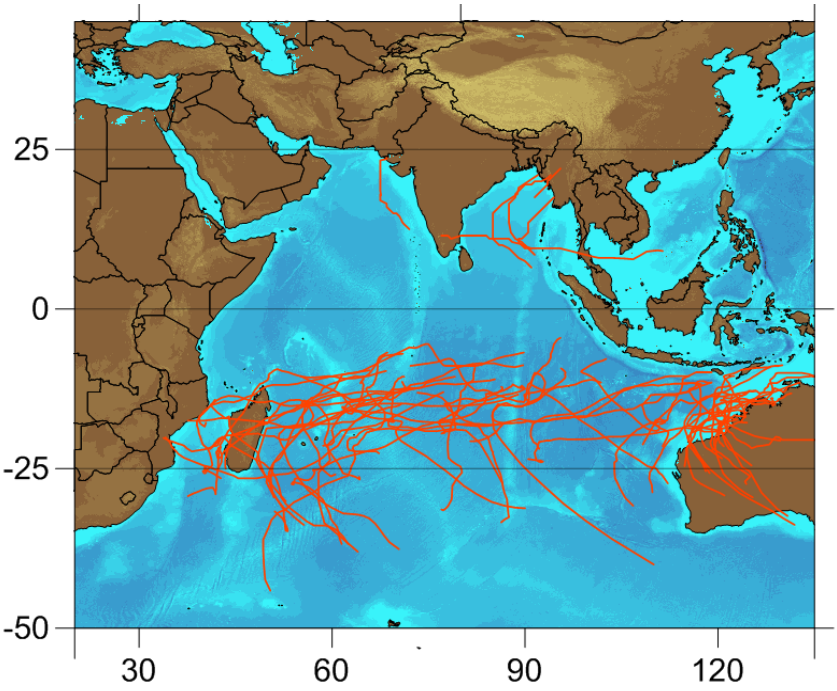


Figure A7-7. Tracks for the Indian Ocean. Category SS=3

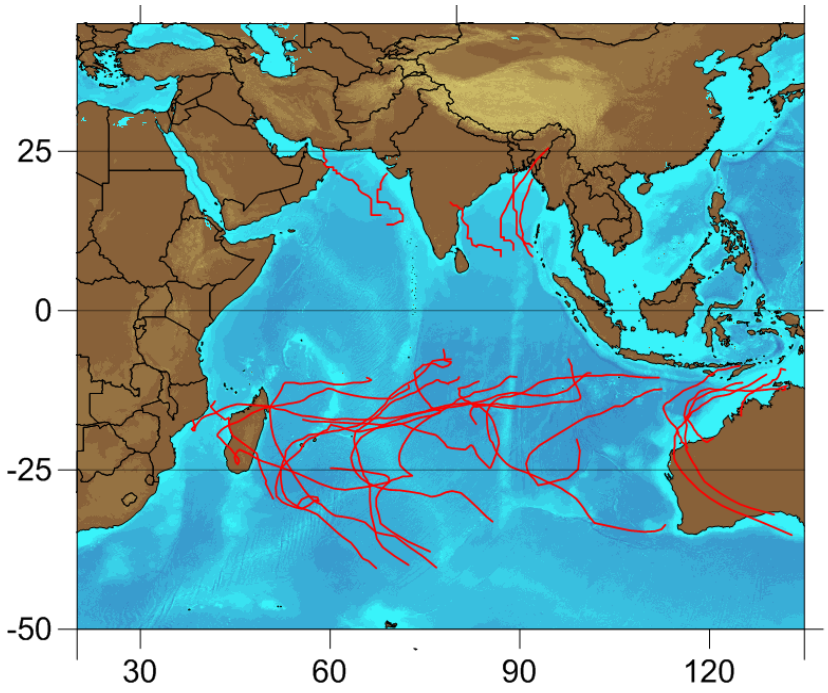


Figure A7-8. Tracks for the Indian Ocean. Category SS=4

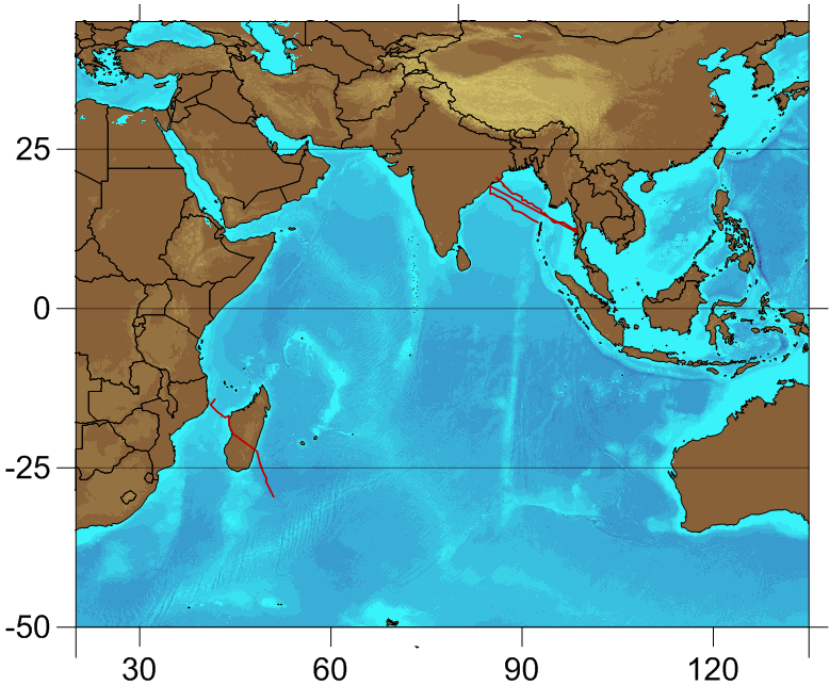


Figure A7-9. Tracks for the Indian Ocean. Category SS=5

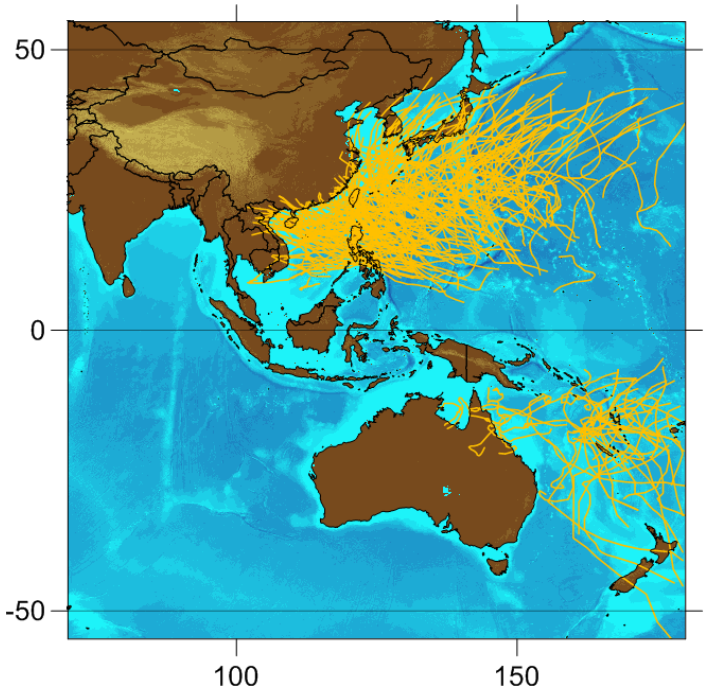


Figure A7-10. Tracks for the West Pacific basin. Category SS=1

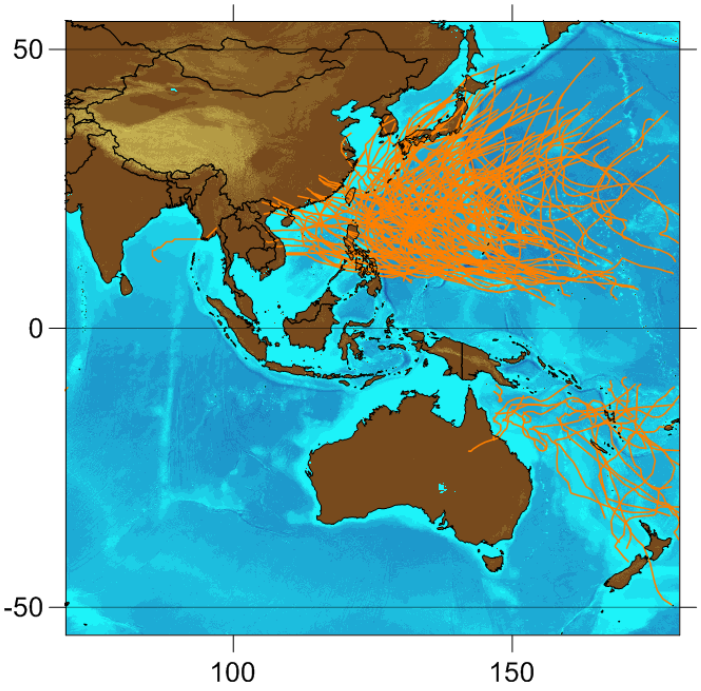


Figure A7-11. Tracks for the West Pacific basin. Category SS=2

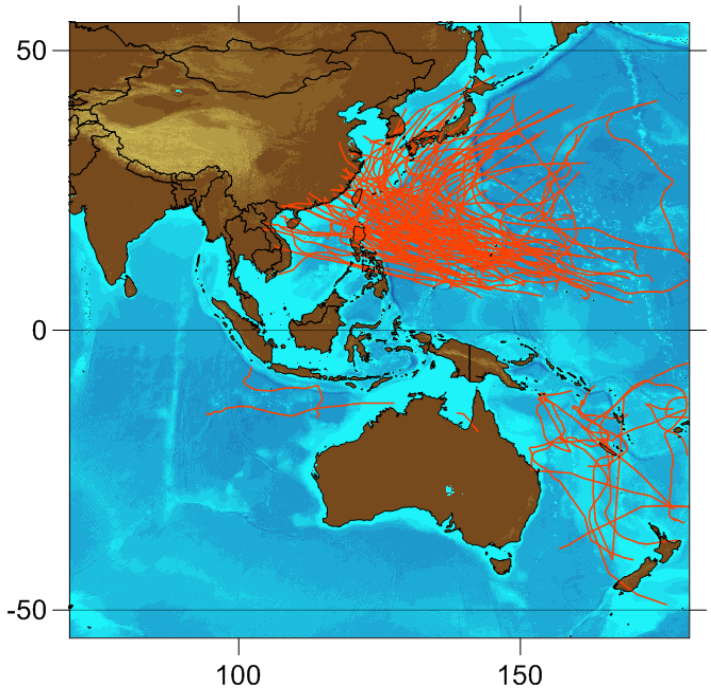


Figure A7-12. Tracks for the West Pacific basin. Category SS=3

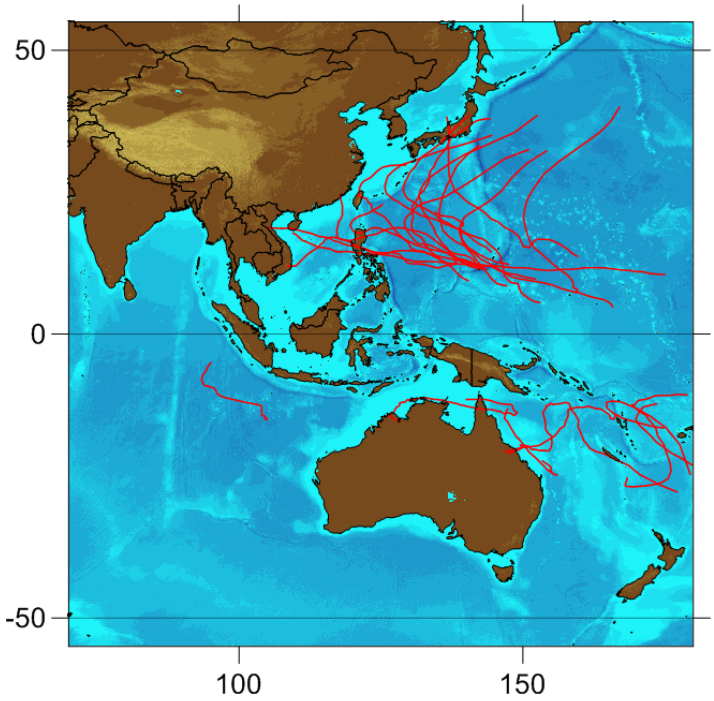


Figure A7-13. Tracks for the West Pacific basin. Category SS=4

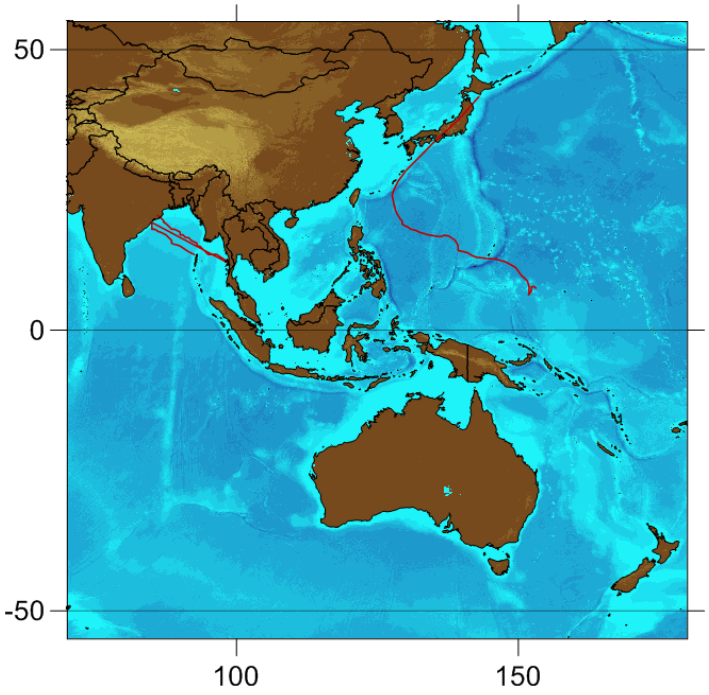


Figure A7-14. Tracks for the West Pacific basin. Category SS=5

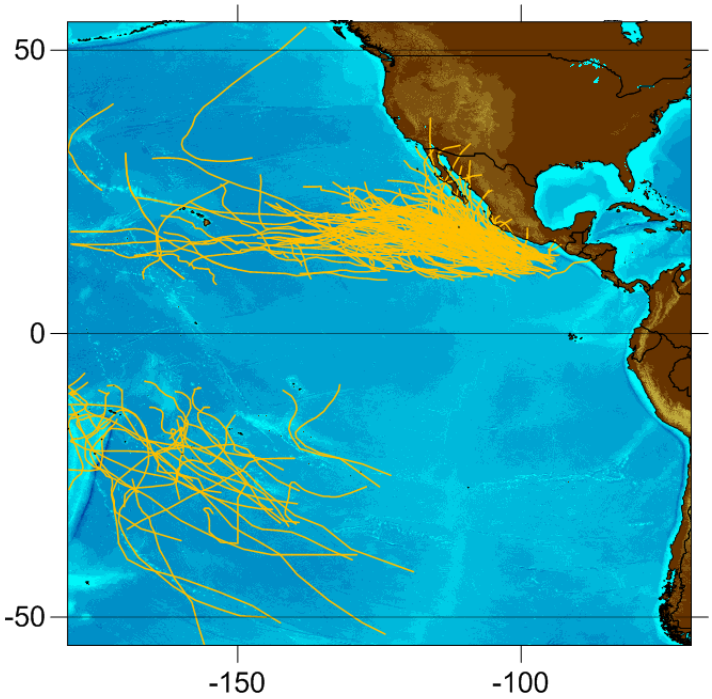


Figure A7-15. Tracks for the East Pacific basin. Category SS=1

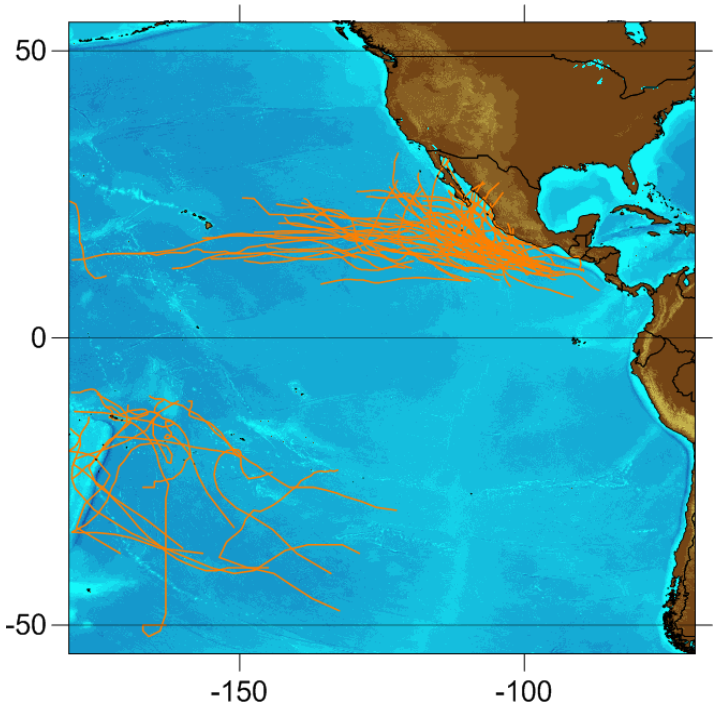


Figure A7-16. Tracks for the East Pacific basin. Category SS=2

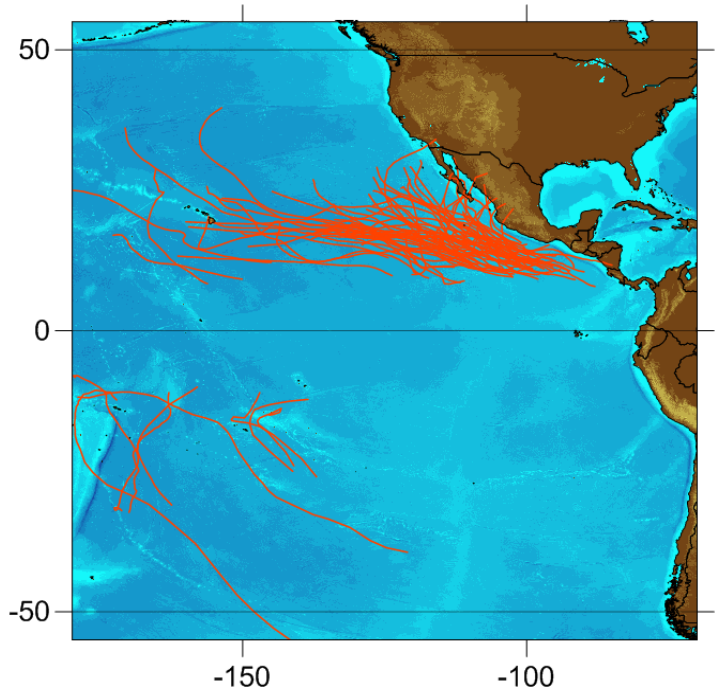


Figure A7-17. Tracks for the East Pacific basin. Category SS=3

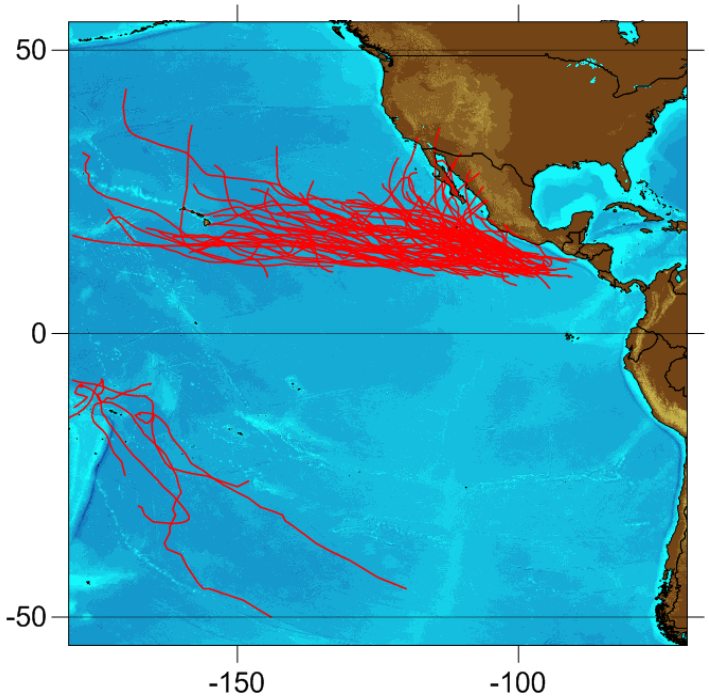


Figure A7-18. Tracks for the East Pacific basin. Category SS=4

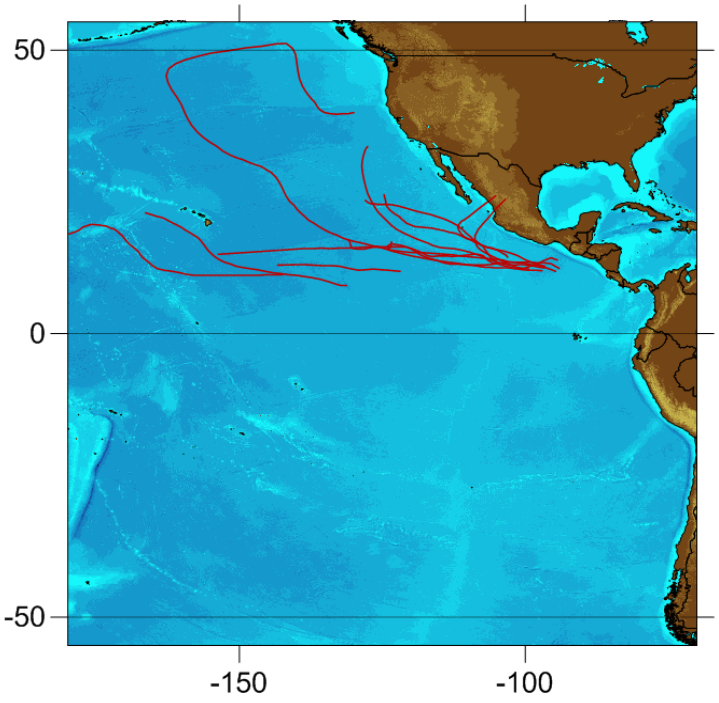


Figure A7-19. Tracks for the East Pacific basin. Category SS=5

Annex 8. Tropical Cyclone Hazard Curves for some Selected Cities

Strong Wind Hazard

Hazard curves for strong wind were calculated for 37 cities in 30 countries worldwide. These curves show the variation of v_{10} with the return period. The selected cities are presented in Table A8-1.

Table A8-1. Selected cities

City	Country	Lon (°)	Lat (°)	Region
Antananarivo	Madagascar	47.53	-18.91	Africa
Jakarta	Indonesia	106.85	-6.22	Asia
Bangalore	India	77.60	12.97	Asia
Colombo	Sri Lanka	79.86	6.93	Asia
Dhaka	Bangladesh	90.41	23.71	Asia
Hanoi	Vietnam	105.88	21.04	Asia
Bangkok	Thailand	100.49	13.75	Asia
Seoul	South Korea	126.98	37.57	Asia
Phnom Penh	Cambodia	104.92	11.56	Asia
Manila	Philippines	120.98	14.60	Asia
Taipei	Taiwan	121.58	25.13	Asia
Hong Kong	China	114.11	22.40	Asia
Shanghai	China	121.47	31.23	Asia
Karachi	Pakistan	67.03	24.89	Asia
Port of Spain	Trinidad and Tobago	-61.52	10.67	Caribbean
San Juan	Puerto Rico	-66.11	18.47	Caribbean
Kingston	Jamaica	-76.79	17.99	Caribbean
Santo Domingo	Dominican Republic	-69.98	18.50	Caribbean
Havana	Cuba	-82.39	23.12	Caribbean
Nassau	Bahamas	-77.35	25.06	Caribbean
Belize City	Belize	-88.19	17.50	Central America
Panama City	Panama	-79.52	8.99	Central America
Tegucigalpa	Honduras	-87.22	14.08	Central America
Guatemala City	Guatemala	-90.53	14.62	Central America
San Jose	Costa Rica	-84.08	9.93	Central America
Cancun	Mexico	-86.84	21.16	Central America
Acapulco	Mexico	-99.88	16.86	Central America
Mexico City	Mexico	-99.13	19.43	North America
New York	EEUU	-74.01	40.71	North America
Miami	EEUU	-80.23	25.79	North America
New Orleans	EEUU	-90.07	29.95	North America
Canberra	Australia	149.12	-35.30	Oceania
Sidney	Australia	151.20	-33.87	Oceania
Wellington	New Zeeland	148.93	-32.55	Oceania

Cities in Africa

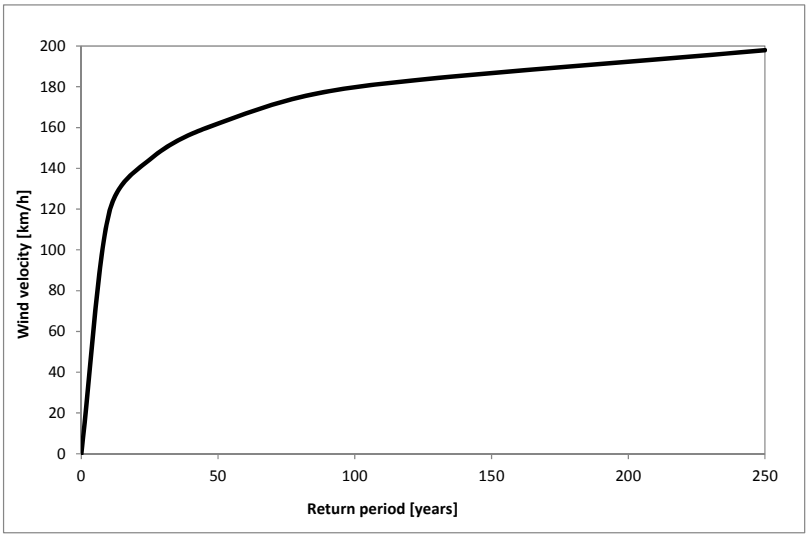


Figure A8-1. Strong wind hazard curve for Antananarivo.

Cities in Asia

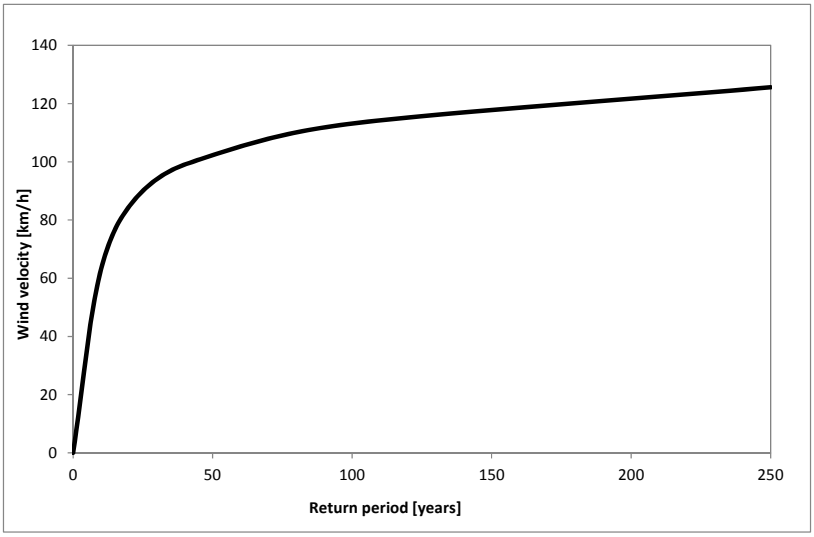


Figure A8-2.Strong wind hazard curve for Dhaka.

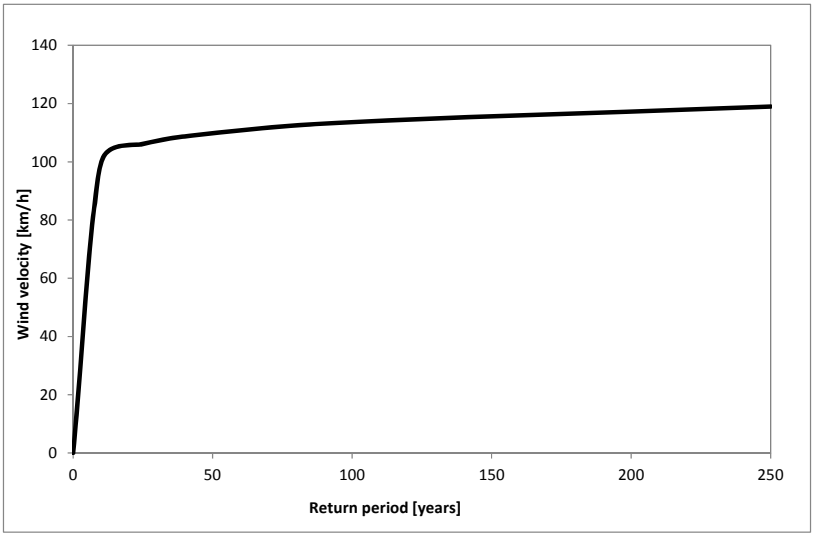


Figure A8-3.Strong wind hazard curve for Hanoi.

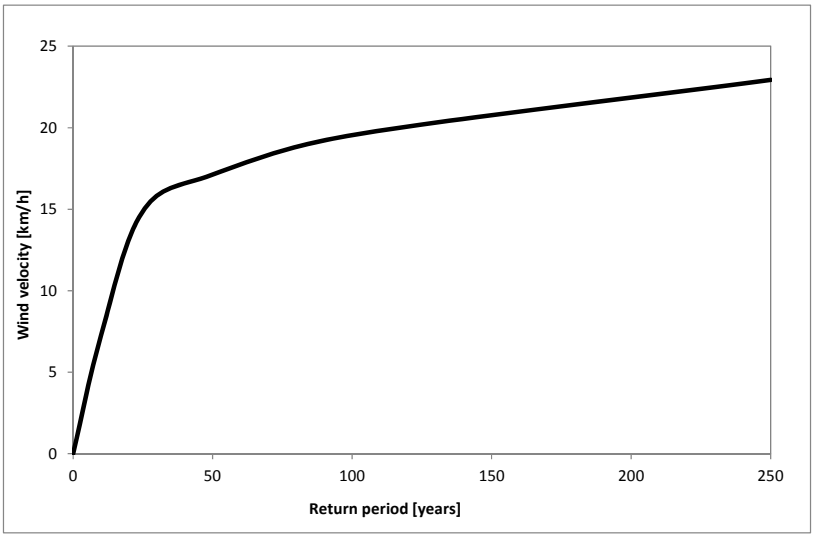


Figure A8-4.Strong wind hazard curve for Bangkok.

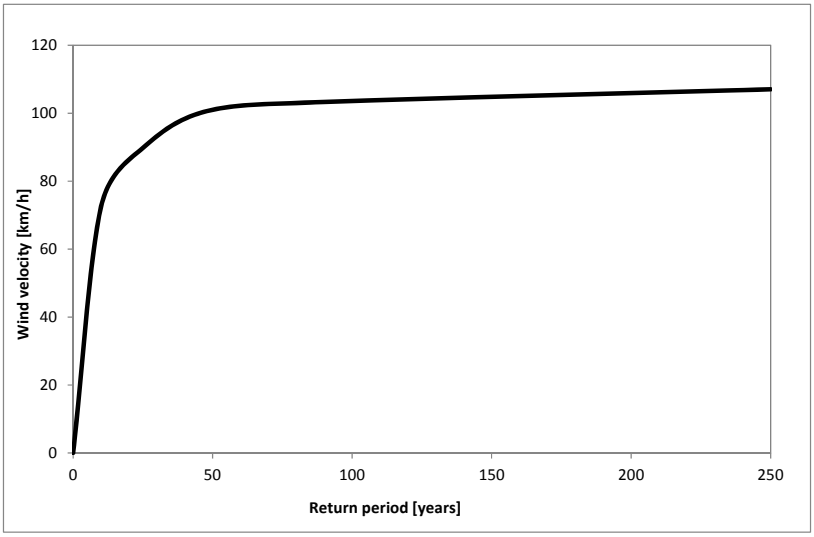


Figure A8-5.Strong wind hazard curve for Seoul.

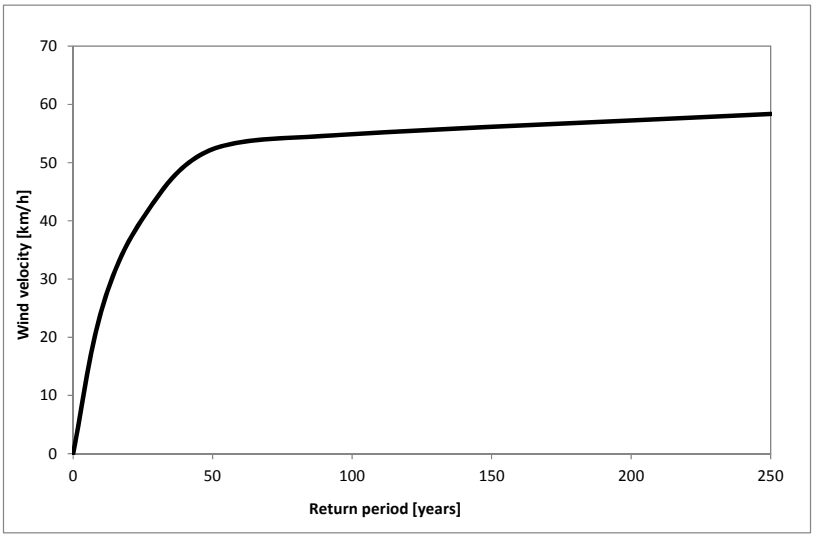


Figure A8-6.Strong wind hazard curve for Phnom Penh.

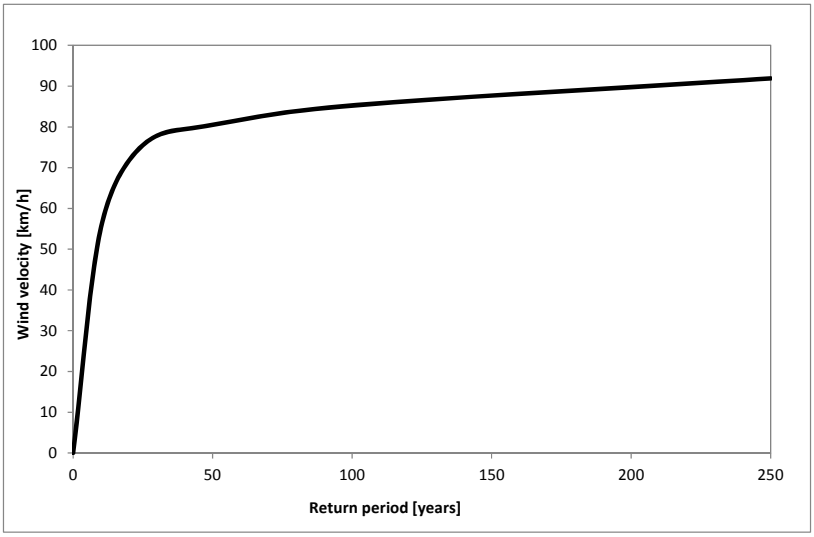


Figure A8-7.Strong wind hazard curve for Bangalore.

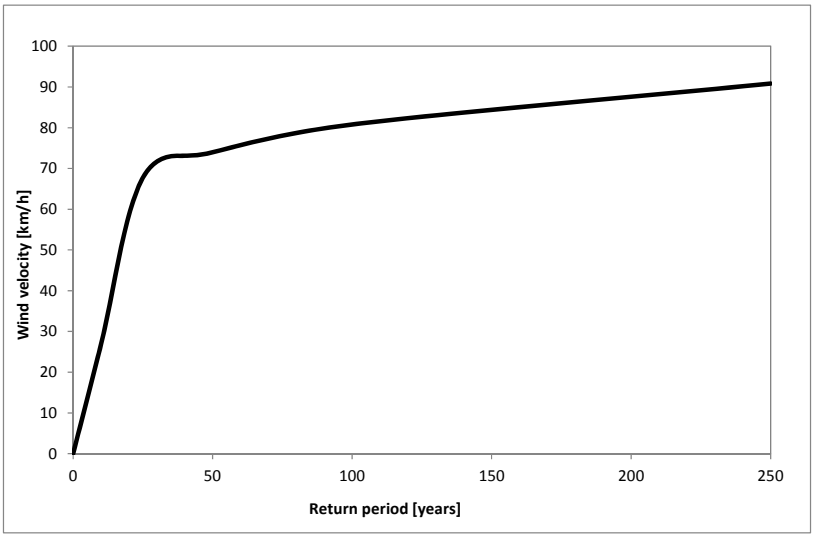


Figure A8-8.Strong wind hazard curve for Colombo.

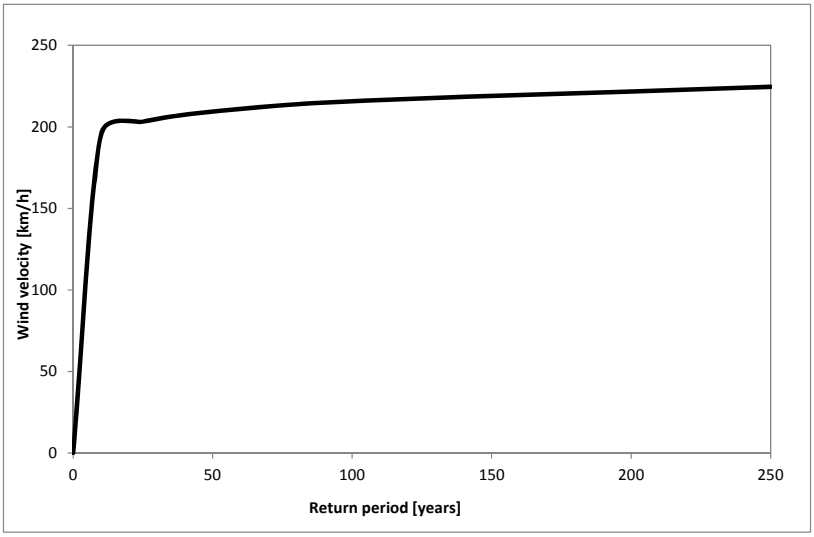


Figure A8-9.Strong wind hazard curve for Manila.

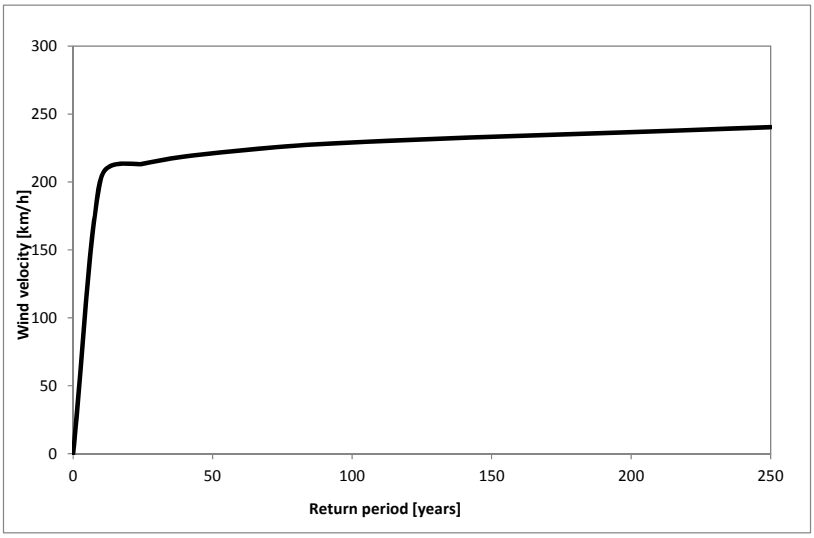


Figure A8-10.Strong wind hazard curve for Taipei.

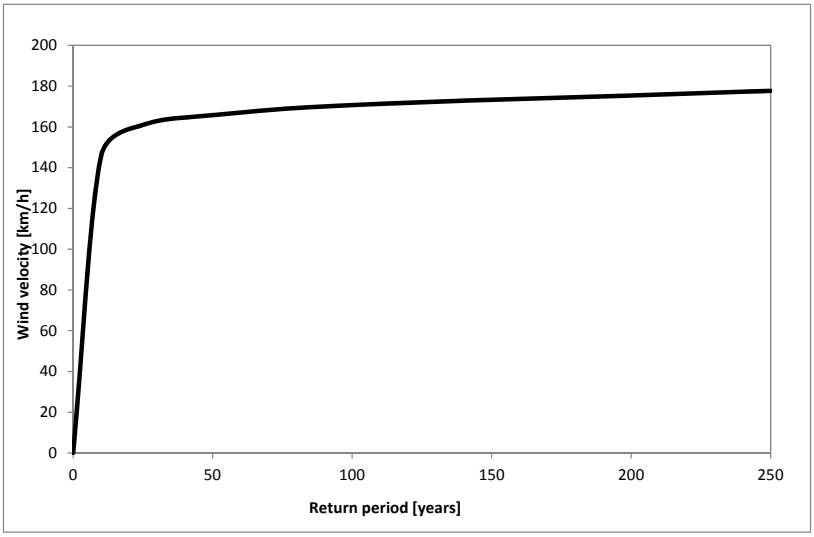


Figure A8-11.Strong wind hazard curve for Hong Kong.

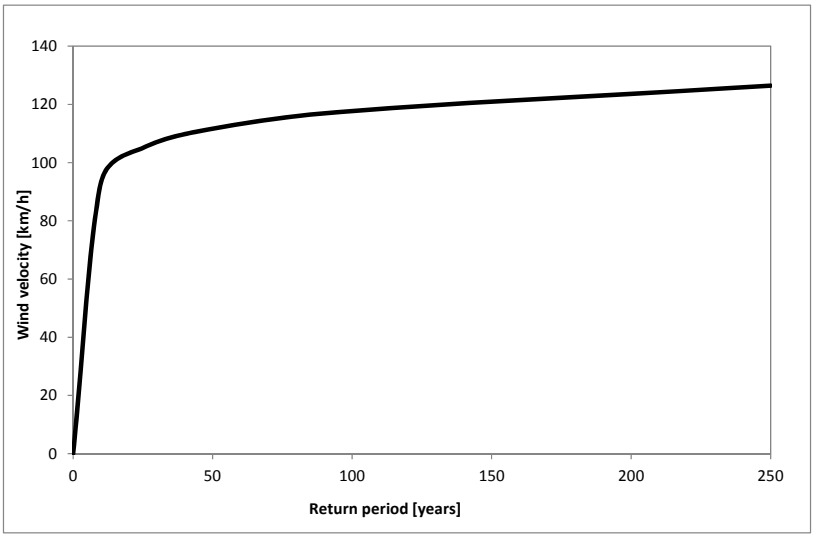


Figure A8-12.Strong wind hazard curve for Shanghai.

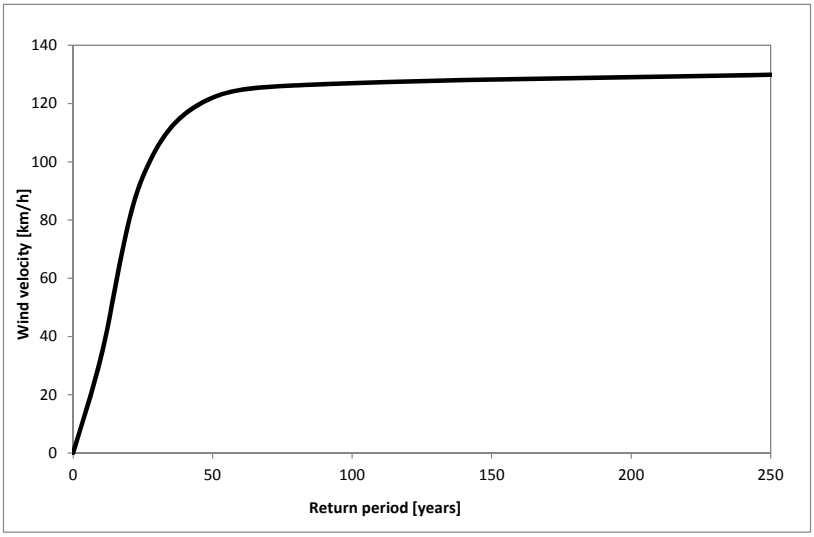


Figure A8-13.Strong wind hazard curve for Karachi.

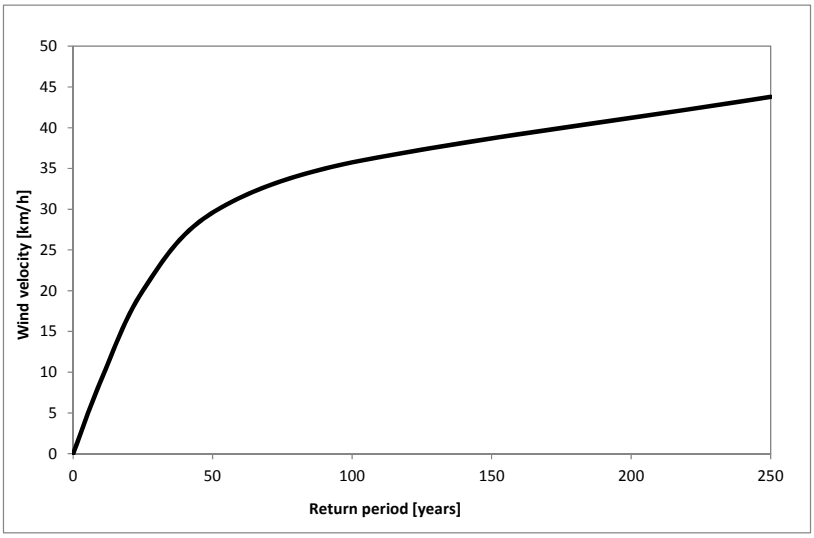


Figure A8-14.Strong wind hazard curve for Jakarta.

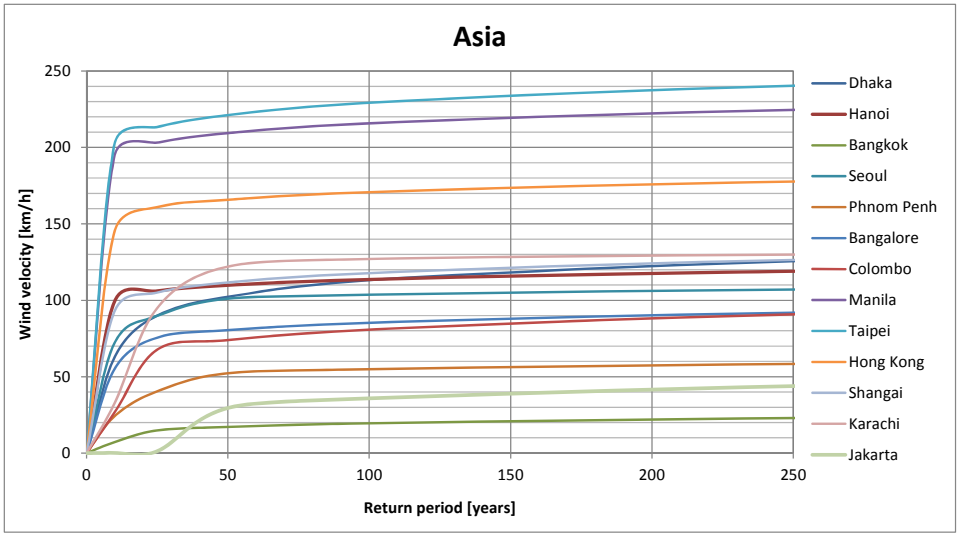


Figure A8-15. Comparison of strong wind hazard curves for selected cities in Asia.

Cities in the Caribbean

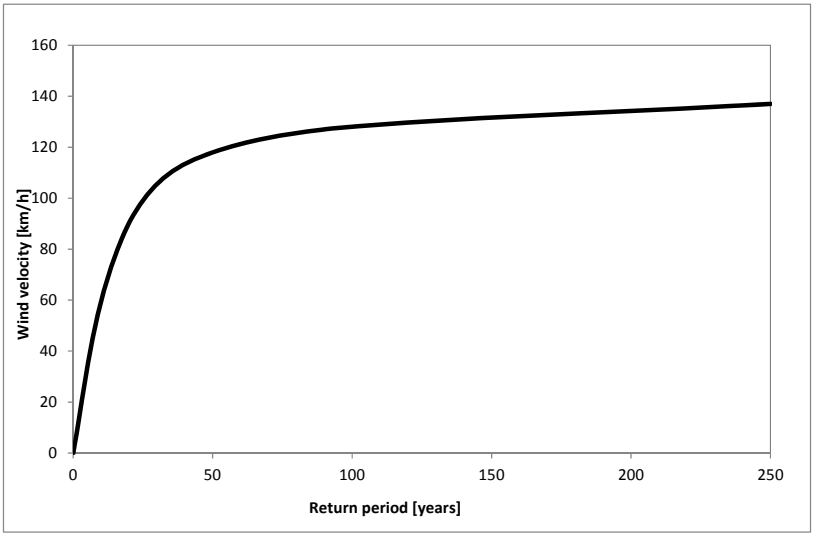


Figure A8-16.Strong wind hazard curve for Port of Spain.

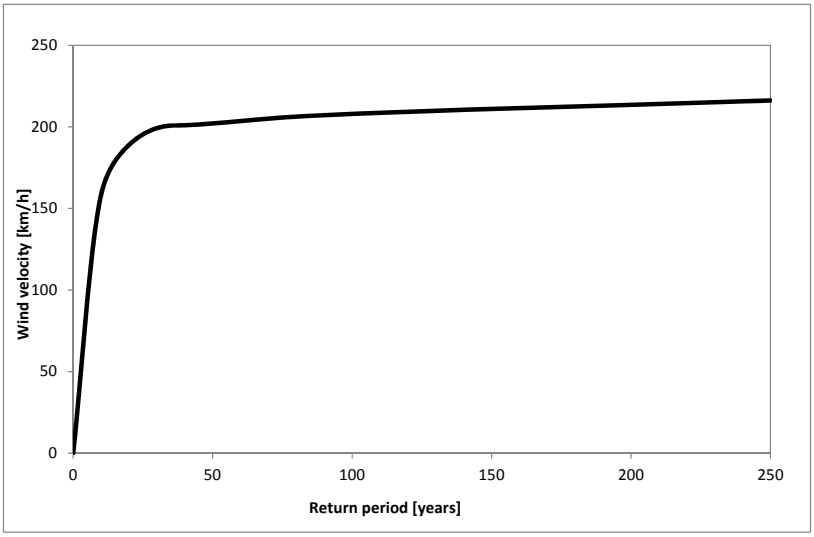


Figure A8-17.Strong wind hazard curve for San Juan.

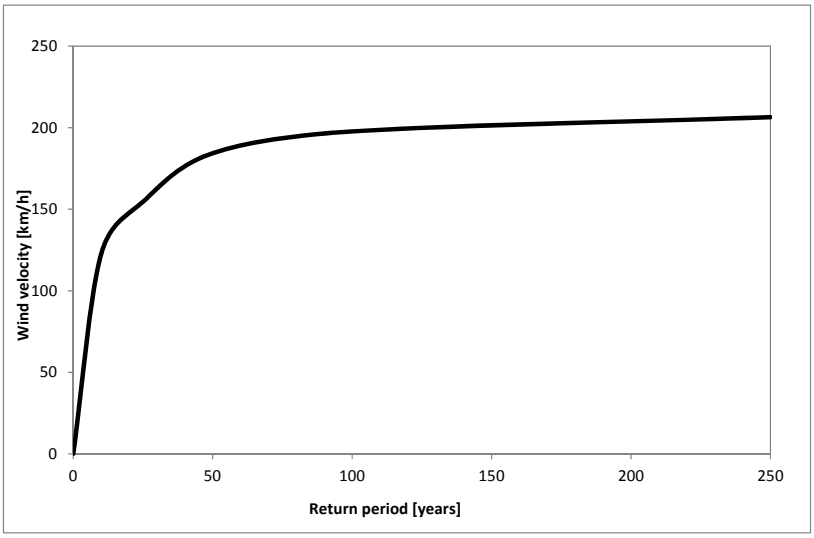


Figure A8-18.Strong wind hazard curve for Kingston.

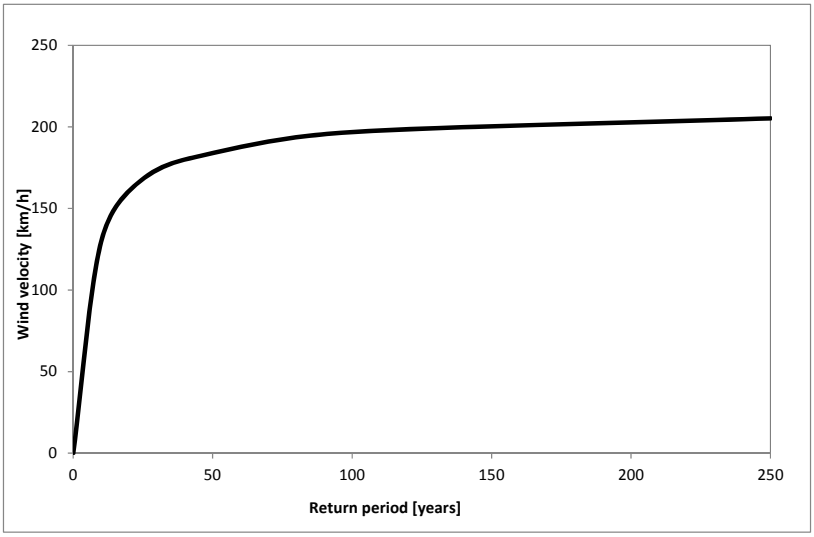


Figure A8-19.Strong wind hazard curve for Santo Domingo.

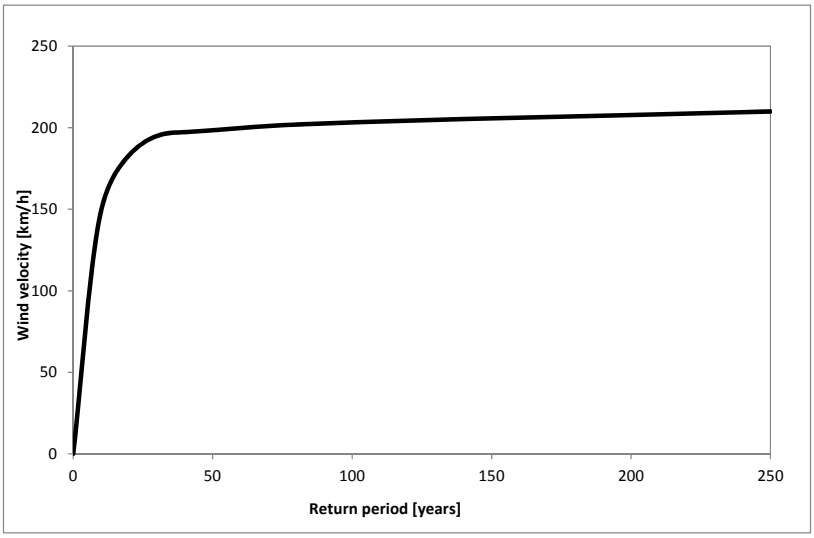


Figure A8-20.Strong wind hazard curve for Havana.

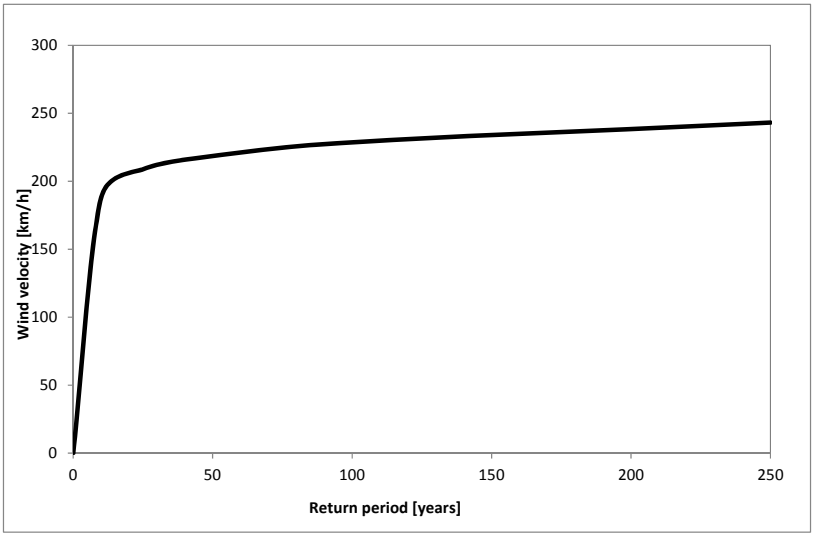


Figure A8-21.Strong wind hazard curve for Nassau.

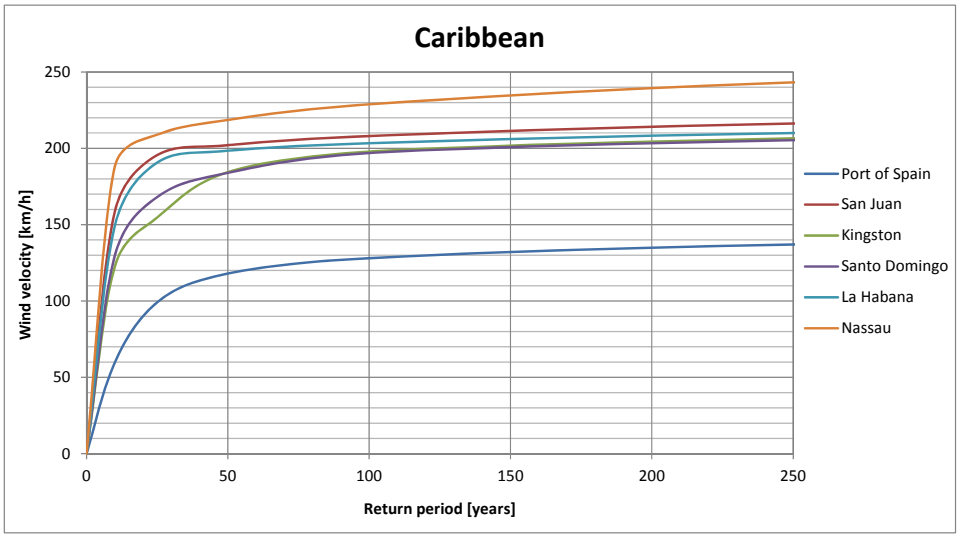


Figure A8-22.Comparison of strong wind hazard curves for selected cities in the Caribbean.

Cities in Central America

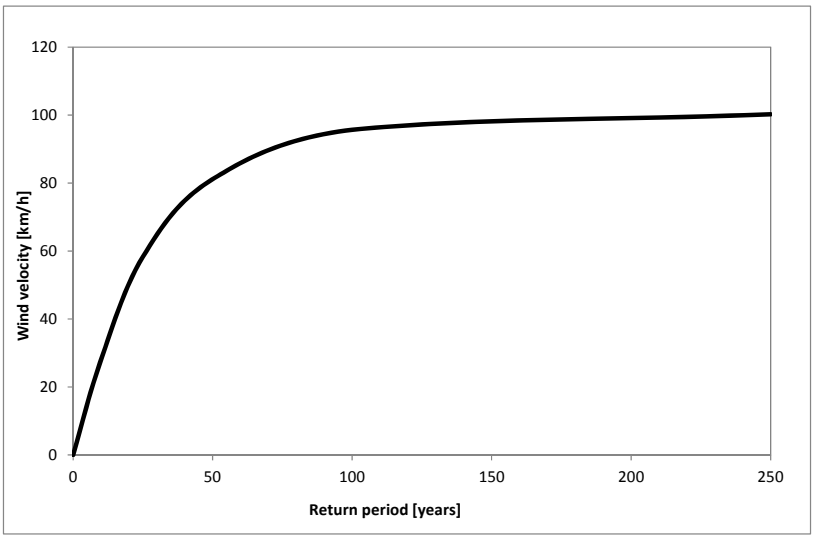


Figure A8-23.Strong wind hazard curve for San Jose.

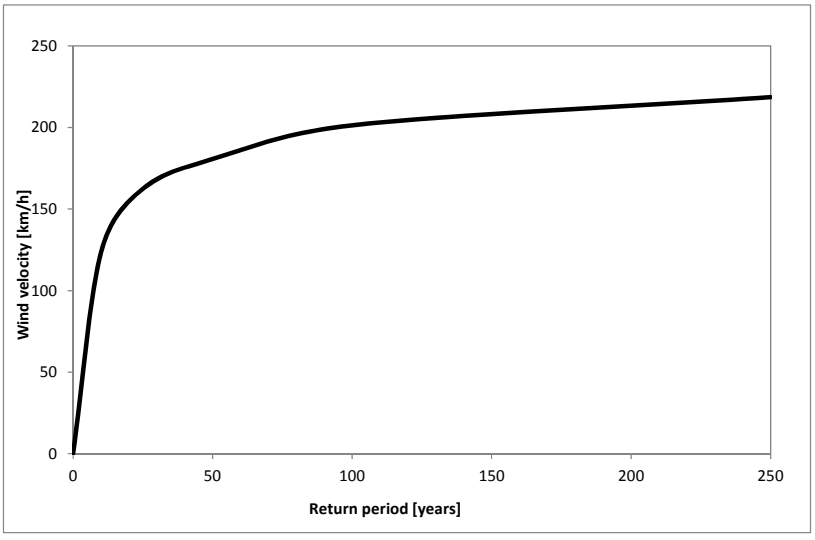


Figure A8-24.Strong wind hazard curve for Belize City.

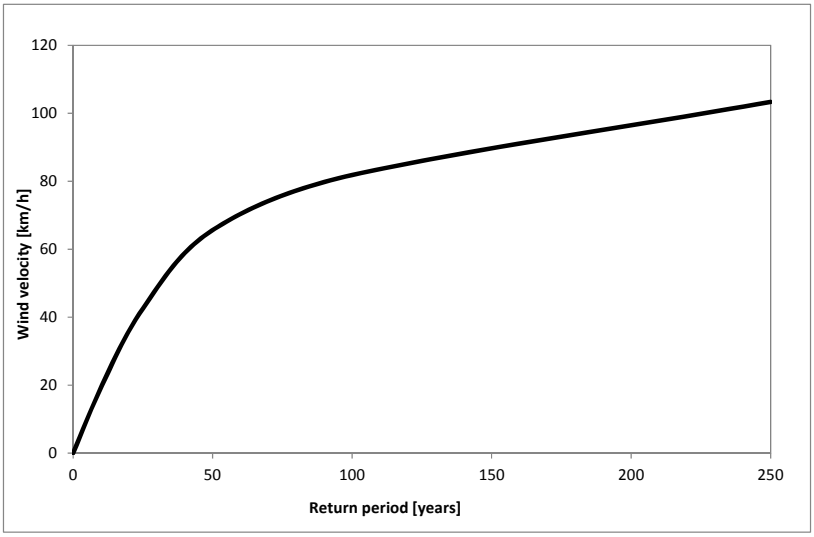


Figure A8-25.Strong wind hazard curve for Panama City.

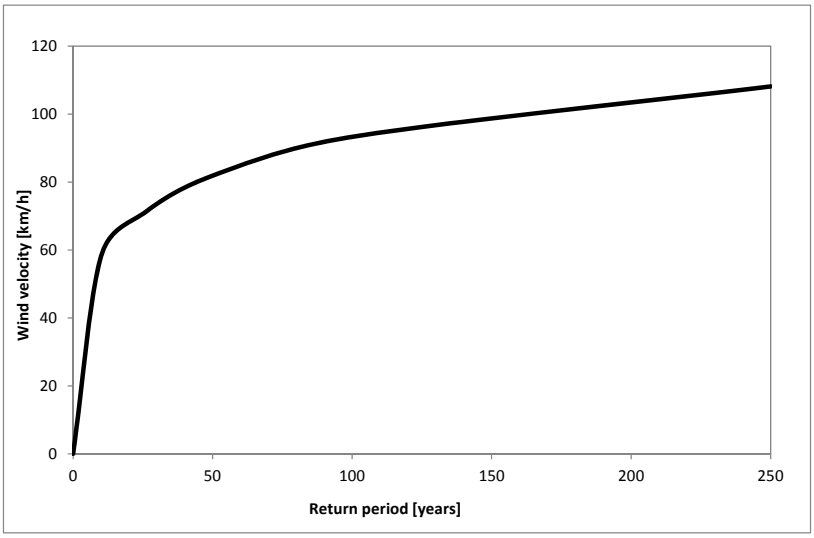


Figure A8-26.Strong wind hazard curve for Tegucigalpa.

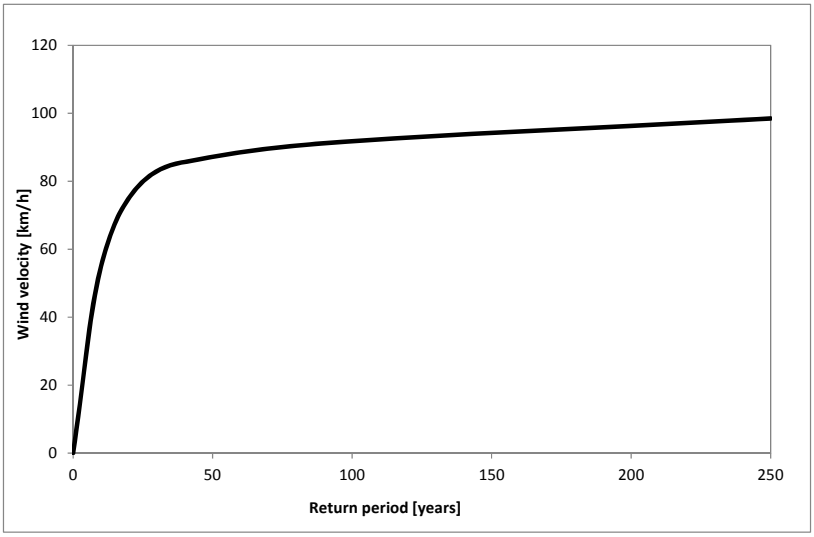


Figure A8-27.Strong wind hazard curve for Guatemala City.

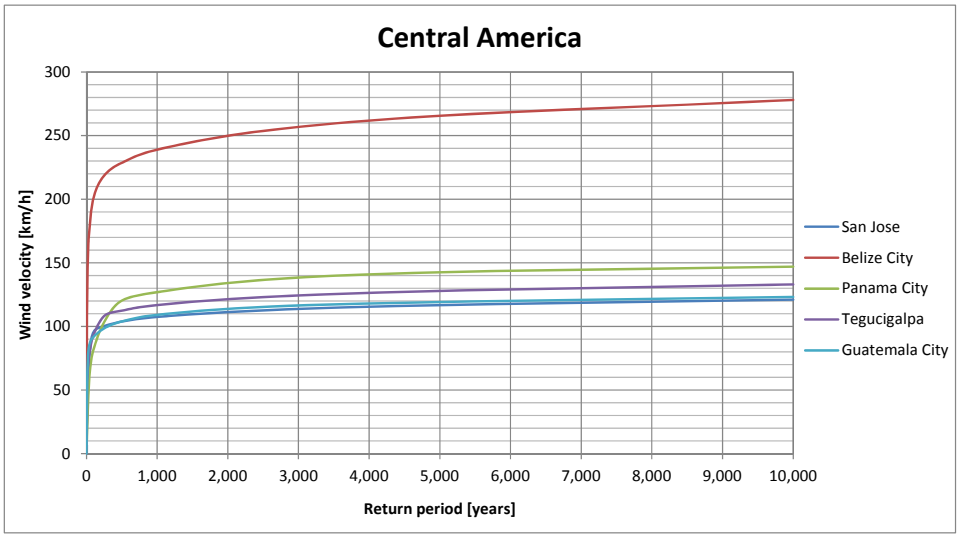


Figure A8-28.Comparison of strong wind hazard curves for selected cities in Central America.

Cities in North America

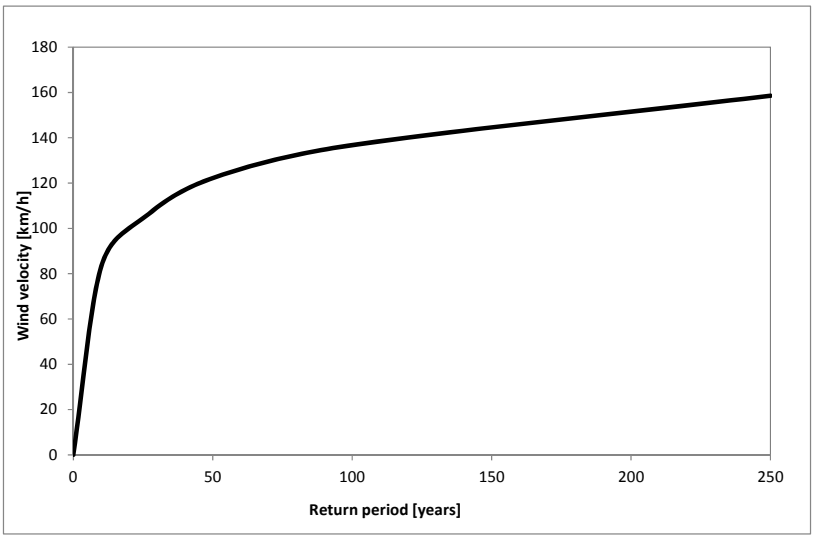


Figure A8-29.Strong wind hazard curve for New York.

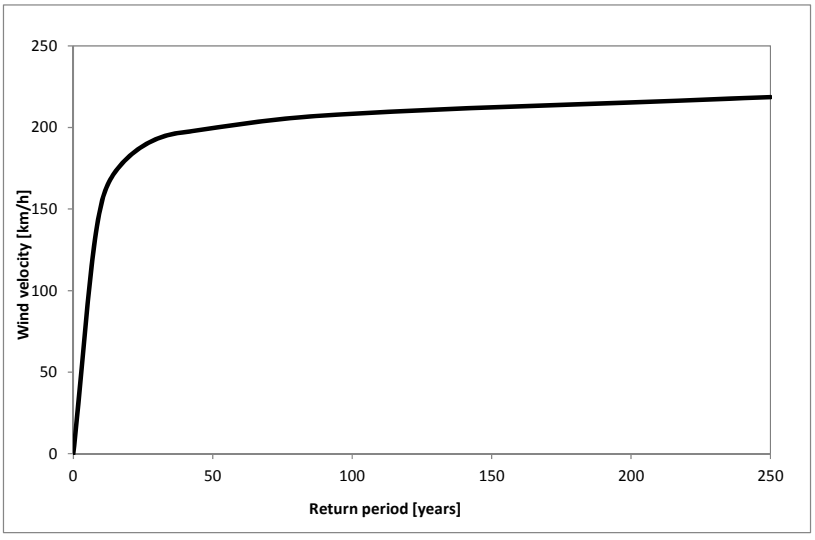


Figure A8-30.Strong wind hazard curve for Miami.

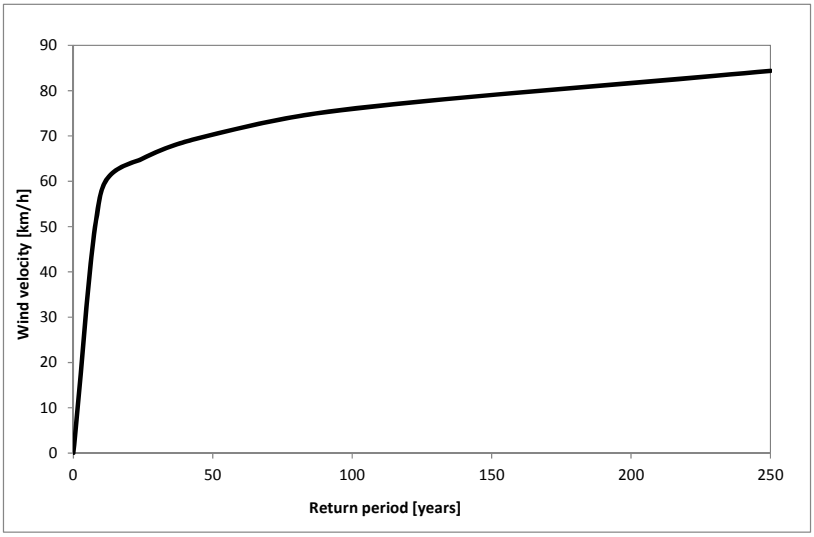


Figure A8-31.Strong wind hazard curve for Mexico City.

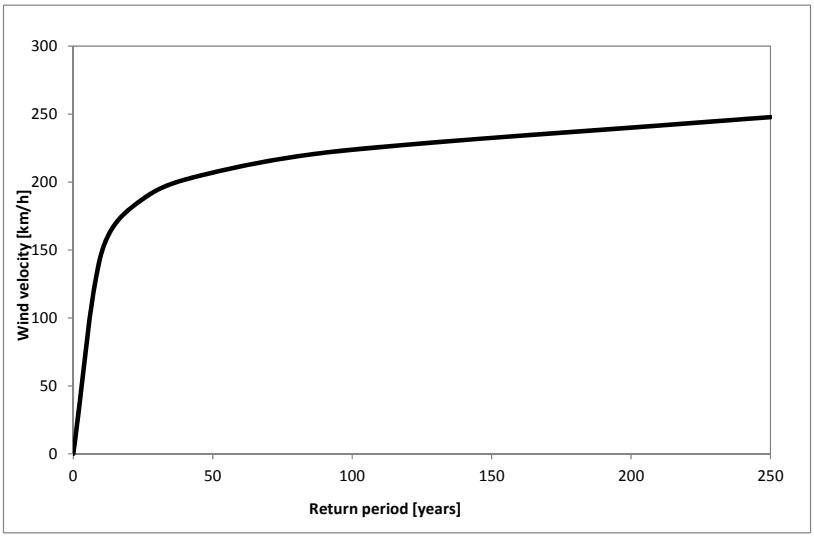


Figure A8-32.Strong wind hazard curve for Cancun.

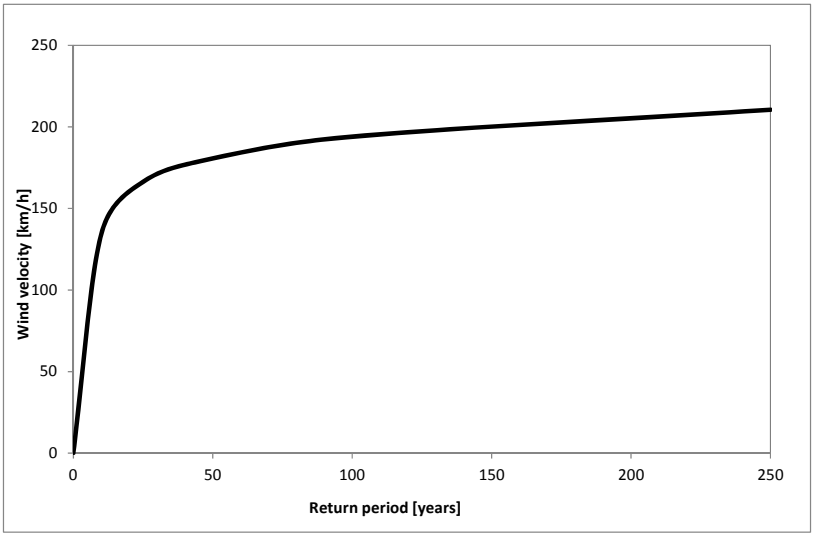


Figure A8-33.Strong wind hazard curve for New Orleans.

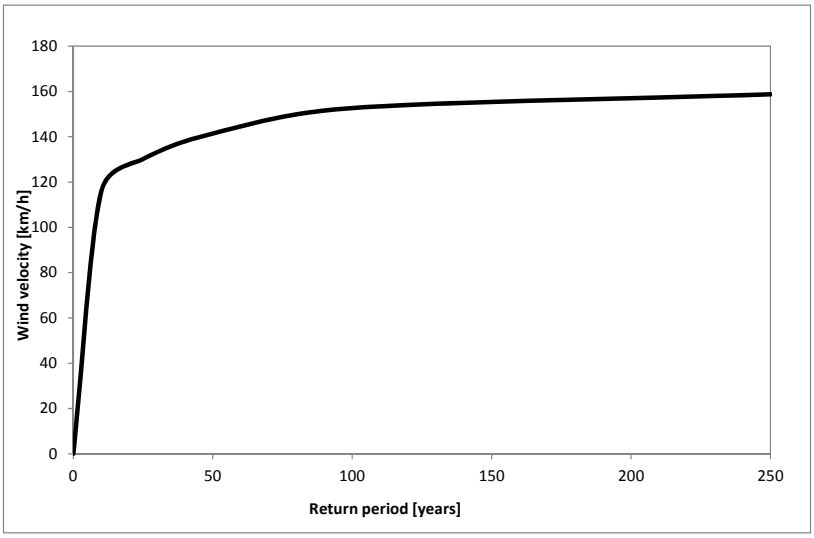


Figure A8-34.Strong wind hazard curve for Acapulco.

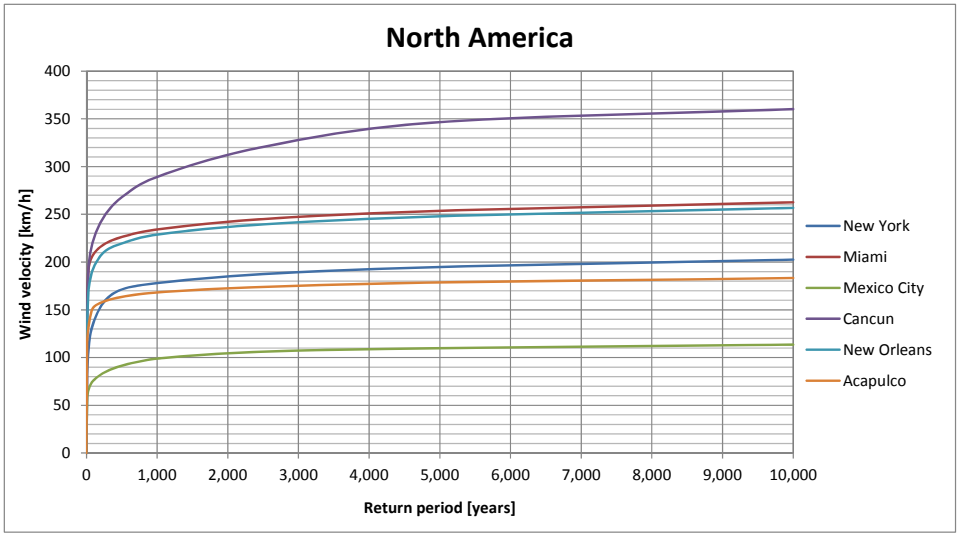


Figure A8-35.Comparison of strong wind hazard curves for selected cities in North America.

Cities in Oceania

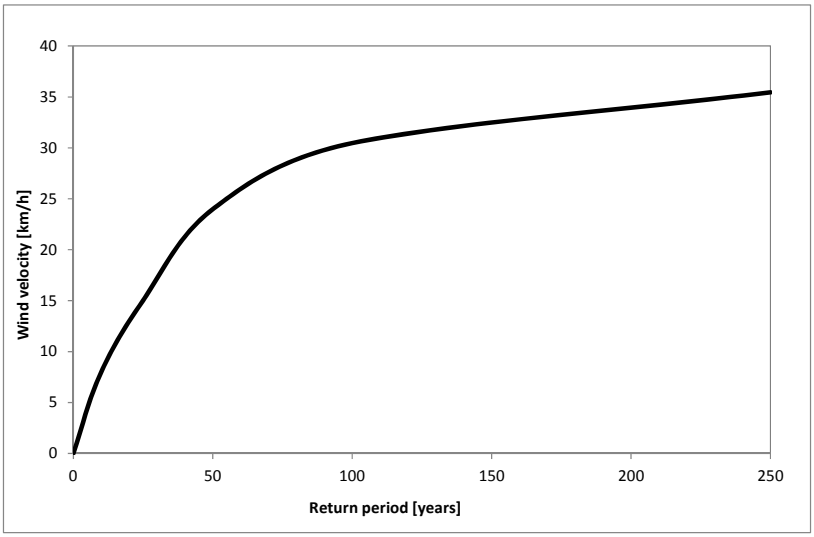


Figure A8-36.Strong wind hazard curve for Canberra.

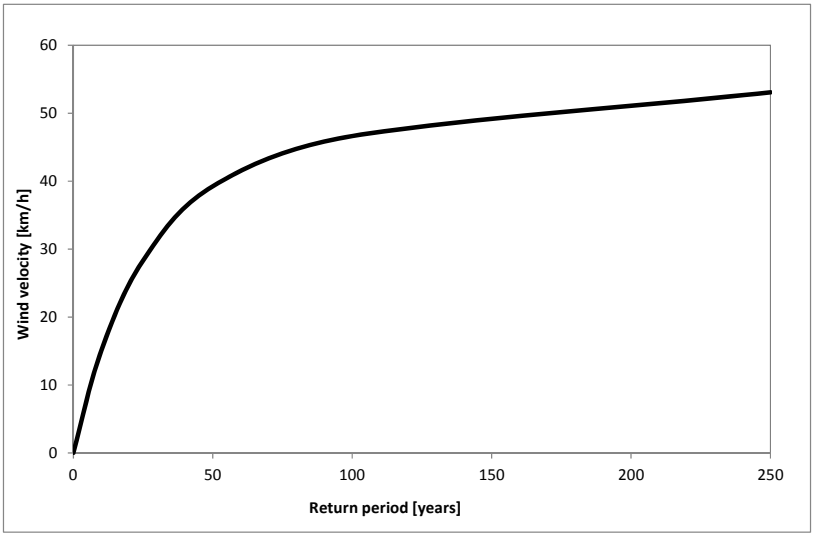


Figure A8-37.Strong wind hazard curve for Sidney.

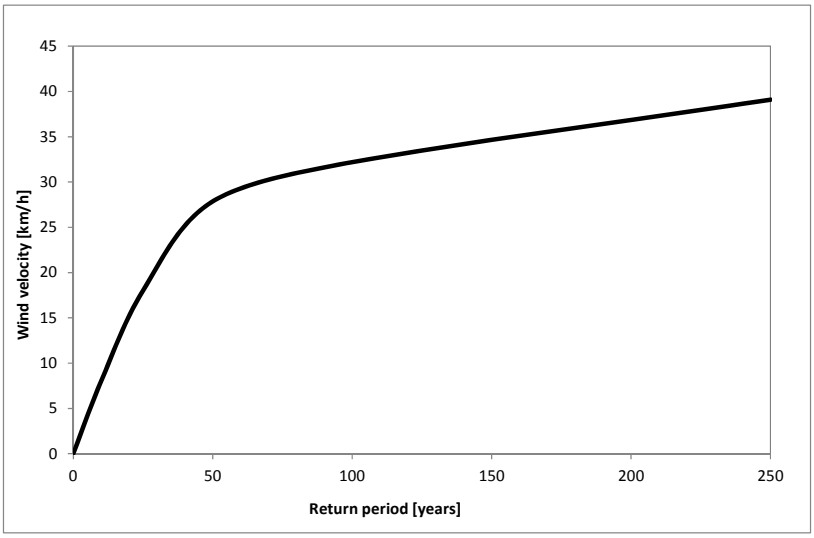


Figure A8-38.Strong wind hazard curve for Wellington.

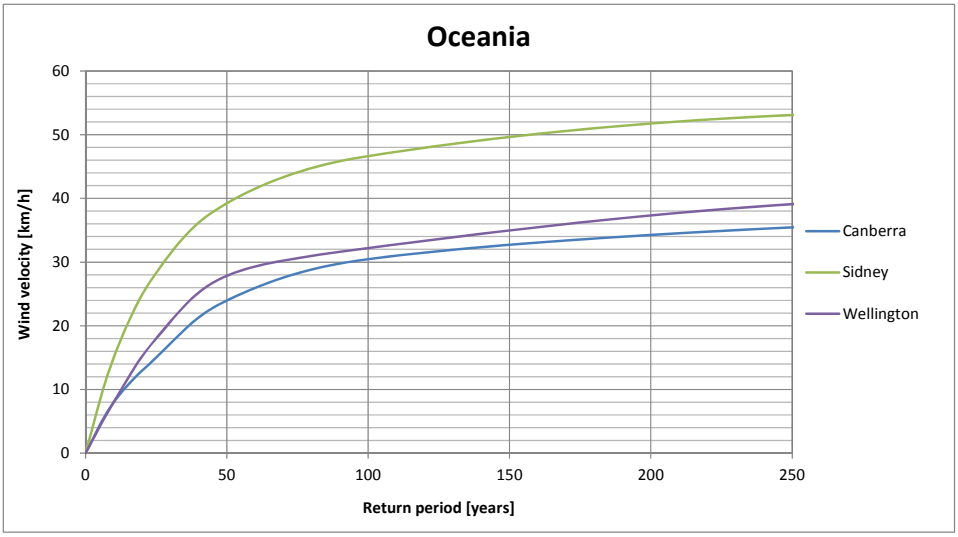


Figure A8-39.Comparison of strong wind hazard curves for selected cities in Oceania.

Storm Surge Hazard

Hazard curves for storm surge were calculated for three cities located near along the coast. These curves show the variation of the run-up with the return period. The selected cities are presented in Table 4.

Table A8-2. Selected cities

City	Country	Lon (°)	Lat (°)	Region
Havana	Cuba	-82.39	23.12	Caribbean
Belize City	Belize	-88.19	17.50	Central America
Nassau	Bahamas	-77.35	25.06	Caribbean
Cancun	Mexico	-86.84	21.16	Central America

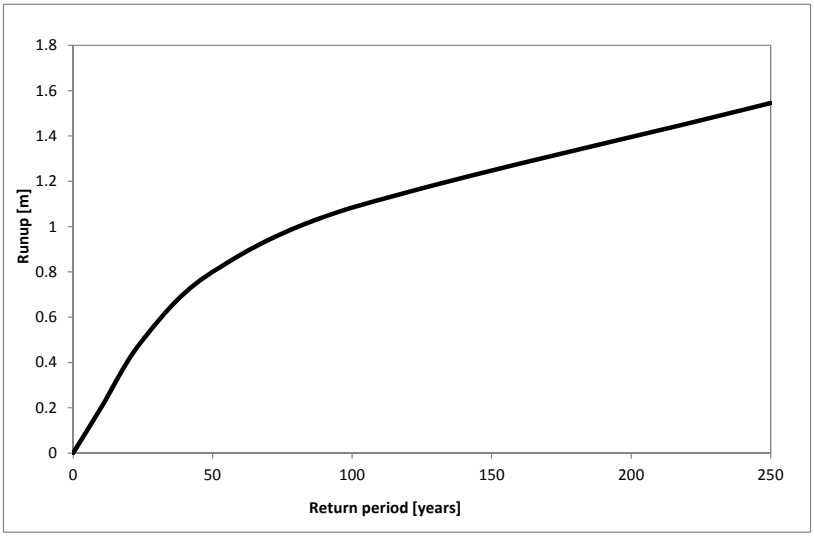


Figure A8-40.Storm surge hazard curve for Belize City.

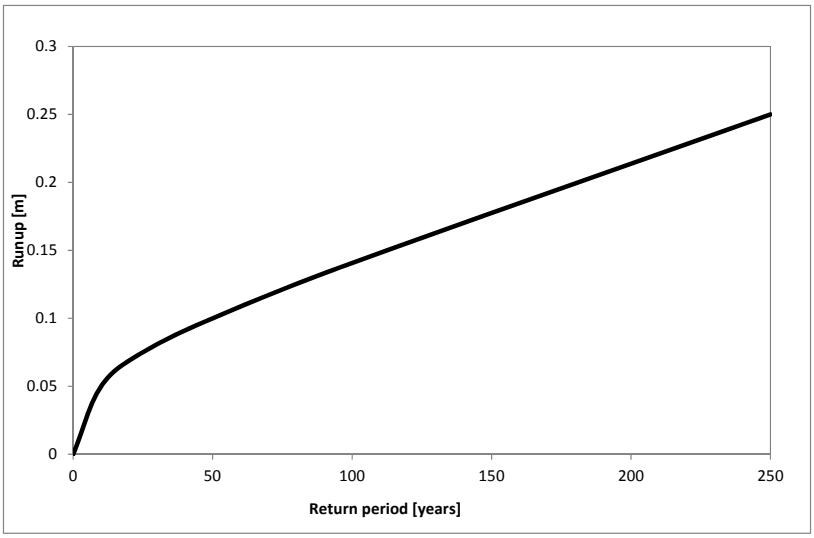


Figure A8-41.Storm surge hazard curve for Havana.

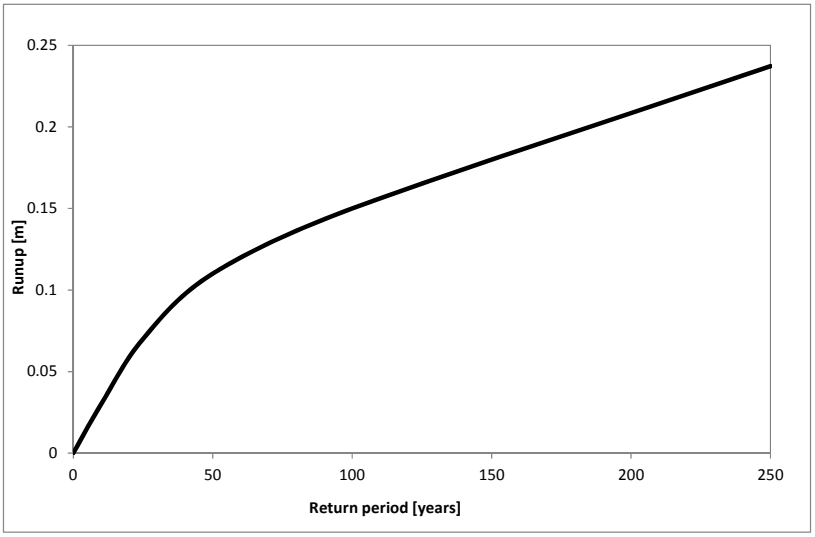


Figure A8-42.Storm surge hazard curve for Cancun.

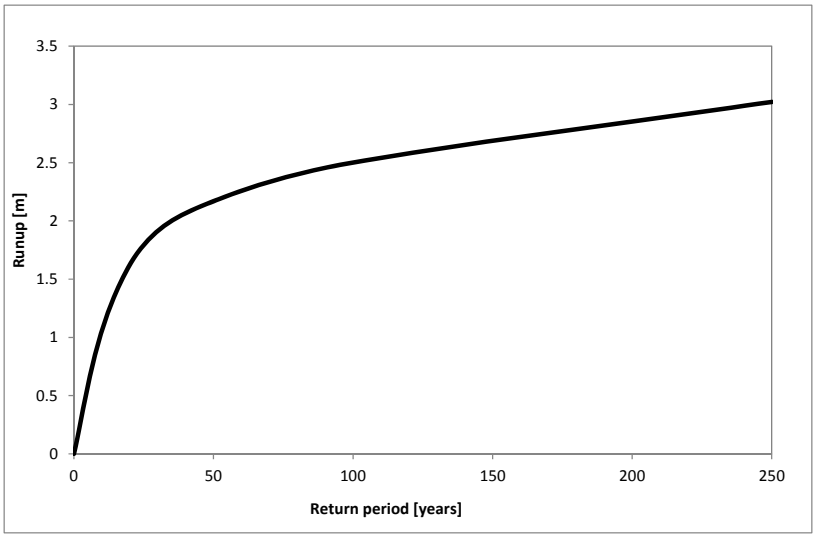


Figure A8-43.Storm surge hazard curve for Nassau.

Annex 9. Climate Change in the Caribbean

Observed data for the last 60 years shows that the air temperature in the Caribbean Small Island Developing States (SIDS), has risen over 1°C (Singh, 1997). In addition, Sea Level Rise (SLR), which is a by-product of global warming, poses a serious threat over the Caribbean SIDS. During the last 100 years, the relative sea level of the Caribbean has risen over 20 cm (Maul, 1989; Gornitz and Lebedeff, 1987) and it is expected to continue rising over the following years (Wigley and Raper, 1993).

It is widely held belief among scientists, politicians and stakeholders in the SIDS that climate change is being imposed upon them by developed countries. This has driven a situation in which these small states feel helpless in developing policies to address these regional changes (Singh, 1997). In addition, they do not fully perceive the need to reduce greenhouse gases emissions and to control deforestation (Singh, 1997).

Furthermore, SIDS have important sustainable development challenges, including small but growing populations, limited resources, remoteness, susceptibility to natural disasters, and fragile environments. These issues add up to high communication, energy and transportation costs, disproportionately expensive public administration and infrastructure due to their small size, and little opportunity to create economies of scale. Nevertheless, the need to reduce latent disaster risk on their exposed population and infrastructure is not fully envisioned. Without a climate change adaptation and disaster risk management policy, that includes the above-mentioned issues as development objectives, the sustainability of the SIDS on a long time-frame is seriously threatened.

Global Warming and Sea Level Rise in the Caribbean

Sea Level Rise (SLR), when manifested, will induce important impacts on the natural environment and on several economic and societal sectors of the Caribbean States (Maul, 1989). The intensity and severity of these impacts will depend on the extent of SLR and also on the vulnerability of the natural and socio-economic environments. Caribbean SIDS are likely to perceive the negative impacts of SLR given the intense land use of coastal areas and the lack of economic resources to implement mitigation strategies or to cope with disaster losses and emergency management.

From the environmental point of view, the expected impacts of SLR include the inundation of low-lying coastal areas, submergence of coastal wetlands, coastal erosion, coral bleaching and saline intrusions into estuaries and coastal aquifers. From the socio-economic point of view, negative impacts will include damage to coastal human settlements and infrastructure, the need to relocate towns or portions of large cities, and economic losses on climate-sensitive economic sectors such as forestry, energy, health and tourism.

Singh (1997) performed a field study oriented to catalog, measure and analyze what were suspected to be early and observable impacts of global warming and SLR in the Caribbean. The study was focused on studying climatological and tidal data, coastal erosion and inundation, aquifer contamination, wetland siltation, estuary salinization and coral bleaching in Trinidad and Tobago. After finding evidence of the occurrence of the above-mentioned issues, the linkage between them and global warming could not be established.

Several authors have studied the trends of SLR and its relation to climate change at a global scale (Domingues et al, 2008; Church et al, 2006; Church et al, 2011; Losada et al, 2013). From the data published by Church et al (2004), historical trends may be generated for the relative height of the sea level. Church et al (2004) reconstructed relative sea levels worldwide, from 1950 to 2001. Figure A9-1 to Figure A9-6 show the geographical distribution of the reconstructed sea levels by Church et al (2004) for the Caribbean, for the month of June from 1950 to 2000. Figure A9-7 shows the historical relative sea level trend at a location near the southwest coast of Trinidad island (Lat: 10°, Lon: -62°), along with a 5 years moving average.

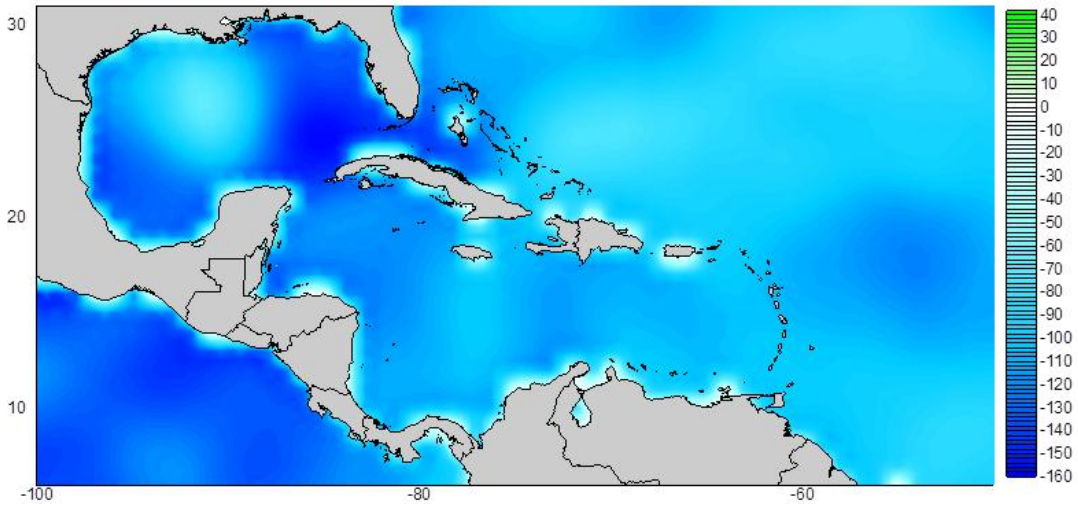


Figure A9-1. Reconstructed sea level height (mm) for the Caribbean Sea in June 1950. (After Church et al 2004)

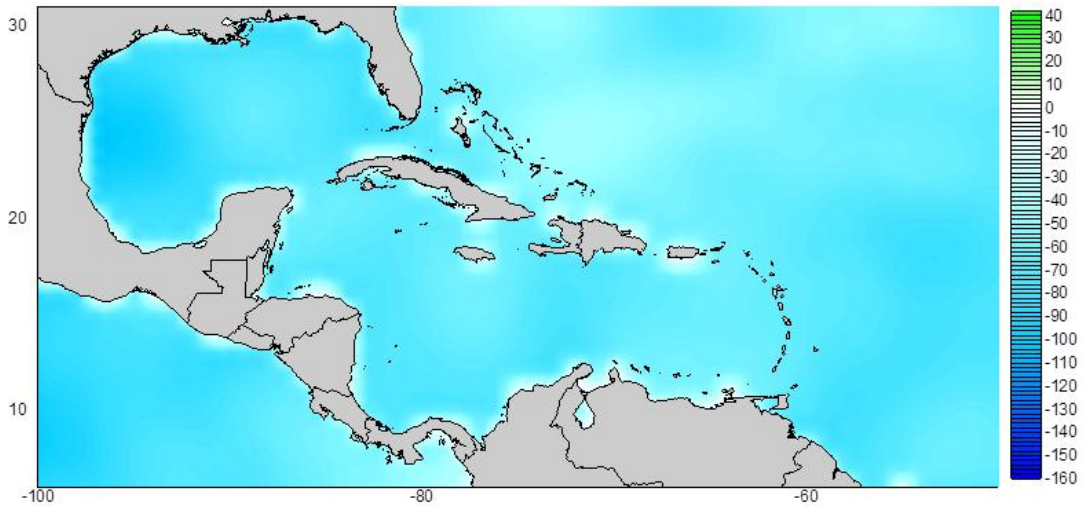


Figure A9-2. Reconstructed sea level height (mm) for the Caribbean Sea in June 1960. (After Church et al 2004)

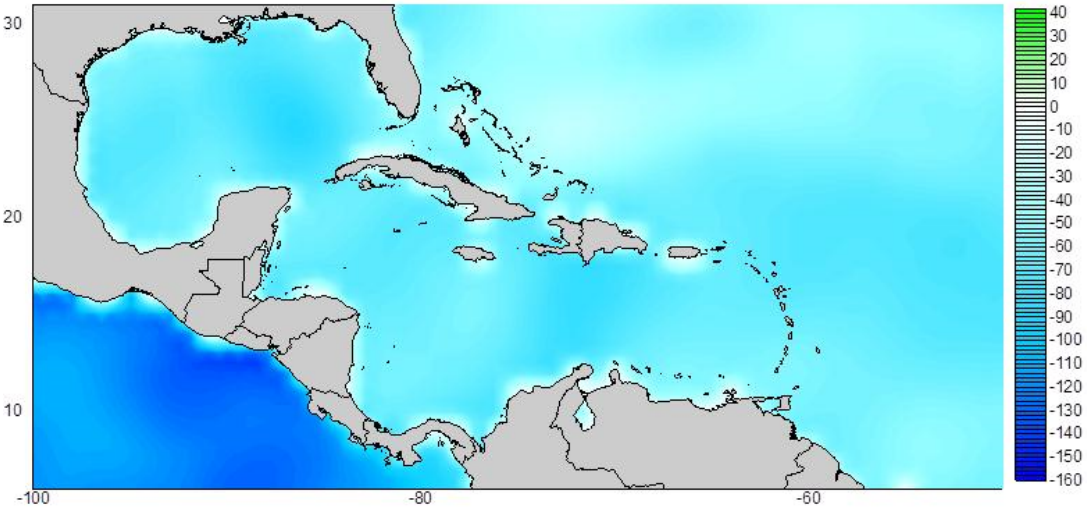


Figure A9-3. Reconstructed sea level height (mm) for the Caribbean Sea in June 1970. (After Church et al 2004)

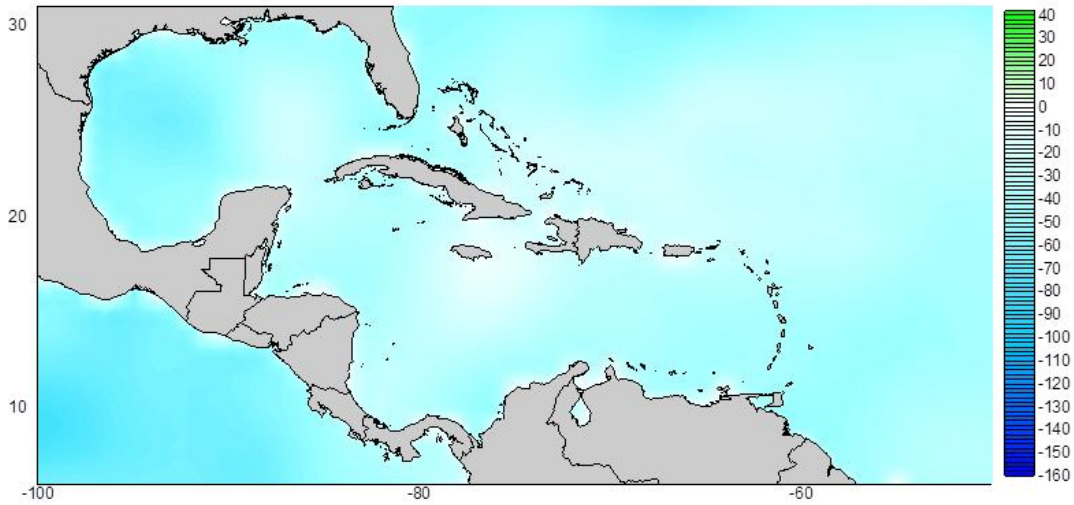


Figure A9-4. Reconstructed sea level height (mm) for the Caribbean Sea in June 1980. (After Church et al 2004)

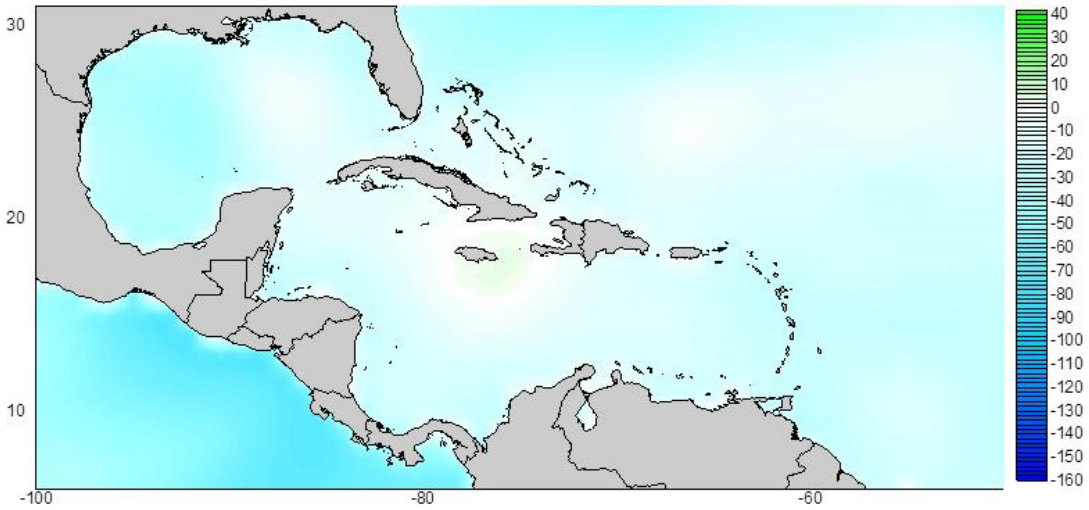


Figure A9-5. Reconstructed sea level height (mm) for the Caribbean Sea in June 1990. (After Church et al 2004)

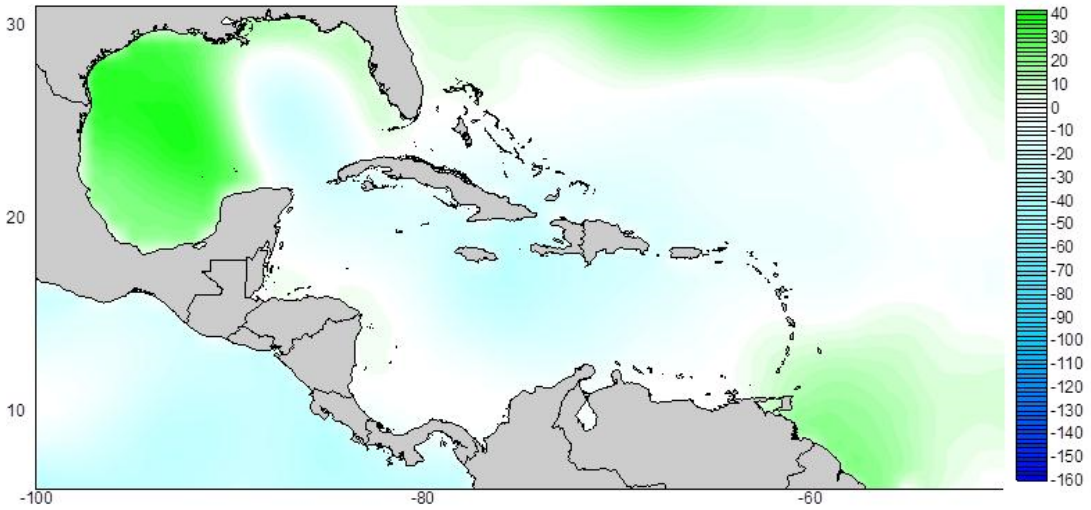


Figure A9-6. Reconstructed sea level height (mm) for the Caribbean Sea in June 2000. (After Church et al 2004)

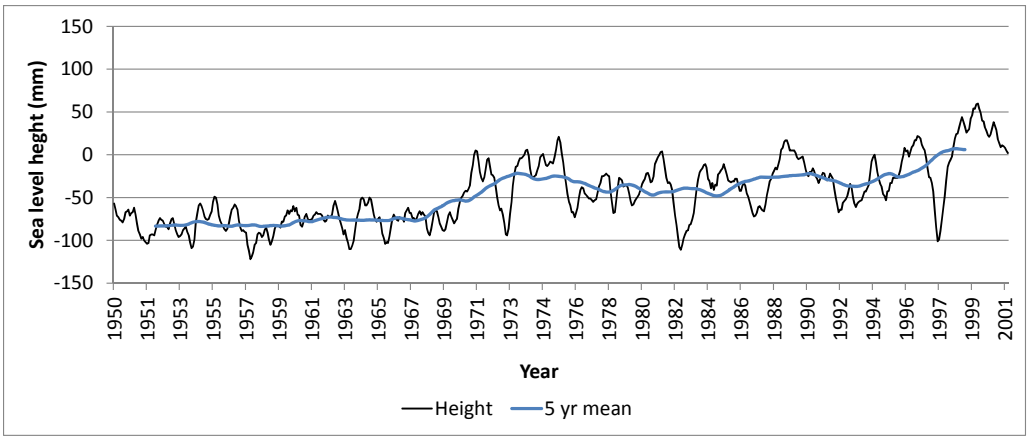


Figure A9-7. Reconstructed sea level height in a location southwest of Trinidad Island. (After Church et al 2004)

It can be seen that the general trend in the region has been for the sea level to rise evenly over the Caribbean. The trend on SRL at Trinidad Island (Figure A9-7) is clearly growing over the years. Following this trend, it can be said that the sea level is expected to rise, at this location, around 1.5 cm per decade. In other words, by 2100 the sea-level at Trinidad and Tobago is expected to have risen around 13.5 cm.

Currently it is not possible to establish to what extent the SLR is a phenomena caused by natural processes and to what extent it is caused by greenhouse gases emission. Anyhow, countries susceptible to be affected by SLR, particularly SIDS, need to start a comprehensive process that

leads to the definition of public policies for the reduction of the exposure and vulnerability of their natural and built environments.

Modelling the Future Occurrence of Extreme Events

Global warming and climate change, according to various reports of scientific experts (i.e. IPCC, 2007), will become more marked as far as progress is made in the course of the century, and will modify the characteristics (frequency, intensity, duration, location of occurrence, times of the year in which they are observed, among others) of extreme weather events, which repeatedly constitute cause of disasters in different regions of the planet. Hence, from the standpoint of practical risk management, special attention is paid to the changes that may occur in spatiotemporal patterns of such phenomena.

One of meteorological phenomena on which attention has been focused for being a cause of recurrent disasters for different countries, are tropical cyclones (tropical depressions, tropical storms and hurricanes), particularly the most intense phase of its development: hurricanes. In managing risk is important to know what could happen in the future with the intensity, frequency, the trajectory, and the speed of these systems under changed climatic conditions. In search of an answer to the question about the characteristics of hurricanes in the future there are two approaches:

- Estimate potential changes based on the analysis of what happened in the past using various statistical tools and probabilities;

- Simulate, based on numerical models that reproduce many of the elements of the climate system, the behavior of the atmosphere that would be observed under assumed conditions (scenarios) very likely in the future and analyze the behavior of hurricanes in this simulated climate.

Of course, the two approaches have a very close relationship. The ability of models to represent hurricanes is measured by comparison with what happened in the past. Similarly, for the analysis of the information generated by the models on hurricanes in the future, statistical tools and probability theory are used.

Meteorological and Climate M+models

The weather is the state of the atmosphere at a particular time and is expressed in a variety of meteorological variables (certain temperature or humidity, calm or wind, rain, fog, storm, etc.) observed hourly or daily which is the result of atmospheric dynamics. The climate in turn comprises the prevailing weather conditions during a given period (months, years, centuries, millennia), which are the result not only of atmospheric dynamics, but the interaction between the atmosphere, hydrosphere (ocean mainly), the biosphere, lithosphere and anthroposphere. Thus, the atmosphere and the weather are the object of study of meteorology, while climate's dynamic is the object of

study of climatology. Obviously, there is a close relationship between these two concepts and between these two earth sciences.

In this context, the hurricanes are extreme meteorological events as far as the processes associated with them are on the scale of hours-days. Meteorology addresses atmospheric dynamics leading to the formation and development of these systems and study their intensity, duration, trajectory and speed, all with a view to improve the prognosis of their formation and evolution to support warning systems and disaster prevention. Meanwhile, the climate (prevailing weather conditions during a period) defines characteristics of these phenomena such as their geographical location, the time of year during which they are observed, their frequency, their dominant path (or mean), their average speed of travel, hence, climatology, regarding tropical cyclones and hurricanes, should address these latest features.

The meteorological models, which consider the radiative and hydrological characteristics of the land surface (land or water), basically reproduce atmospheric processes of varying scales. At present there has been progress in both parameterization schemes as in the explicit representation of the processes at mesoscale and microscale in very high resolution meteorological models. As a result, the representation of atmospheric dynamics has improved, which has led to improved weather forecasts on the horizon of up to three days.

Climate models approximately synthesize the complex set of elements, processes and interactions involved in the dynamics of the climate system that generates the prevailing weather conditions (climate) in a region. For several decades numerical climate models were based on the general circulation of the atmosphere (MCGA), perhaps the least complex of the numerical, but consider the complexity of the atmospheric processes that control circulation. Currently advanced tools are available and widely used for climate simulation which includes the progress in the understanding of the dynamics of the climate system. These models are three-dimensional representations of the processes occurring in the global climate system and are of varying complexity. Today progress in climate modeling has advanced to the creation of coupled models that consider not only the atmosphere, but include the interaction between different components of the climate system (atmosphere, ocean, cryosphere, etc.) as represented in Figure A9-8.

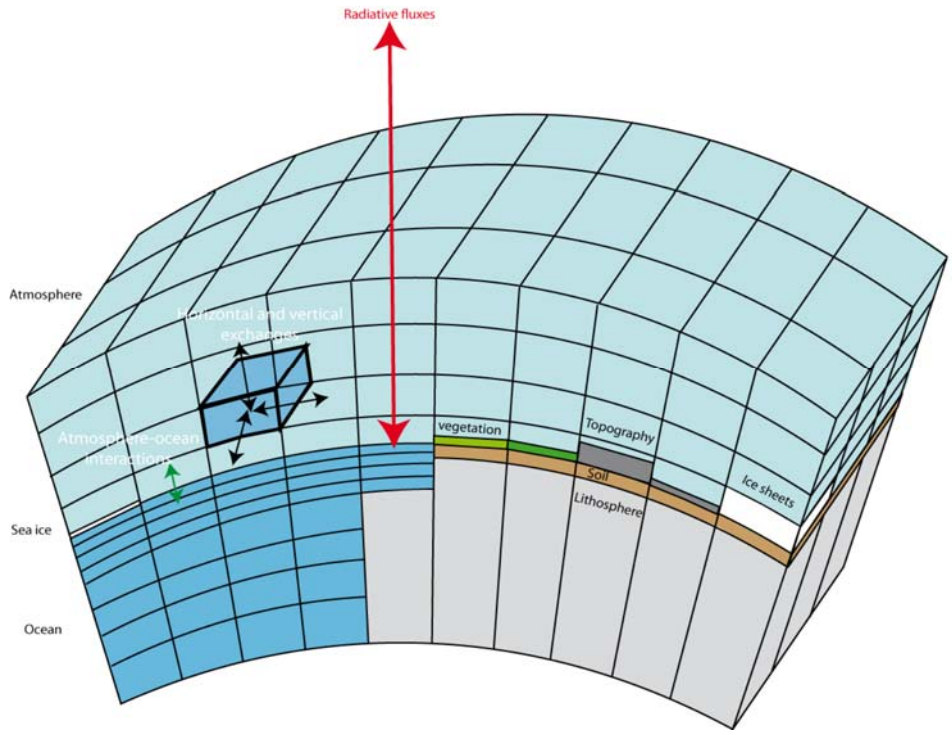


Figure A9-8. Schematic representation of the grid for each system component coupled to one climate model. (Taken from Goose et al., 2010).

Great progress has been made regarding the modeling of hurricanes on the meteorological scale for weather forecasting purposes. The prediction generated several days ahead and real-time tracking of hurricanes from satellite, substantially improved the level of accuracy on the evolution of these systems. This is coupled with improved spatial resolution (10x10 and up 4x4 kilometers in some cases) and the representation of processes as convection and convective cloud microphysics. Developing models parameterizations in coarse spatial resolution or the explicit representation of these processes in models with high spatial resolution have led to an improvement in the representation of process involved in the dynamics of hurricanes. Although there are still difficulties related to the prediction of their tracks.

Overall meteorological models represent well enough tropical cyclones, given that as being updated every day with real data, they include actual conditions of atmospheric dynamics into the simulations and project those conditions in the future when considering atmospheric dynamics in period of hours and several days.

In regard to the simulated climate characteristics of tropical cyclones, including hurricanes, a recent evaluation of the ability of many of the climate models used so far in the development of climate change scenarios for the twenty-first century found that they tend to have a higher intensity than actually observed. For the tropical Atlantic, some models satisfactorily represent the interannual

variability of the frequency and even long-term trends observed (Gualdi et al., 2008; Zhao et al., 2010), but had to make modifications or replacements on the convection schemes which initially had the models.

The models that best represent the particular meteorological characteristics of hurricanes are of medium spatial resolution (grid of 50 x 50 km) with enhanced convection schemes. Most climate models have coarse spatial resolution (of the order 100x100 or 200 x 200 km) where convective processes involved in hurricanes dynamics at mesoscale and microscale are hardly represented, but include the latest advances in convective parameterization. Smaller scale processes such as cloud microphysics, important in the evolution of tropical cyclones, can hardly be incorporated in models of low spatial resolution. Indeed, in the evaluation of Walsh et al. (2010) of the models used for hurricane studies, it was found that the coarse spatial resolution produce poor results, particularly in the detection of tropical cyclones, and therefore underestimates the frequency of these phenomena.

Simulation of Tropical Cyclones Using Nested Models

Using climate models to simulate hurricanes demands huge computational resources (memory, storage, computation time, among other requirements) and high or very high spatial and temporal resolution is necessary. One way to overcome this difficulty is to analyze processes that require high resolution over a specific region using high resolution models that are nested in global models which are generally of low resolution. Thus, the high resolution would be only for a limited region of interest and not for the entire globe, reducing the required computational resources. In this case the results of the simulation for a region depend on the characteristics of the global model and its capacity to represent large-scale processes, and also on the particularities of the high-resolution model that is nested in the first.

One of the recent efforts to study the climatological characteristics of hurricanes, particularly those in the tropical Atlantic basin, was made in the Nested Regional Climate Model project (NRCM) of the National Center for Atmospheric Research (NCAR) of the United States, in which the meteorological model Weather & Research Forecasting (WRF) was nested in the Community Climate System Model (CCSM) to study different climatological characteristics of hurricanes in the tropical Atlantic basin region covering the tropical Atlantic, northern South America, Caribbean Sea, Gulf of Mexico, Central America and a portion of the south east USA.

NRCM's global model operated in a grid of 150x150 km and the regional model was run on a grid of 36x36 km for the tropics, 12x12 for the tropical Atlantic basin and 4x4 km for two domains on the United States (one in the south east and another to the west). The spatial resolution for the tropical Atlantic Basin allows simulation of tropical cyclones. The results of applying NRCM to the tropical Atlantic Basin, for the period 1995-2005 are shown in Figure A9-9.

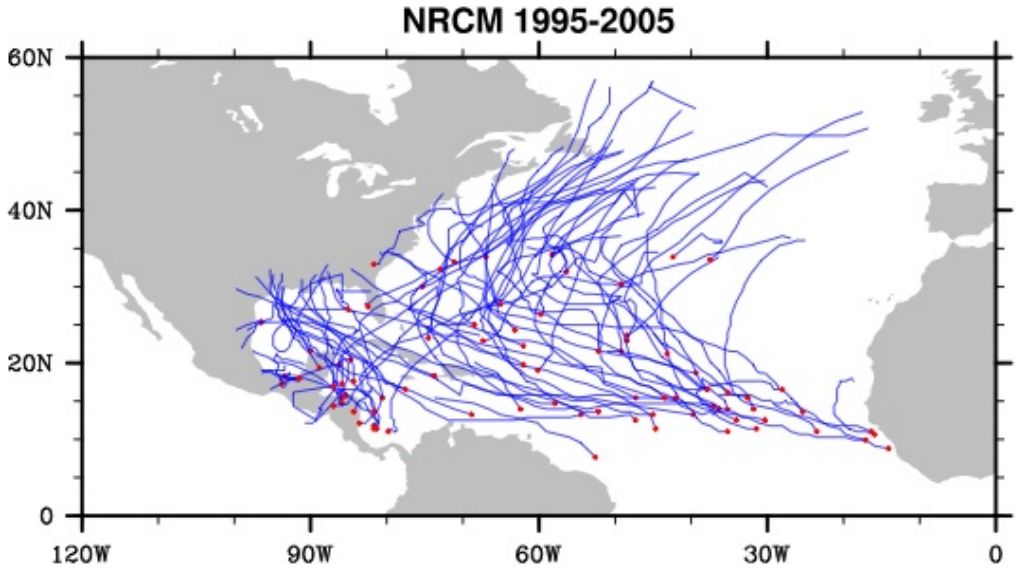


Figure A9-9. Tropical cyclone tracks simulated using NRCM

Suitable Model for the North Atlantic Basin

In the recent years, there has been an increased interest in using Regional Climate Models (RCM) throughout the Caribbean to provide specific information for researchers and policymakers. This situation has derived in the application of the PRECIS model, which uses HadRCM3P (state of the art RCM developed by the Hadley Center of the United Kingdom). This effort represents the more important coordinated and sustained activity, in terms of climate change modeling, taking place today in the Caribbean (PRECIS-Caribbean).

Anyhow, future hurricane hazard for the North Atlantic Ocean basin was assessed using simulation results from the Nested Regional Climate Model (NRCM) developed by NCAR. The main reason for choosing NRCM over PRECIS-Caribbean is its resolution level, which enables the model to simulate the fine-resolution conditions related to the generation and evolution of tropical cyclones.

The spatial domains of both PRECIS-Caribbean and NRCM are presented in Figure A9-10 and Figure A9-11 respectively. As shown, PRECIS-Caribbean has a regional domain of 50Km resolution (i.e. distance between calculation points) and two subdomains of 25Km resolution. NRCM has a regional domain resolution that covers most of the northern hemisphere of 36Km, with a regional subdomain over the North Atlantic basin of 12Km resolution, and subdomains over the Caribbean and western USA of 4Km.

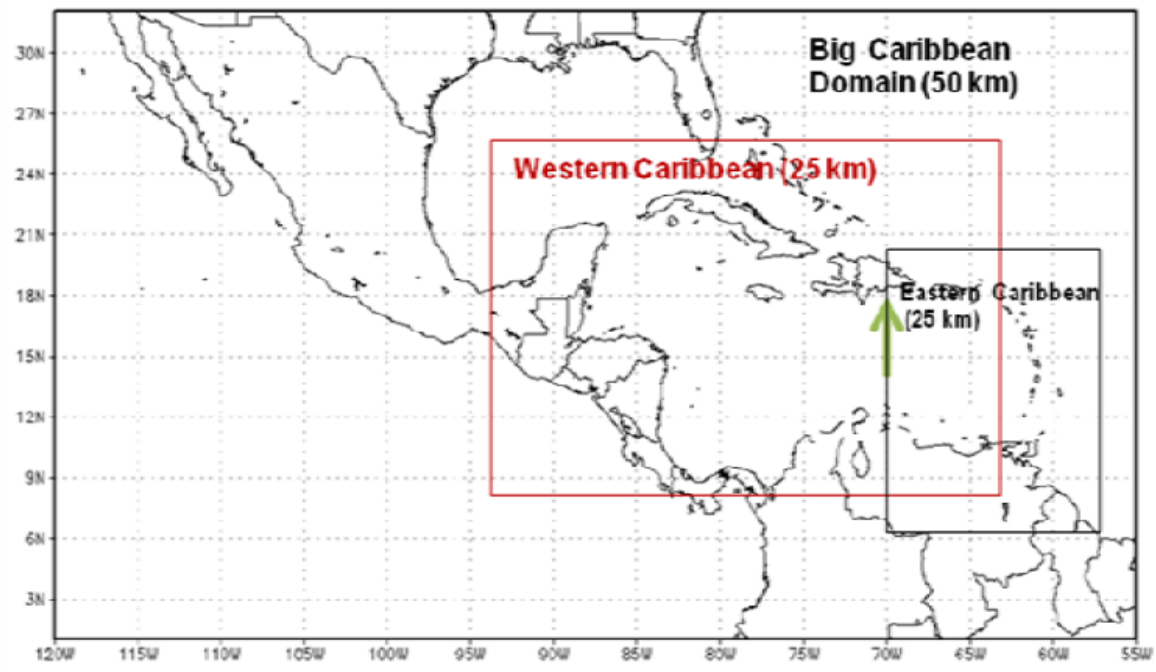


Figure A9-10. Extent and spatial resolution of PRECIS-Caribbean. (Taken from UN-ECLAC 2010)

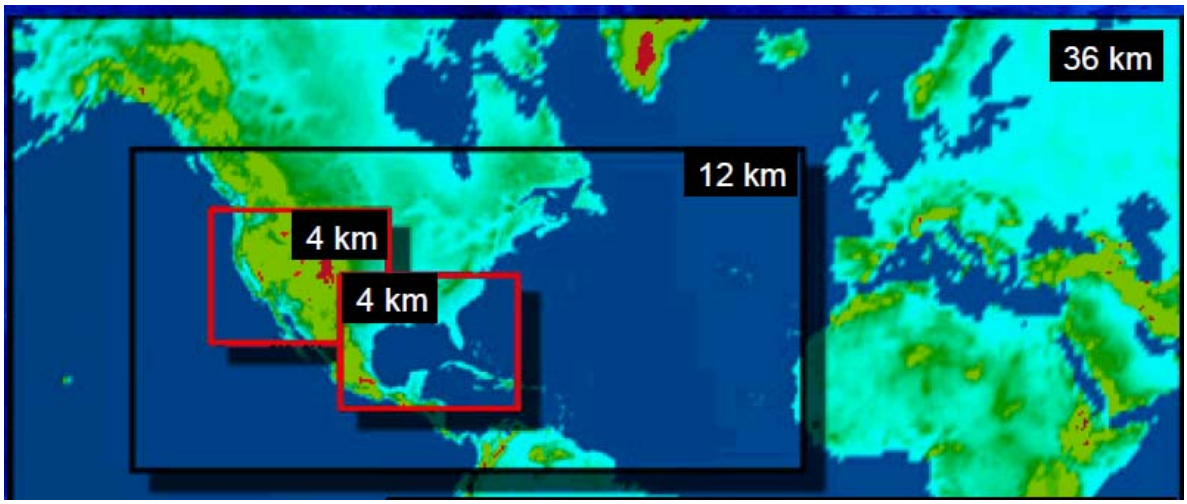


Figure A9-11. Extent and spatial resolution of NRCM. (Taken from: NRCM Brochure. http://www.nrcm.ucar.edu)

Although there have been some advances in simulating tropical cyclones using PRECIS-Caribbean, there is still a need for further refinement in the spatial resolution for the model to be able to provide the evolution over hourly timescale of the trajectory, central pressure and sustained wind speed of tropical cyclones. Figure A9-12 shows the tropical storm density and tracks

generated by PRECIS, driven by the Global Circulation Model (GCM) HadAM3P for the period 1961-1990. As shown in Figure A9-12, there are deficiencies in the tropical storms simulation. For example, the results present a low density and lack of tracks in the eastern Caribbean, in which the frequency of storms is relatively high. Nevertheless, other features, such as the high-density area located close to the Gulf of Honduras are well represented.

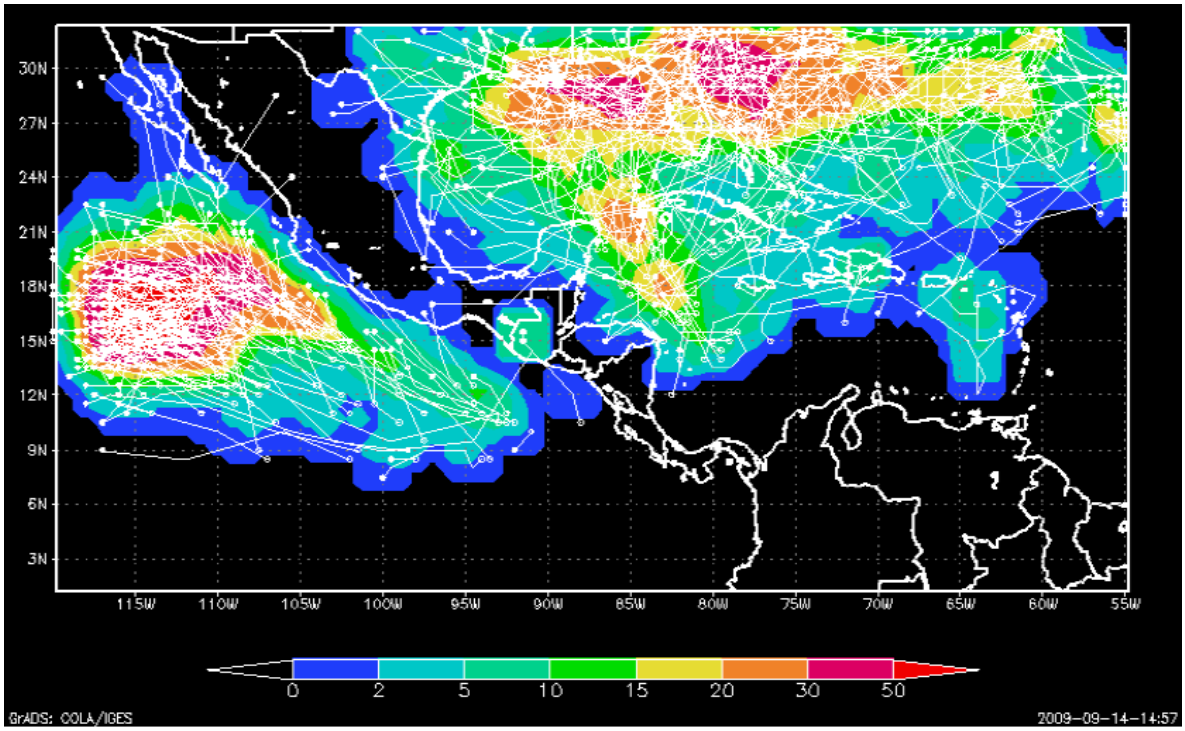


Figure A9-12. Tropical storm density and tracks generated by PRECIS, driven by the GCM HadAM3P for the period 1961-1990. (Taken from UN-ECLAC 2010)

The tropical cyclones tracks, central pressure and sustained wind speed, over hourly timescale, are required inputs for wind hazard assessment. Fortunately, the NRCM provided this information for the entire North Atlantic basin, for the period 2010-2055. Therefore, NRCM was chosen over PRECIS-Caribbean, given the data needs for probabilistic hazard and risk assessment. It is important to note that the input tracks provided by NRCM were generated for emissions scenario A1B of IPCC's AR4 (IPCC, 2012).

Annex 10. Simulated Tracks of Future Tropical Cyclones (2014-2055) in the North Atlantic Ocean Considering Climate Change

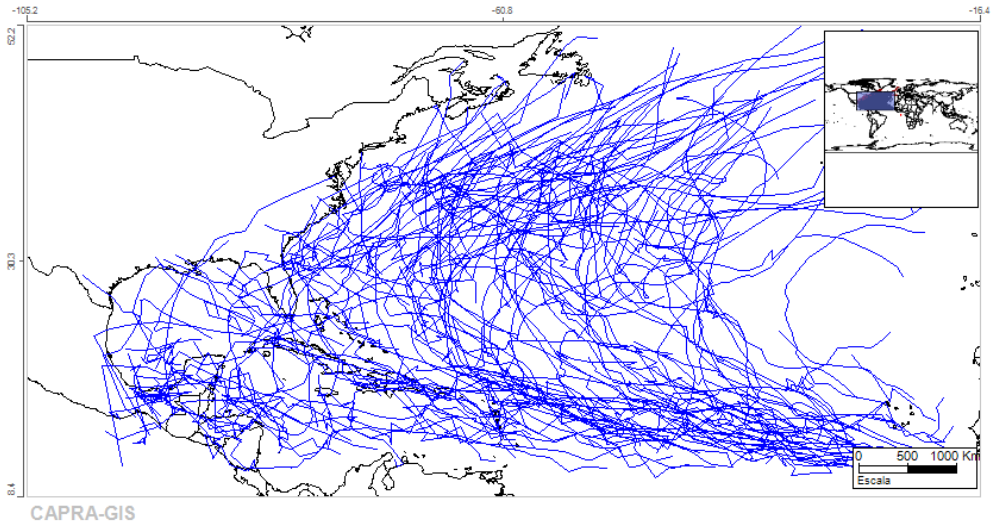


Figure A10-1. Tropical cyclones tracks simulated by NCAR for the period 2020-2030.

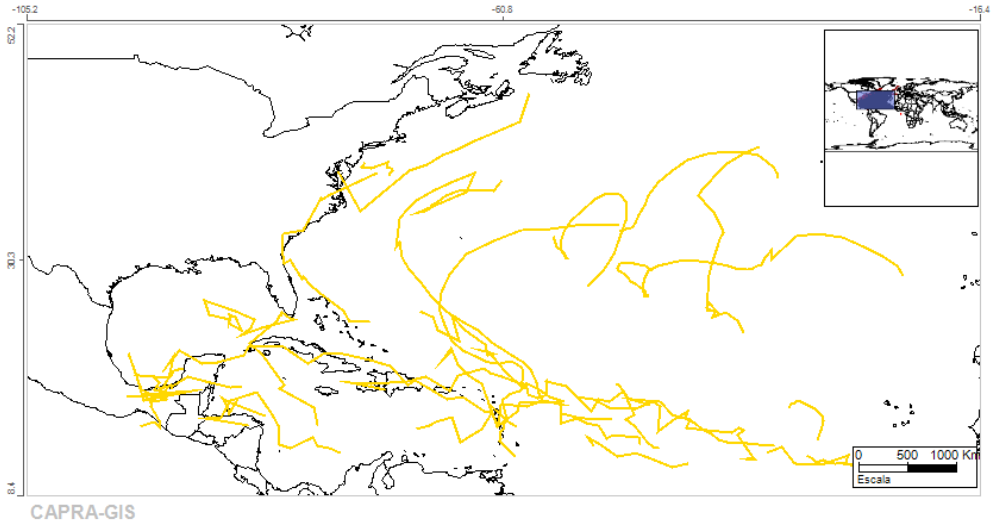


Figure A10-2. SS-1 tropical cyclones tracks simulated by NCAR for the period 2020-2030.

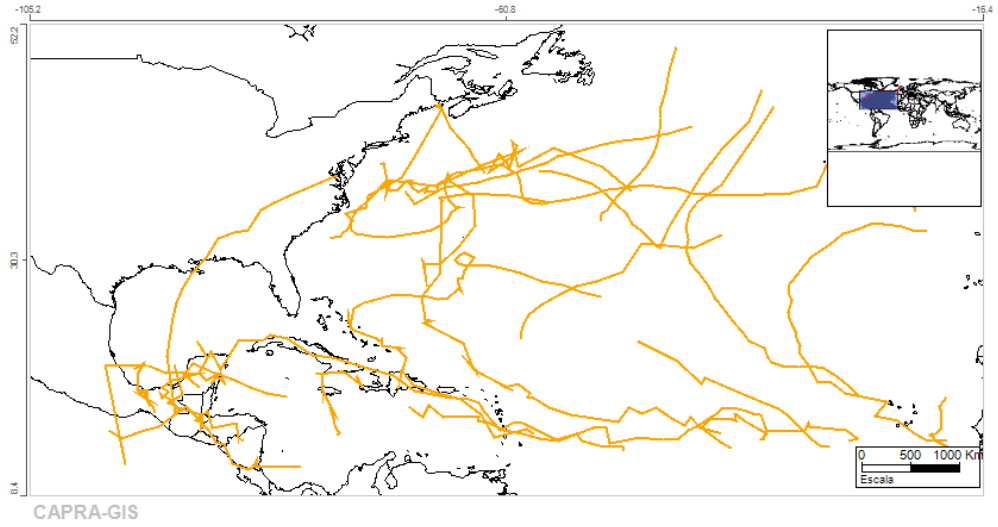


Figure A10-3. SS-2 tropical cyclones tracks simulated by NCAR for the period 2020-2030.

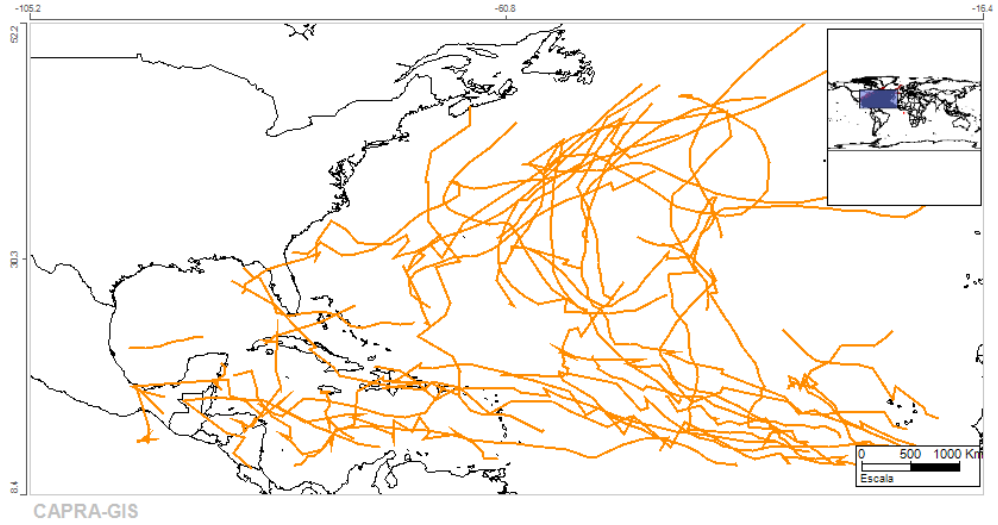


Figure A10-4. SS-3 tropical cyclones tracks simulated by NCAR for the period 2020-2030.

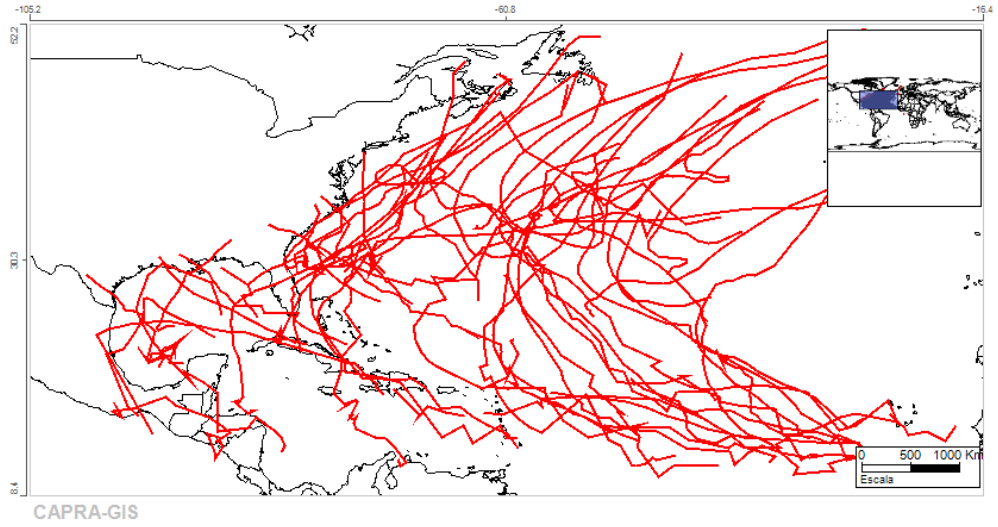


Figure A10-5. SS-4 tropical cyclones tracks simulated by NCAR for the period 2020-2030.

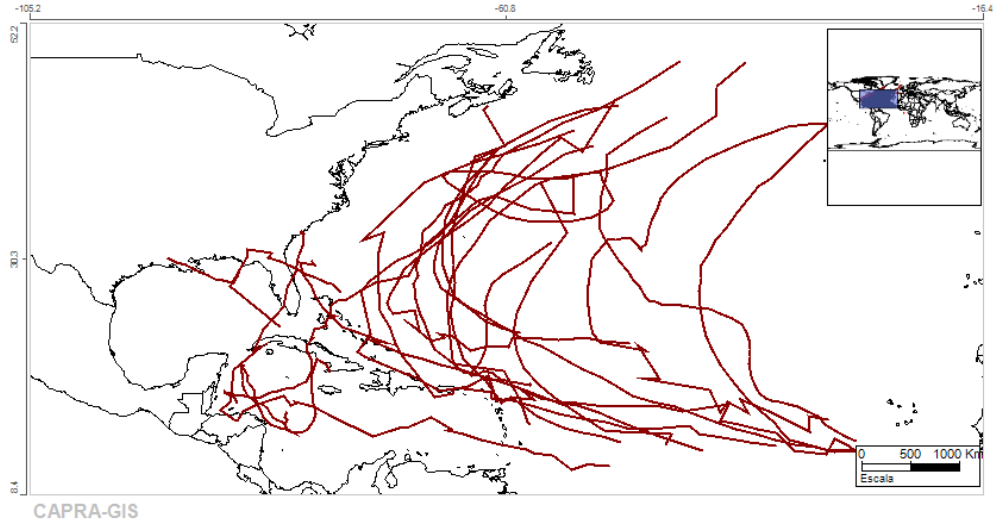


Figure A10-6. SS-5 tropical cyclones tracks simulated by NCAR for the period 2020-2030.

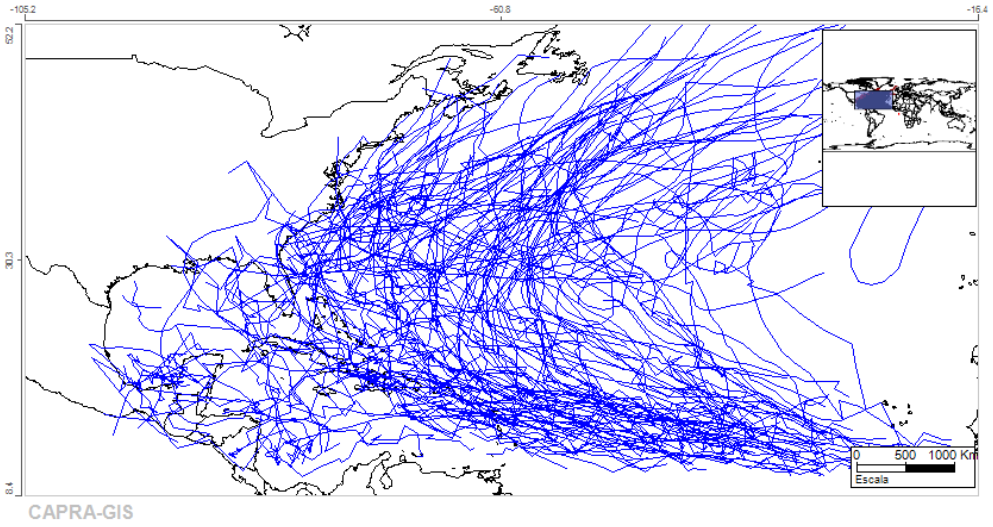


Figure A10-7. Tropical cyclones tracks simulated by NCAR for the period 2045-2055.

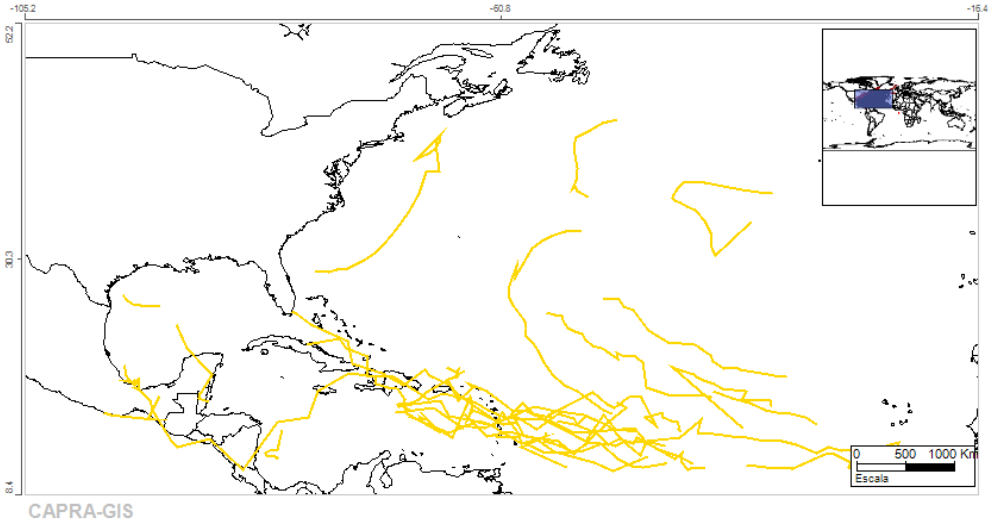


Figure A10-8. SS-1 tropical cyclones tracks simulated by NCAR for the period 2045-2055.

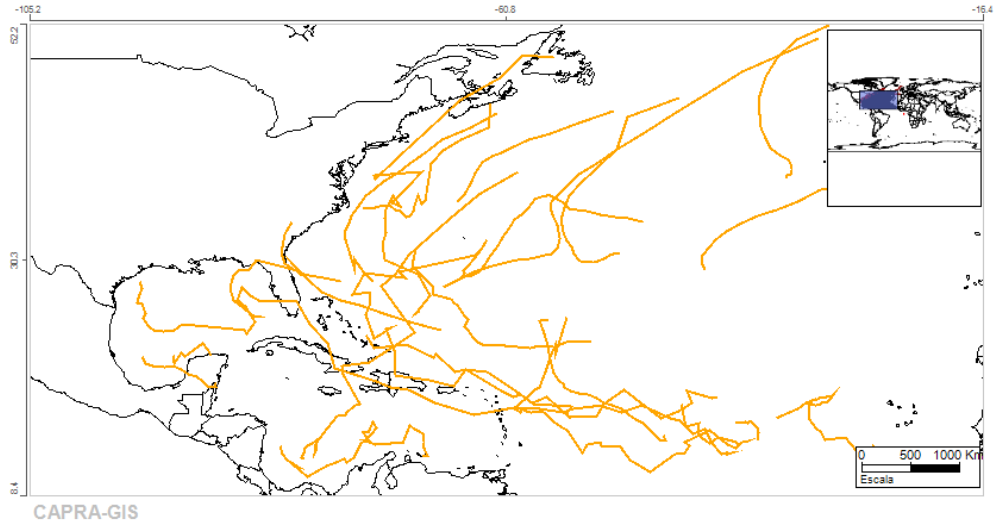


Figure A10-9. SS-2 tropical cyclones tracks simulated by NCAR for the period 2045-2055.

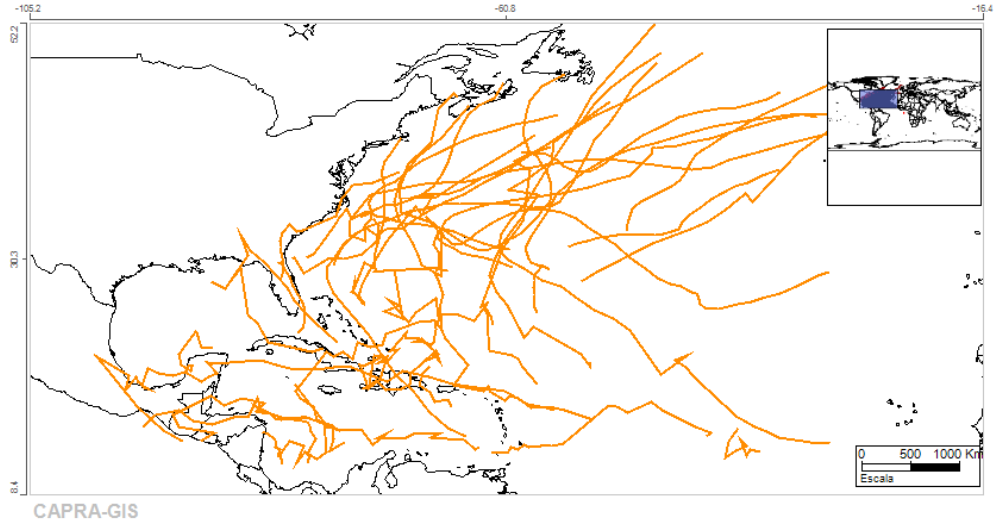


Figure A10-10. SS-3 tropical cyclones tracks simulated by NCAR for the period 2045-2055.

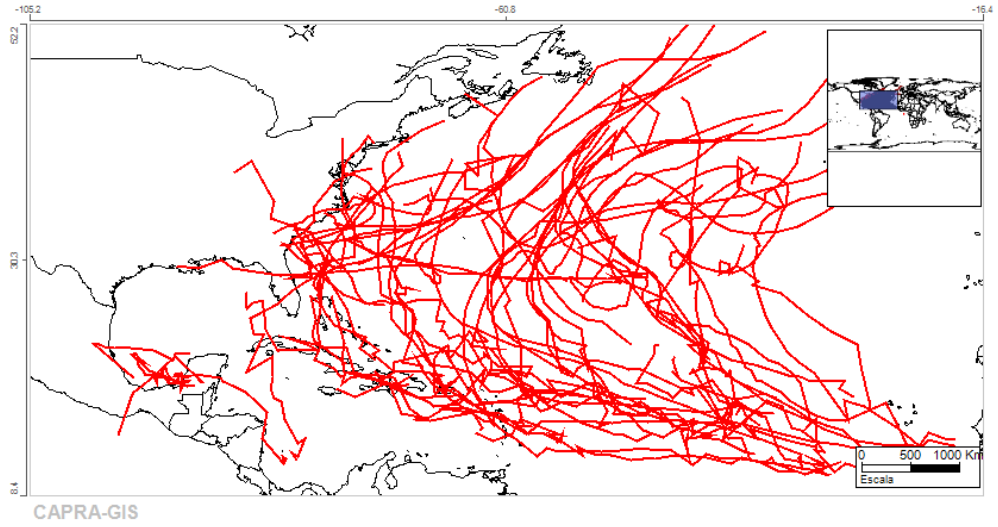


Figure A10-11. SS-4 tropical cyclones tracks simulated by NCAR for the period 2045-2055.

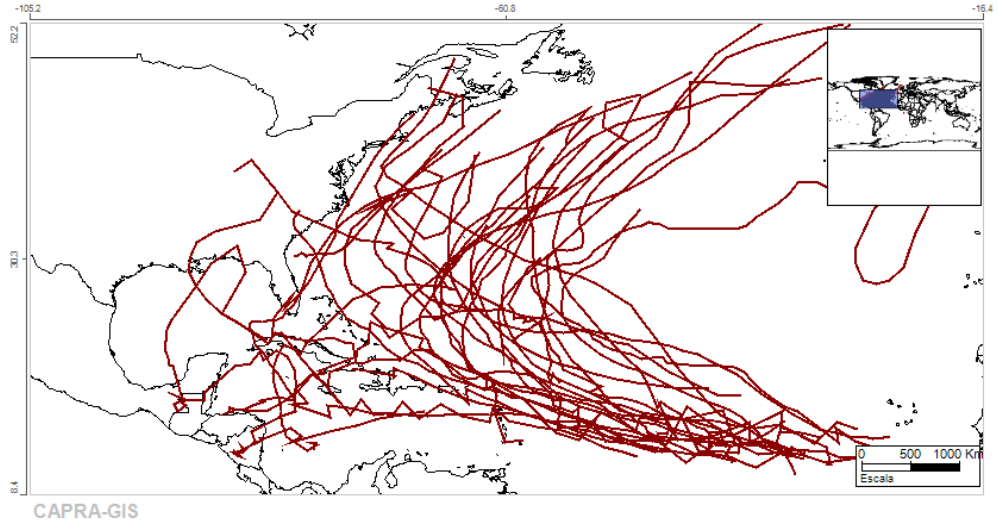


Figure A10-12. SS-5 tropical cyclones tracks simulated by NCAR for the period 2045-2055.

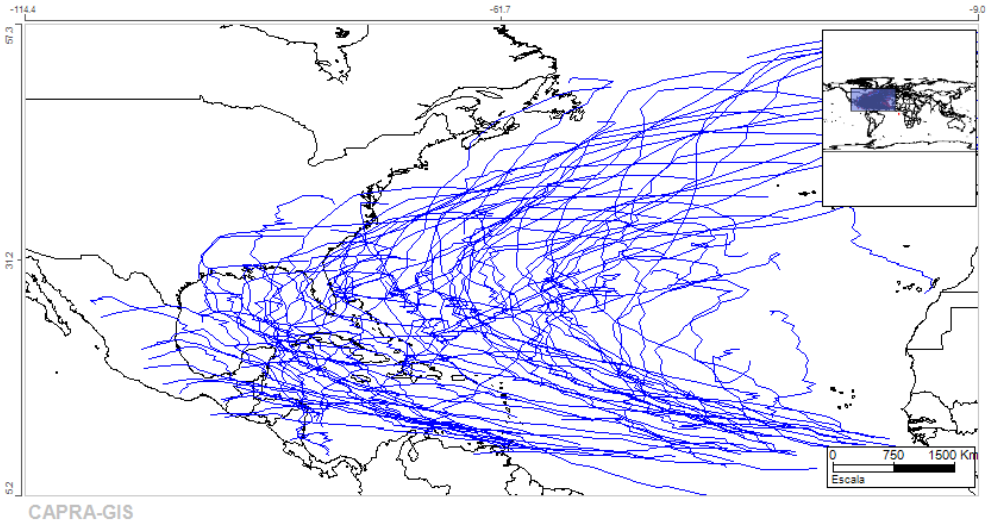


Figure A10-13. Tropical cyclones tracks simulated for the period 2014-2019.

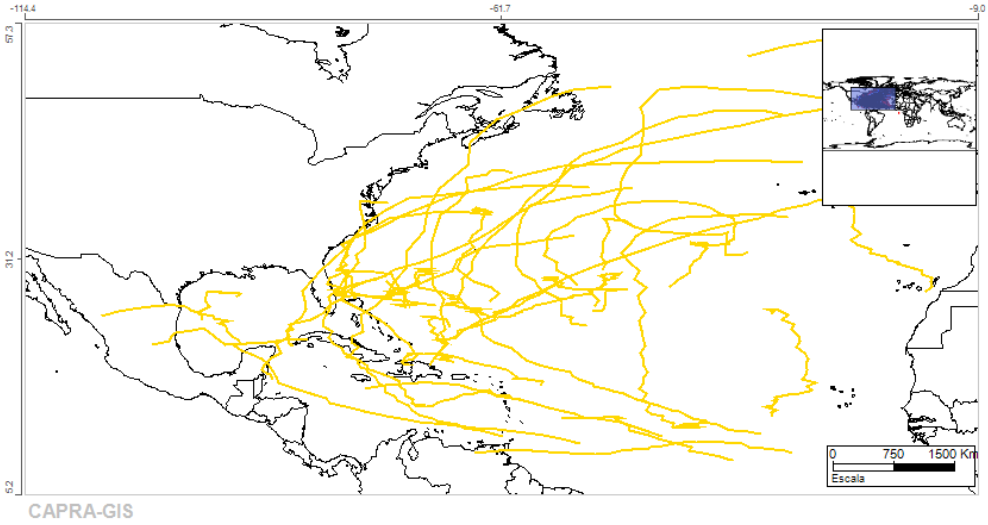


Figure A10-14. SS-1 tropical cyclones tracks simulated for the period 2014-2019.

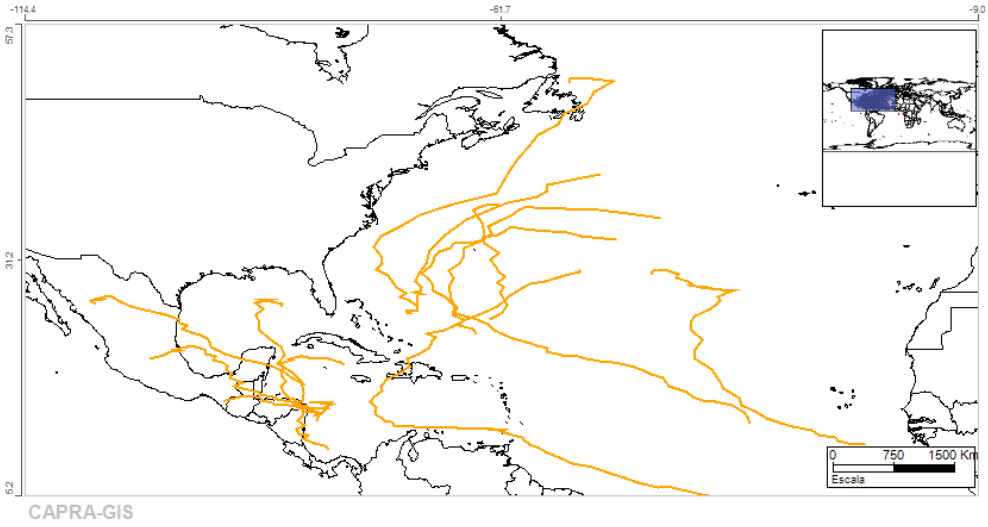


Figure A10-15. SS-2 tropical cyclones tracks simulated for the period 2014-2019.

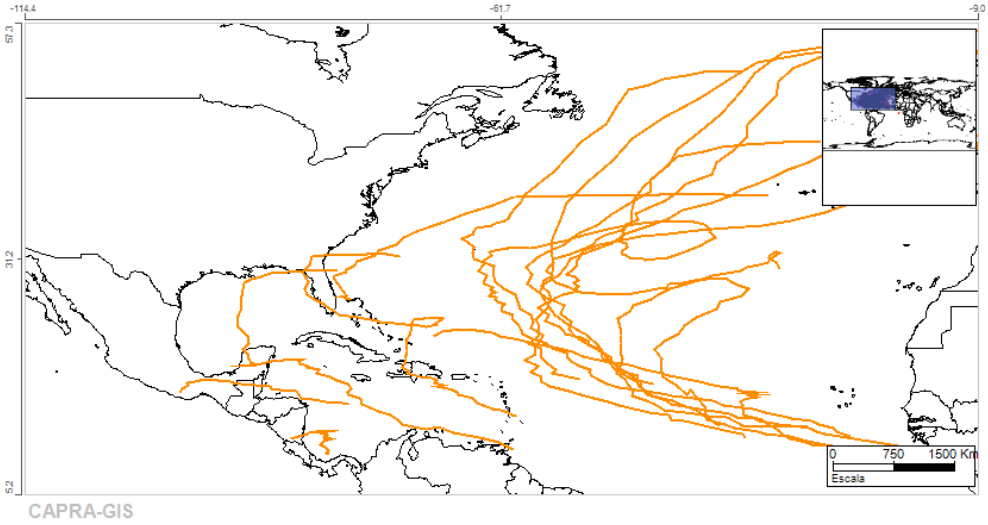


Figure A10-16. SS-3 tropical cyclones tracks simulated for the period 2014-2019.

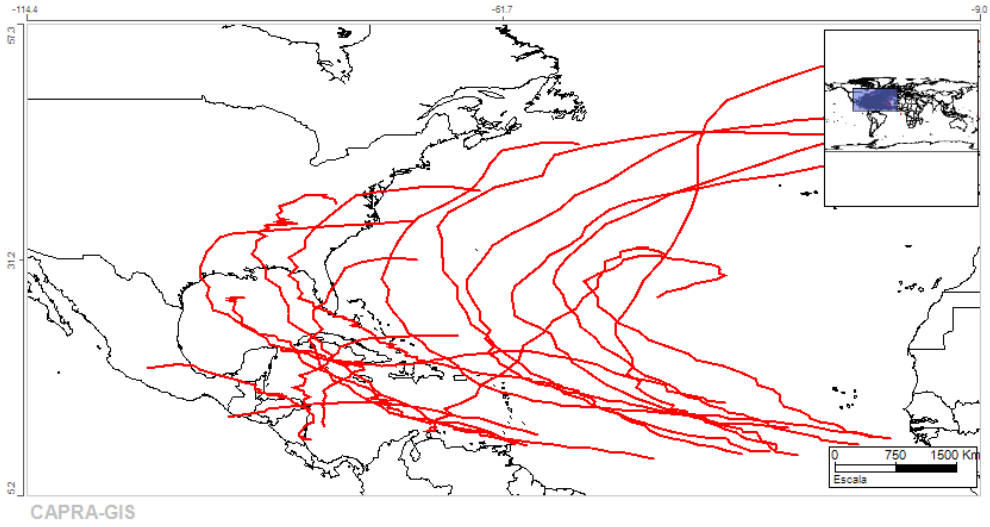


Figure A10-17. SS-4 tropical cyclones tracks simulated for the period 2014-2019.

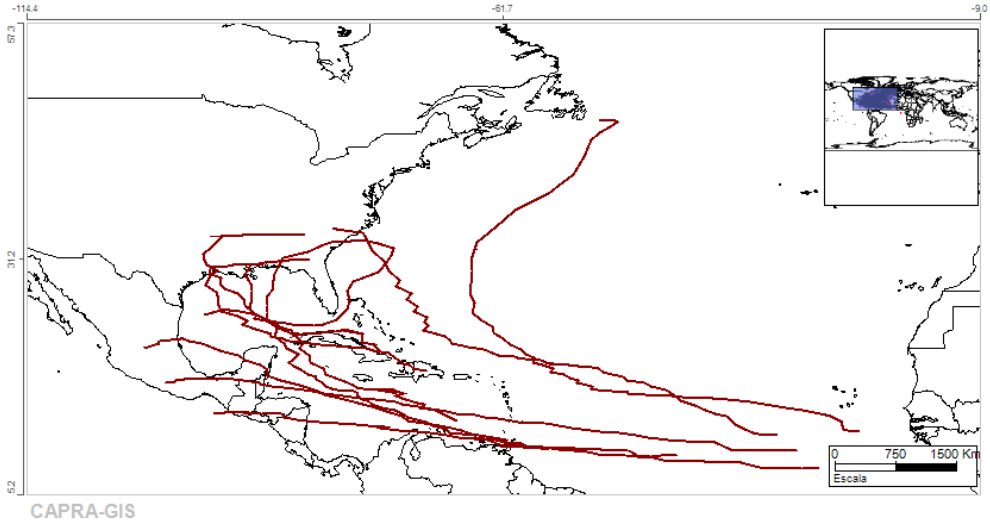


Figure A10-18. SS-5 tropical cyclones tracks simulated for the period 2014-2019.

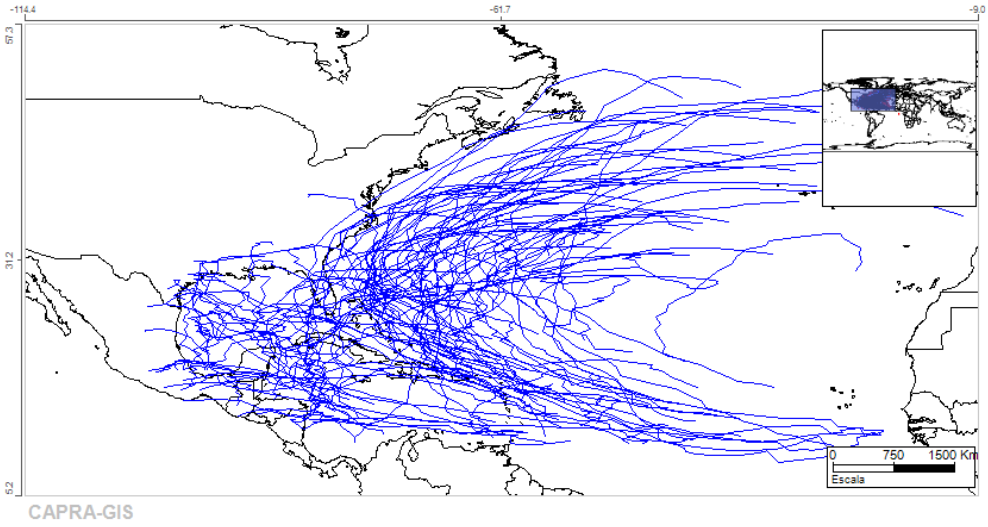


Figure A10-19. Tropical cyclones tracks simulated for the period 2031-2044.

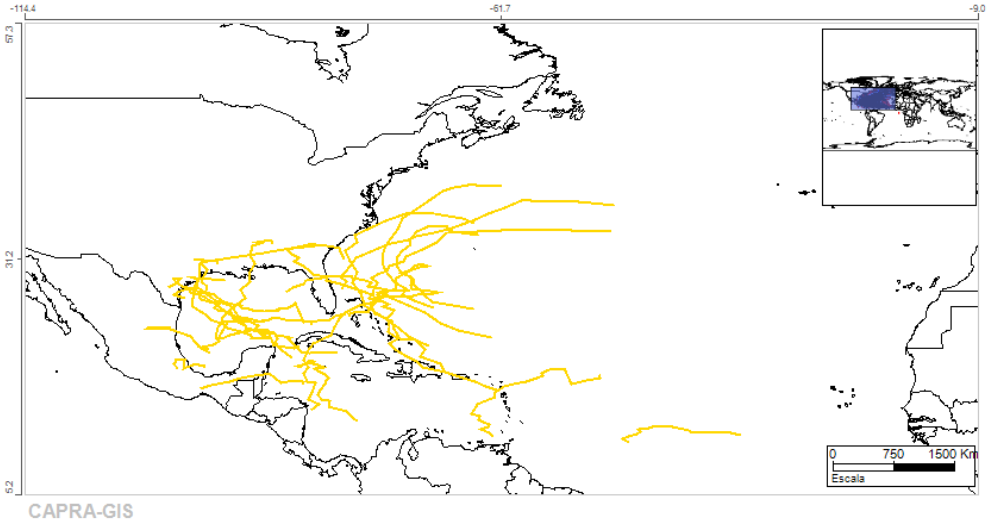


Figure A10-20. SS-1 tropical cyclones tracks simulated for the period 2031-2044.

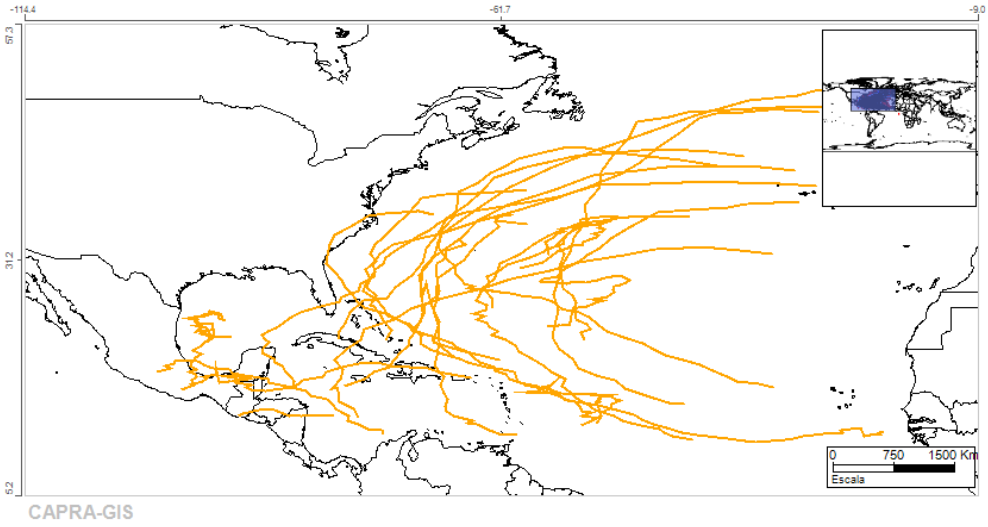


Figure A10-21. SS-2 tropical cyclones tracks simulated for the period 2031-2044.

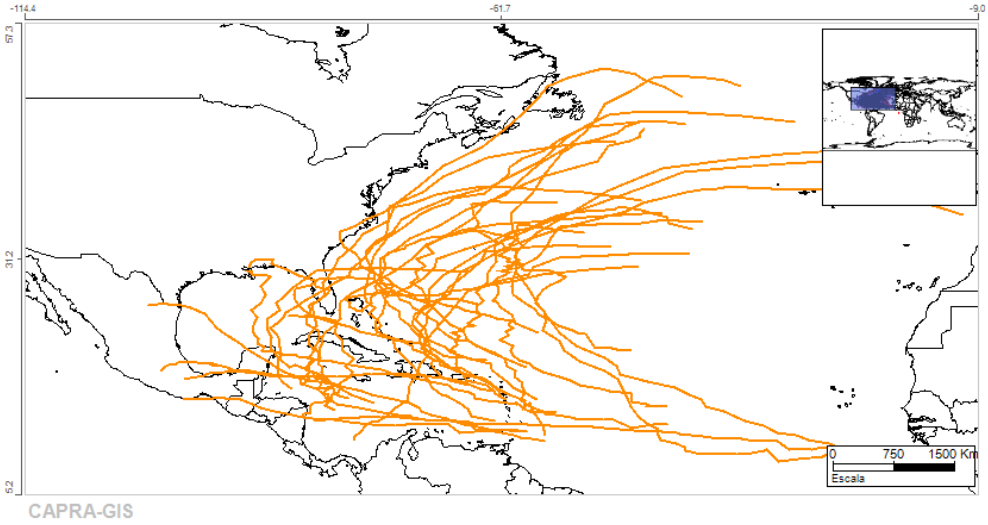


Figure A10-22. SS-3 tropical cyclones tracks simulated for the period 2031-2044.

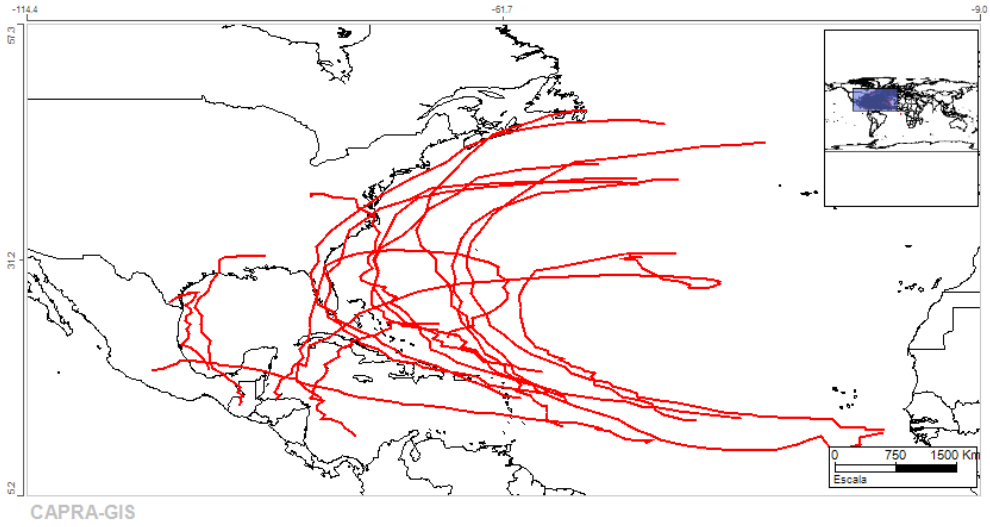


Figure A10-23. SS-4 tropical cyclones tracks simulated for the period 2031-2044.

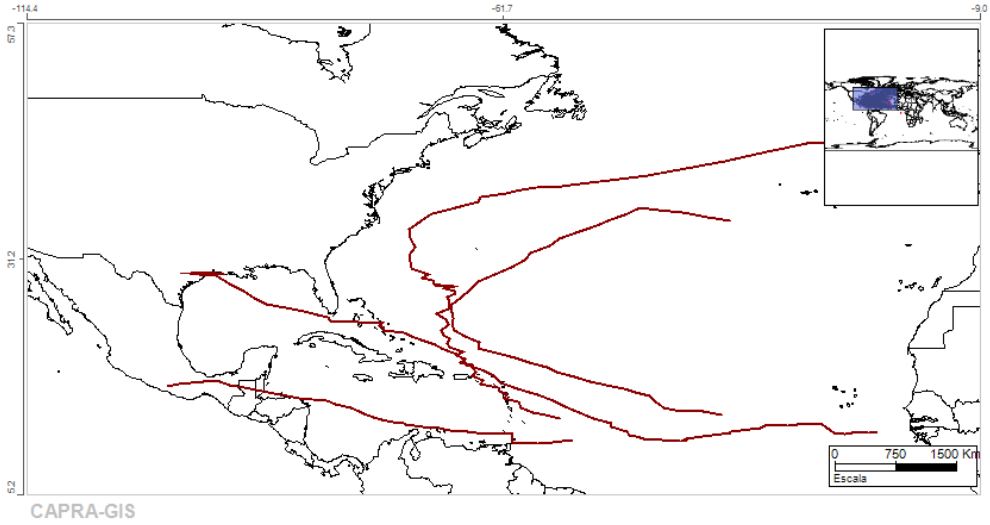


Figure A10-24. SS-5 tropical cyclones tracks simulated for the period 2031-2044.

Annex 11. Climate Change Wind Hazard Curves for Some Selected Cities

Hazard curves for strong wind were calculated for 12 cities in The Caribbean, Central America and North America, comparing the results of including future simulated cyclones with the hazard without Climate Change. These curves show the variation of v_{10} with the return period. The selected cities are presented in Table A11-1.

Table A11-1. Selected cities

City	Country	Lon (°)	Lat (°)	Region
San Juan	Puerto Rico	-66.11	18.47	Caribbean
Santo Domingo	Dominican Republic	-69.98	18.50	Caribbean
Havana	Cuba	-82.39	23.12	Caribbean
Belize City	Belize	-88.19	17.50	Caribbean
Nassau	Bahamas	-77.35	25.06	Caribbean
Tegucigalpa	Honduras	-87.22	14.08	Central America
San Jose	Costa Rica	-84.08	9.93	Central America
Cancun	Mexico	-86.84	21.16	Central America
Mexico City	Mexico	-99.13	19.43	North America
New York	EEUU	-74.01	40.71	North America
Miami	EEUU	-80.23	25.79	North America
New Orleans	EEUU	-90.07	29.95	North America

Cities in the Caribbean

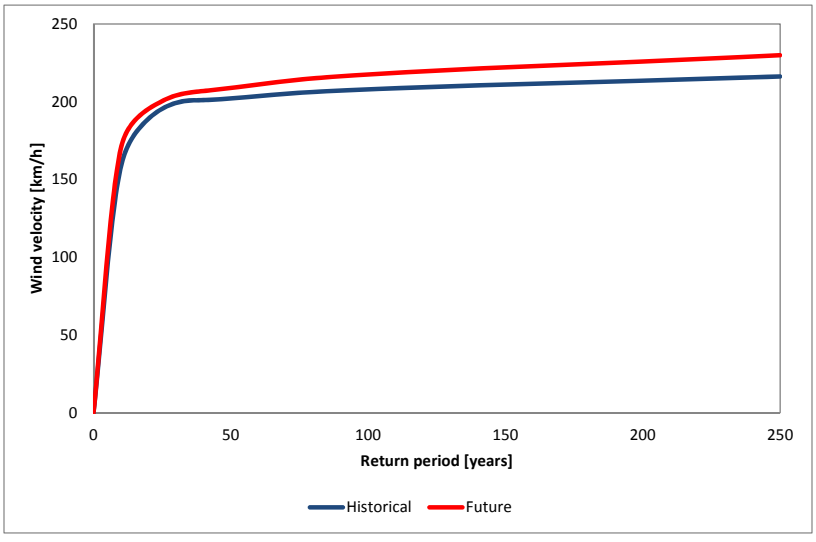


Figure A11-1. Comparison of strong wind hazard curves for San Juan.

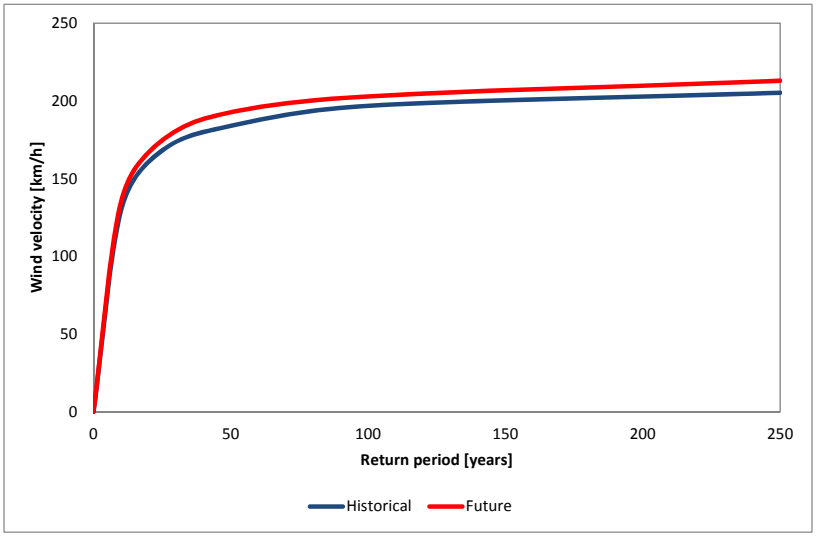


Figure A11-2. Comparison of strong wind hazard curves for Santo Domingo.

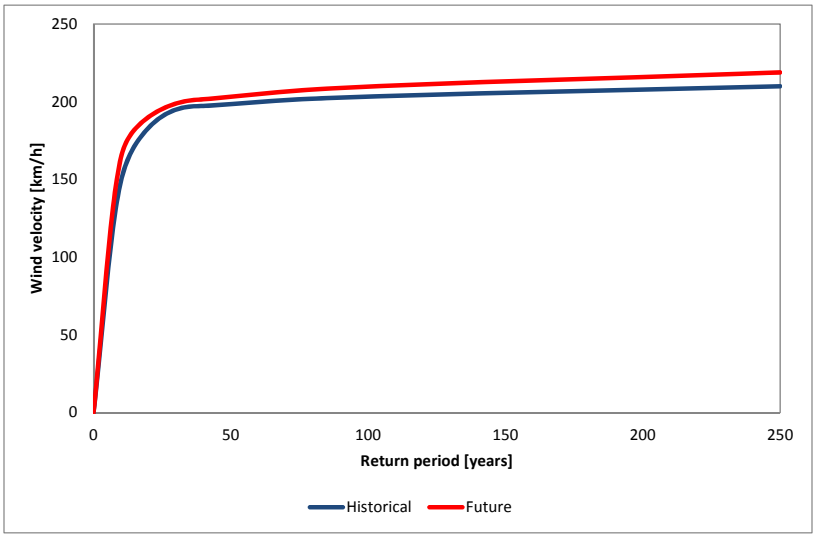


Figure A11-3. Comparison of strong wind hazard curves for Havana.

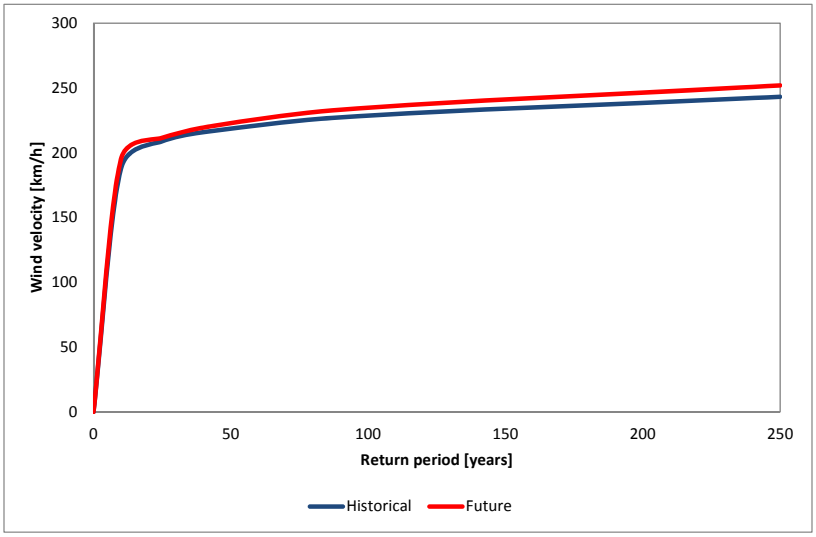


Figure A11-4. Comparison of strong wind hazard curves for Nassau.

Cities in Central America

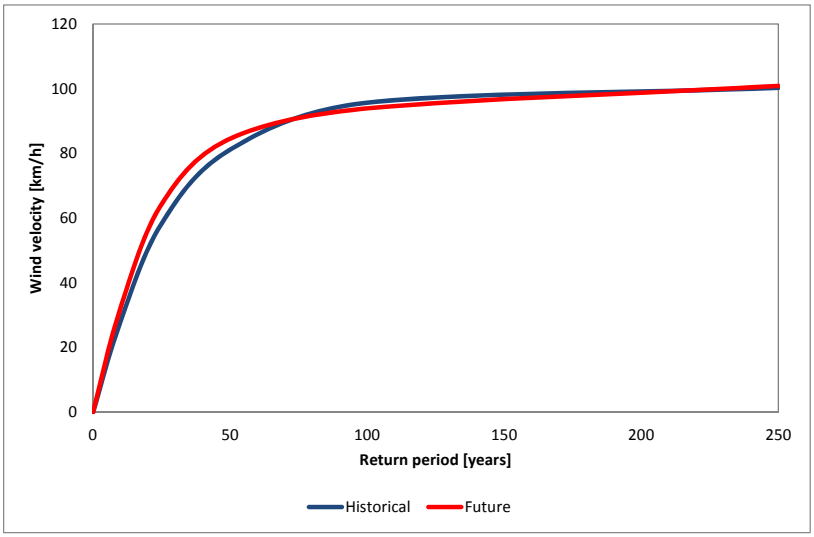


Figure A11-5. Comparison of strong wind hazard curves for San Jose.

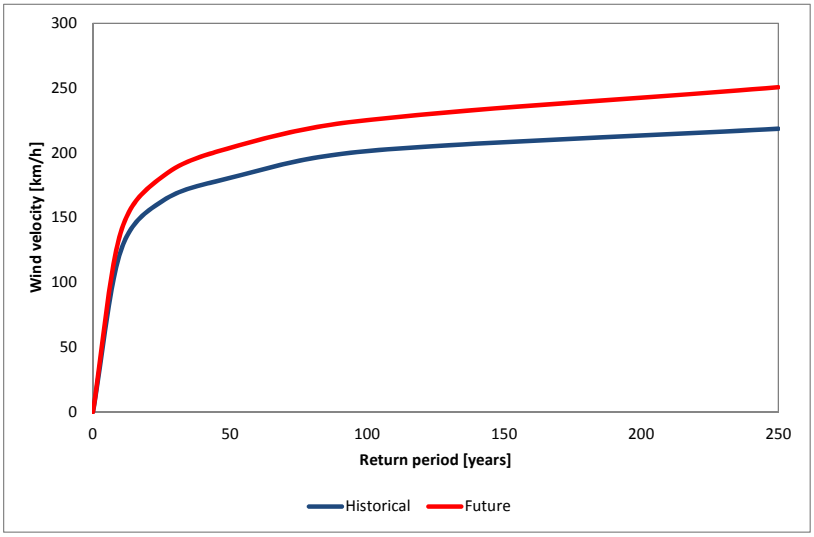


Figure A11-6. Comparison of strong wind hazard curves for Belize City.

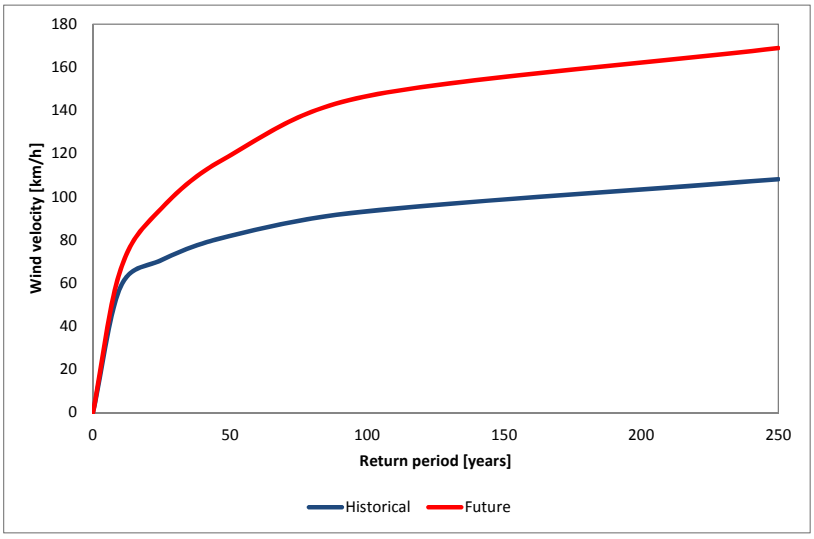


Figure A11-7. Comparison of strong wind hazard curves for Tegucigalpa.

Cities in North America

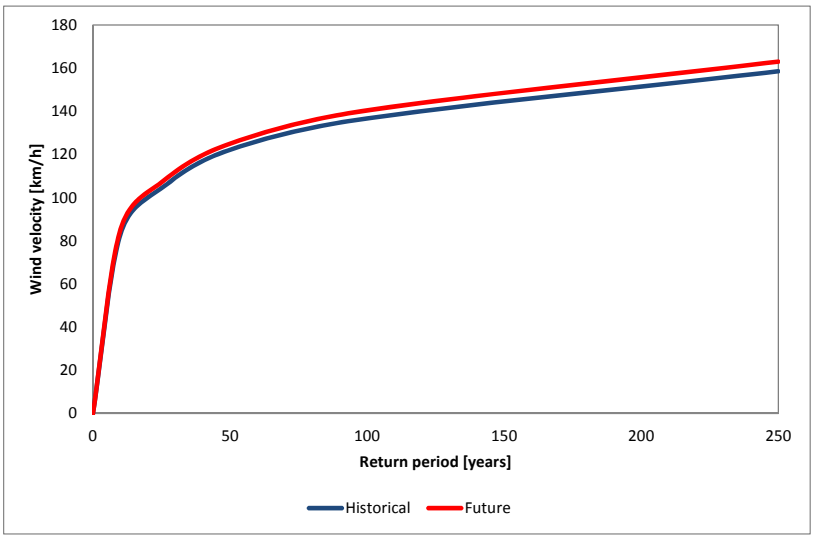


Figure A11-8. Comparison of strong wind hazard curves for New York.

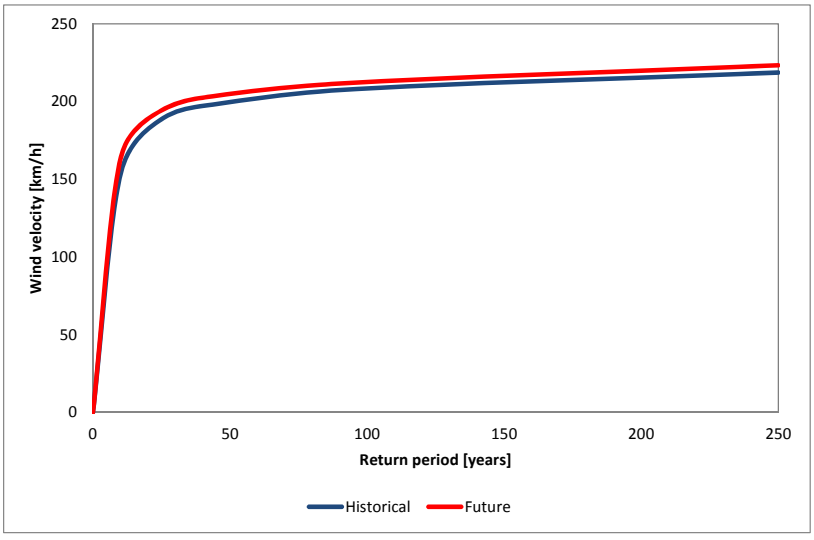


Figure A11-9. Comparison of strong wind hazard curves for Miami.

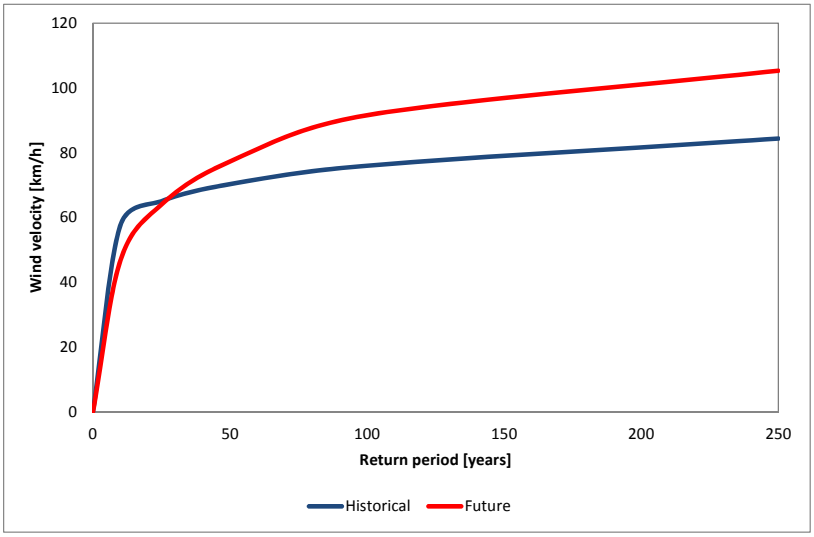


Figure A11-10. Comparison of strong wind hazard curves for Mexico City.

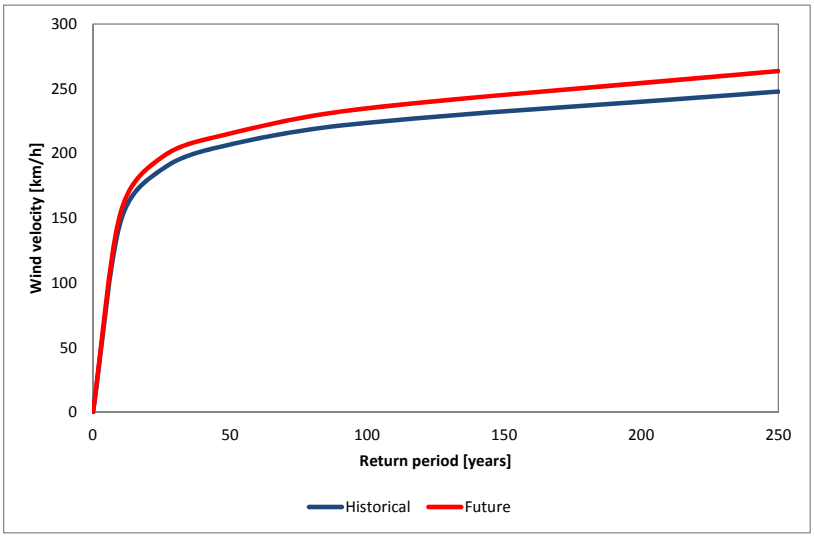


Figure A11-11. Comparison of strong wind hazard curves for Cancun.

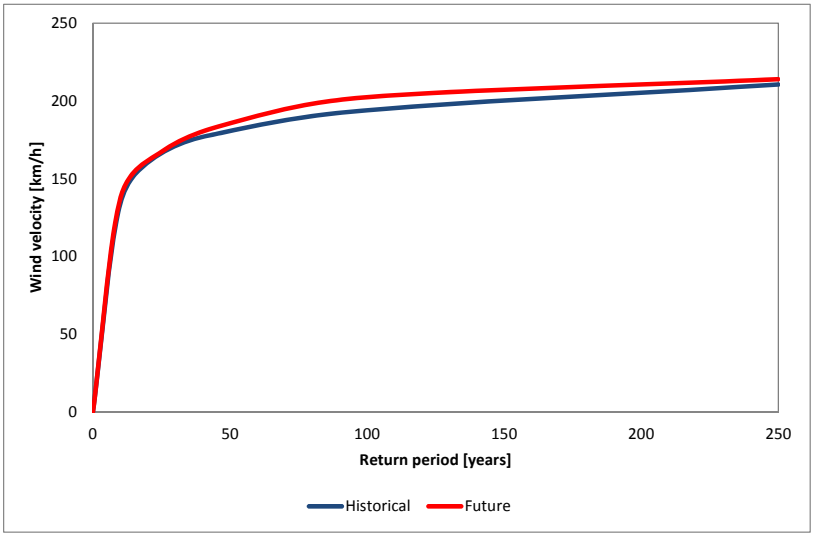


Figure A11-12. Comparison of strong wind hazard curves for New Orleans.

Annex 12. Vulnerability Regionalization

The complete list of countries with the vulnerability data source is presented in Table A12-1.

Table A12-1. Vulnerability source for all countries

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
AUS	Australia	East Asia and the Pacific	GA	HAZUS	GA	GA	GA	GA
BRN	Brunei	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
CHN	China	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
FJI	Fiji	East Asia and the Pacific	GA	HAZUS	GA	GA	---	GA
FSM	Micronesia	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
HKG	Hong Kong	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
IDN	Indonesia	East Asia and the Pacific	GA	HAZUS	GA	GA	GA	GA
JPN	Japan	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
KHM	Cambodia	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
KIR	Kiribati	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	---	---
KOR	South Korea	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
LAO	Laos	East Asia and the Pacific	HAZUS	HAZUS	---	---	CAPRA	---
MAC	Macau	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	---	---
MHL	Marshall Islands	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	---	---
MMR	Myanmar	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
MNG	Mongolia	East Asia and the Pacific	HAZUS	HAZUS	---	---	CAPRA	GA
MYS	Malaysia	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
NCL	New Caledonia	East Asia and the Pacific	GA	HAZUS	GA	GA	---	---
NZL	New Zealand	East Asia and the Pacific	GA	HAZUS	GA	GA	GA	GA

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
PHL	Philippines	East Asia and the Pacific	GA	HAZUS	GA	GA	GA	GA
PLW	Palau	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
PNG	Papua New Guinea	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
PRK	North Korea	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
PYF	French Polynesia	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	---	---
SGP	Singapore	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	---	---	---
SLB	Solomon Islands	East Asia and the Pacific	GA	HAZUS	GA	GA	---	GA
THA	Thailand	East Asia and the Pacific	GA	HAZUS	GA	GA	GA	---
TLS	Timor-Leste	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
TON	Tonga	East Asia and the Pacific	GA	HAZUS	GA	---	---	GA
TUV	Tuvalu	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	---	---	---
TWN	Taiwan	East Asia and the Pacific	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
VNM	Vietnam	East Asia and the Pacific	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
VUT	Vanuatu	East Asia and the Pacific	GA	HAZUS	GA	GA	---	GA
WSM	Samoa	East Asia and the Pacific	GA	HAZUS	GA	---	---	GA
ALB	Albania	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
AND	Andorra	Europe and Central Asia	RISK EU	HAZUS	---	---	---	---
ARM	Armenia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
AUT	Austria	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
AZE	Azerbaijan	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
BEL	Belgium	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
BGR	Bulgaria	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
BIH	Bosnia and Herzegovina	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
BLR	Belarus	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
CHE	Switzerland	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
CYP	Cyprus	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
CZE	Czech Republic	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
DEU	Germany	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
DNK	Denmark	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
ESP	Spain	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
EST	Estonia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
FIN	Finland	Europe and Central Asia	RISK EU	HAZUS	---	---	---	---
FRA	France	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
FRO	Faroe Islands	Europe and Central Asia	RISK EU	HAZUS	---	---	---	---
GBR	United Kingdom	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
GEO	Georgia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
GIB	Gibraltar	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	---	---
GRC	Greece	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
HRV	Croatia	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
HUN	Hungary	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
IRL	Ireland	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
ISL	Iceland	Europe and Central Asia	RISK EU	HAZUS	---	---	---	---
ITA	Italy	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
KAZ	Kazakhstan	Europe and Central Asia	HAZUS	HAZUS	---	---	CAPRA	---
KGZ	Kyrgizstan	Europe and Central Asia	HAZUS	HAZUS	---	---	CAPRA	---
LIE	Liechtenstein	Europe and Central Asia	RISK EU	HAZUS	---	---	---	---
LTU	Lithuania	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
LUX	Luxembourg	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
LVA	Latvia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
MCO	Monaco	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	---	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
MDA	Moldova	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
MKD	Macedonia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
MNE	Montenegro	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
NLD	Netherlands	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
NOR	Norway	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	---	---
POL	Poland	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
PRT	Portugal	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
ROU	Romania	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
RUS	Russia	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	CAPRA	CAPRA	GA
SMR	San Marino	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	---	---
SRB	Serbia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
SVK	Slovakia	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
SVN	Slovenia	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
SWE	Sweden	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
TJK	Tajikistan	Europe and Central Asia	HAZUS	HAZUS	---	---	CAPRA	---
TKM	Turkmenistan	Europe and Central Asia	HAZUS	HAZUS	---	---	CAPRA	---
TUR	Turkey	Europe and Central Asia	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
UKR	Ukraine	Europe and Central Asia	RISK EU	HAZUS	---	---	CAPRA	---
UZB	Uzbekistan	Europe and Central Asia	HAZUS	HAZUS	---	---	CAPRA	---
ABW	Aruba	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
AIA	Anguilla	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
ARG	Argentina	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
ATG	Antigua and Barbuda	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
BHS	The Bahamas	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
BLZ	Belize	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
BOL	Bolivia	Latin America and the Caribbean	CAPRA	HAZUS	---	---	CAPRA	---
BRA	Brazil	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
BRB	Barbados	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
CHL	Chile	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
COL	Colombia	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
CRI	Costa Rica	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
CUB	Cuba	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
CYM	Cayman Islands	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
DMA	Dominica	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
DOM	Dominican Republic	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
ECU	Ecuador	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
FLK	Falkland Islands	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	---	---
GLP	Guadeloupe	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
GRD	Grenada	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
GTM	Guatemala	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
GUF	French Guiana	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
GUY	Guyana	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
HND	Honduras	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
HTI	Haiti	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
JAM	Jamaica	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
KNA	St Kitts and Nevis	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
LCA	St Lucia	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
MEX	Mexico	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
MSR	Montserrat	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
MTQ	Martinique	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
NIC	Nicaragua	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
PAN	Panama	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
PER	Peru	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
PRI	Puerto Rico	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
PRY	Paraguay	Latin America and the Caribbean	CAPRA	HAZUS	---	---	CAPRA	---
SLV	El Salvador	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
SUR	Suriname	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
TCA	Turks and Caicos Islands	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	---	---
TTO	Trinidad and Tobago	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
URY	Uruguay	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	CAPRA	---
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
VEN	Venezuela	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
VGB	British Virgin Islands	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	---	---	---
VIR	Virgin Islands	Latin America and the Caribbean	CAPRA	HAZUS	Suppasri et.al.	CAPRA	---	---
ARE	United Arab Emirates	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
BHR	Bahrain	Middle East and North Africa	HAZUS	HAZUS	---	---	---	---
DJI	Djibouti	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
DZA	Algeria	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
EGY	Egypt	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
ESH	Western Sahara	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
IRN	Iran	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
IRQ	Iraq	Middle East and North Africa	HAZUS	HAZUS	---	---	CAPRA	---
ISR	Israel	Middle East and North Africa	RISK EU	HAZUS	Suppasri et.al.	---	CAPRA	---
JOR	Jordan	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
KWT	Kuwait	Middle East and North Africa	HAZUS	HAZUS	---	---	CAPRA	---
LBN	Lebanon	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
LBY	Libya	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
MAR	Morroco	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
MLT	Malta	Middle East and North Africa	RISK EU	HAZUS	Suppasri et.al.	---	---	---
OMN	Oman	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
PSE	State of Palestine	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
QAT	Qatar	Middle East and North Africa	HAZUS	HAZUS	---	---	CAPRA	---
SAU	Saudi Arabia	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
SYR	Syria	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
TUN	Tunisia	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
YEM	Yemen	Middle East and North Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
BMU	Bermuda	North America	CAPRA	HAZUS	Suppasri et.al.	---	---	---
CAN	Canada	North America	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
USA	United States	North America	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
AFG	Afghanistan	South Asia	HAZUS	HAZUS	---	---	CAPRA	---
BGD	Bangladesh	South Asia	GA	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
BTN	Bhutan	South Asia	GA	HAZUS	---	---	CAPRA	---
IND	India	South Asia	GA	HAZUS	GA	GA	GA	---
LKA	Sri Lanka	South Asia	GA	HAZUS	GA	GA	GA	---
MDV	Maldives	South Asia	HAZUS	HAZUS	Suppasri et.al.	---	---	---
NPL	Nepal	South Asia	GA	HAZUS	---	---	CAPRA	---
PAK	Pakistan	South Asia	GA	HAZUS	GA	GA	GA	---
AGO	Angola	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
BDI	Burundi	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
BEN	Benin	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
BFA	Burkina Faso	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
BWA	Botswana	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
CAF	Central African Republic	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
CIV	Ivory Coast	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
CMR	Cameroon	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
COD	Democratic Republic of the Congo	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
COG	Congo	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
COM	Comoros	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
CPV	Cape Verde	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	---	---
ERI	Eritrea	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
ETH	Ethiopia	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
GAB	Gabon	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
GHA	Ghana	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
GIN	Guinea	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
GMB	The Gambia	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
GNB	Guinea-Bissau	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
GNQ	Equatorial Guinea	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
KEN	Kenya	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
LBR	Liberia	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
LSO	Lesotho	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
MDG	Madagascar	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
MLI	Mali	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
MOZ	Mozambique	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---

Country ISO	Country name	Region	Earthquake	Wind	Tsunami	Storm Surge	Flood	Ash
MRT	Mauritania	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
MUS	Mauritius	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
MWI	Malawi	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
MYT	Mayotte	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
NAM	Namibia	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
NER	Niger	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
NGA	Nigeria	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
REU	Reunion	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
RWA	Rwanda	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
SDN	Sudan	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
SEN	Senegal	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
SLE	Sierra Leone	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
SOM	Somalia	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
SSD	South Sudan	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
STP	Sao Tome And Principe	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	---	---
SWZ	Swaziland	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
SYC	Seychelles	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	---	---
TCD	Chad	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
TGO	Togo	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
TZA	Tanzania	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	CAPRA	CAPRA	---
UGA	Uganda	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
ZAF	South Africa	Sub-Saharan Africa	HAZUS	HAZUS	Suppasri et.al.	---	CAPRA	---
ZMB	Zambia	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---
ZWE	Zimbawue	Sub-Saharan Africa	HAZUS	HAZUS	---	---	CAPRA	---

Annex 13. Vulnerability Curves

The set of vulnerability curves used for risk calculations comprises all the hazards included in GAR15, and is in line with the global regionalization defined. This Annex presents the vulnerability curves assigned to each construction class. The curves are grouped by hazard and by source of information. These groups are listed in Table A14-1.

Table A14-1. Vulnerability curves groups.

Hazard	Source	N° curves
Earthquake	CAPRA	148
Earthquake	Geoscience Australia	64
Earthquake	HAZUS	92
Earthquake	Risk EU	91
Wind	Geoscience Australia	49
Wind	HAZUS	111
Storm surge	CAPRA	4
Storm surge	Geoscience Australia	72
Flood	CAPRA	15
Flood	Geoscience Australia	12
Tsunami	Geoscience Australia	72
Tsunami	Suppasri et.al. (2013)	9
Volcanic ash fall	Geoscience Australia	22

The following sections present the assignation to the exposed elements of the different vulnerability curves that compose every group, as a function of the construction class, country development level, hazard level and exposure complexity type. The value on the cells correspond to the name of the vulnerability function. If a cell is blank it means that there are no exposed elements in the GED that comply with those characteristics. Next to the assignation matrix, the complete set of vulnerability functions is presented.

HAZUS Earthquake curves

Table A14-2. Assignation matrix for HAZUS earthquake curves (Dev1 and Dev 21).

Structural system	Country development																		
	Dev1									Dev21									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A				AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H				AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
A1												AD1L_M	AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
A2							AD1L_H	AD1L_H	AD1L_H				AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
A3																		
C			C1M_H			C1M_H	C1M_H	C1M_H	C1M_H				C1L_H	C1L_H	C1L_M	C1L_L	C1L_L	C1L_L
C1	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H							C1M_L	C1M_L	C1M_L
C1H							C1H_H	C1H_H	C1H_H	C1H_H	C1H_H	C1H_M	C1H_H	C1H_H	C1H_M	C1H_L	C1H_L	C1H_L
C1L	C1L_H	C1L_H	C1L_H	C1L_M	C1L_M	C1L_M	C1L_H	C1L_H	C1L_H	C1L_H	C1L_H	C1L_M	C1L_H	C1L_H	C1L_M	C1L_L	C1L_L	C1L_L
C1M							C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_M	C1M_H	C1M_H	C1M_M	C1M_L	C1M_L	C1M_L
C2	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H			C2M_M	C2M_H	C2M_H	C2M_M	C2M_L	C2M_L	C2M_L
C2L	C2L_H	C2L_H	C2L_H	C2L_M	C2L_M	C2L_M	C2L_M	C2L_M	C2L_M									
C3	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M			C3M_M	C3M_M	C3M_M	C3M_M	C3M_L	C3M_L	C3M_L
C3L	C3L_M	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L							C3L_L	C3L_L	C3L_L
DS1																		
DS3																		
INF							W1_H	W1_H	W1_H			W1_M	W1_H	W1_H	W1_M	W1_L	W1_L	W1_L
M													AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
M2																		
MH	MH_L	MH_L	MH_L	MH_L	MH_L	MH_L	MH_L	MH_L	MH_L									
PC																		
PC1	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H			PC1M_M	PC1M_H	PC1M_H	PC1M_M	PC1M_L	PC1M_L	PC1M_L
PC2												PC2M_M	PC2M_H	PC2M_H	PC2M_M	PC2M_L	PC2M_L	PC2M_L
PC2L	PC2L_H	PC2L_H	PC2L_H	PC2L_M	PC2L_M	PC2L_M	PC2L_M	PC2L_M	PC2L_M									

Structural system	Country development																		
	Dev1									Dev21									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
RE																		
RM			RM1M_H			RM1M_H	RM1M_H	RM1M_H	RM1M_H									
RM1L	RM1L_H	RM1L_H	RM1L_H	RM1L_M	RM1L_M	RM1L_M	RM1L_L	RM1L_L	RM1L_L									
RM2	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H									
RM2L	RM2L_H	RM2L_H	RM2L_H	RM2L_M	RM2L_M	RM2L_M	RM2L_H	RM2L_H	RM2L_H	RM2L_H	RM2L_H	RM2L_M	RM2L_H	RM2L_H	RM2L_M	RM2L_L	RM2L_L	RM2L_L
RM2M							RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_M	RM2M_H	RM2M_H	RM2M_M	RM2M_L	RM2M_L	RM2M_L
RS				URML_H	URML_H	URML_H	URML_H	URML_H	URML_H				URML_H	URML_H	URML_M	URML_L	URML_L	URML_L
RS1							URML_H	URML_H	URML_H				URML_H	URML_H	URML_M	URML_L	URML_L	URML_L
RS2																		
RS3																		
RS4																		
RS5																		
S			S1M_H			S1M_H	S1M_H	S1M_H	S1M_H									
S1	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H									
S1H							S1H_H	S1H_H		S1H_H	S1H_H		S1H_H	S1H_H		S1H_H	S1H_H	
S1L	S1L_H	S1L_H	S1L_H	S1L_M	S1L_M	S1L_M	S1L_H	S1L_H	S1L_H	S1L_H	S1L_H	S1L_M	S1L_H	S1L_H	S1L_M	S1L_L	S1L_L	S1L_L
S1M							S1M_H	S1M_H		S1M_H	S1M_H		S1M_H	S1M_H		S1M_L	S1M_L	
S2	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H									
S2L	S2L_H	S2L_H	S2L_H	S2L_M	S2L_M	S2L_M	S2L_M	S2L_M	S2L_M									
S3	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_H	S3_M	S3_H	S3_H	S3_M	S3_L	S3_L	S3_L
S4	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H									
S4H							S4H_H	S4H_H	S4H_H	S4H_H	S4H_H	S4H_M	S4H_H	S4H_H	S4H_M	S4H_H	S4H_H	S4H_M
S4L	S4L_H	S4L_H	S4L_H	S4L_M	S4L_M	S4L_M	S4L_M	S4L_H	S4L_H		S4L_H	S4L_M		S4L_H	S4L_M		S4L_L	S4L_L
S4M							S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_M	S4M_H	S4M_H	S4M_M	S4M_L	S4M_L	S4M_L
S5	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H									
S5L	S5L_H	S5L_H	S5L_H	S5L_M	S5L_M	S5L_M	S5L_M	S5L_M	S5L_M									
UCB	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H				URML_H	URML_H	URML_M	URML_L	URML_L	URML_L

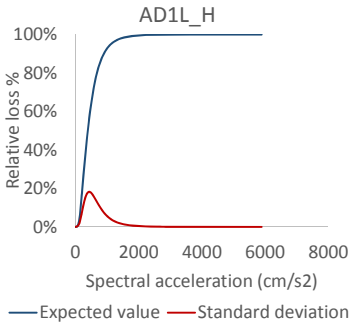
Structural system	Country development																		
	Dev1									Dev21									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
UFB			URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_M	URML_H	URML_H	URML_M	URML_L	URML_L	URML_L
UFB1																		
UFB2												URML_M	URML_H	URML_H	URML_M	URML_L	URML_L	URML_L
UFB3	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H	URML_H									
UFB4												URML_M	URML_H	URML_H	URML_M	URML_L	URML_L	URML_L
W	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H		W1_H	W1_M	W1_H	W1_H	W1_M	W1_L	W1_L	W1_L
W1	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H									
W2	W2_H	W2_H	W2_H	W2_M	W2_M	W2_M	W2_L	W2_L	W2_L									
W4																		

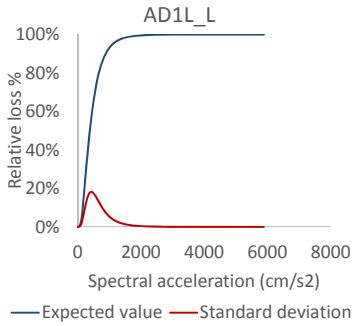
Table A14-2. Assignation matrix for HAZUS earthquake curves (Dev22 and Dev 3).

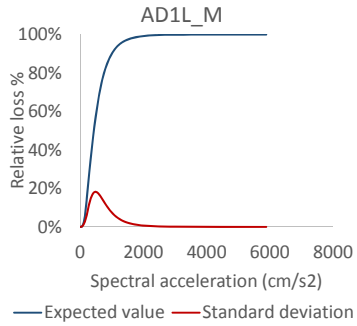
Structural system	Country development																	
	Dev22									Dev3								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	AD1L_M	AD1L_M	AD1L_M	AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
A1			AD1L_M	AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
A2													AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
A3													AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
C	C1L_M	C1L_M	C1M_M	C1L_L	C1L_L	C1L_L	C1L_P	C1L_P	C1L_P	C1M_L	C1L_L	C1L_L	C1L_P	C1L_P	C1L_P	C1L_P	C1L_P	C1L_P
C1				C1M_L	C1M_L	C1M_L	C1M_P	C1M_P	C1M_P									
C1H																		
C1L																		

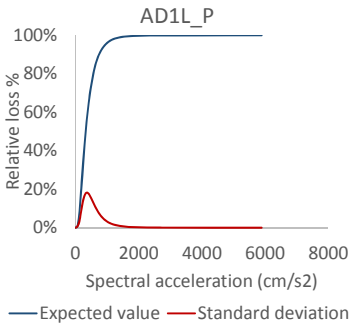
Structural system	Country development																	
	Dev22									Dev3								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
C1M																		
C2	C2M_M	C2M_M	C2M_M	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_M	C2M_L	C2M_L	C2M_L
C2L																		
C3	C3L_M	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L	C3L_P	C3L_P	C3L_P	C3M_L	C3M_L	C3M_L	C3M_P	C3M_P	C3M_P	C3L_P	C3L_P	C3L_P
C3L	C3L_M	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L	C3L_P	C3L_P	C3L_P	C3L_L	C3L_L	C3L_L	C3L_P	C3L_P	C3L_P	C3L_P	C3L_P	C3L_P
DS1				URML_L	URML_L	URML_L	URML_P	URML_P	URML_P				URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
DS3				URML_L	URML_L	URML_L	URML_P	URML_P	URML_P				URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
INF	W1_M	W1_M	W1_M	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_P	W1_P	W1_P
M				AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P			AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
M2													AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
MH																		
PC	PC1M_M	PC1M_M		PC1M_L	PC1M_L		PC1M_P	PC1M_P										
PC1			PC1M_M	PC1M_L	PC1M_L	PC1M_L	PC1M_P	PC1M_P	PC1M_P	PC1M_L	PC1M_L	PC1M_L	PC1M_P	PC1M_P	PC1M_P	PC1M_P	PC1M_P	PC1M_P
PC2	PC2M_M	PC2M_M	PC2M_M	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_M	PC2M_L	PC2M_L	PC2M_L
PC2L																		
RE														AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
RM	RM1M_M	RM1M_M	RM1M_M	RM1M_L	RM1M_L	RM1M_L	RM1M_P	RM1M_P	RM1M_P	RM1M_L	RM1M_L	RM1M_L	RM1M_P	RM1M_P	RM1M_P	RM1M_P	RM1M_P	RM1M_P
RM1L																		
RM2	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P							URML_P	URML_P	URML_P
RM2L																		
RM2M																		
RS	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS1	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS2	URML_M	URML_M	URML_M		URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS3	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P							URML_P	URML_P	URML_P
RS4	URML_M	URML_M			URML_L						URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS5	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P							URML_P	URML_P	URML_P

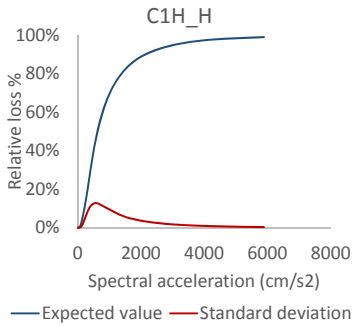
Structural system	Country development																		
	Dev22									Dev3									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
S	S1M_M	S1M_M	S1M_M	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L
S1																		
S1H																		
S1L																		
S1M																		
S2	S2M_M	S2M_M			S2M_L					S2M_L	S2M_L		S2M_L	S2M_L		S2M_L	S2M_L	
S2L																		
S3					S3_L	S3_L	S3_P	S3_P	S3_P									
S4																		
S4H																		
S4L																		
S4M																		
S5	S5M_M	S5M_M	S5M_M		S5M_L	S5M_L	S5M_L	S5M_L		S5M_L	S5M_L	S5M_L	S5M_L	S5M_L	S5M_L	S5M_L	S5M_L	S5M_L
S5L																		
UCB	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB1						URML_L	URML_P	URML_P	URML_P				URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB2	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB3	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB4	URML_M	URML_M	URML_M	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_L	URML_L	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
W	W1_M	W1_M	W1_M	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_P	W1_P	W1_P
W1	W1_M	W1_M	W1_M	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P	W1_P	W1_P	W1_P
W2	W2_M	W2_M	W2_M		W2_L	W2_L	W2_L	W2_L	W2_L	W2_L	W2_L	W2_L	W2_H	W2_H	W2_M	W2_L	W2_L	W2_L
W4			W2_M	W2_L	W2_L	W2_L	W2_L	W2_L	W2_L									

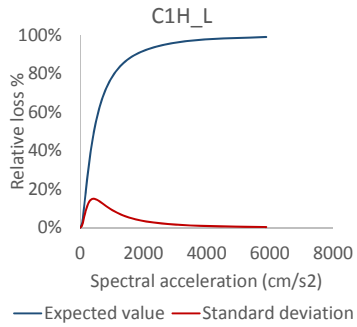

AD1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

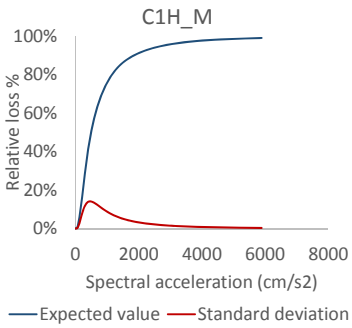

AD1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

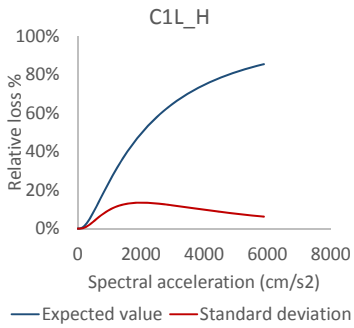

AD1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

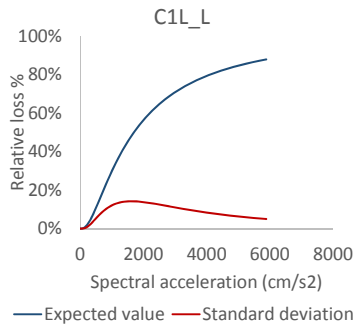

AD1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

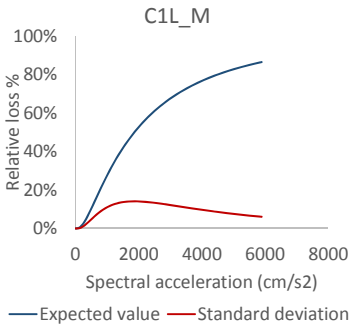

C1H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

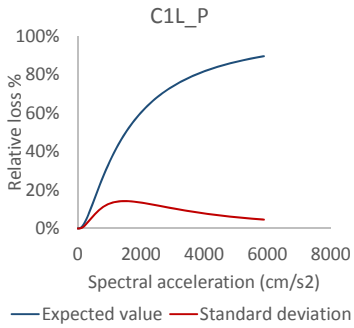

C1H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

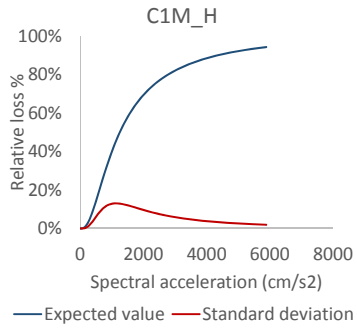

C1H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

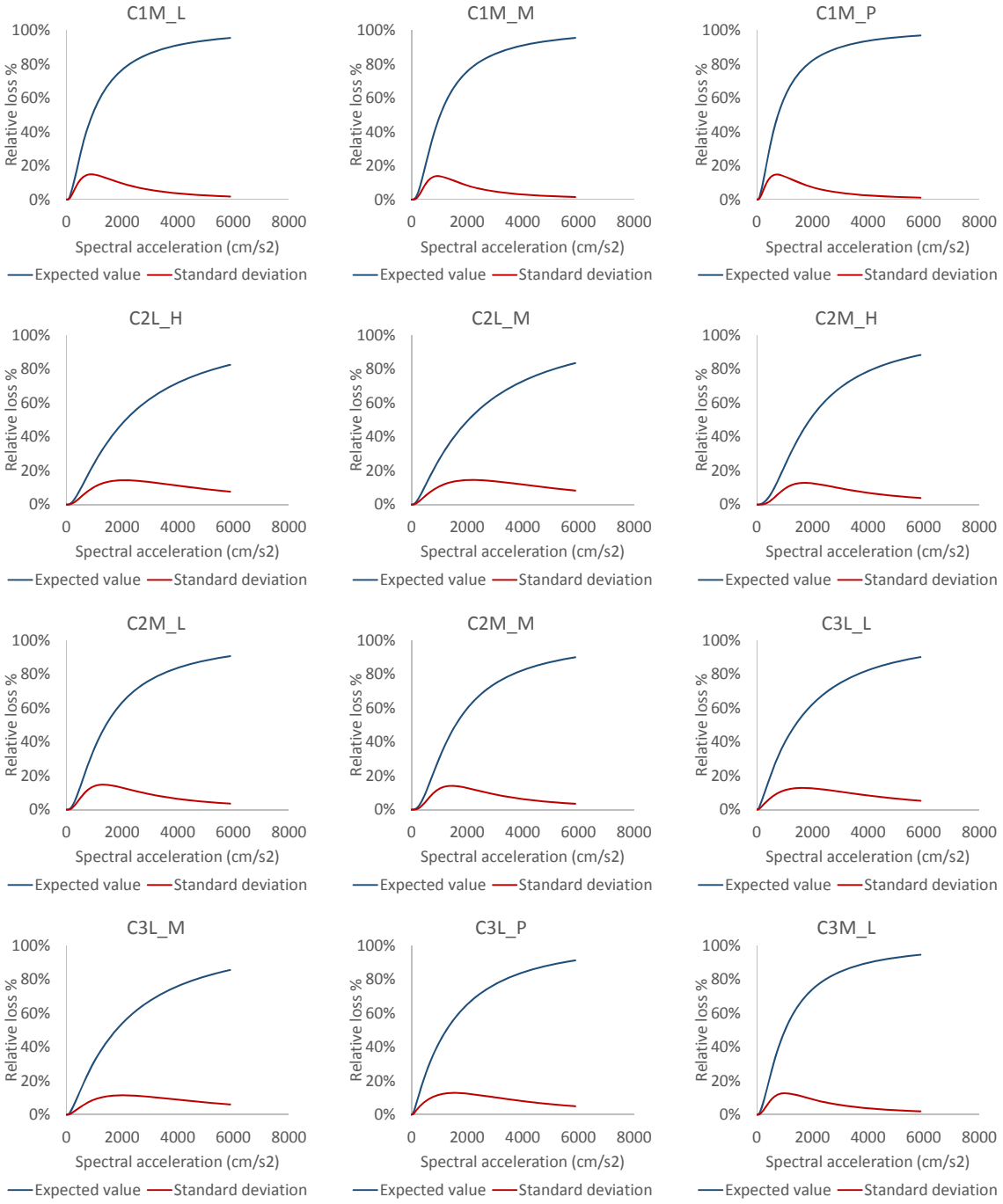

C1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

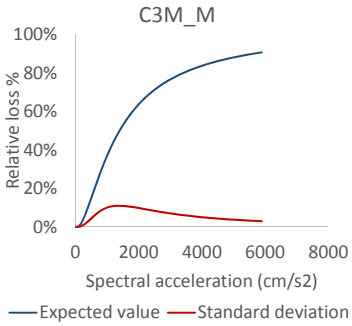

C1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

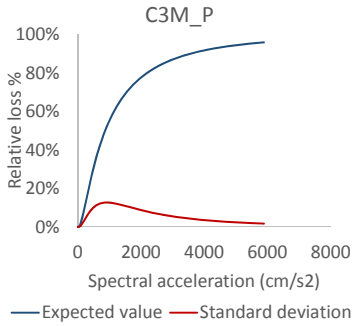

C1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

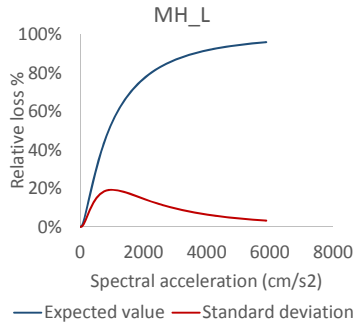

C1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

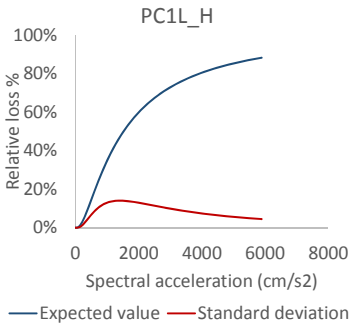

C1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

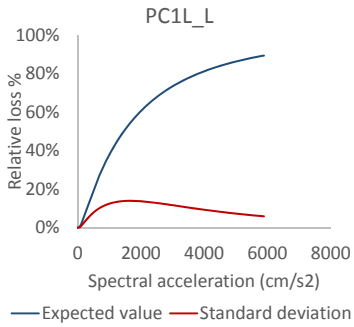

C1M_L
C1M_M
C1M_P
C2L_H
C2L_M
C2M_H
C2M_L
C2M_M
C3L_L
C3L_M
C3L_P
C3M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

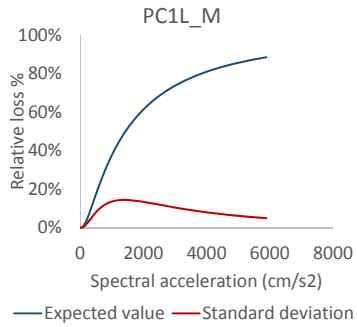

C3M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

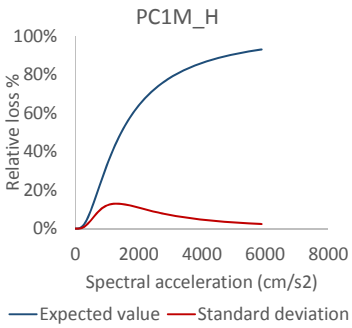

C3M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

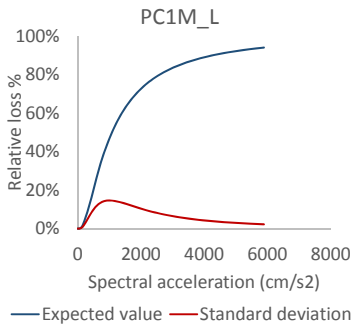

MH_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

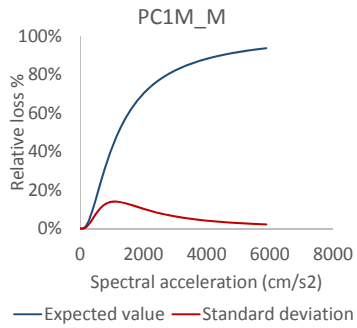

PC1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

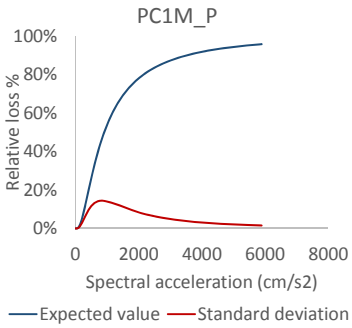

PC1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

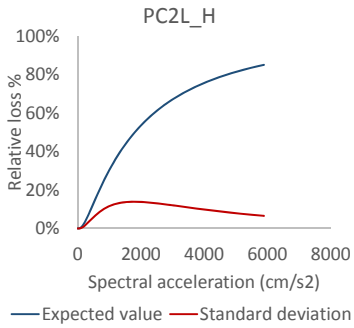

PC1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

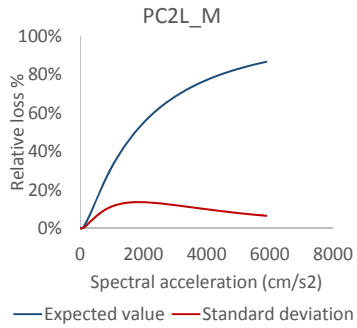

PC1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

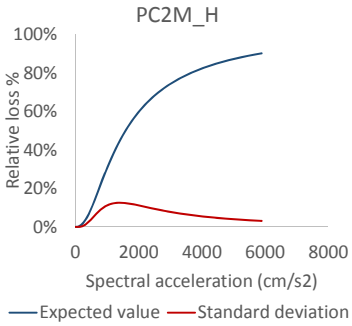

PC1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

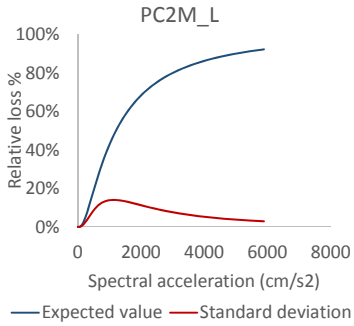

PC1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

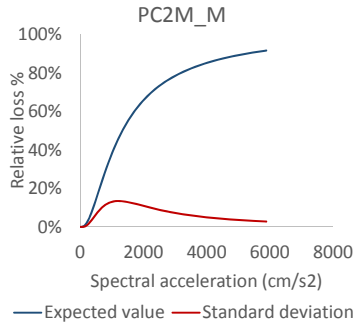

PC1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

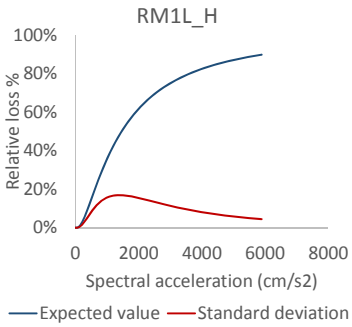

PC2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

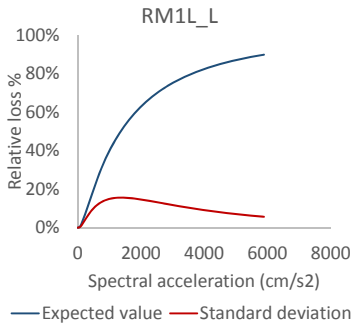

PC2L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

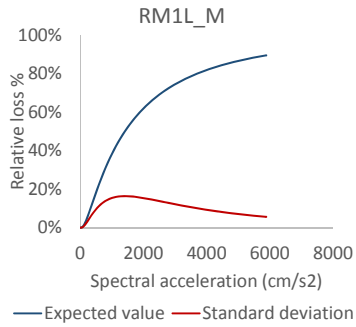

PC2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

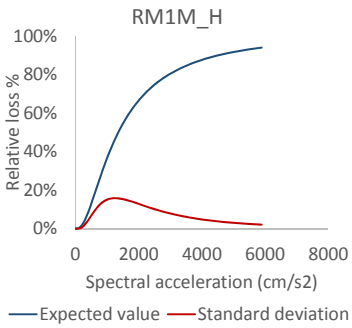

PC2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

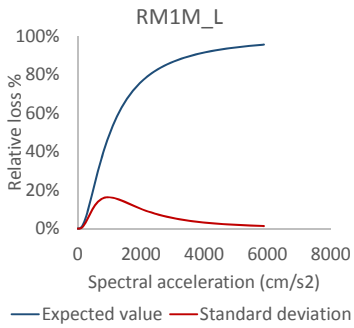

PC2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

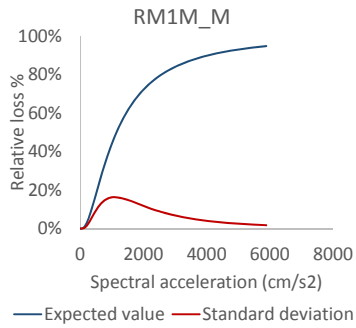

RM1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

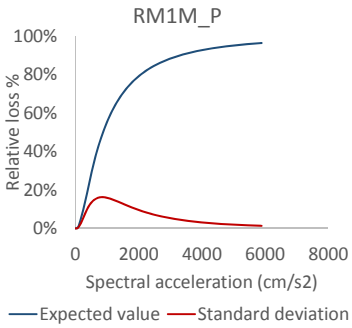

RM1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

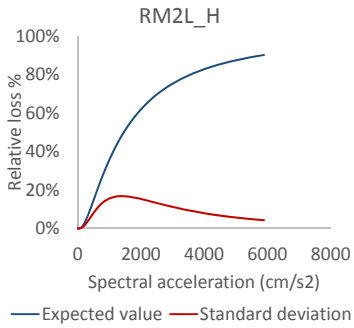

RM1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

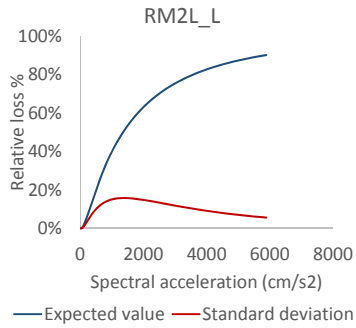

RM1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

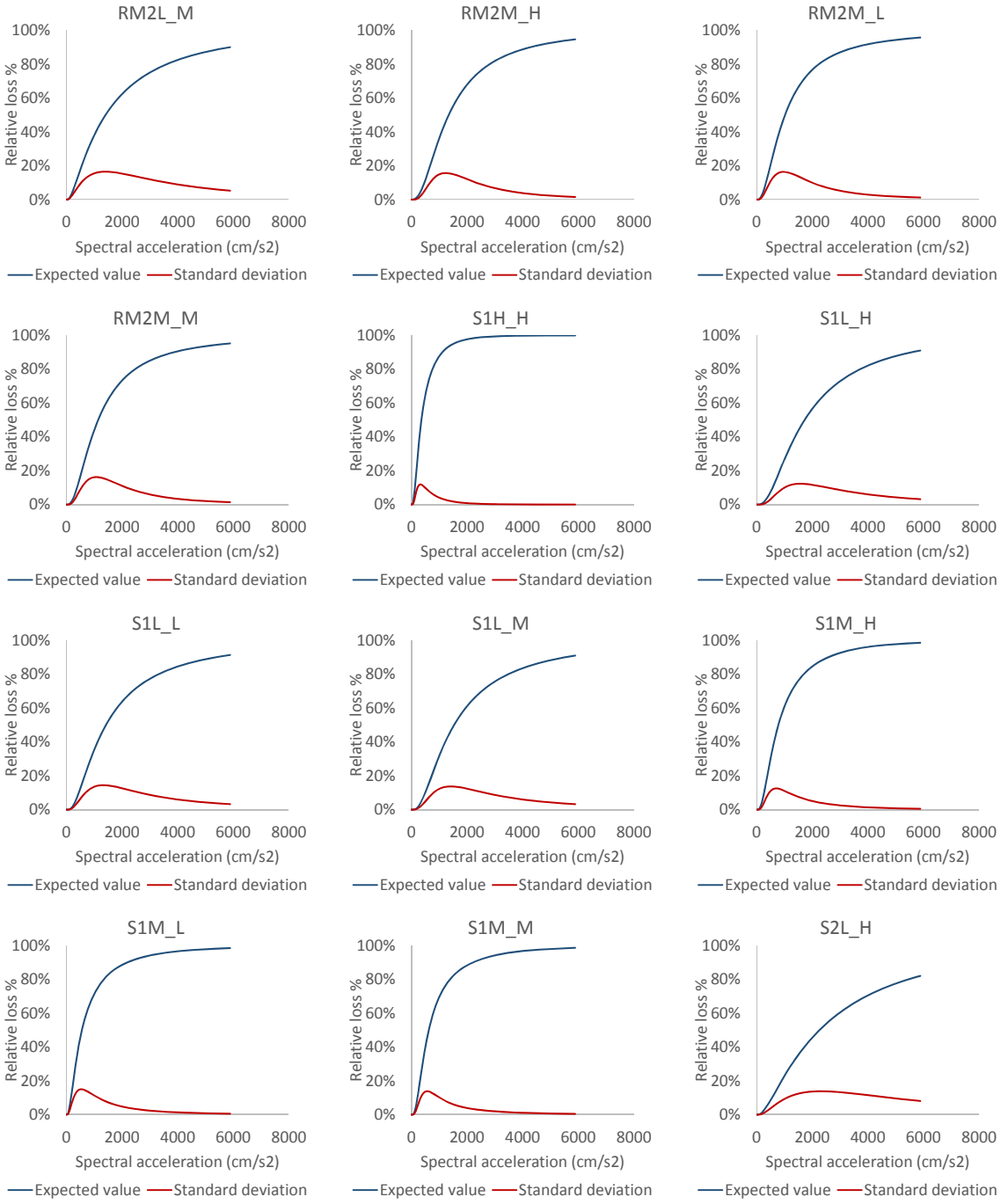

RM1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

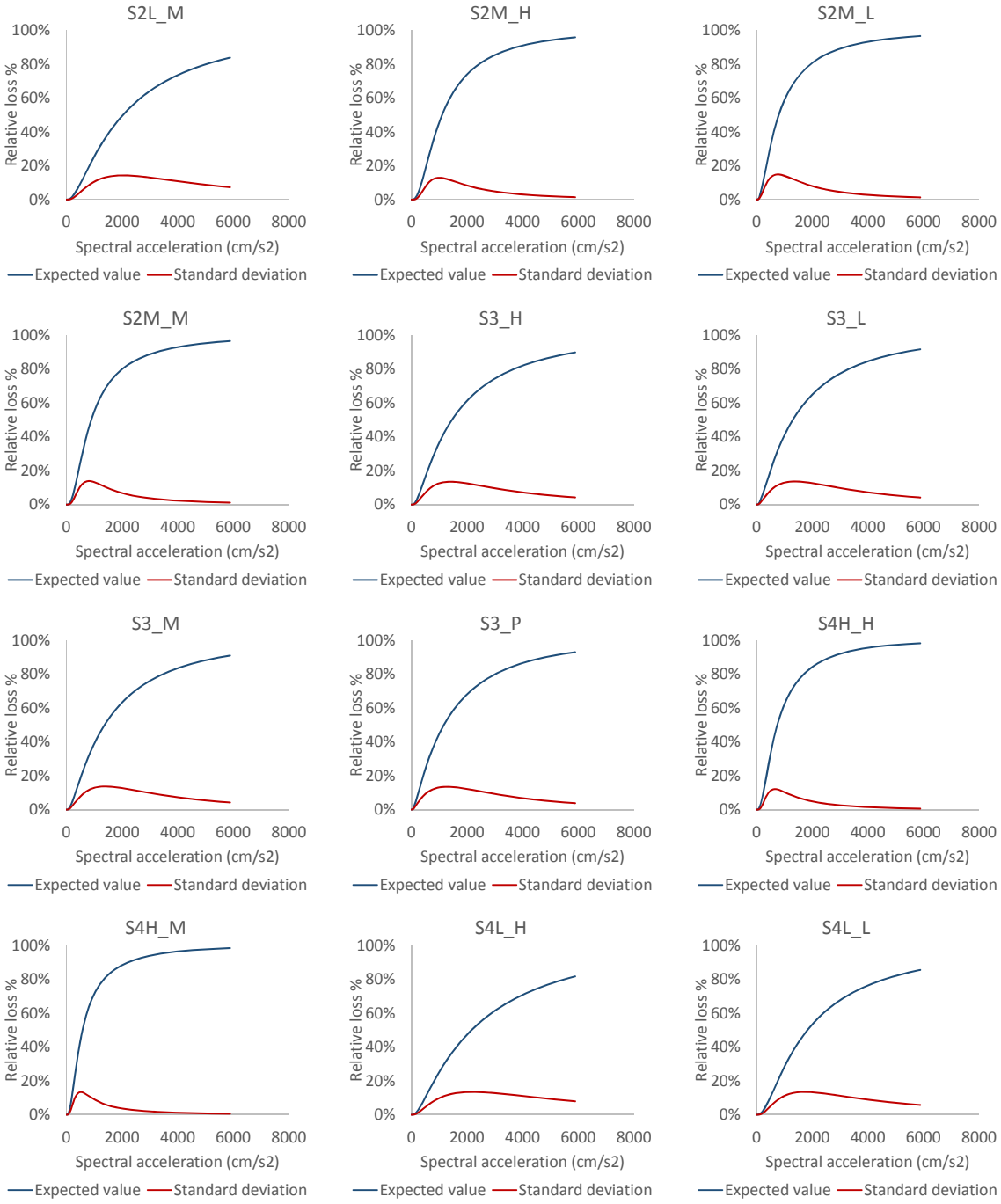

RM1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

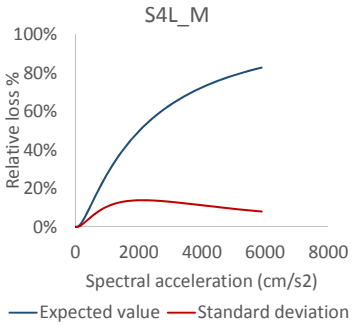

RM1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

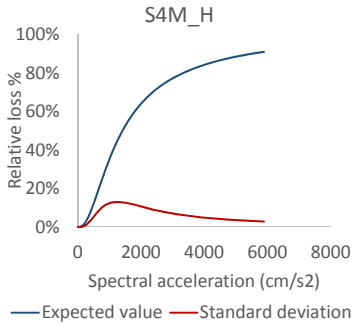

RM2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

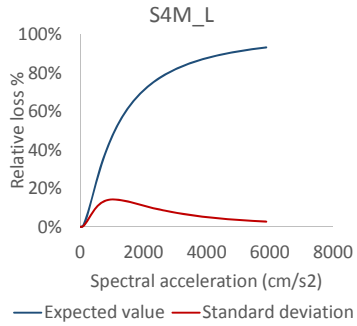

RM2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

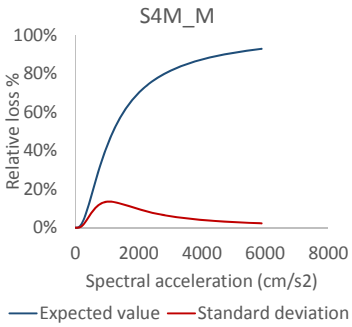

RM2L_M
RM2M_H
RM2M_L
RM2M_M
S1H_H
S1L_H
S1L_L
S1L_M
S1M_H
S1M_L
S1M_M
S2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

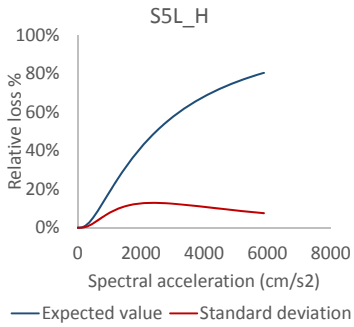

S2L_M
S2M_H
S2M_L
S2M_M
S3_H
S3_L
S3_M
S3_P
S4H_H
S4H_M
S4L_H
S4L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

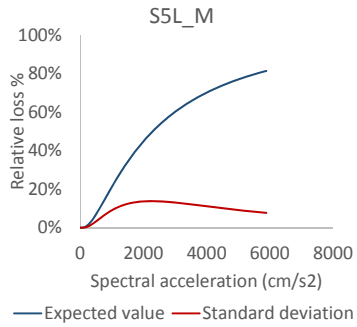

S4L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

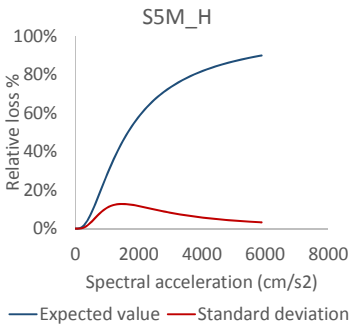

S4M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

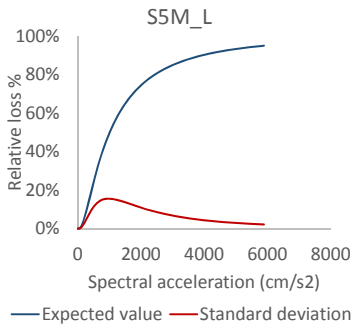

S4M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

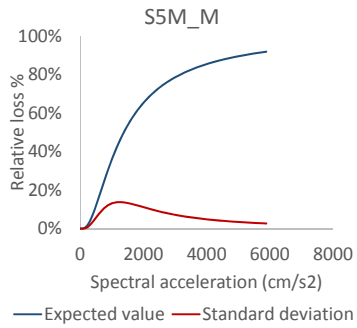

S4M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

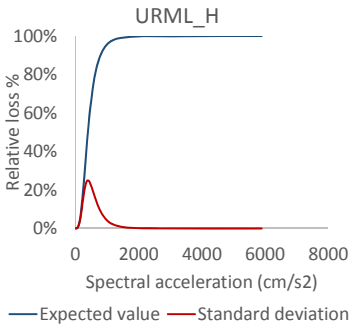

S5L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

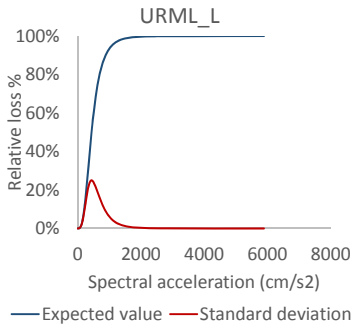

S5L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

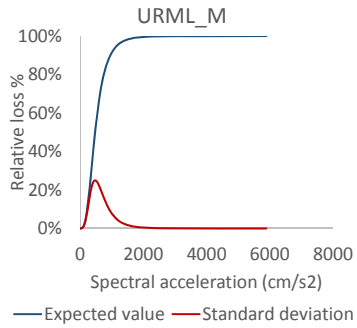

S5M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

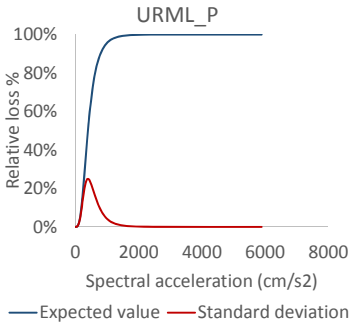

S5M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

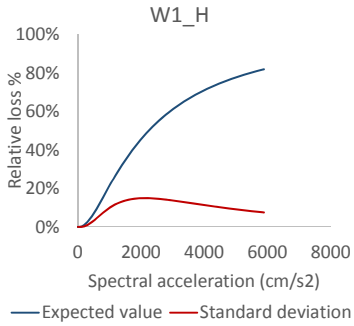

S5M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

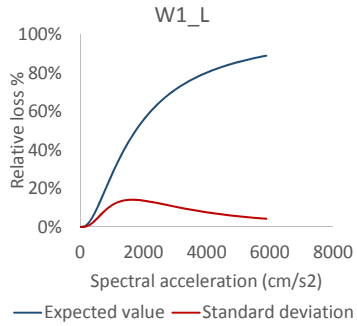

URML_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

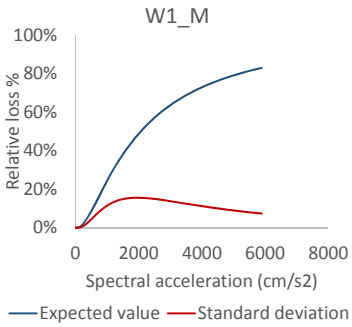

URML_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

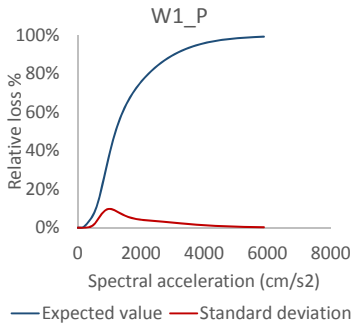

URML_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

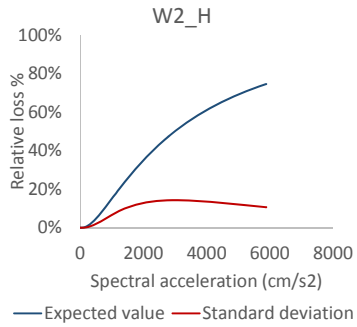

URML_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

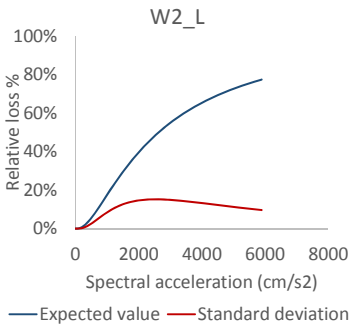

W1_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

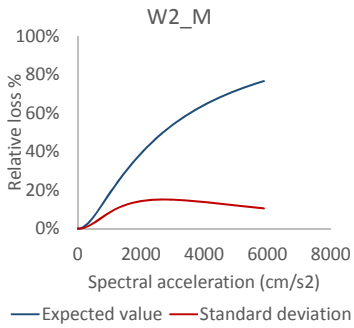

W1_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

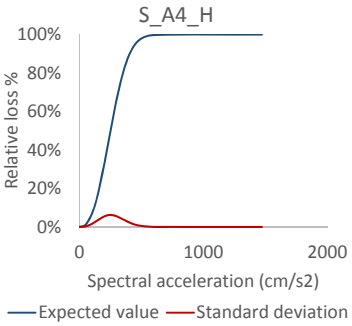
CAPRA Earthquake Curves

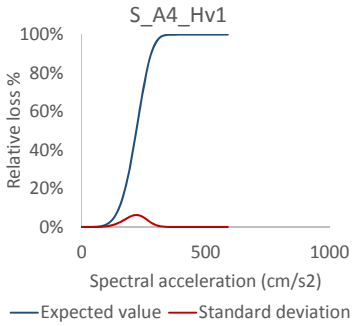
Table A14-2. Assignation matrix for CAPRA earthquake curves (Dev1 and Dev 21).

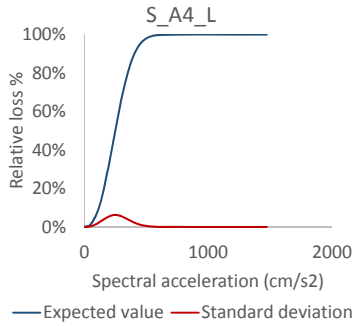
Structural system	Country development																	
	Dev1									Dev21								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A										S_A_H	S_A_H	S_A_M	S_A_H	S_A_H	S_A_M	S_A_L	S_A_L	S_A_L
A4										S_A4_H	S_A4_H	S_A4_M	S_A4_H	S_A4_H	S_A4_M	S_A4_L	S_A4_L	S_A4_L
C				S_C_H	S_C_H	S_C_H	S_C_H	S_C_H	S_C_H	S_C_H	S_C_H	S_C_M	S_C_H	S_C_H	S_C_M	S_C_L	S_C_L	S_C_L
C1										S_C1_H	S_C1_H	S_C1_M	S_C1_H	S_C1_H	S_C1_M	S_C1_L	S_C1_L	S_C1_L
C2										S_C2_H	S_C2_H		S_C2_H	S_C2_H		S_C2_L	S_C2_L	
C3										S_C3_H	S_C3_H	S_C3_M	S_C3_H	S_C3_H	S_C3_M	S_C3_L	S_C3_L	S_C3_L
DS												S_DS_M	S_DS_H	S_DS_H	S_DS_M	S_DS_L	S_DS_L	S_DS_L
DS3							S_DS3_H	S_DS3_H	S_DS3_H							S_DS3_L	S_DS3_L	S_DS3_L
INF				S_INF_H	S_INF_H	S_INF_H	S_INF_H	S_INF_H	S_INF_H	S_INF_H	S_INF_H	S_INF_M	S_INF_H	S_INF_H	S_INF_M	S_INF_L	S_INF_L	S_INF_L
M										S_M_H	S_M_H	S_M_M	S_M_H	S_M_H	S_M_M	S_M_L	S_M_L	S_M_L
RM										S_RM_H	S_RM_H	S_RM_M	S_RM_H	S_RM_H	S_RM_M	S_RM_L	S_RM_L	S_RM_L
RM2																		
RS										S_RS_H	S_RS_H	S_RS_M	S_RS_H	S_RS_H	S_RS_M	S_RS_L	S_RS_L	S_RS_L
RS2															S_RS2_M			S_RS2_L
RS3															S_RS3_M			S_RS3_L
RS4																		
RS5																		
S										S_S_H	S_S_H	S_S_M	S_S_H	S_S_H	S_S_M	S_S_L	S_S_L	S_S_L
UCB				S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_H	S_UCB_M	S_UCB_H	S_UCB_H	S_UCB_M	S_UCB_L	S_UCB_L	S_UCB_L
UFB										S_UFB_H	S_UFB_H	S_UFB_M	S_UFB_H	S_UFB_H	S_UFB_M	S_UFB_L	S_UFB_L	S_UFB_L
UFB3										S_UFB3_H	S_UFB3_H	S_UFB3_M	S_UFB3_H	S_UFB3_H	S_UFB3_M	S_UFB3_L	S_UFB3_L	S_UFB3_L
W				S_W_H	S_W_H	S_W_H	S_W_H	S_W_H	S_W_H	S_W_H	S_W_H	S_W_M	S_W_H	S_W_H	S_W_M	S_W_L	S_W_L	S_W_L

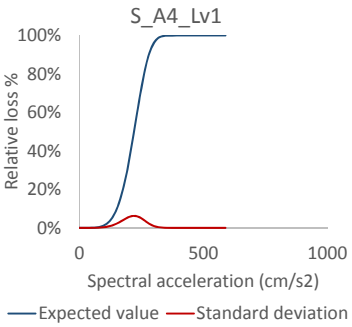
Table A14-2. Assignation matrix for CAPRA earthquake curves (Dev22 and Dev 3).

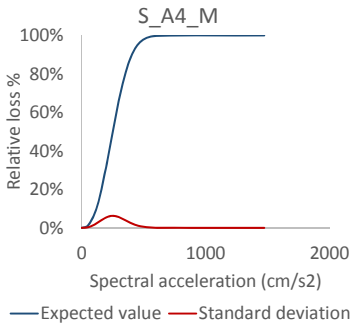
Structural system	Country development																		
	Dev22									Dev3									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	S_A_M	S_A_M	S_A_M	S_A_L	S_A_L	S_A_L	S_A_P	S_A_P	S_A_P				S_A_P	S_A_P	S_A_P	S_A_P	S_A_P	S_A_P
A4																		
C	S_C_M	S_C_M	S_C_M	S_C_L	S_C_L	S_C_L	S_C_P	S_C_P	S_C_P				S_C_P	S_C_P	S_C_P	S_C_P	S_C_P	S_C_P
C1	S_C1_M	S_C1_M	S_C1_M	S_C1_L	S_C1_L	S_C1_L	S_C1_P	S_C1_P	S_C1_P									
C2	S_C2_M	S_C2_M	S_C2_M	S_C2_L	S_C2_L	S_C2_L	S_C2_P	S_C2_P	S_C2_P									
C3	S_C3_M	S_C3_M	S_C3_M	S_C3_L	S_C3_L	S_C3_L	S_C3_P	S_C3_P	S_C3_P									
DS				S_DS_L	S_DS_L	S_DS_L							S_DS_P	S_DS_P	S_DS_P	S_DS_P	S_DS_P	S_DS_P
DS3													S_DS3_P	S_DS3_P	S_DS3_P		S_DS3_P	S_DS3_P
INF	S_INF_M	S_INF_M	S_INF_M	S_INF_L	S_INF_L	S_INF_L	S_INF_P	S_INF_P	S_INF_P				S_INF_P	S_INF_P	S_INF_P	S_INF_P	S_INF_P	S_INF_P
M	S_M_M	S_M_M	S_M_M	S_M_L	S_M_L	S_M_L	S_M_P	S_M_P	S_M_P				S_M_P	S_M_P	S_M_P	S_M_P	S_M_P	S_M_P
RM	S_RM_M	S_RM_M	S_RM_M	S_RM_L	S_RM_L	S_RM_L	S_RM_P	S_RM_P	S_RM_P				S_RM_P	S_RM_P	S_RM_P			
RM2	S_RM2_M	S_RM2_M	S_RM2_M	S_RM2_L	S_RM2_L	S_RM2_L	S_RM2_P	S_RM2_P	S_RM2_P									
RS	S_RS_M	S_RS_M	S_RS_M	S_RS_L	S_RS_L	S_RS_L	S_RS_P	S_RS_P	S_RS_P									
RS2	S_RS2_M	S_RS2_M	S_RS2_M	S_RS2_L	S_RS2_L	S_RS2_L	S_RS2_P	S_RS2_P	S_RS2_P									
RS3	S_RS3_M	S_RS3_M	S_RS3_M	S_RS3_L	S_RS3_L	S_RS3_L	S_RS3_P	S_RS3_P	S_RS3_P									
RS4	S_RS4_M	S_RS4_M	S_RS4_M	S_RS4_L	S_RS4_L	S_RS4_L	S_RS4_P	S_RS4_P	S_RS4_P									
RS5									S_RS5_P									
S	S_S_M	S_S_M		S_S_L	S_S_L		S_S_P	S_S_P	S_S_P									
UCB	S_UCB_M	S_UCB_M	S_UCB_M	S_UCB_L	S_UCB_L	S_UCB_L	S_UCB_P	S_UCB_P	S_UCB_P				S_UCB_P	S_UCB_P	S_UCB_P	S_UCB_P	S_UCB_P	S_UCB_P
UFB	S_UFB_M	S_UFB_M	S_UFB_M	S_UFB_L	S_UFB_L	S_UFB_L	S_UFB_P	S_UFB_P	S_UFB_P				S_UFB_P	S_UFB_P	S_UFB_P	S_UFB_P	S_UFB_P	S_UFB_P
UFB3	S_UFB3_M	S_UFB3_M	S_UFB3_M	S_UFB3_L	S_UFB3_L	S_UFB3_L	S_UFB3_P	S_UFB3_P	S_UFB3_P								S_UFB3_P	S_UFB3_P
W	S_W_M	S_W_M	S_W_M	S_W_L	S_W_L	S_W_L	S_W_P	S_W_P	S_W_P				S_W_P	S_W_P	S_W_P	S_W_P	S_W_P	S_W_P

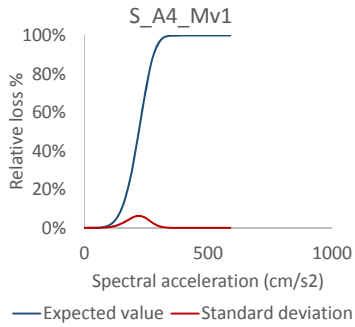

S_A4_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

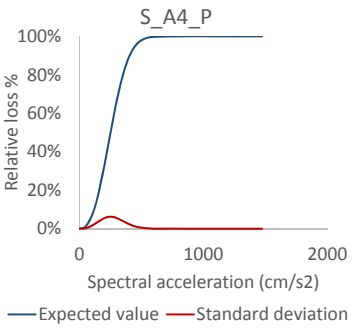

S_A4_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

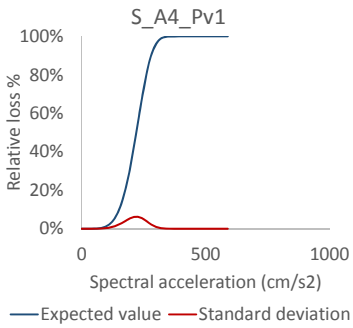

S_A4_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

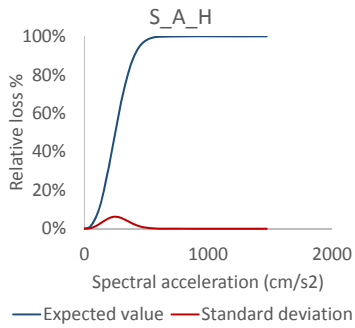

S_A4_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

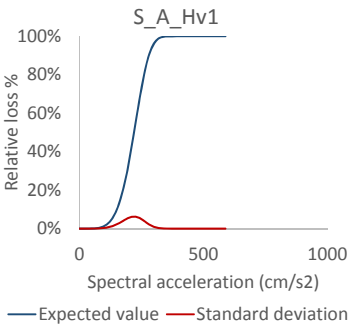

S_A4_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

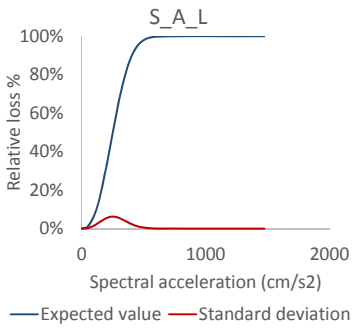

S_A4_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

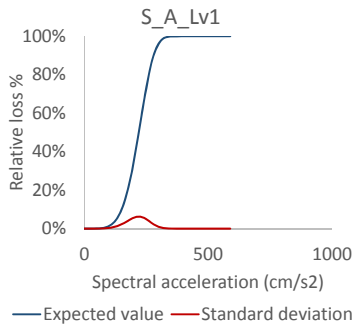

S_A4_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

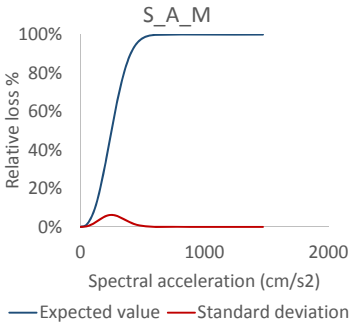

S_A4_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

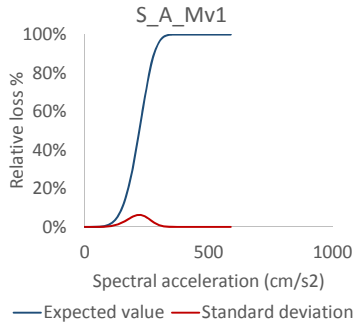

S_A_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

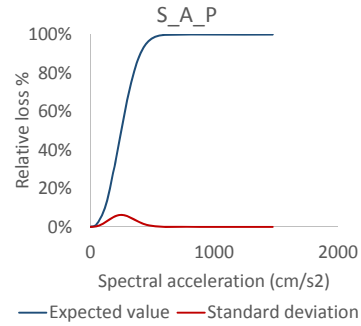

S_A_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

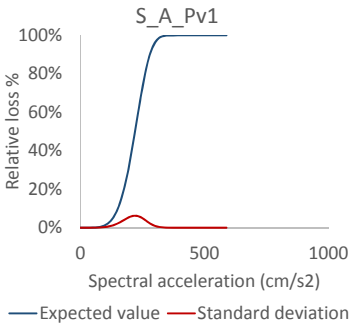

S_A_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

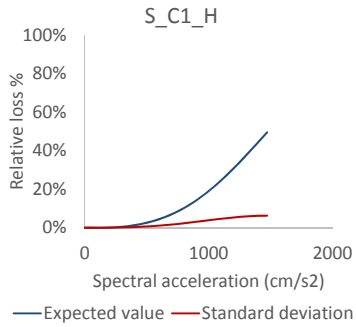

S_A_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

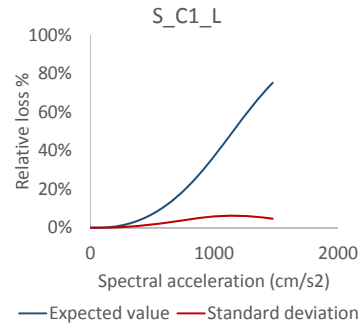

S_A_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

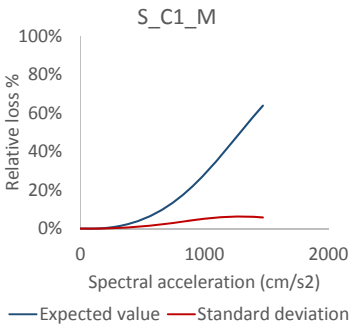

S_A_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

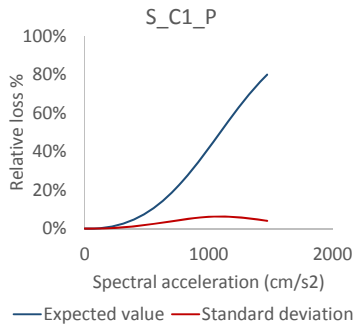

S_A_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

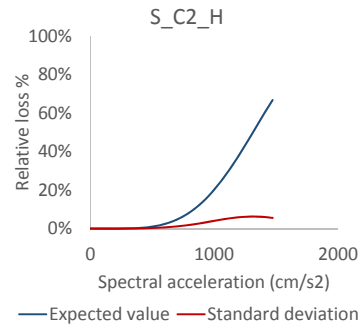

S_A_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

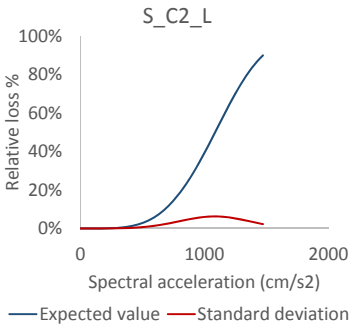

S_C1_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

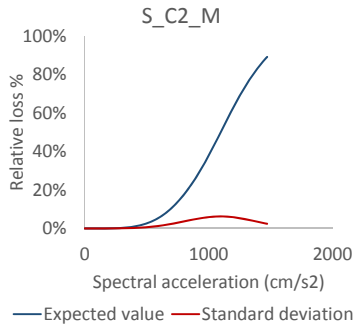

S_C1_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

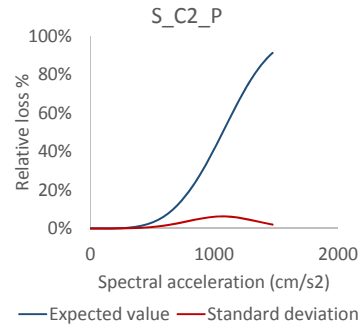

S_C1_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

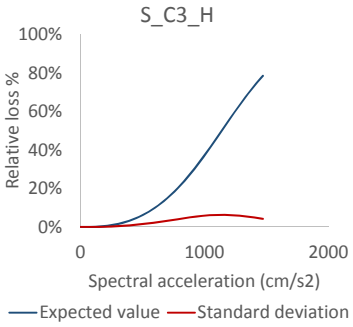

S_C1_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

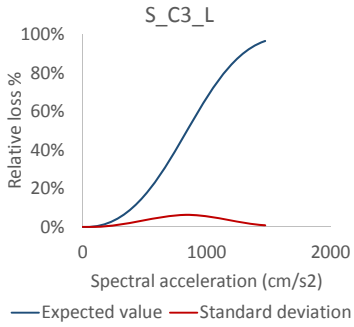

S_C2_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

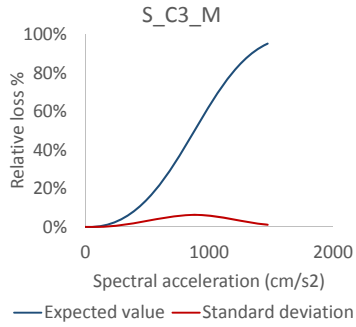

S_C2_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

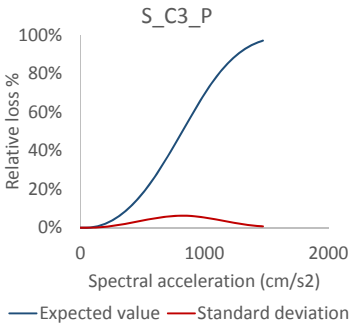

S_C2_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

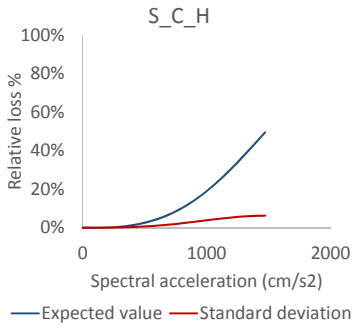

S_C2_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

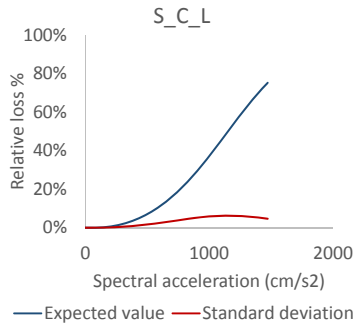

S_C3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

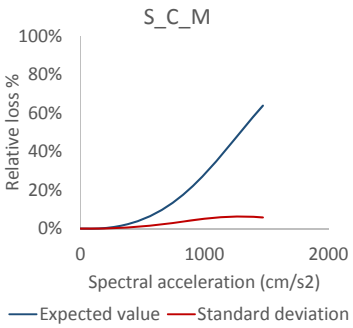

S_C3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

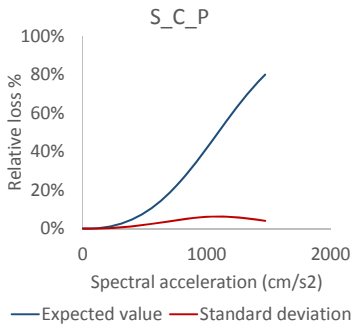

S_C3_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

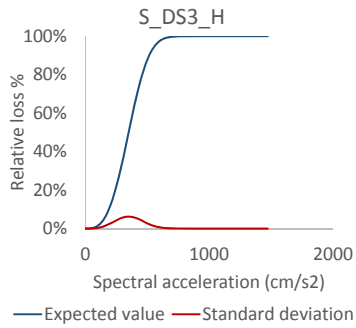

S_C3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

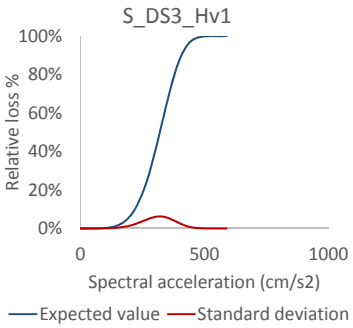

S_C_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

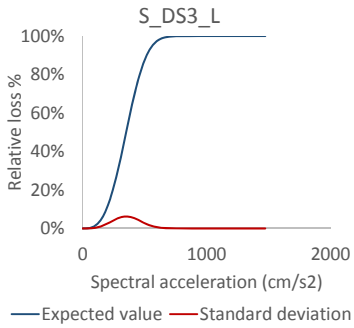

S_C_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

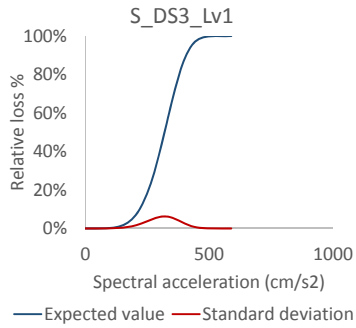

S_C_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

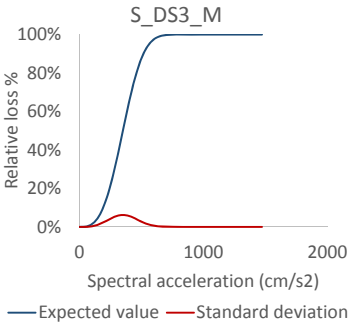

S_C_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

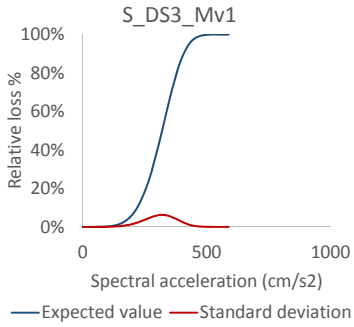

S_DS3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

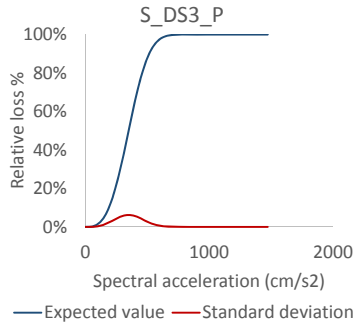

S_DS3_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

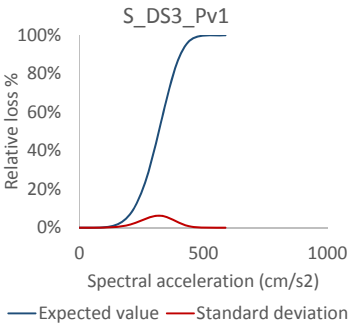

S_DS3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

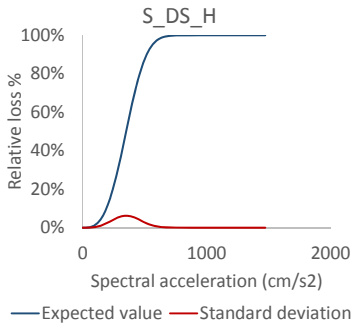

S_DS3_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

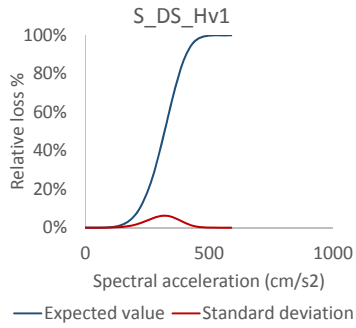

S_DS3_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

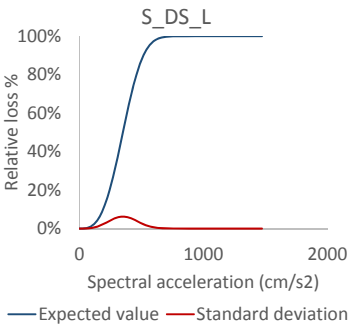

S_DS3_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

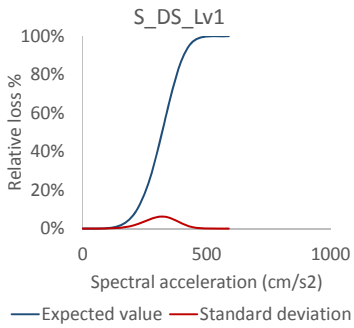

S_DS3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

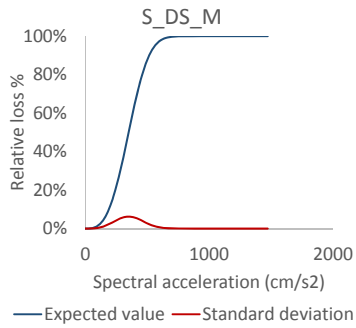

S_DS3_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

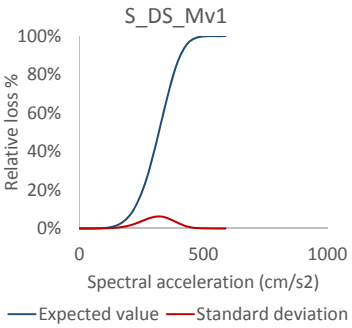

S_DS_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

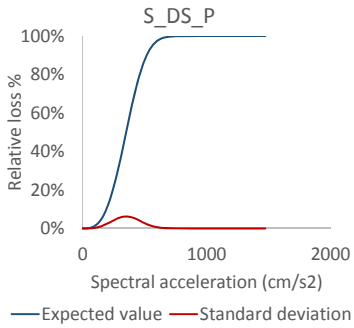

S_DS_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

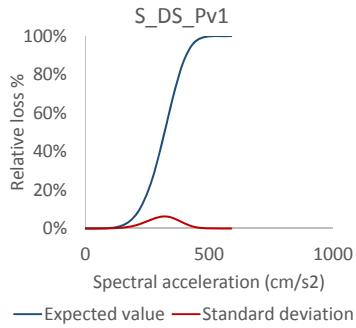

S_DS_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

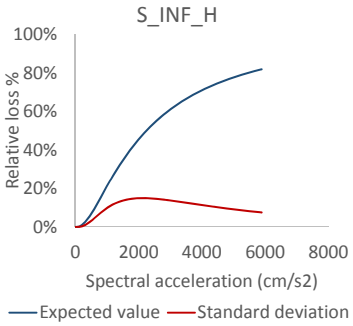

S_DS_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

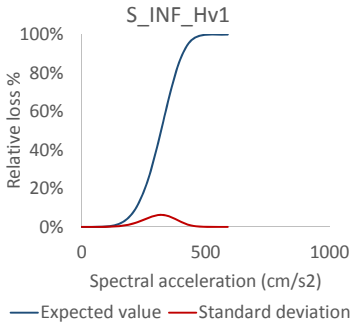

S_DS_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

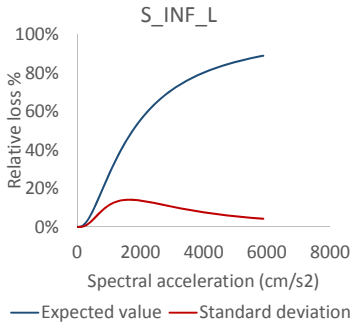

S_DS_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

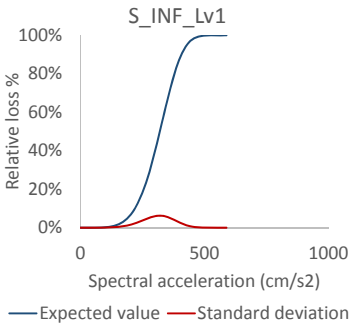

S_DS_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

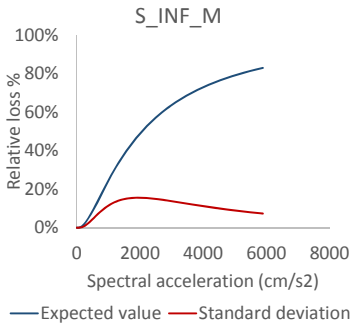

S_DS_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

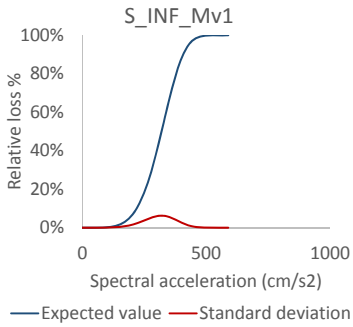

S_INF_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

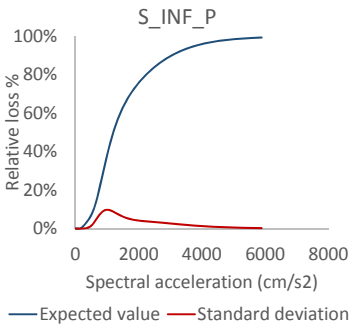

S_INF_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

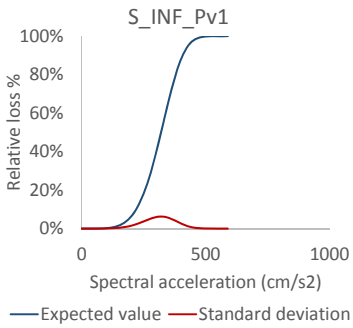

S_INF_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

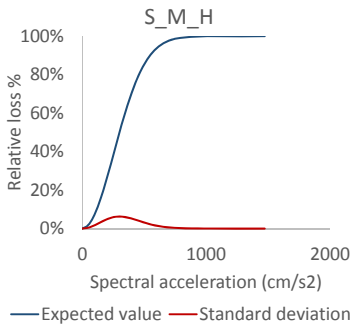

S_INF_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

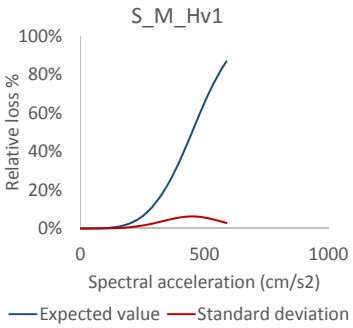

S_INF_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

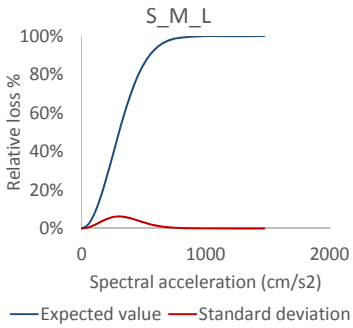

S_INF_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

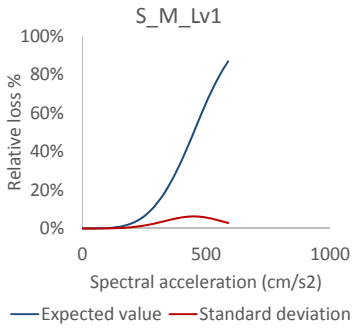

S_INF_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

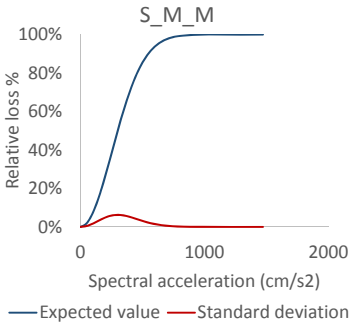

S_INF_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

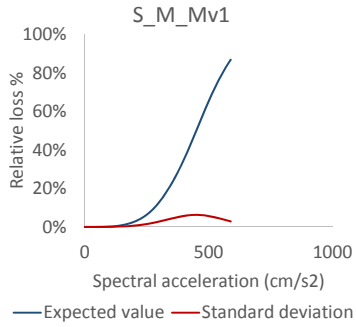

S_M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

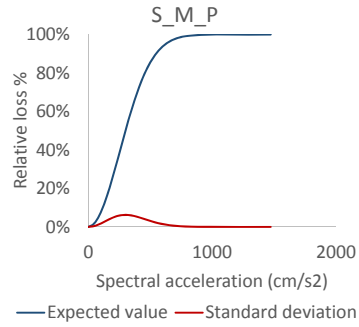

S_M_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

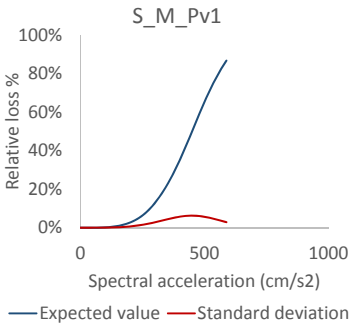

S_M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

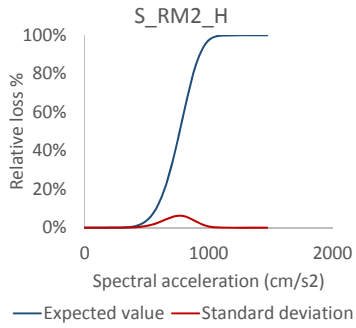

S_M_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

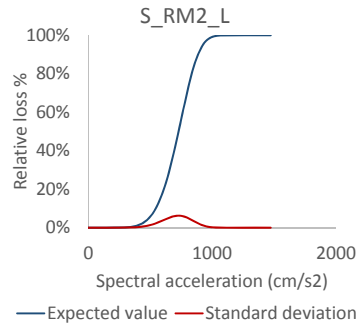

S_M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

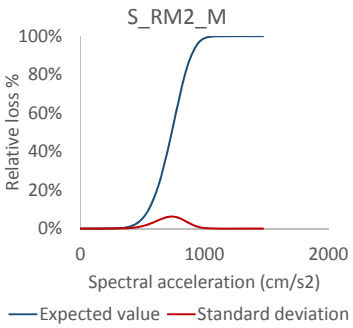

S_M_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

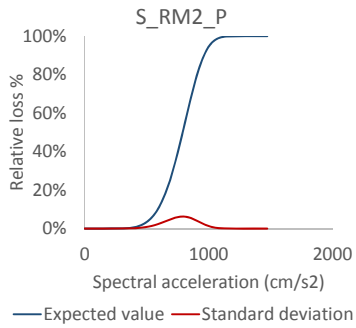

S_M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

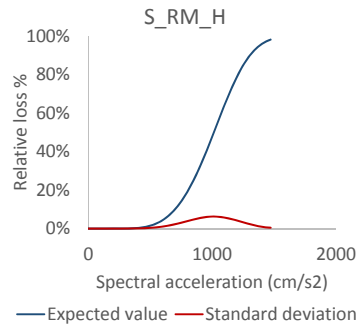

S_M_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

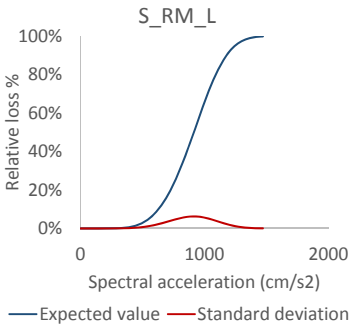

S_RM2_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

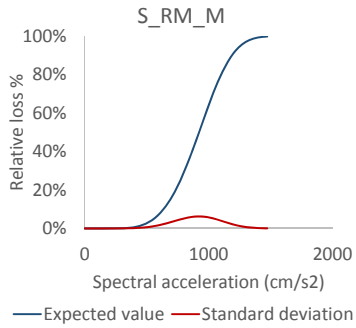

S_RM2_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

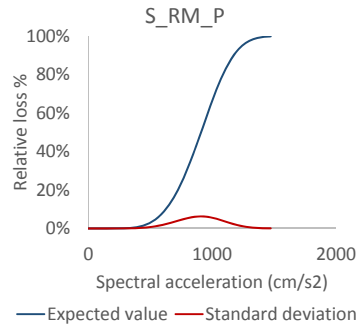

S_RM2_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

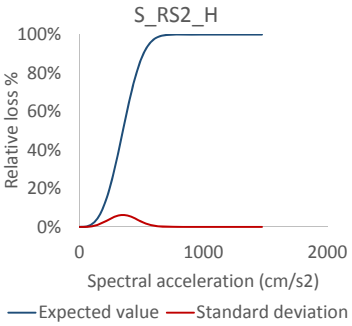

S_RM2_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

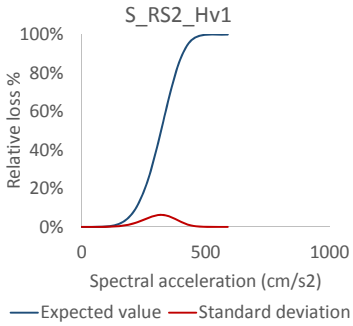

S_RM_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

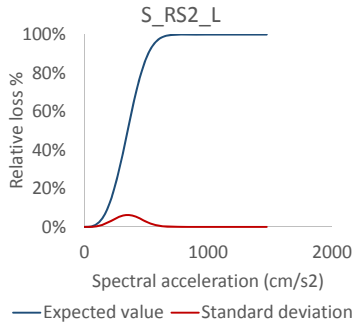

S_RM_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

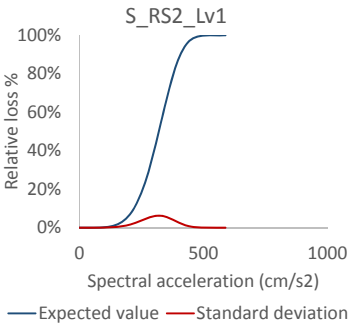

S_RM_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

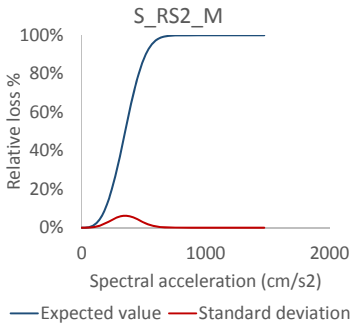

S_RM_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

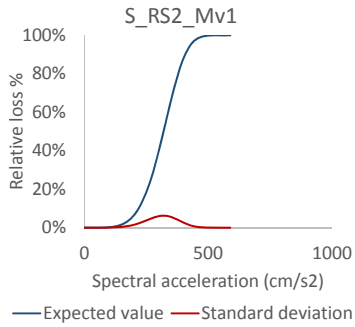

S_RS2_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

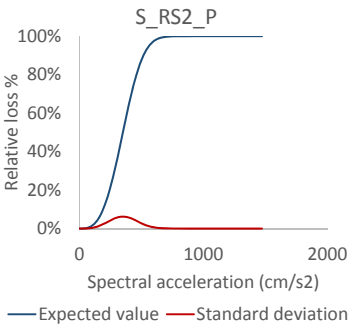

S_RS2_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

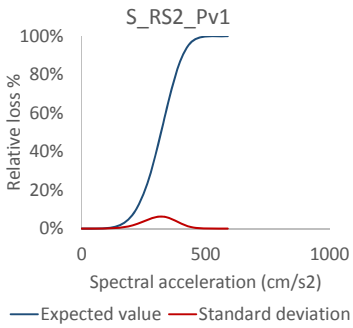

S_RS2_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

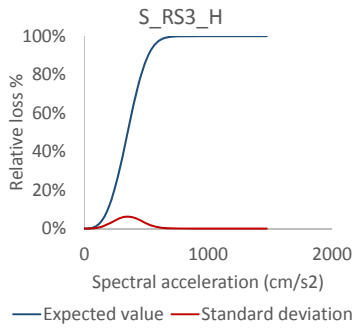

S_RS2_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

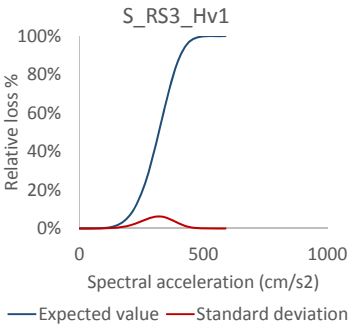

S_RS2_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

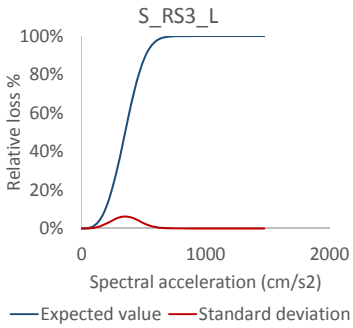

S_RS2_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

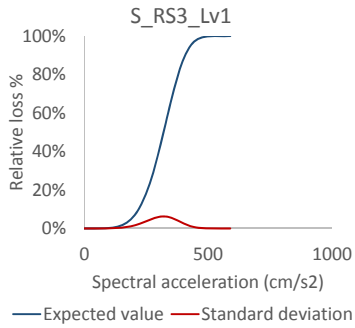

S_RS2_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

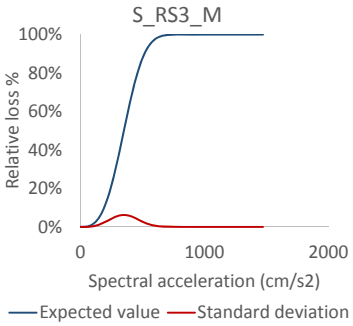

S_RS2_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

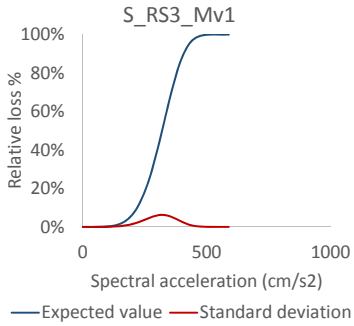

S_RS3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

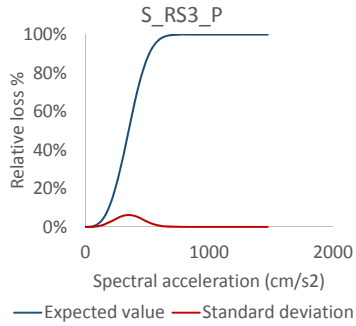

S_RS3_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

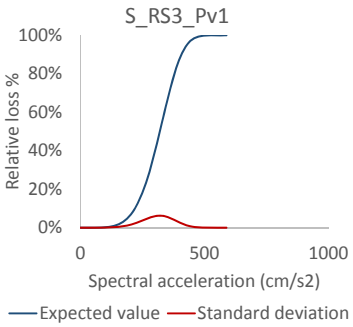

S_RS3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

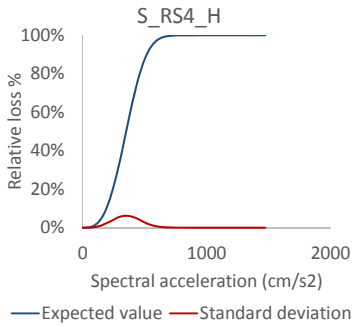

S_RS3_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

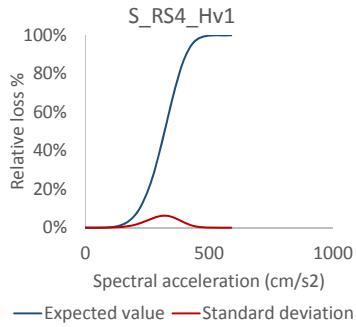

S_RS3_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

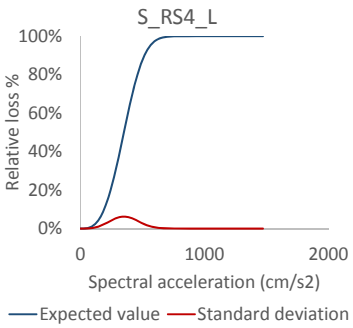

S_RS3_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

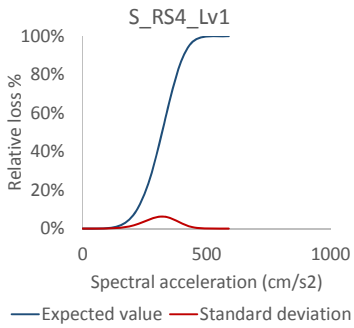

S_RS3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

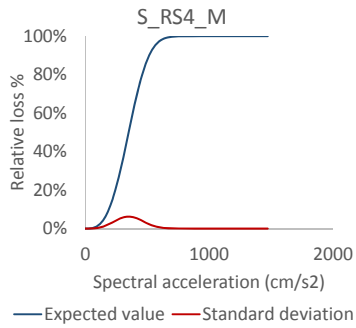

S_RS3_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

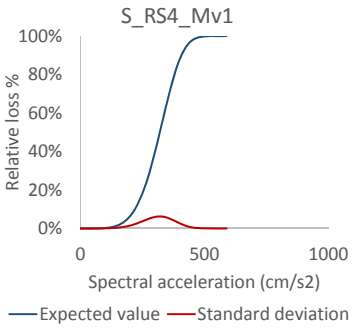

S_RS4_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

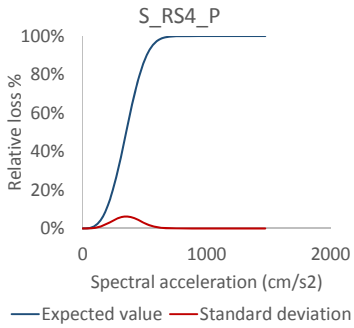

S_RS4_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

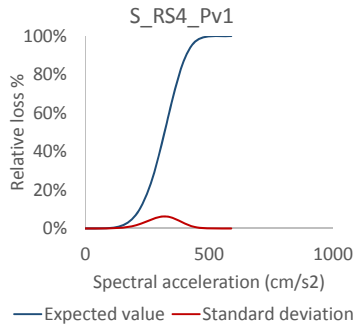

S_RS4_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

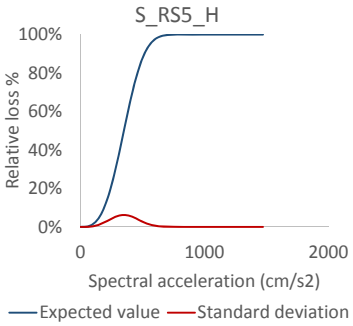

S_RS4_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

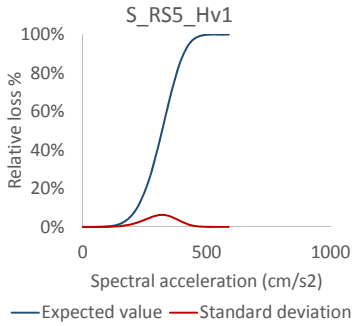

S_RS4_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

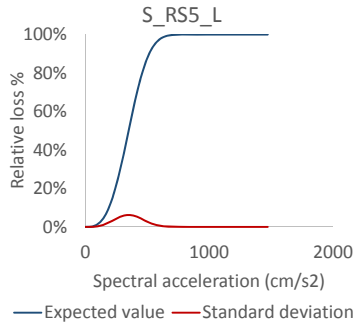

S_RS4_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

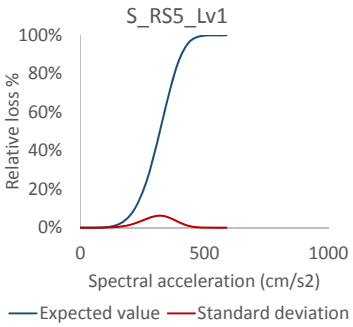

S_RS4_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

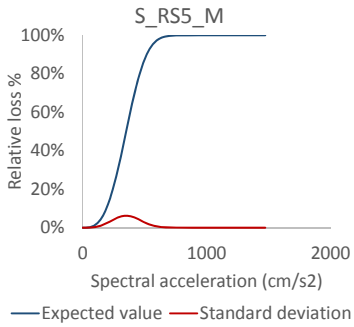

S_RS4_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

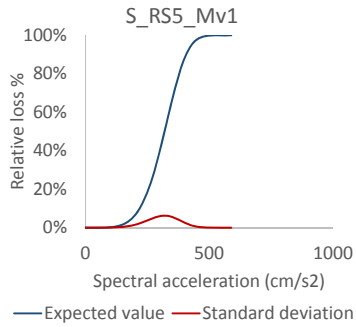

S_RS5_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

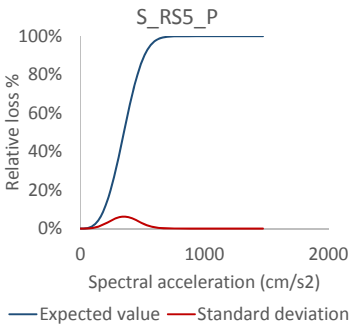

S_RS5_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

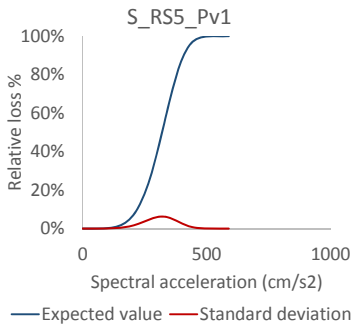

S_RS5_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

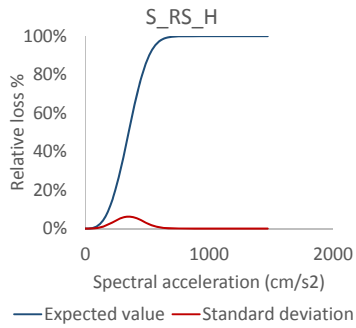

S_RS5_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

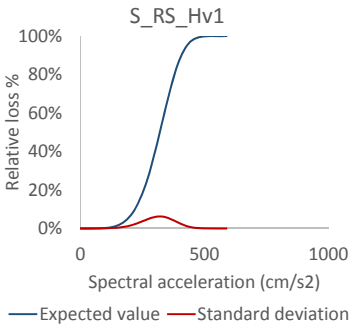

S_RS5_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

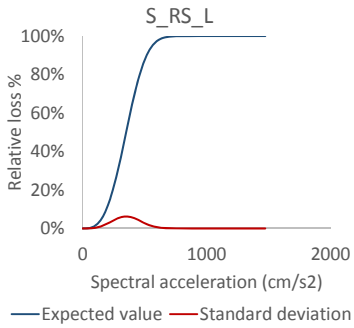

S_RS5_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

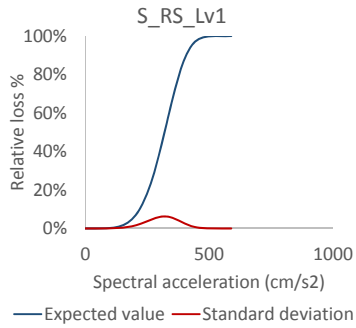

S_RS5_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

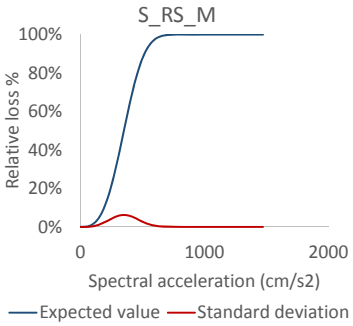

S_RS5_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

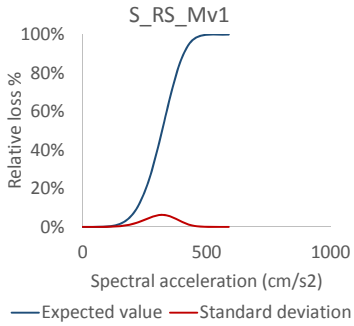

S_RS_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

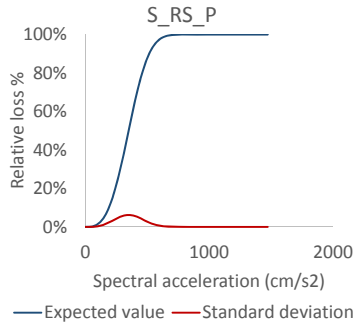

S_RS_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

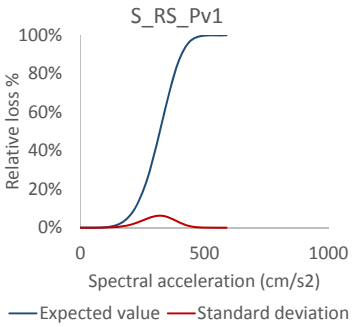

S_RS_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

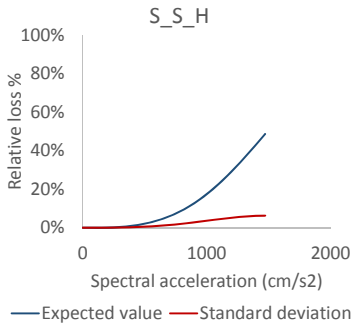

S_RS_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

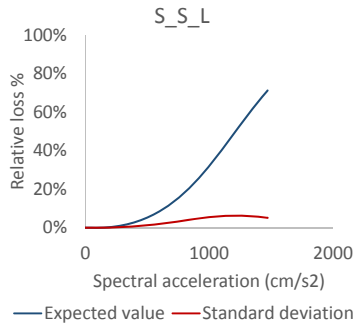

S_RS_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

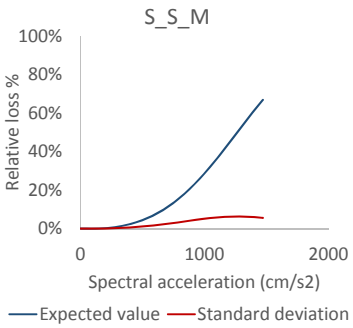

S_RS_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

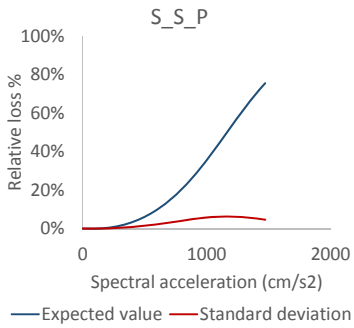

S_RS_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

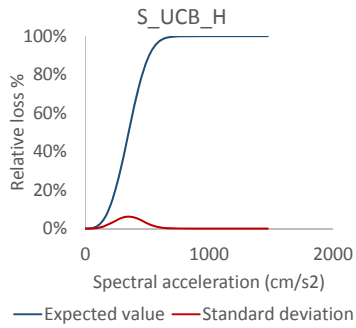

S_RS_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

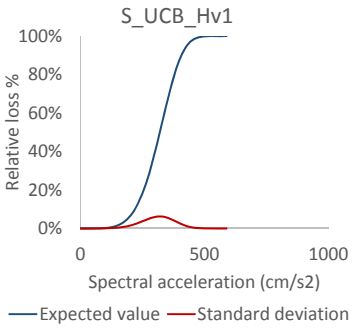

S_S_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

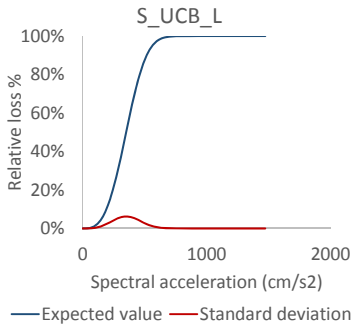

S_S_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

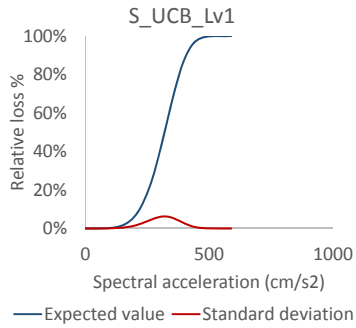

S_S_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

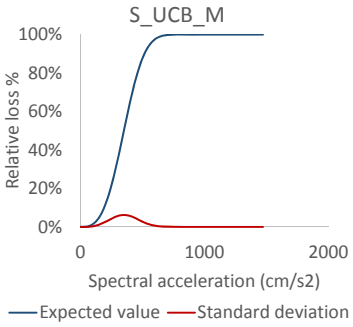

S_S_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

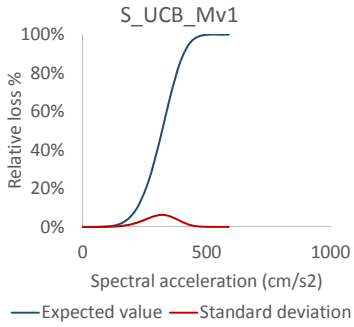

S_UCB_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

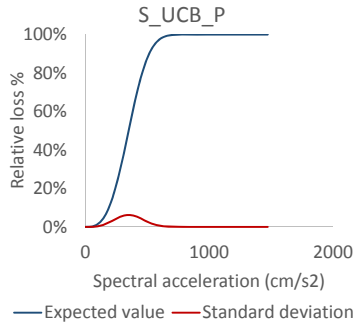

S_UCB_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

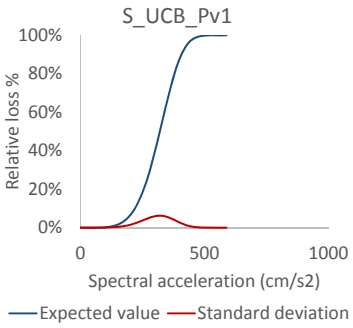

S_UCB_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

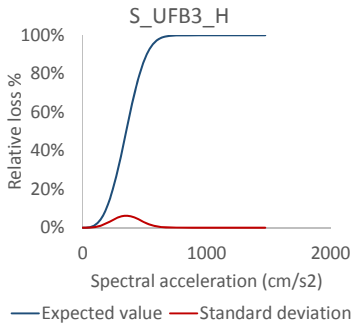

S_UCB_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

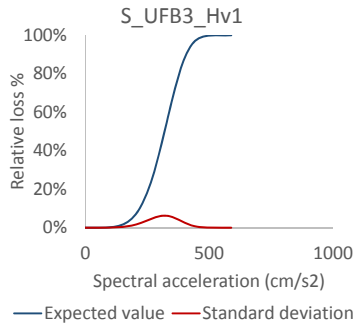

S_UCB_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

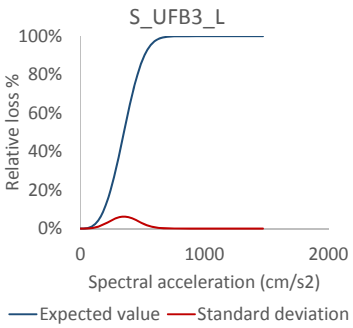

S_UCB_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

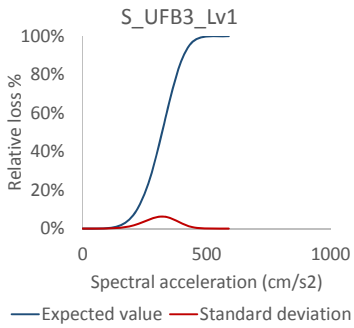

S_UCB_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

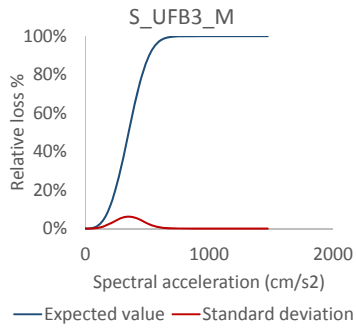

S_UCB_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

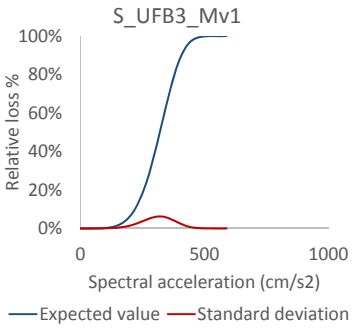

S_UFB3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

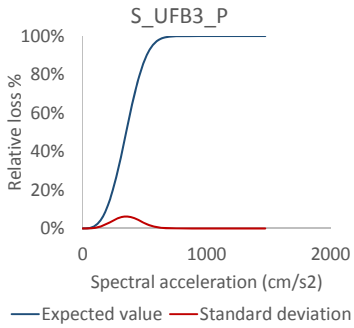

S_UFB3_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

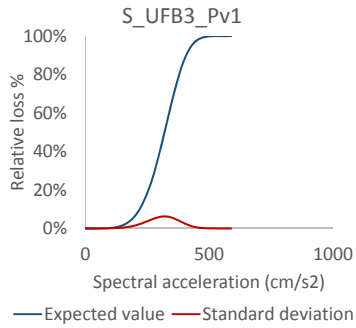

S_UFB3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

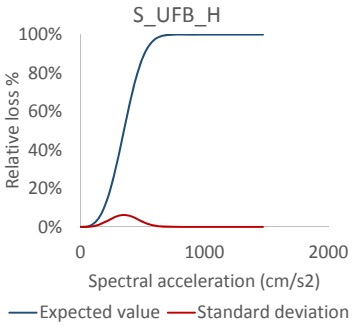

S_UFB3_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

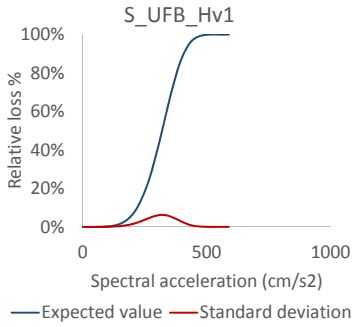

S_UFB3_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

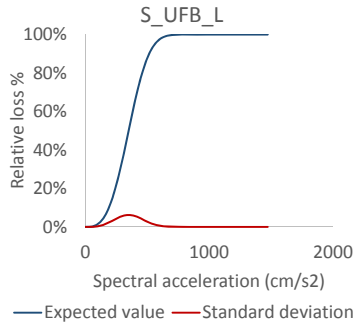

S_UFB3_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

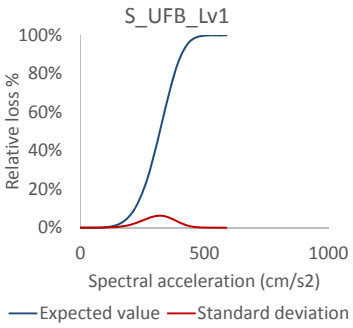

S_UFB3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

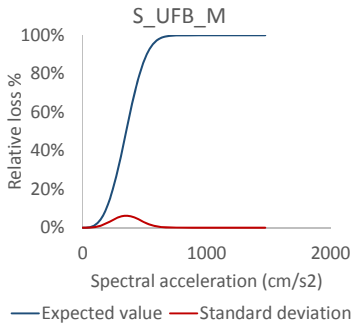

S_UFB3_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

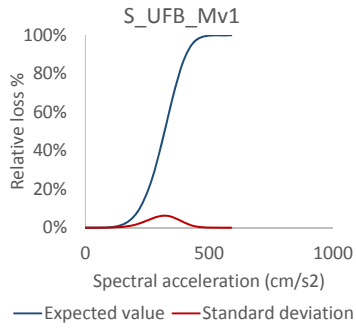

S_UFB_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

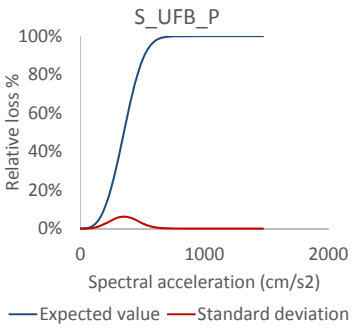

S_UFB_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

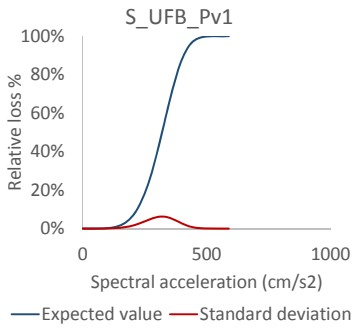

S_UFB_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

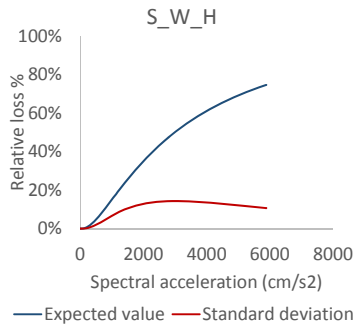

S_UFB_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

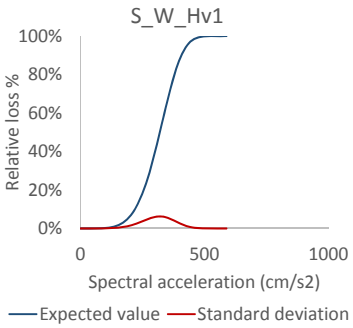

S_UFB_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

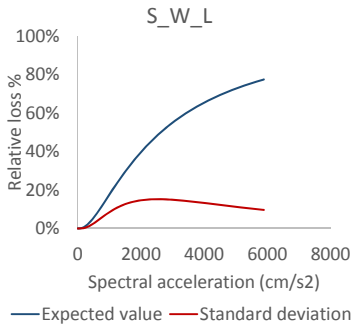

S_UFB_Mv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

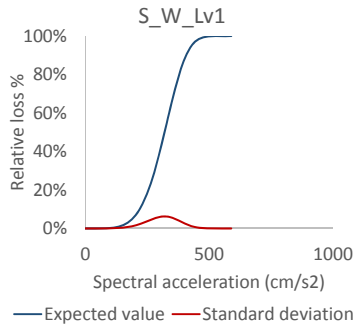

S_UFB_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

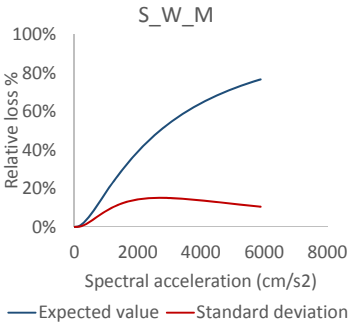

S_UFB_Pv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

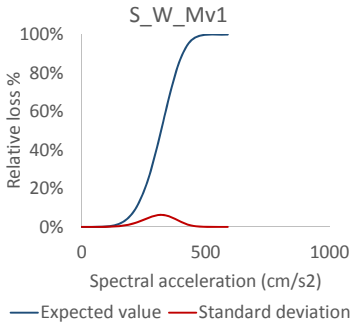

S_W_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

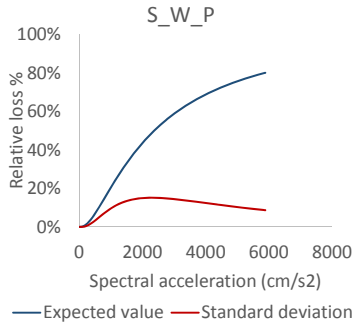

S_W_Hv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

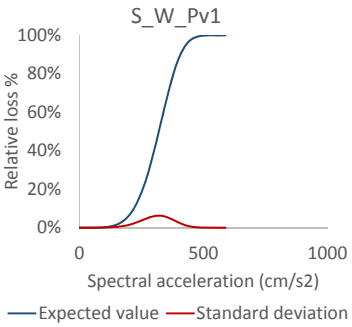

S_W_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


S_W_Lv1
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


S_W_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


S_W_Mv1
100%
80%
60%
40%
20%
0%
Relative loss %
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


S_W_P
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


S_W_Pv1
100%
80%
60%
40%
20%
0%
Relative loss %
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

Geoscience Australia Earthquake Curves

Table A14-2. Assignation matrix for GA earthquake curves (Dev1 and Dev 21).

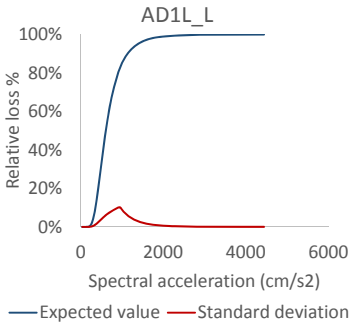
Structural system	Country development																	
	Dev1									Dev21								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A																		
A1												AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_P
A2							AD1L_L	AD1L_L	AD1L_P				AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_P
C						C1M_M	C1M_L	C1M_L	C1M_L				C1M_M	C1M_M		C1M_L	C1M_L	C1M_L
C1	C1M_H	C1M_H	C1M_M	C1M_M	C1M_M	C1M_M	C1M_L	C1M_L	C1M_L									
C1H							C1H_M	C1H_M	C1H_M	C1H_H	C1H_H	C1H_M	C1H_M	C1H_M	C1H_M	C1H_M	C1H_M	C1H_M
C1L							C1L_L	C1L_L	C1L_L	C1L_H	C1L_H	C1L_M	C1L_M	C1L_M	C1L_M	C1L_L	C1L_L	C1L_L
C1M							C1M_L	C1M_L	C1M_L	C1M_H	C1M_H	C1M_M	C1M_M	C1M_M	C1M_M	C1M_L	C1M_L	C1M_L
C2	C2M_H	C2M_H	C2M_M	C2M_M	C2M_M	C2M_M	C2M_L	C2M_L	C2M_L			C2M_M	C2M_M	C2M_M	C2M_M	C2M_L	C2M_L	C2M_L
C3	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M	C3M_M			C3M_M	C3M_M	C3M_M	C3M_M	C3M_L	C3M_L	C3M_L
C3L																		
DS1																		
DS3																		
INF							W1_M	W1_L	W1_L			W1_M	W1_M	W1_M	W1_M	W1_M	W1_L	W1_L
PC																		
PC1	PC1M_H	PC1M_H	PC1M_M	PC1M_M	PC1M_M	PC1M_M	PC1M_L	PC1M_L	PC1M_L			PC1M_M	PC1M_M	PC1M_M	PC1M_M	PC1M_L	PC1M_L	PC1M_L
PC2												PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_L	PC2M_L	PC2M_L
RM						RM1M_M	RM1M_L	RM1M_L	RM1M_L									
RM2	RM2M_H	RM2M_H	RM2M_M	RM2M_M	RM2M_M	RM2M_M	RM2M_L	RM2M_L	RM2M_L									
RM2L							RM2L_L	RM2L_L	RM2L_L	RM2L_H	RM2L_H	RM2L_M	RM2L_M	RM2L_M	RM2L_M	RM2L_L	RM2L_L	RM2L_L
RM2M							RM2M_L	RM2M_L	RM2M_L	RM2M_H	RM2M_H	RM2M_M	RM2M_M	RM2M_M	RM2M_M	RM2M_L	RM2M_L	RM2M_L
RS																		
RS1							URML_L	URML_L	URML_P				URML_L	URML_L	URML_L	URML_L	URML_L	URML_P

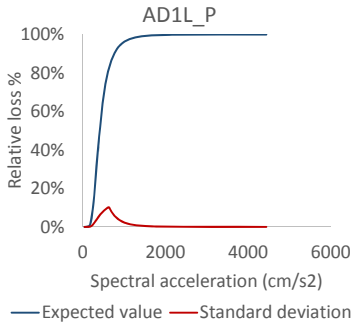
Structural system	Country development																	
	Dev1									Dev21								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
RS2																		
RS3																		
S						S1M_M	S1M_L	S1M_L	S1M_L									
S1	S1M_H	S1M_H	S1M_M	S1M_M	S1M_M	S1M_M	S1M_L	S1M_L	S1M_L									
S1H							S1H_M	S1H_M		S1H_H	S1H_H		S1H_M	S1H_M		S1H_M	S1H_M	
S1L							S1L_L	S1L_L	S1L_L	S1L_H	S1L_H	S1L_M	S1L_M	S1L_M	S1L_M	S1L_L	S1L_L	
S1M							S1M_L	S1M_L		S1M_H	S1M_H		S1M_M	S1M_M		S1M_L	S1M_L	
S2	S2M_H	S2M_H	S2M_M	S2M_M	S2M_M	S2M_M	S2M_L	S2M_L	S2M_L									
S3	S3_H	S3_H	S3_M	S3_M	S3_M	S3_M	S3_M	S3_L	S3_L	S3_H	S3_H	S3_M	S3_M	S3_M	S3_M	S3_M	S3_L	S3_L
S4	S4M_H	S4M_H	S4M_M	S4M_M	S4M_M	S4M_M	S4M_L	S4M_L	S4M_L									
S4H							S4H_M	S4H_M	S4H_M	S4H_H	S4H_H	S4H_M	S4H_M	S4H_M	S4H_M	S4H_M	S4H_M	S4H_M
S4L								S4L_L	S4L_L		S4L_H	S4L_M		S4L_M	S4L_M		S4L_L	
S4M							S4M_L	S4M_L	S4M_L	S4M_H	S4M_H	S4M_M	S4M_M	S4M_M	S4M_M	S4M_L	S4M_L	S4M_L
S5	S5M_H	S5M_H	S5M_M	S5M_M	S5M_M	S5M_M	S5M_L	S5M_L	S5M_L									
UCB	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_P				URML_L	URML_L	URML_L	URML_L	URML_L	URML_P
UFB						URML_L	URML_L	URML_L	URML_P	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_P
UFB1																		
UFB2												URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_P
UFB3	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_P									
UFB4												URML_L	URML_L	URML_L	URML_L	URML_L	URML_L	URML_P
W	W1_H	W1_H	W1_M	W1_M	W1_M	W1_M	W1_M	W1_L	W1_L		W1_H	W1_M	W1_M	W1_M	W1_M	W1_M	W1_L	W1_L
W1	W1_H	W1_H	W1_M	W1_M	W1_M	W1_M	W1_M	W1_L	W1_L									
W2																		
W4																		

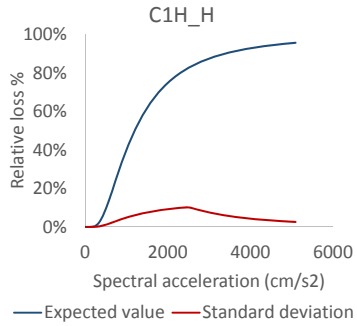
Table A14-2. Assignation matrix for GA earthquake curves (Dev22 and Dev 3).

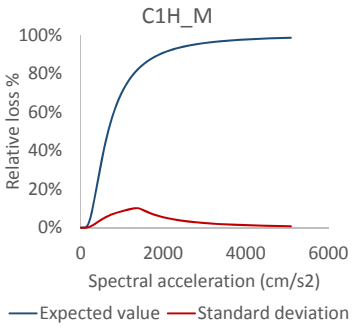
Structural system	Country development																		
	Dev22									Dev3									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
A1			AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_L	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
A2													AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P	AD1L_P
C	C1M_M	C1M_M	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L	C1M_M	C1M_M	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L	C1M_L
C1					C1M_L	C1M_L	C1M_L	C1M_L	C1M_L									
C1H																		
C1L																		
C1M																		
C2	C2M_M	C2M_M		C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_L	C2M_M	C2M_M	C2M_L	C2M_M	C2M_M	C2M_M	C2M_M	C2M_M	C2M_L
C3	C3M_M	C3M_M	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L	C3M_M	C3M_M	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L	C3M_L
C3L	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L	C3L_L
DS1													URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
DS3													URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
INF	W1_M	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P	W1_M	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P
PC	PC1M_M	PC1M_M		PC1M_L	PC1M_L		PC1M_L	PC1M_L										
PC1			PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_M	PC1M_M	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L
PC2	PC2M_M	PC2M_M		PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_L	PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_M	PC2M_L
RM	RM1M_M	RM1M_M	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_M	RM1M_M	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L
RM2																		
RM2L																		
RM2M																		
RS	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS1	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
RS2					URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P

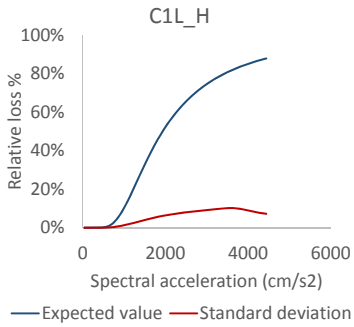
Structural system	Country development																		
	Dev22									Dev3									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
RS3					URML_P	URML_P	URML_P	URML_P	URML_P									
S	S1M_M	S1M_M	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_M	S1M_M	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L	S1M_L
S1																		
S1H																		
S1L																		
S1M																		
S2	S2M_M	S2M_M			S2M_L					S2M_M	S2M_M		S2M_M	S2M_M		S2M_M	S2M_M	
S3					S3_L	S3_L	S3_L	S3_L	S3_P									
S4																		
S4H																		
S4L																		
S4M																		
S5	S5M_M	S5M_M	S5M_L		S5M_L	S5M_L	S5M_L			S5M_M	S5M_M	S5M_L	S5M_M	S5M_M	S5M_L	S5M_M	S5M_M	S5M_L
UCB	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB1						URML_P	URML_P	URML_P	URML_P				URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB2	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB3	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
UFB4	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_L	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P	URML_P
W	W1_M	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P	W1_M	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P
W1			W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P	W1_M	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_L	W1_P
W2					W2_L	W2_L	W2_L	W2_L	W2_L				W2_M	W2_L	W2_L	W2_M	W2_L	W2_L
W4			W2_L	W2_L	W2_L	W2_L	W2_M	W2_L	W2_L									

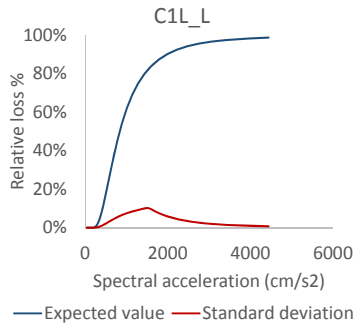

AD1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

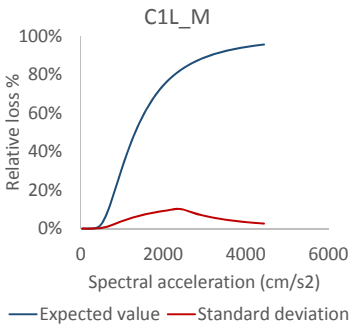

AD1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

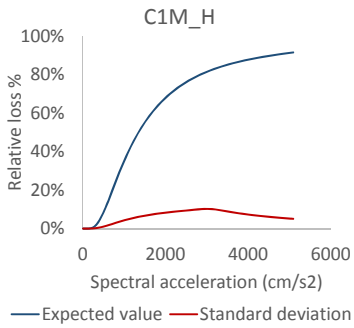

C1H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

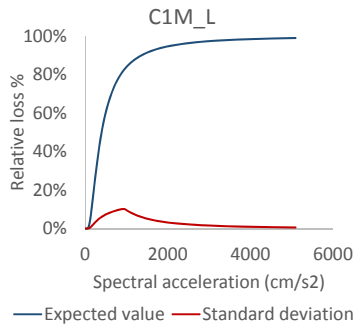

C1H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

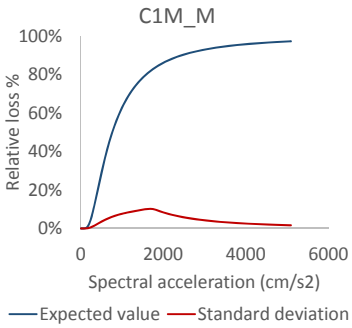

C1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

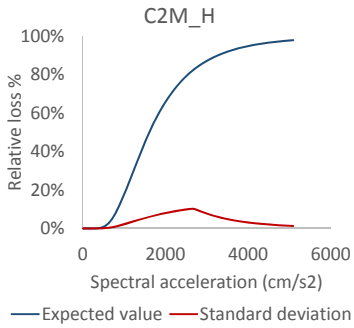

C1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

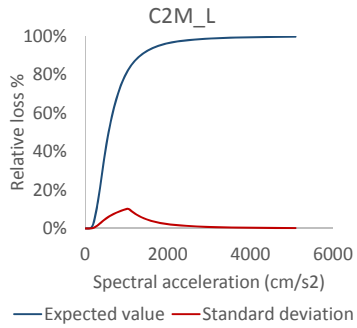

C1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

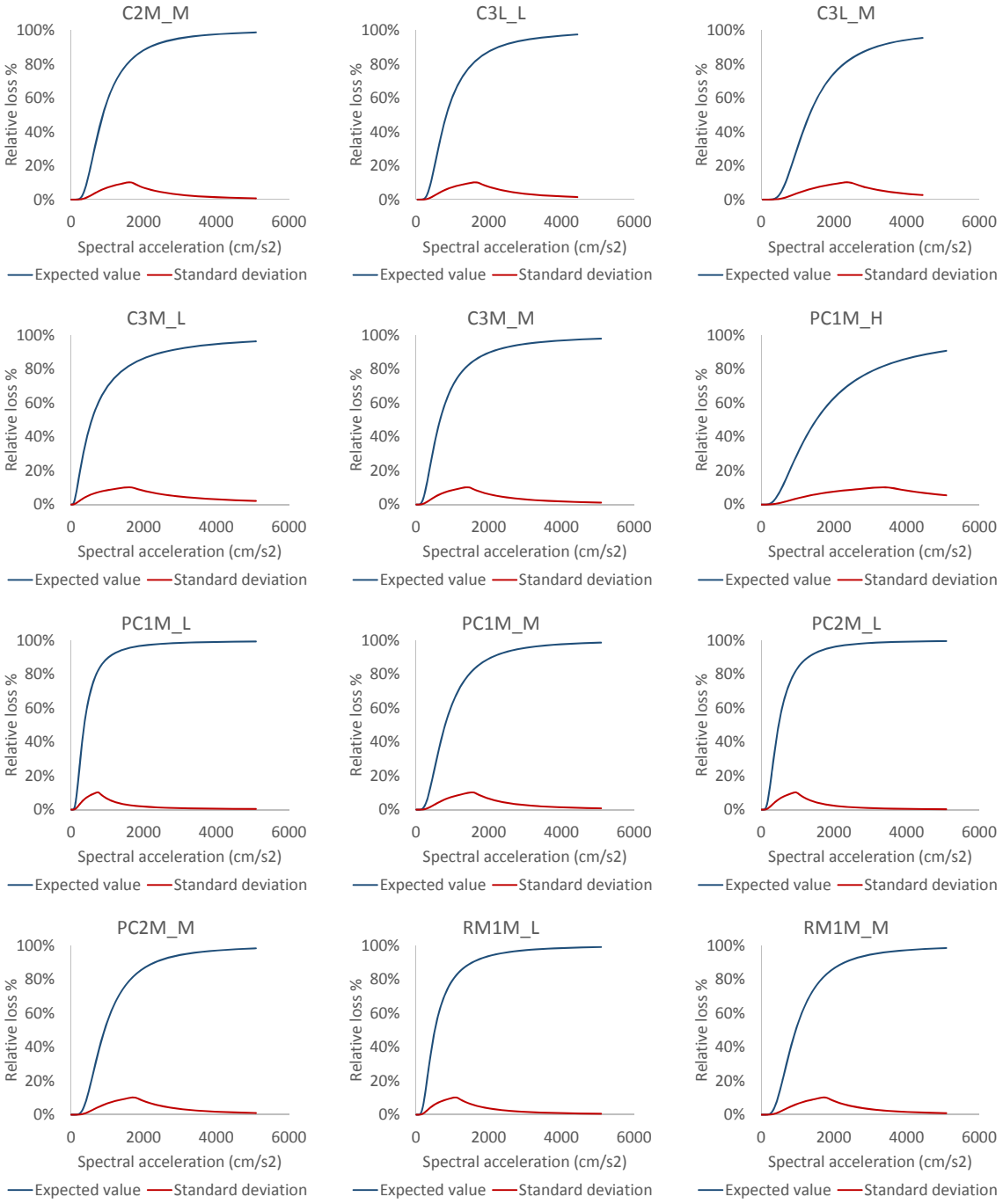

C1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

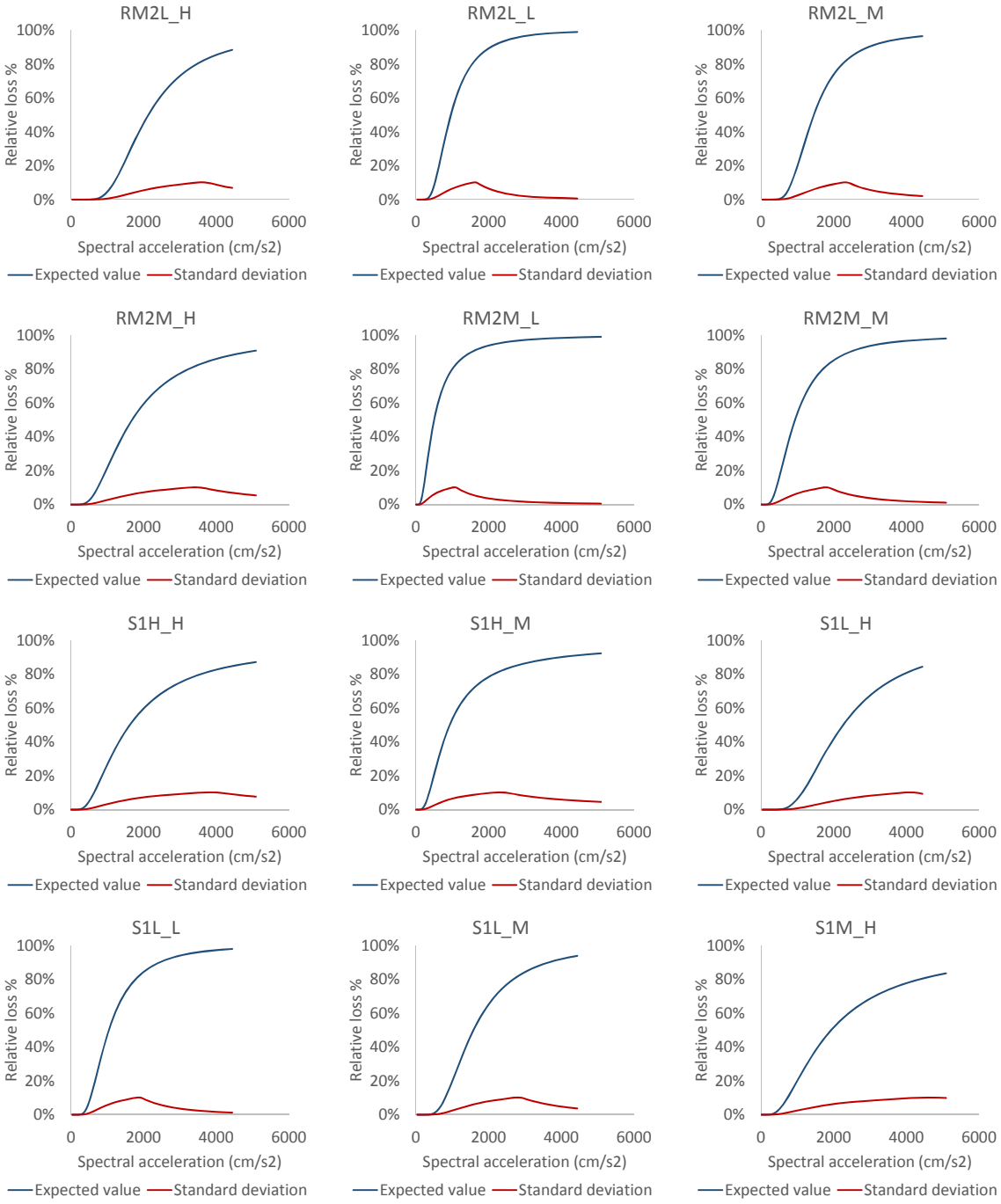

C1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

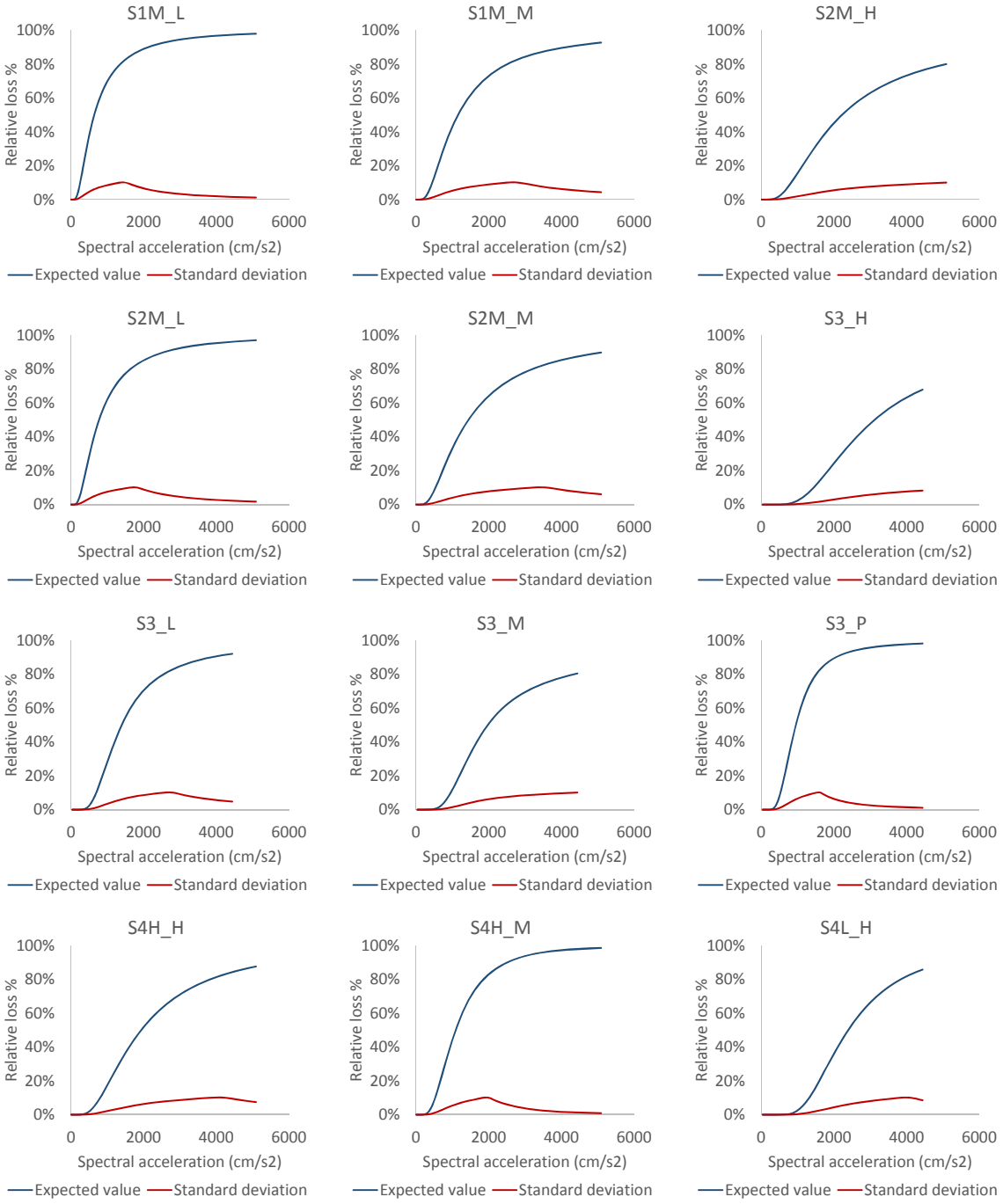

C1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

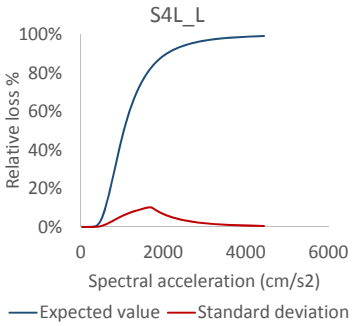

C2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

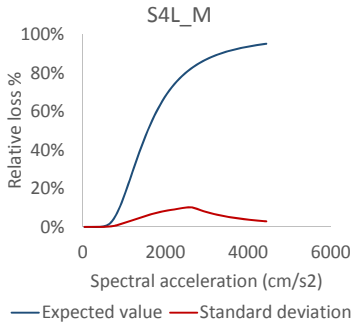

C2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

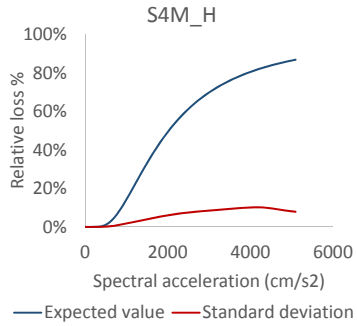

C2M_M
C3L_L
C3L_M
C3M_L
C3M_M
PC1M_H
PC1M_L
PC1M_M
PC2M_L
PC2M_M
RM1M_L
RM1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

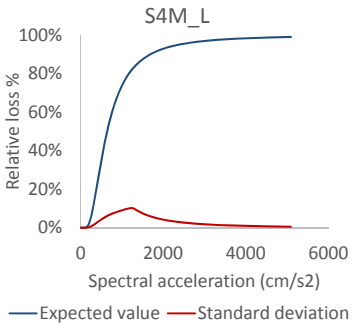

RM2L_H
RM2L_L
RM2L_M
RM2M_H
RM2M_L
RM2M_M
S1H_H
S1H_M
S1L_H
S1L_L
S1L_M
S1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

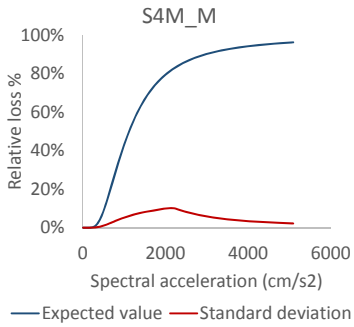

S1M_L
S1M_M
S2M_H
S2M_L
S2M_M
S3_H
S3_L
S3_M
S3_P
S4H_H
S4H_M
S4L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

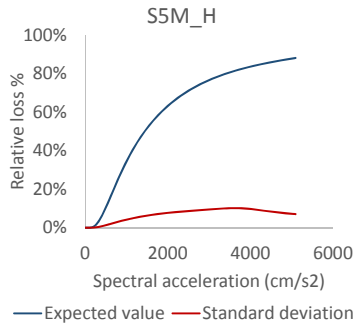

S4L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

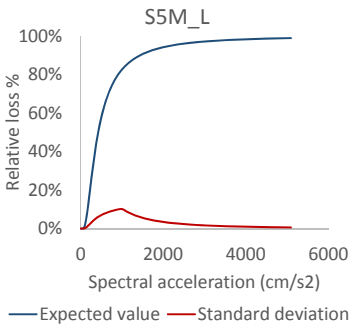

S4L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

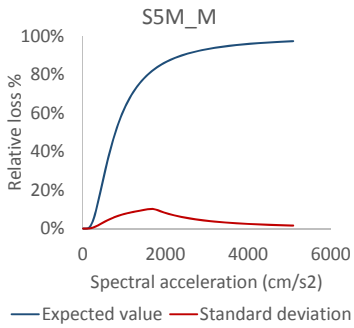

S4M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

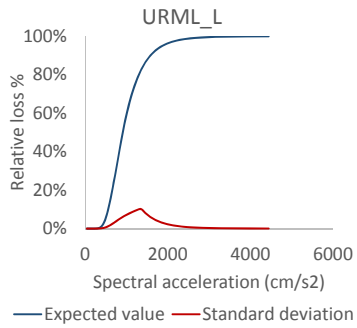

S4M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

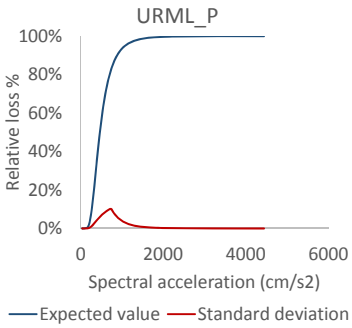

S4M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

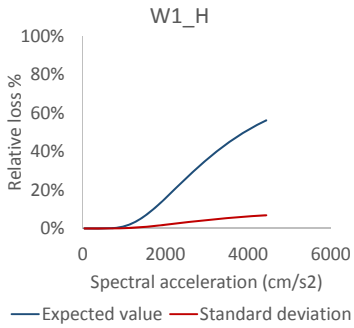

S5M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

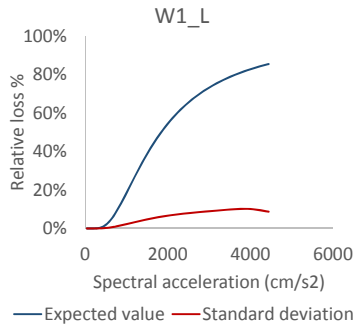

S5M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

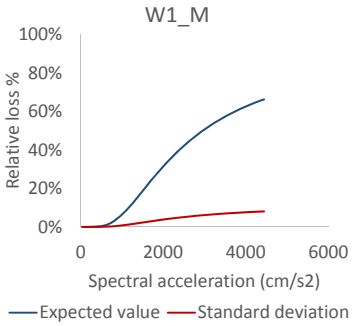

S5M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

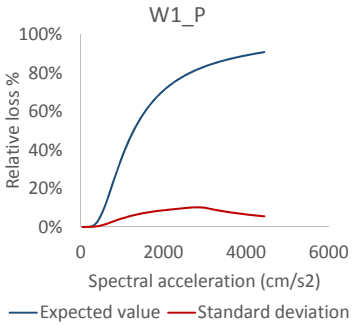

URML_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

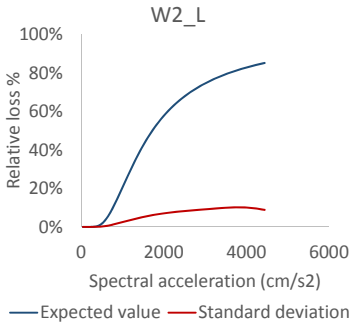

URML_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

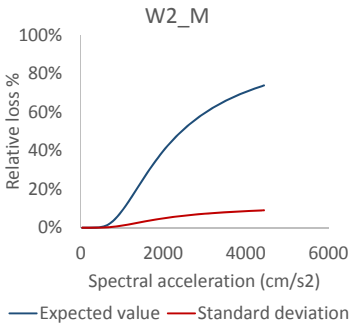

W1_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_P
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_L
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

Risk-EU Earthquake Curves

Table A14-2. Assignation matrix for Risk-EU earthquake curves (Dev1).

Structural system	Country development								
	Dev1								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A				AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H
C	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H
C1				S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H
C1L				S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H
C1M				S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H
C2				S_RC2M_H	S_RC2M_H	S_RC2M_H	S_RC2M_H	S_RC2M_H	S_RC2M_H
C3				S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L
C3L				S_RC3.1L_L	S_RC3.1L_L	S_RC3.1L_L	S_RC3.1L_L	S_RC3.1L_L	S_RC3.1L_L
C3M				S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L
C4									
CH	S_RC1H_H	S_RC1H_H		S_RC1H_H	S_RC1H_H				
CL	S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H	S_RC1L_H			
CM	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H	S_RC1M_H			
DS				S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P
DS2				S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P
DS4									
INF	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H			
M2									
MS				AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H	AD1L_H
PC						PC1M_H			
PC1				PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H	PC1M_H
PC2									
RM									
RM1				RM1M_H	RM1M_H	RM1M_H	RM1M_H	RM1M_H	RM1M_H
RM1L									
RM2				RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H
RM2H									
RS	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS2				S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS3									
RS5									
S	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H
S1				S1M_H	S1M_H				
S2									
S3				S3_H	S3_H	S3_H	S3_H	S3_H	S3_H
S4				S4M_H	S4M_H		S4M_H	S4M_H	
S5				S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H
UCB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P

Structural system	Country development								
	Dev1								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
UFB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB1				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB2				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB3				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB4				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UNK		W1_H			W1_H			W1_H	
W	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H
W1									
W2									
W4									

Table A14-2. Assignation matrix for Risk-EU earthquake curves (Dev 21).

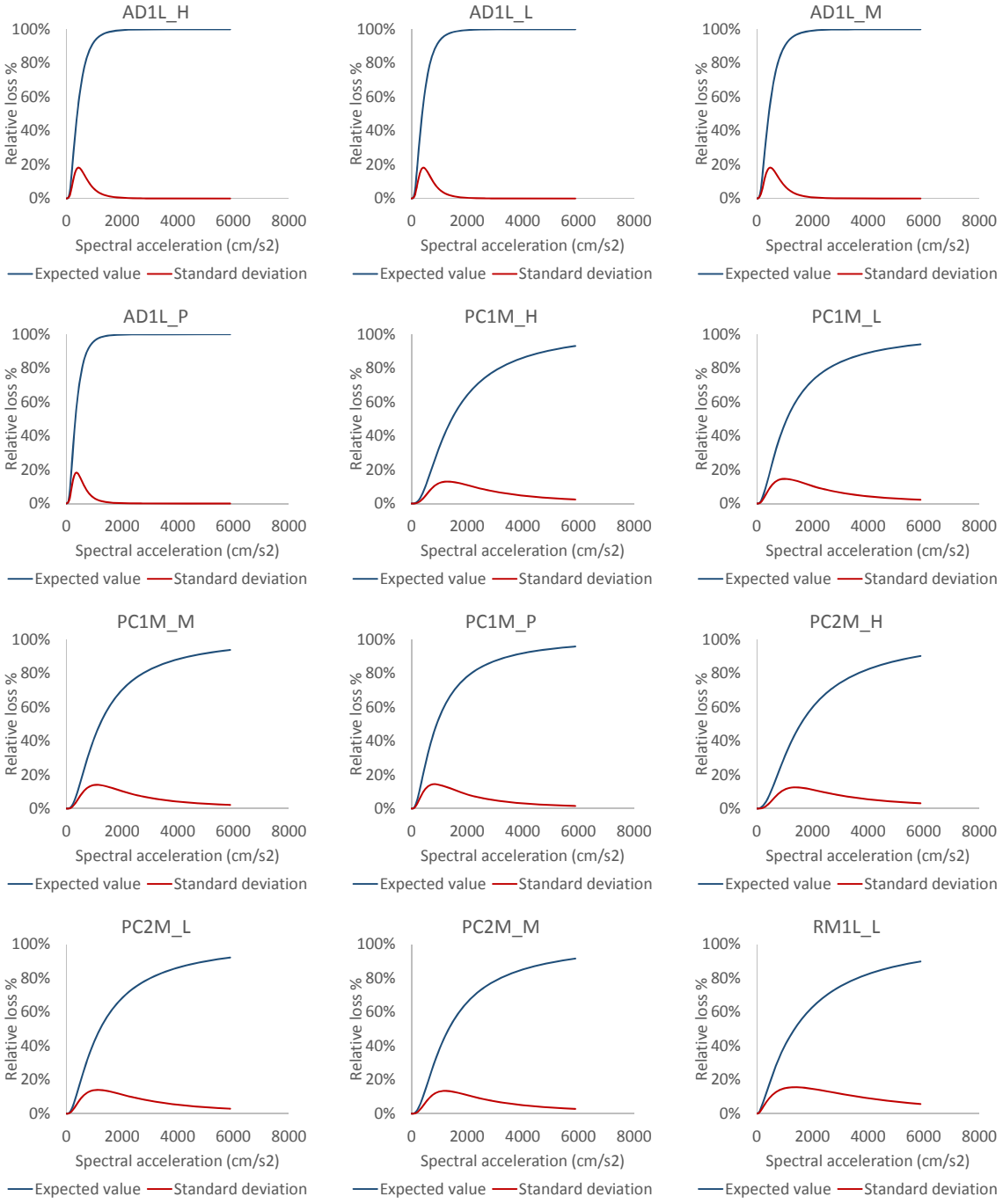
Structural system	Country development								
	Dev21								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	AD1L_H	AD1L_H	AD1L_M	AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
C				S_RC1M_H	S_RC1M_H	S_RC1M_M	S_RC1M_L	S_RC1M_L	S_RC1M_L
C1				S_RC1M_H	S_RC1M_H	S_RC1M_M	S_RC1M_L	S_RC1M_L	S_RC1M_L
C1L									
C1M									
C2	S_RC2M_H	S_RC2M_H	S_RC2M_M	S_RC2M_H	S_RC2M_H	S_RC2M_M	S_RC2M_L	S_RC2M_L	S_RC2M_L
C3	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L
C3L									
C3M									
C4	S_RC1M_H	S_RC1M_H		S_RC1M_H	S_RC1M_H		S_RC1M_L	S_RC1M_L	
CH									
CL						S_RC1L_M			
CM						S_RC1M_M			
DS	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P
DS2									
DS4									
INF				W1_L	W1_L	W1_L	W1_L	W1_L	W1_L
M2				AD1L_H	AD1L_H	AD1L_M	AD1L_L	AD1L_L	AD1L_L
MS									
PC				PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L	PC1M_L
PC1	PC1M_H	PC1M_H	PC1M_M	PC1M_H	PC1M_H	PC1M_M	PC1M_L	PC1M_L	PC1M_L
PC2	PC2M_H	PC2M_H	PC2M_M	PC2M_H	PC2M_H	PC2M_M	PC2M_L	PC2M_L	PC2M_L

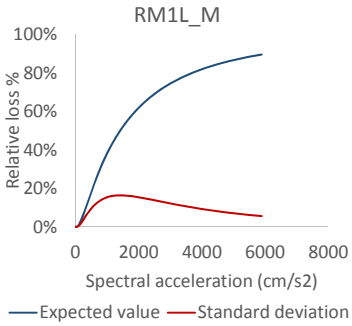
Structural system	Country development								
	Dev21								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
RM				RM1M_H	RM1M_H	RM1M_M	RM1M_L	RM1M_L	RM1M_L
RM1									
RM1L									
RM2		RM2M_H	RM2M_M	RM2M_H	RM2M_H	RM2M_M	RM2M_L	RM2M_L	RM2M_L
RM2H									
RS				S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS2				S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS3									
RS5									
S				S1M_H	S1M_H	S1M_M	S1M_L	S1M_L	S1M_L
S1	S1M_H	S1M_H		S1M_H	S1M_H		S1M_L	S1M_L	
S2	S2M_H	S2M_H		S2M_H	S2M_H		S2M_L	S2M_L	
S3									
S4									
S5	S5M_H	S5M_H		S5M_H	S5M_H		S5M_L	S5M_L	
UCB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB1	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB2				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB3							S_M3.3M_P		S_M3.3M_P
UFB4				S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UNK									
W				W1_H	W1_H	W1_M	W1_L	W1_L	W1_L
W1	W1_H	W1_H	W1_M	W1_H	W1_H	W1_M	W1_L	W1_L	W1_L
W2	W2_H	W2_H	W2_M	W2_H	W2_H	W2_M	W2_L	W2_L	W2_L
W4	W2_H	W2_H	W2_M	W2_H	W2_H	W2_M	W2_L	W2_L	W2_L

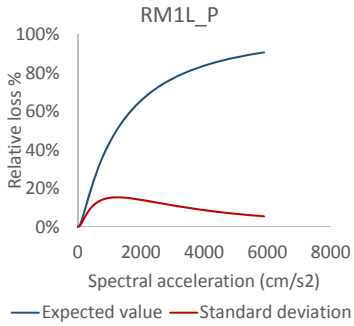
Table A14-2. Assignation matrix for Risk-EU earthquake curves (Dev22).

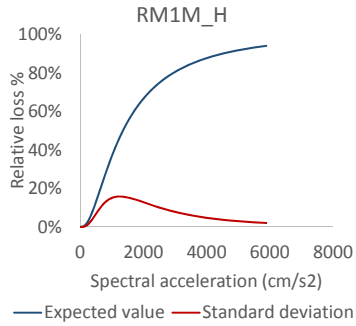
Structural system	Country development								
	Dev22								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A				AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P
C	S_RC1M_M	S_RC1M_M	S_RC1M_M	S_RC1M_L	S_RC1M_L	S_RC1M_L	S_RC1M_P	S_RC1M_P	S_RC1M_P
C1			S_RC1M_M	S_RC1M_L	S_RC1M_L	S_RC1M_L	S_RC1M_P	S_RC1M_P	S_RC1M_P
C1L									
C1M									
C2	S_RC2M_M	S_RC2M_M	S_RC2M_M	S_RC2M_L	S_RC2M_L	S_RC2M_L	S_RC2M_P	S_RC2M_P	S_RC2M_P

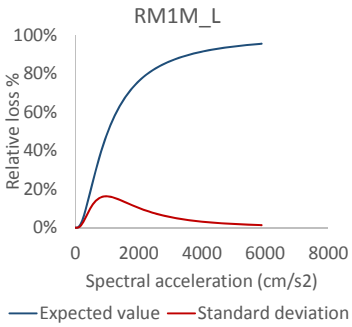
Structural system	Country development								
	Dev22								
	Hazard level								
	Hz1			Hz2			Hz3		
	Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
C3			S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L	S_RC3.1M_L
C3L				S_RC3.1L_L	S_RC3.1L_L	S_RC3.1L_L			
C3M									
C4									
CH									
CL									
CM									
DS	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P	S_M1.1L_P			
DS2									
DS4				S_M1.1L_P	S_M1.1L_P	S_M1.1L_P			
INF	W1_M	W1_M	W1_M	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P
M2			AD1L_M	AD1L_L	AD1L_L	AD1L_L	AD1L_P	AD1L_P	AD1L_P
MS									
PC	PC1M_M	PC1M_M	PC1M_M	PC1M_L	PC1M_L	PC1M_L			
PC1	PC1M_M	PC1M_M		PC1M_L	PC1M_L		PC1M_P	PC1M_P	
PC2				PC2M_L	PC2M_L	PC2M_L			
RM			RM1M_M	RM1M_L	RM1M_L	RM1M_L	RM1M_P	RM1M_P	RM1M_P
RM1									
RM1L	RM1L_M	RM1L_M	RM1L_M	RM1L_L	RM1L_L	RM1L_L		RM1L_P	RM1L_P
RM2				RM2M_L	RM2M_L		RM2M_P	RM2M_P	
RM2H	RM2H_M	RM2H_M		RM2H_L	RM2H_L			RM2H_P	
RS			S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS2	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P		S_M1.2M_P	S_M1.2M_P
RS3				S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P	S_M1.2M_P
RS5								S_M1.2M_P	S_M1.2M_P
S				S1M_L	S1M_L	S1M_L	S1M_P	S1M_P	S1M_P
S1				S1M_L	S1M_L		S1M_P	S1M_P	
S2				S2M_L	S2M_L		S2M_P	S2M_P	
S3									
S4									
S5									
UCB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB1			S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB2									
UFB3	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UFB4	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P	S_M3.3M_P
UNK									
W	W1_M	W1_M	W1_M	W1_L	W1_L	W1_L	W1_P	W1_P	W1_P
W1									
W2				W2_L	W2_L	W2_L			
W4				W2_L	W2_L	W2_L	W2_P	W2_P	W2_P

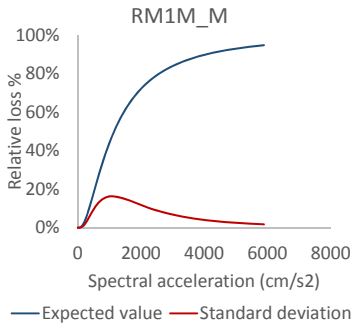

AD1L_H
AD1L_L
AD1L_M
AD1L_P
PC1M_H
PC1M_L
PC1M_M
PC1M_P
PC2M_H
PC2M_L
PC2M_M
RM1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

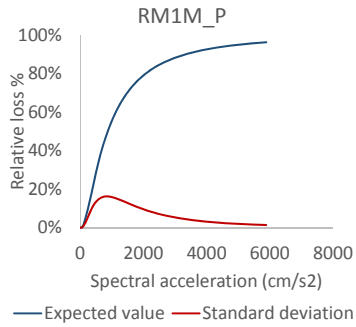

RM1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

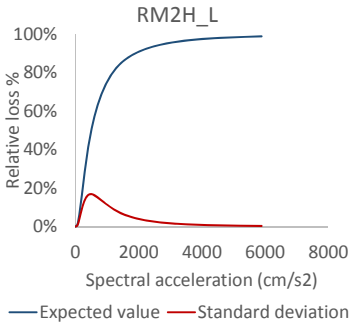

RM1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

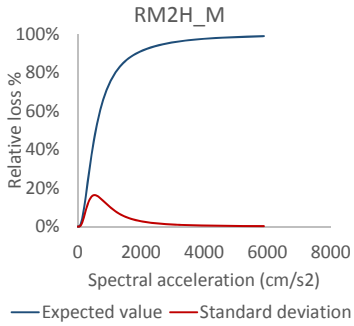

RM1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

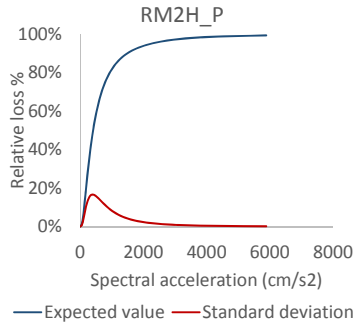

RM1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

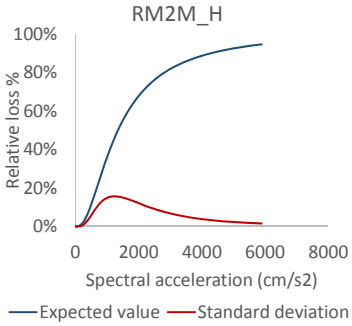

RM1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

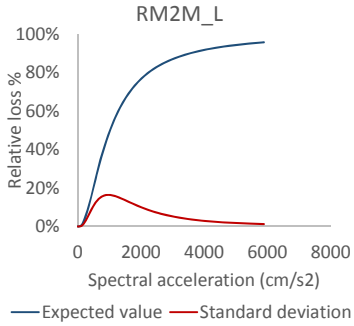

RM1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

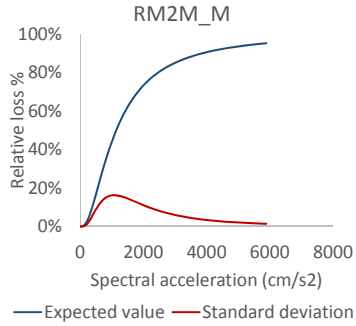

RM2H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

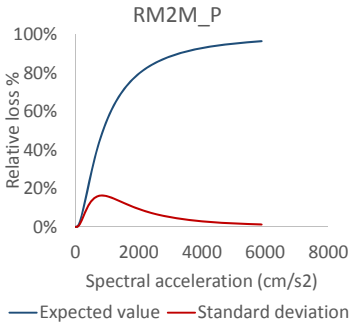

RM2H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

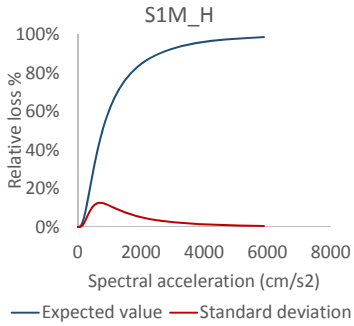

RM2H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

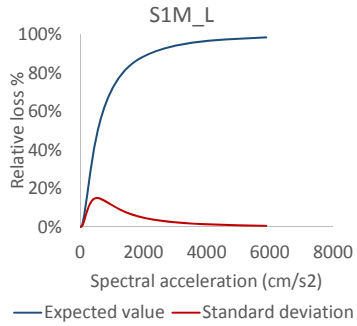

RM2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

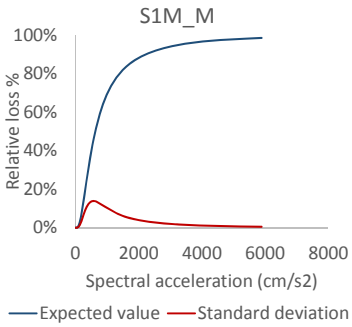

RM2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

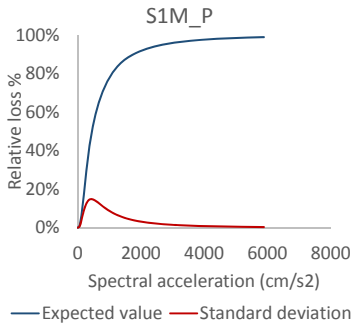

RM2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

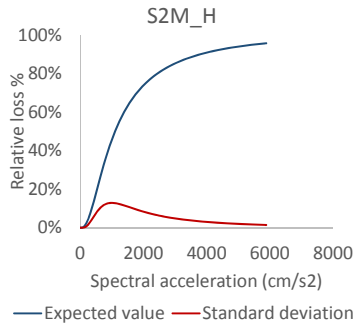

RM2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

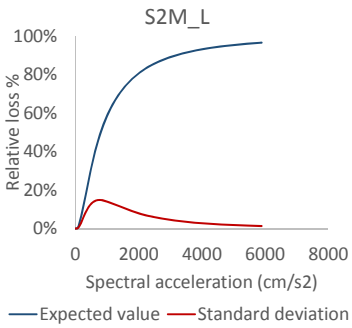

S1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

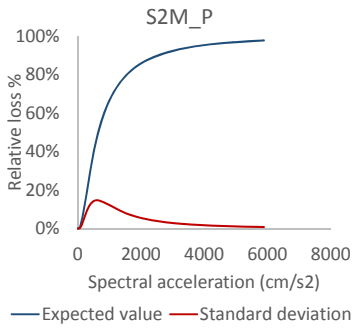

S1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

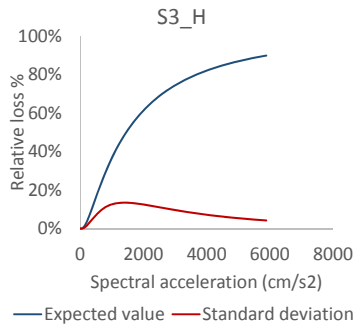

S1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

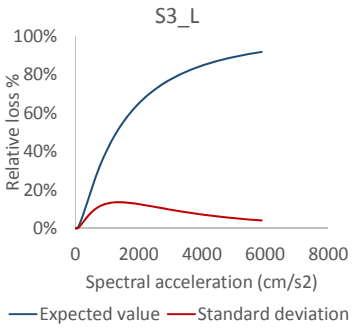

S1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

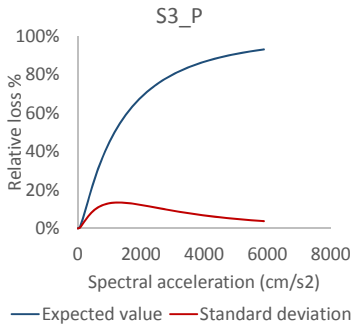

S2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

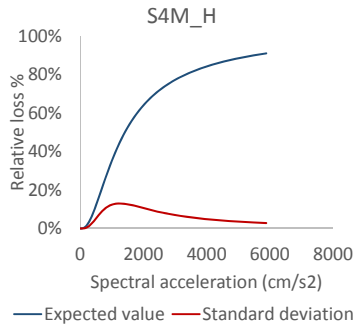

S2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

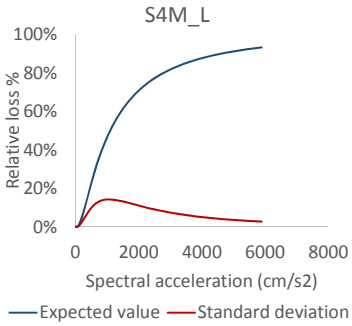

S2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

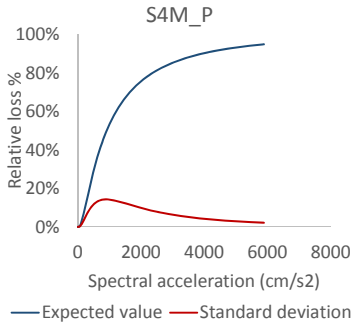

S3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

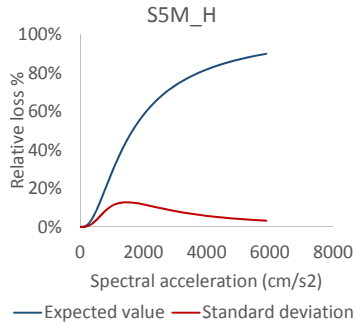

S3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

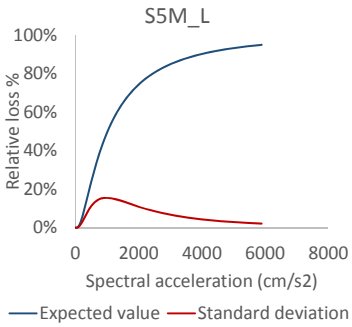

S3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

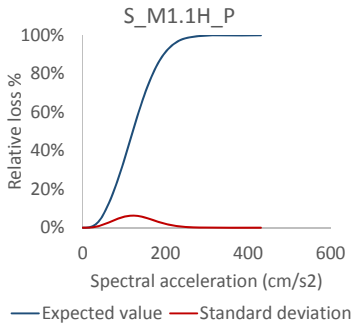

S4M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

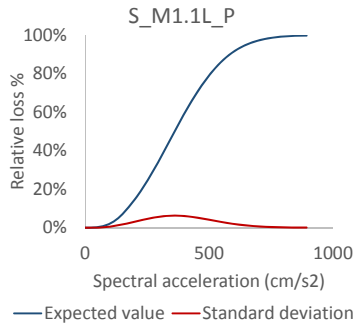

S4M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

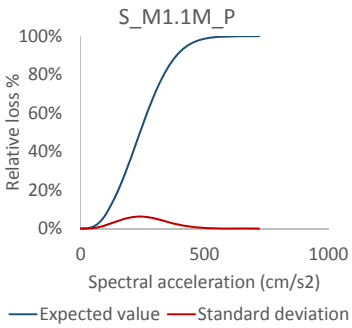

S4M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

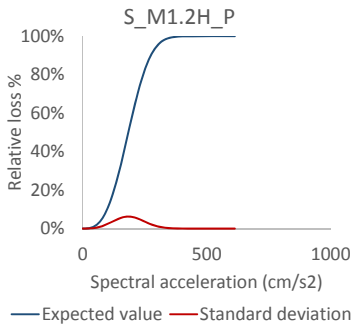

S5M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

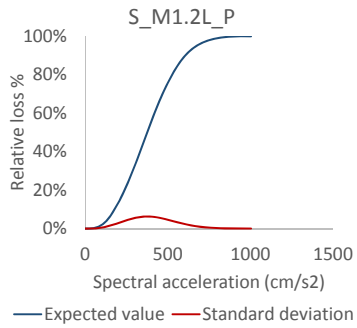

S5M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

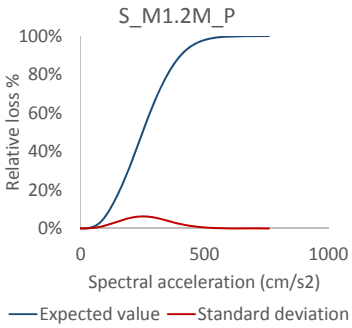

S_M1.1H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Spectral acceleration (cm/s2)
Expected value
Standard deviation

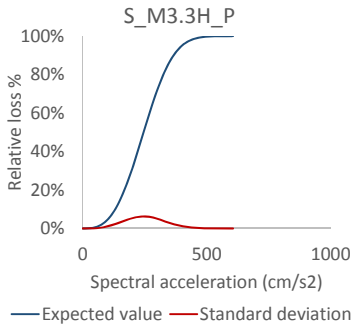

S_M1.1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

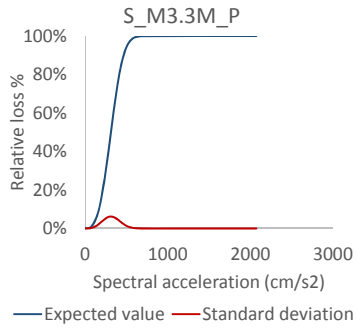

S_M1.1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

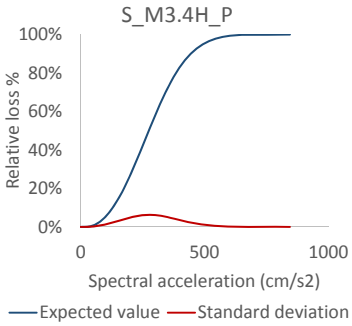

S_M1.2H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

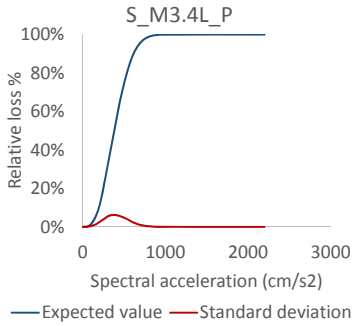

S_M1.2L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

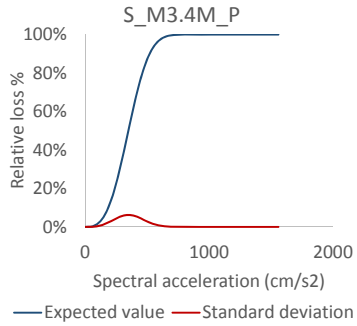

S_M1.2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

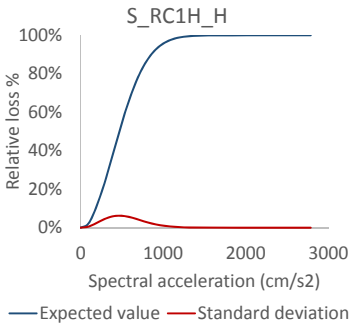

S_M3.3H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

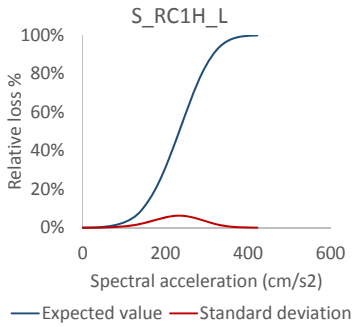

S_M3.3M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

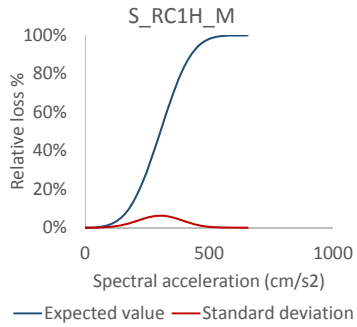

S_M3.4H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

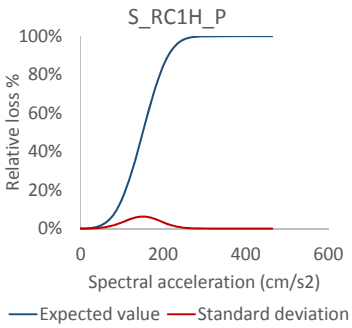

S_M3.4L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

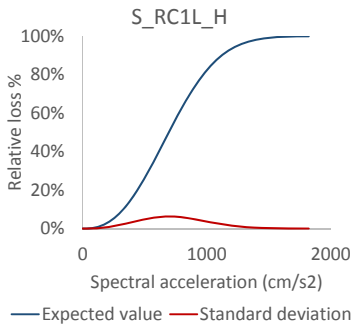

S_M3.4M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

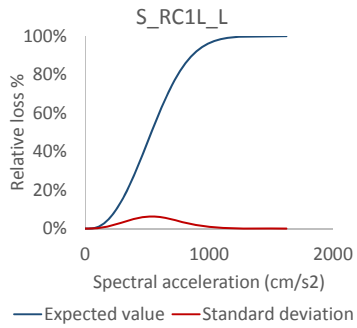

S_RC1H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

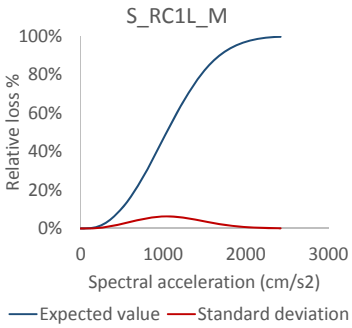

S_RC1H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Spectral acceleration (cm/s2)
Expected value
Standard deviation

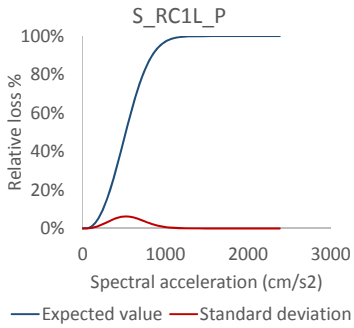

S_RC1H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

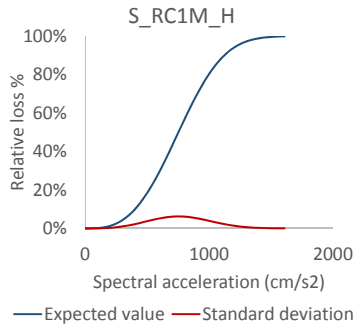

S_RC1H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Spectral acceleration (cm/s2)
Expected value
Standard deviation

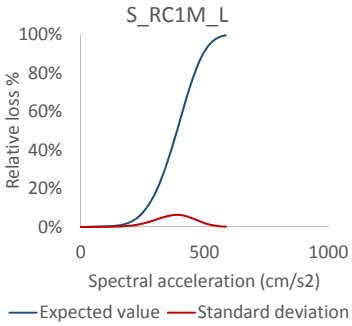

S_RC1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

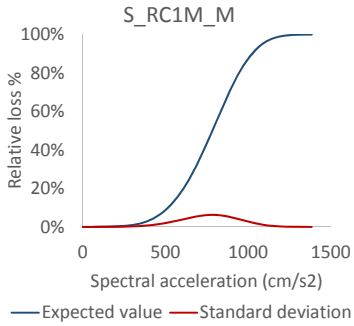

S_RC1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

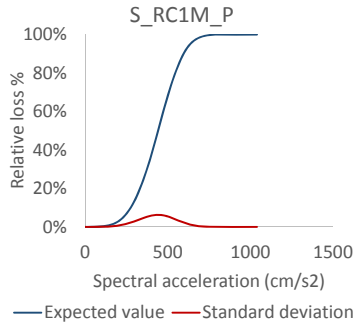

S_RC1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

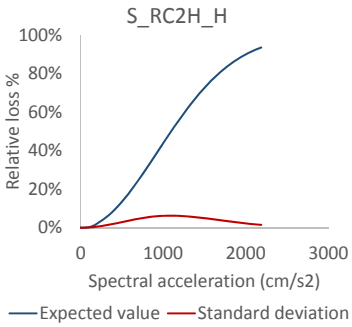

S_RC1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

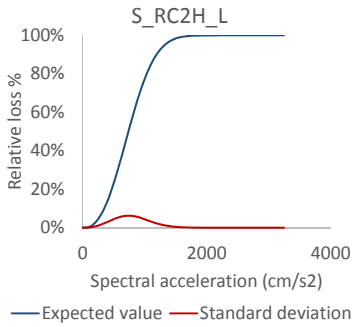

S_RC1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

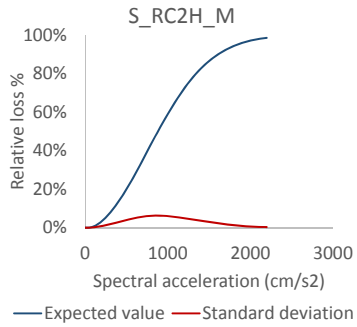

S_RC1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

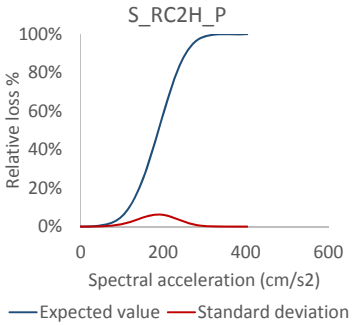

S_RC1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

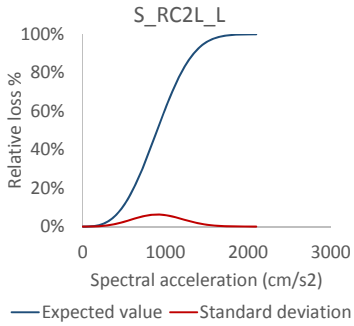

S_RC1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

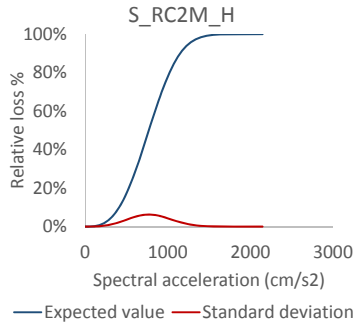

S_RC2H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

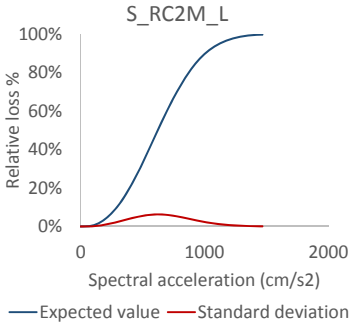

S_RC2H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

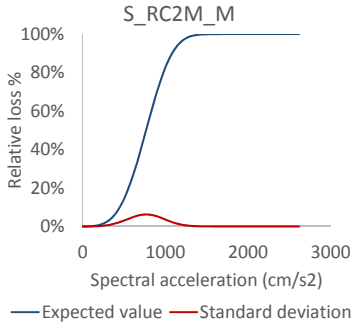

S_RC2H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

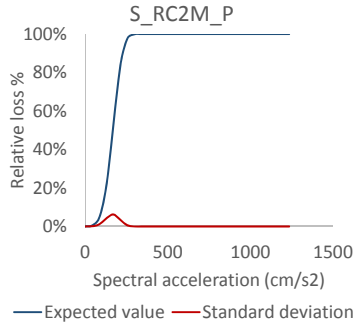

S_RC2H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Spectral acceleration (cm/s2)
Expected value
Standard deviation

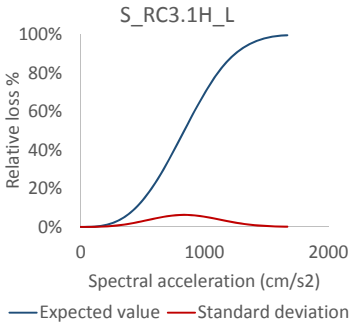

S_RC2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

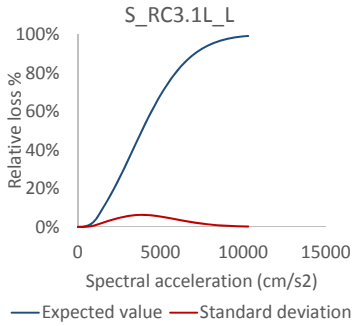

S_RC2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

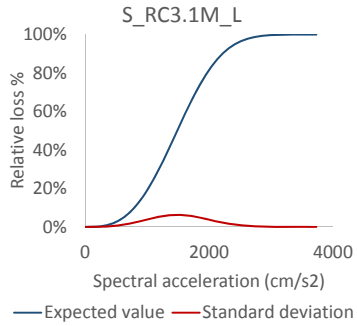

S_RC2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

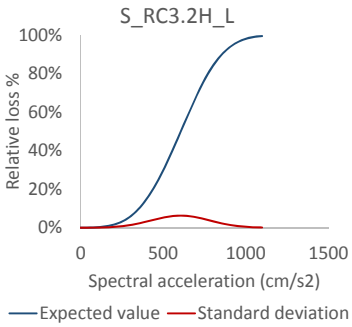

S_RC2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
3000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

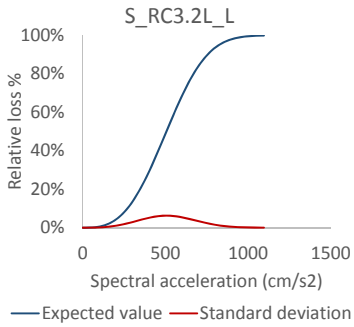

S_RC2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

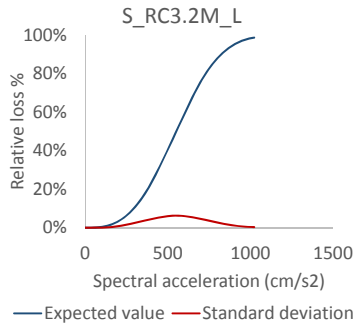

S_RC3.1H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

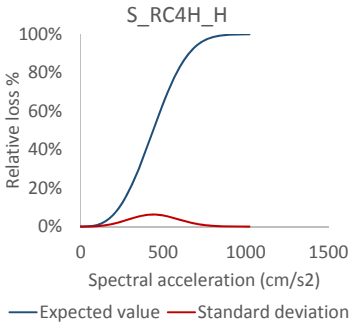

S_RC3.1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
5000
10000
15000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

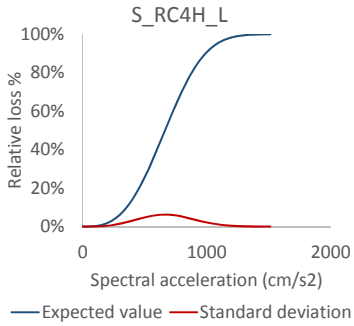

S_RC3.1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

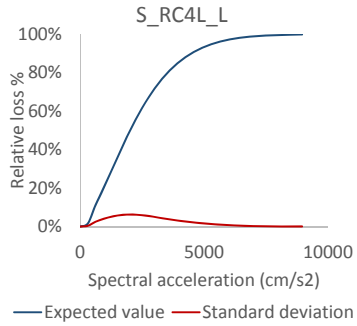

S_RC3.2H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

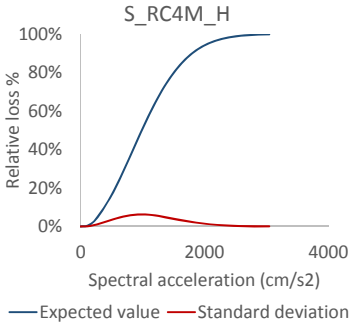

S_RC3.2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

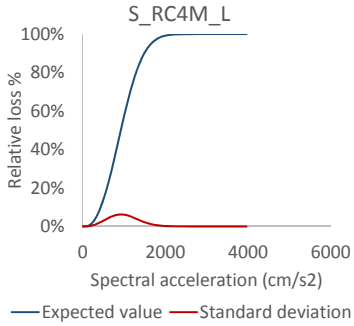

S_RC3.2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

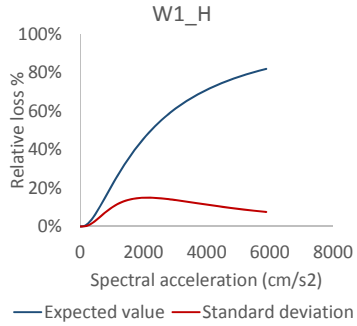

S_RC4H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
500
1000
1500
Spectral acceleration (cm/s2)
Expected value
Standard deviation

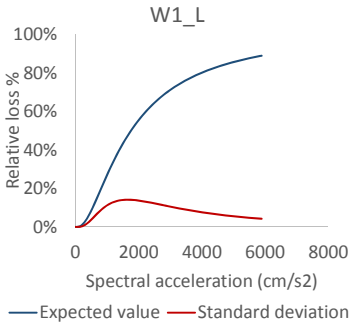

S_RC4H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
1000
2000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

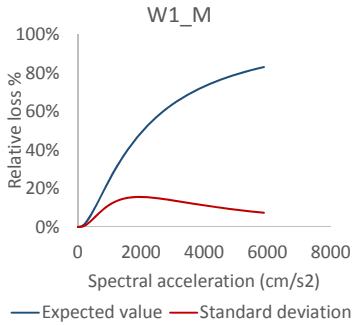

S_RC4L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
5000
10000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

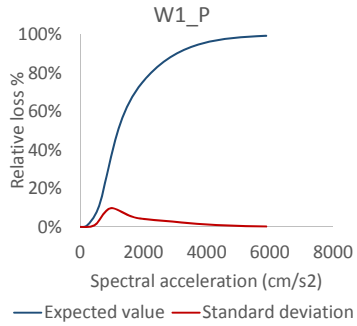

S_RC4M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

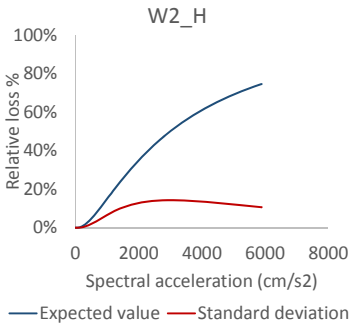

S_RC4M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

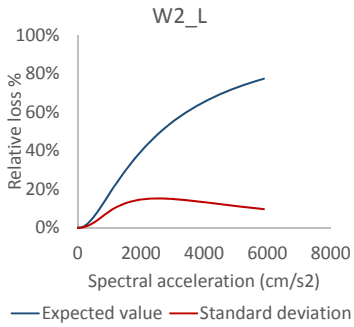

W1_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

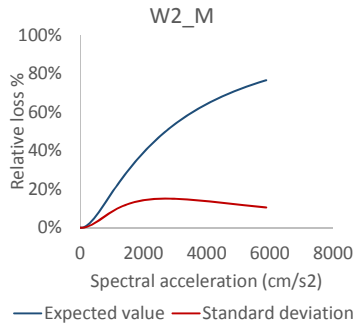

W1_L
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

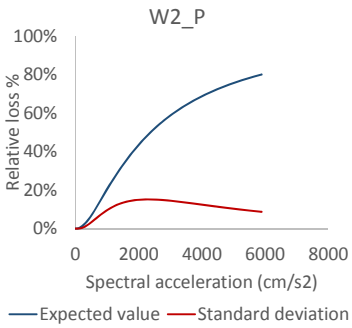

W1_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W1_P
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_H
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_L
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation


W2_P
100%
80%
60%
40%
20%
0%
Relative loss %
0
2000
4000
6000
8000
Spectral acceleration (cm/s2)
Expected value
Standard deviation

HAZUS Wind Curves

Table A14-2. Assignation matrix for HAZUS wind curves (Dev1 and Dev 21).

Structural system	Country development																	
	Dev1									Dev21								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A				AD1L_M	AD1L_M	AD1L_M	AD1L_L	AD1L_L	AD1L_L				AD1L_M	AD1L_M	AD1L_L	AD1L_L	AD1L_L	AD1L_L
A1																AD1L_M	AD1L_M	AD1L_M
A2							AD1L_H	AD1L_H	AD1L_H							AD1L_M	AD1L_M	AD1L_M
A3																		
A4													AD1L_M	AD1L_M	AD1L_L	AD1L_L	AD1L_L	AD1L_L
C				C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H				C1M_M	C1M_M	C1M_L	C1M_L	C1M_L	C1M_L
C1			C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H	C1M_H				C1M_M	C1M_M	C1M_L	C1M_L	C1M_L	C1M_L
C1H				C1H_H	C1H_H	C1H_H	C1H_H		C1H_H				C1H_M	C1H_M	C1H_M			
C1L				C1L_H	C1L_H	C1L_H	C1L_H	C1L_L	C1L_H				C1L_M	C1L_M	C1L_M			
C1M				C1M_H	C1M_H	C1M_H	C1M_H	C1M_L	C1M_H				C1M_M	C1M_M	C1M_M			
C2			C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H	C2M_H				C2M_M	C2M_M	C2M_L	C2M_L	C2M_L	C2M_L
C2L				C2L_M	C2L_M	C2L_M	C2L_L	C2L_L	C2L_L									
C3			C3M_H	C3M_H	C3M_H	C3M_H	C3M_H	C3M_H	C3M_H				C3M_M	C3M_M	C3M_L	C3M_M	C3M_M	C3M_M
C3L				C3L_M	C3L_M	C3L_M	C3L_L	C3L_L	C3L_L							C3L_L	C3L_L	C3L_L
C3M							C3M_L	C3M_L	C3M_L									
C4																C1M_L	C1M_L	
CH							C1H_L	C1H_L										
CL							C1L_L	C1L_L	C1L_L									C1L_L
CM							C1M_L	C1M_L	C1M_L									C1M_L
DS							URML_L	URML_L	URML_L				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
DS1																		
DS2							URML_L	URML_L	URML_L									
DS3				URML_M	URML_M	URML_M							URML_M	URML_M	URML_L			

Structural system	Country development																	
	Dev1									Dev21								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
DS4																		
INF				URML_M	URML_M	URML_M	URML_H	URML_H	URML_H				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
M													TA1L_M	TA1L_M	TA1L_L	TA1L_L	TA1L_L	TA1L_L
M2																TA1L_L	TA1L_L	TA1L_L
MH				MH_M	MH_M	MH_M	MH_L	MH_L	MH_L									
MS							URML_L	URML_L	URML_L									
PC									PC1L_L							PC1L_L	PC1L_L	PC1L_L
PC1				PC1L_M	PC1L_H	PC1L_H	PC1L_H	PC1L_H	PC1L_H				PC1L_M	PC1L_M	PC1L_L	PC1L_M	PC1L_M	PC1L_M
PC2													PC2M_M	PC2M_M	PC2M_L	PC2M_M	PC2M_M	PC2M_M
PC2L				PC2L_M	PC2L_M	PC2L_M	PC2L_L	PC2L_L	PC2L_L									
RE																		
RM				RM1M_H	RM1M_H	RM1M_H	RM1M_H	RM1M_H	RM1M_H				RM1M_M	RM1M_M	RM1M_L	RM1M_L	RM1M_L	RM1M_L
RM1							RM1L_L	RM1L_L	RM1L_L									
RM1L				RM1L_M	RM1L_M	RM1L_M	RM1L_L	RM1L_L	RM1L_L									
RM2			RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H	RM2M_H					RM2M_M	RM2M_L	RM2M_L	RM2M_L	RM2M_L
RM2H																		
RM2L				RM2L_H	RM2L_H	RM2L_H	RM2L_H	RM2L_L	RM2L_H				RM2L_M	RM2L_M	RM2L_M			
RM2M				RM2M_H	RM2M_H	RM2M_H	RM2M_H		RM2M_H				RM2M_M	RM2M_M	RM2M_M			
RS							URML_L	URML_L	URML_L							URML_L	URML_L	URML_L
RS1							URML_H	URML_H	URML_H							URML_M	URML_M	URML_M
RS2							URML_L	URML_L	URML_L							URML_L	URML_L	URML_L
RS3																		URML_L
RS4																		
RS5																		
S				S2M_H	S2M_H	S2M_H	S2M_H	S2M_H	S2M_H				S2M_M	S2M_M	S2M_L	S2M_L	S2M_L	S2M_L
S1			S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H	S1M_H							S1M_L	S1M_L	
S1H				S1H_H	S1H_H		S1H_H						S1H_M	S1H_M				

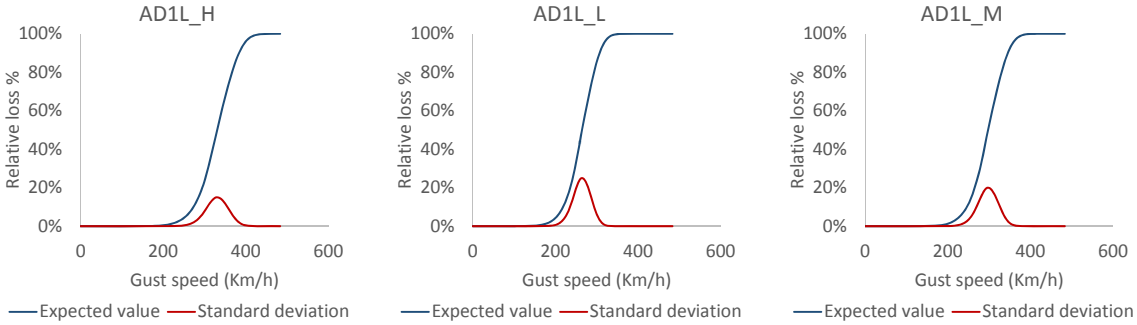
Structural system	Country development																		
	Dev1									Dev21									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
S1L				S1L_H	S1L_H	S1L_H	S1L_H	S1L_L	S1L_H				S1L_M	S1L_M	S1L_M			
S1M				S1M_H	S1M_H		S1M_H						S1M_M	S1M_M				
S2					S2M_H	S2M_H	S2M_H	S2M_H	S2M_H				S2M_M	S2M_M		S2M_L	S2M_L	
S2L				S2L_M	S2L_M	S2L_M	S2L_L	S2L_L	S2L_L									
S3				S3_H	S3_H	S3_H	S3_H	S3_H	S3_H				S3_M	S3_M	S3_M			
S4			S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H	S4M_H									
S4H				S4H_H	S4H_H	S4H_H	S4H_H		S4H_H				S4H_M	S4H_M	S4H_M			
S4L				S4L_M	S4L_H	S4L_H	S4L_L	S4L_L	S4L_H					S4L_M	S4L_M			
S4M				S4M_H	S4M_H	S4M_H	S4M_H		S4M_H				S4M_M	S4M_M	S4M_M			
S5			S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H	S5M_H				S5M_M	S5M_M		S5M_L	S5M_L	
S5L				S5L_M	S5L_M	S5L_M	S5L_L	S5L_L	S5L_L									
UCB				URML_H	URML_H	URML_H	URML_H	URML_H	URML_H				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
UFB				URML_H	URML_H	URML_H	URML_H	URML_H	URML_H				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
UFB1							URML_L	URML_L	URML_L				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
UFB2							URML_L	URML_L	URML_L							URML_M	URML_M	URML_M
UFB3				URML_M	URML_M	URML_H	URML_H	URML_H	URML_H				URML_M	URML_M	URML_L	URML_L	URML_L	URML_L
UFB4							URML_L	URML_L	URML_L							URML_M	URML_M	URML_M
UNK								URML_L										
W			W1_H	W1_H	W1_H	W1_H	W1_H	W1_H	W1_H				W1_M	W1_M	W1_L	W1_L	W1_L	W1_L
W1				W1_H	W1_H	W1_H	W1_H	W1_H	W1_H				W1_M	W1_M	W1_L	W1_L	W1_L	W1_L
W2				W2_M	W2_M	W2_M	W2_L	W2_L	W2_L							W2_L	W2_L	W2_L
W4													W1_M	W1_M	W1_L	W1_L	W1_L	W1_L

Table A14-2. Assignation matrix for HAZUS wind curves (Dev22 and Dev 3).

Structural system	Country development																	
	Dev22									Dev3								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A			AD1L_M	AD1L_M	AD1L_M	AD1L_M	AD1L_L	AD1L_P	AD1L_P				AD1L_L	AD1L_L	AD1L_P	AD1L_L	AD1L_P	AD1L_P
A1				AD1L_M	AD1L_M	AD1L_M	AD1L_M	AD1L_M	AD1L_M							AD1L_L	AD1L_P	AD1L_P
A2													AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_L	AD1L_L
A3																AD1L_L	AD1L_P	AD1L_P
A4																		
C			C1M_M	C1M_M	C1M_M	C1M_M	C1M_L	C1M_P	C1M_P				C1M_L	C1M_L	C1M_P	C1M_L	C1M_P	C1M_P
C1				C1M_M	C1M_M	C1M_M	C1M_L	C1M_P	C1M_P									
C1H																		
C1L																		
C1M																		
C2							C2M_L	C2M_P	C2M_P				C2M_L	C2M_L		C2M_L	C2M_L	C2M_L
C2L																		
C3				C3M_M	C3M_M	C3M_M	C3M_L	C3M_P	C3M_P				C3M_L	C3M_L	C3M_L	C3M_L	C3M_P	C3M_P
C3L							C3L_L	C3L_P	C3L_P							C3L_L	C3L_L	C3L_L
C3M																		
C4																		
CH																		
CL																		
CM																		
DS							URML_L	URML_P	URML_P				URML_L	URML_L	URML_L	URML_L	URML_L	URML_L
DS1							URML_L	URML_P	URML_M							URML_L	URML_L	URML_L
DS2																		

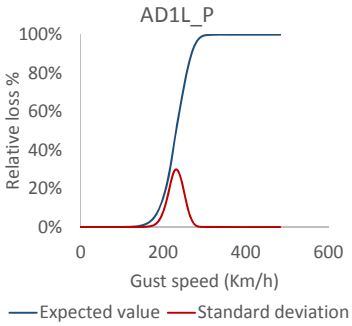
Structural system	Country development																		
	Dev22									Dev3									
	Hazard level									Hazard level									
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level									
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
DS3							URML_L	URML_P	URML_M				URML_L	URML_L	URML_L	URML_L	URML_L	URML_L
DS4							URML_L	URML_P	URML_P									
INF			URML_M	URML_M	URML_M	URML_M	URML_L	URML_P	URML_P				URML_L	URML_L	URML_P	URML_L	URML_P	URML_P
M				TA1L_M	TA1L_M	TA1L_M	TA1L_L	TA1L_P	TA1L_P				TA1L_L	TA1L_L	TA1L_P	TA1L_L	TA1L_P	TA1L_P
M2							TA1L_L	TA1L_P	TA1L_P							TA1L_L	TA1L_P	TA1L_P
MH																		
MS																		
PC				PC1L_M	PC1L_M		PC1L_M	PC1L_M	PC1L_P									
PC1							PC1L_M	PC1L_M	PC1L_M							PC1L_L	PC1L_L	PC1L_L
PC2							PC2M_M	PC2M_M	PC2M_M				PC2M_L	PC2M_L		PC2M_L	PC2M_L	PC2M_L
PC2L																		
RE													TA1L_L	TA1L_L	TA1L_P	TA1L_L	TA1L_P	TA1L_P
RM				RM1M_M	RM1M_M	RM1M_M	RM1M_M	RM1M_M	RM1M_M				RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L	RM1M_L
RM1																		
RM1L							RM1L_L	RM1L_P	RM1L_P									
RM2							RM2M_L	RM2M_P	RM2M_P							RM2M_L	RM2M_P	RM2M_P
RM2H							RM2H_L	RM2H_P										
RM2L																		
RM2M																		
RS			URML_M	URML_M	URML_M	URML_M	URML_L	URML_P	URML_P				URML_L	URML_L	URML_P	URML_L	URML_P	URML_P
RS1							URML_L	URML_P	URML_P				URML_L	URML_L	URML_L	URML_L	URML_P	URML_P
RS2				URML_M	URML_M	URML_M	URML_L	URML_P	URML_P				URML_L	URML_L	URML_L	URML_L	URML_P	URML_P
RS3				URML_M	URML_M	URML_M	URML_L	URML_P	URML_P							URML_L	URML_P	URML_P
RS4				URML_M	URML_M	URML_M	URML_L	URML_P	URML_M							URML_L	URML_P	URML_P
RS5							URML_L	URML_P	URML_P							URML_L	URML_P	URML_P
S				S2M_M	S2M_M	S2M_M	S2M_M	S2M_M	S2M_M							S2M_L	S2M_L	S2M_L
S1							S1M_L	S1M_P										

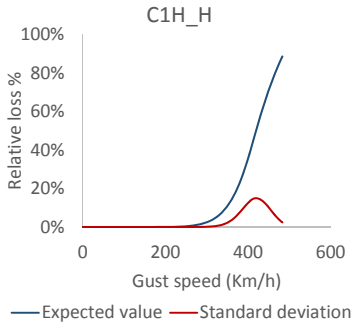
Structural system	Country development																	
	Dev22									Dev3								
	Hazard level									Hazard level								
	Hz1			Hz2			Hz3			Hz1			Hz2			Hz3		
	Complexity level									Complexity level								
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
S1H																		
S1L																		
S1M																		
S2							S2M_M	S2M_M					S2M_L	S2M_L		S2M_L	S2M_L	
S2L																		
S3				S3_M	S3_M	S3_M	S3_M	S3_M	S3_M									
S4																		
S4H																		
S4L																		
S4M																		
S5							S5M_M	S5M_M	S5M_M				S5M_L	S5M_L	S5M_L	S5M_L	S5M_L	S5M_L
S5L																		
UCB			URML_M	URML_M	URML_M	URML_M	URML_L	URML_P	URML_P				URML_L	URML_L	URML_P	URML_L	URML_P	URML_P
UFB			URML_M	URML_M	URML_M	URML_M	URML_L	URML_P	URML_P				URML_L	URML_L	URML_P	URML_L	URML_P	URML_P
UFB1							URML_M	URML_M	URML_M				URML_L	URML_L	URML_L	URML_L	URML_L	URML_L
UFB2				URML_M	URML_M	URML_M	URML_M	URML_M	URML_M				URML_L	URML_L	URML_L	URML_L	URML_L	URML_L
UFB3							URML_L	URML_P	URML_P				URML_L	URML_L	URML_L	URML_L	URML_P	URML_P
UFB4				URML_M	URML_M	URML_M	URML_M	URML_M	URML_M				URML_L	URML_L	URML_L	URML_L	URML_L	URML_L
UNK																		
W			W1_M	W1_M	W1_M	W1_M	W1_L	W1_P	W1_P				W1_L	W1_L	W1_P	W1_L	W1_P	W1_P
W1				W1_M	W1_M	W1_M	W1_L	W1_P	W1_P				W1_L	W1_L	W1_L	W1_L	W1_P	W1_P
W2				W2_M	W2_M	W2_M	W2_L	W2_P	W2_P				W2_L	W2_L	W2_L	W2_L	W2_P	W2_P
W4							W1_M	W1_M	W1_M									

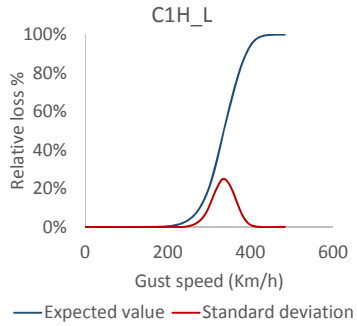

AD1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

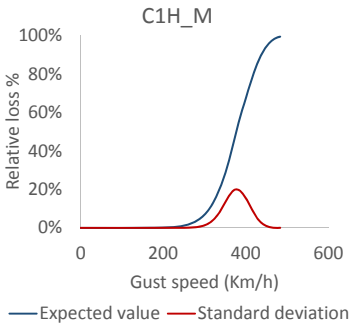
AD1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

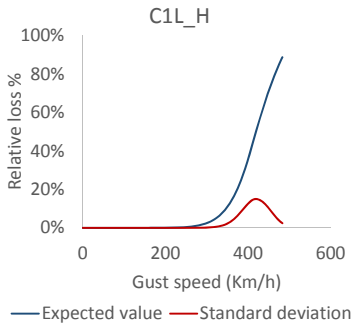
AD1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

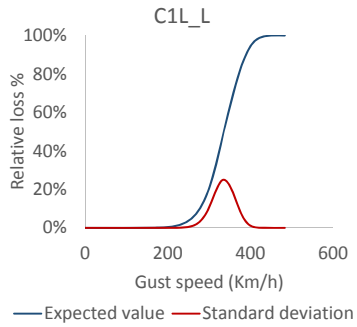

AD1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

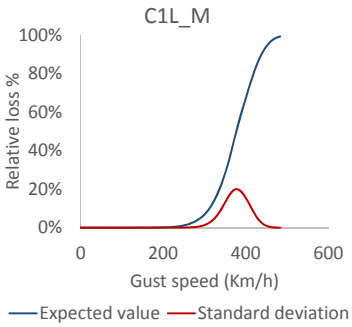

C1H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

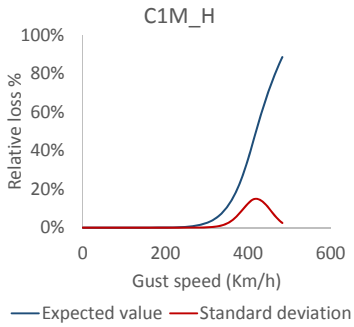

C1H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

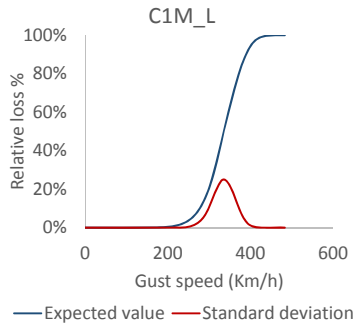

C1H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

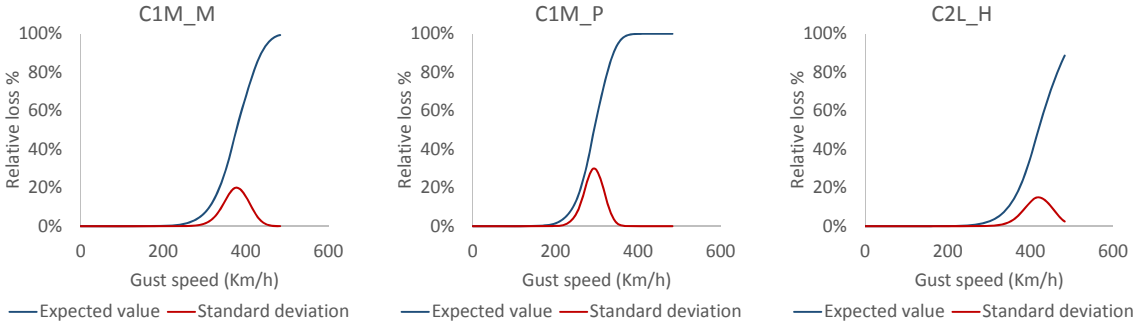

C1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


C1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


C1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

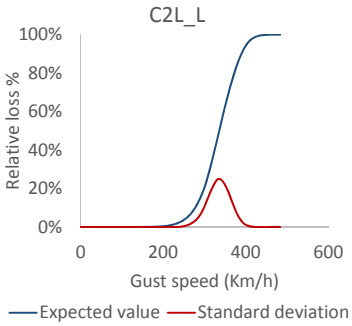

C1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

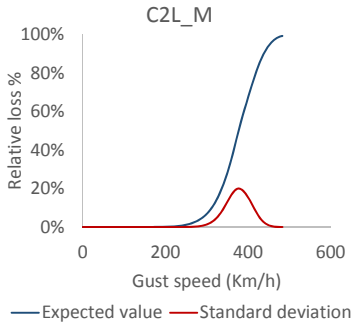

C1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

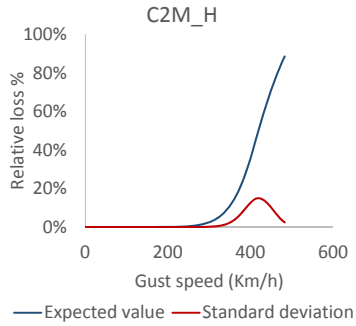

C1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

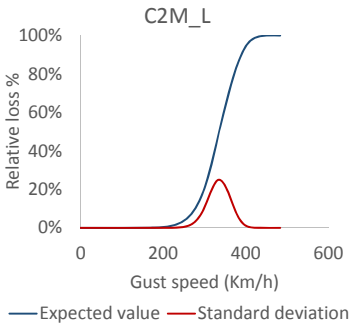
C1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

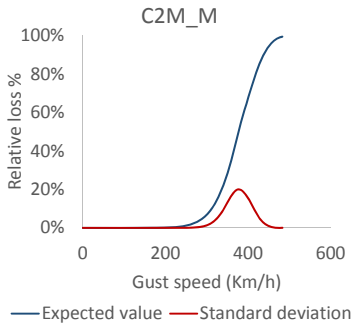
C2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

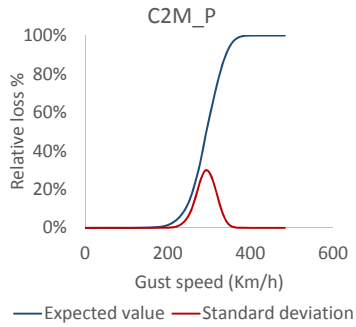

C2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

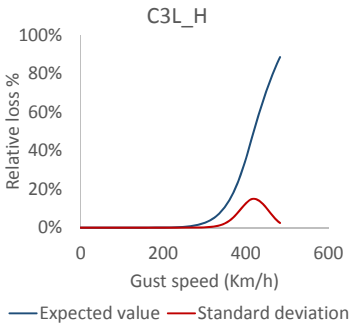

C2L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

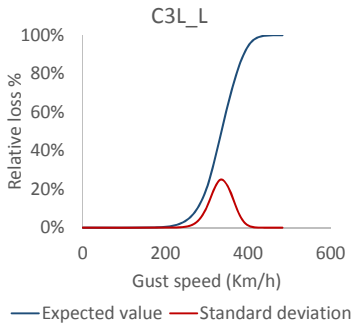

C2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

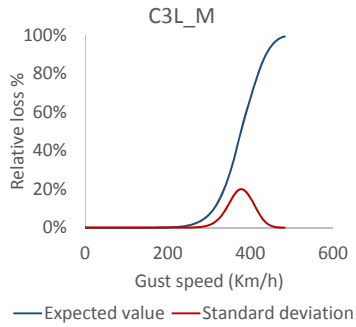

C2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

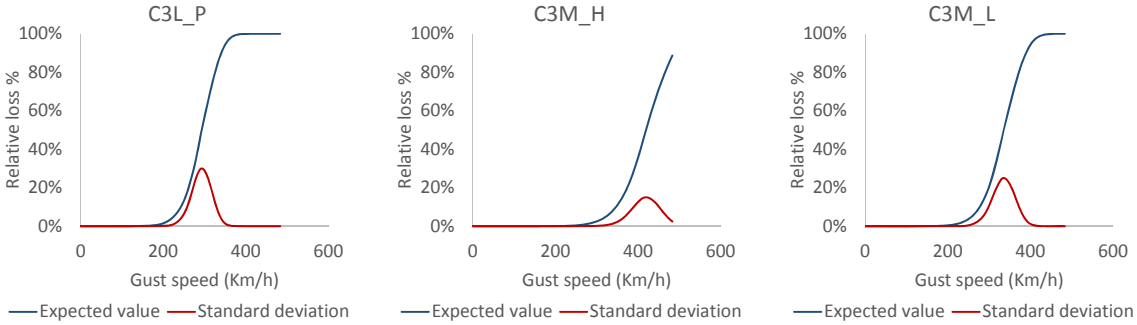

C2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

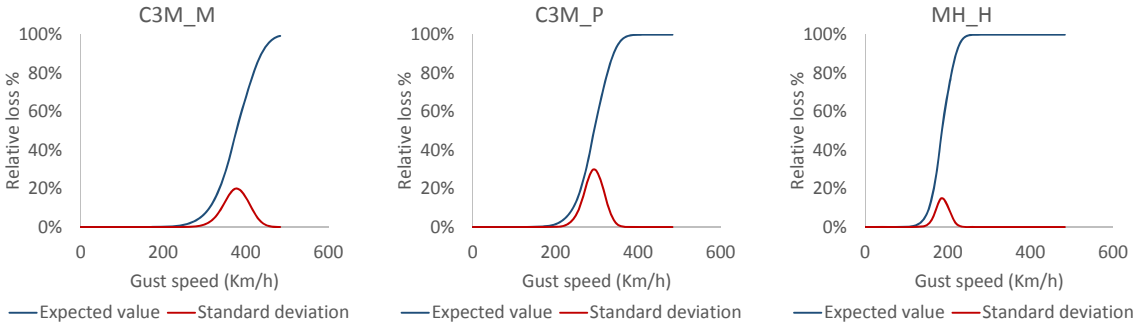

C2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

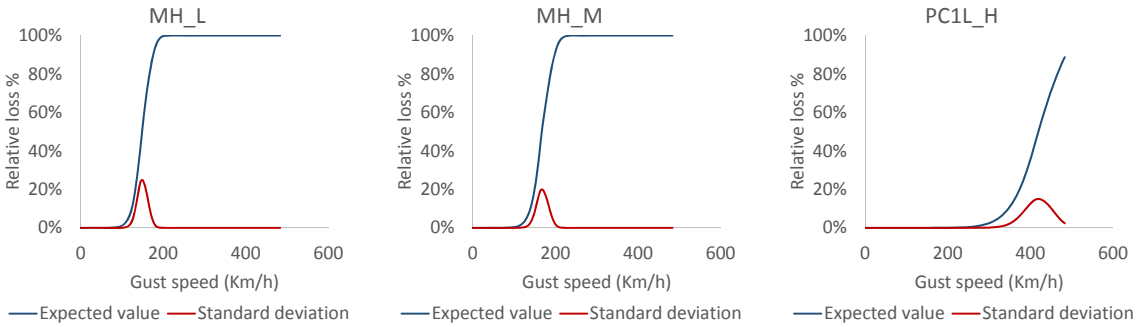

C3L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

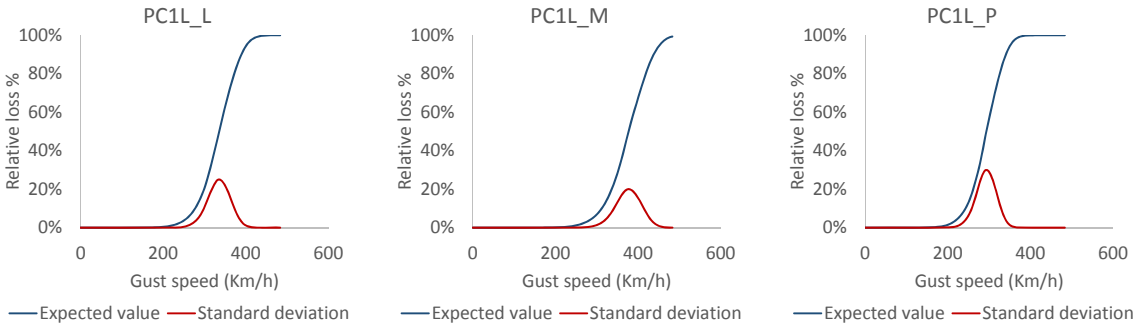

C3L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

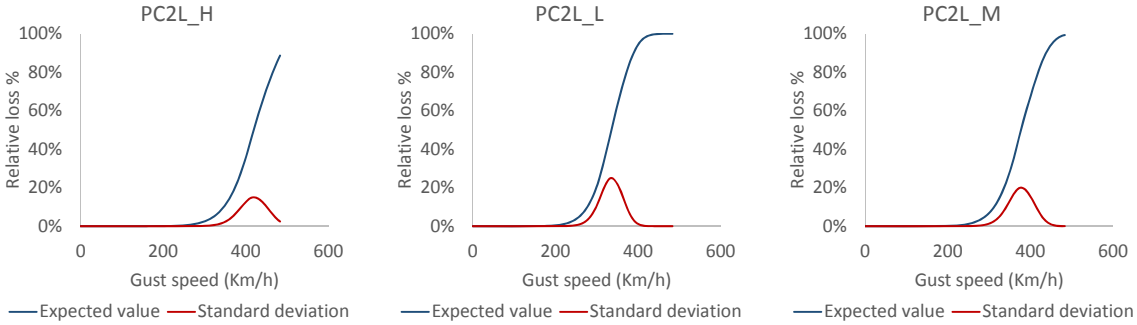

C3L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


C3L_P
C3M_H
C3M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


C3M_M
C3M_P
MH_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

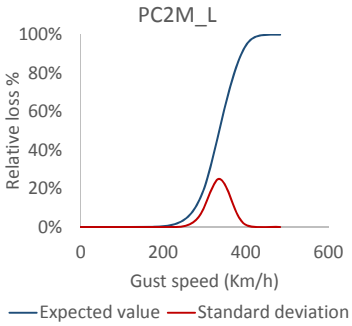

MH_L
MH_M
PC1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

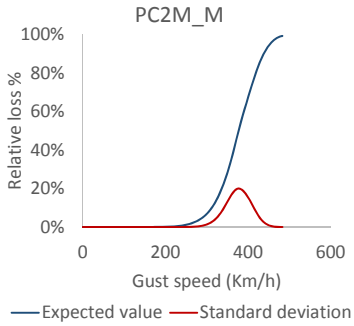

PC1L_L
PC1L_M
PC1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

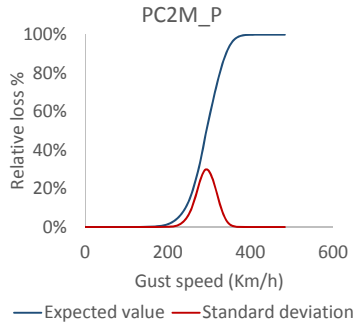

PC2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

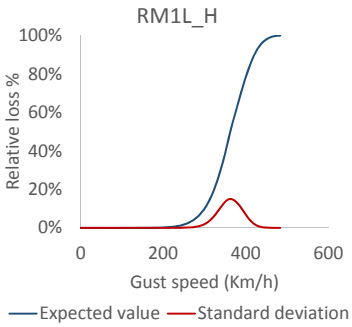
PC2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

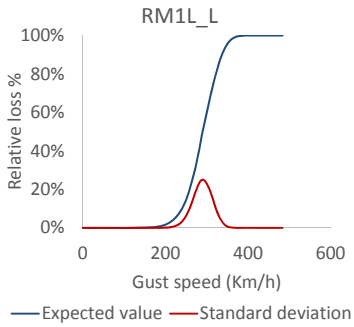
PC2L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

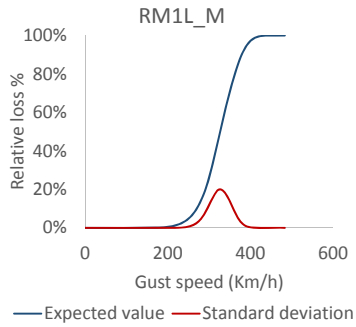

PC2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

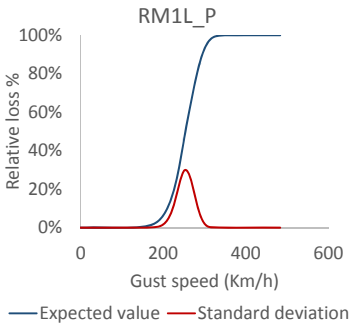

PC2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

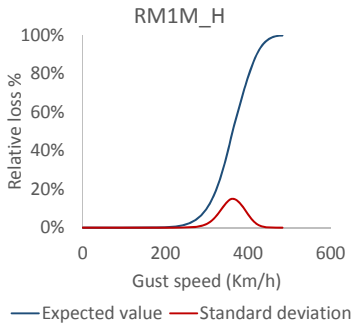

PC2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

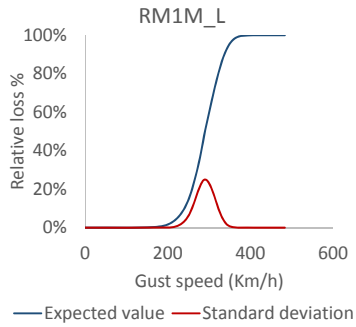

RM1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

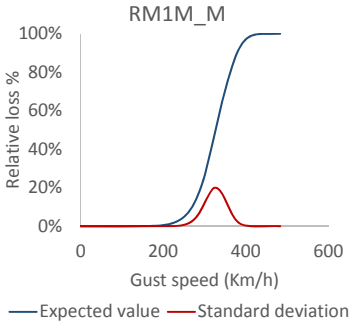

RM1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

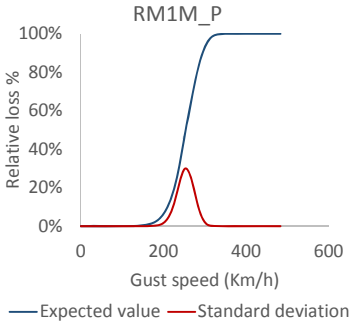

RM1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

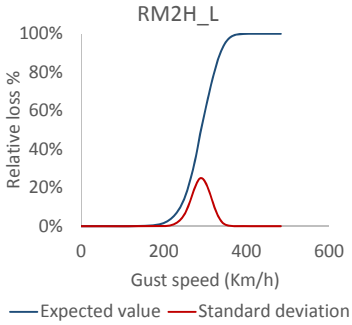

RM1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

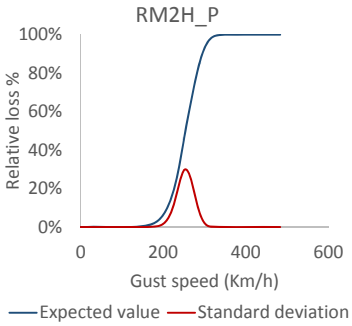

RM1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

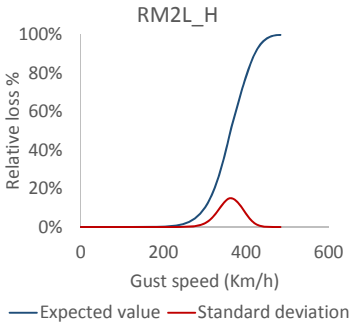

RM1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

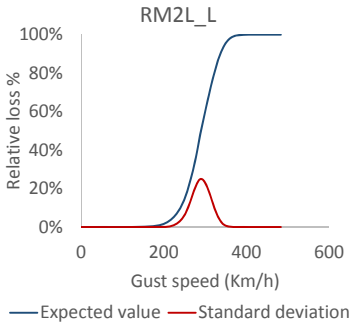

RM1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

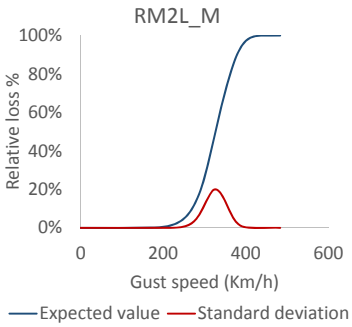

RM1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

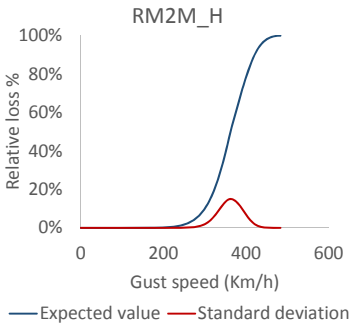

RM2H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

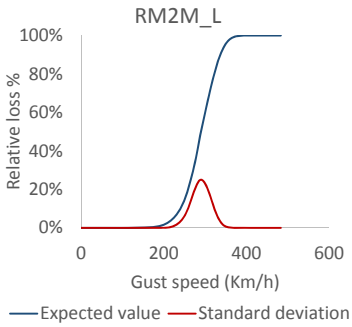

RM2H_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

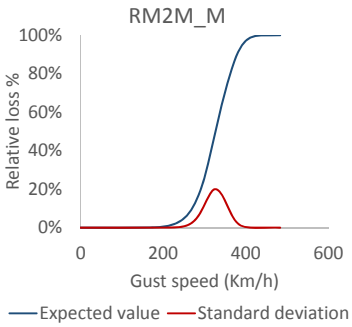

RM2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

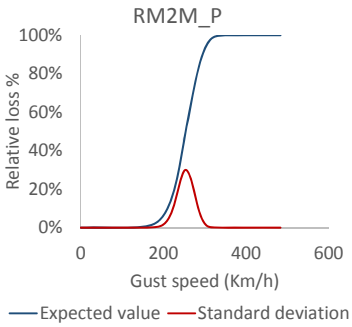

RM2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

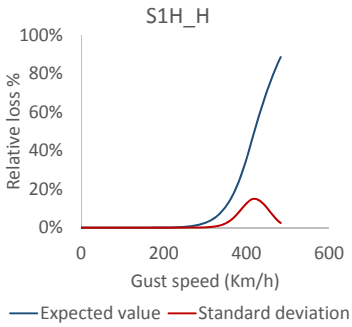

RM2L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

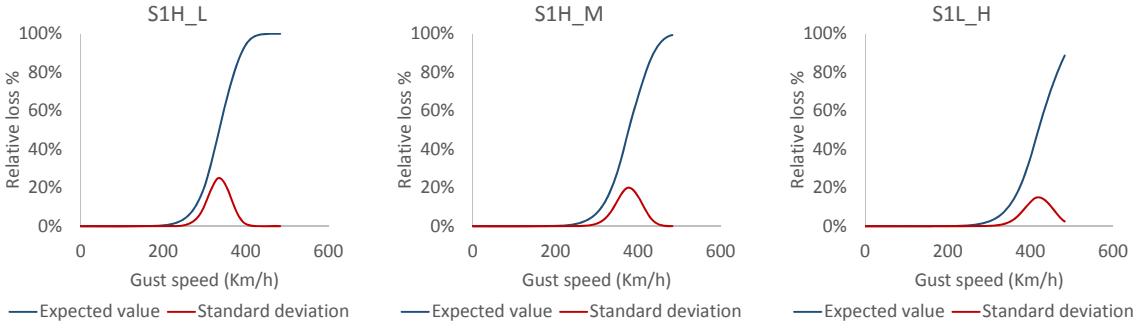

RM2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


RM2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


RM2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

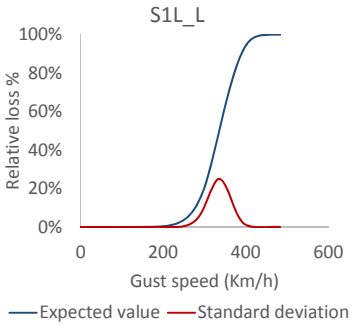

RM2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

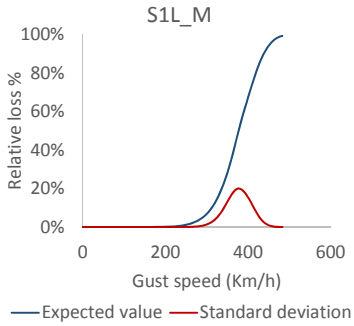

S1H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

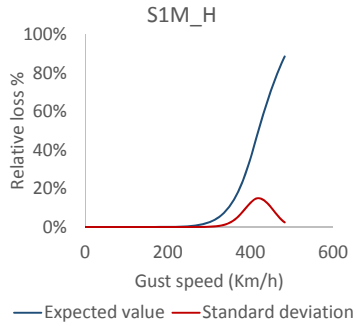

S1H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

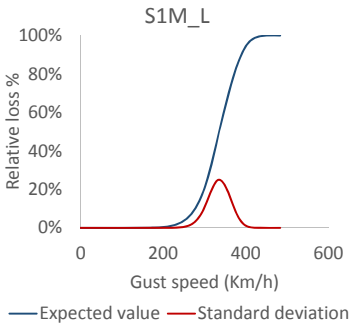
S1H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

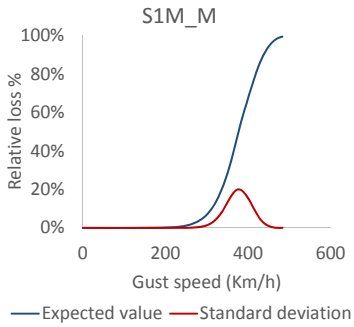
S1L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

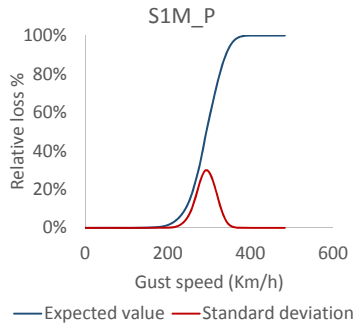

S1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

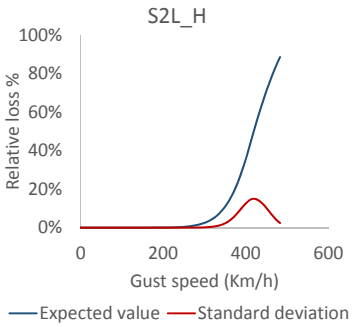

S1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

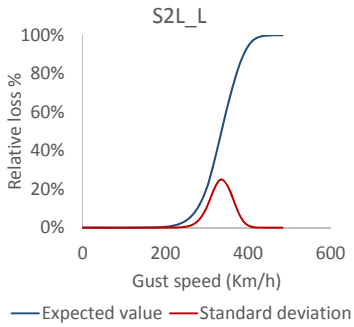

S1M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

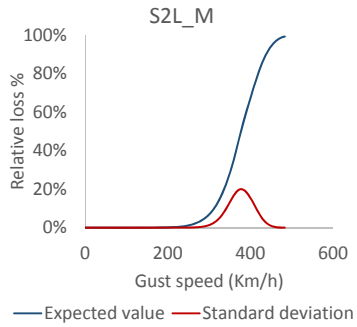

S1M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

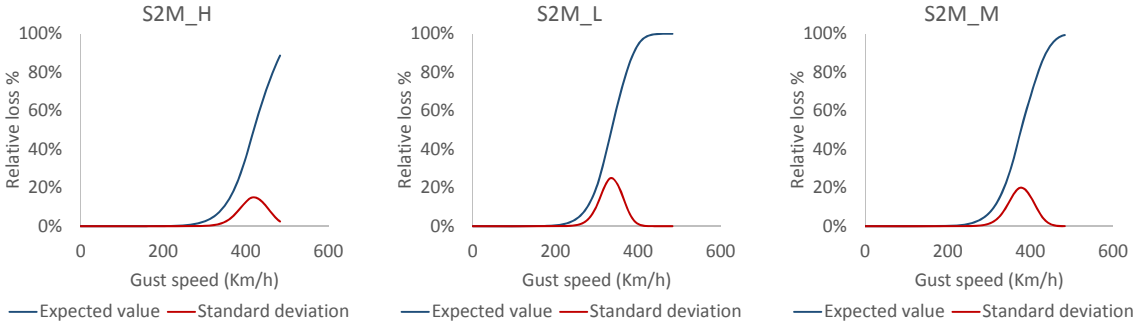

S1M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S1M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S2L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

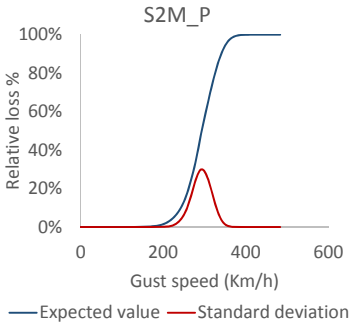

S2L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

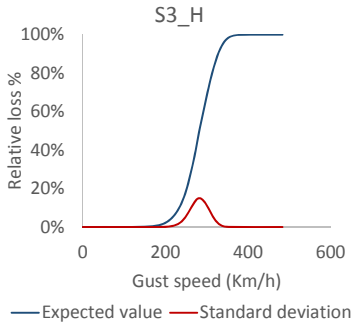

S2L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

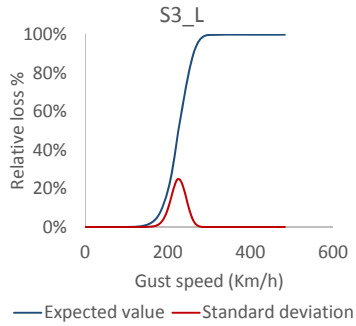

S2M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

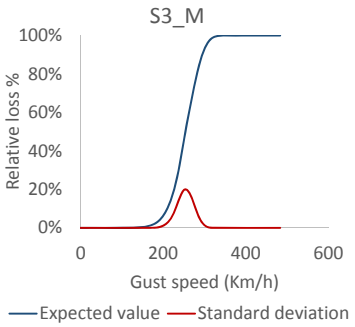
S2M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

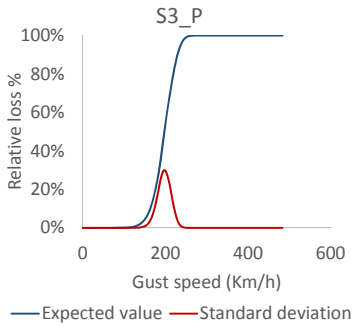
S2M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

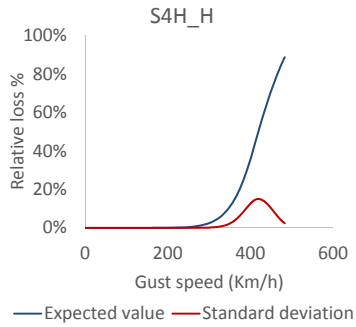

S2M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

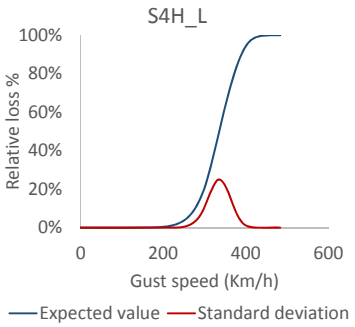

S3_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

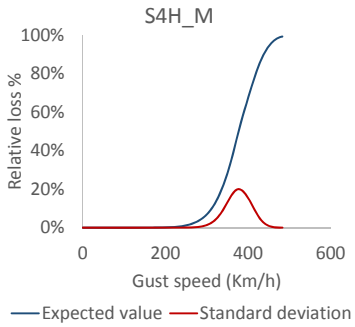

S3_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

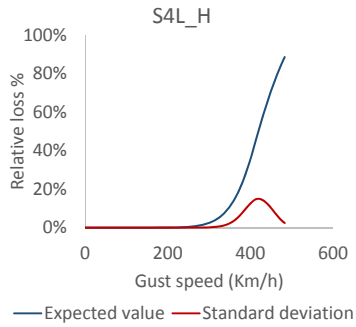

S3_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

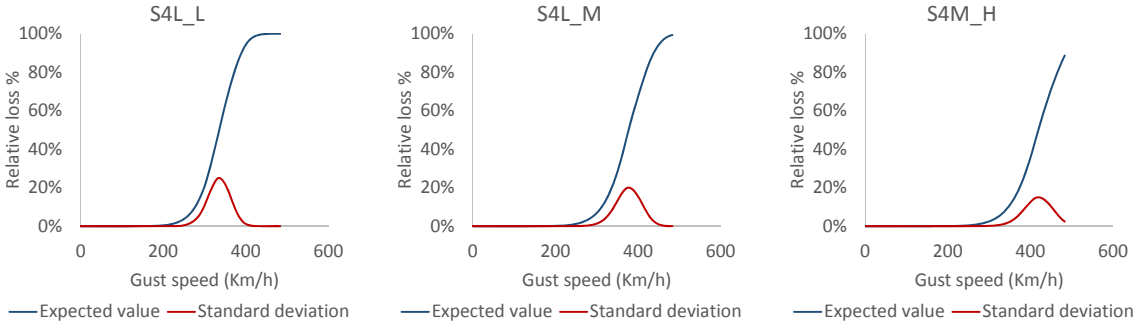

S3_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S4H_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S4H_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

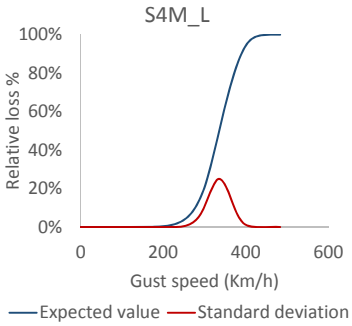

S4H_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

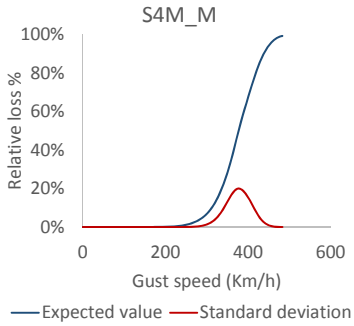

S4L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

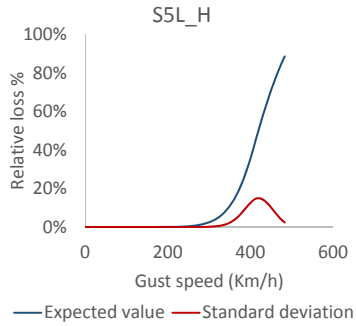

S4L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

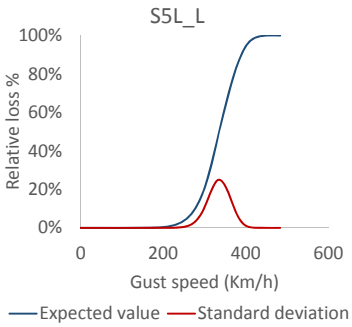
S4L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

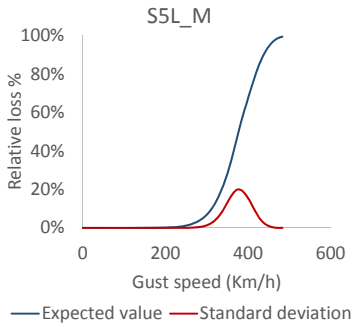
S4M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

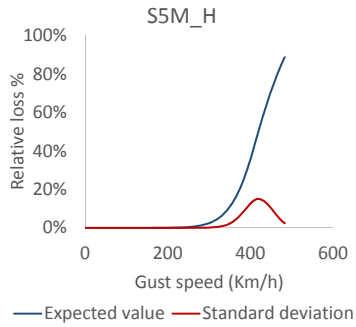

S4M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

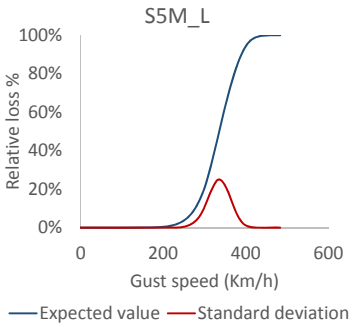

S4M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

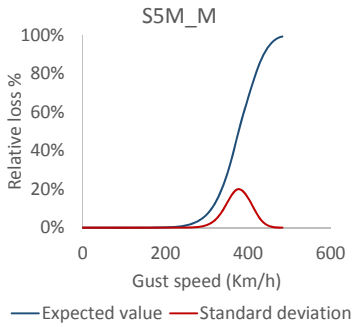

S5L_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

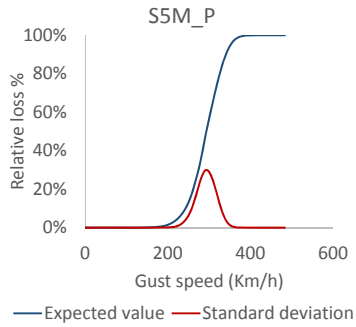

S5L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

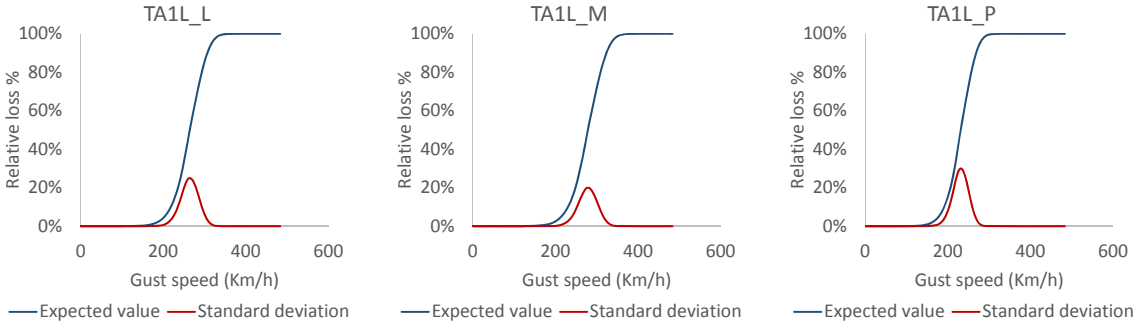

S5L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S5M_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


S5M_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

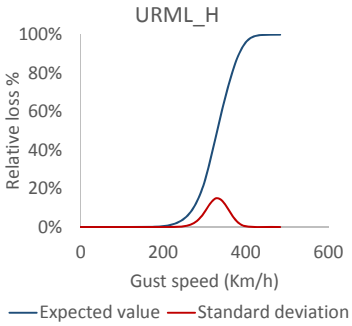

S5M_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

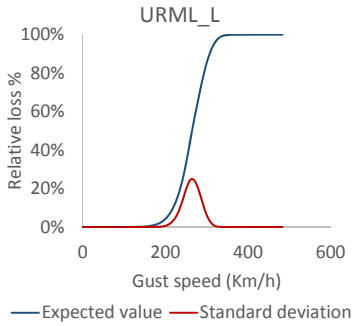

S5M_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

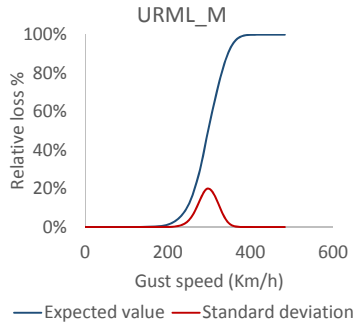

TA1L_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

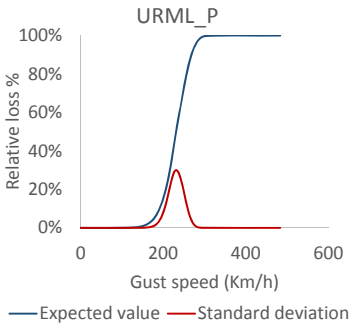
TA1L_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

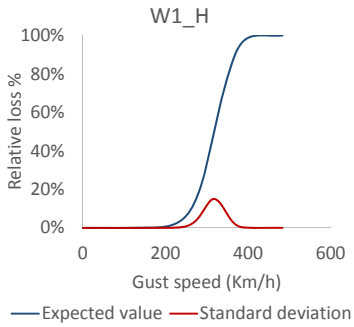
TA1L_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

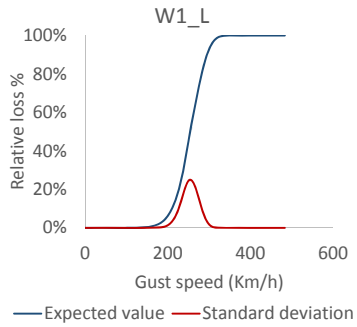

URML_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

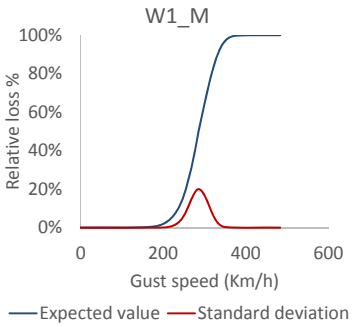

URML_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

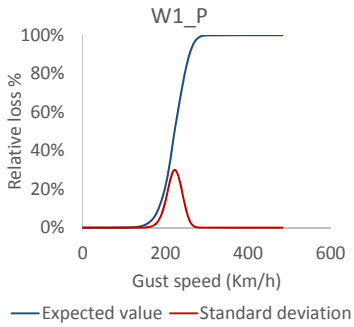

URML_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

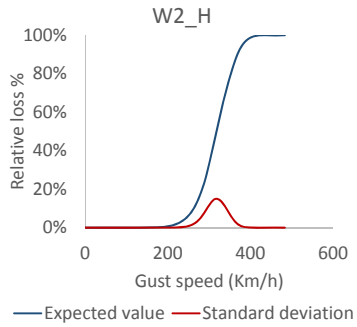

URML_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

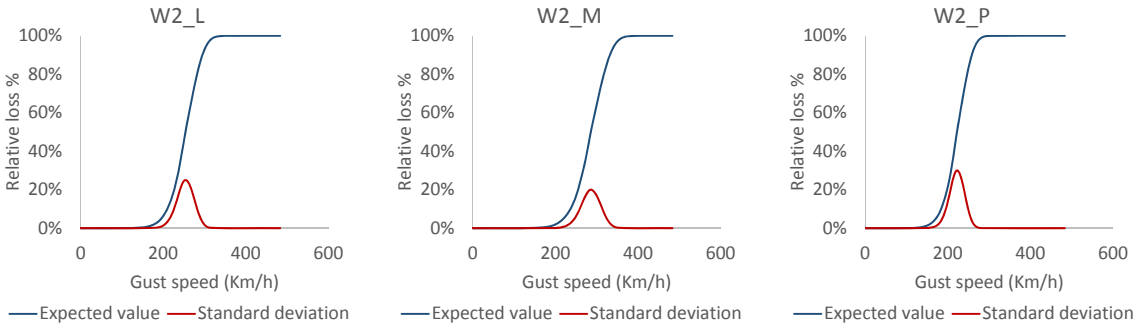

W1_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


W1_L
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


W1_M
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


W1_P
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation


W2_H
Relative loss %
100%
80%
60%
40%
20%
0%
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

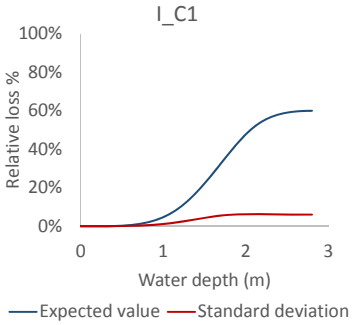

W2_L
100%
80%
60%
40%
20%
0%
Relative loss %
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation
W2_M
100%
80%
60%
40%
20%
0%
Relative loss %
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation
W2_P
100%
80%
60%
40%
20%
0%
Relative loss %
0
200
400
600
Gust speed (Km/h)
Expected value
Standard deviation

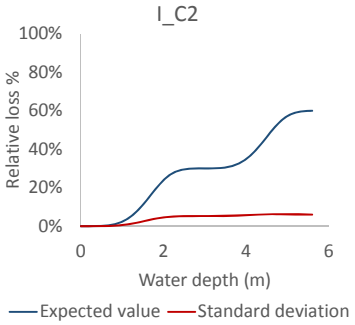
CAPRA Flood Curves

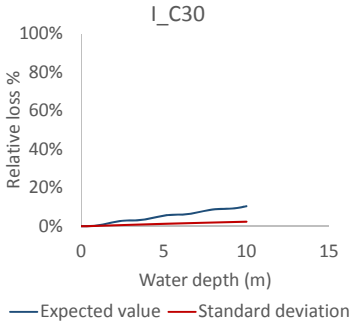
Table A14-2. Assignation matrix for CAPRA flood curves.

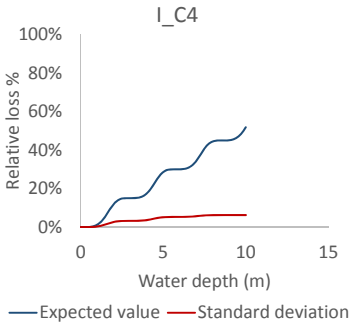
Structural system	Country development											
	Dev1			Dev21			Dev22			Dev3		
	Complexity level			Complexity level			Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	I_T1	I_T1	I_T1	I_T1	I_C1	I_C1	I_C1	I_C1	I_C1	I_W1	I_W1	I_W1
A1				I_T1	I_T1	I_T1	I_T1	I_T1	I_T1	I_C1	I_C1	I_C1
A2	I_T1	I_T1	I_T1	I_T1	I_T1	I_T1				I_T1	I_T1	I_T1
A3										I_W1	I_W1	I_W1
A4				I_T1	I_T1	I_T1						
C	I_C1	I_C1	I_C1	I_W1	I_M1	I_M1	I_C1	I_C1	I_C1	I_W1	I_T1	I_T1
C1	I_C1	I_C1	I_C1	I_W1	I_W1	I_W1	I_C1	I_C1	I_M1			
C1H	I_C30	I_C30	I_C30	I_C30	I_C30	I_C30						
C1L	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1						
C1M	I_C5	I_C5	I_C5	I_C5	I_C5	I_C5						
C2	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_M1	I_M1	I_C1	I_C1	I_C1	I_C1
C2L	I_C1	I_C1	I_C1									
C3	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_T1	I_M1	I_T1
C3L	I_C1	I_C1	I_C1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_C1	I_C1	I_C1
C3M	I_C5	I_C5	I_C5									
C4				I_C1	I_C1							
CH	I_C30	I_C30										
CL	I_C1	I_C1	I_C1			I_C1						
CM	I_C5	I_C5	I_C5			I_C5						
DS	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
DS1							I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
DS2	I_M1	I_M1	I_M1									
DS3	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
DS4							I_M1	I_M1	I_M1			
INF	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1	I_M1	I_M1	I_M1	I_M1	I_C1	I_M1
M				I_M1	I_M1	I_W1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
M2				I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
MH	I_W1	I_W1	I_W1									
MS	I_M1	I_M1	I_M1									
PC			I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1			
PC1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1
PC2				I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1
PC2L	I_C1	I_C1	I_C1									
RE										I_M1	I_M1	I_M1
RM	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2
RM1	I_M1	I_M1	I_M1									
RM1L	I_M1	I_M1	I_M1				I_M1	I_M1	I_M1			
RM2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M2	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
RM2H							I_M5	I_M5				
RM2L	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1						
RM2M	I_M5	I_M5	I_M5	I_M5	I_M5	I_M5						
RS	I_M1	I_M1	I_M1	I_M1	I_M1	I_W1	I_M1	I_M2	I_M2	I_W1	I_W1	I_W1
RS1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_C1	I_C1	I_W1	I_M1	I_M1	I_M1

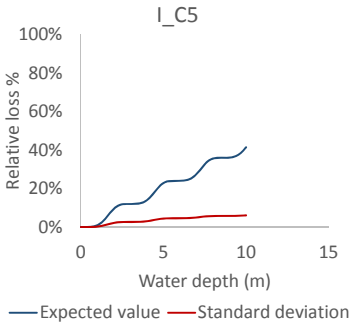
Structural system	Country development											
	Dev1			Dev21			Dev22			Dev3		
	Complexity level			Complexity level			Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
RS2	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_W1	I_M1	I_W1	I_W1	I_W1	I_W1
RS3						I_M1	I_W1	I_C1	I_C1	I_M1	I_M1	I_M1
RS4							I_M1	I_W1	I_M1	I_M1	I_M1	I_M1
RS5							I_M1	I_M1	I_M1	I_C1	I_M1	I_M1
S	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1
S1	I_C1	I_C1	I_C1	I_C1	I_C1		I_C1	I_C1				
S1H	I_C30	I_C30		I_C30	I_C30							
S1L	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1						
S1M	I_C5	I_C5		I_C5	I_C5							
S2	I_C1	I_C1	I_C1	I_C1	I_C1		I_C1	I_C1		I_C1	I_C1	
S2L	I_C1	I_C1	I_C1									
S3	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1	I_C1			
S4	I_C1	I_C1	I_C1									
S4H	I_C30	I_C30	I_C30	I_C30	I_C30	I_C30						
S4L	I_C1	I_C1	I_C1		I_C1	I_C1						
S4M	I_C5	I_C5	I_C5	I_C5	I_C5	I_C5						
S5	I_C1	I_C1	I_C1	I_C1	I_C1		I_C1	I_C1	I_C1	I_C1	I_C1	I_C1
S5L	I_C1	I_C1	I_C1									
UCB	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_T1	I_T1	I_T1	I_M1	I_M1	I_M1
UFB	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M2	I_M1
UFB1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
UFB2	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
UFB3	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_C1	I_C1
UFB4	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1	I_M1
UNK		I_W1										
W	I_W1	I_W1	I_W1	I_M1	I_M1	I_M1	I_C1	I_C1	I_C1	I_M1	I_M1	I_M1
W1	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1	I_C1	I_C1	I_C1	I_T1	I_T1	I_T1
W2	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1	I_C1	I_C1	I_C1	I_T1	I_T1	I_T1
W4				I_W1	I_W1	I_W1	I_W1	I_W1	I_W1			

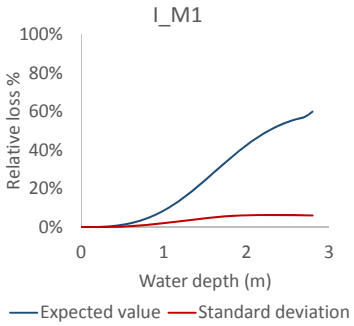

I_C1
Relative loss %
100%
80%
60%
40%
20%
0%
0
1
2
3
Water depth (m)
Expected value
Standard deviation

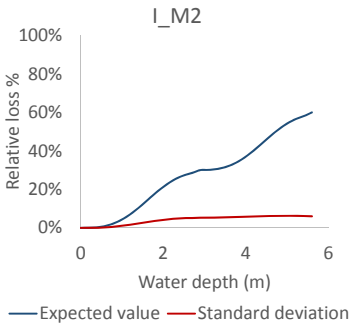

I_C2
Relative loss %
100%
80%
60%
40%
20%
0%
0
2
4
6
Water depth (m)
Expected value
Standard deviation

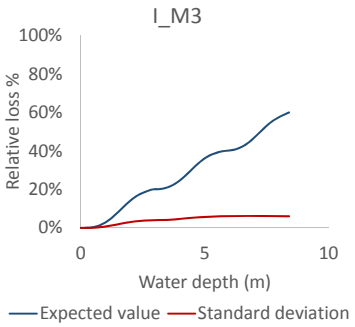

I_C30
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
15
Water depth (m)
Expected value
Standard deviation

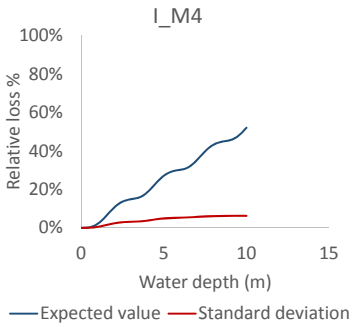

I_C4
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
15
Water depth (m)
Expected value
Standard deviation

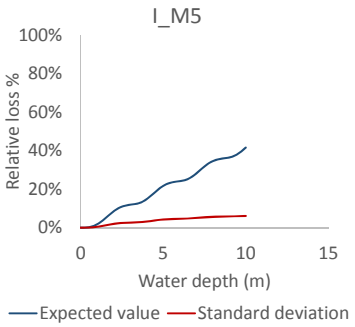

I_C5
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
15
Water depth (m)
Expected value
Standard deviation

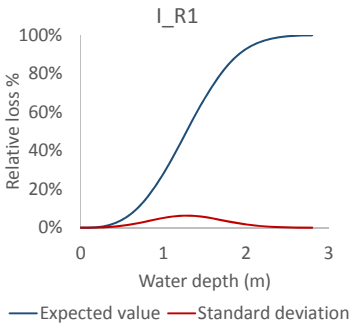

I_M1
Relative loss %
100%
80%
60%
40%
20%
0%
0
1
2
3
Water depth (m)
Expected value
Standard deviation

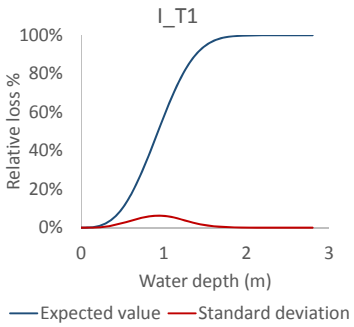

I_M2
Relative loss %
100%
80%
60%
40%
20%
0%
0
2
4
6
Water depth (m)
Expected value
Standard deviation

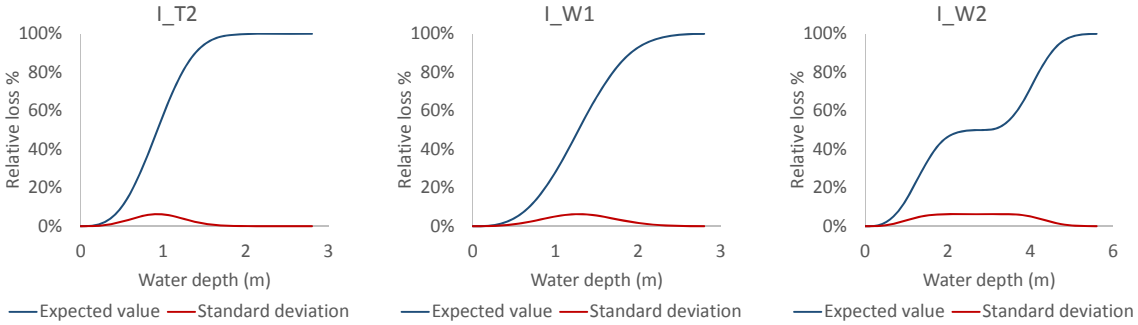

I_M3
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation


I_M4
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
15
Water depth (m)
Expected value
Standard deviation


I_M5
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
15
Water depth (m)
Expected value
Standard deviation


I_R1
Relative loss %
100%
80%
60%
40%
20%
0%
0
1
2
3
Water depth (m)
Expected value
Standard deviation


I_T1
Relative loss %
100%
80%
60%
40%
20%
0%
0
1
2
3
Water depth (m)
Expected value
Standard deviation


I_T2
100%
80%
60%
40%
20%
0%
Relative loss %
0
1
2
3
Water depth (m)
Expected value
Standard deviation
I_W1
100%
80%
60%
40%
20%
0%
Relative loss %
0
1
2
3
Water depth (m)
Expected value
Standard deviation
I_W2
100%
80%
60%
40%
20%
0%
Relative loss %
0
2
4
6
Water depth (m)
Expected value
Standard deviation

Geoscience Australia Flood Curves

Table A14-2. Assignation matrix for GA flood curves (Dev 1 and Dev 21).

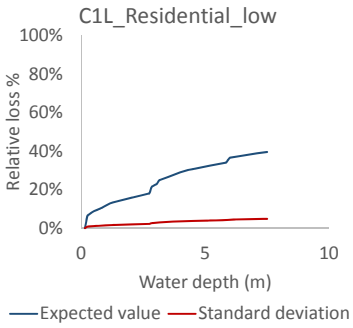
Structural system	Country development					
	Dev1			Dev21		
	Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A						
A1				I_T1	I_T1	I_T1
A2	I_T1	I_T1	I_T1	I_T1	I_T1	I_T1
C	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C1	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low			
C1H	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C1L	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C1M	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C2	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C3	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C3L						
DS1						
DS3						
INF	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
PC						
PC1	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low
PC2				PC2L_Residential_low	PC2L_Residential_low	PC2L_Residential_low
RM	RM1L_Residential_low	RM1L_Residential_low	RM1L_Residential_low			
RM2	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low			
RM2L	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low
RM2M	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low	RM2L_Residential_low
RS						
RS1	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
RS2						
RS3						
S	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low			
S1	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low			
S1H	S1L_Residential_low	S1L_Residential_low		S1L_Residential_low	S1L_Residential_low	
S1L	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low
S1M	S1L_Residential_low	S1L_Residential_low		S1L_Residential_low	S1L_Residential_low	
S2	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low			
S3	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low
S4	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low			
S4H	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low
S4L		S4L_Residential_low	S4L_Residential_low		S4L_Residential_low	S4L_Residential_low
S4M	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low	S4L_Residential_low
S5	S5L_Residential_low	S5L_Residential_low	S5L_Residential_low			
UCB	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB1						
UFB2				URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB3	URML_Residential_low	URML_Residential_low	URML_Residential_low			
UFB4				URML_Residential_low	URML_Residential_low	URML_Residential_low

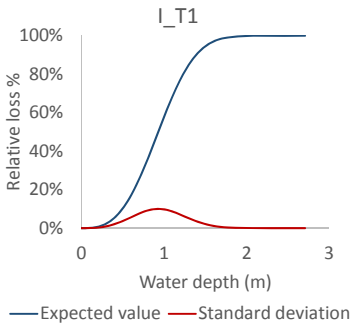
Structural system	Country development					
	Dev1			Dev21		
	Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
W	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
W1	I_W1	I_W1	I_W1			
W2						
W4						

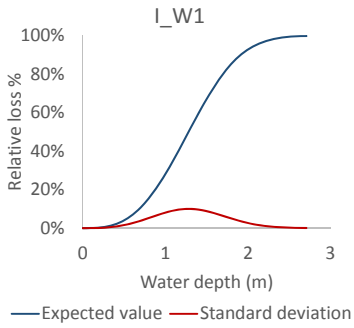
Table A14-2. Assignation matrix for GA flood curves (Dev 22 and Dev 3).

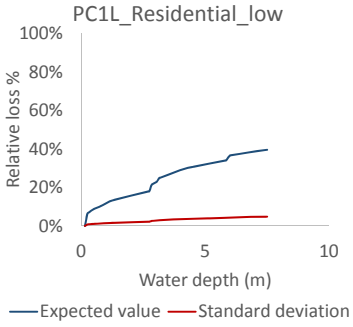
Structural system	Country development					
	Dev22			Dev3		
	Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
A	I_T1	I_T1	I_T1	I_T1	I_T1	I_T1
A1	I_T1	I_T1	I_T1	I_T1	I_T1	I_T1
A2				I_T1	I_T1	I_T1
C	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C1	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low			
C1H						
C1L						
C1M						
C2	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C3	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
C3L	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low	C1L_Residential_low
DS1			URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
DS3			URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
INF	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
PC	PC1L_Residential_low	PC1L_Residential_low				
PC1	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low	PC1L_Residential_low
PC2	PC2L_Residential_low	PC2L_Residential_low	PC2L_Residential_low	PC2L_Residential_low	PC2L_Residential_low	PC2L_Residential_low
RM	RM1L_Residential_low	RM1L_Residential_low	RM1L_Residential_low	RM1L_Residential_low	RM1L_Residential_low	RM1L_Residential_low
RM2						
RM2L						
RM2M						
RS	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
RS1	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
RS2	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
RS3	URML_Residential_low	URML_Residential_low	URML_Residential_low			
S	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low	S1L_Residential_low
S1						
S1H						
S1L						
S1M						
S2	S2L_Residential_low	S2L_Residential_low		S2L_Residential_low	S2L_Residential_low	
S3	S2L_Residential_low	S2L_Residential_low	S2L_Residential_low			
S4						
S4H						
S4L						
S4M						

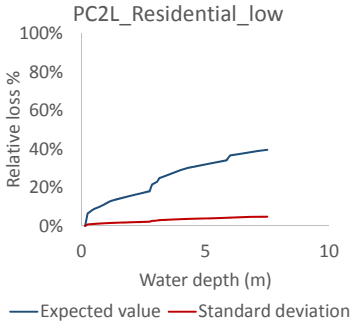
Structural system	Country development					
	Dev22			Dev3		
	Complexity level			Complexity level		
	Cpx1	Cpx2	Cpx3	Cpx1	Cpx2	Cpx3
S5	S5L_Residential_low	S5L_Residential_low	S5L_Residential_low	S5L_Residential_low	S5L_Residential_low	S5L_Residential_low
UCB	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB1	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB2	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB3	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
UFB4	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low	URML_Residential_low
W	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
W1	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
W2	I_W1	I_W1	I_W1	I_W1	I_W1	I_W1
W4	I_W1	I_W1	I_W1			

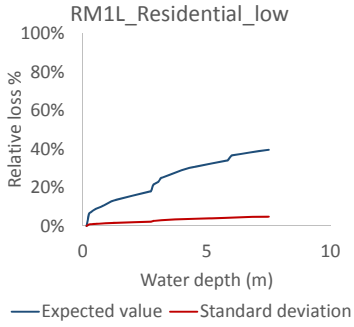


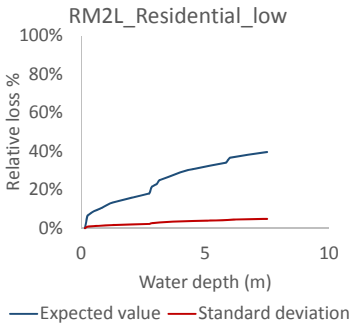


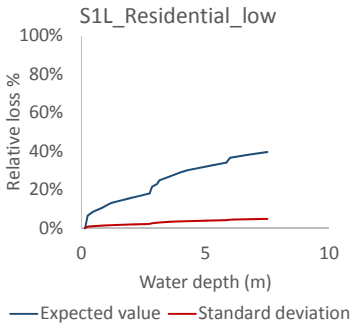


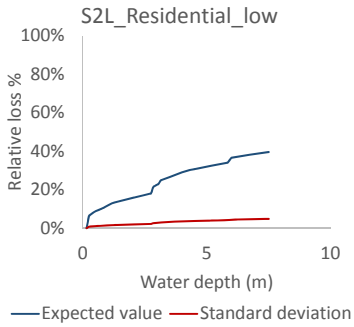


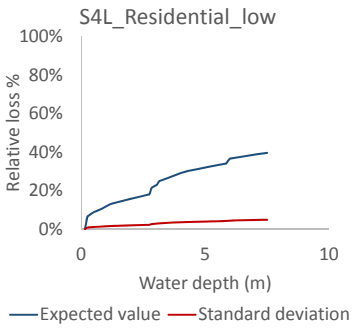


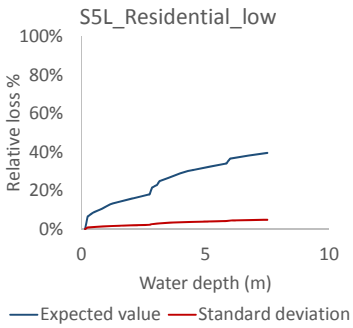


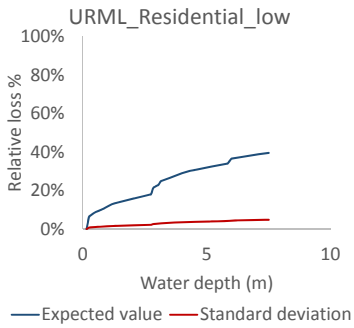

RM2L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation


S1L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation


S2L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation


S4L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation


S5L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation

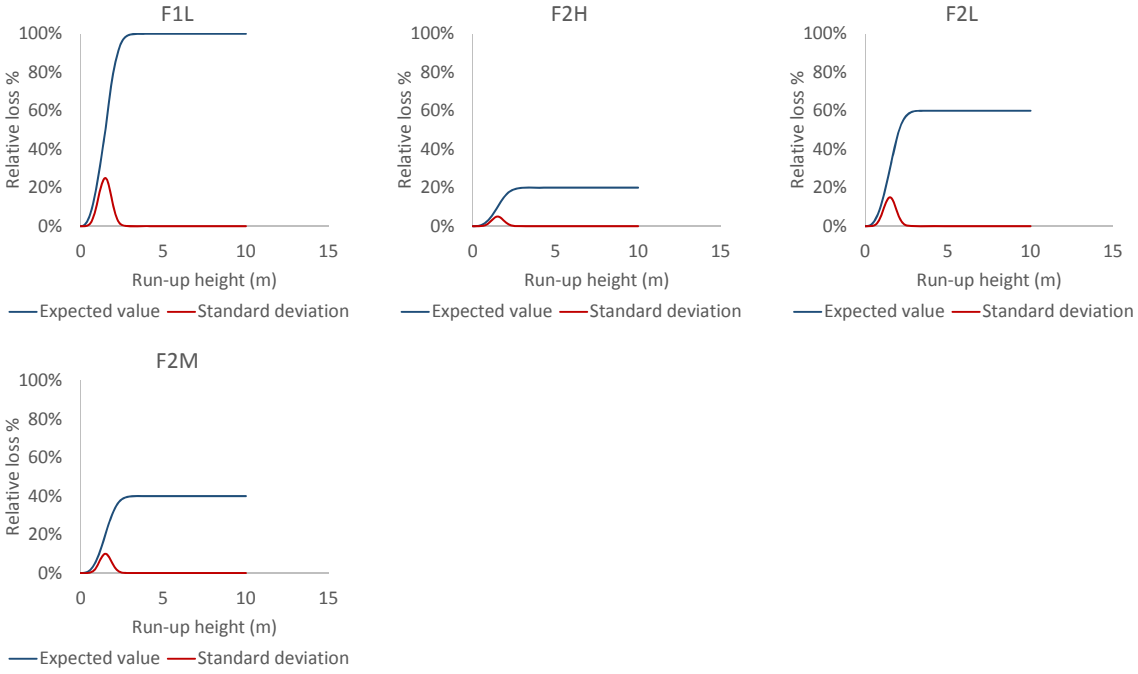

URML_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Water depth (m)
Expected value
Standard deviation

CAPRA Storm Surge Curves

Table A14-2. Assignation matrix for CAPRA storm surge curves.

Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
A	F1L	F1L	F1L	F1L
A1			F1L	
A2	F1L	F1L		F1L
A4		F1L		
C	F2M	F2M	F2M	F2M
C1	F2M	F2M	F2M	
C1H	F2H	F2H		
C1L	F2L	F2L		
C1M	F2M	F2M		
C2	F2M	F2M	F2M	F2M
C2L	F2L			
C3	F2M	F2M	F2M	F2M
C3L	F2L	F2L	F2L	
C3M	F2M			
C4		F2M		
CH	F2M			
CL	F2M			
CM	F2M			
DS	F2L	F2L	F2L	F2L
DS1			F2L	F2L
DS2	F2L			
DS3	F2L	F2L	F2L	F2L
DS4			F2L	
INF	F1L	F1L	F1L	F1L
M		F1L	F1L	F1L
M2		F1L	F1L	F1L
MH	F1L			
MS	F2L			
PC			F2L	
PC1	F2L	F2L	F2L	
PC2		F2M	F2M	F2M
PC2L	F2L			
RE				F1L
RM	F2M	F2M	F2M	F2M
RM1	F2L			
RM1L	F2L		F2L	
RM2	F2M	F2M	F2M	F2M
RM2H			F2H	
RM2L	F2L	F2L		
RM2M	F2M	F2M		
RS	F2L	F2L	F2L	F2L
RS1	F2L	F2L	F2L	F2L
RS2	F2L	F2L	F2L	F2L
RS3		F2L	F2L	F2L

Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
RS4			F2L	F2L
RS5			F2L	F2L
S	F2M	F2M	F2M	
S1	F2M	F2M	F2M	
S1H	F2H	F2H		
S1L	F2L	F2L		
S1M	F2M	F2M		
S2	F2M	F2M	F2M	F2M
S2L	F2M			
S3	F2L	F2L	F2L	
S4	F2M			
S4H	F2H	F2H		
S4L	F2L	F2L		
S4M	F2M	F2M		
S5	F2M	F2M	F2M	F2M
S5L	F2L			
UCB	F2L	F2L	F2L	F2L
UFB	F2L	F2L	F2L	F2L
UFB1	F2L	F2L	F2L	F2L
UFB2	F2L	F2L	F2L	F2L
UFB3	F2L	F2L	F2L	F2L
UFB4	F2L	F2L	F2L	F2L
UNK	F1L	F1L	F1L	
W	F1L	F1L	F1L	F1L
W1	F1L	F1L	F1L	F1L
W2	F1L	F1L	F1L	F1L
W4		F1L	F1L	

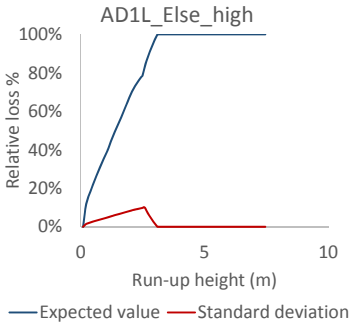

F1L
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
15
Run-up height (m)
Expected value
Standard deviation
F2H
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
15
Run-up height (m)
Expected value
Standard deviation
F2L
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
15
Run-up height (m)
Expected value
Standard deviation
F2M
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
15
Run-up height (m)
Expected value
Standard deviation

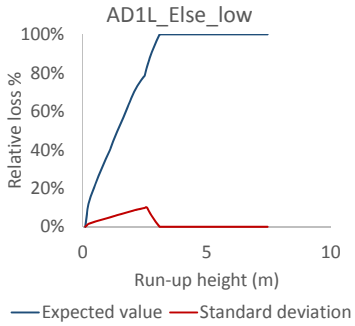
Geoscience Australia Storm Surge and Tsunami Curves

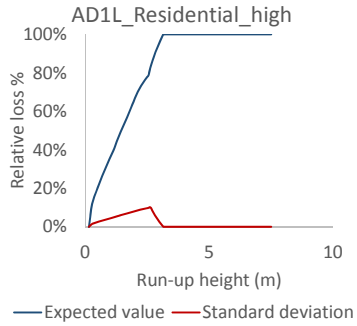
Table A14-2. Assignation matrix for GA storm surge and tsunami curves.

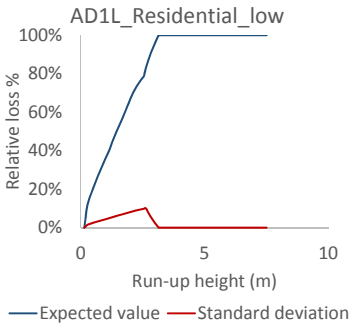
Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
A			AD1L_Else_low	AD1L_Else_low
A1		AD1L_Else_high	AD1L_Else_low	AD1L_Else_low
A2	AD1L_Else_high	AD1L_Else_high		AD1L_Else_low
C	C1L_Else_high	C1L_Else_high	C1L_Else_low	C1L_Else_low
C1	C1L_Else_high		C1L_Else_low	
C1H	C1H_Else_high	C1H_Else_high		
C1L	C1L_Else_high	C1L_Else_high		
C1M	C1M_Else_high	C1M_Else_high		
C2	C2L_Else_high	C2L_Else_high	C2L_Else_low	C2L_Else_low
C3	C3L_Else_high	C3L_Else_high	C3L_Else_low	C3L_Else_low
C3L			C3L_Else_low	C3L_Else_low
DS1				URML_Else_low
DS3				URML_Else_low
INF	W2_Else_high	W2_Else_high	W2_Else_low	W2_Else_low
PC			PC1L_Else_low	
PC1	PC1L_Else_high	PC1L_Else_high	PC1L_Else_low	PC1L_Else_low
PC2		PC2L_Else_high	PC2L_Else_low	PC2L_Else_low
RM	RM1L_Else_high		RM1L_Else_low	RM1L_Else_low
RM2	RM2L_Else_high			
RM2L	RM2L_Else_high	RM2L_Else_high		
RM2M	RM2M_Else_high	RM2M_Else_high		
RS			URML_Else_low	URML_Else_low
RS1	URML_Else_high	URML_Else_high	URML_Else_low	URML_Else_low
RS2			URML_Else_low	URML_Else_low
RS3			URML_Else_low	
S	S1L_Else_high		S1L_Else_low	S1L_Else_low
S1	S1L_Else_high			
S1H	S1H_Else_high	S1H_Else_high		
S1L	S1L_Else_high	S1L_Else_high		
S1M	S1M_Else_high	S1M_Else_high		
S2	S2L_Else_high		S2L_Else_low	S2L_Else_low
S3	S3_Else_high	S3_Else_high	S3_Else_low	
S4	S4L_Else_high			
S4H	S4H_Else_high	S4H_Else_high		
S4L	S4L_Else_high	S4L_Else_high		
S4M	S4M_Else_high	S4M_Else_high		
S5	S5L_Else_high		S5L_Else_low	S5L_Else_low
UCB	URML_Else_high	URML_Else_high	URML_Else_low	URML_Else_low
UFB	URML_Else_high	URML_Else_high	URML_Else_low	URML_Else_low
UFB1			URML_Else_low	URML_Else_low
UFB2		URML_Else_high	URML_Else_low	URML_Else_low
UFB3	URML_Else_high		URML_Else_low	URML_Else_low
UFB4		URML_Else_high	URML_Else_low	URML_Else_low
W	W2_Else_high	W2_Else_high	W2_Else_low	W2_Else_low

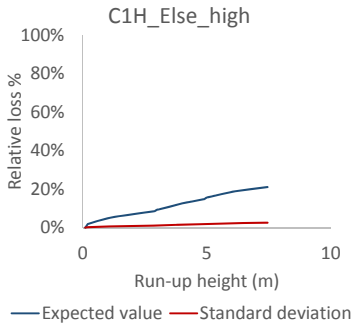
Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
W1	W2_Else_high		W2_Else_low	W2_Else_low
W2			W2_Else_low	W2_Else_low
W4			W2_Else_low	

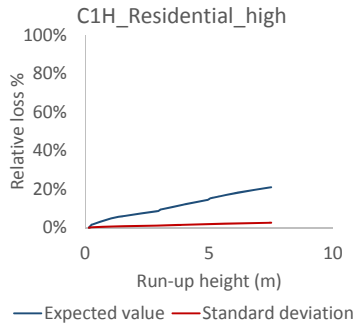


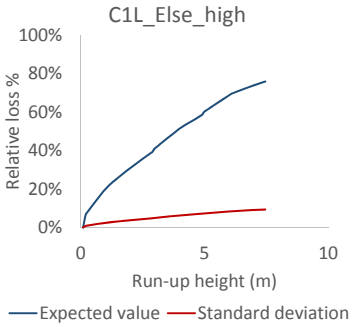


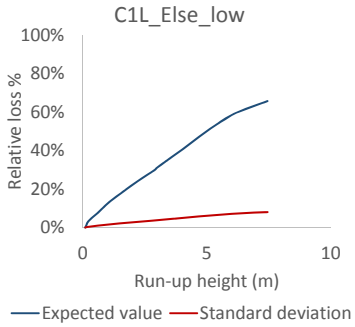


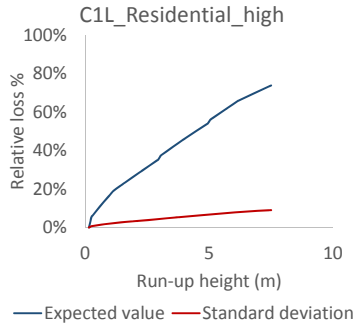


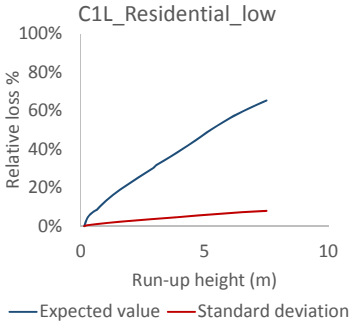


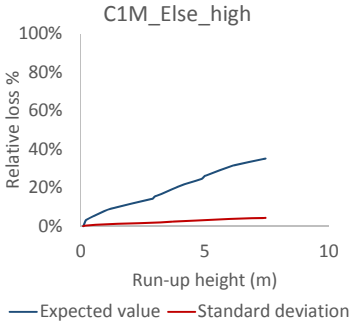


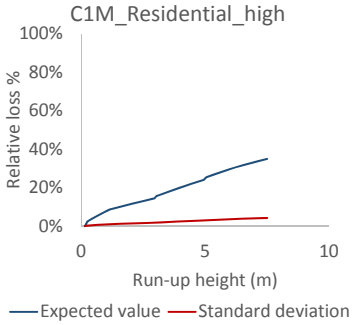


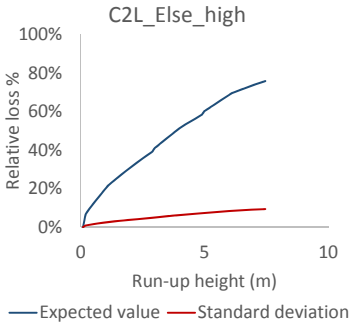


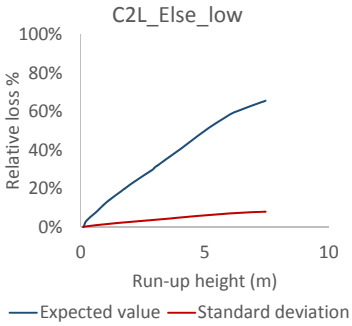


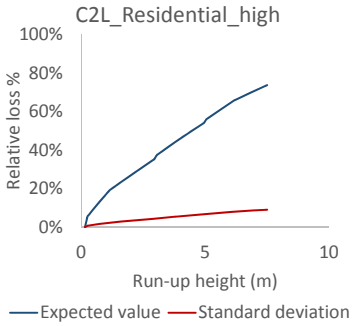

C1L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

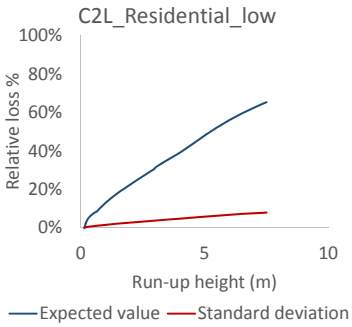

C1M_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

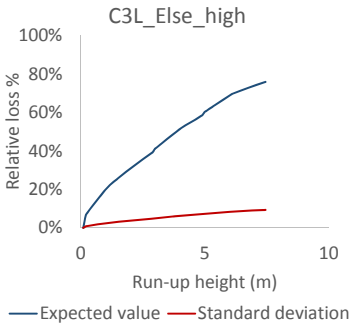

C1M_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

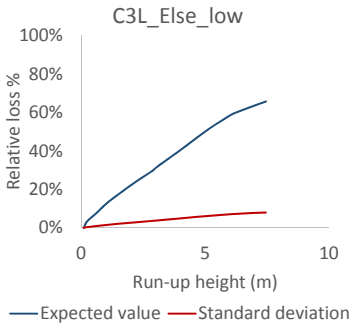

C2L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

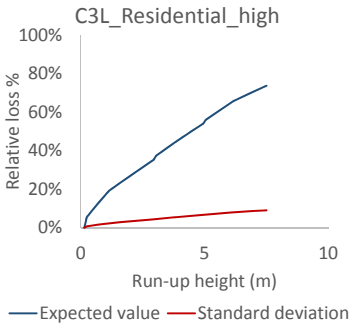

C2L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

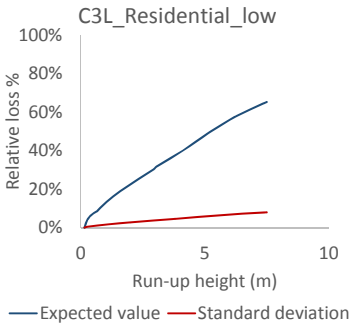

C2L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

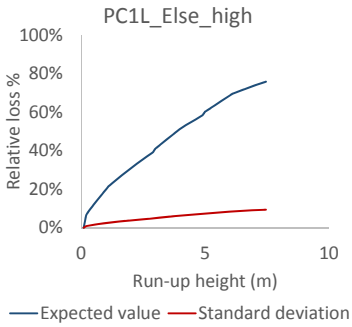

C2L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

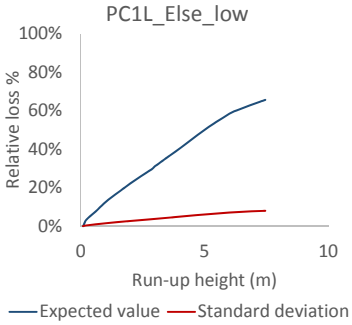

C3L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

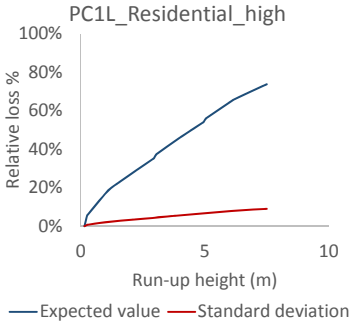

C3L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

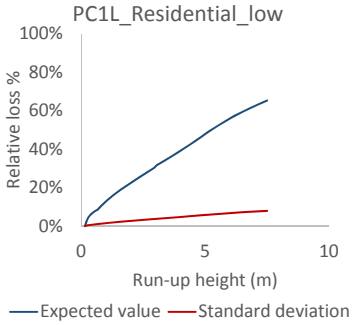

C3L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

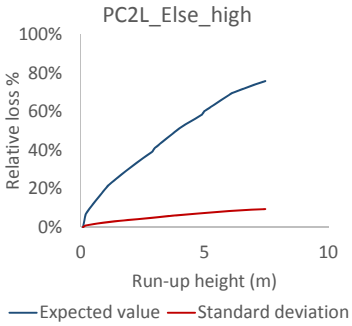

C3L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

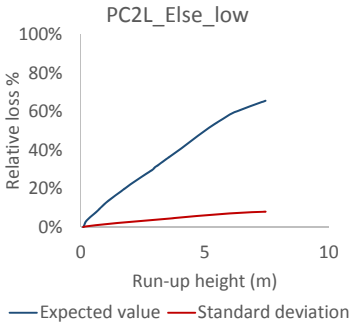

PC1L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

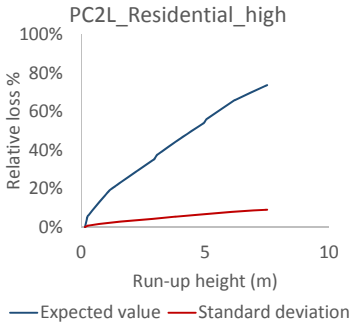

PC1L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

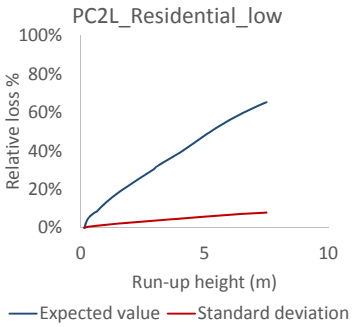

PC1L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

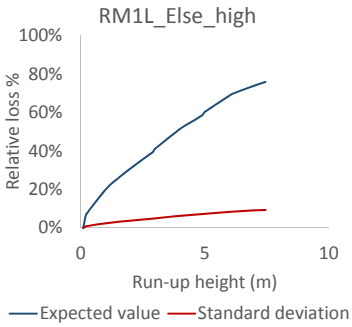

PC1L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

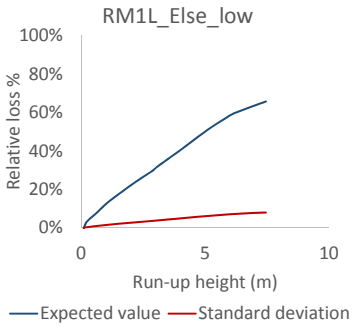

PC2L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

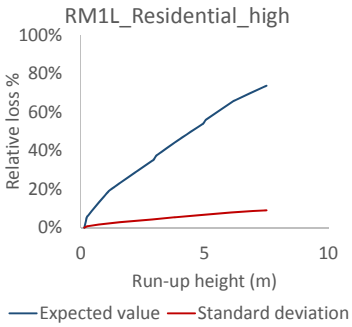

PC2L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

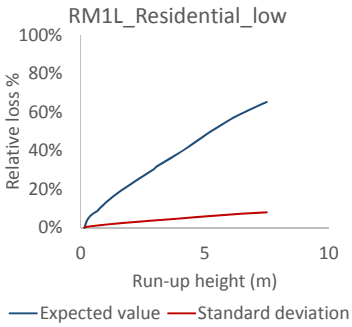

PC2L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

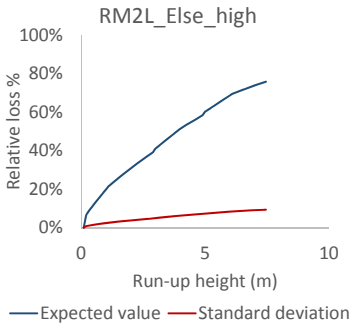

PC2L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

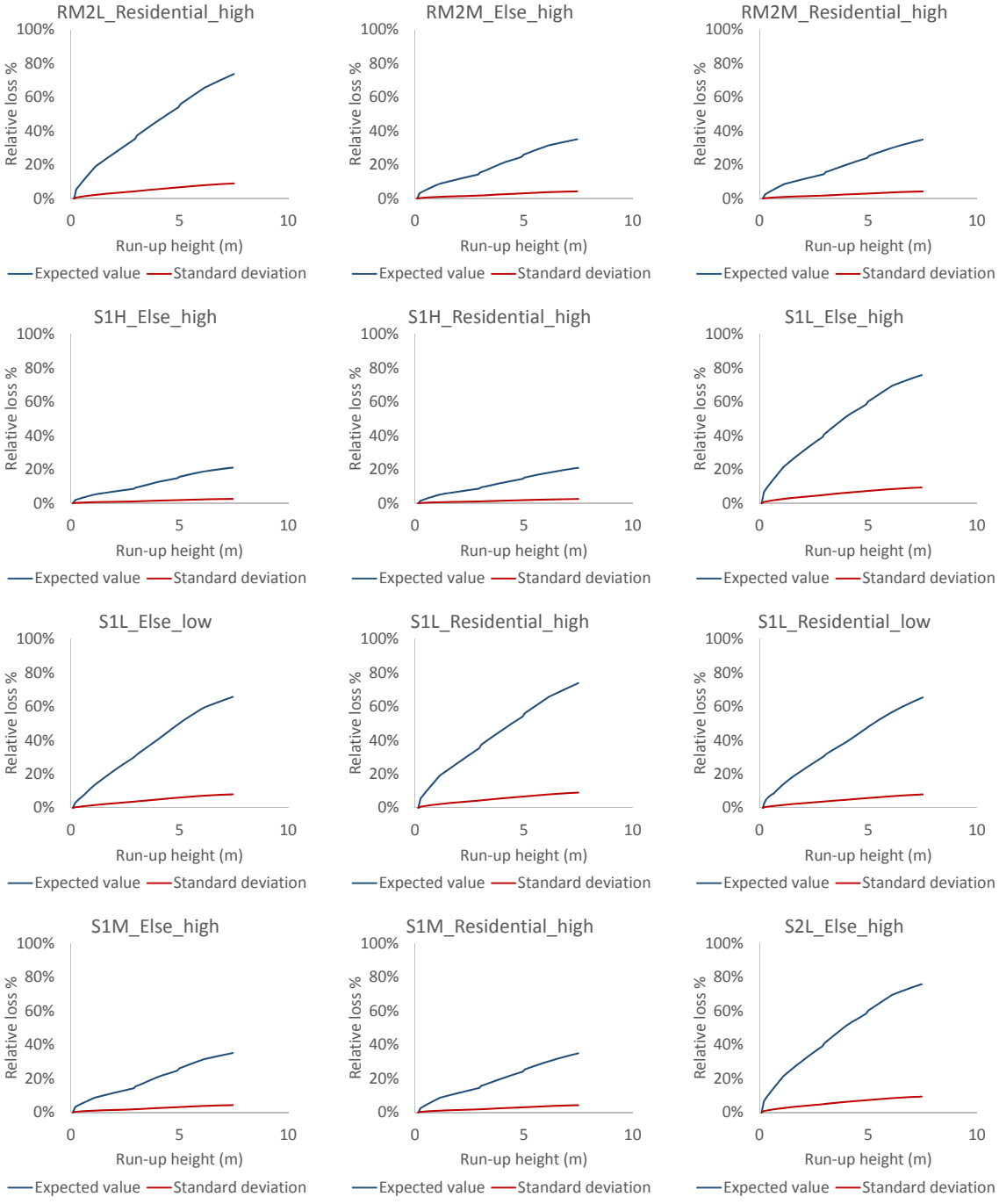

RM1L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation


RM1L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

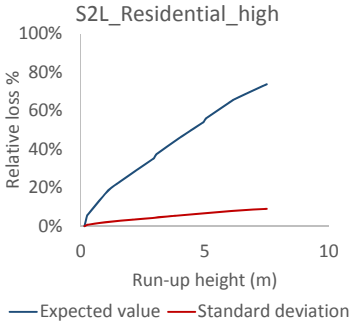

RM1L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

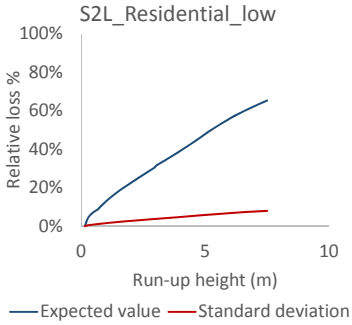

RM1L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

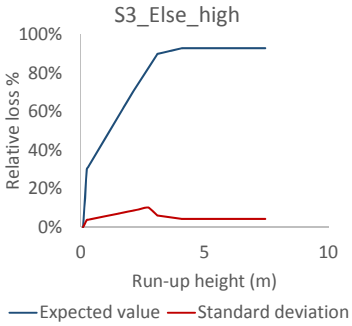

RM2L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

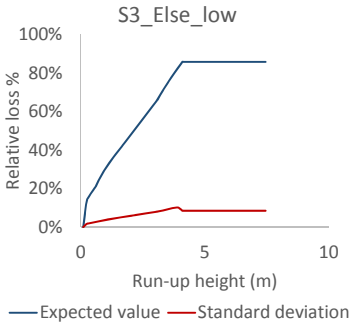

RM2L_Residential_high
RM2M_Else_high
RM2M_Residential_high
S1H_Else_high
S1H_Residential_high
S1L_Else_high
S1L_Else_low
S1L_Residential_high
S1L_Residential_low
S1M_Else_high
S1M_Residential_high
S2L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

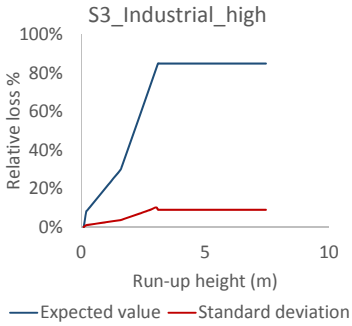

S2L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

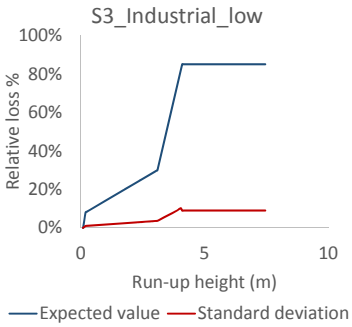

S2L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

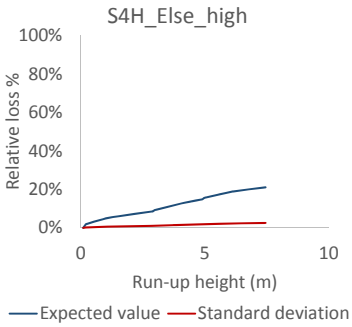

S2L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

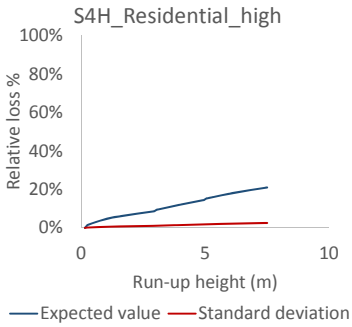

S3_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

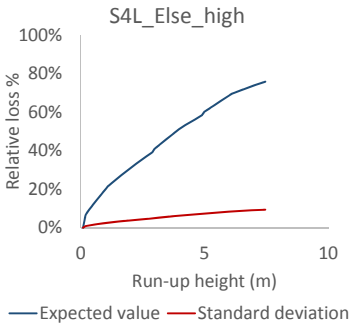

S3_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

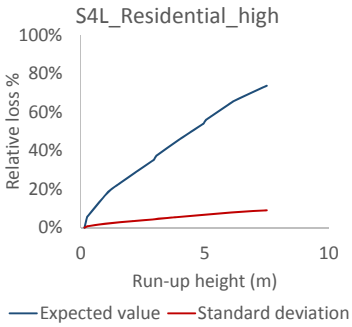

S3_Industrial_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

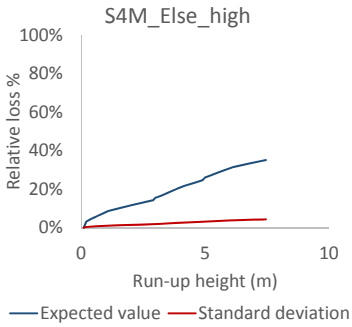

S3_Industrial_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

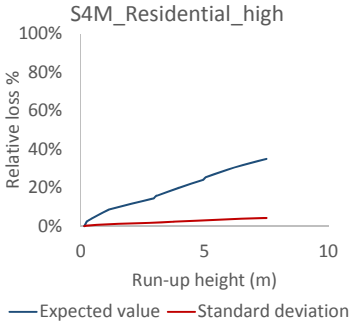

S4H_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

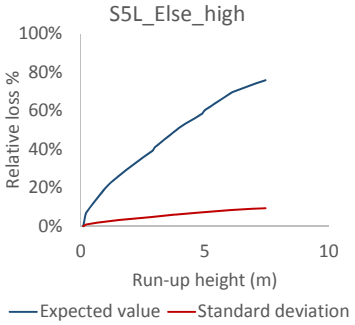

S4H_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

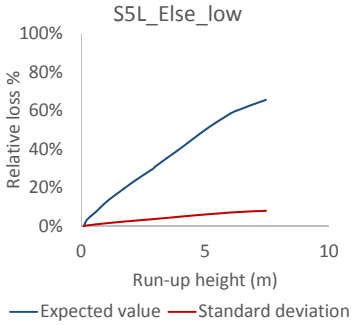

S4L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

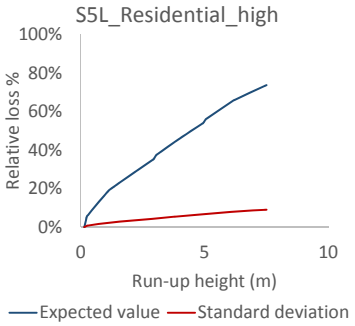

S4L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

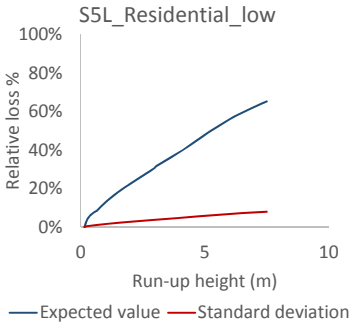

S4M_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

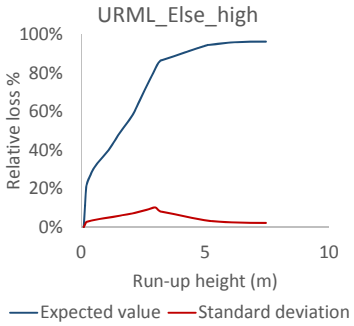

S4M_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

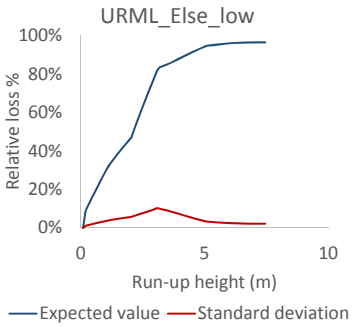

S5L_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

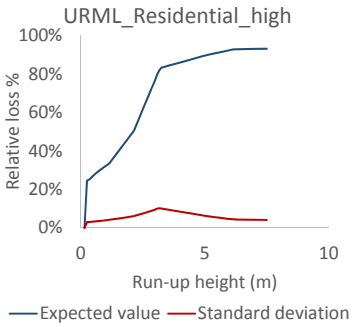

S5L_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

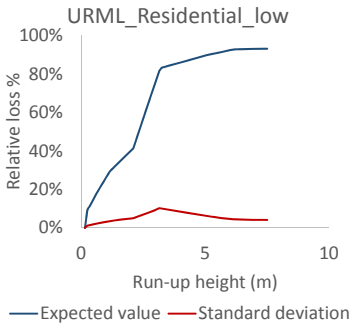

S5L_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

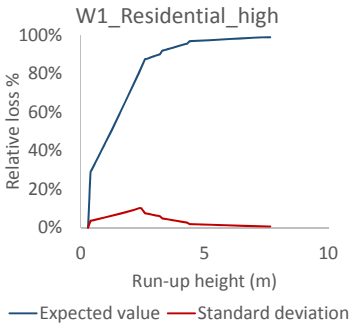

S5L_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

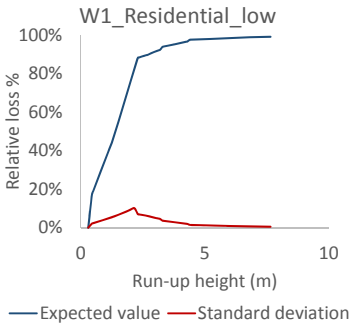

URML_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

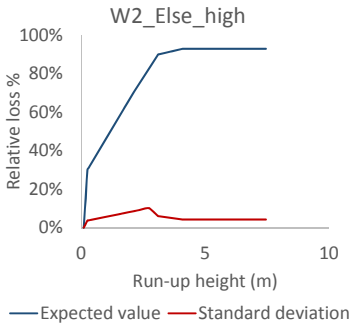

URML_Else_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

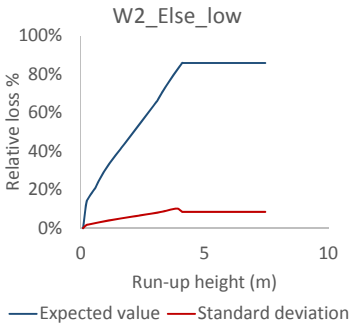

URML_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

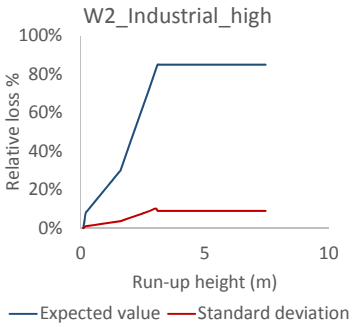

URML_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

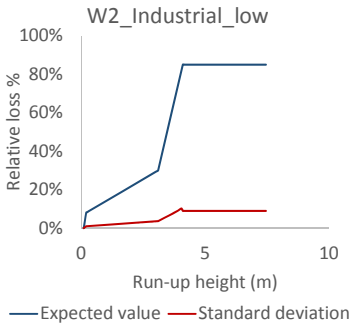

W1_Residential_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation


W1_Residential_low
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation


W2_Else_high
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation


W2_Else_low
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
Run-up height (m)
Expected value
Standard deviation


W2_Industrial_high
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
Run-up height (m)
Expected value
Standard deviation

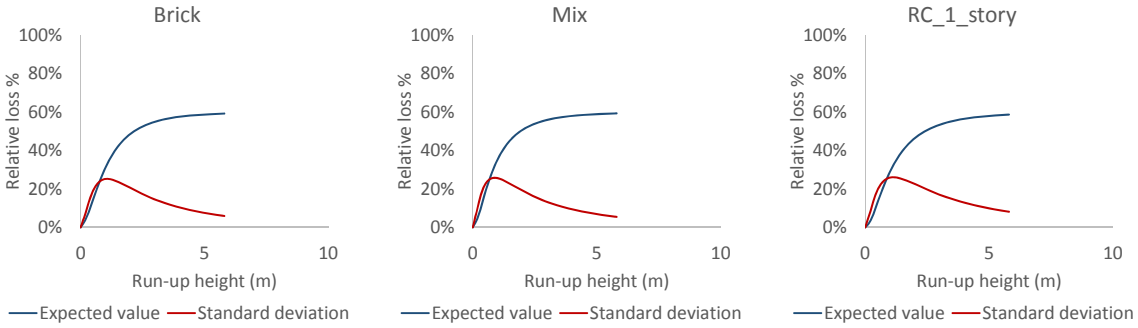

W2_Industrial_low
100%
80%
60%
40%
20%
0%
Relative loss %
0
5
10
Run-up height (m)
Expected value
Standard deviation

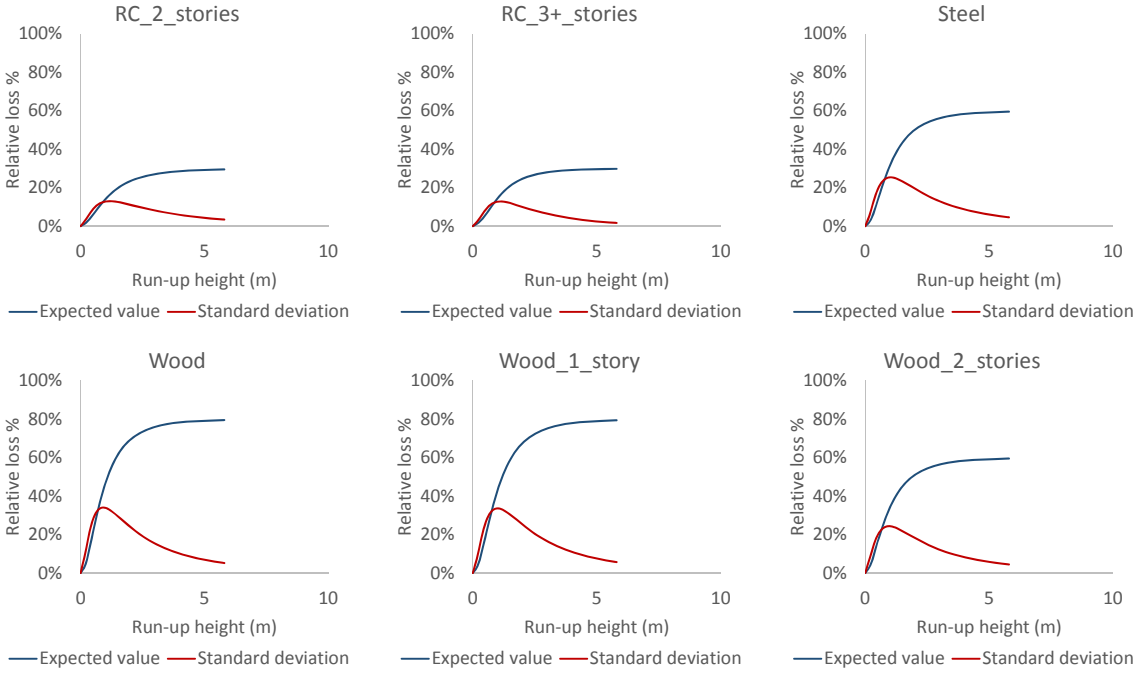
Suppasri et.al. (2013) Tsunami Curves

Table A14-2. Assignation matrix for Suppasri et.al. (2013) tsunami curves.

Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
A	Mix	Mix	Mix	Mix
A1			Mix	
A2	Mix	Mix		Mix
A4		Mix		
C	RC_1_story	RC_1_story	RC_1_story	RC_1_story
C1	RC_1_story	RC_1_story	RC_1_story	
C1H	RC_3+_stories	RC_3+_stories		
C1L	RC_1_story	RC_1_story		
C1M	RC_2_stories	RC_2_stories		
C2	RC_1_story	RC_1_story	RC_1_story	RC_1_story
C2L	RC_1_story			
C3	RC_1_story	RC_1_story	RC_1_story	RC_1_story
C3L	RC_1_story	RC_1_story	RC_1_story	
C3M	RC_2_stories			
C4		RC_1_story		
CH	RC_1_story			
CL	RC_1_story			
CM	RC_1_story			
DS	Brick	Brick	Brick	Brick
DS1			Brick	Brick
DS2	Brick			
DS3	Brick	Brick	Brick	Brick
INF	Mix	Mix	Mix	Mix
M		Mix	Mix	Mix
M2		Mix	Mix	Mix
MH	Wood_1_story			
MS	Brick			
PC			RC_1_story	
PC1	RC_1_story	RC_1_story	RC_1_story	
PC2		RC_1_story	RC_1_story	RC_1_story
PC2L	RC_1_story			
RE				Mix
RM	Brick	Brick	Brick	Brick
RM1	Brick			
RM1L	Brick		Brick	
RM2	Brick	Brick	Brick	Brick
RM2H			Brick	
RM2L	Brick	Brick		
RM2M	Brick	Brick		
RS	Brick	Brick	Brick	Brick
RS1	Brick	Brick	Brick	Brick
RS2	Brick	Brick	Brick	Brick
RS3		Brick	Brick	Brick
RS4			Brick	Brick

Structural system	Country development			
	Dev1	Dev21	Dev22	Dev3
RS5			Brick	Brick
S	Steel	Steel	Steel	
S1	Steel	Steel	Steel	
S1H	Steel	Steel		
S1L	Steel	Steel		
S1M	Steel	Steel		
S2	Steel	Steel	Steel	Steel
S2L	Steel			
S3	Steel	Steel	Steel	
S4	Steel			
S4H	Steel	Steel		
S4L	Steel	Steel		
S4M	Steel	Steel		
S5	Steel	Steel	Steel	Steel
S5L	Steel			
UCB	Brick	Brick	Brick	Brick
UFB	Brick	Brick	Brick	Brick
UFB1	Brick	Brick	Brick	Brick
UFB2	Brick	Brick	Brick	Brick
UFB3	Brick	Brick	Brick	Brick
UFB4	Brick	Brick	Brick	Brick
UNK	Mix			
W	Wood	Wood	Wood	Wood
W1	Wood	Wood	Wood	Wood
W2	Wood_2_stories	Wood_2_stories	Wood_2_stories	Wood_2_stories
W4		Wood	Wood	

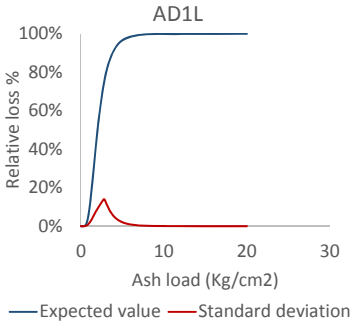


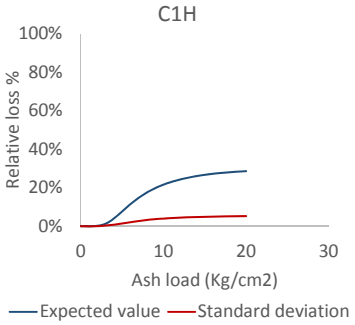

RC_2_stories
RC_3+_stories
Steel
Wood
Wood_1_story
Wood_2_stories
Relative loss %
100%
80%
60%
40%
20%
0%
0
5
10
Run-up height (m)
Expected value
Standard deviation

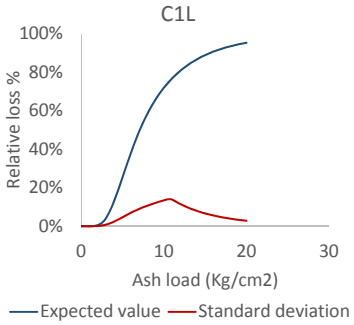
Geoscience Australia Ash Fall Curves

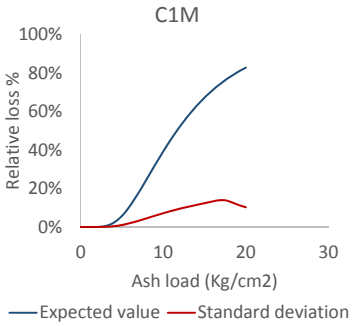
Table A14-2. Assignation matrix for GA ash fall curves.

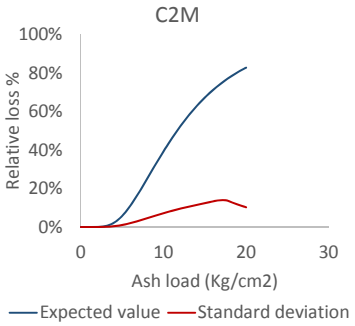
Structural system	
A	AD1L
C	C1M
C1	C1M
C1H	C1H
C1L	C1L
C1M	C1M
C2	C2M
C3	C3M
DS1	URML
DS3	URML
INF	W1
PC	PC1M
PC1	PC1M
PC2	PC2M
RM	URML
RM2	URML
RM2L	RM2L
RM2M	RM2M
RS	URML
RS1	URML
RS2	URML
S	S1M
S1	S1M
S1H	S1H
S1L	S1L
S1M	S1M
S2	S2M
S3	S3
S4	S4M
S4H	S4H
S4L	S4L
S4M	S4M
S5	S5M
UCB	URML
UFB	URML
UFB1	URML
UFB2	URML
UFB3	URML
UFB4	URML
W	W1
W1	W1
W2	W2
W4	W2

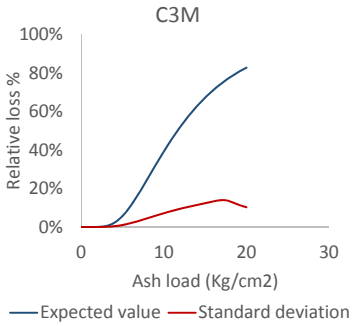

AD1L
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

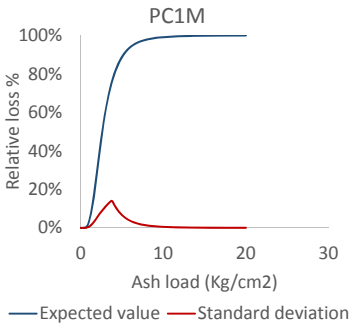

C1H
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

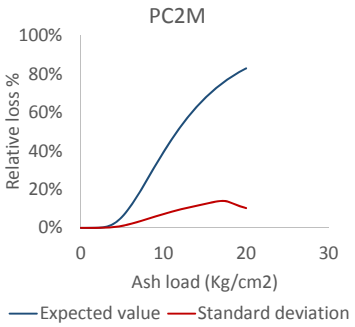

C1L
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

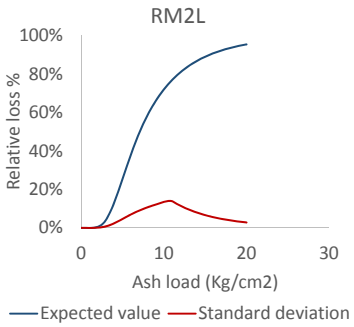

C1M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

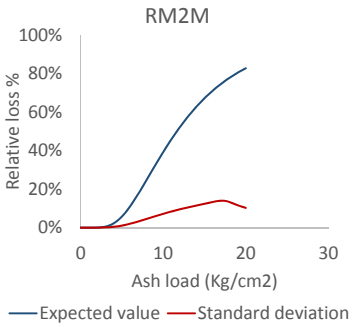

C2M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

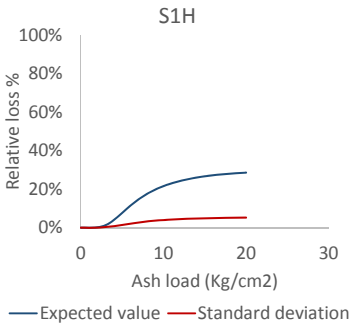

C3M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

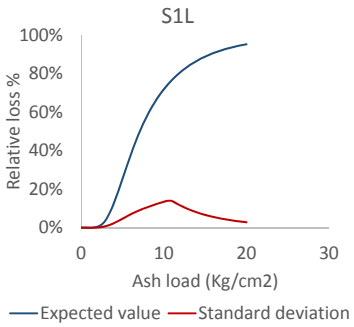

PC1M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

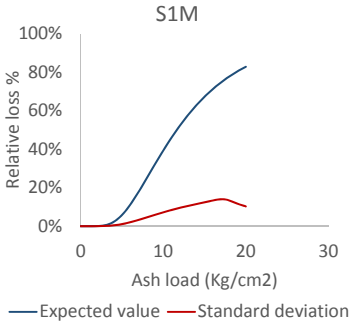

PC2M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

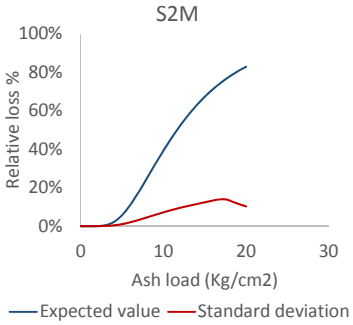

RM2L
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

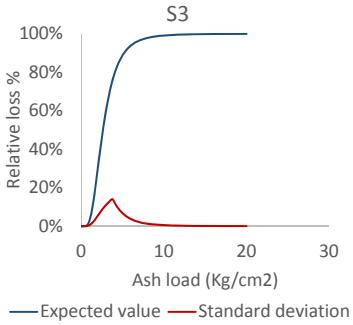

RM2M
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

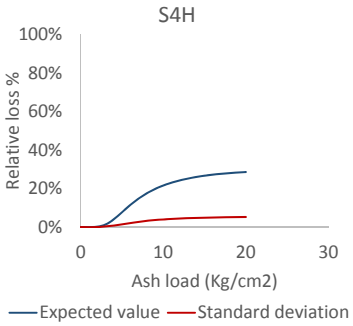

S1H
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

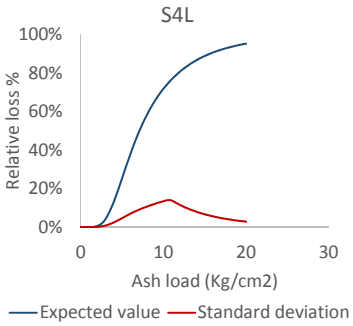

S1L
Relative loss %
100%
80%
60%
40%
20%
0%
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

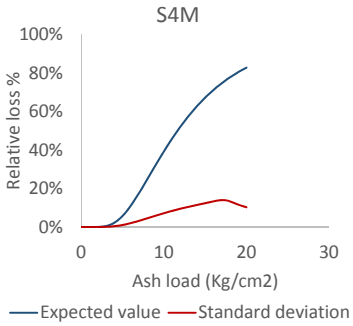

S1M
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

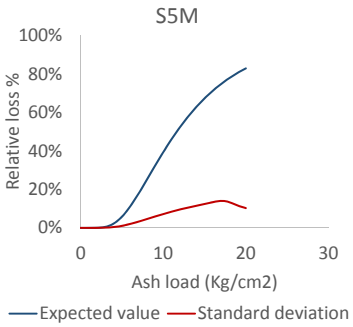

S2M
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

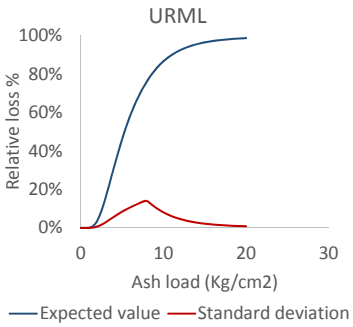

S3
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

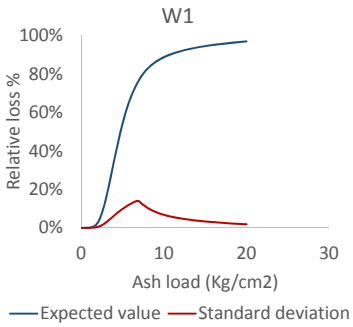

S4H
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

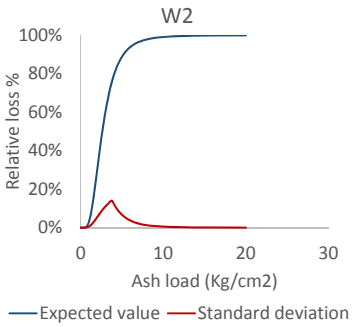

S4L
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation


S4M
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation


S5M
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation


URML
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation


W1
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation


W2
100%
80%
60%
40%
20%
0%
Relative loss %
0
10
20
30
Ash load (Kg/cm2)
Expected value
Standard deviation

Annex 14. Comparison of Strong Winds Vulnerability Functions

For the Global Risk Assessment of the UNISDR's Global Assessment Report on Disaster Risk Reduction 2015 (GAR15), a vulnerability regionalization was performed in order to consider singularities in building types and structural behavior to natural hazards in different regions of the world. Geoscience Australia (GA) played a major role in this regionalization, providing vulnerability functions for all the hazards included in GAR 15 for the countries in the Asia-Pacific Region. For strong winds, the following countries fall into GA's vulnerability scope: Tonga, Pakistan, Singapore, Cambodia, New Caledonia, Samoa, Vanuatu, Myanmar, New Zealand, Fiji, Australia, Solomon Islands, Malaysia, Sri Lanka, Bangladesh, Viet Nam, Thailand, India, Papua New Guinea, Indonesia, Philippines, Nepal, Bhutan and Cook Islands.

This document presents a comparison between the vulnerability functions for tropical cyclones strong winds developed by GA, and the ones developed by CIMNE-INGENIAR from the information of the HAZUS platform (HAZUS curves). The comparison was made for pairs of functions matching the same building type description. A comparison sheet was developed in order to easily highlight the main differences in the vulnerability curves.

Description of the Comparison Sheet

The first section of the sheet provides general information regarding the building type, its code and the hazard for which the curves were created. A small table presents the building type code in both GA's and HAZUS's taxonomy, along with the creator of the curve and the creation date.

Next, the expected value and variance curves are shown in the main central plot for both vulnerability functions. This allows for a first visual comparison of the functions. For further detail, four small plots were designed in order to account for relevant characteristics in the comparison.

The first plot from top to bottom, shows a zoom of the starting portion of the expected value curves, up to 20% of the relative loss. The starting portion of the vulnerability functions, particularly the expected loss curve has a major impact in the resulting AAL values, given that the most frequent hazard events are the ones that generate small intensities in the ground, therefore small losses are constantly and very frequently added in the risk calculation to the final value of AAL.

The second plot presents the difference in the values for both expected loss curves. This operation was done by subtracting the expected loss value of HAZUS curves from the expected loss value of GA curves (i.e. Difference = GA - HAZUS). This plot allows to see the magnitude of the difference for any intensity value. If the difference is positive, the it means that the GA curve is representing a more vulnerable building type than the HAZUS curve, and vice versa if the difference is negative.

The third plot shows the area below the expected value curve (i.e. its integral) with respect to the wind intensity. This plot is useful to see how fast a vulnerability function accumulates the total

loss. Even though this characteristic may result evident for some pairs of functions upon visualization, it provides important information especially when the functions are very similar.

Finally, the fourth plot presents the probability of exceeding a loss value, for all intensities covered in the vulnerability functions. It presents exceeding probability curves for relative losses of 20%, 50% and 70%. This plot is very important for the comparison purposes given that it takes into account the role of both expected value and variance curves in the risk calculations. The probability curves that reach an exceeding probability of 1.0 for lower intensities are representing more vulnerable systems.

This comparison sheet was applied to all the vulnerability functions provided by GA, compared to the corresponding ones in the HAZUS taxonomy. The comparison sheets are presented in this document.

Comparison of Vulnerability Functions

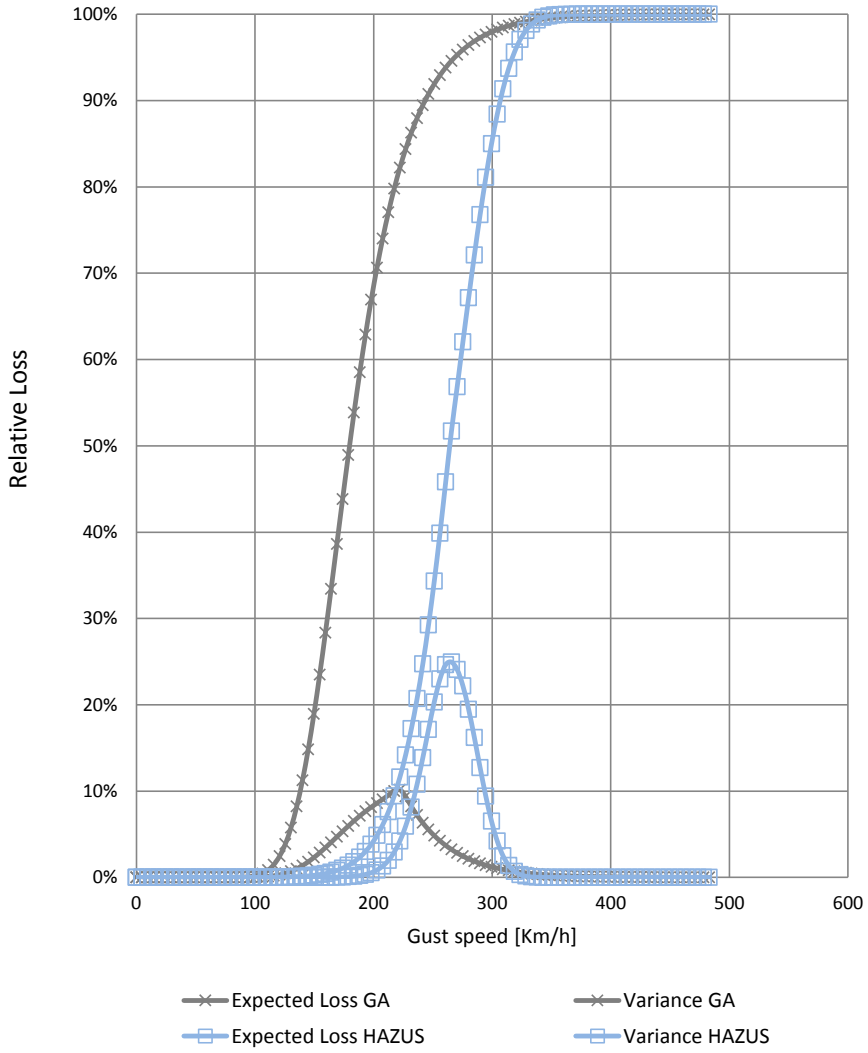
General Information

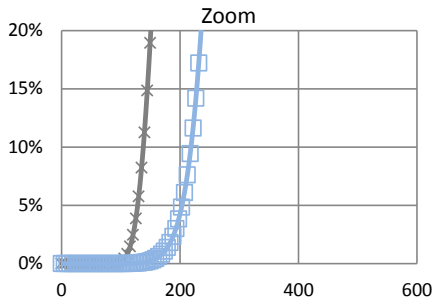
Code: AD1L **Hazard:** Wind

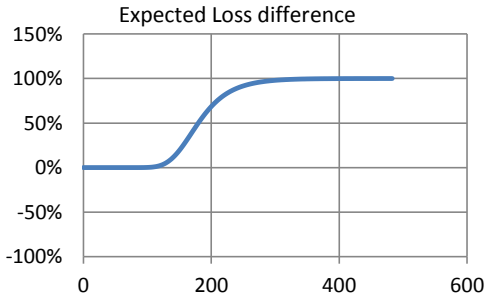
Description: ADOBE BLOCKS (UNBAKED SUNDRIED MUD BLOCK) WALLS

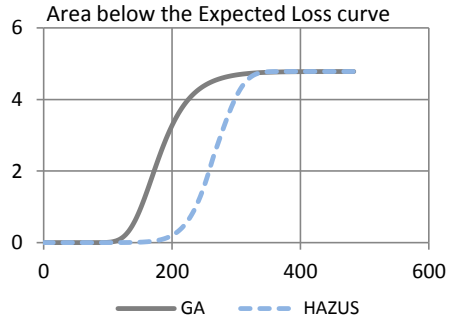
	GA	HAZUS
Project:		
Curve Name:	AD1L_Low	AD1L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

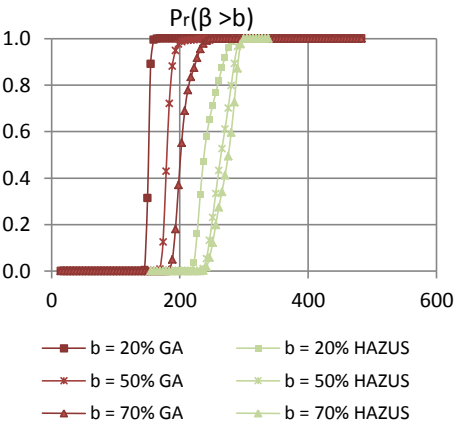
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

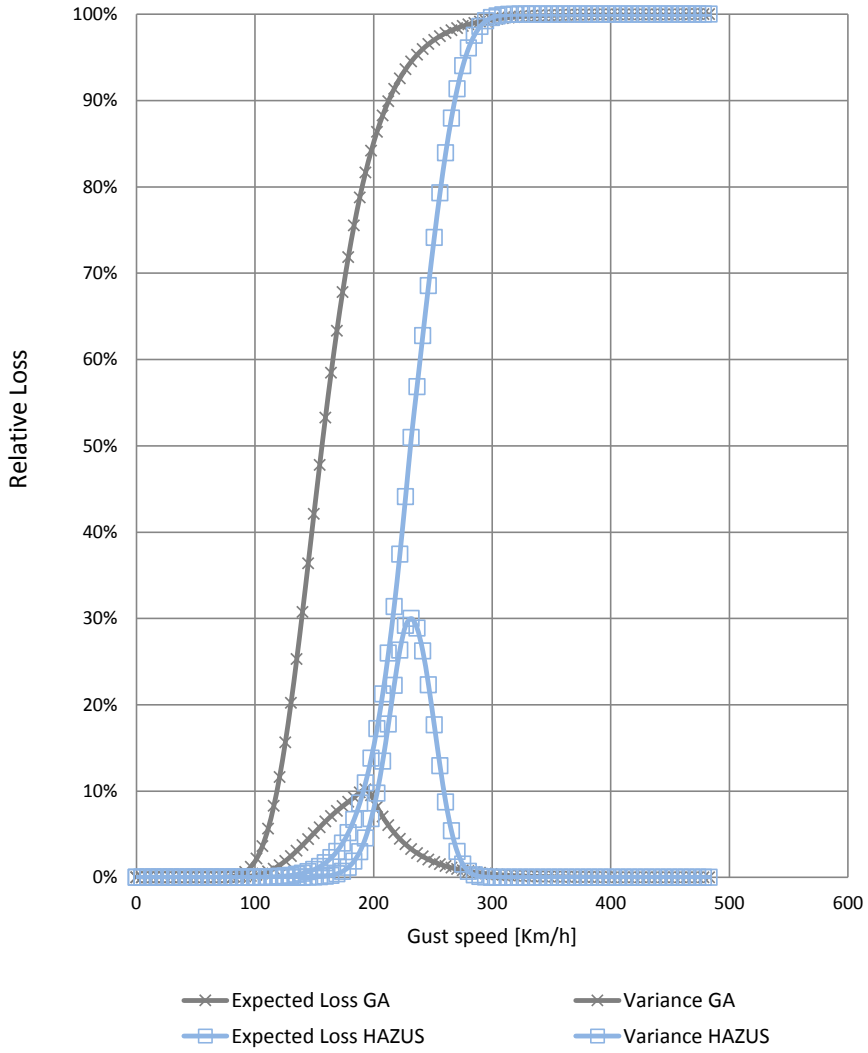
General Information

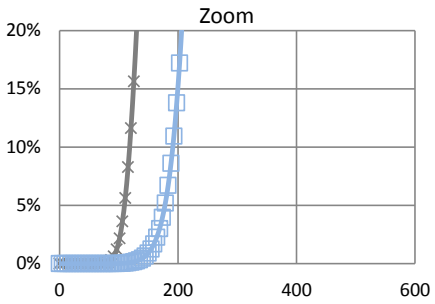
Code: AD1L **Hazard:** Wind

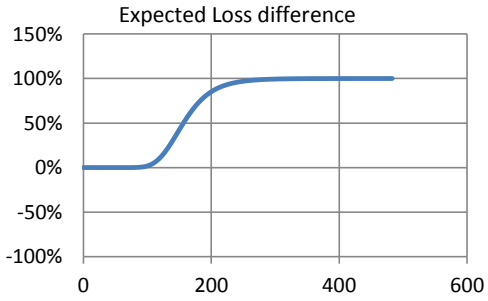
Description: ADOBE BLOCKS (UNBAKED SUNDRIED MUD BLOCK) WALLS

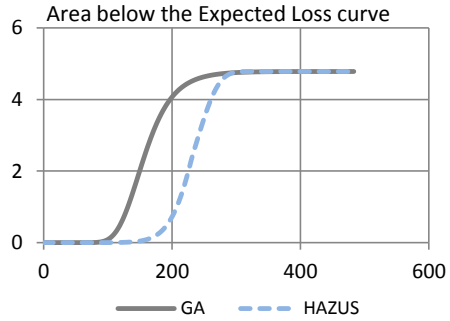
	GA	HAZUS
Project:		
Curve Name:	AD1L_Poor	AD1L_P
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

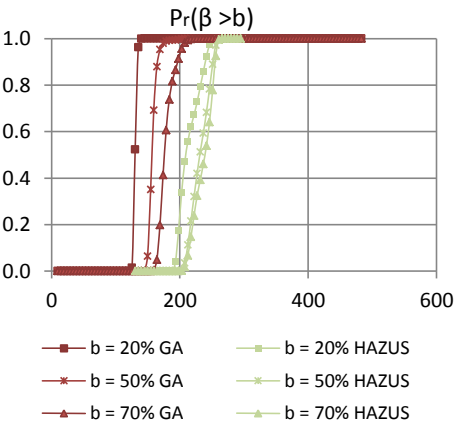
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

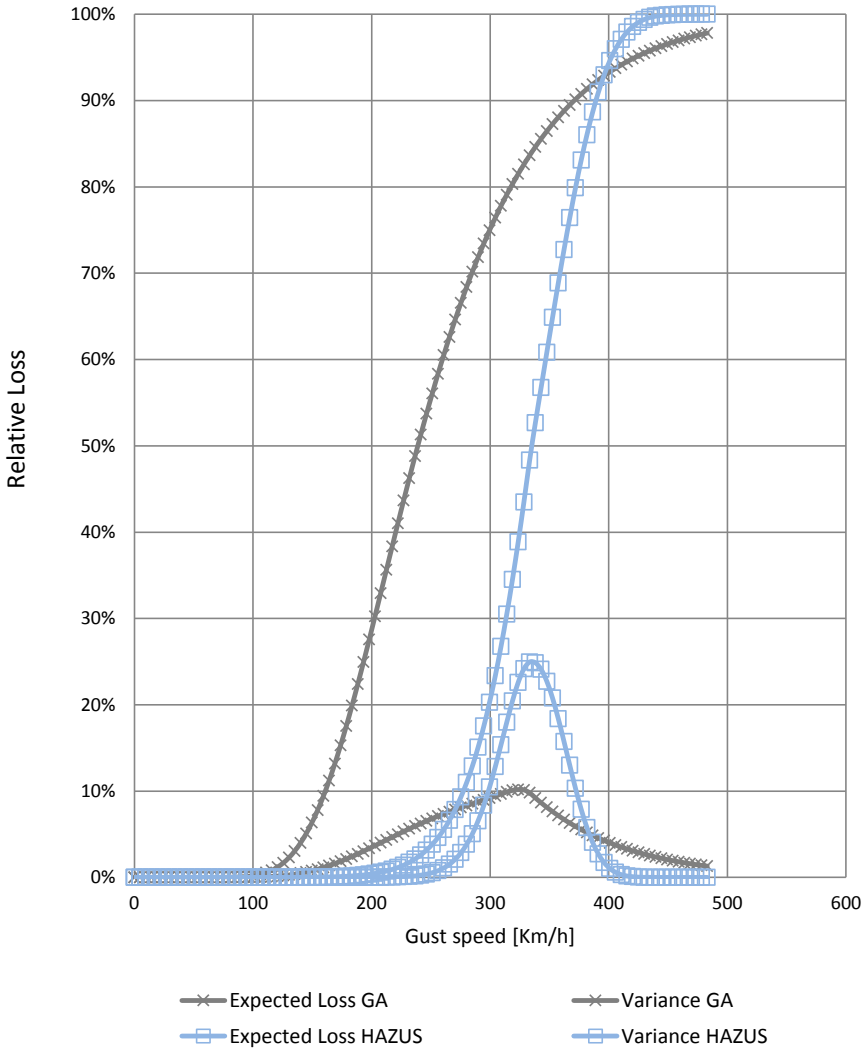
General Information

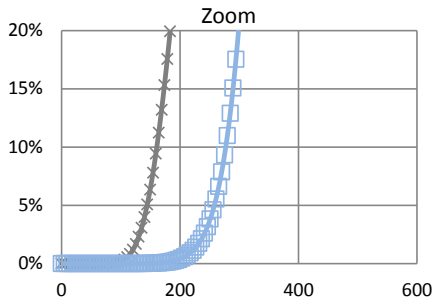
Code: C1H **Hazard:** Wind

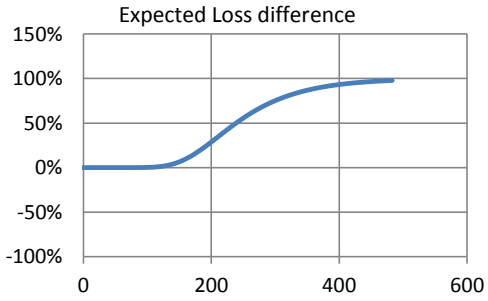
Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL HIGH-RISE

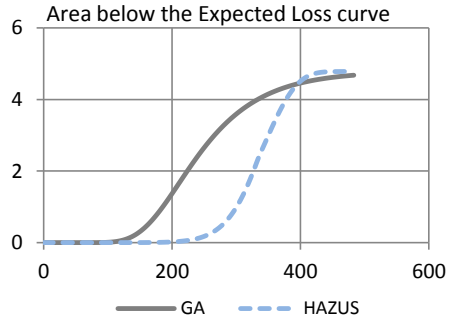
	GA	HAZUS
Project:		
Curve Name:	C1H_Low	C1H_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

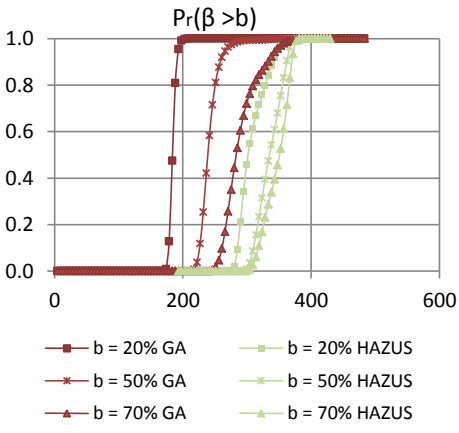
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

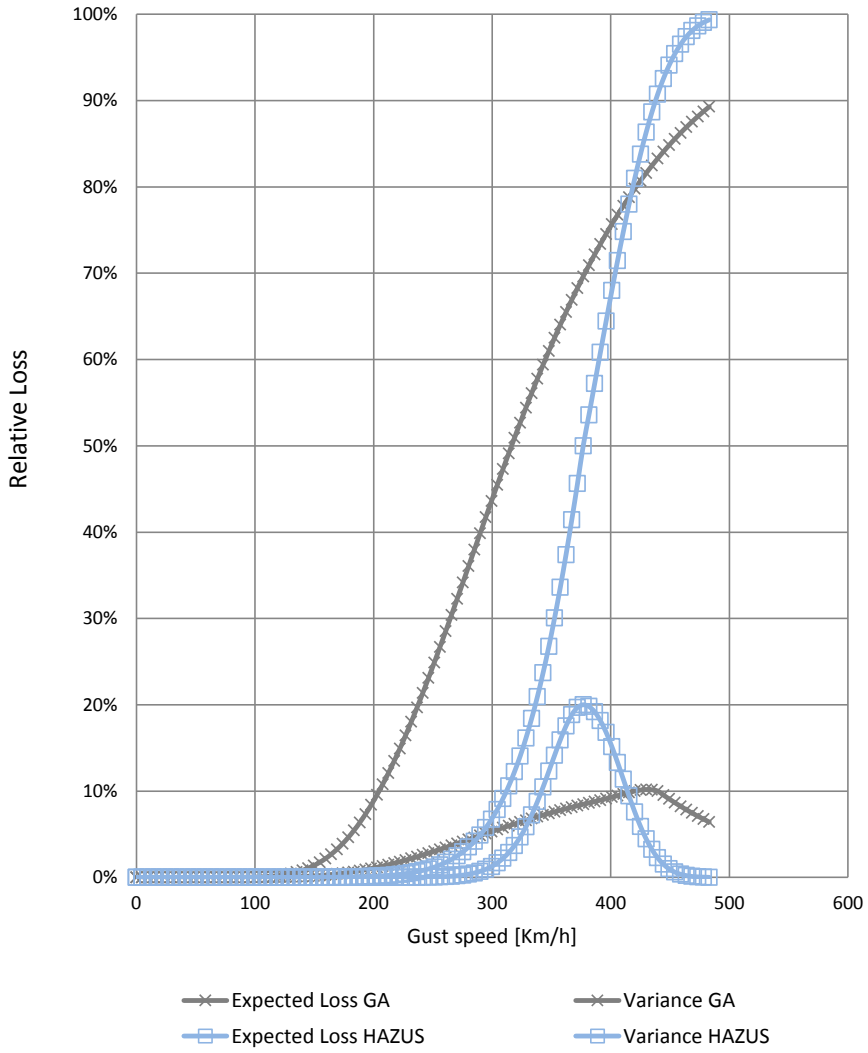
General Information

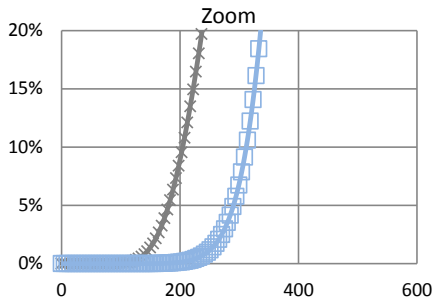
Code: C1H **Hazard:** Wind

Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL HIGH-RISE

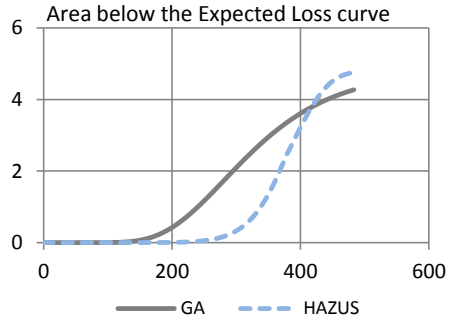
Project:	GA	HAZUS
Curve Name:	C1H_Medium	C1H_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

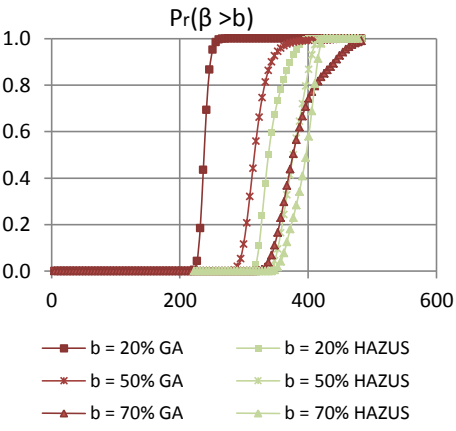
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction

Comparison of Vulnerability Functions

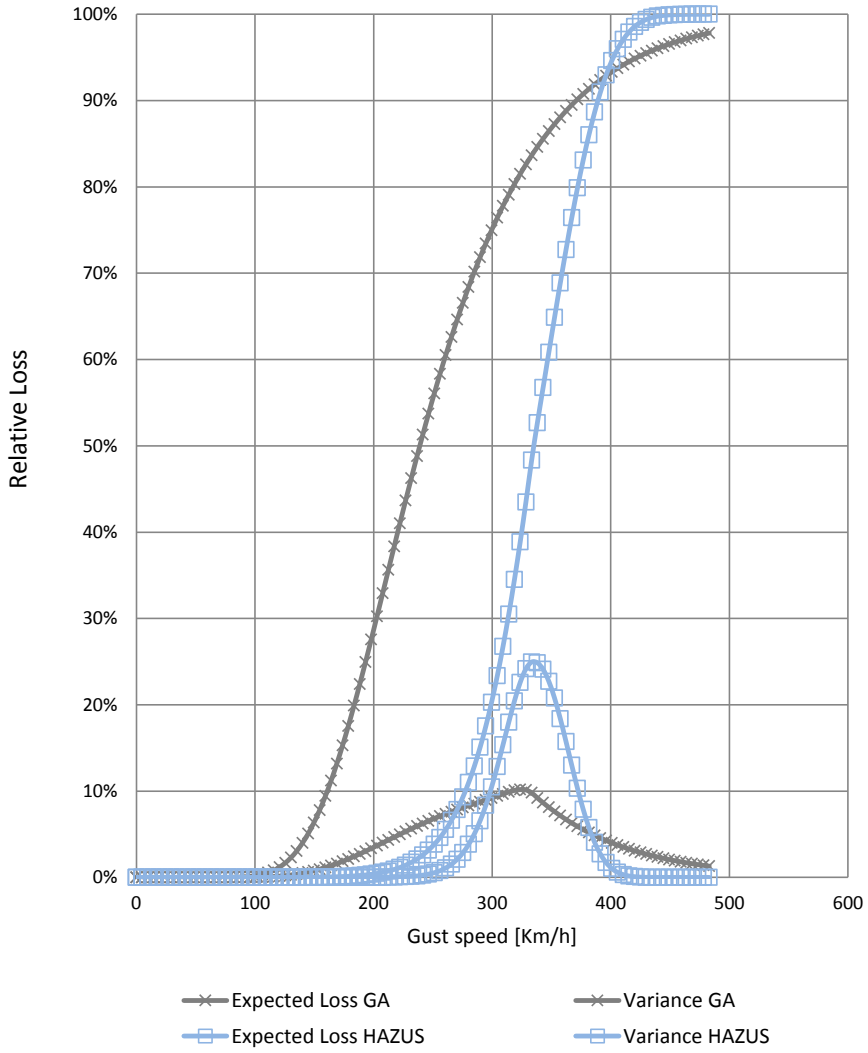
General Information

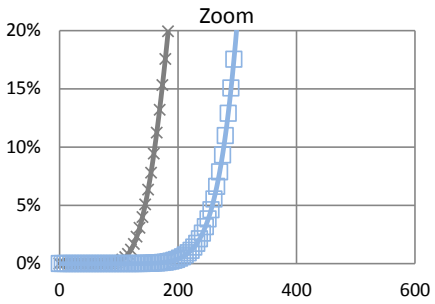
Code: C1L **Hazard:** Wind

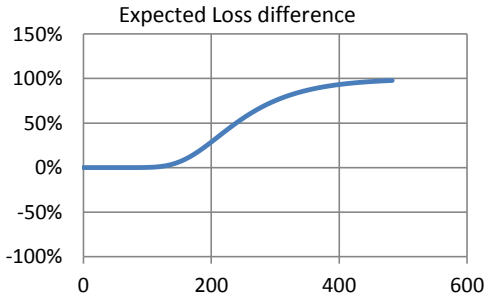
Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL LOW-RISE

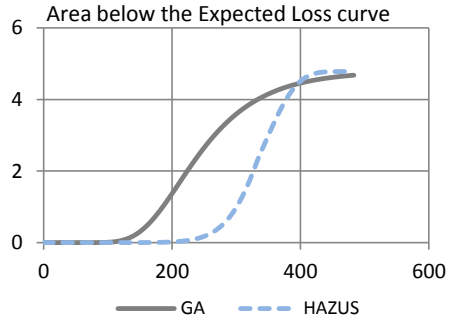
	GA	HAZUS
Project:		
Curve Name:	C1L_Low	C1L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

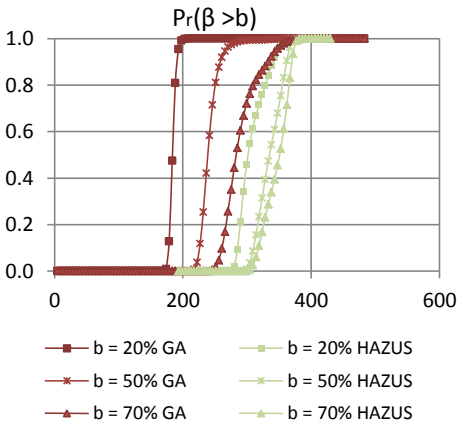
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

CIMNE

INGENIAR

Comparison of Vulnerability Functions

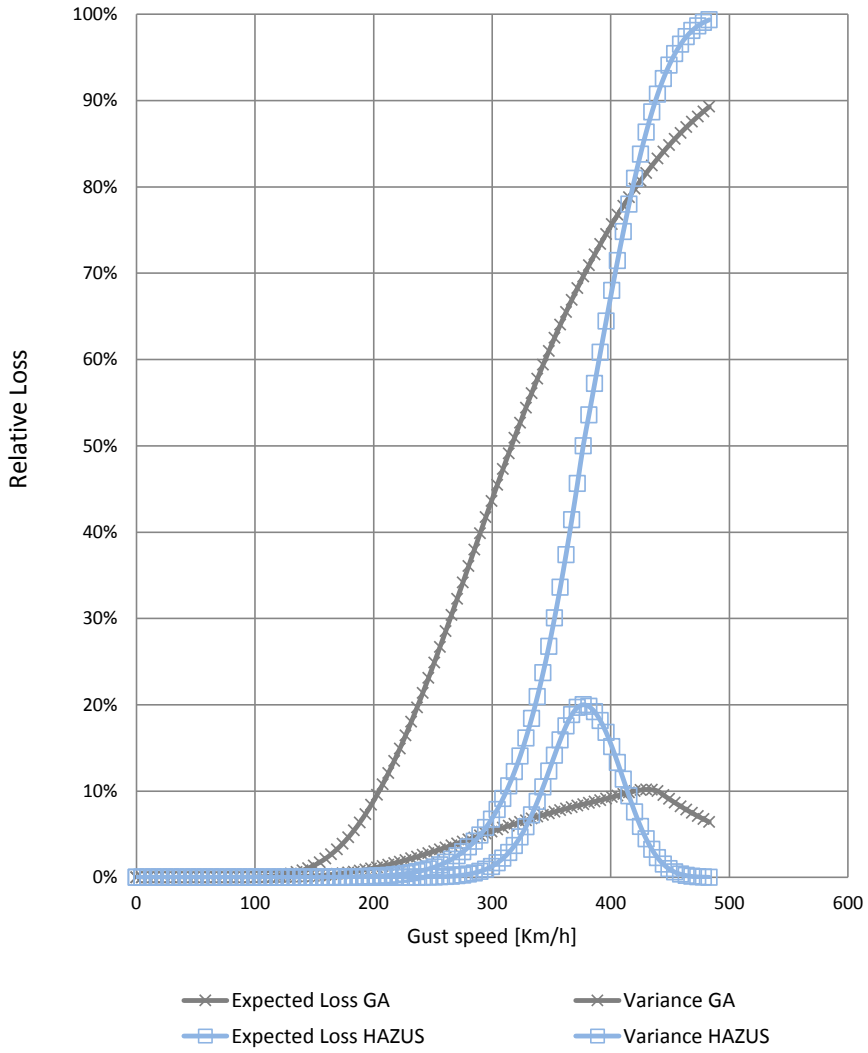
General Information

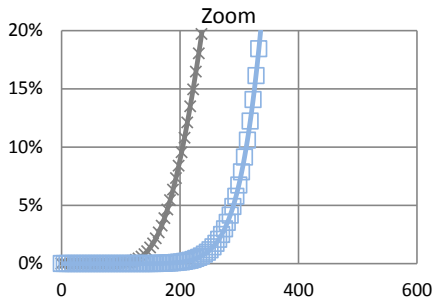
Code: C1L **Hazard:** Wind

Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL LOW-RISE

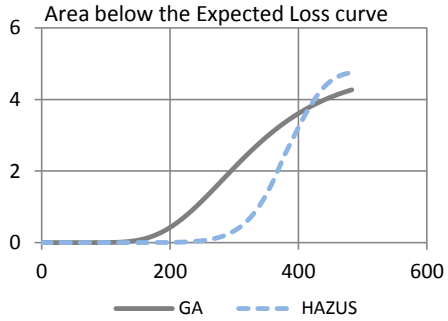
	GA	HAZUS
Project:		
Curve Name:	C1L_Medium	C1L_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

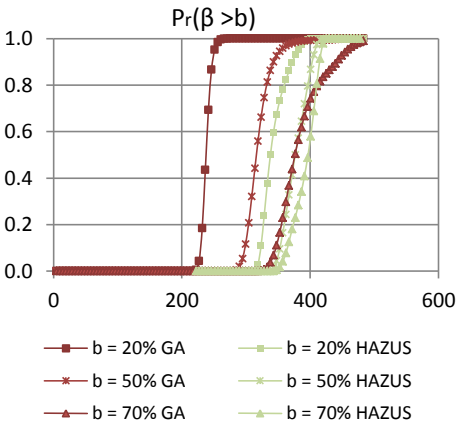
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

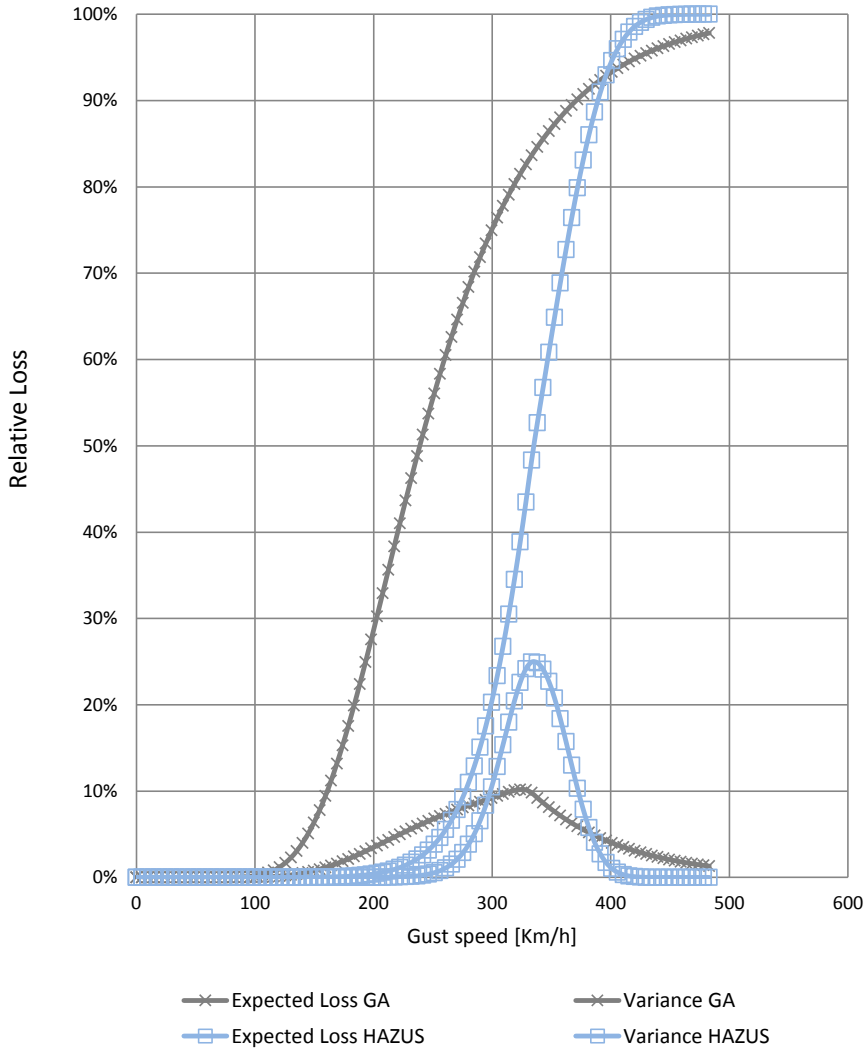
General Information

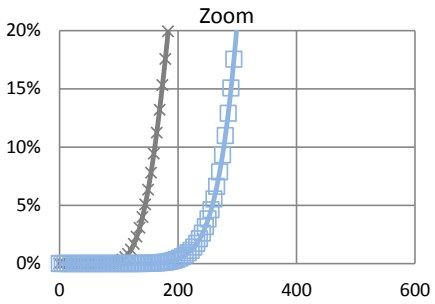
Code: C1M **Hazard:** Wind

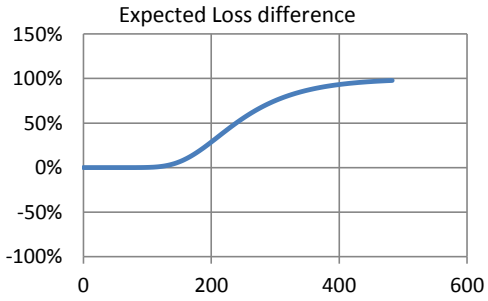
Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL MID-RISE

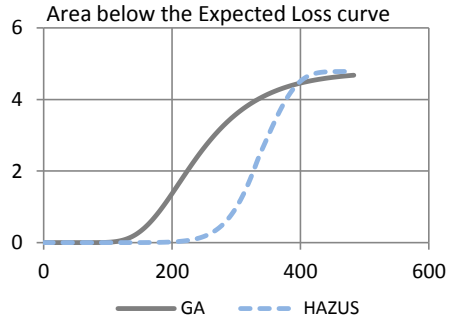
	GA	HAZUS
Project:		
Curve Name:	C1M_Low	C1M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

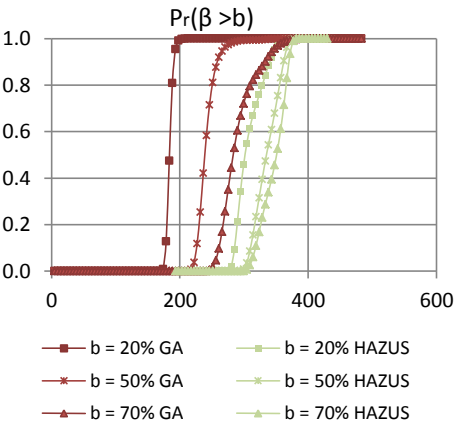
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

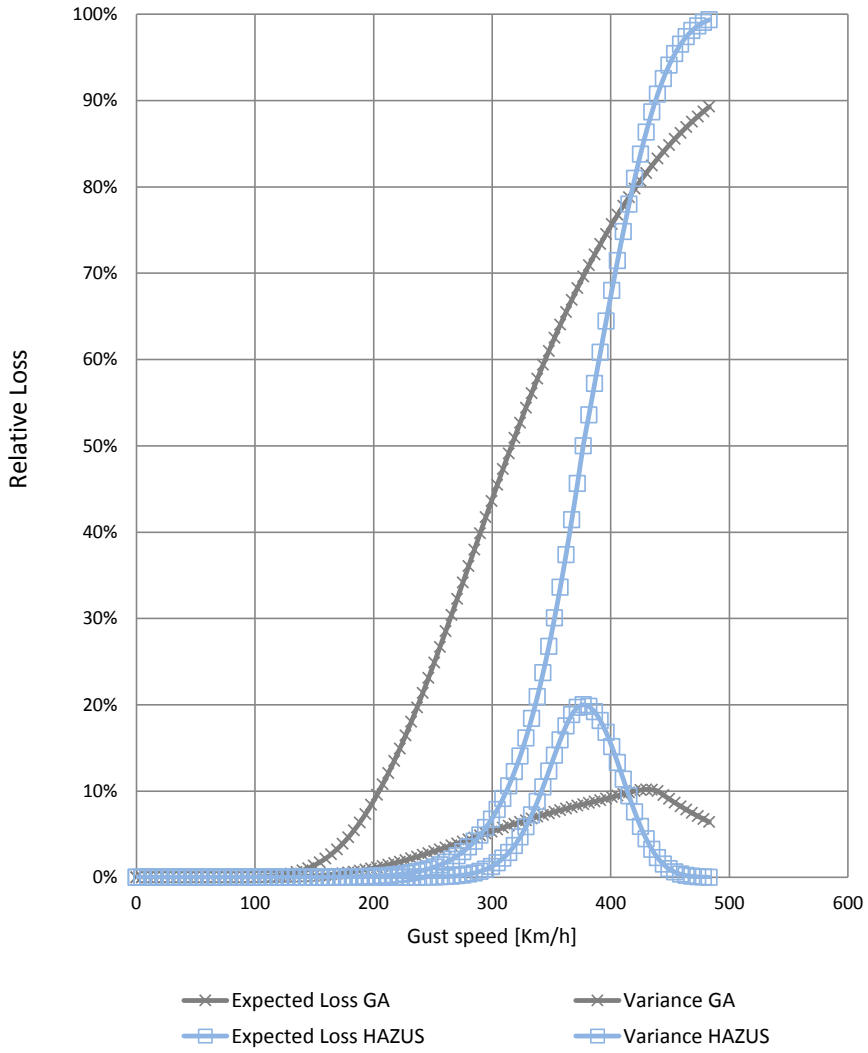
General Information

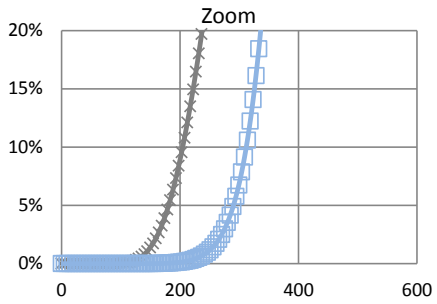
Code: C1M **Hazard:** Wind

Description: DUCTILE REINFORCED CONCRETE MOMENT FRAME WITH OR WITHOUT INFILL MID-RISE

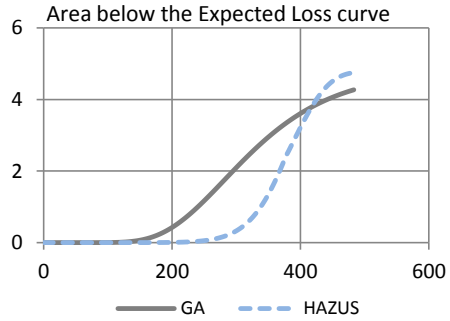
Project:	GA	HAZUS
Curve Name:	C1M_Medium	C1M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

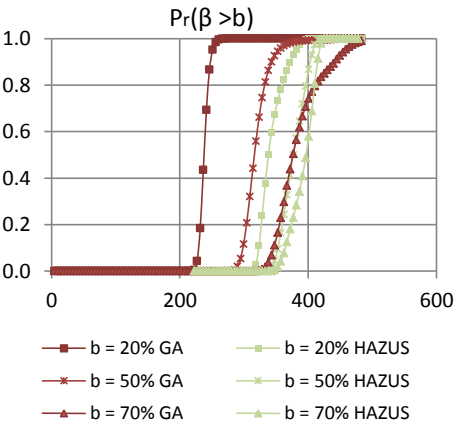
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

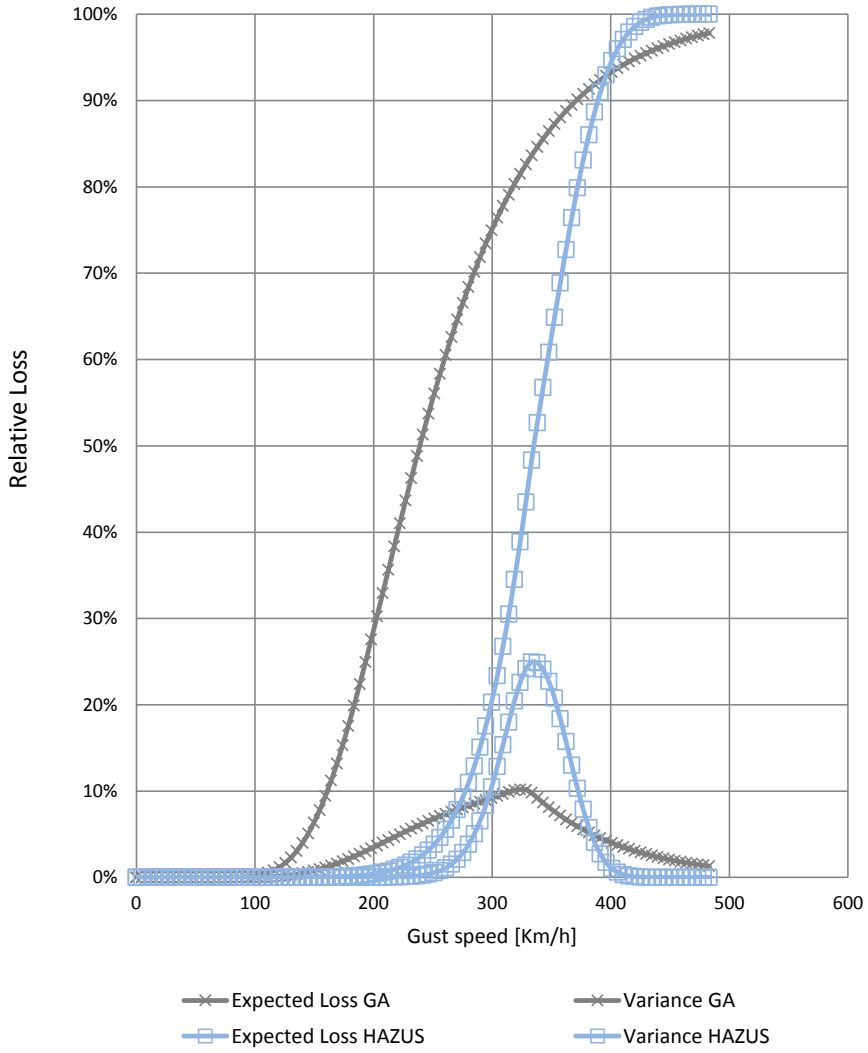
General Information

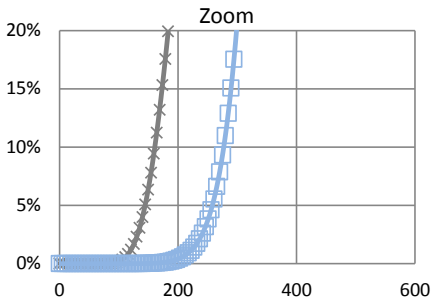
Code: C2M **Hazard:** Wind

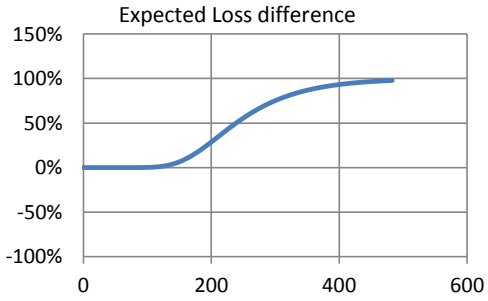
Description: REINFORCED CONCRETE SHEAR WALLS MID-RISE

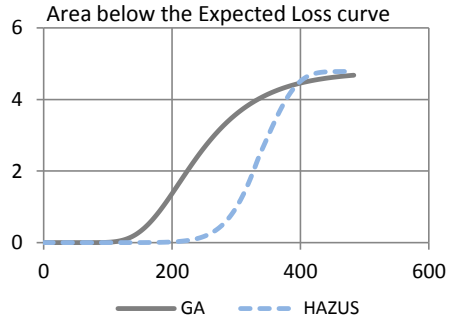
Project:	GA	HAZUS
Curve Name:	C2M_Low	C2M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

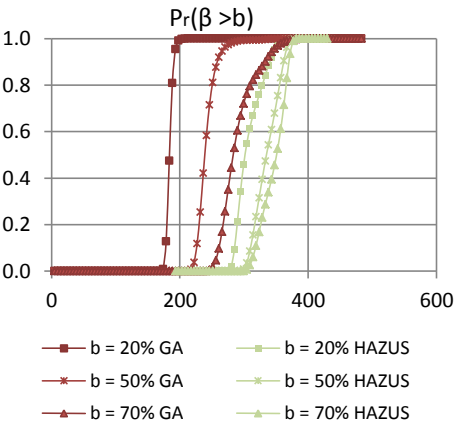
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

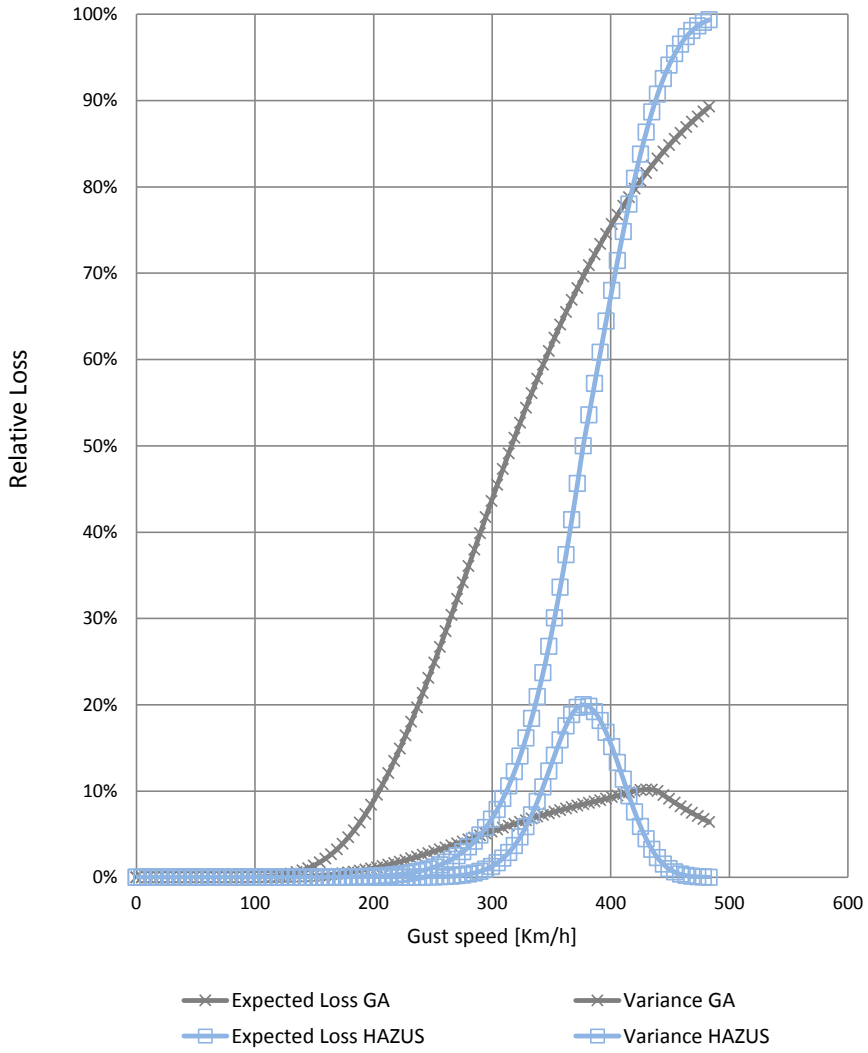
General Information

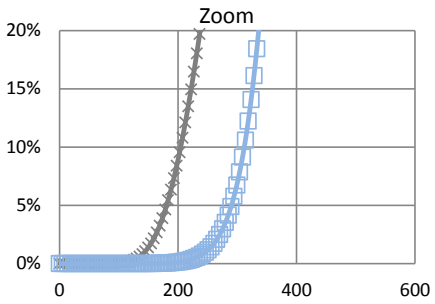
Code: C2M **Hazard:** Wind

Description: REINFORCED CONCRETE SHEAR WALLS MID-RISE

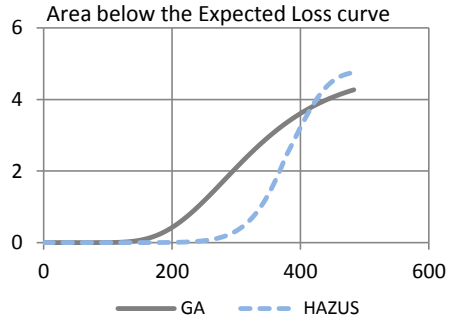
Project:	GA	HAZUS
Curve Name:	C2M_Medium	C2M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

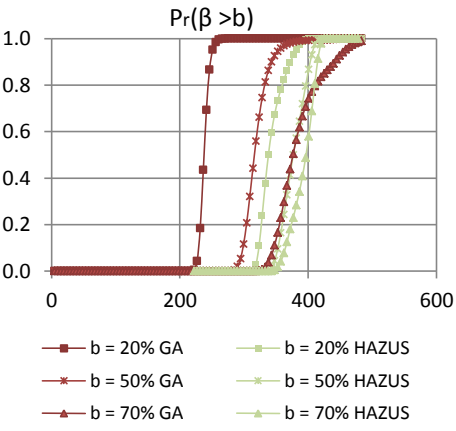
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

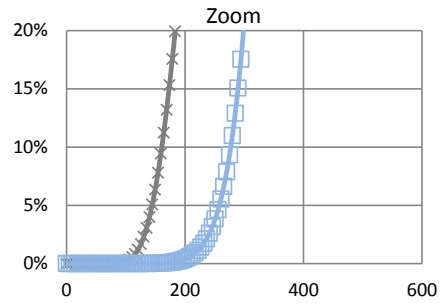
Comparison of Vulnerability Functions

General Information

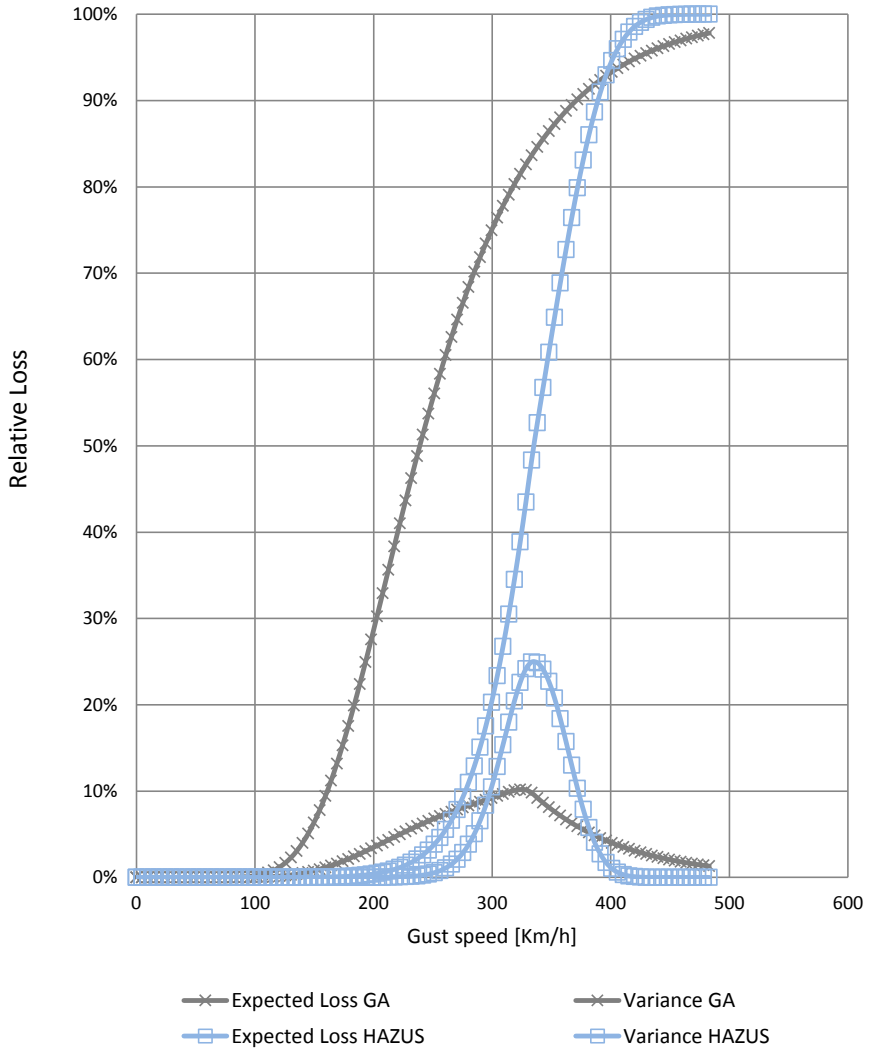
Code: C3L **Hazard:** Wind

Description: NONDUCTILE REINFORCED CONCRETE FRAME WITH MASONRY INFILL WALLS LOW-RISE

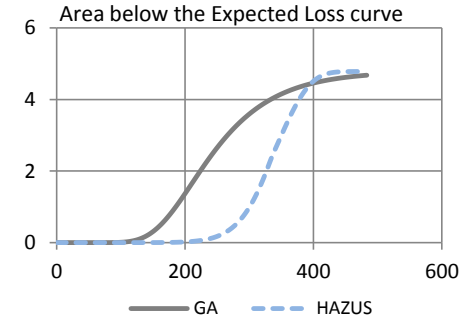
	GA	HAZUS
Project:		
Curve Name:	C3L_Low	C3L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

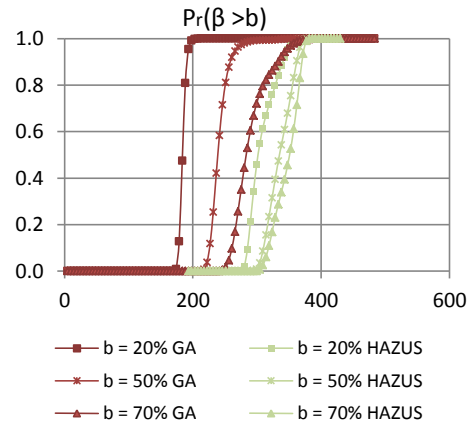


Vulnerability Functions









International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

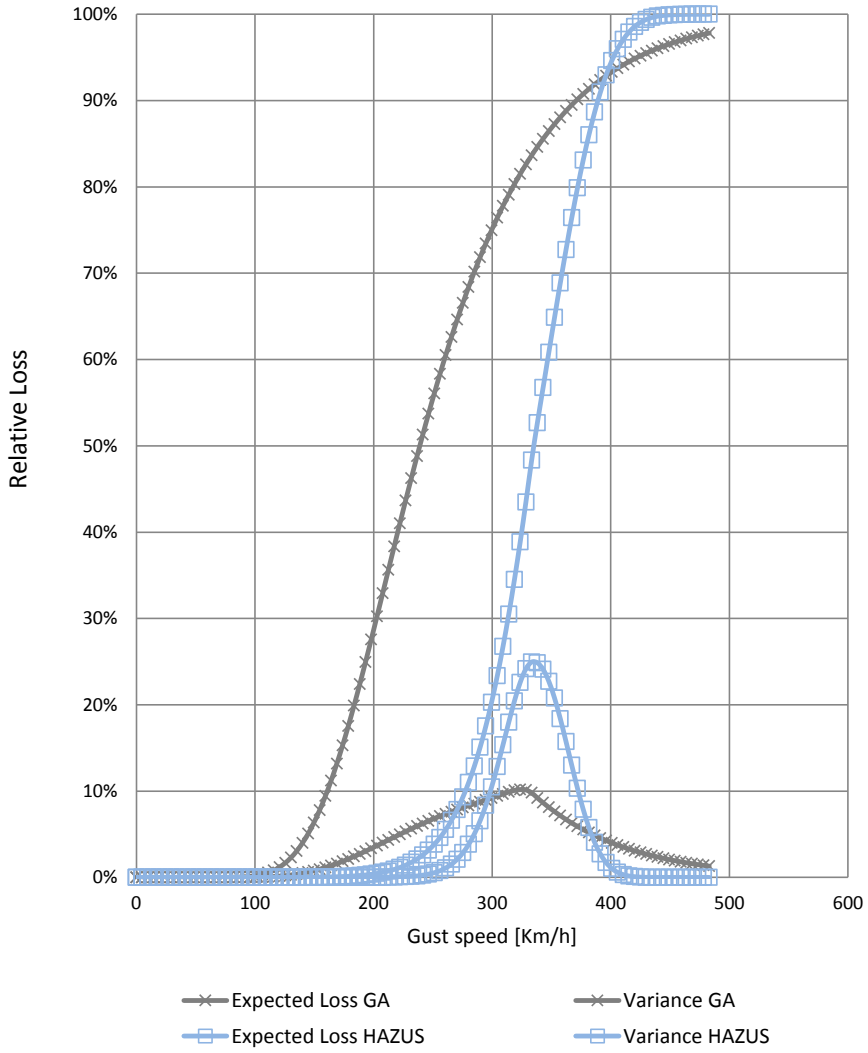
General Information

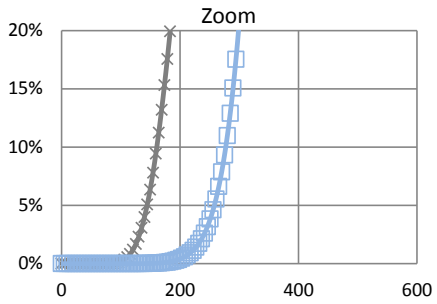
Code: C3M **Hazard:** Wind

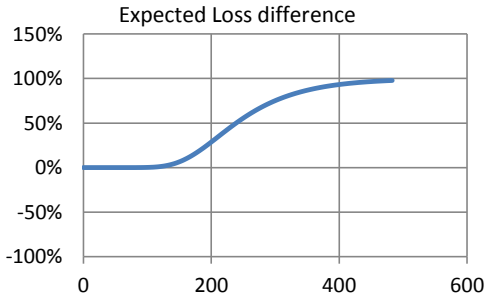
Description: NONDUCTILE REINFORCED CONCRETE FRAME WITH MASONRY INFILL WALLS MID-RISE

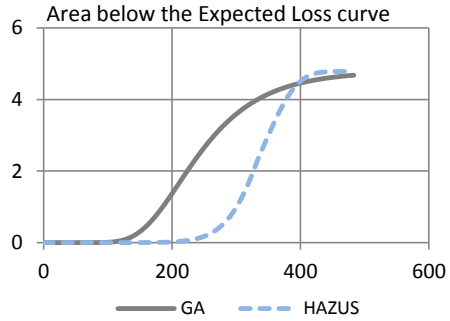
	GA	HAZUS
Project:		
Curve Name:	C3M_Low	C3M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

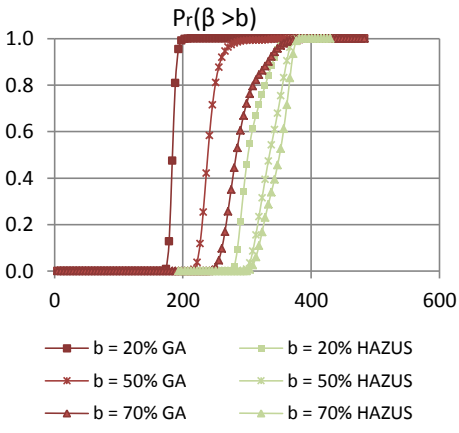
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

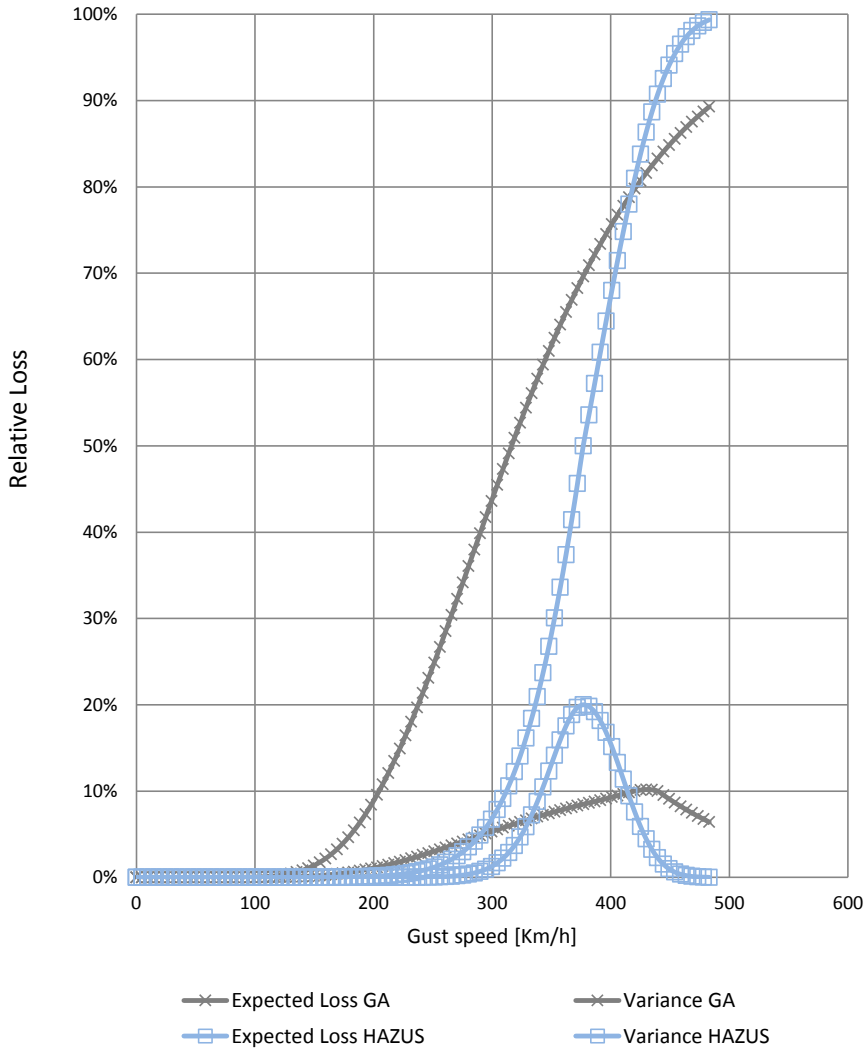
General Information

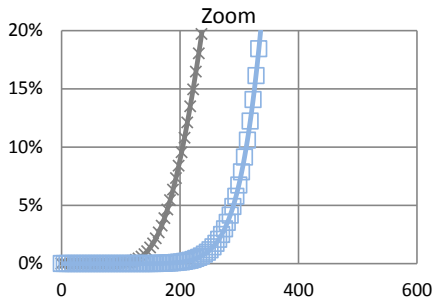
Code: C3M **Hazard:** Wind

Description: NONDUCTILE REINFORCED CONCRETE FRAME WITH MASONRY INFILL WALLS MID-RISE

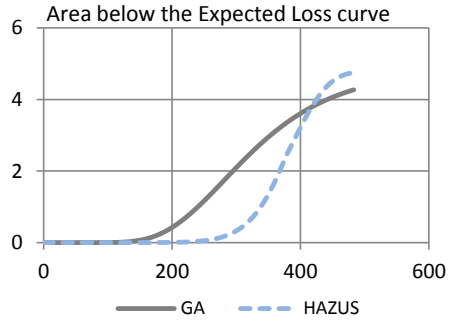
	GA	HAZUS
Project:		
Curve Name:	C3M_Medium	C3M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

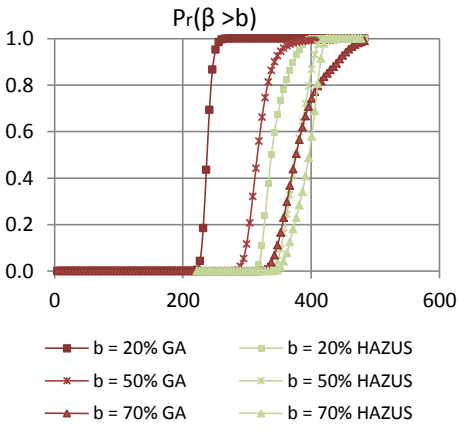
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

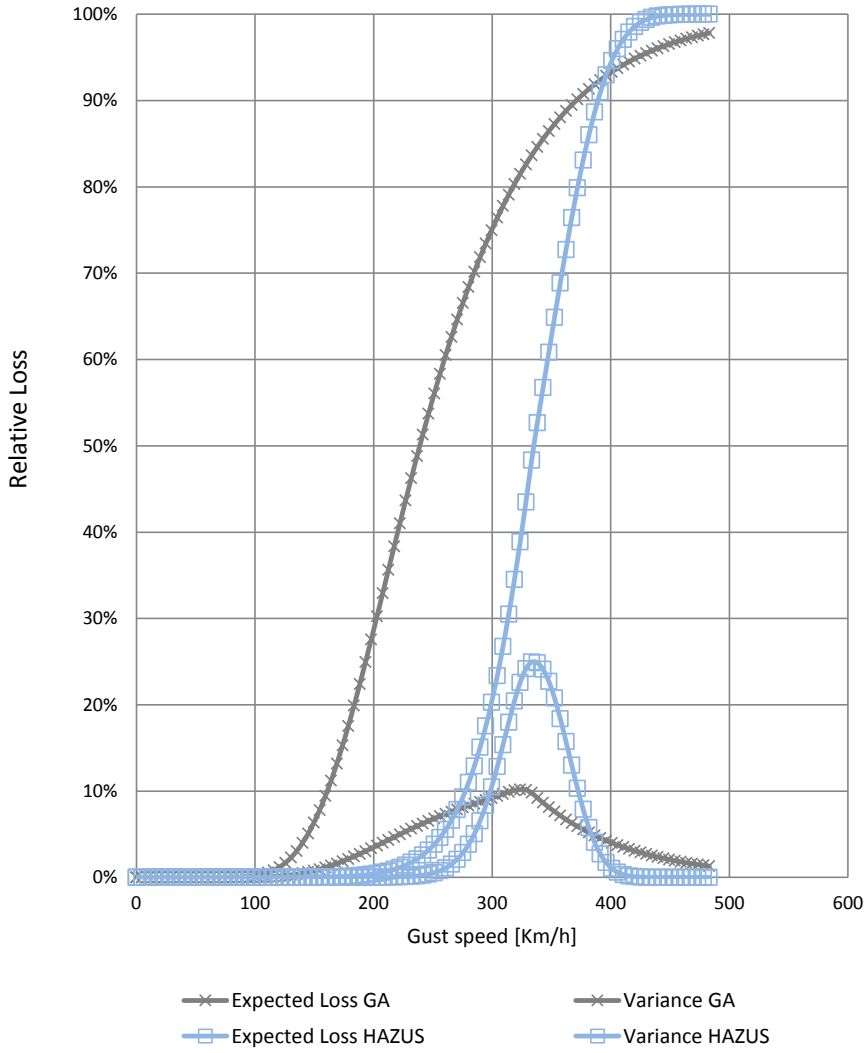
General Information

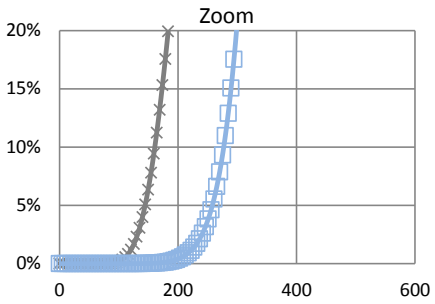
Code: PC2M **Hazard:** Wind

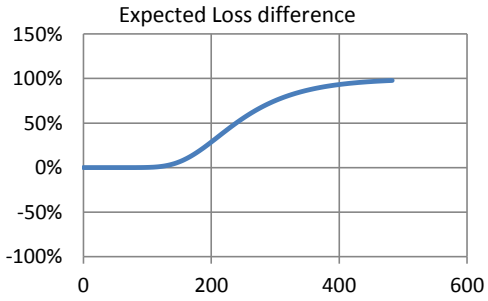
Description: PRECAST CONCRETE FRAMES WITH CONCRETE SHEAR WALLS MID-RISE

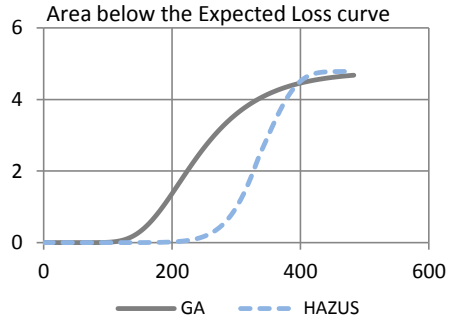
	GA	HAZUS
Project:		
Curve Name:	PC2M_Low	PC2M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

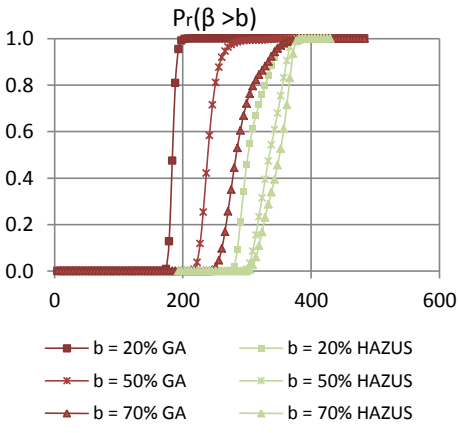
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

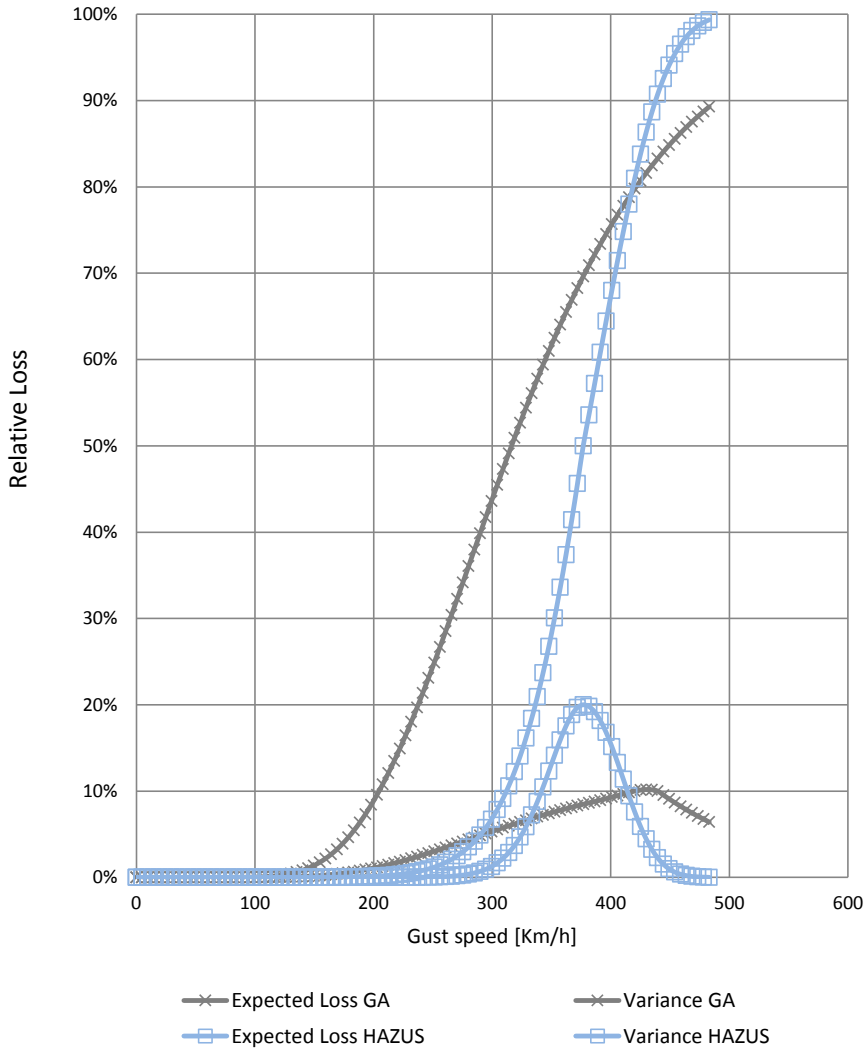
General Information

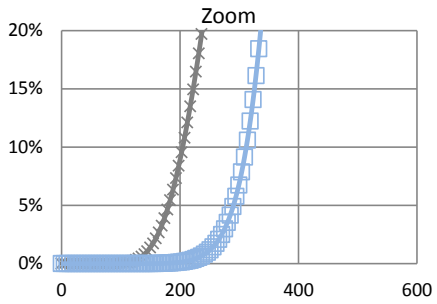
Code: PC2M **Hazard:** Wind

Description: PRECAST CONCRETE FRAMES WITH CONCRETE SHEAR WALLS MID-RISE

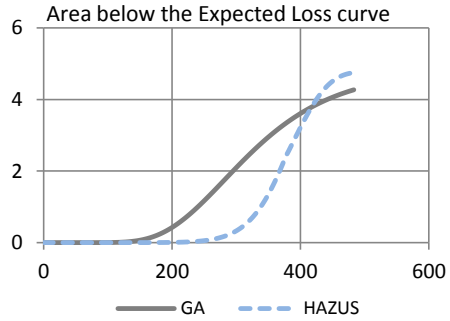
	GA	HAZUS
Project:		
Curve Name:	PC2M_Medium	PC2M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

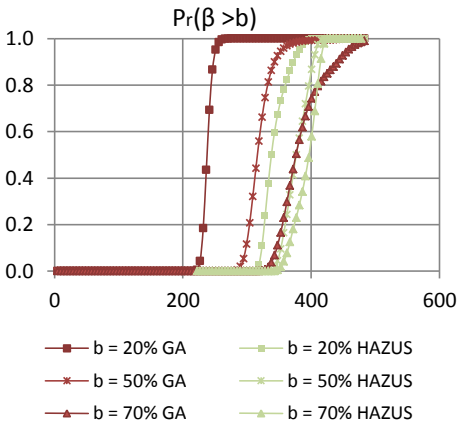
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

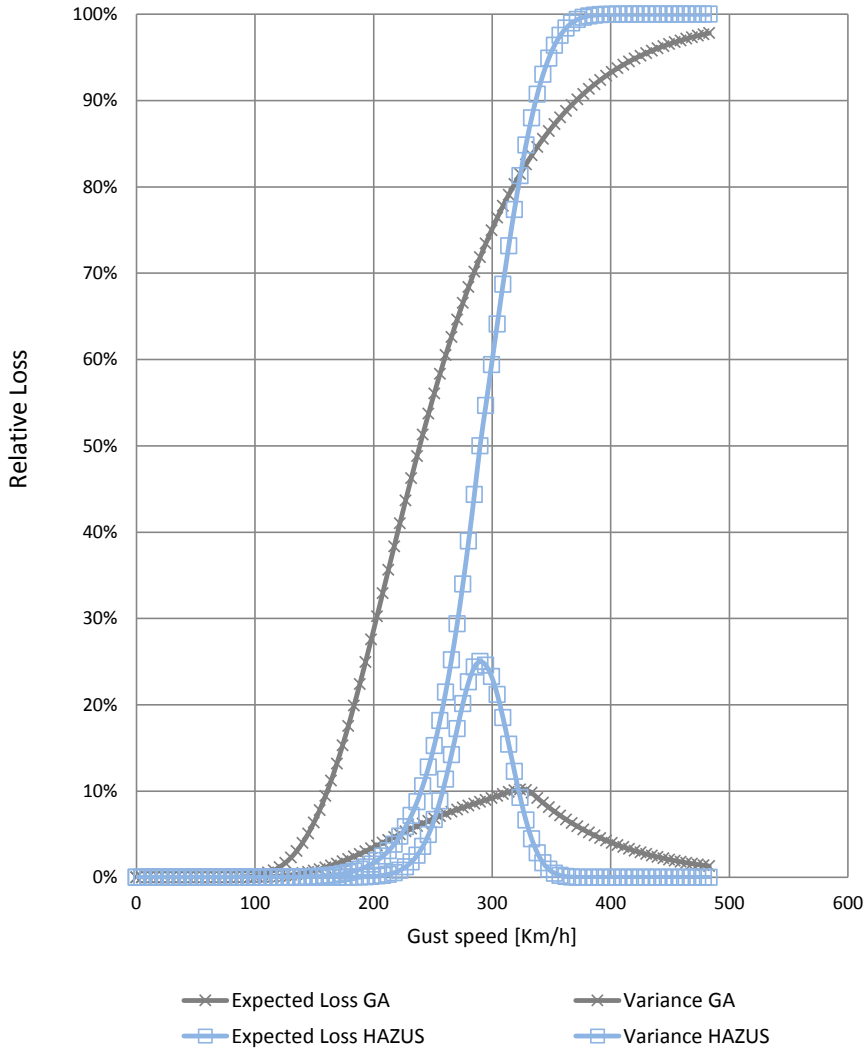
General Information

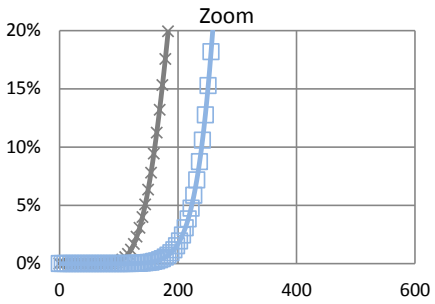
Code: RM1M **Hazard:** Wind

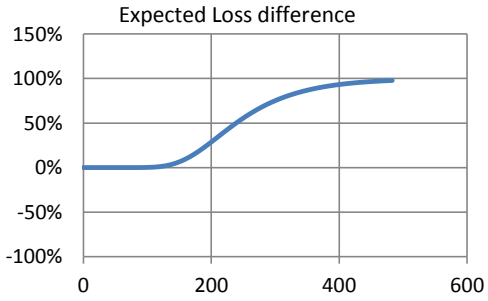
Description: REINFORCED MASONRY BEARING WALLS WITH WOOD OR METAL DECK DIAPHRAGMS MID-RISE (4+ STORIES)

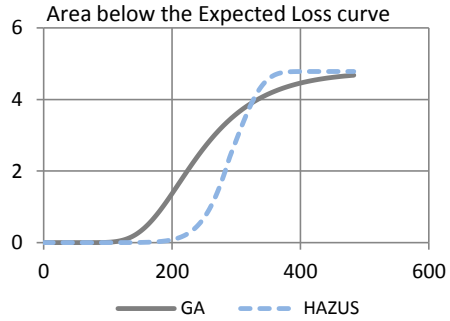
	GA	HAZUS
Project:		
Curve Name:	RM1M_Low	RM1M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

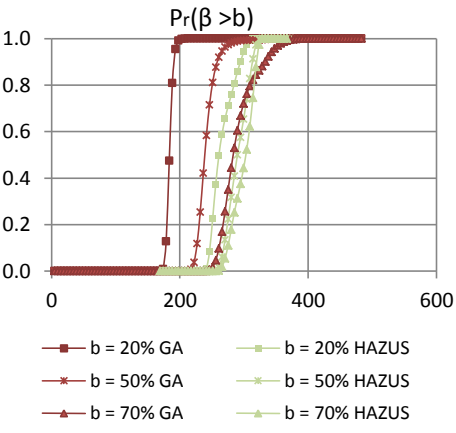
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

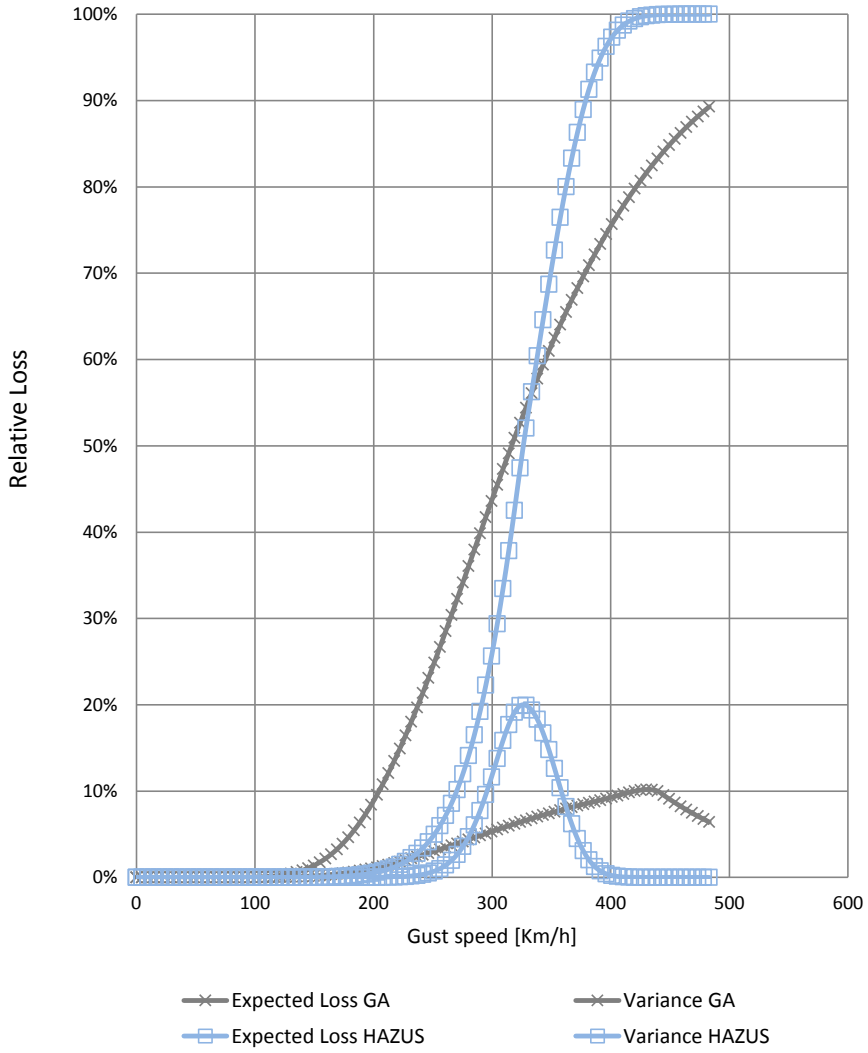
General Information

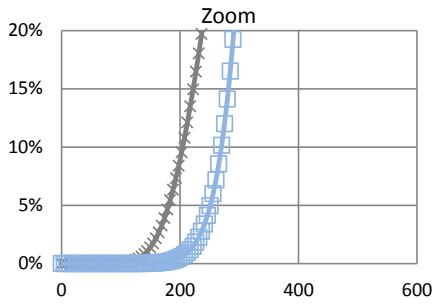
Code: RM1M **Hazard:** Wind

Description: REINFORCED MASONRY BEARING WALLS WITH WOOD OR METAL DECK DIAPHRAGMS MID-RISE (4+ STORIES)

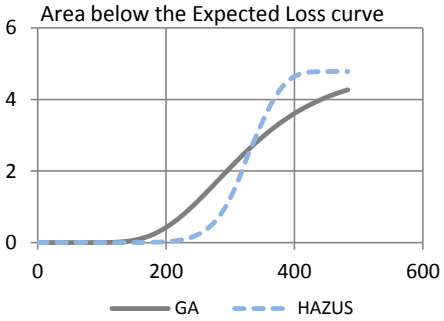
	GA	HAZUS
Project:		
Curve Name:	RM1M_Medium	RM1M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

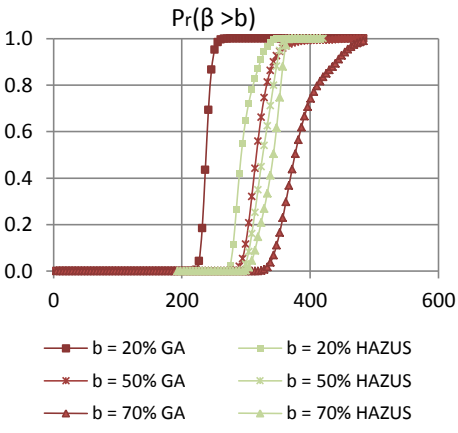
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction

Comparison of Vulnerability Functions

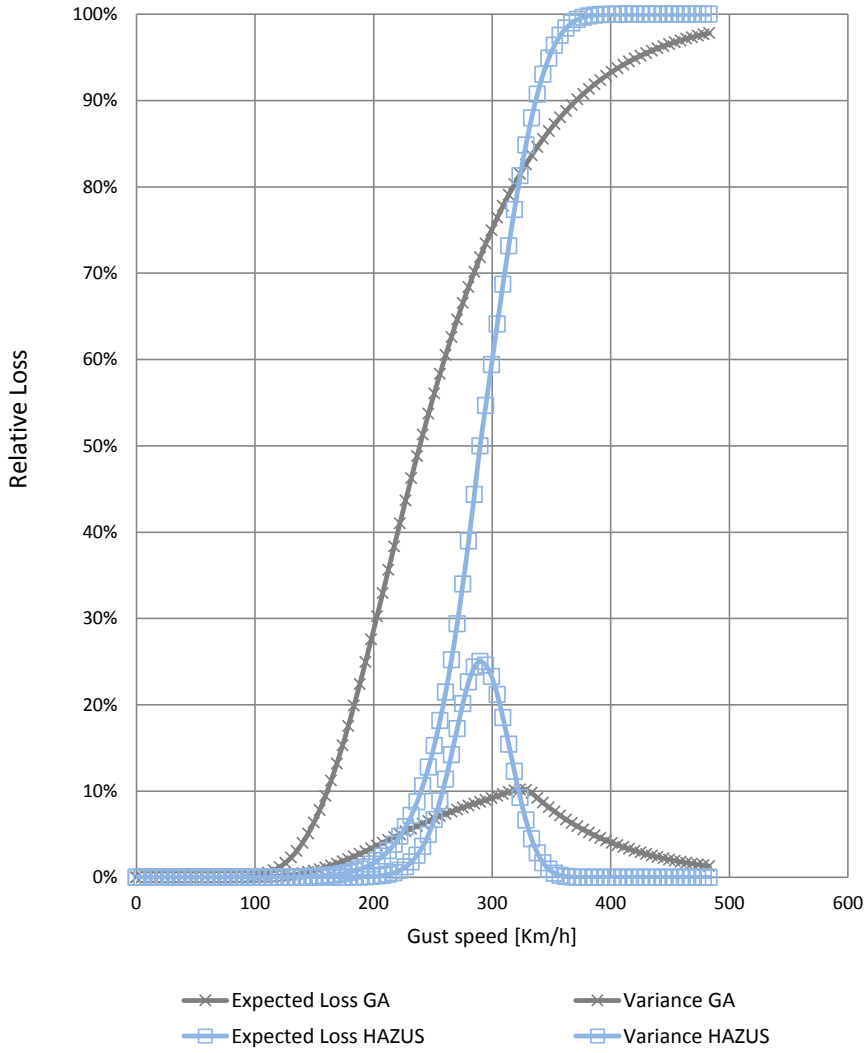
General Information

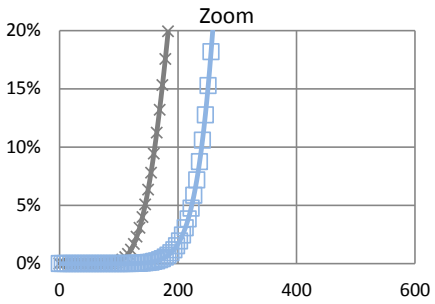
Code: RM2L **Hazard:** Wind

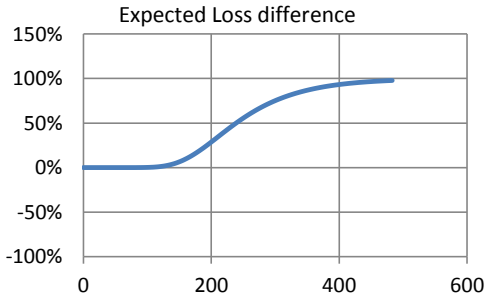
Description: REINFORCED MASONRY BEARING WALLS WITH CONCRETE DIAPHRAGMS LOW-RISE

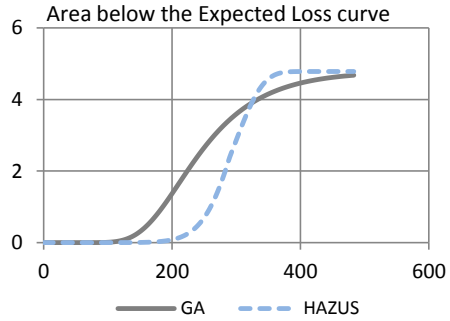
	GA	HAZUS
Project:		
Curve Name:	RM2L_Low	RM2L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

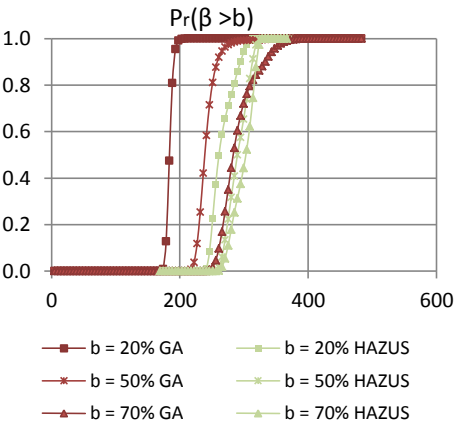
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

CIMNE

INGENIAR

Comparison of Vulnerability Functions

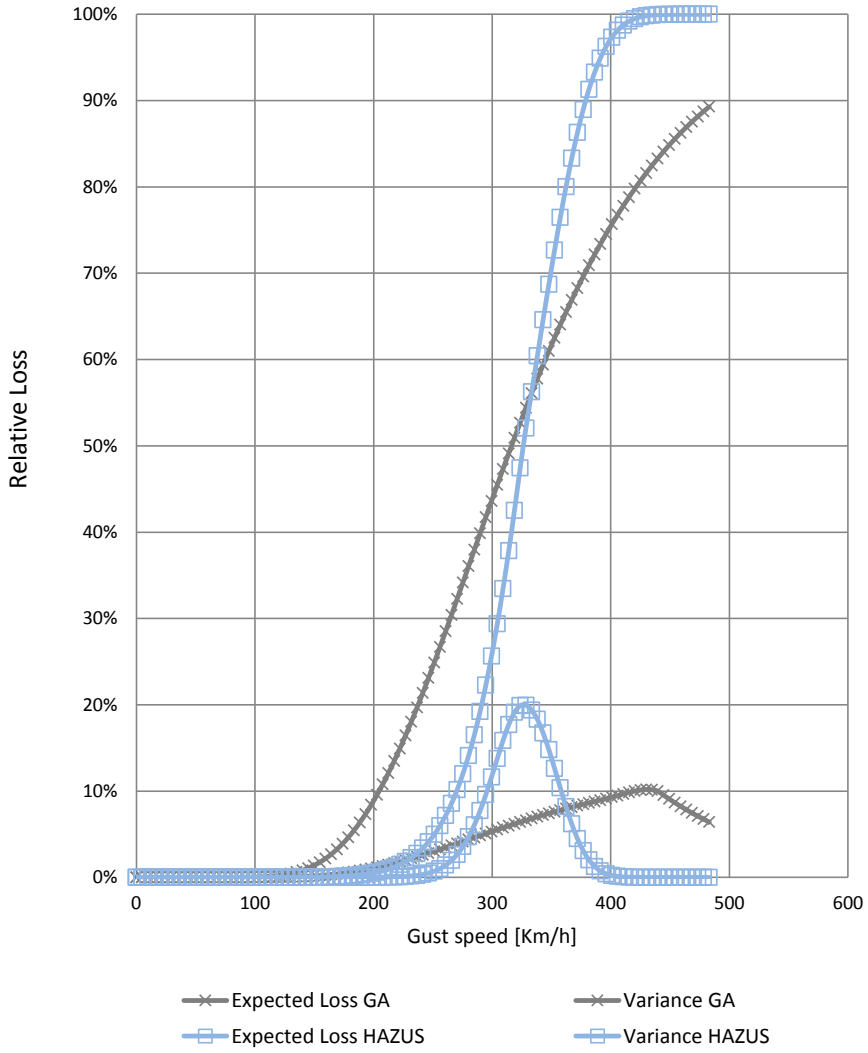
General Information

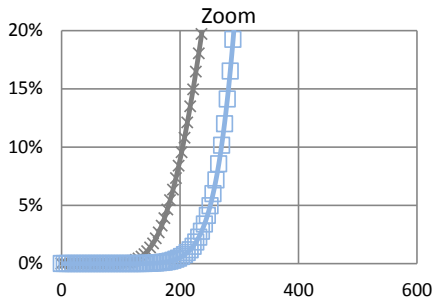
Code: RM2L **Hazard:** Wind

Description: REINFORCED MASONRY BEARING WALLS WITH CONCRETE DIAPHRAGMS LOW-RISE

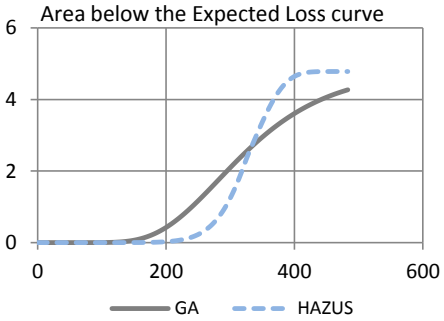
	GA	HAZUS
Project:		
Curve Name:	RM2L_Medium	RM2L_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

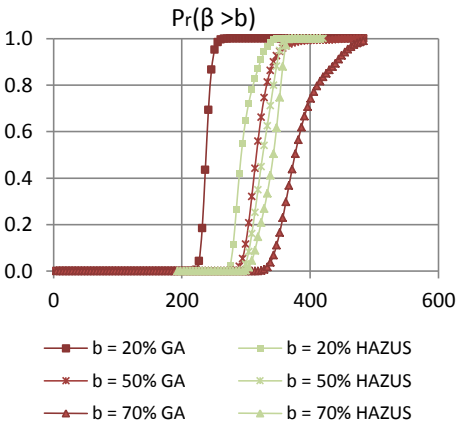
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

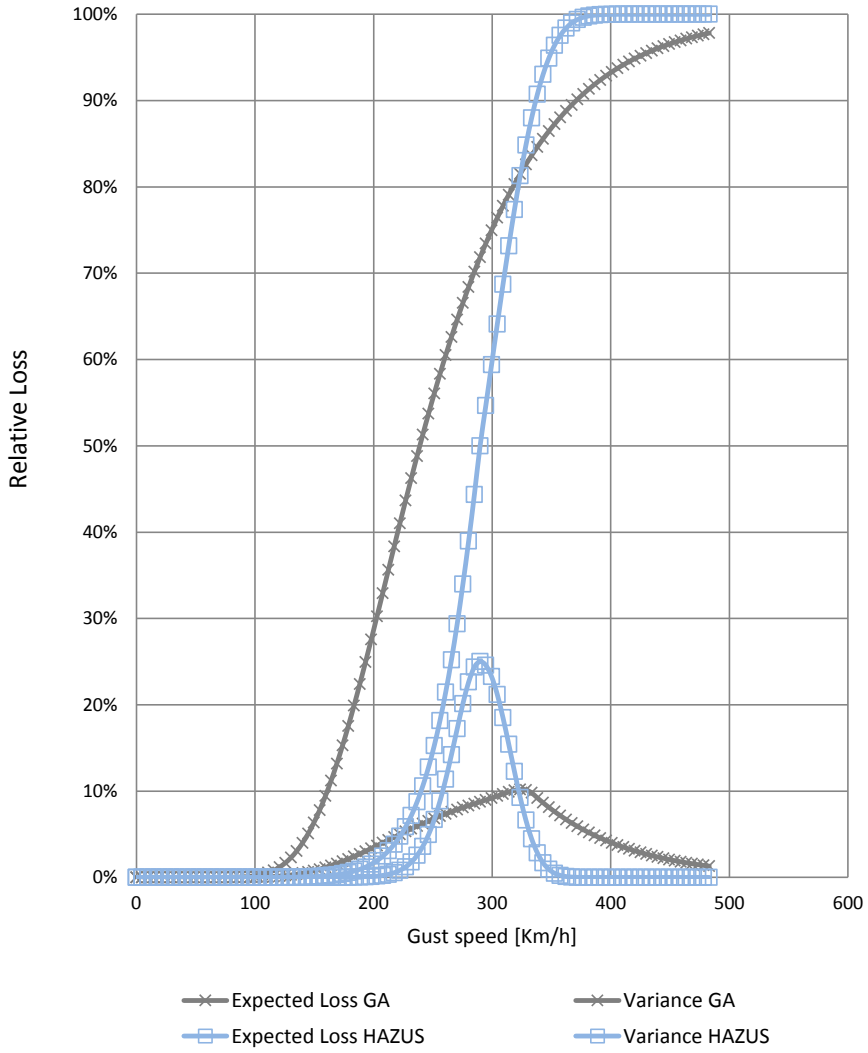
General Information

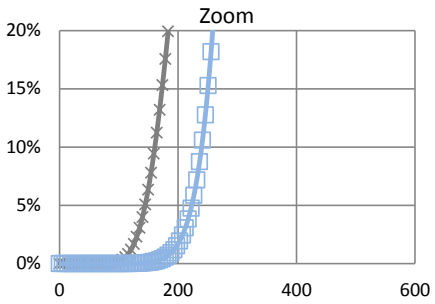
Code: RM2M **Hazard:** Wind

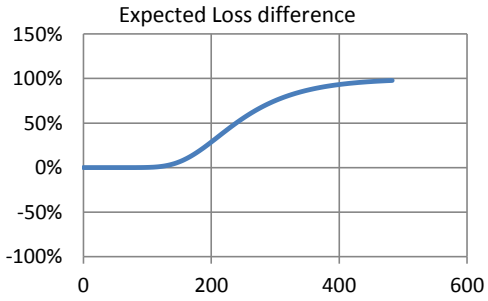
Description: REINFORCED MASONRY BEARING WALLS WITH CONCRETE DIAPHRAGMS MID-RISE

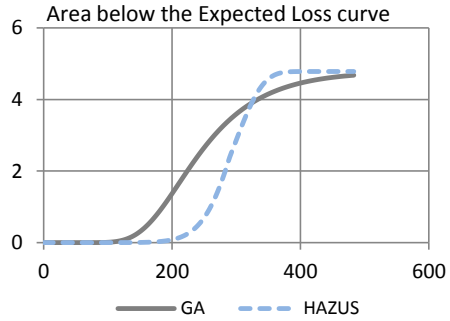
	GA	HAZUS
Project:		
Curve Name:	RM2M_Low	RM2M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

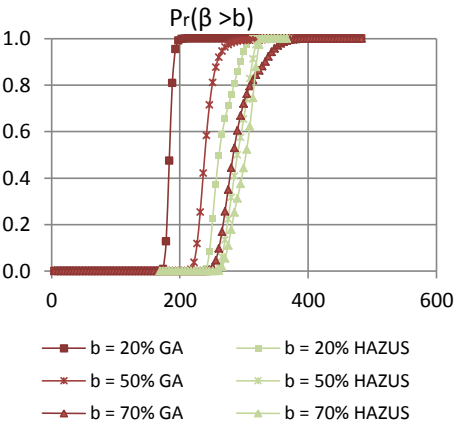
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

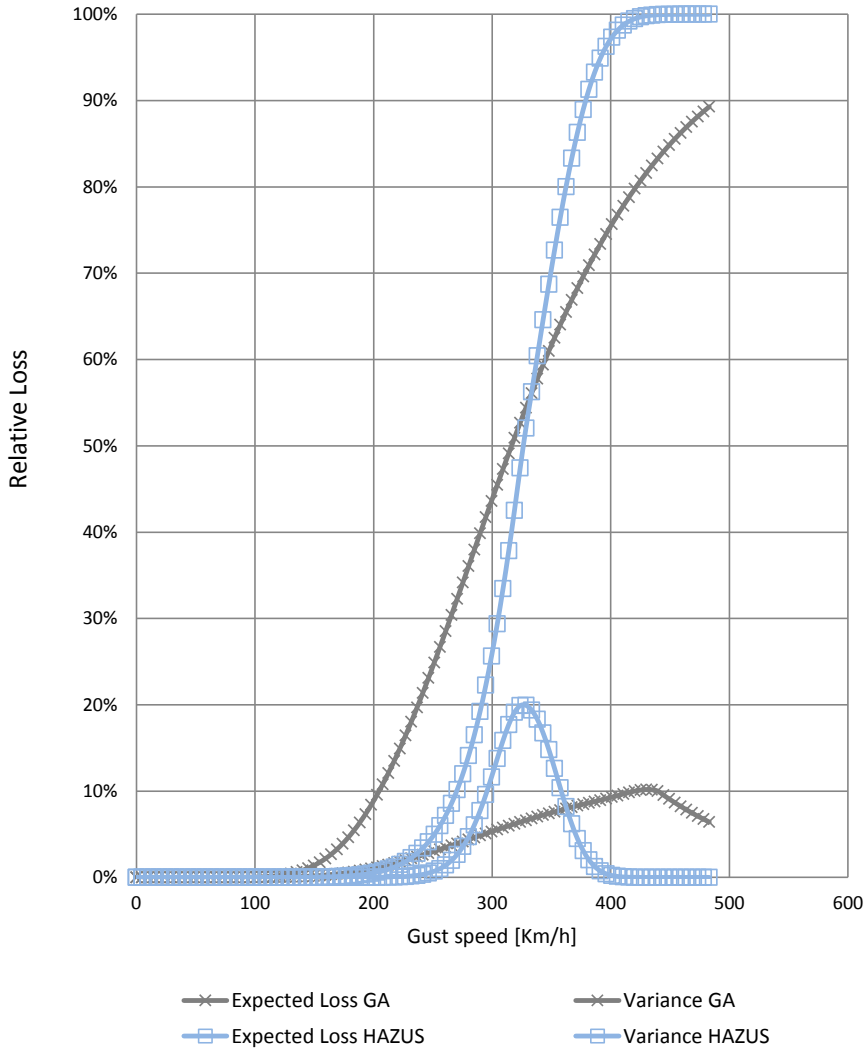
General Information

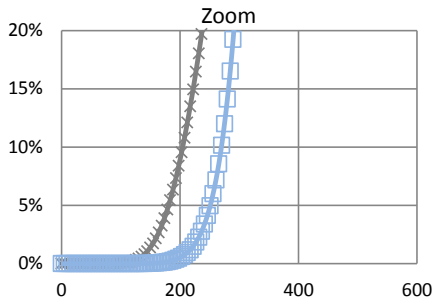
Code: RM2M **Hazard:** Wind

Description: REINFORCED MASONRY BEARING WALLS WITH CONCRETE DIAPHRAGMS MID-RISE

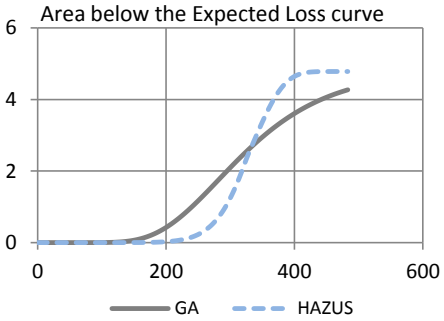
	GA	HAZUS
Project:		
Curve Name:	RM2M_Medium	RM2M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

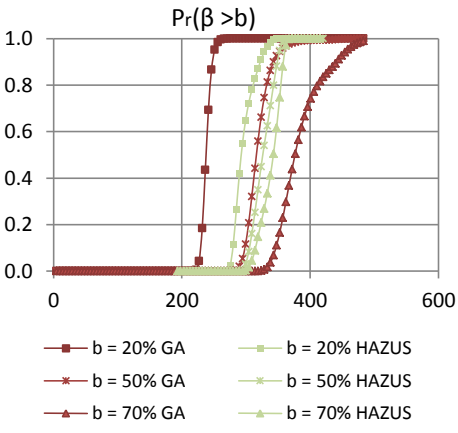
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

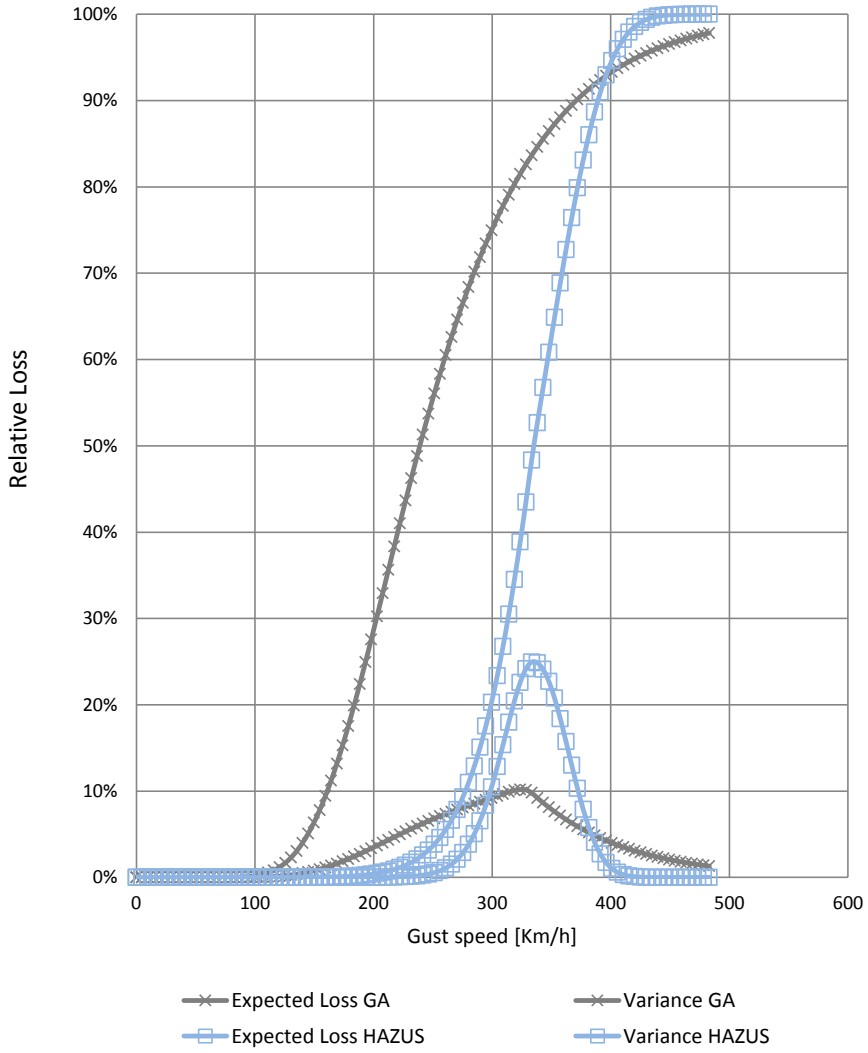
General Information

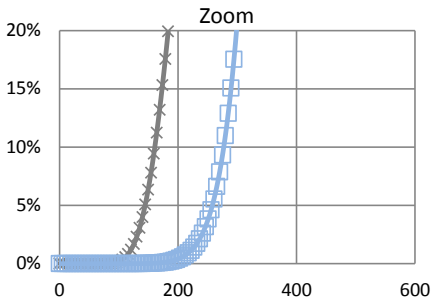
Code: S1H **Hazard:** Wind

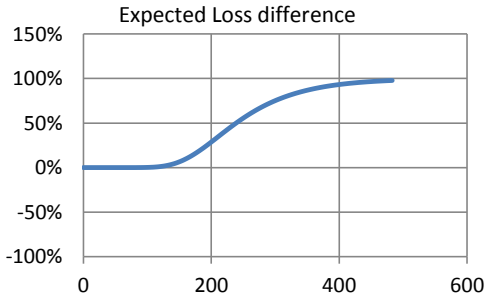
Description: STEEL MOMENT FRAME HIGH-RISE

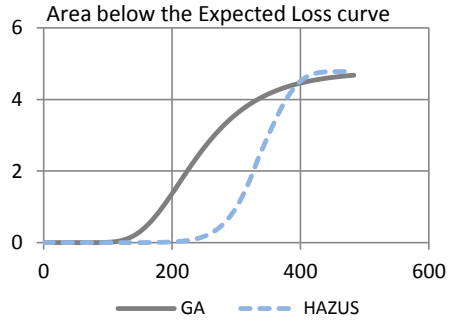
Project:	GA	HAZUS
Curve Name:	S1H_Low	S1H_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

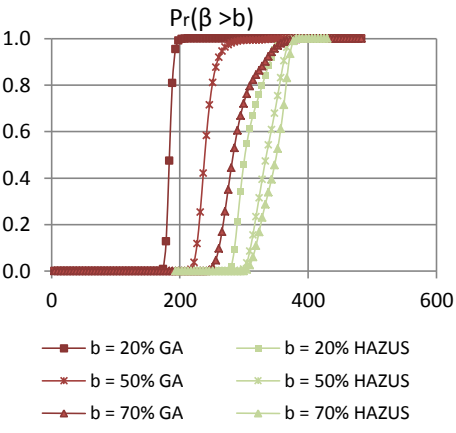
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

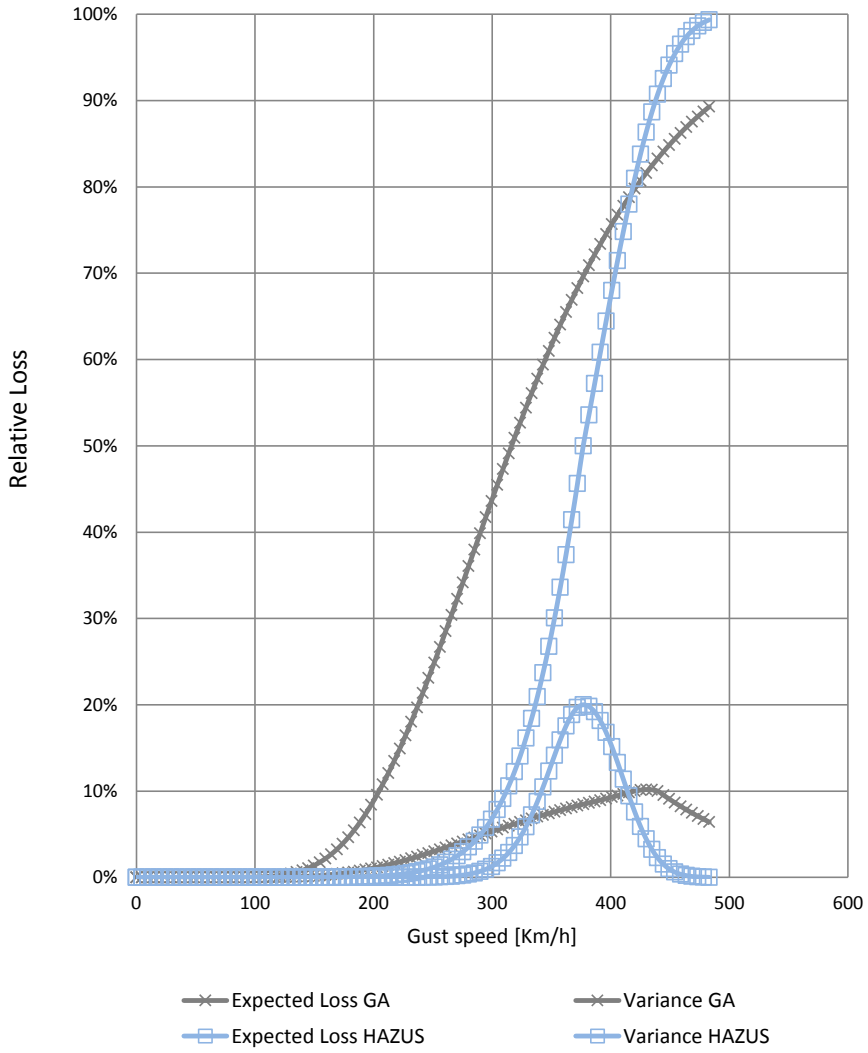
General Information

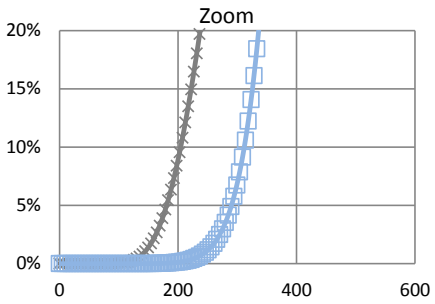
Code: S1H **Hazard:** Wind

Description: STEEL MOMENT FRAME HIGH-RISE

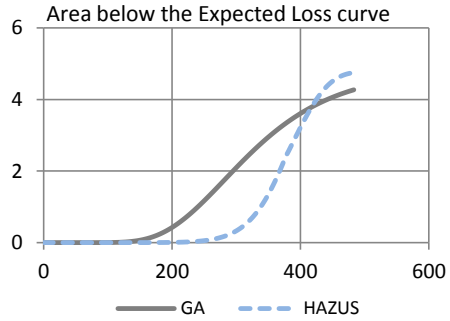
Project:	GA	HAZUS
Curve Name:	S1H_Medium	S1H_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

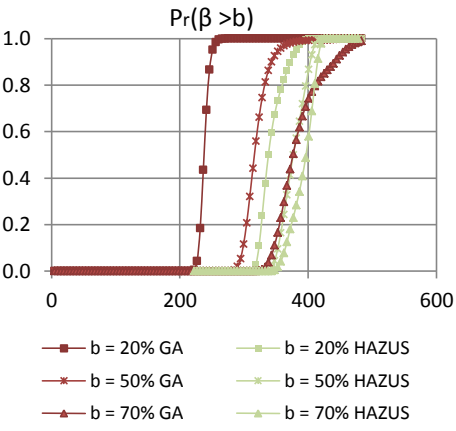
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

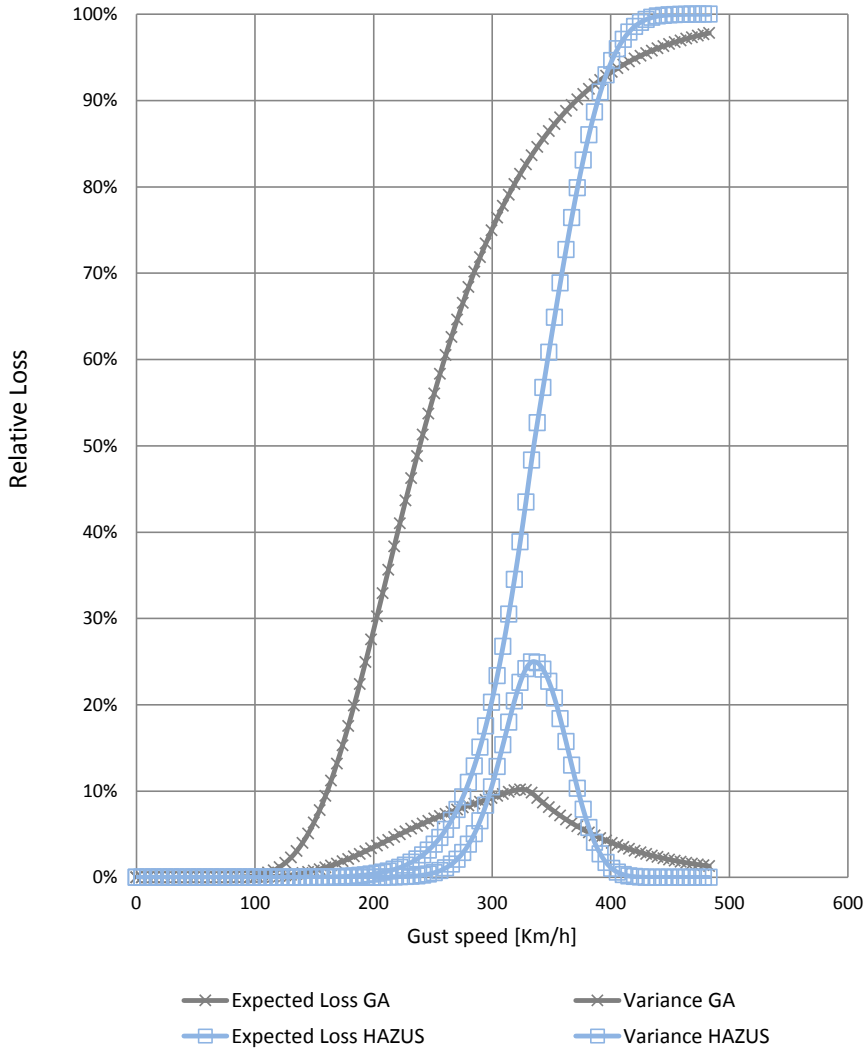
General Information

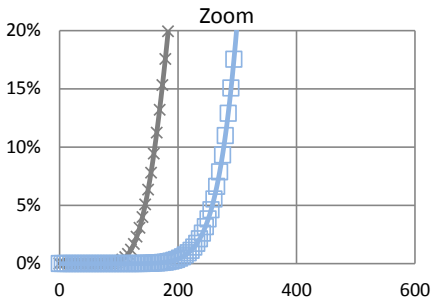
Code: S1L **Hazard:** Wind

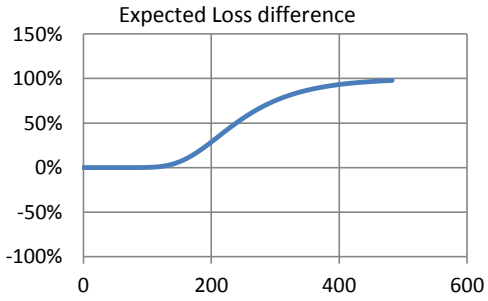
Description: STEEL MOMENT FRAME LOW-RISE

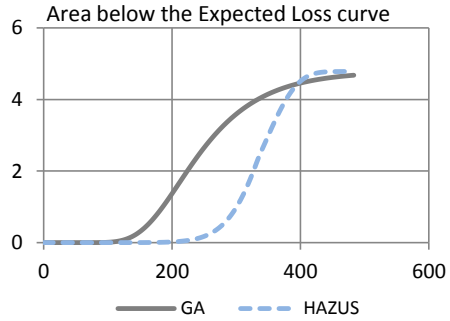
	GA	HAZUS
Project:		
Curve Name:	S1L_Low	S1L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

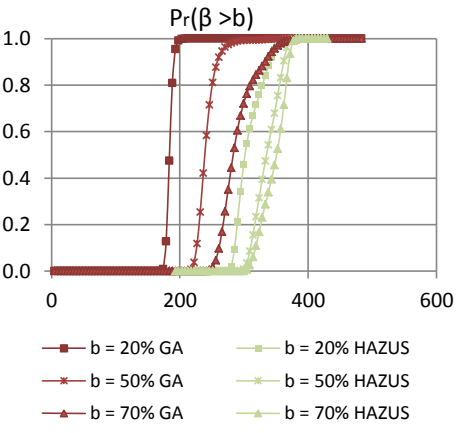
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

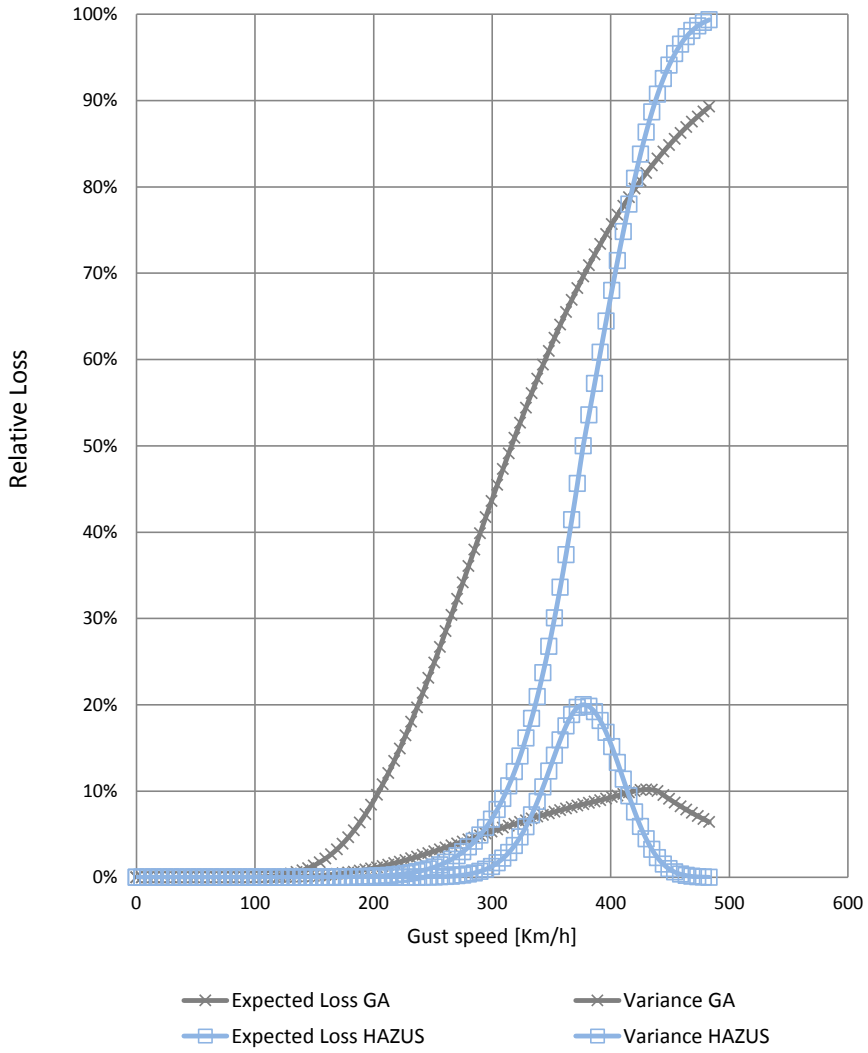
General Information

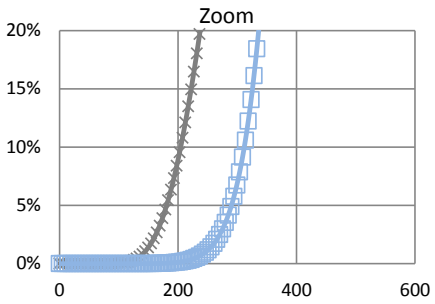
Code: S1L **Hazard:** Wind

Description: STEEL MOMENT FRAME LOW-RISE

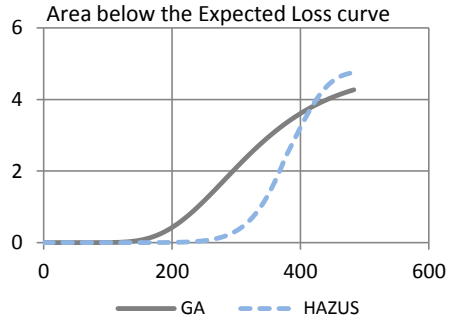
Project:	GA	HAZUS
Curve Name:	S1L_Medium	S1L_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

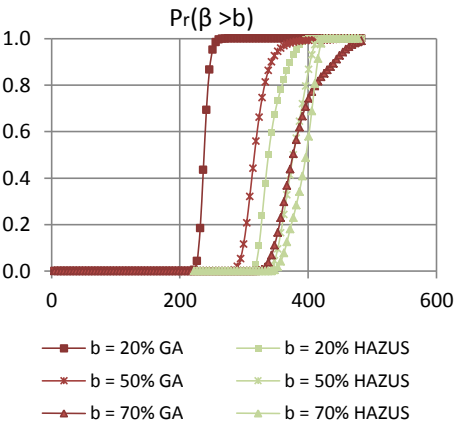
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

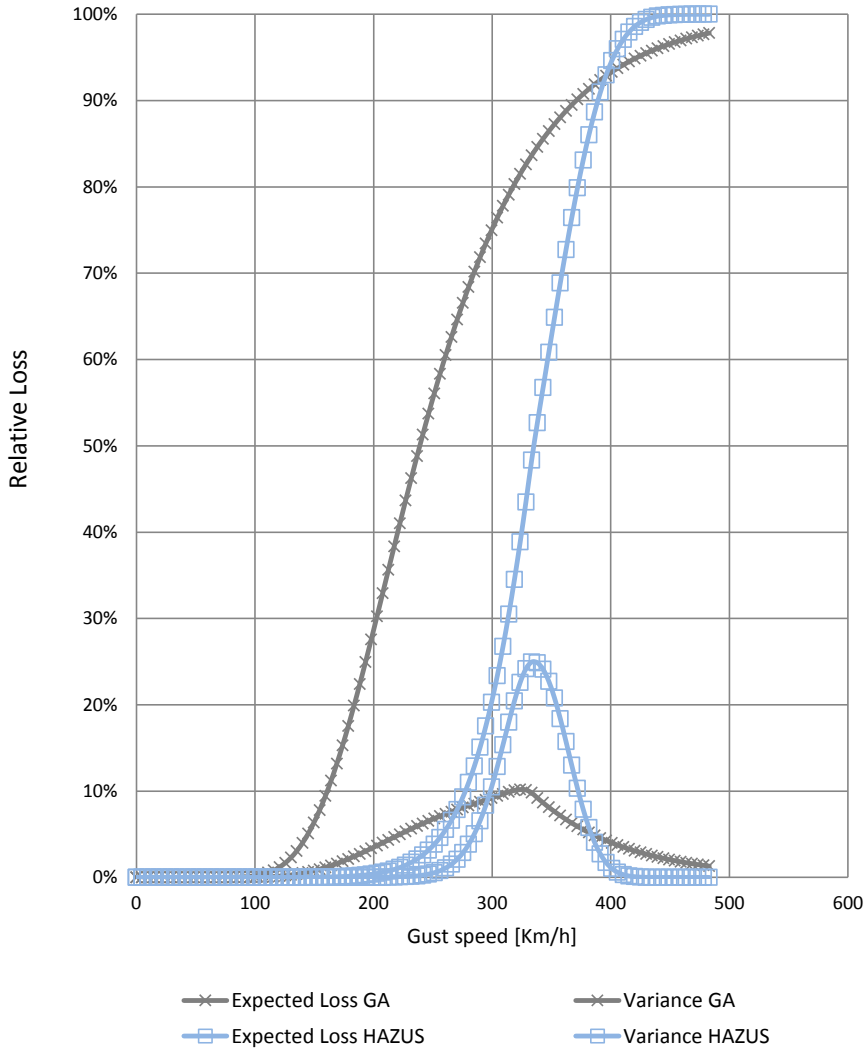
General Information

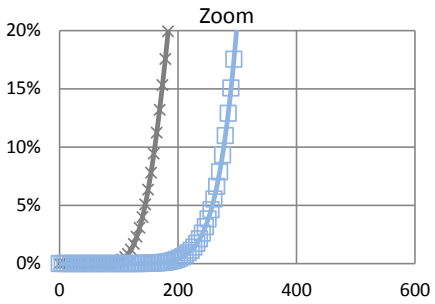
Code: S1M **Hazard:** Wind

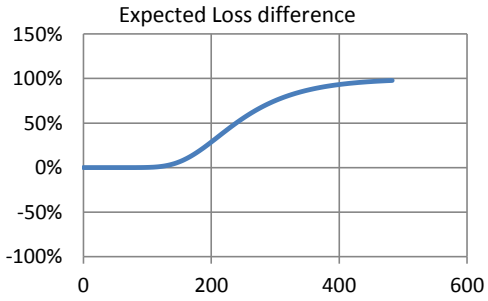
Description: STEEL MOMENT FRAME MID-RISE

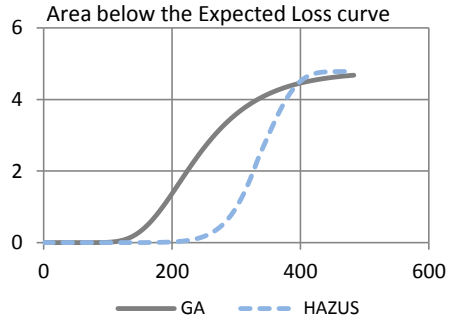
Project:	GA	HAZUS
Curve Name:	S1M_Low	S1M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

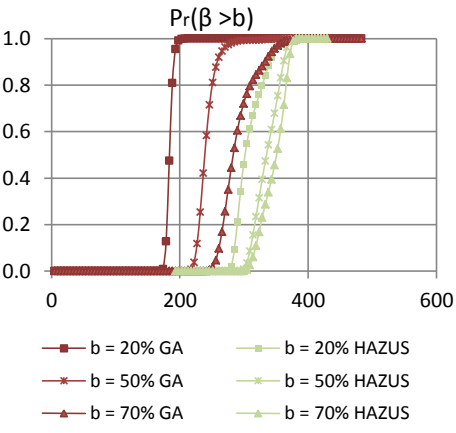
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

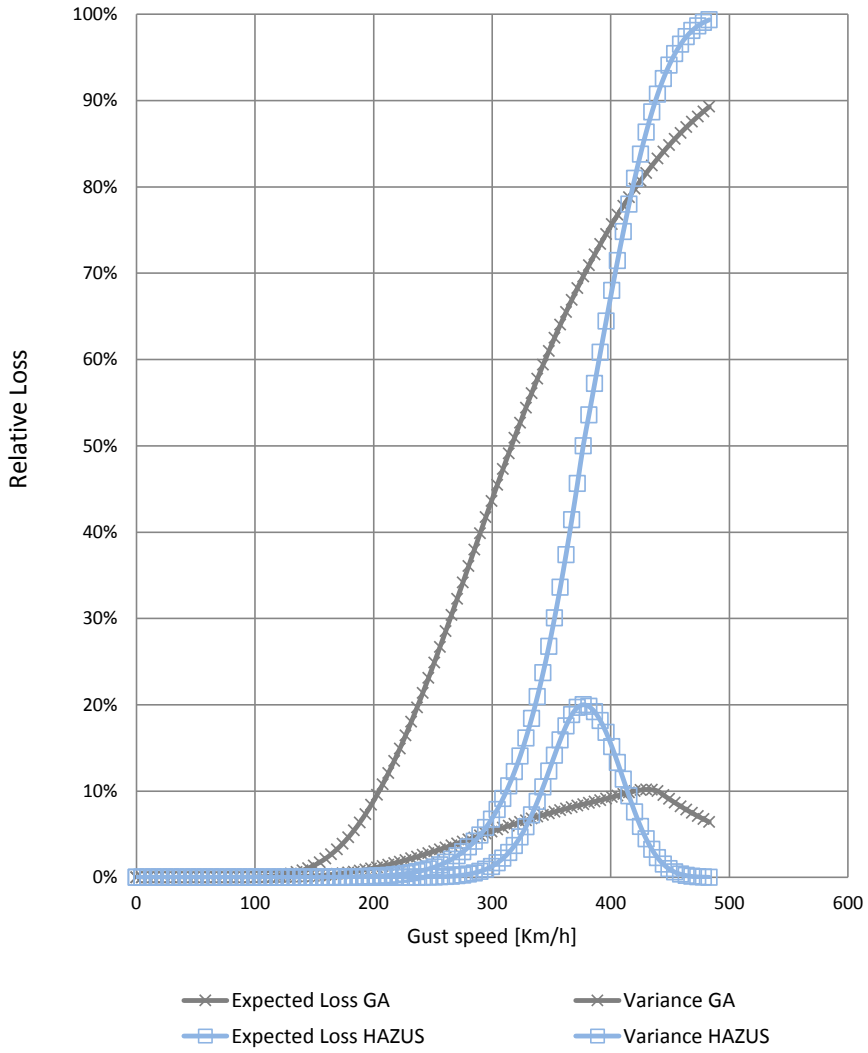
General Information

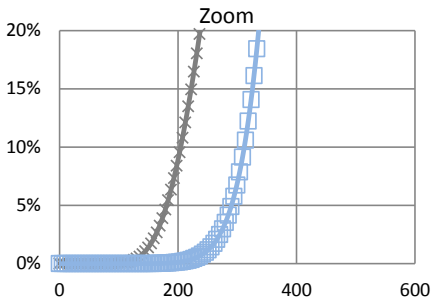
Code: S1M **Hazard:** Wind

Description: STEEL MOMENT FRAME MID-RISE

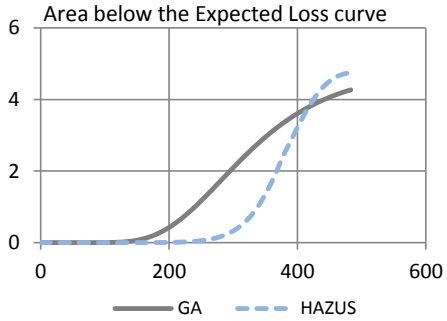
Project:	GA	HAZUS
Curve Name:	S1M_Medium	S1M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

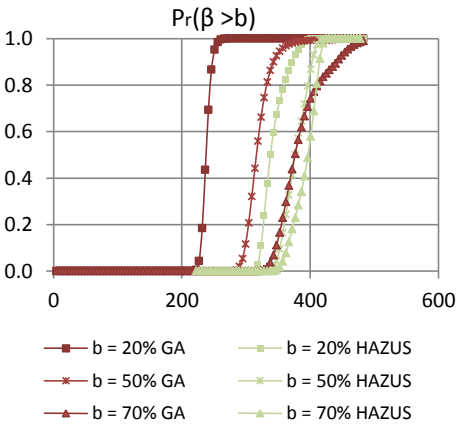
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

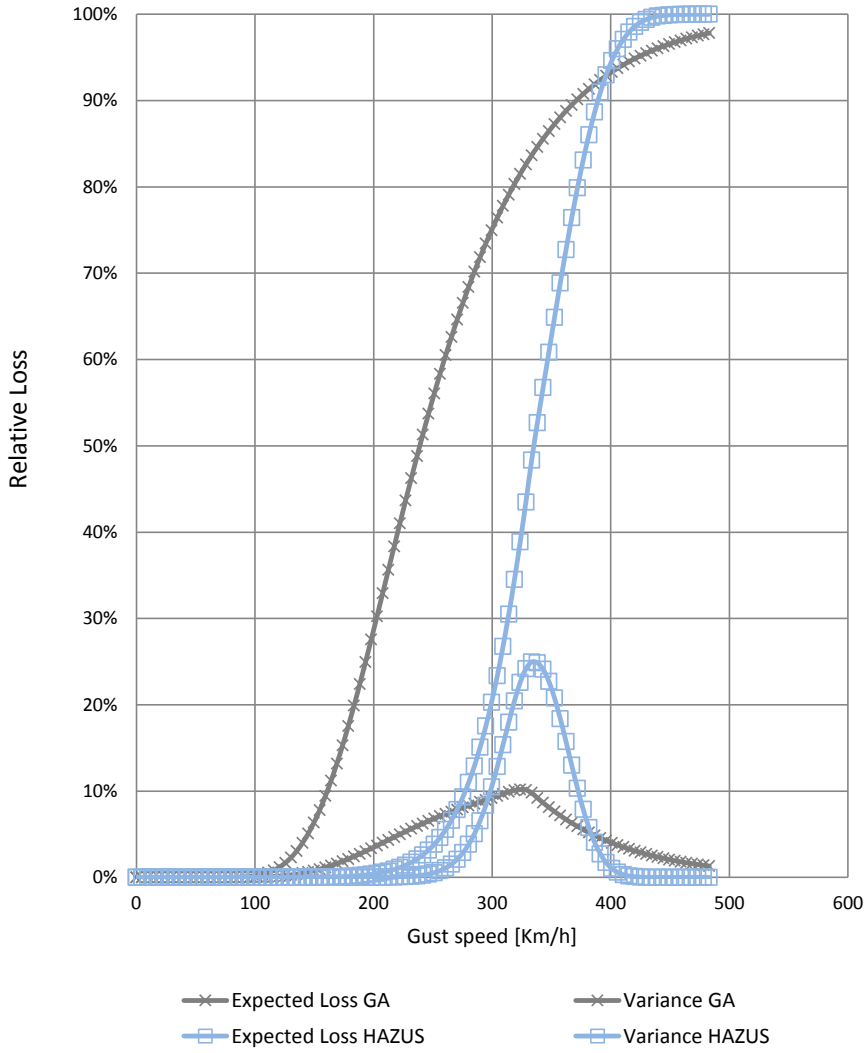
General Information

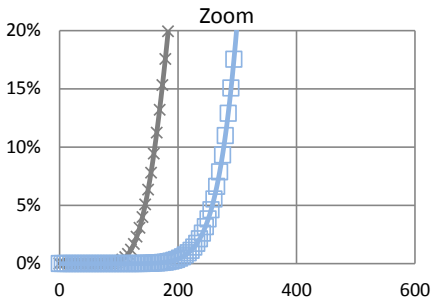
Code: S2M **Hazard:** Wind

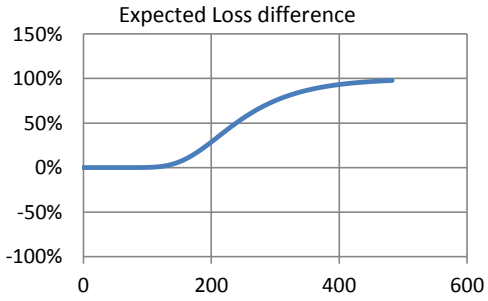
Description: STEEL BRACED FRAME MID-RISE

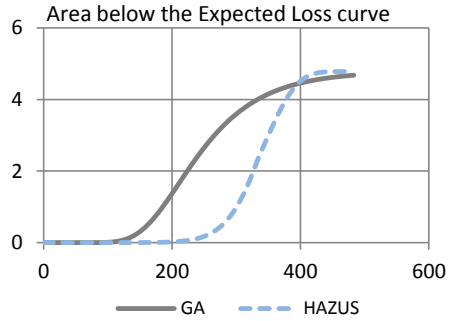
Project:	GA	HAZUS
Curve Name:	S2M_Low	S2M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

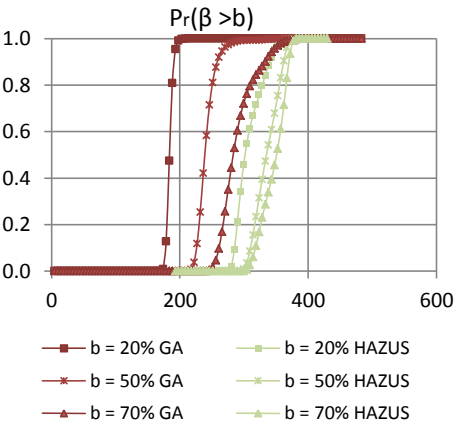
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

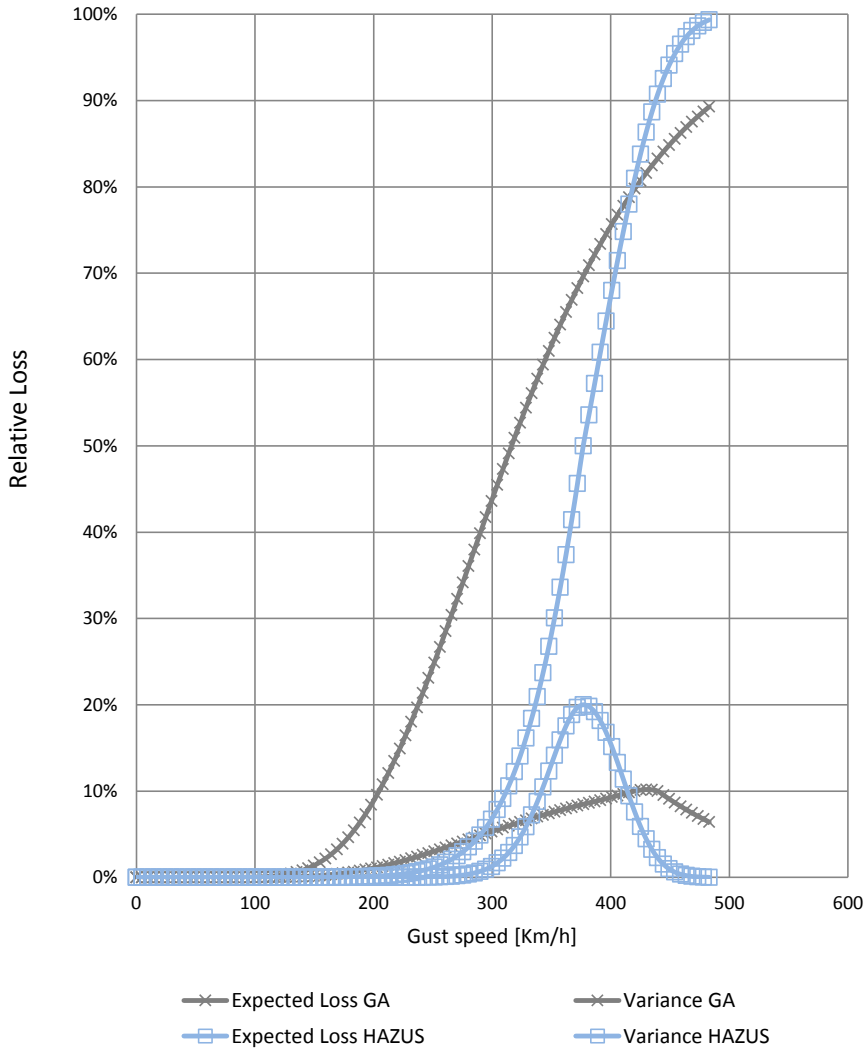
General Information

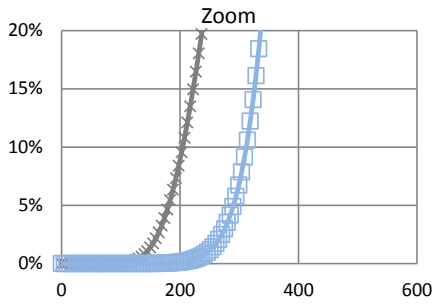
Code: S2M **Hazard:** Wind

Description: STEEL BRACED FRAME MID-RISE

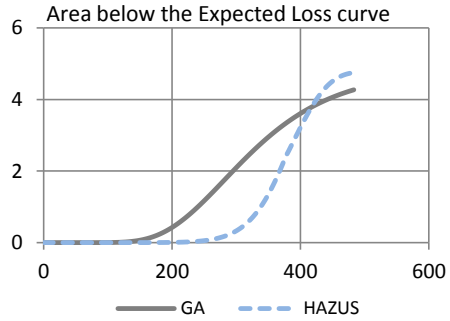
Project:	GA	HAZUS
Curve Name:	S2M_Medium	S2M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

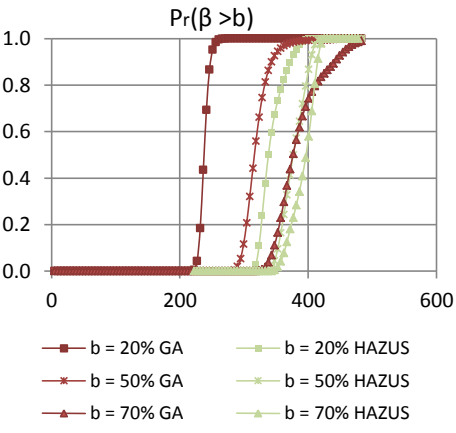
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

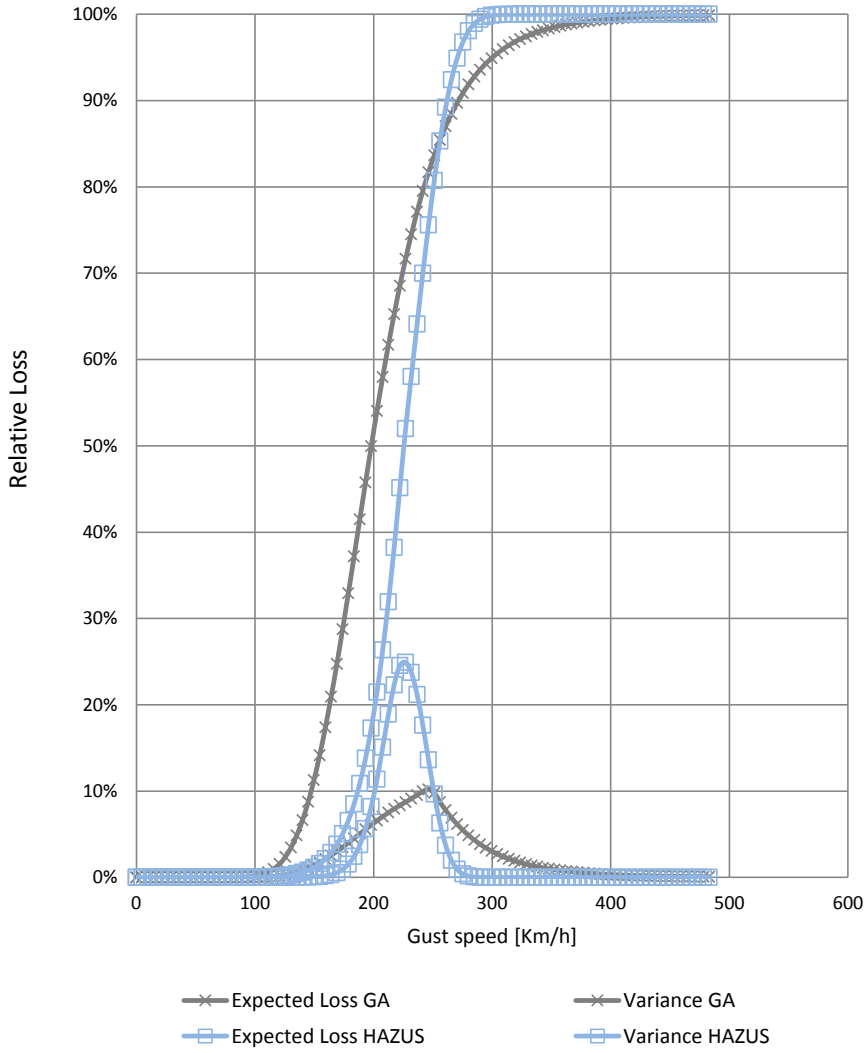
General Information

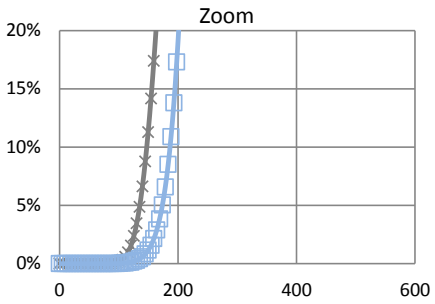
Code: S3 **Hazard:** Wind

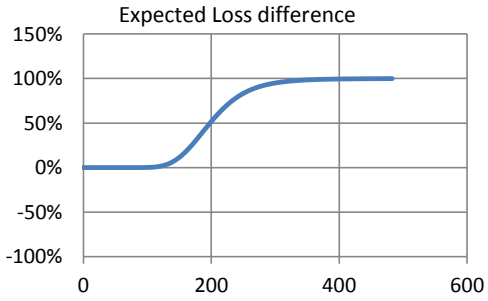
Description: STEEL LIGHT FRAME

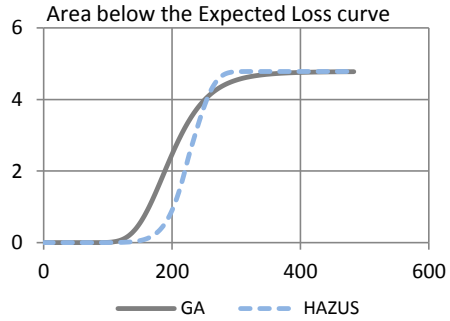
	GA	HAZUS
Project:		
Curve Name:	S3_Low	S3_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

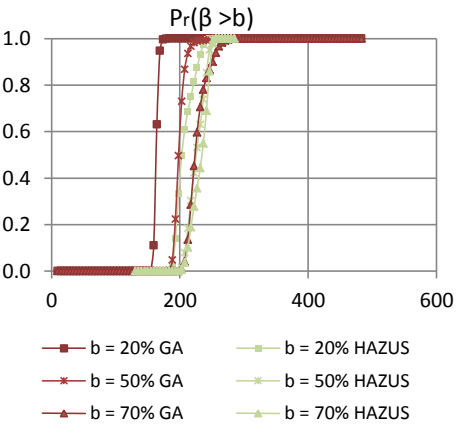
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction

Comparison of Vulnerability Functions

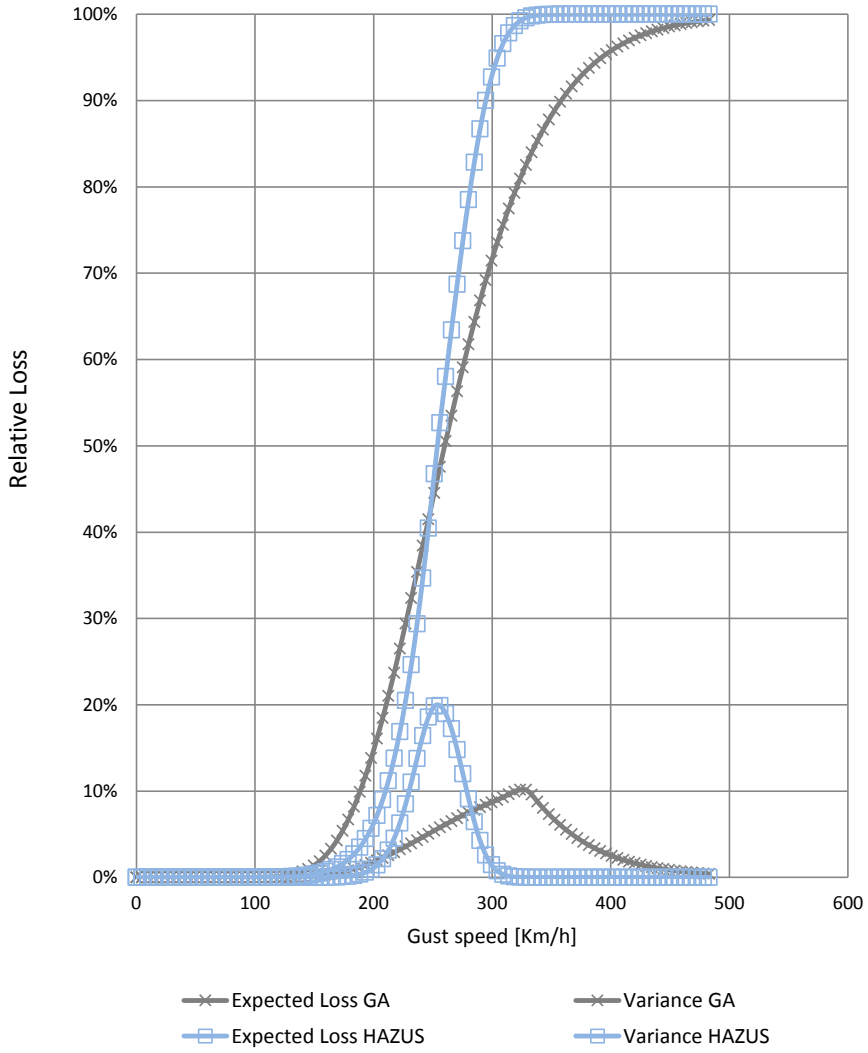
General Information

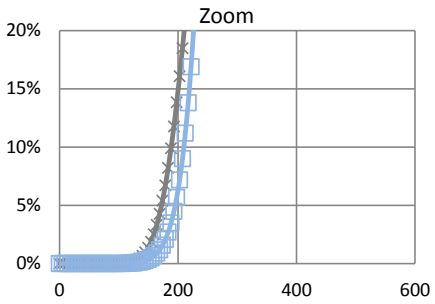
Code: S3 **Hazard:** Wind

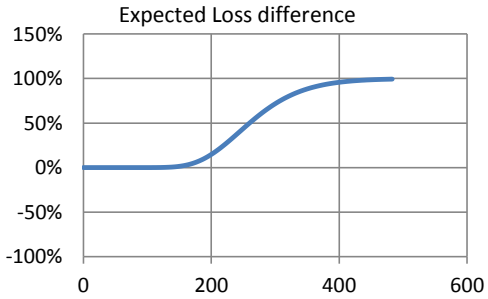
Description: STEEL LIGHT FRAME

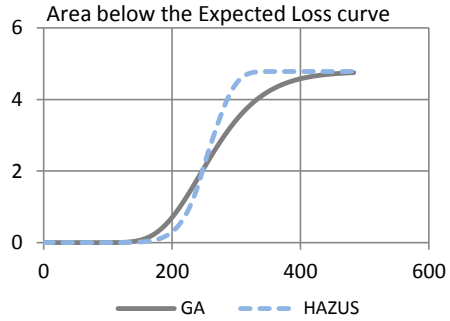
	GA	HAZUS
Project:		
Curve Name:	S3_Medium	S3_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

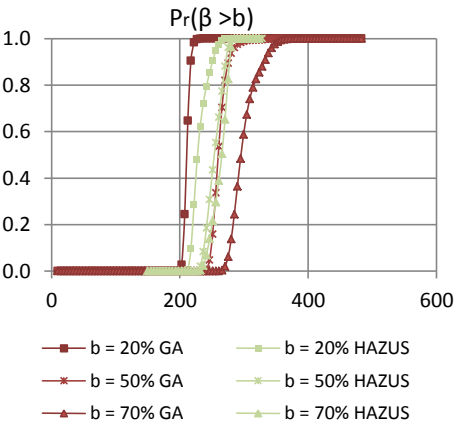
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

CIMNE

INGENIAR

Comparison of Vulnerability Functions

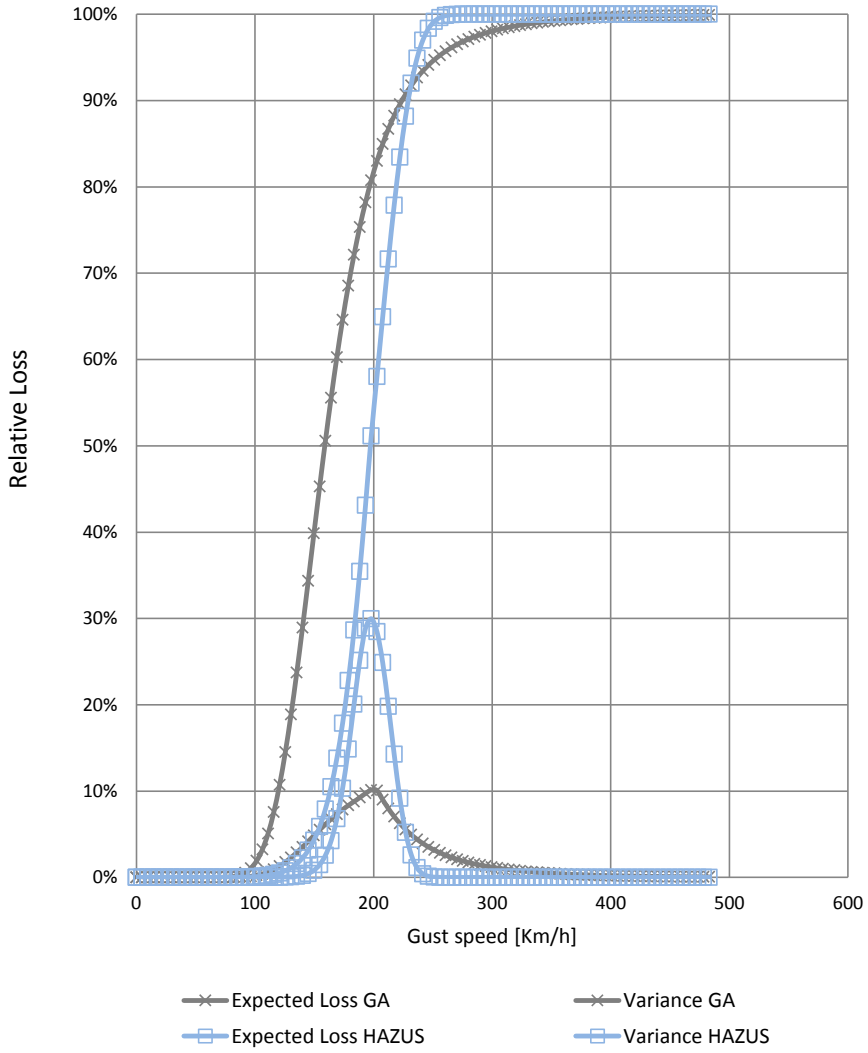
General Information

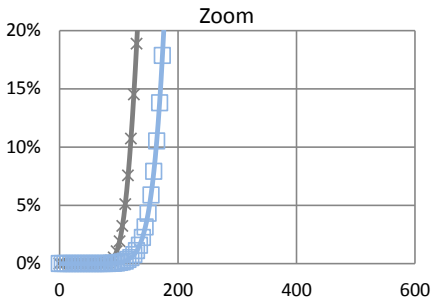
Code: S3 **Hazard:** Wind

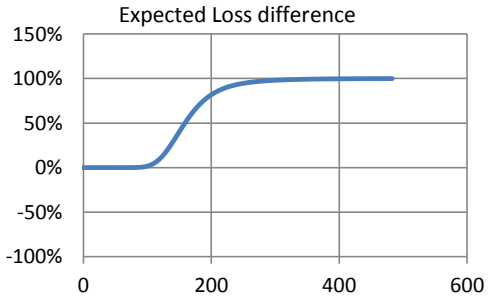
Description: STEEL LIGHT FRAME

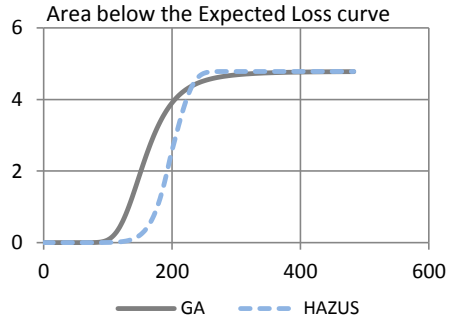
	GA	HAZUS
Project:		
Curve Name:	S3_Poor	S3_P
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

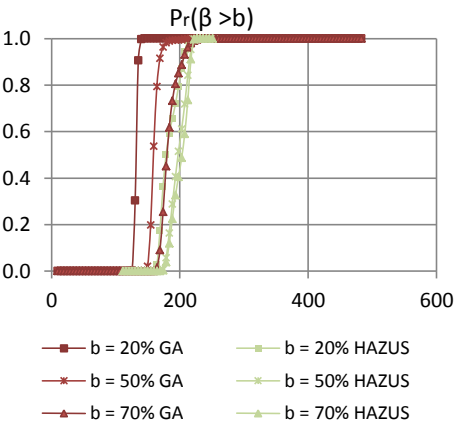
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

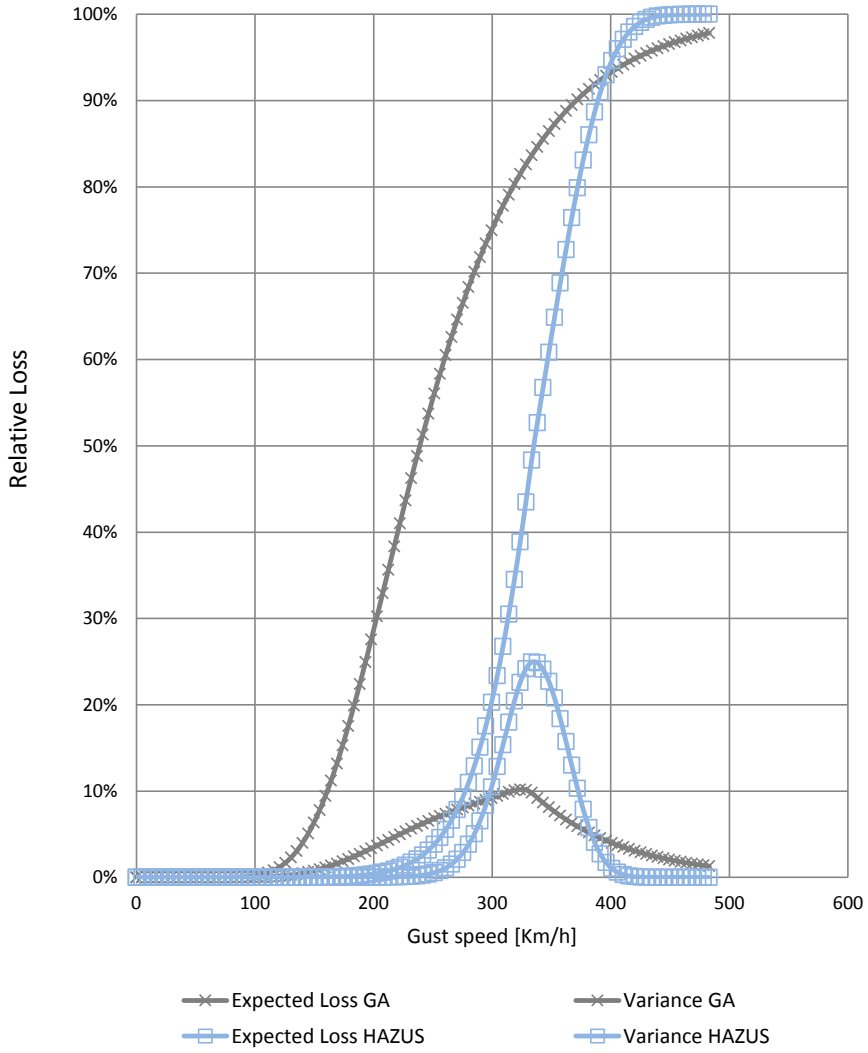
General Information

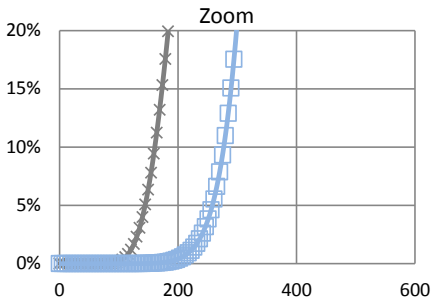
Code: S4H **Hazard:** Wind

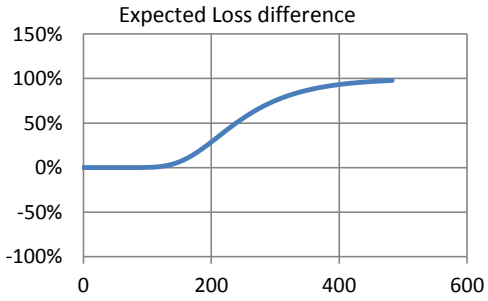
Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS HIGH-RISE

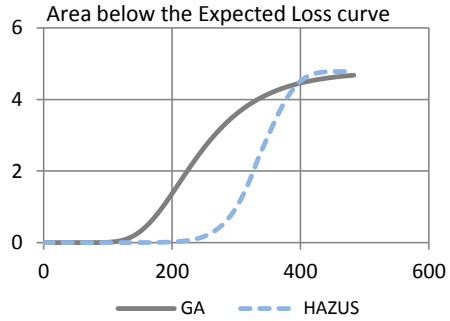
	GA	HAZUS
Project:		
Curve Name:	S4H_Low	S4H_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

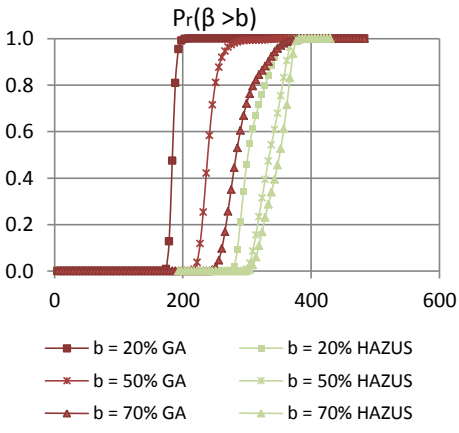
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

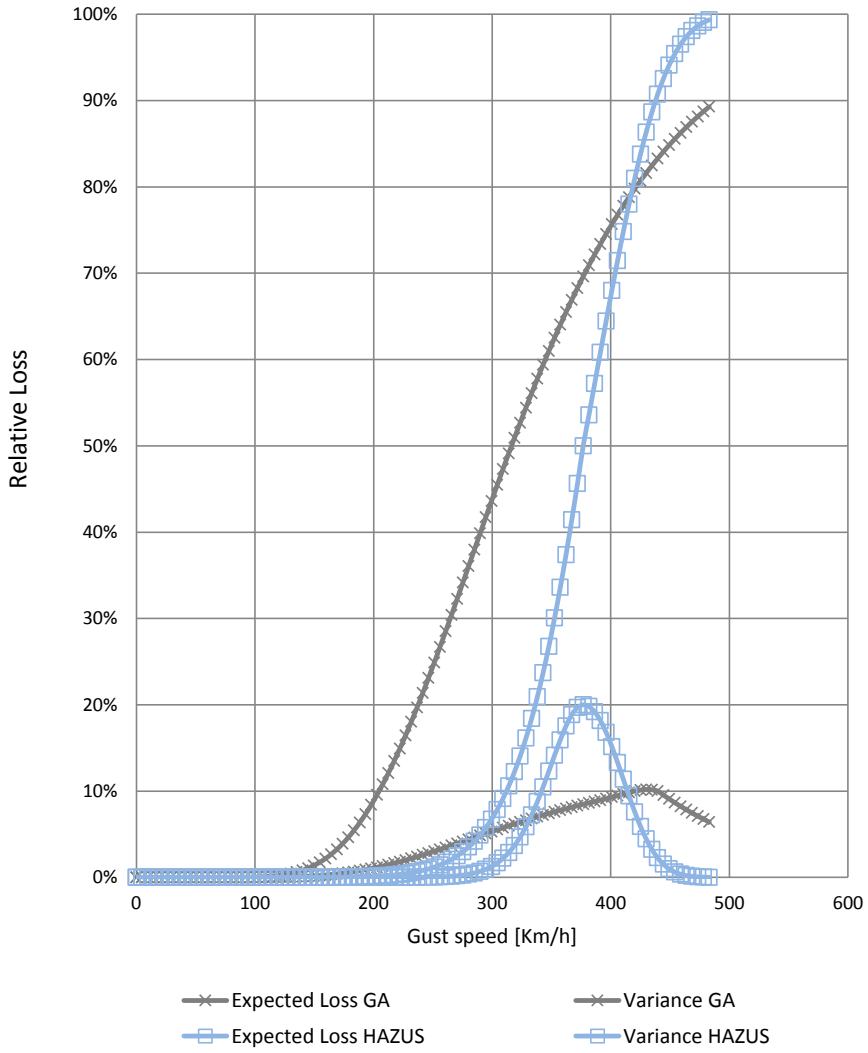
General Information

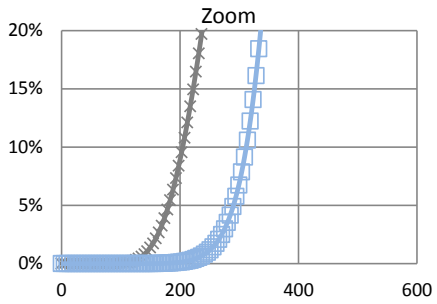
Code: S4H **Hazard:** Wind

Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS HIGH-RISE

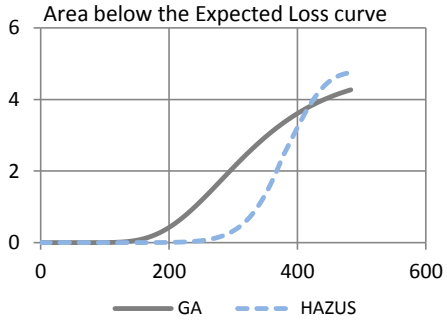
	GA	HAZUS
Project:		
Curve Name:	S4H_Medium	S4H_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

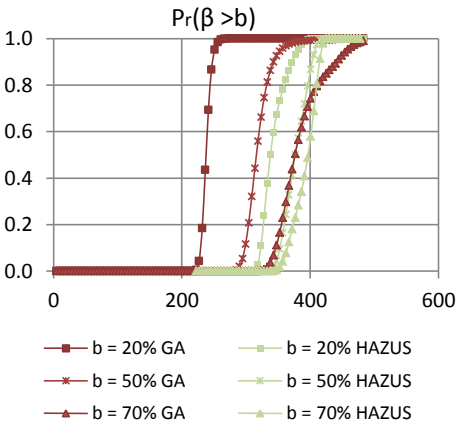
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

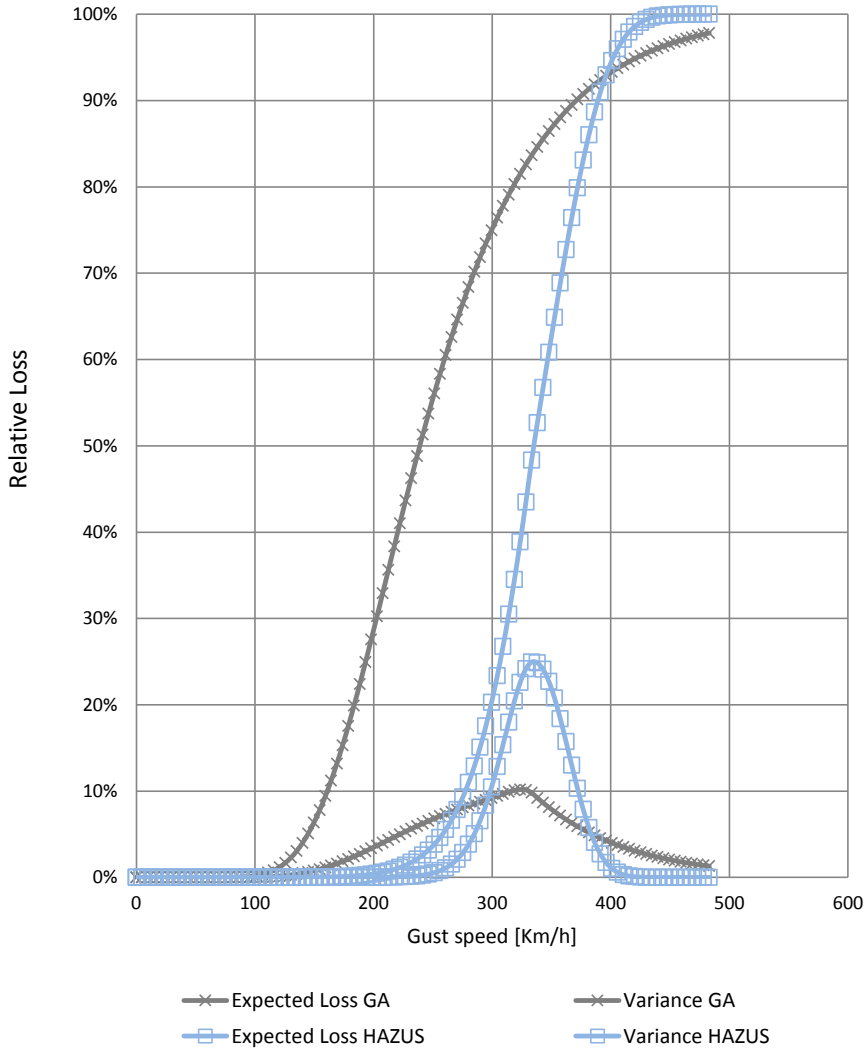
General Information

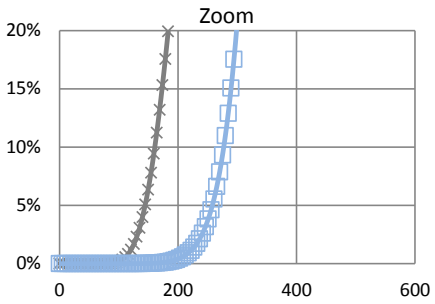
Code: S4L **Hazard:** Wind

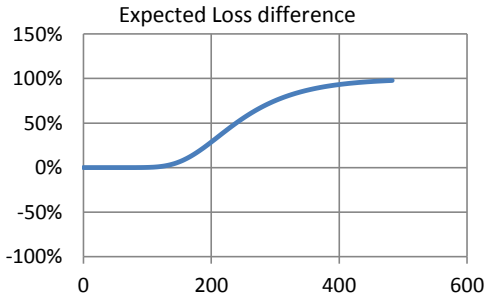
Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS LOW-RISE

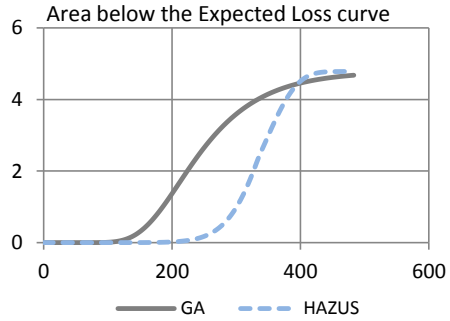
	GA	HAZUS
Project:		
Curve Name:	S4L_Low	S4L_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

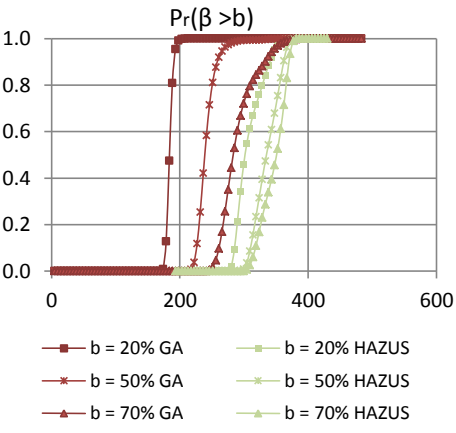
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

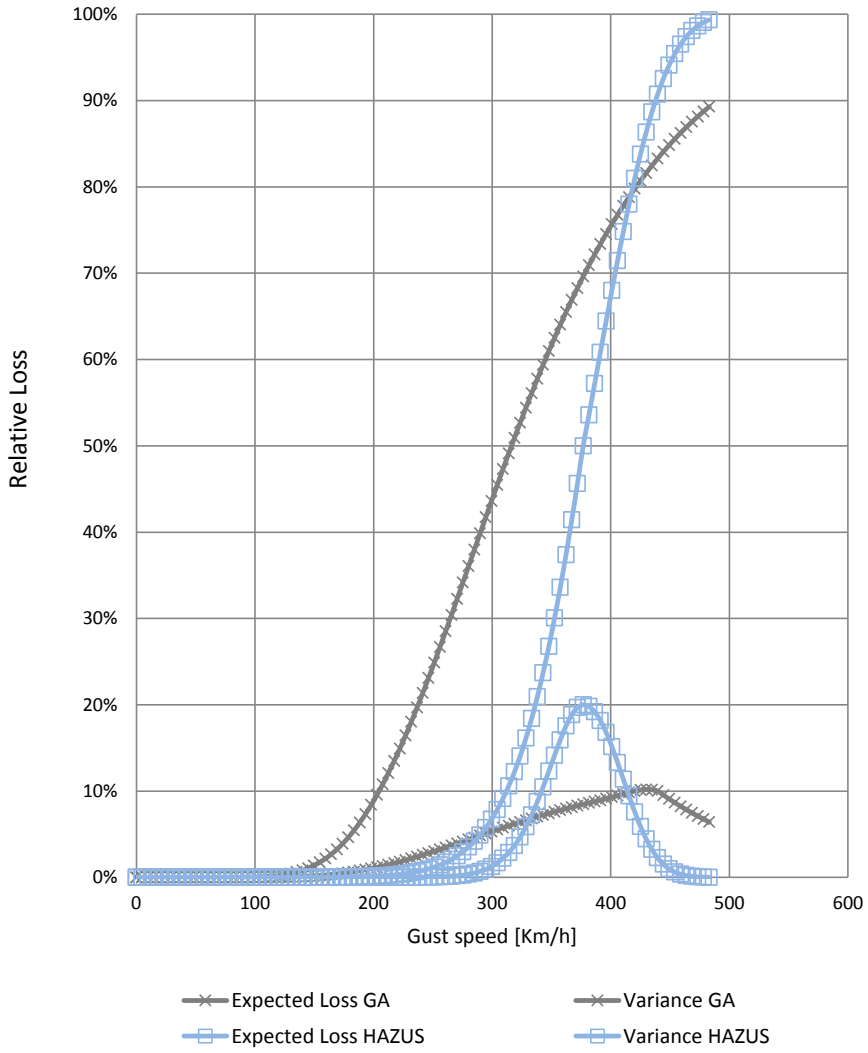
General Information

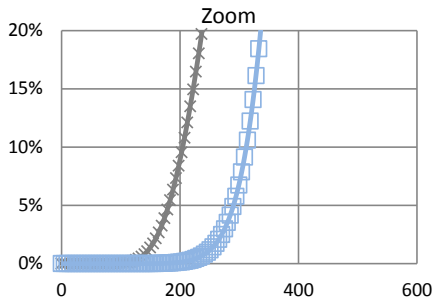
Code: S4L **Hazard:** Wind

Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS LOW-RISE

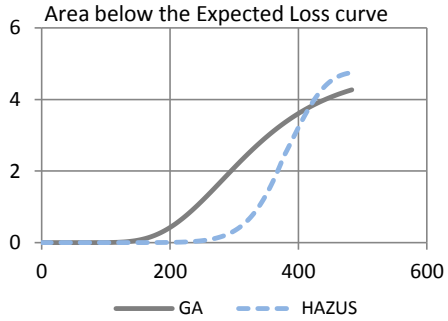
Project:	GA	HAZUS
Curve Name:	S4L_Medium	S4L_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

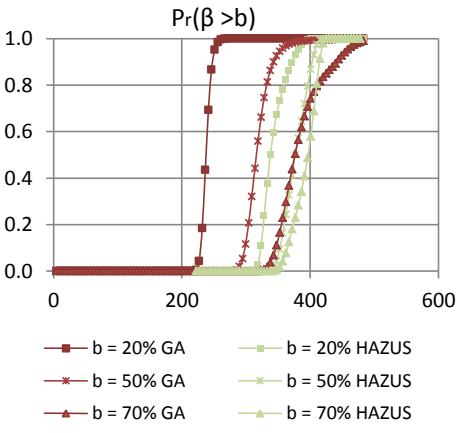
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

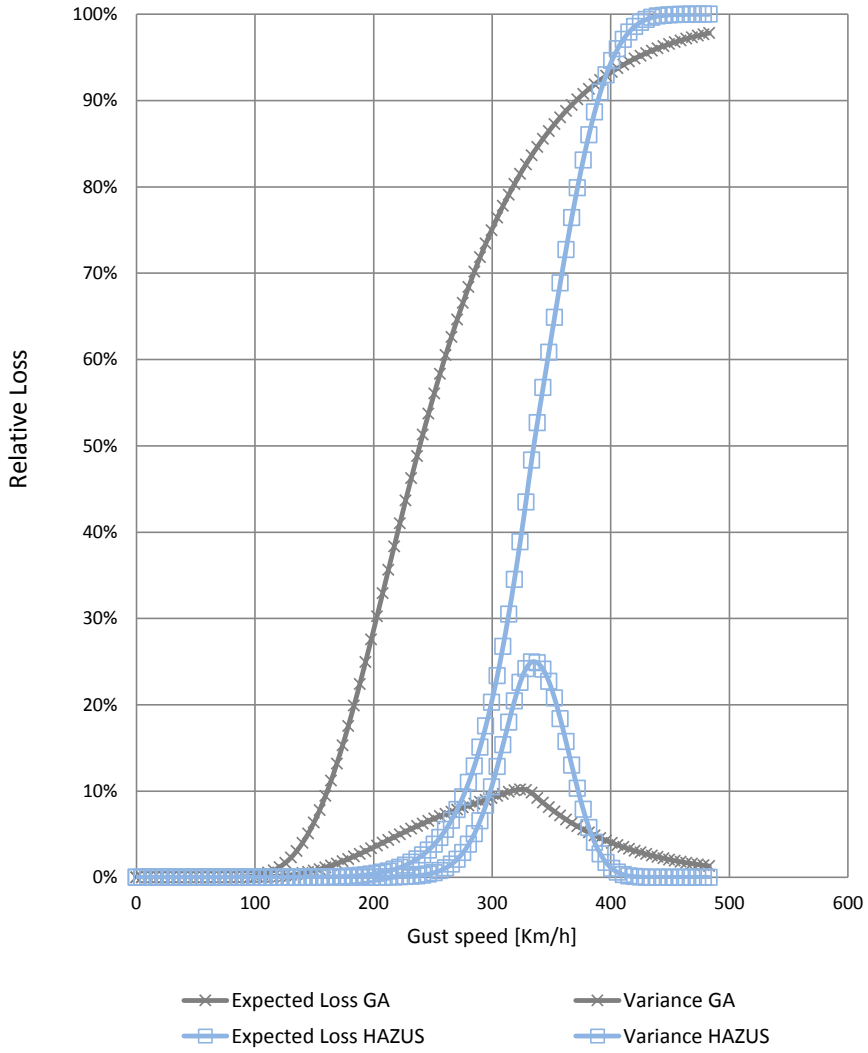
General Information

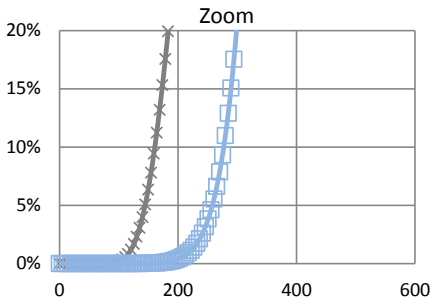
Code: S4M **Hazard:** Wind

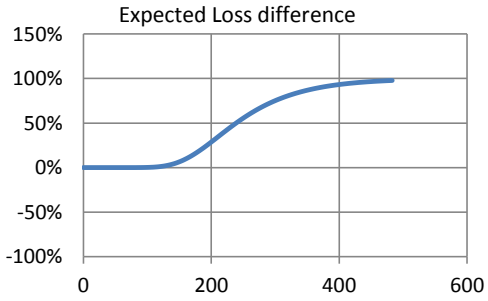
Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS MID-RISE

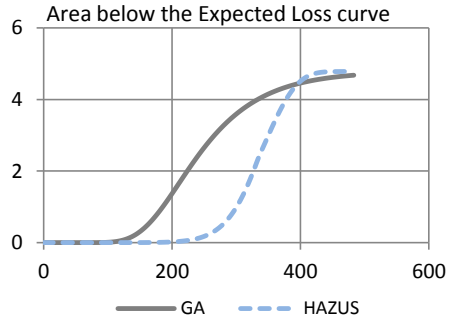
	GA	HAZUS
Project:		
Curve Name:	S4M_Low	S4M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

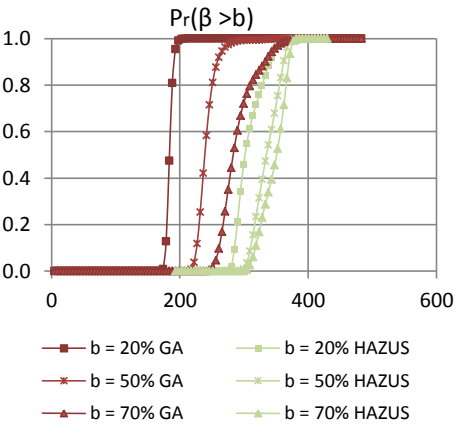
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

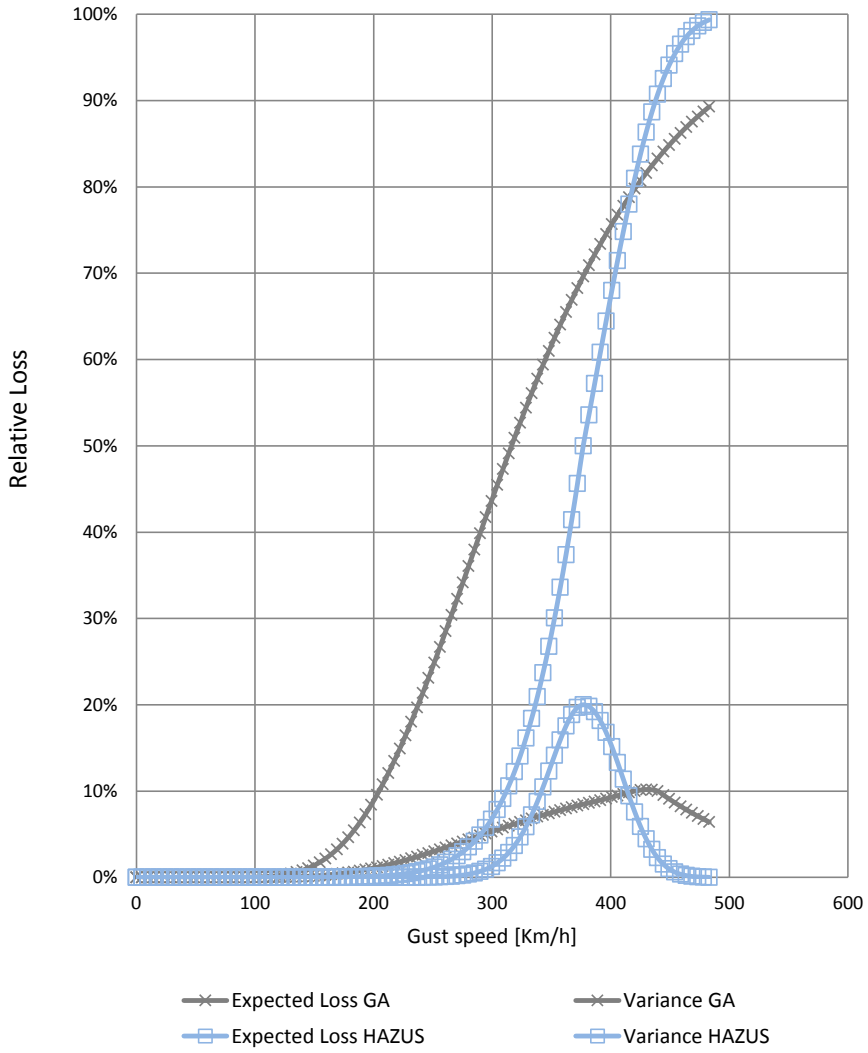
General Information

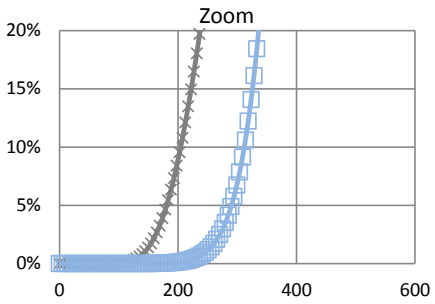
Code: S4M **Hazard:** Wind

Description: STEEL FRAME WITH CAST-IN-PLACE CONCRETE SHEAR WALLS MID-RISE

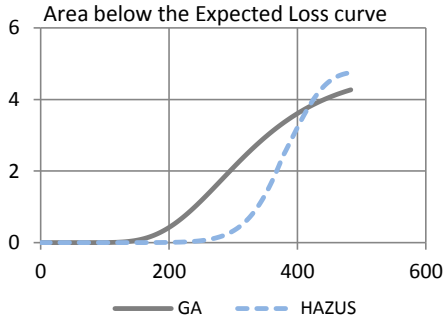
	GA	HAZUS
Project:		
Curve Name:	S4M_Medium	S4M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

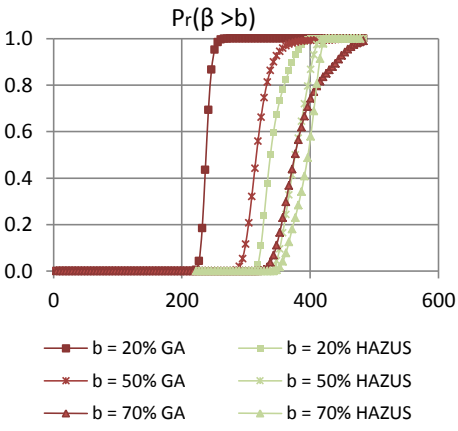
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

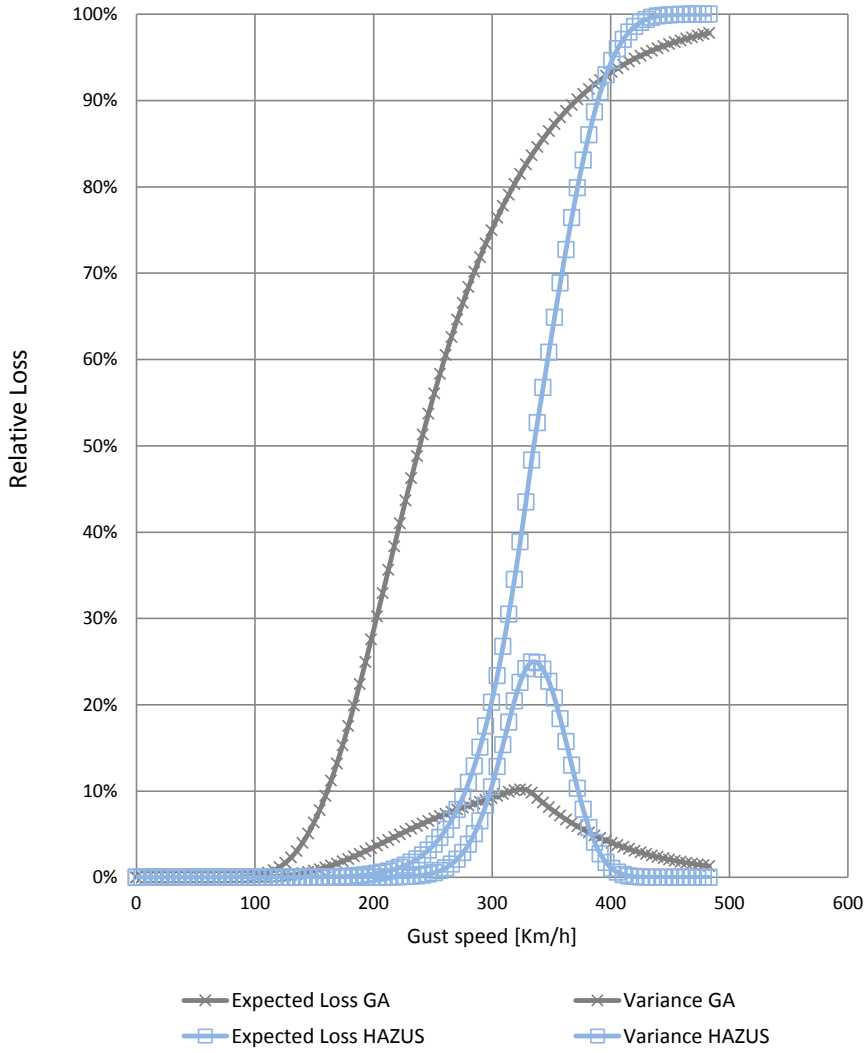
General Information

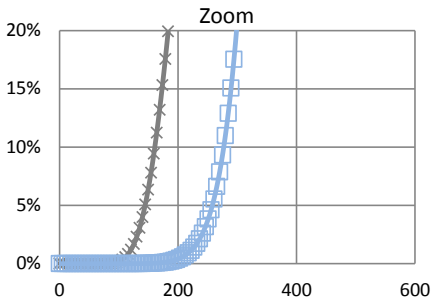
Code: S5M **Hazard:** Wind

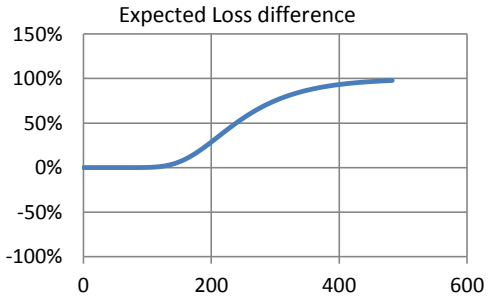
Description: STEEL FRAME WITH UNREINFORCED MASONRY INFILL WALLS MID-RISE

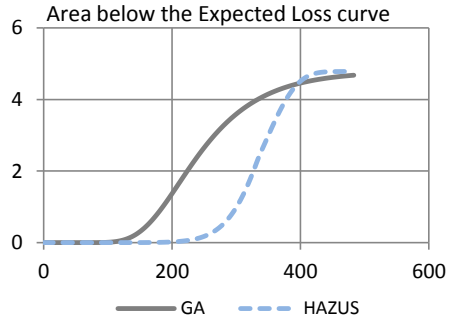
	GA	HAZUS
Project:		
Curve Name:	S5M_Low	S5M_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

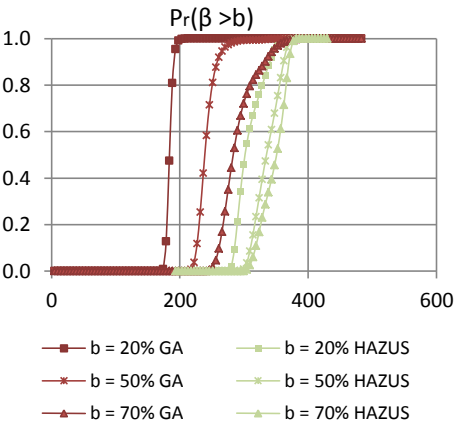
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

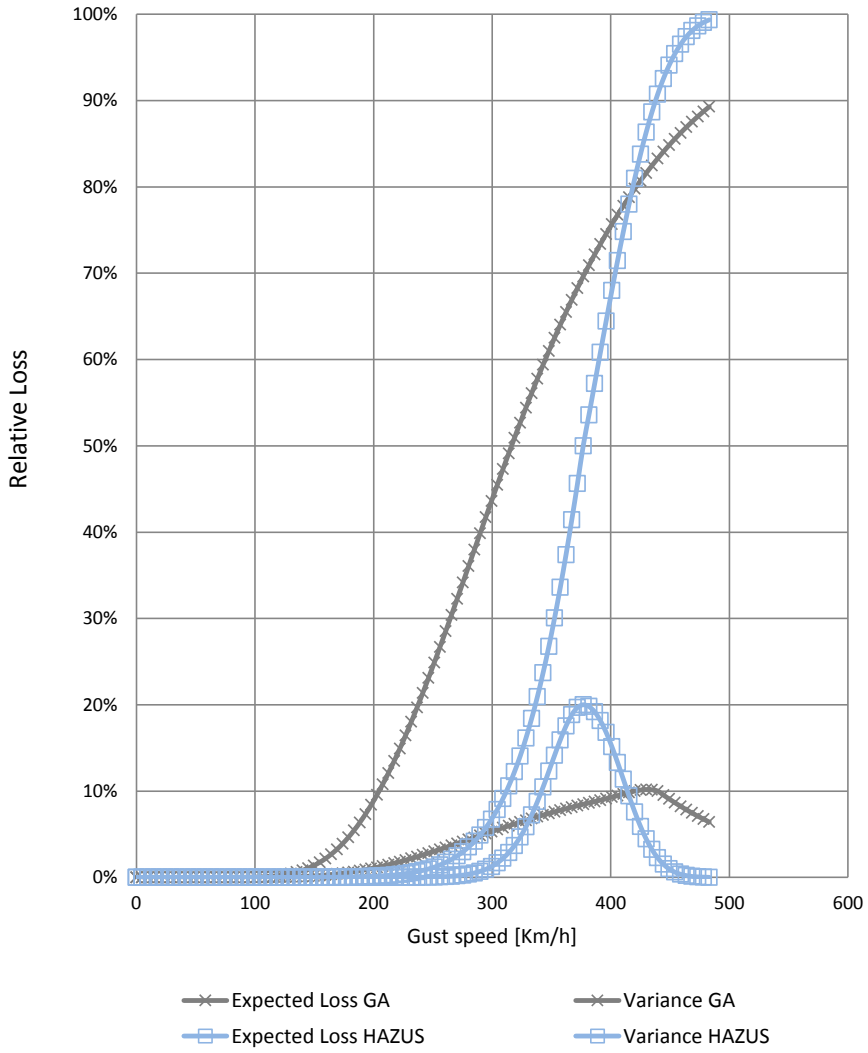
General Information

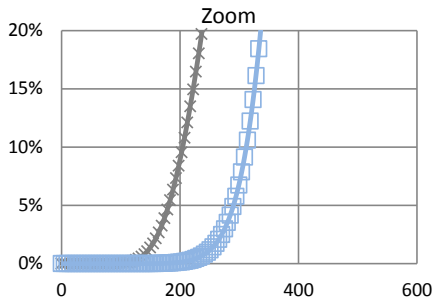
Code: S5M **Hazard:** Wind

Description: STEEL FRAME WITH UNREINFORCED MASONRY INFILL WALLS MID-RISE

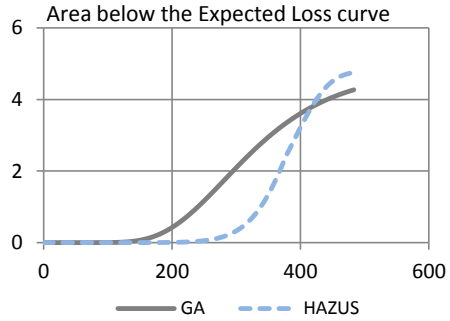
	GA	HAZUS
Project:		
Curve Name:	S5M_Medium	S5M_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

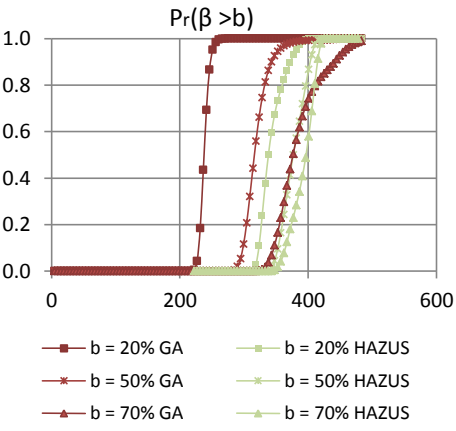
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction

Comparison of Vulnerability Functions

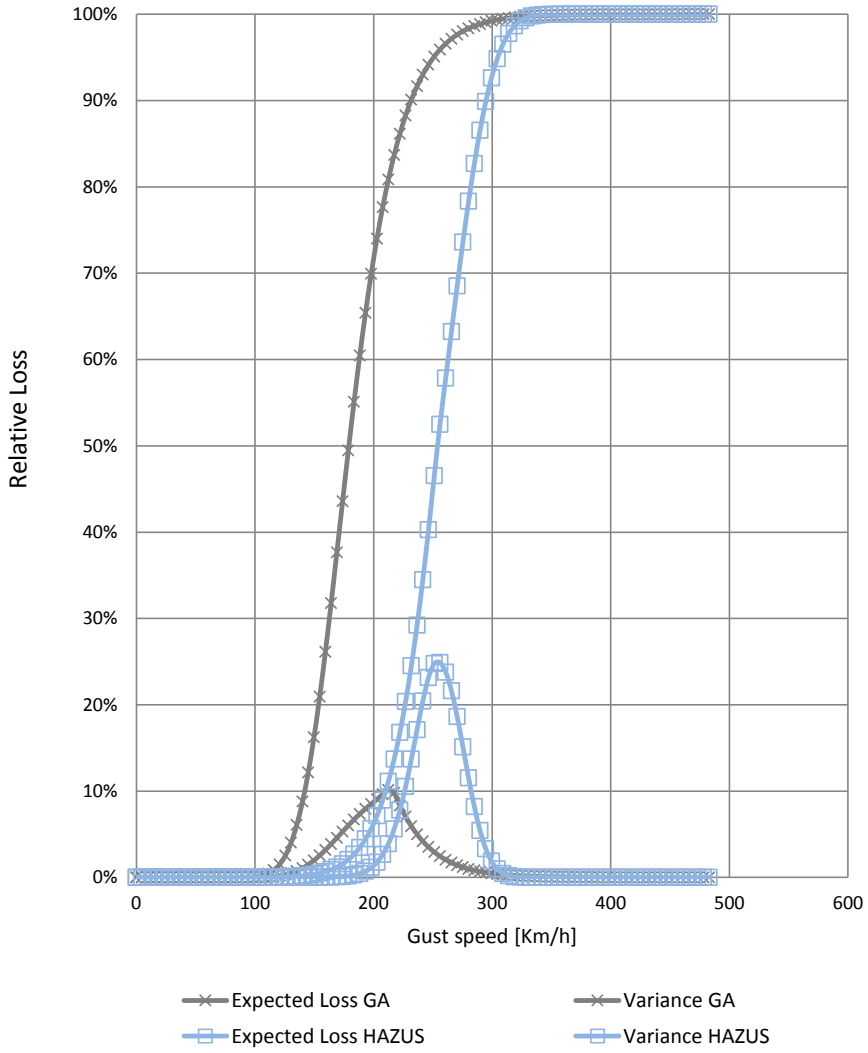
General Information

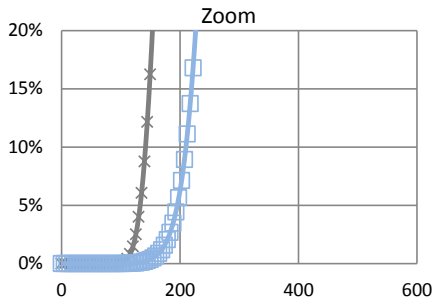
Code: W1 **Hazard:** Wind

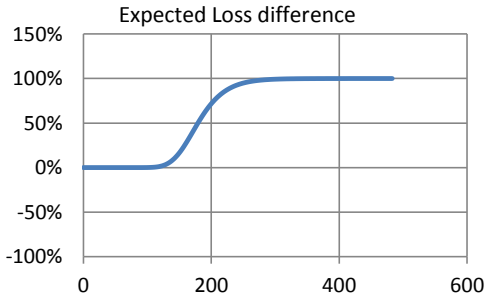
Description: WOOD STUD-WALL FRAME WITH PLYWOOD/GYPSUM BOARD SHEATHING. ABSENCE OF MASONRY INFILL WALLS. SHEAR WALL SYSTEM CONSISTS OF PLYWOOD OR MANUFACTURED WOOD PANELS. EXTERIOR IS COMMONLY CEMENT PLASTER ("STUCCO"), WOOD OR VINYL PLANKS, OR ALUMINUM PLANKS (IN LOWER COST

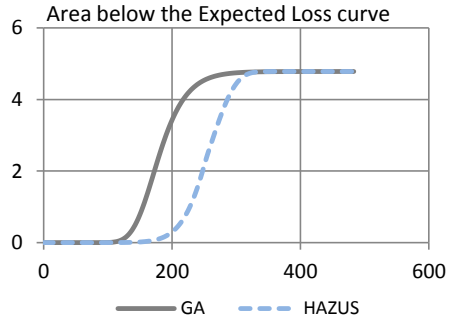
	GA	HAZUS
Project:		
Curve Name:	W1_Low	W1_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

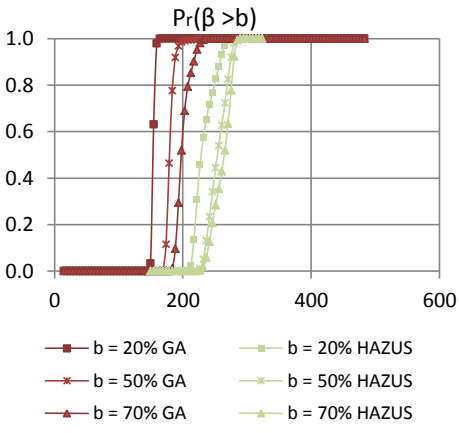
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

CIMNE

INGENIAR

Comparison of Vulnerability Functions

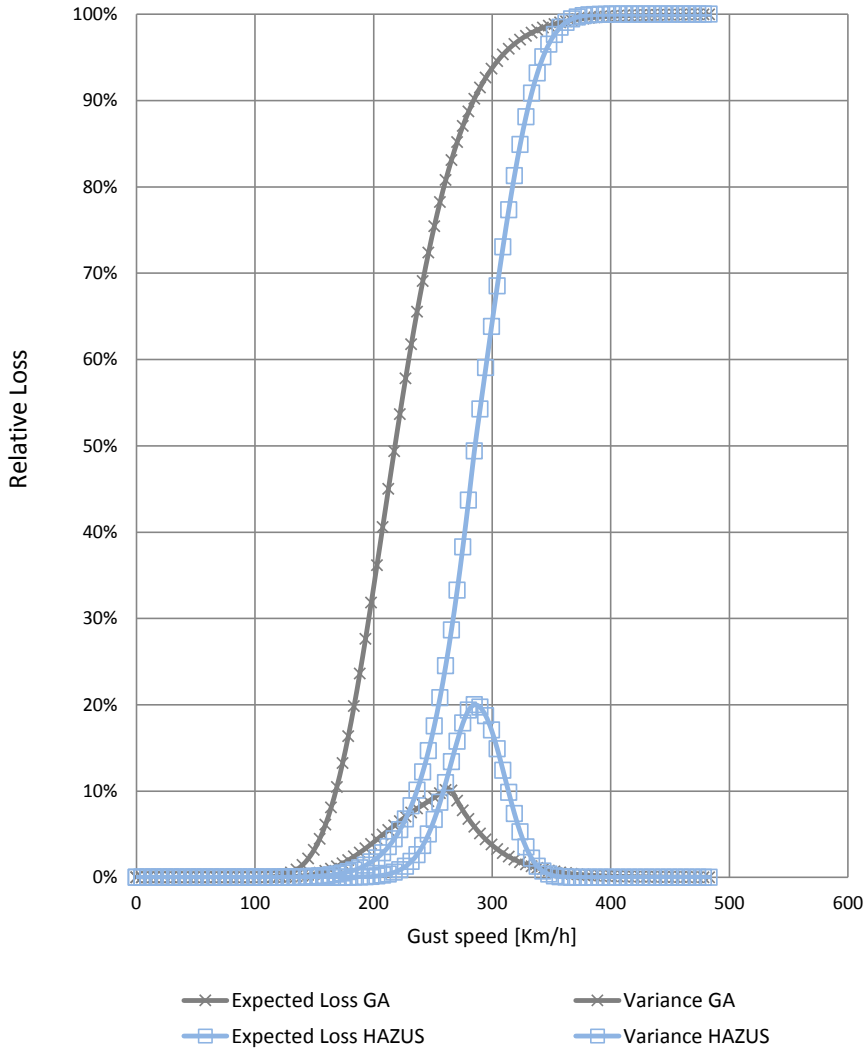
General Information

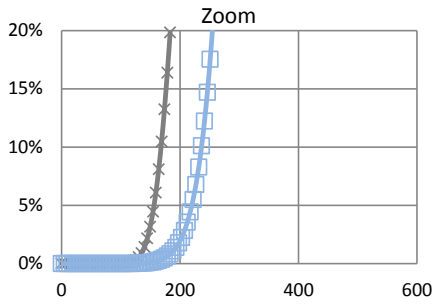
Code: W1 **Hazard:** Wind

Description: WOOD STUD-WALL FRAME WITH PLYWOOD/GYPSUM BOARD SHEATHING. ABSENCE OF MASONRY INFILL WALLS. SHEAR WALL SYSTEM CONSISTS OF PLYWOOD OR MANUFACTURED WOOD PANELS. EXTERIOR IS COMMONLY CEMENT PLASTER ("STUCCO"), WOOD OR VINYL PLANKS, OR ALUMINUM PLANKS (IN LOWER COST

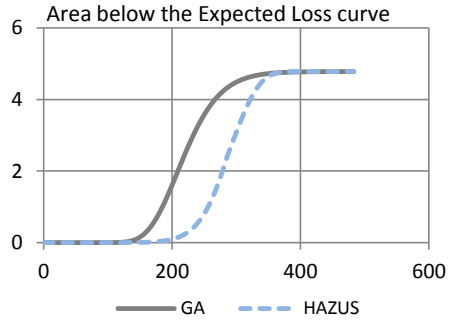
	GA	HAZUS
Project:		
Curve Name:	W1_Medium	W1_M
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

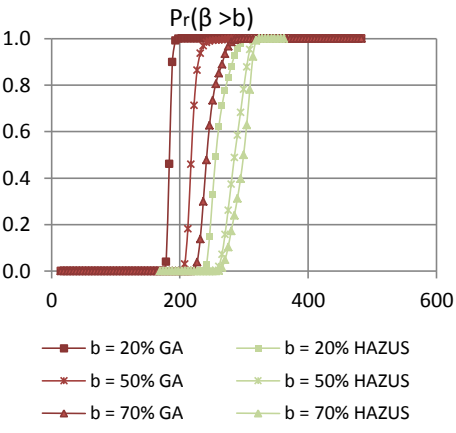
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

UNISDR
The United Nations Office for Disaster Risk Reduction

GAR
Global Assessment Report on Disaster Risk Reduction

Comparison of Vulnerability Functions

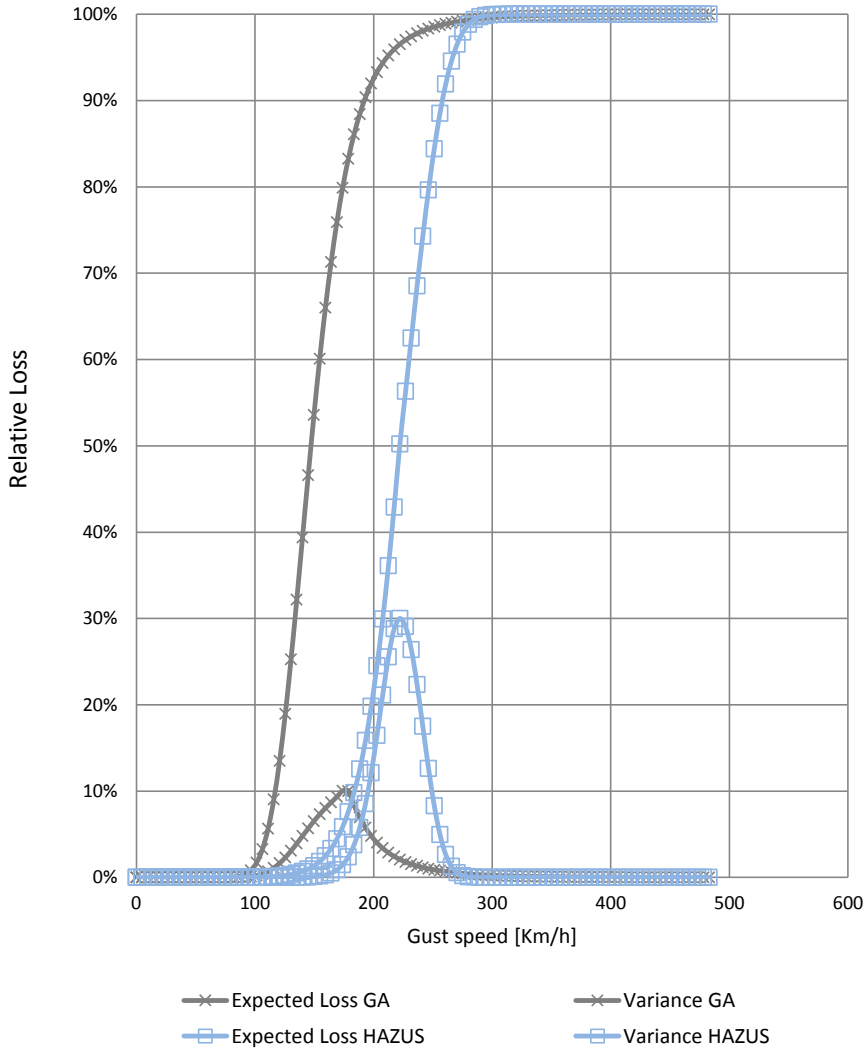
General Information

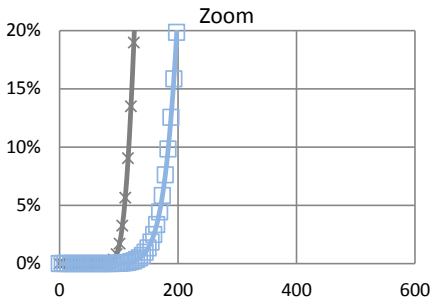
Code: W1 **Hazard:** Wind

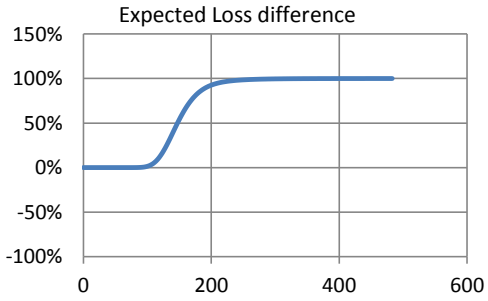
Description: WOOD STUD-WALL FRAME WITH PLYWOOD/GYPSUM BOARD SHEATHING. ABSENCE OF MASONRY INFILL WALLS. SHEAR WALL SYSTEM CONSISTS OF PLYWOOD OR MANUFACTURED WOOD PANELS. EXTERIOR IS COMMONLY CEMENT PLASTER ("STUCCO"), WOOD OR VINYL PLANKS, OR ALUMINUM PLANKS (IN LOWER COST

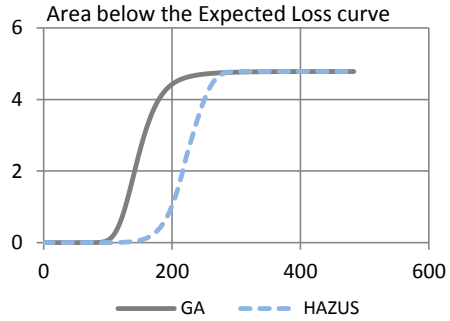
	GA	HAZUS
Project:		
Curve Name:	W1_Poor	W1_P
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

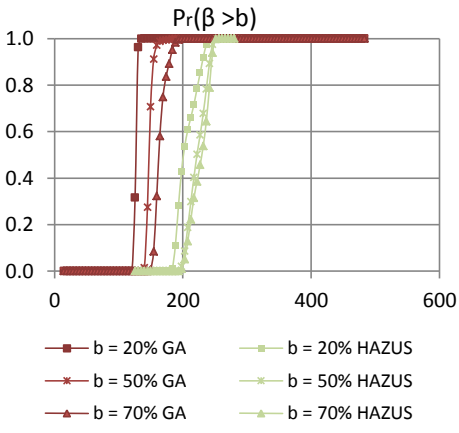
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

CIMNE

INGENIAR

Comparison of Vulnerability Functions

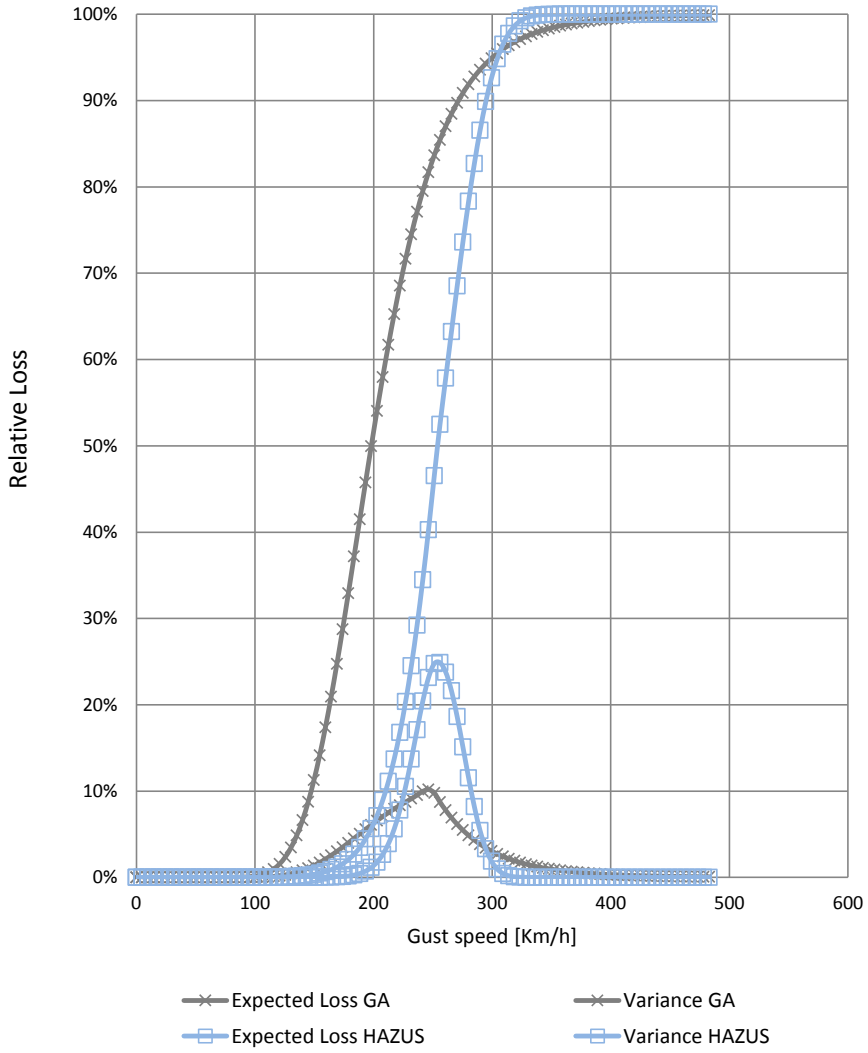
General Information

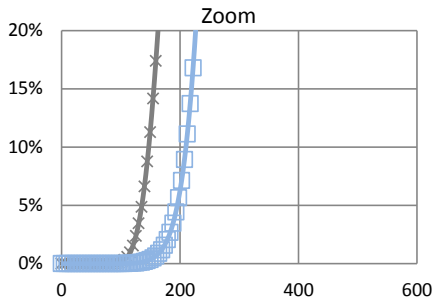
Code: W2 **Hazard:** Wind

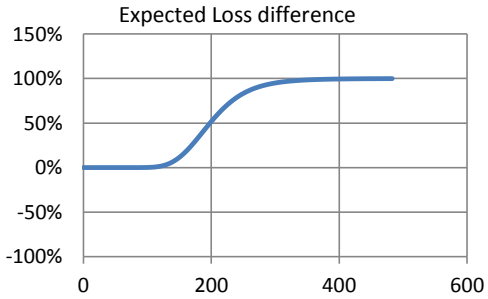
Description: WOOD FRAME, HEAVY MEMBERS (WITH AREA > 5000 SQ. FT.) (US & CANADIAN COMMERCIAL AND INDUSTRIAL WOOD FRAME).

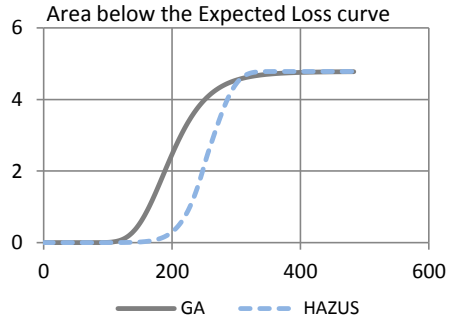
	GA	HAZUS
Project:		
Curve Name:	W2_Low	W2_L
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

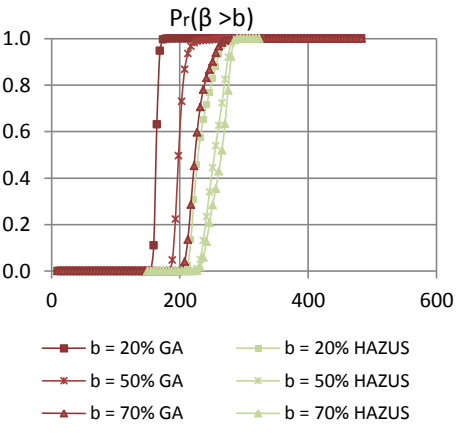
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Comparison of Vulnerability Functions

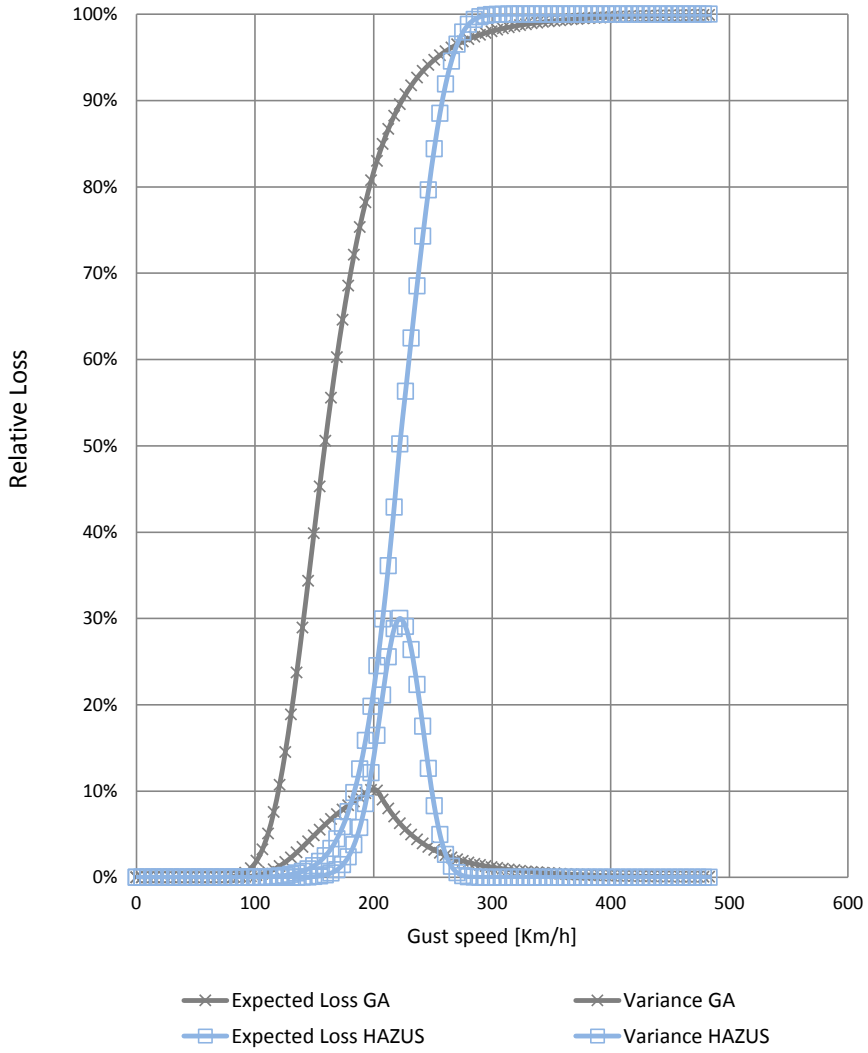
General Information

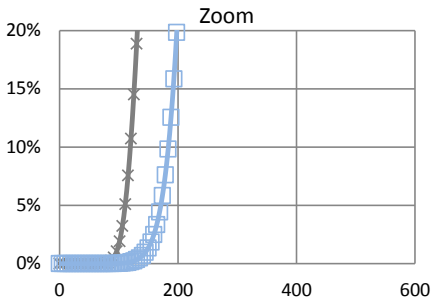
Code: W2 **Hazard:** Wind

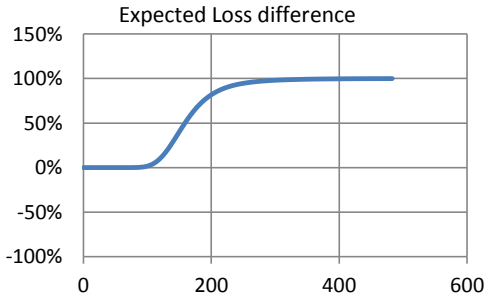
Description: WOOD FRAME, HEAVY MEMBERS (WITH AREA > 5000 SQ. FT.) (US & CANADIAN COMMERCIAL AND INDUSTRIAL WOOD FRAME).

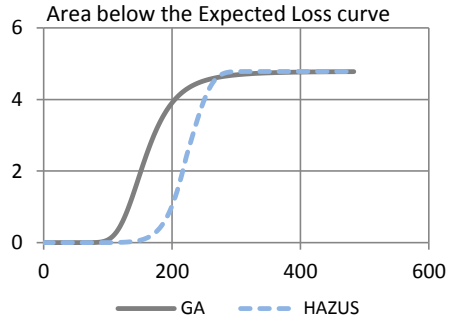
	GA	HAZUS
Project:		
Curve Name:	W2_Poor	W2_P
Creator:	GA	Cimne & Associates
Date:	1/02/14	30/11/12

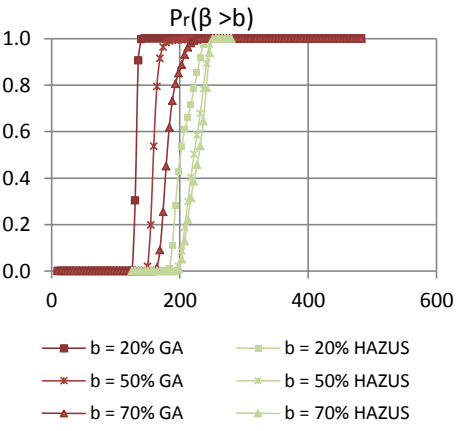
Vulnerability Functions











International Centre for Numerical Methods in Engineering and INGENIAR Ltda.

Annex 15. Exposure, Vulnerability and Risk Data for Medellín

Exposure Information

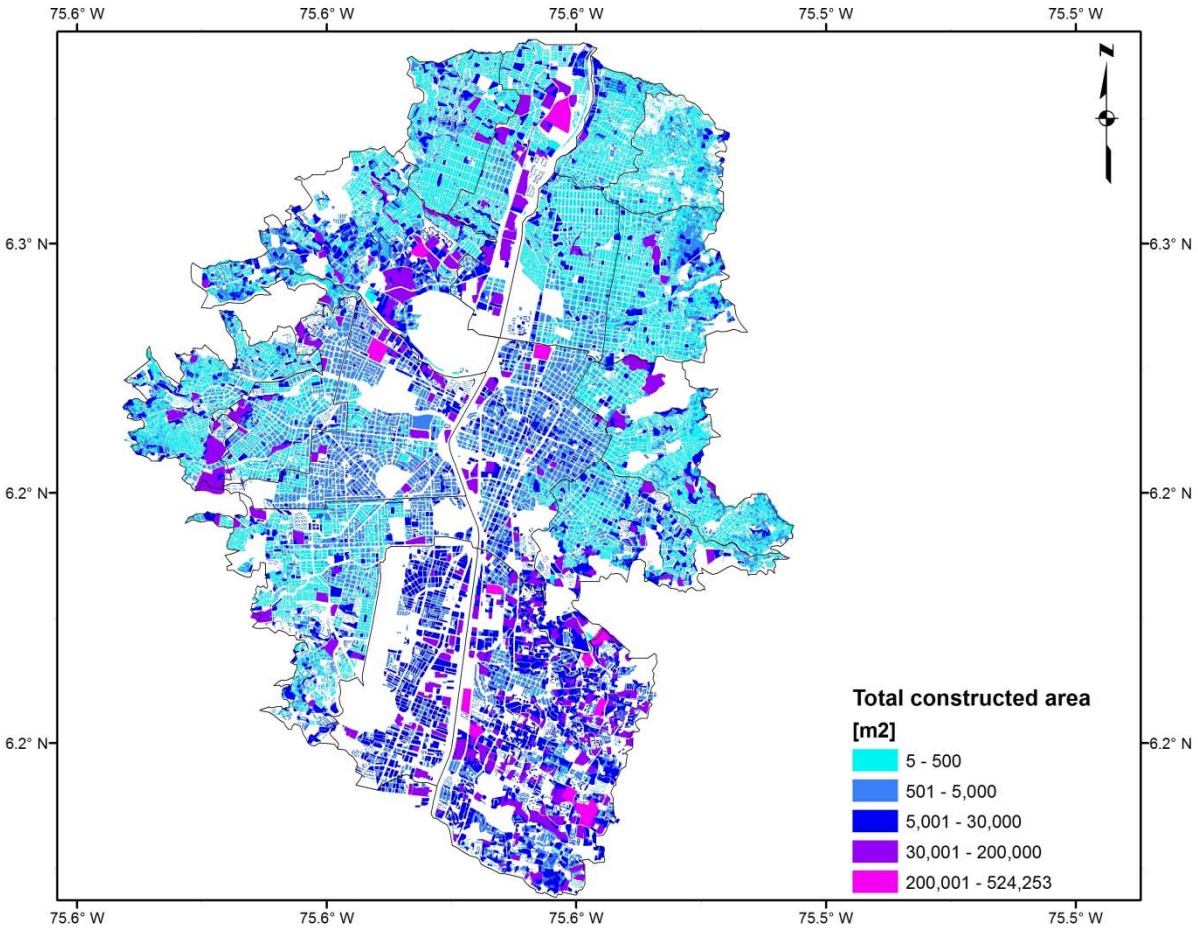


Figure A15-1. Total constructed area by dwelling

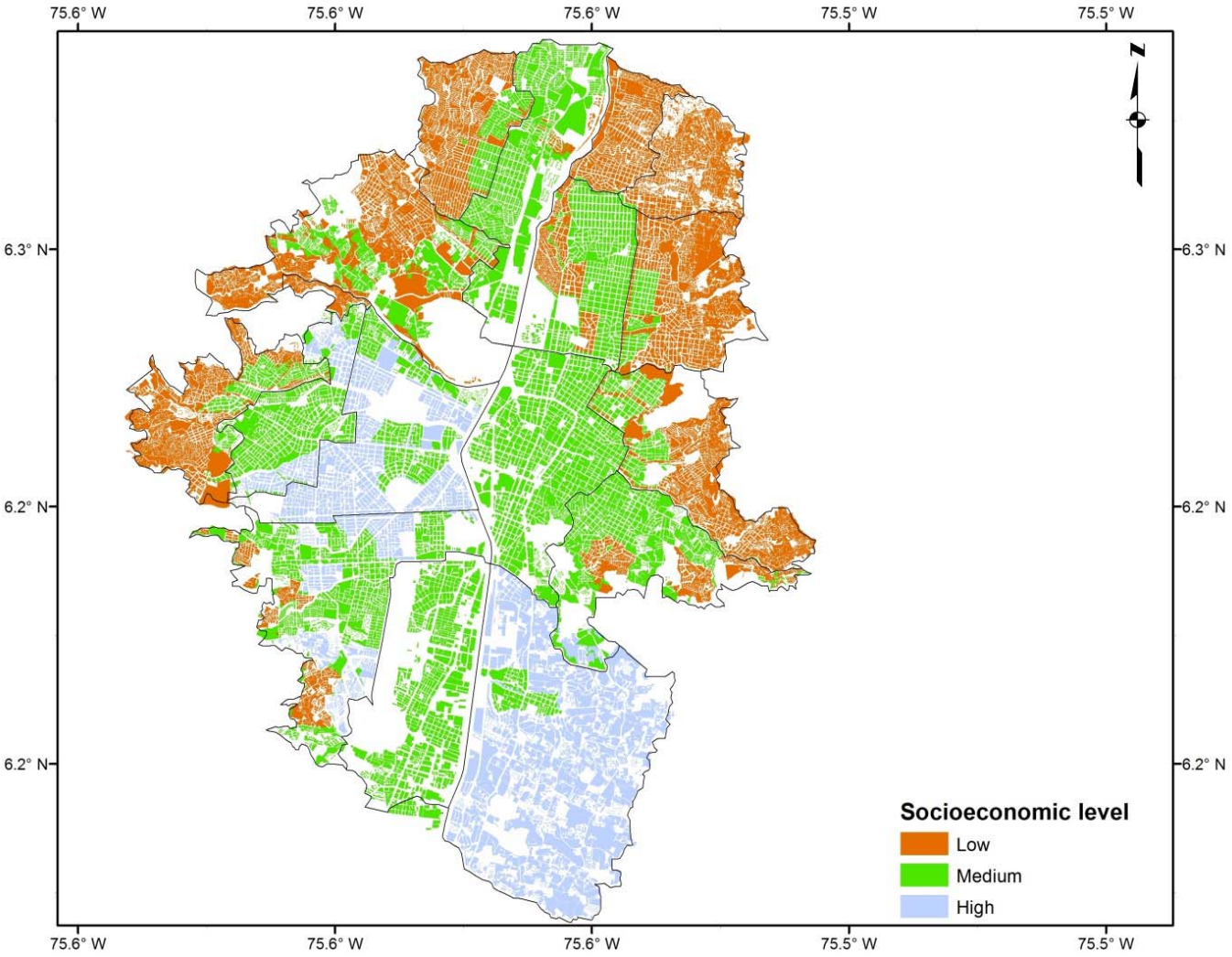


Figure A15-2. Predominant socioeconomic dwelling by county

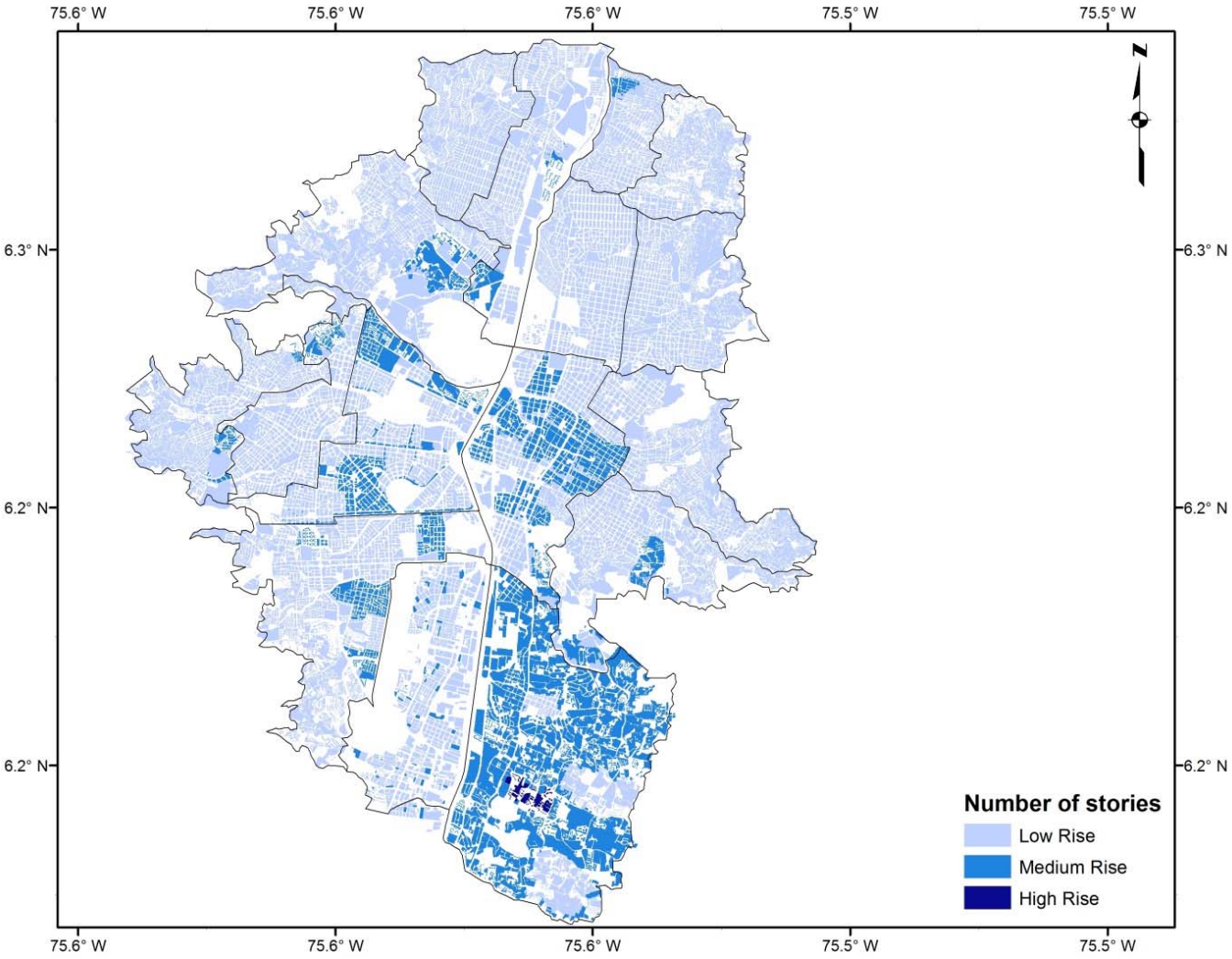


Figure A15-3. Number of stories category by dwelling

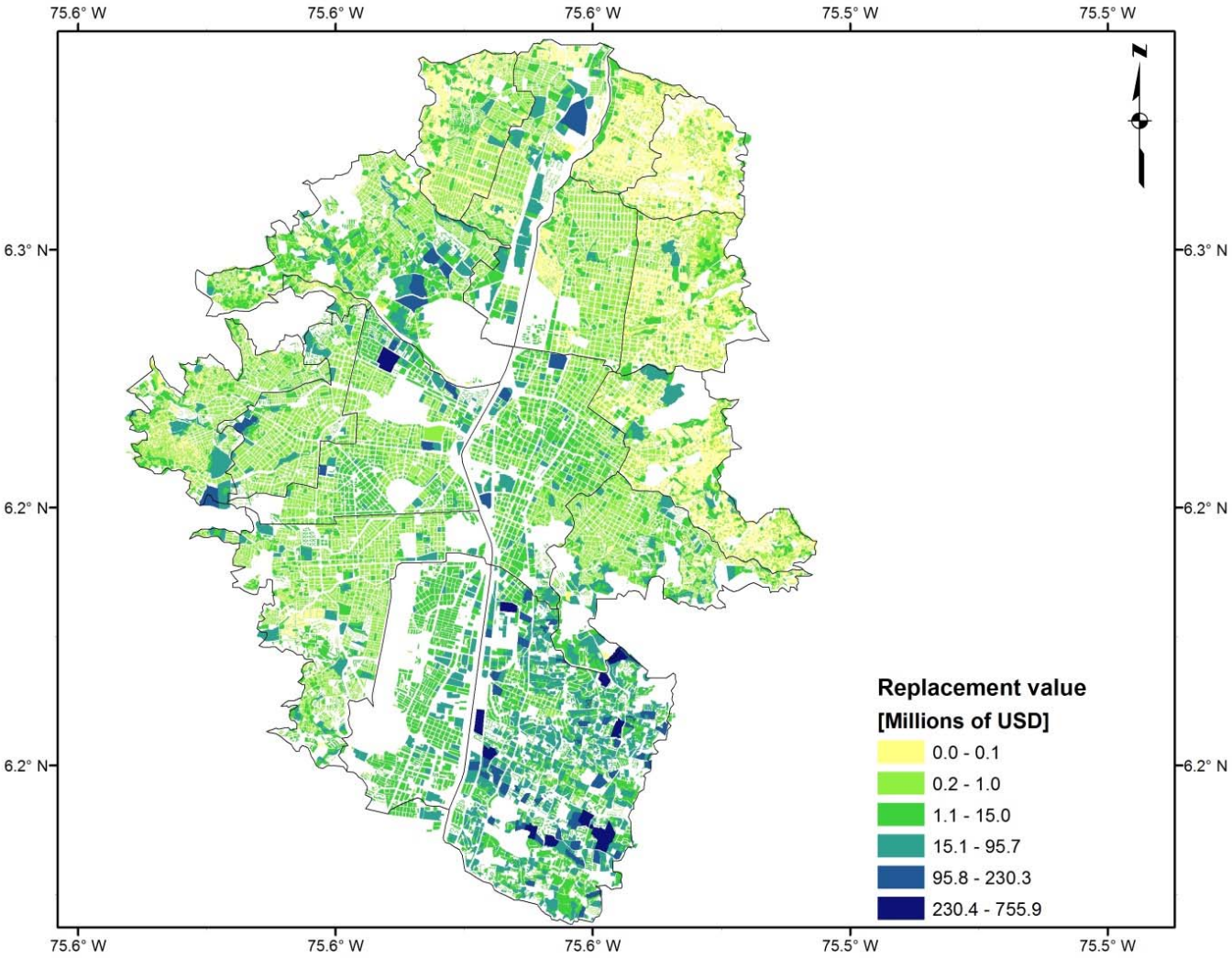


Figure A15-4. Replacement value by dwelling

Vulnerability Functions

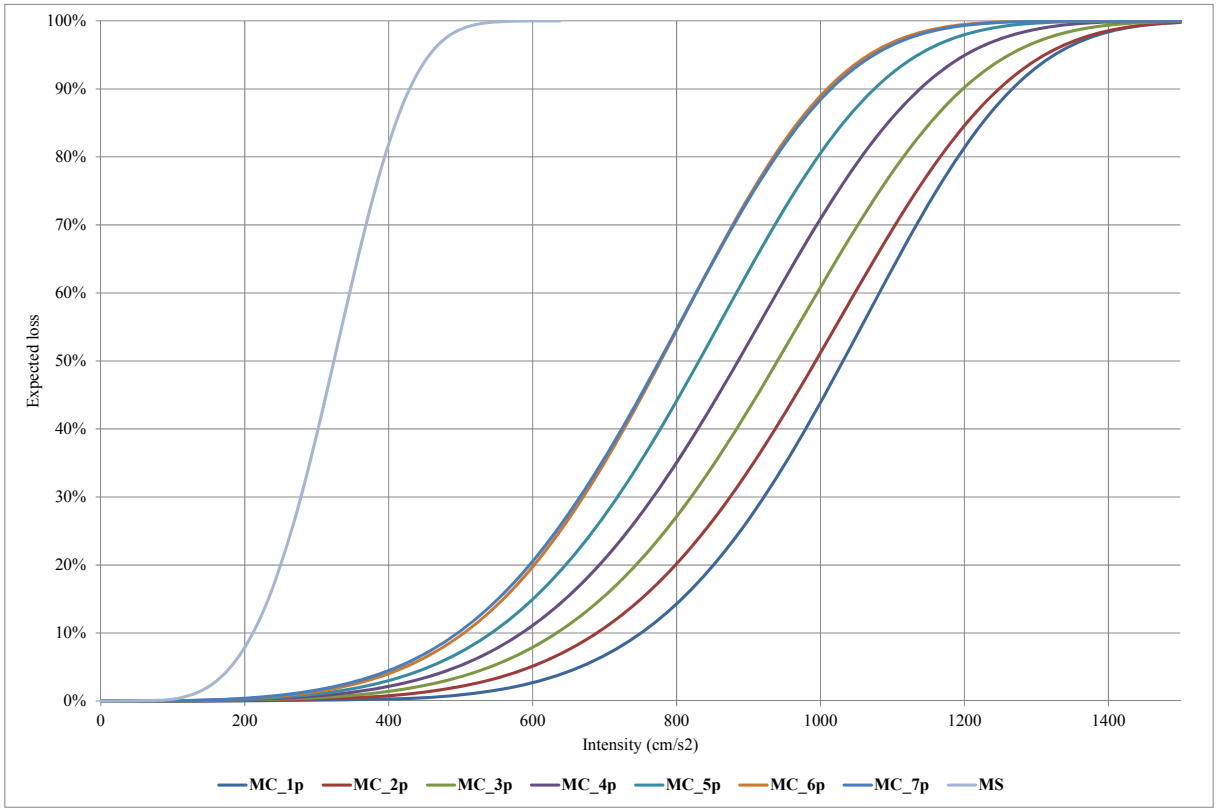


Figure A15-5. Vulnerability functions for masonry dwellings (unreinforced and confined)

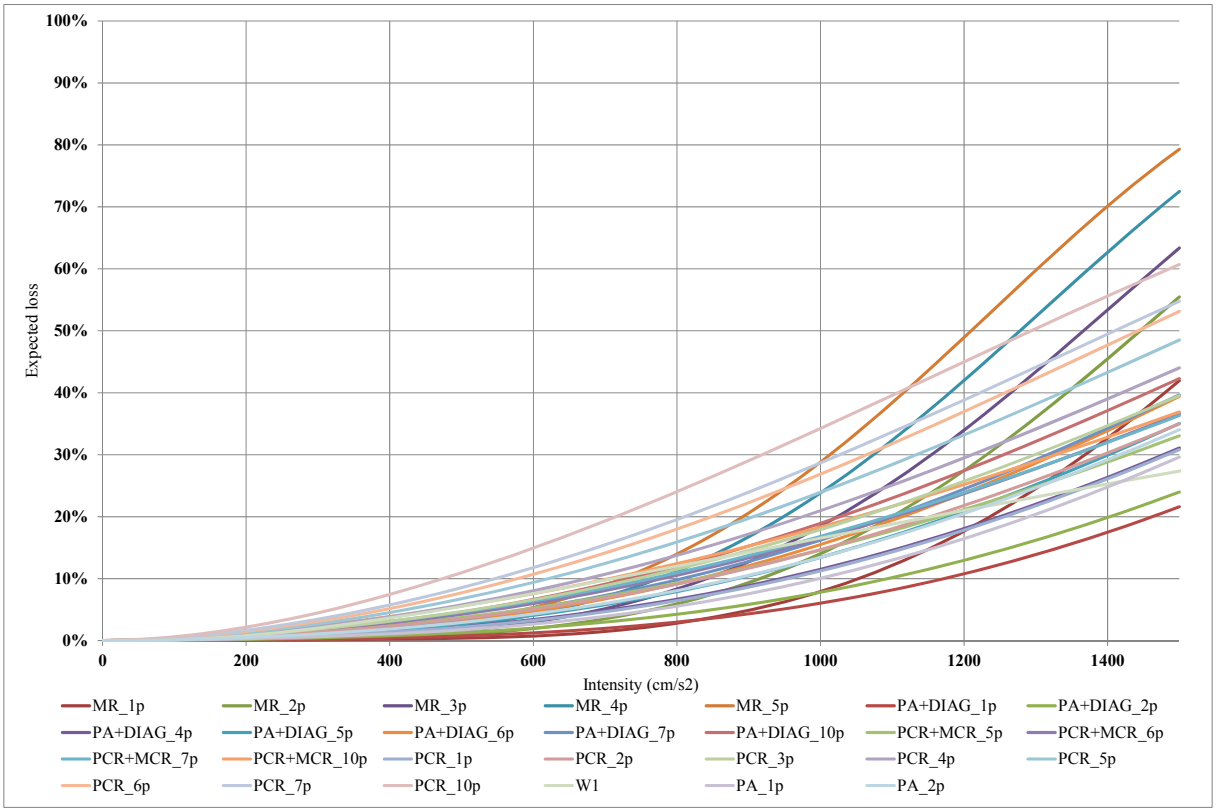


Figure A15-6. Vulnerability functions for reinforced concrete and braced steel frames

Seismic Risk

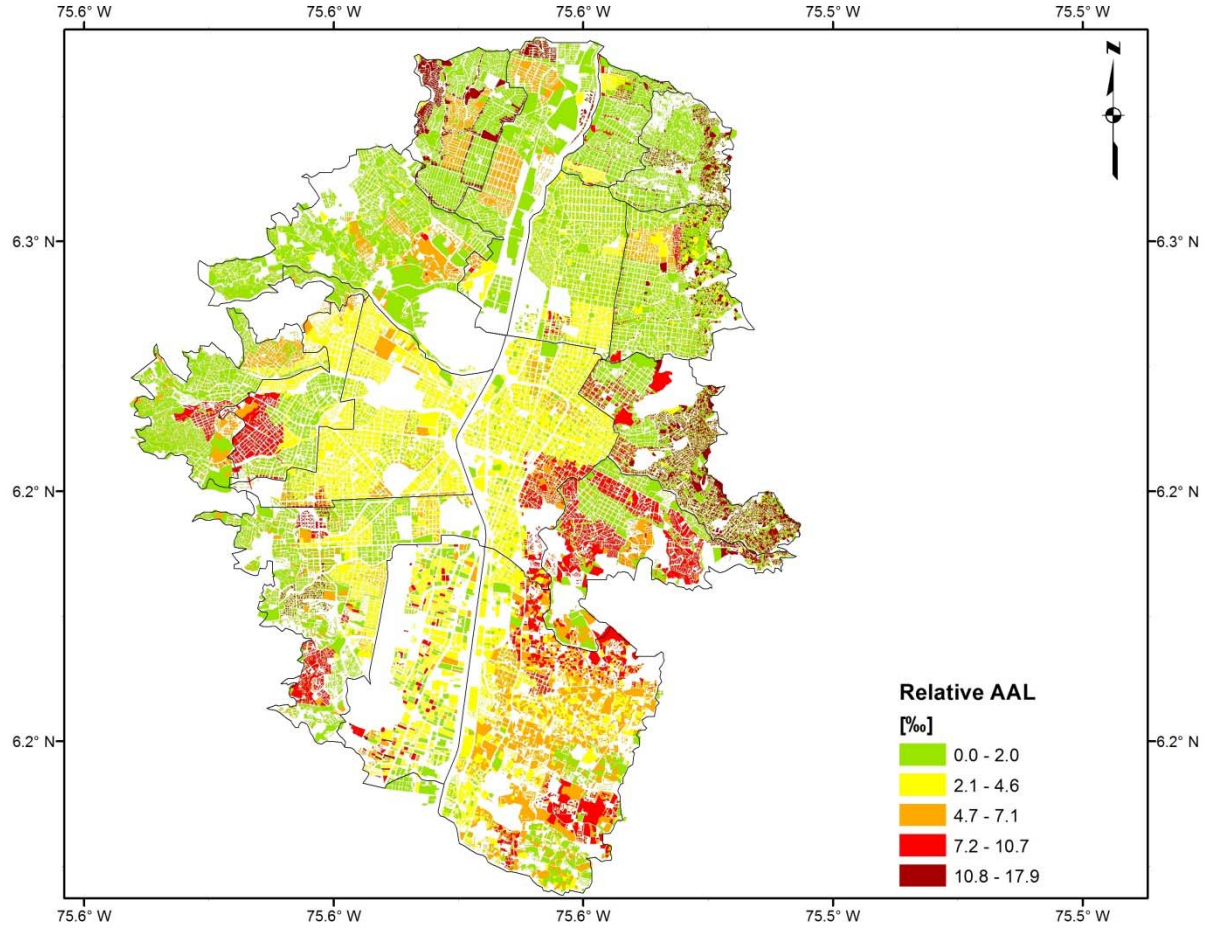


Figure A15-7. Relative AAL by dwelling

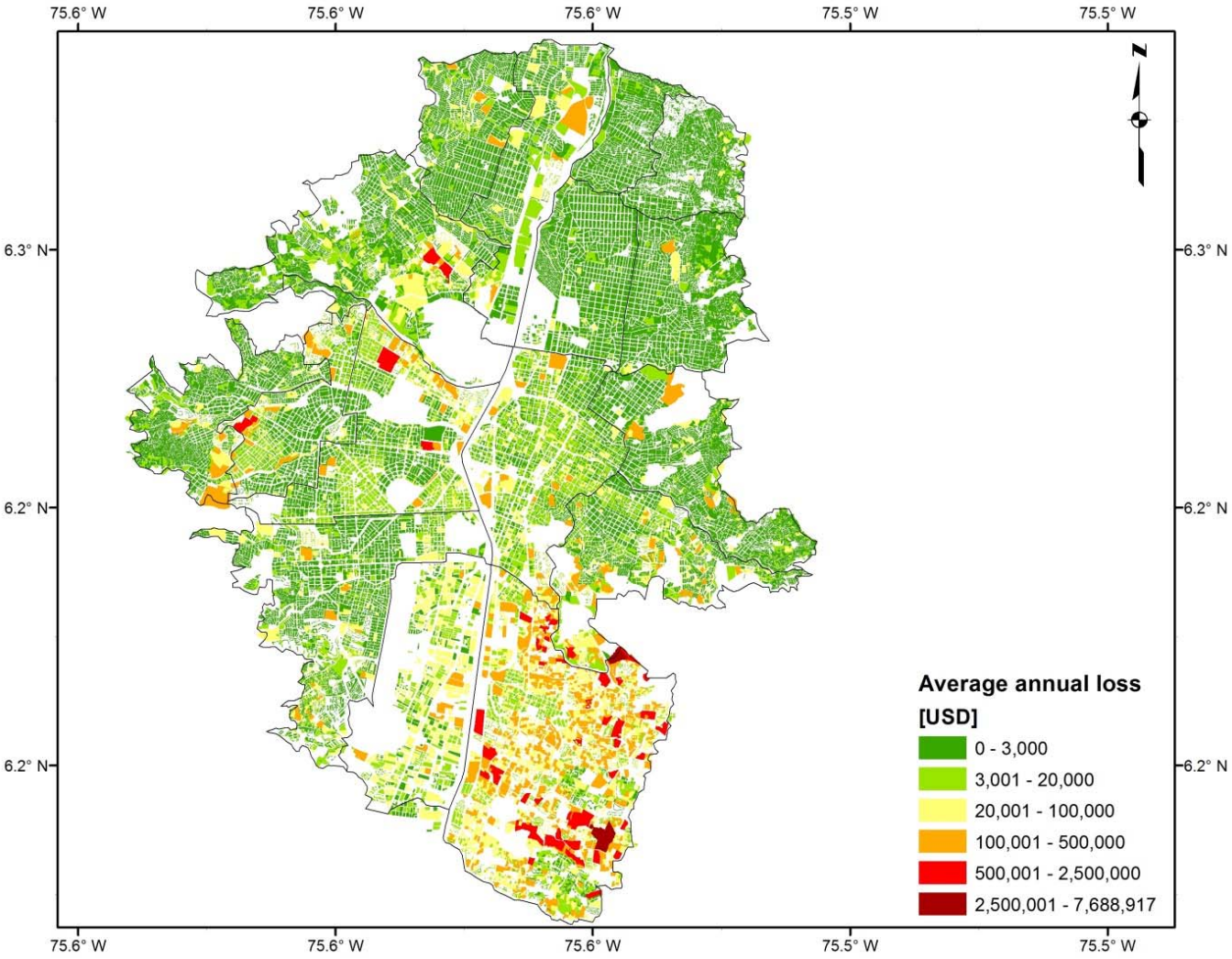


Figure A15-8. Absolute AAL by dwelling

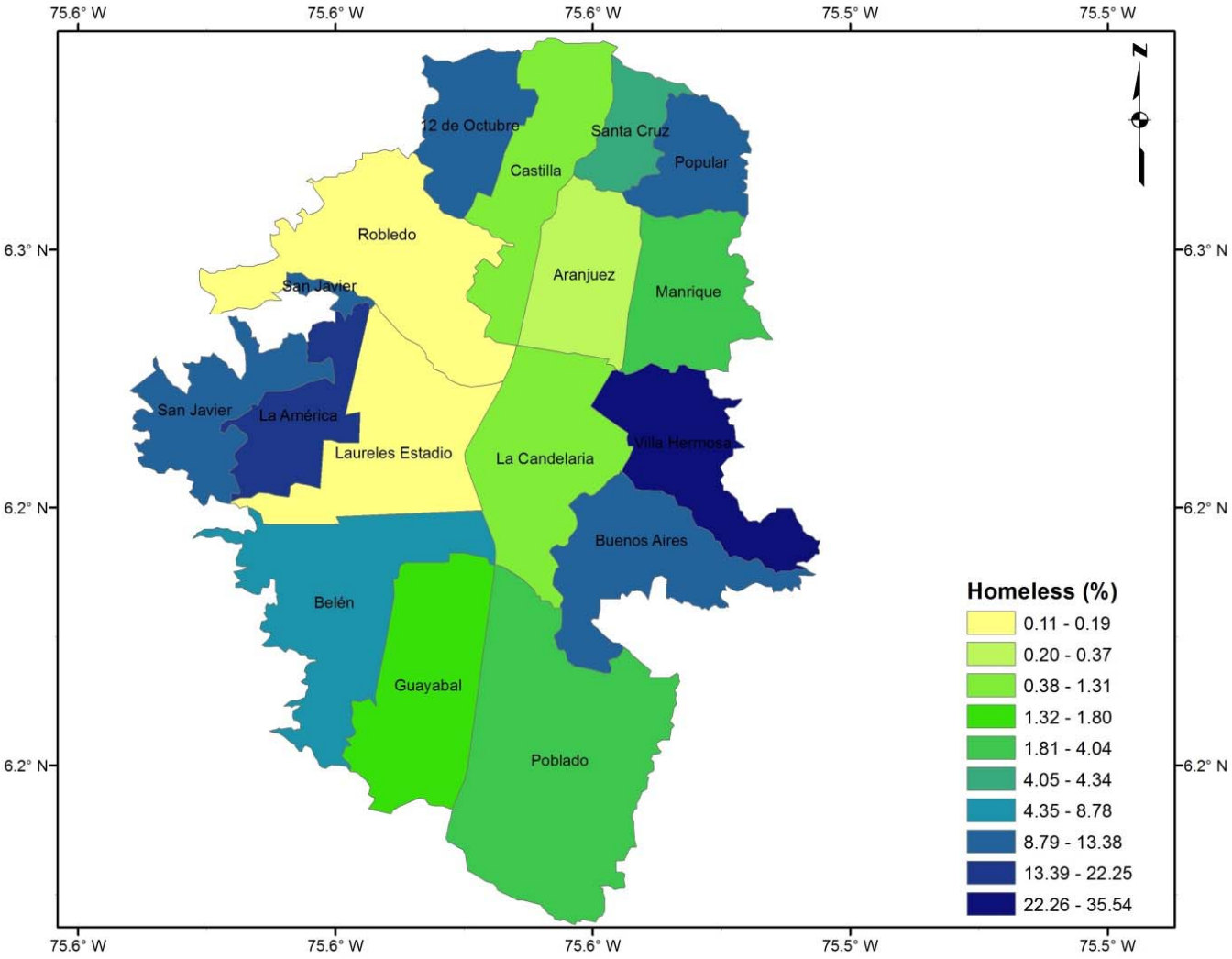


Figure A15-9. Homeless estimation (due to dwelling damage) for Medellín

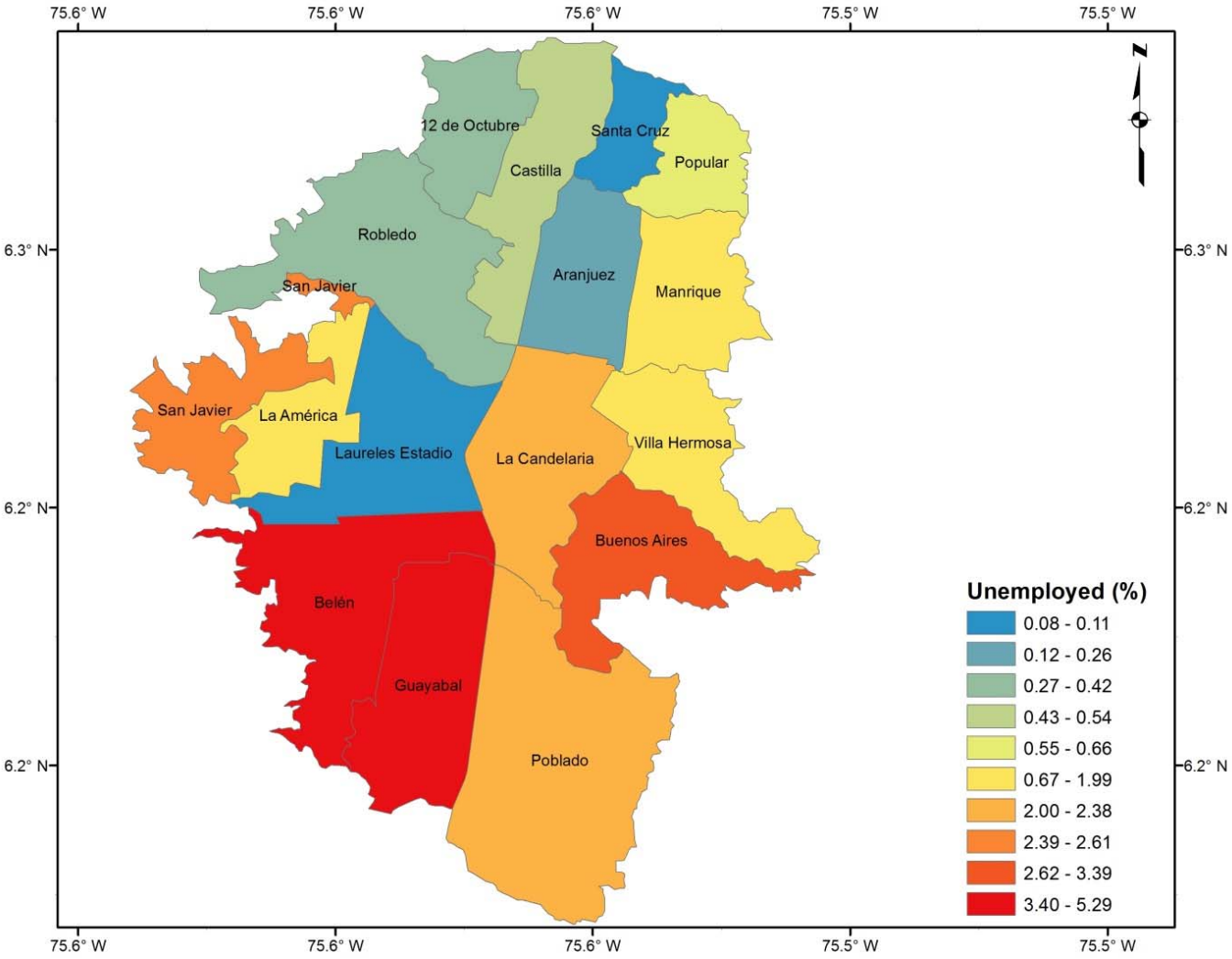


Figure A15-10. Unemployed estimation (due to dwelling damage) for Medellín

Holistic Risk Analysis

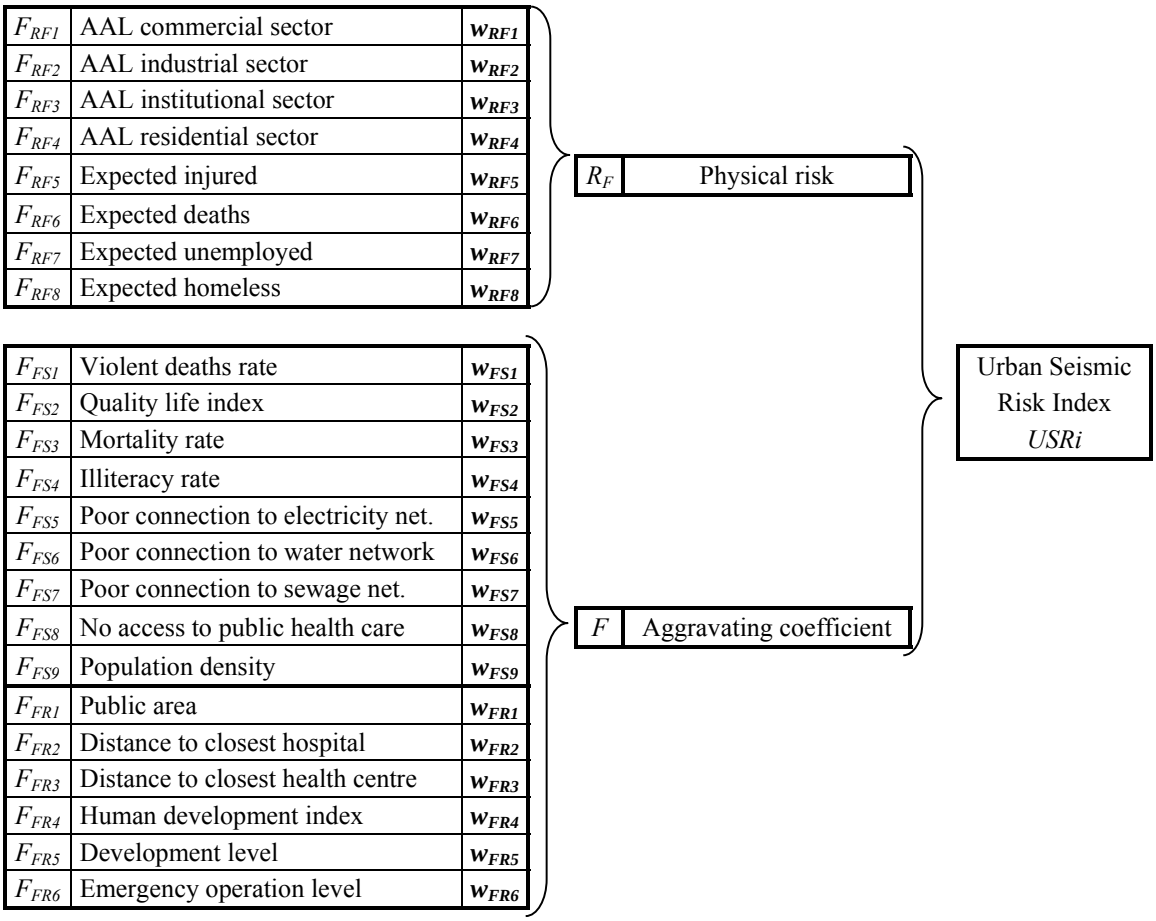


Figure A15-11. Descriptors used for the physical risk and aggravating coefficient indexes

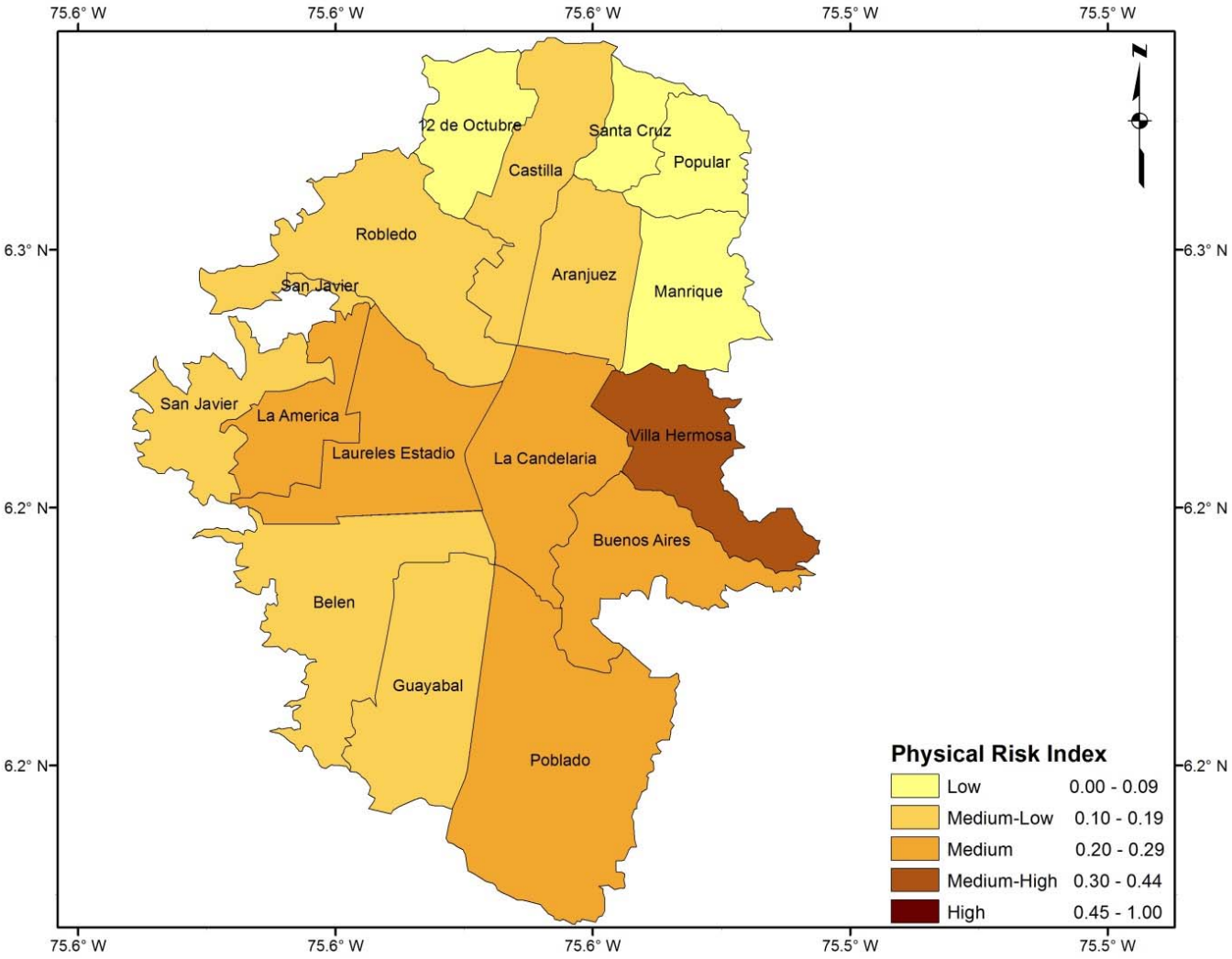


Figure A15-12. Physical risk index by county

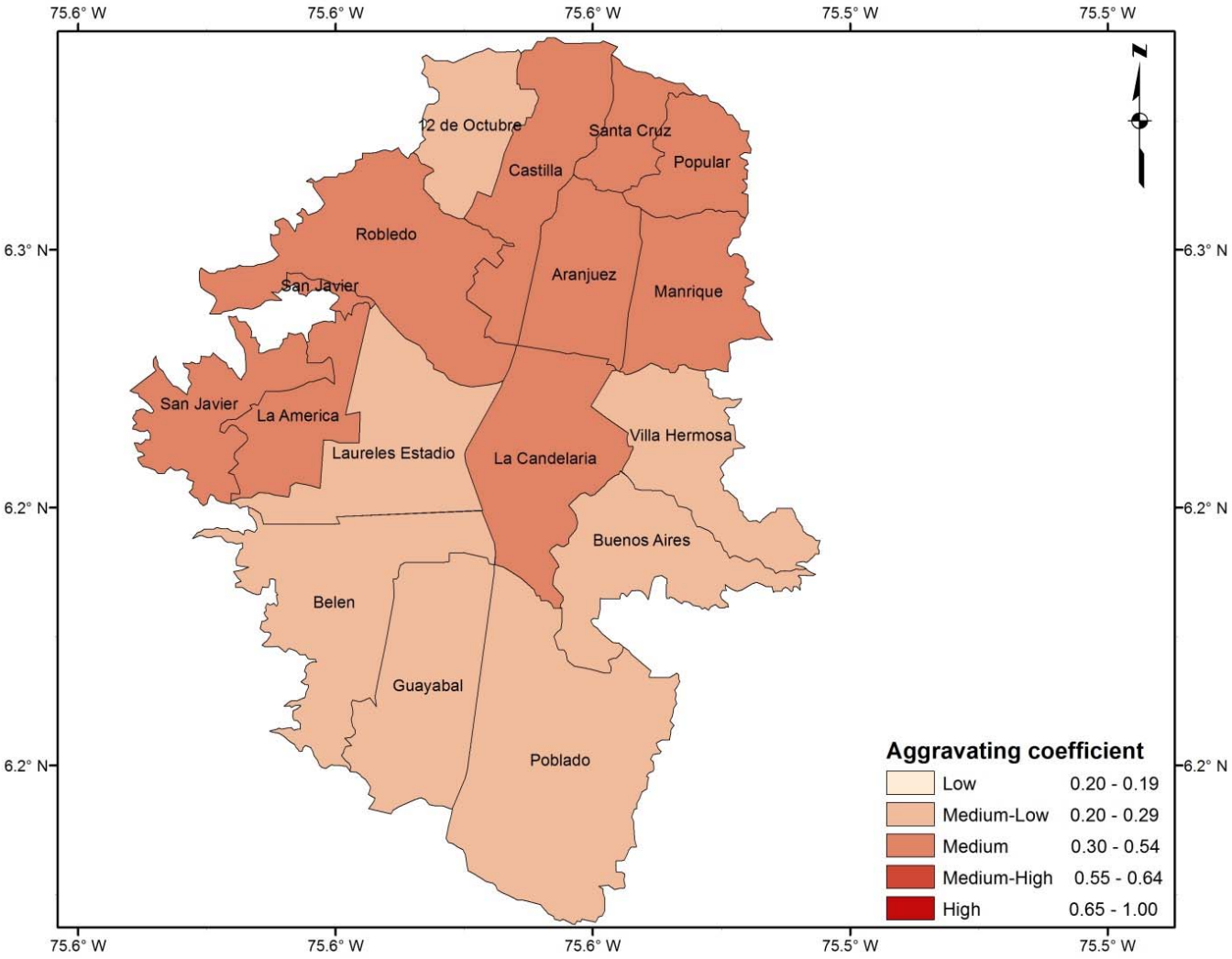


Figure A15-13. Aggravating coefficient by county

Annex 16. Exposure, Vulnerability and Risk Data for Barcelona

Exposure Information

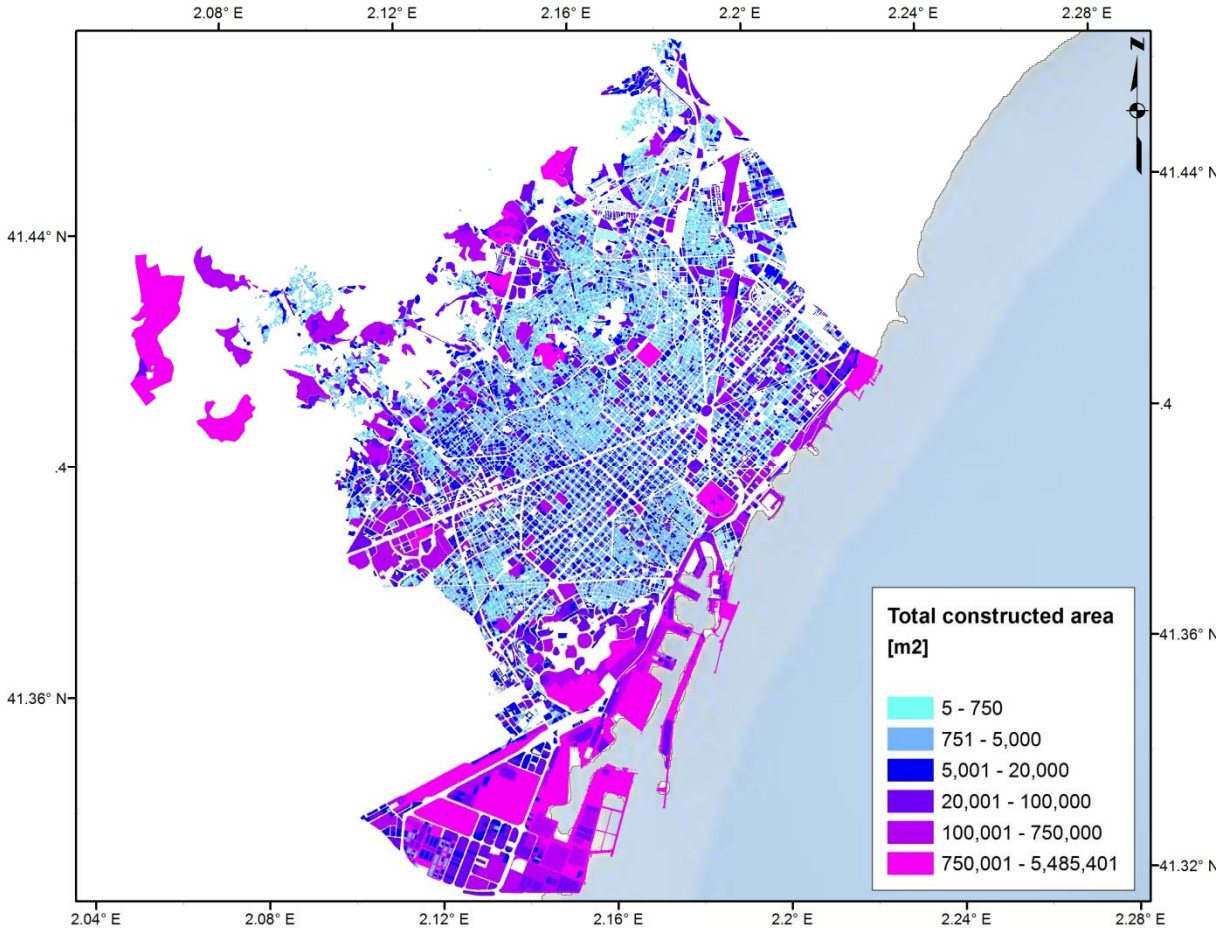


Figure A16-1. Total constructed area by dwelling

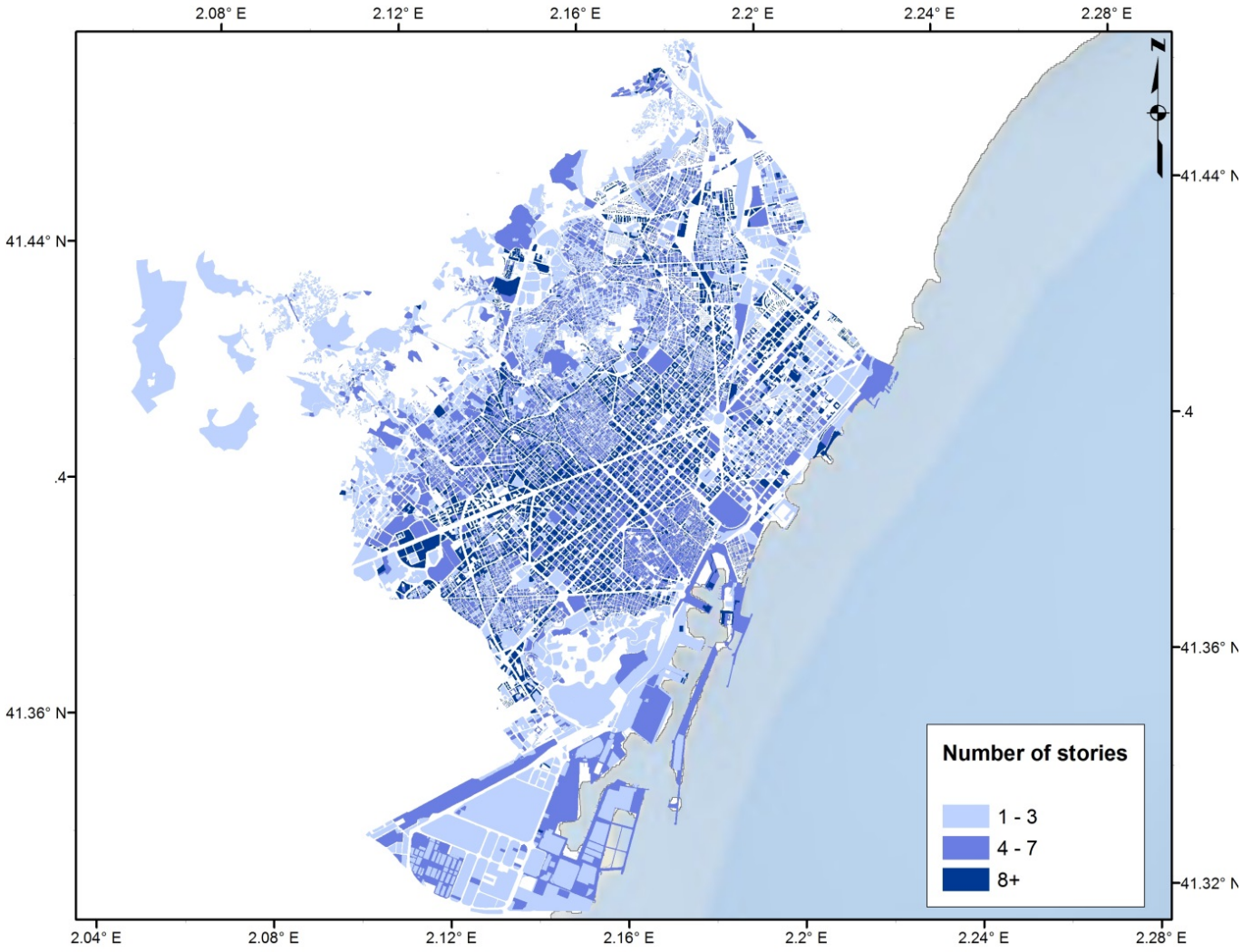


Figure A16-2. Number of stories category by dwelling

Vulnerability Functions

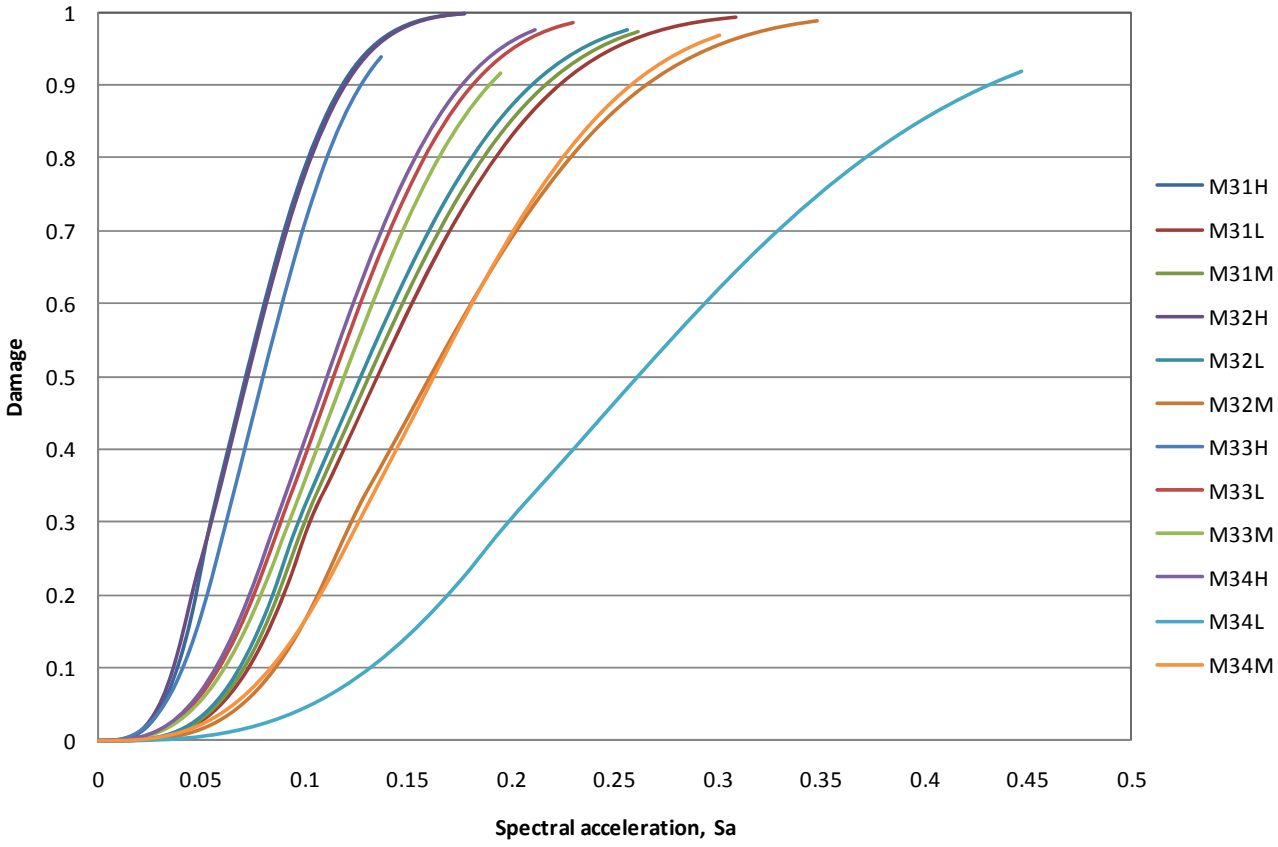


Figure A16-3. Vulnerability functions for masonry dwellings (unreinforced and confined)

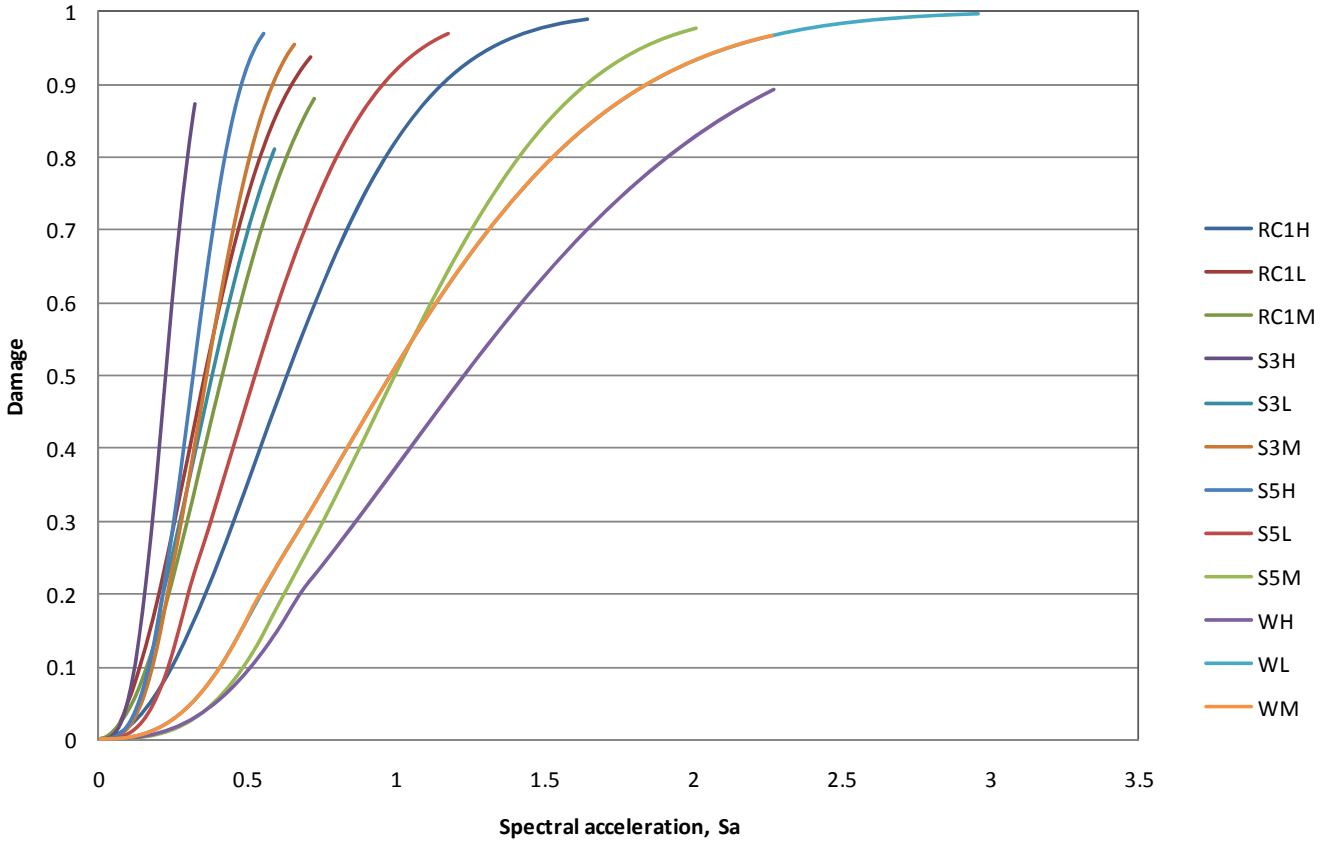


Figure A16-4. Vulnerability functions for reinforced concrete and braced steel frames and wooden dwellings

Seismic Risk

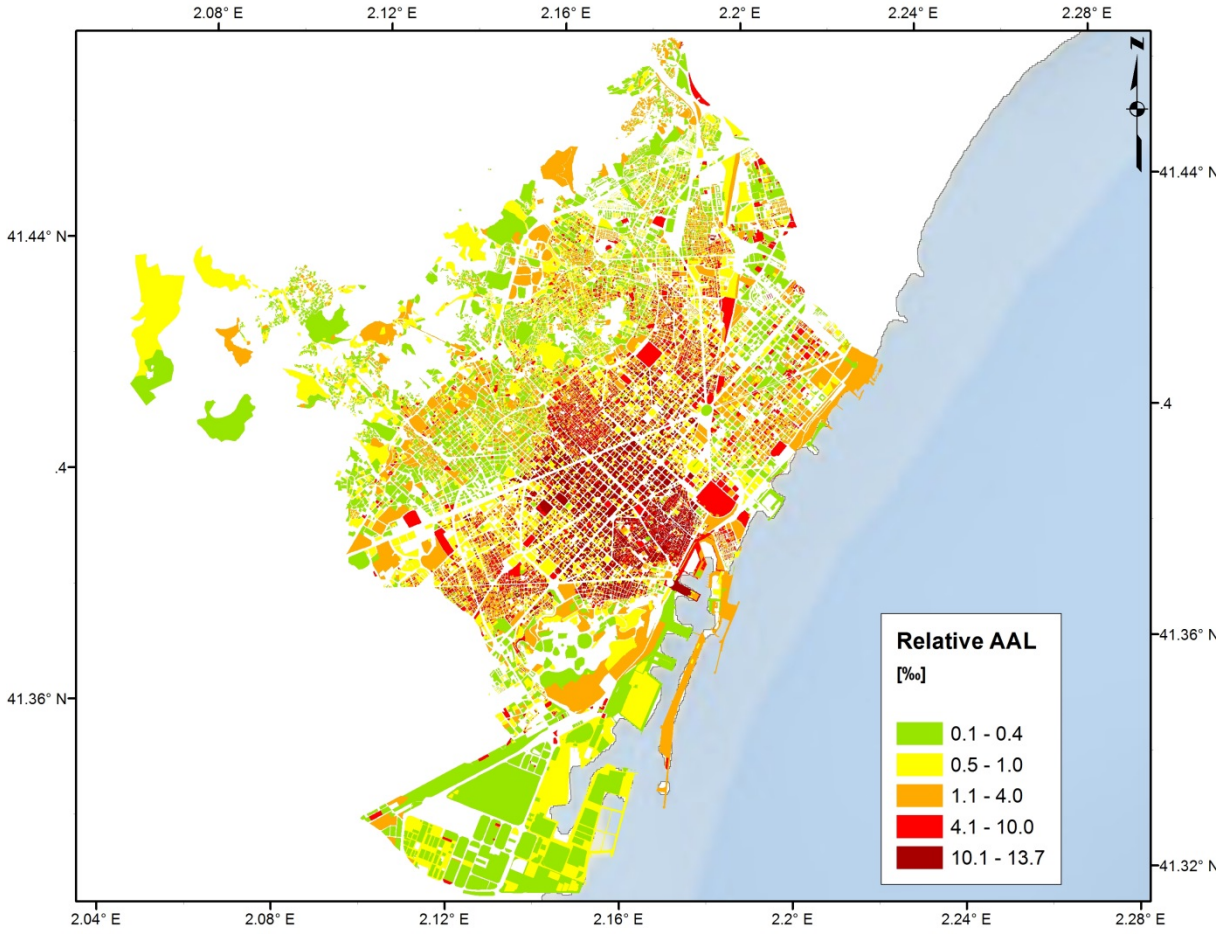


Figure A16-5. Relative AAL by dwelling

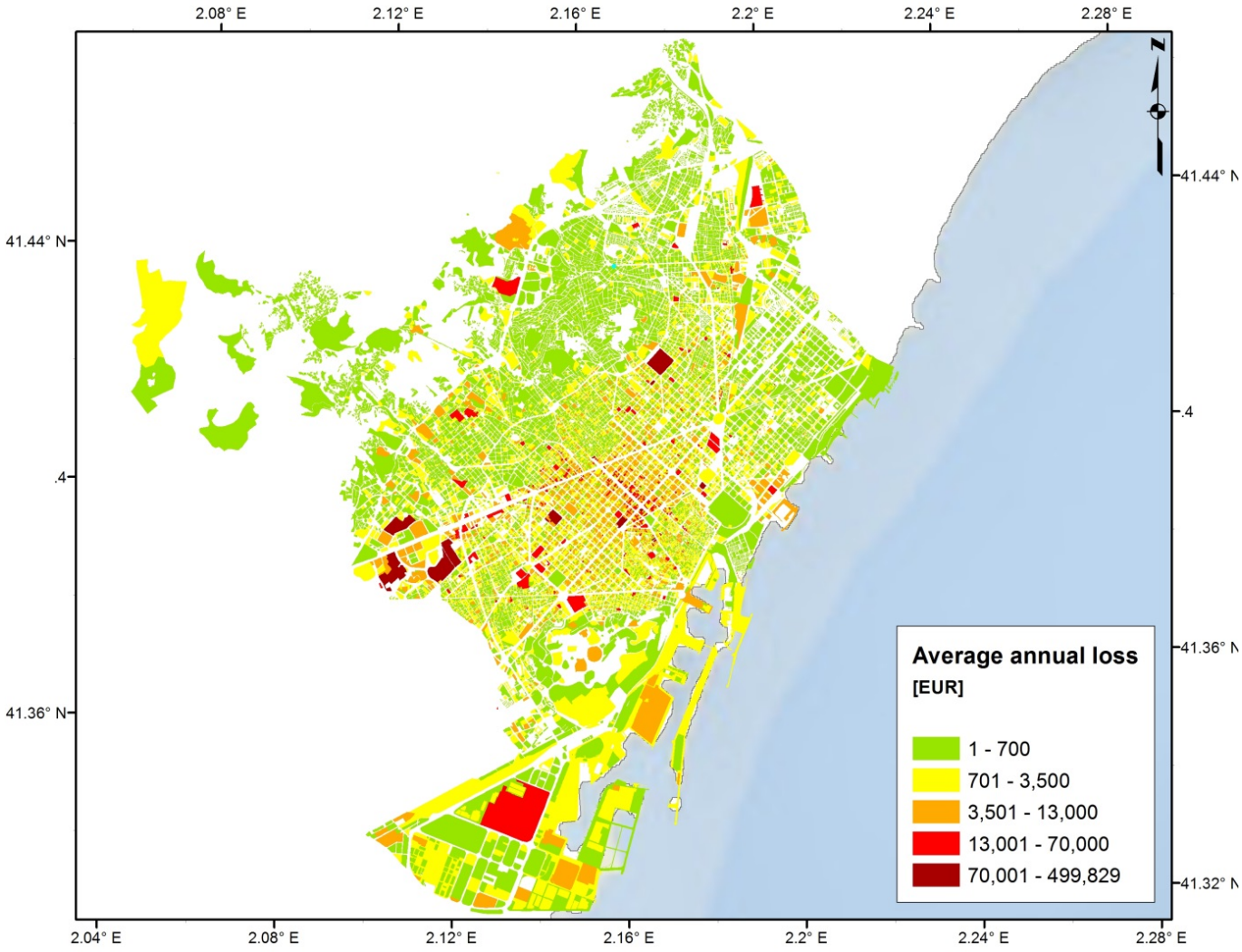


Figure A16-6. Absolute AAL by dwelling

Holistic Risk Analysis

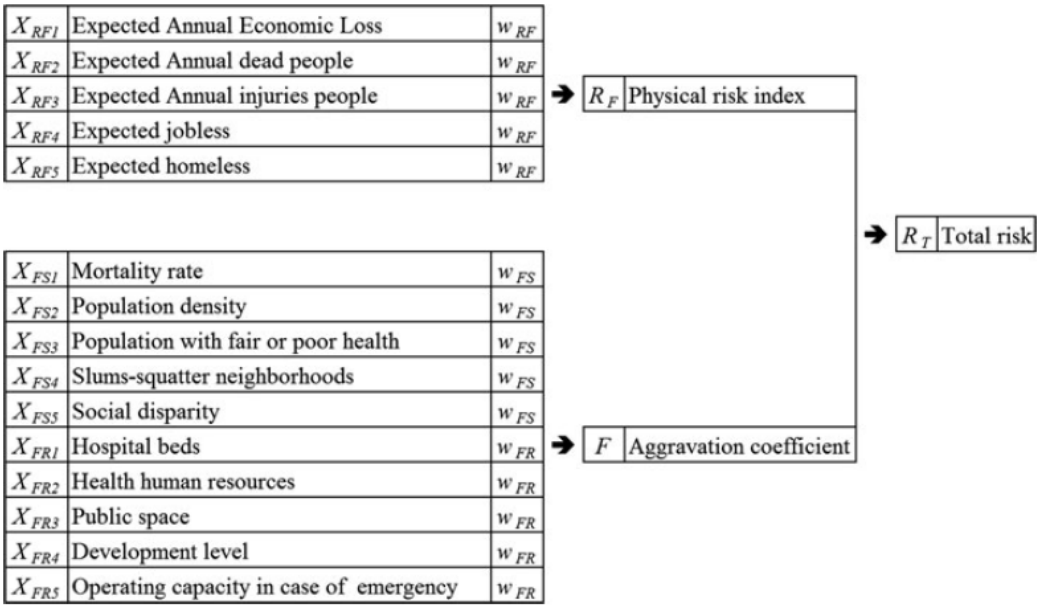


Figure A16-7. Descriptors used for the physical risk and aggravating coefficient indexes

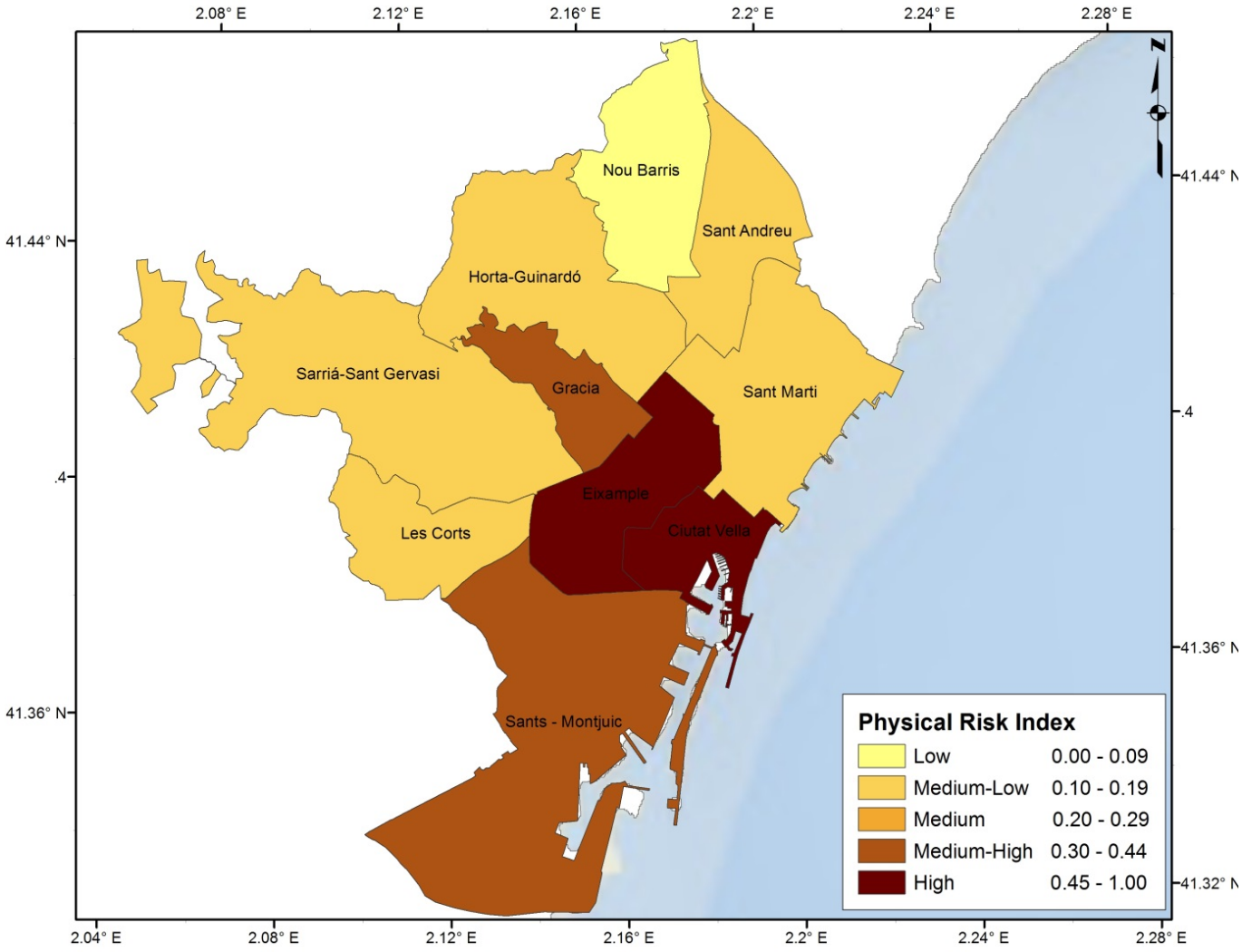


Figure A16-8. Physical risk index by district

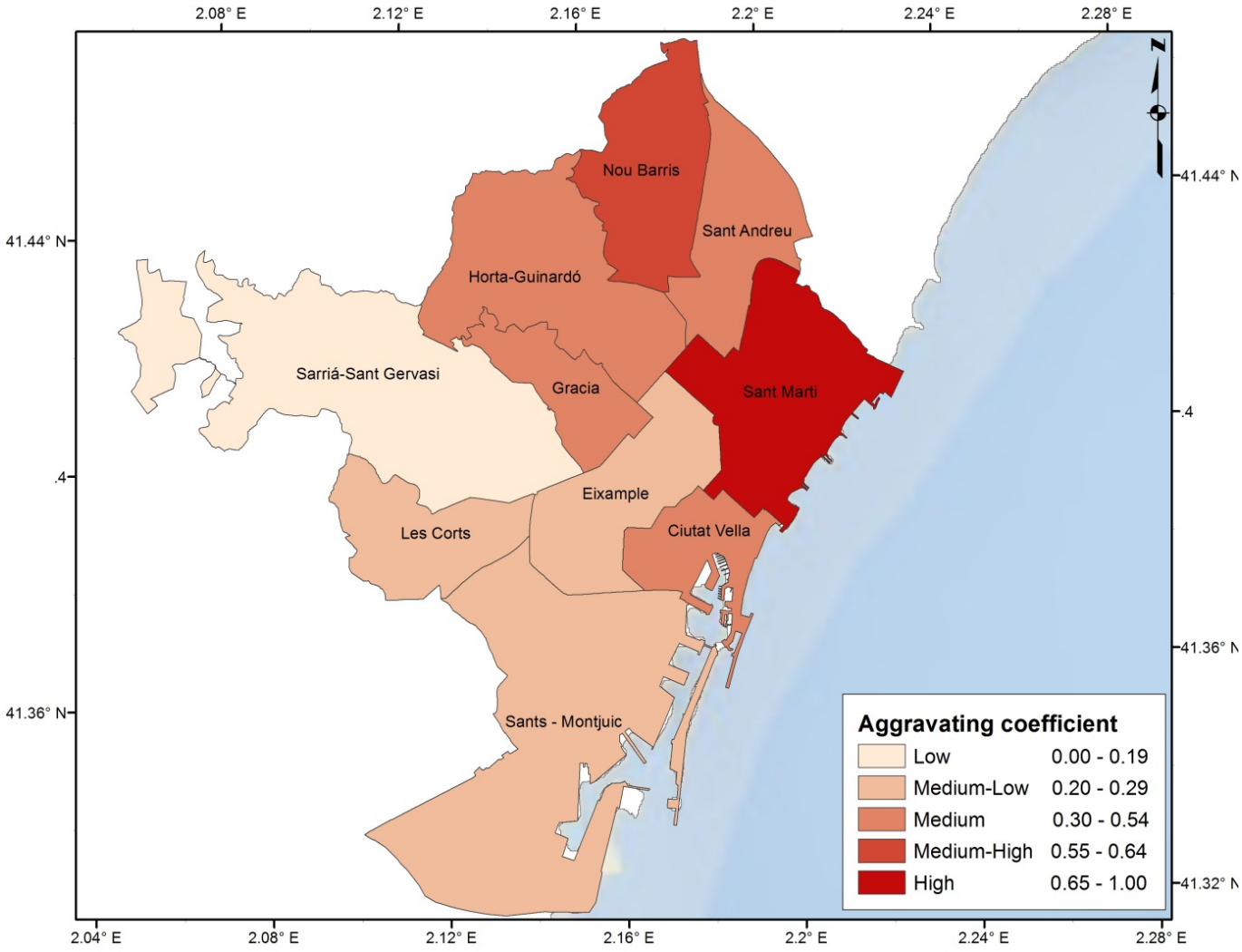


Figure A16-9. Aggravating coefficient by district

Annex 17. Exposure, Vulnerability and Risk Data for Bogotá

Exposure Information

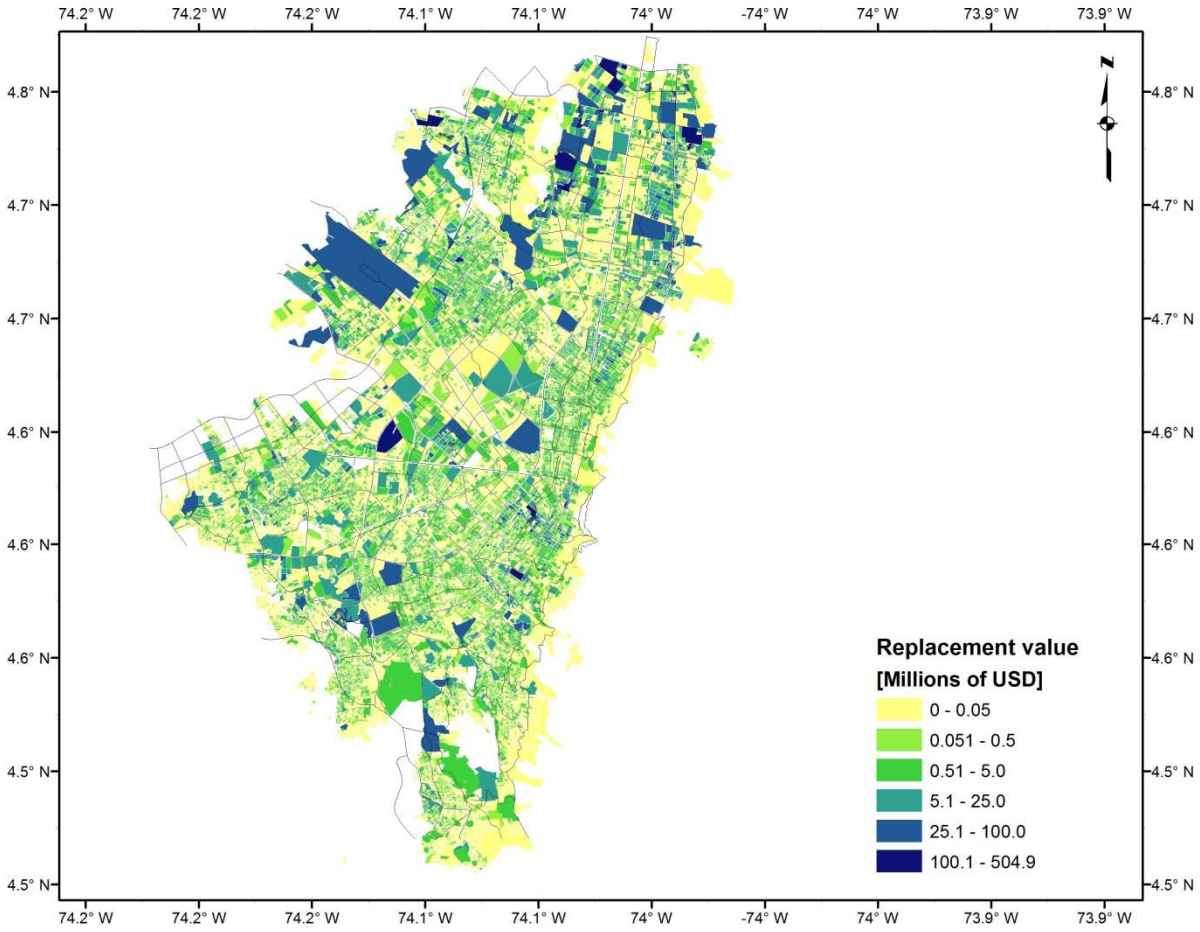


Figure A17-1. Total replacement cost by block in Bogotá

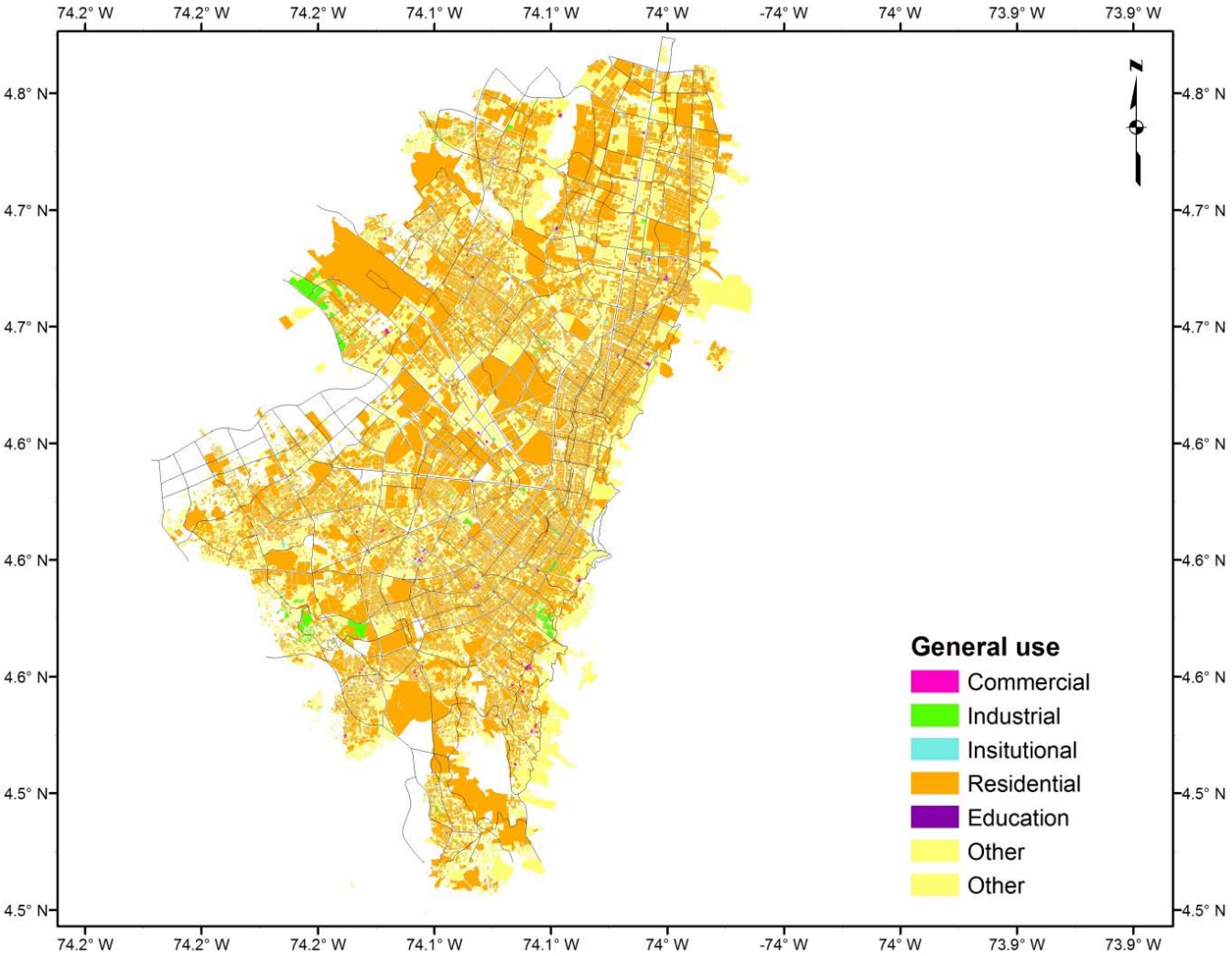


Figure A17-2. Main use by block in Bogotá

Vulnerability Functions

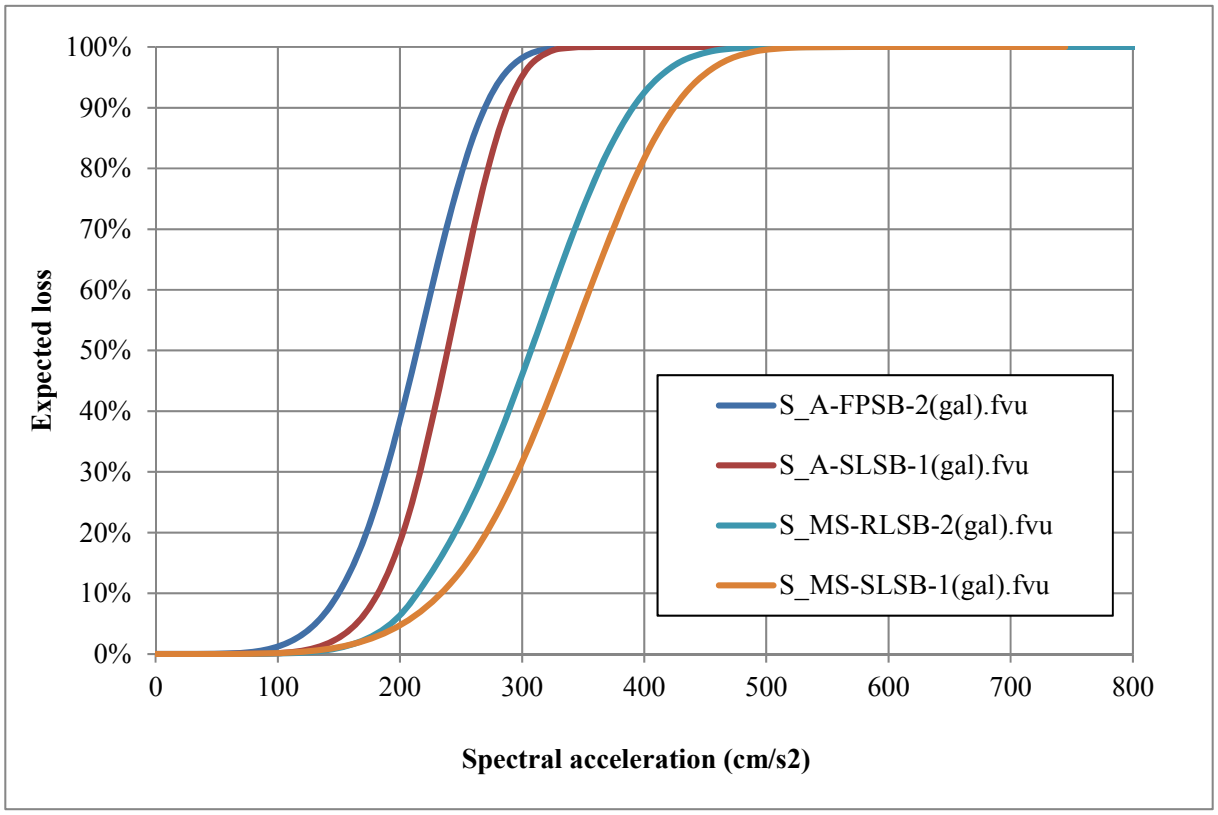


Figure A17-3. Vulnerability functions for adobe and masonry dwellings

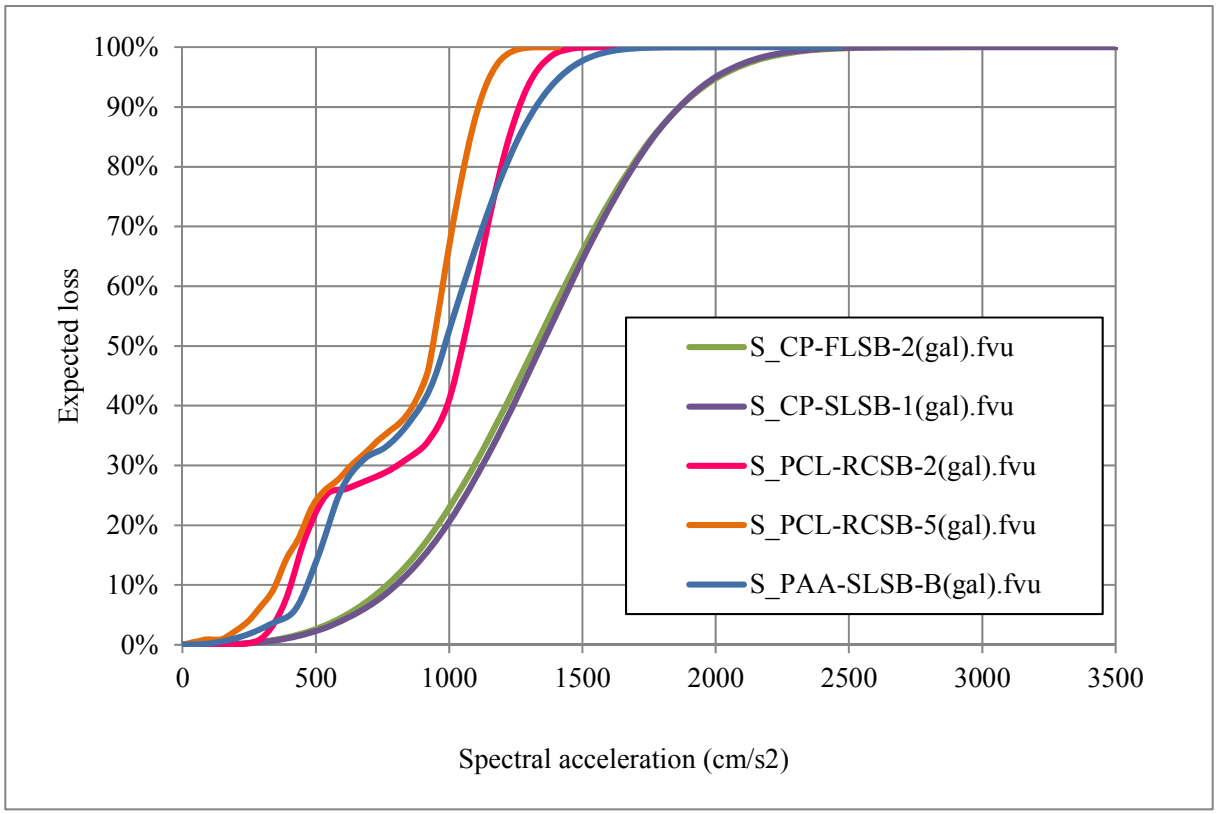


Figure A17-4. Vulnerability functions for precast reinforced concrete, reinforced concrete slabs and industrial facilities

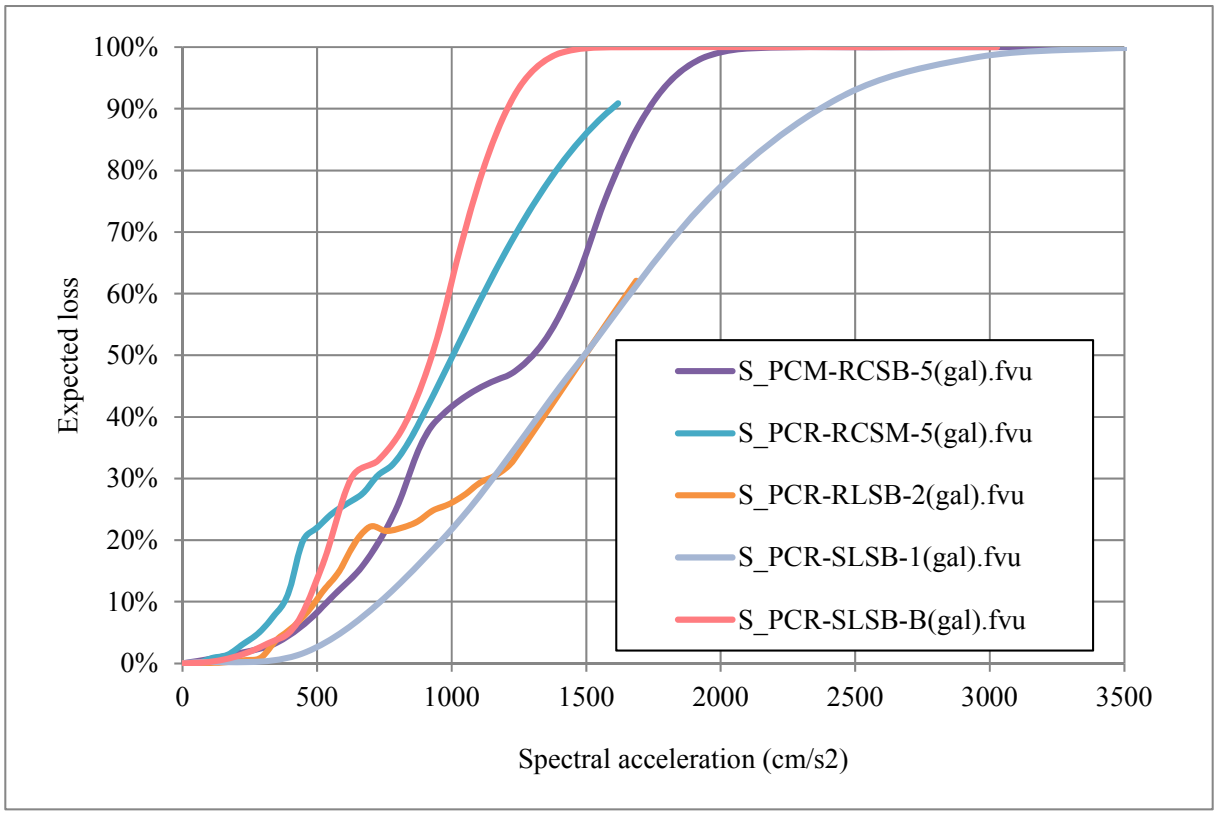


Figure A17-5. Vulnerability functions for reinforced concrete frames and dual systems

Seismic Risk

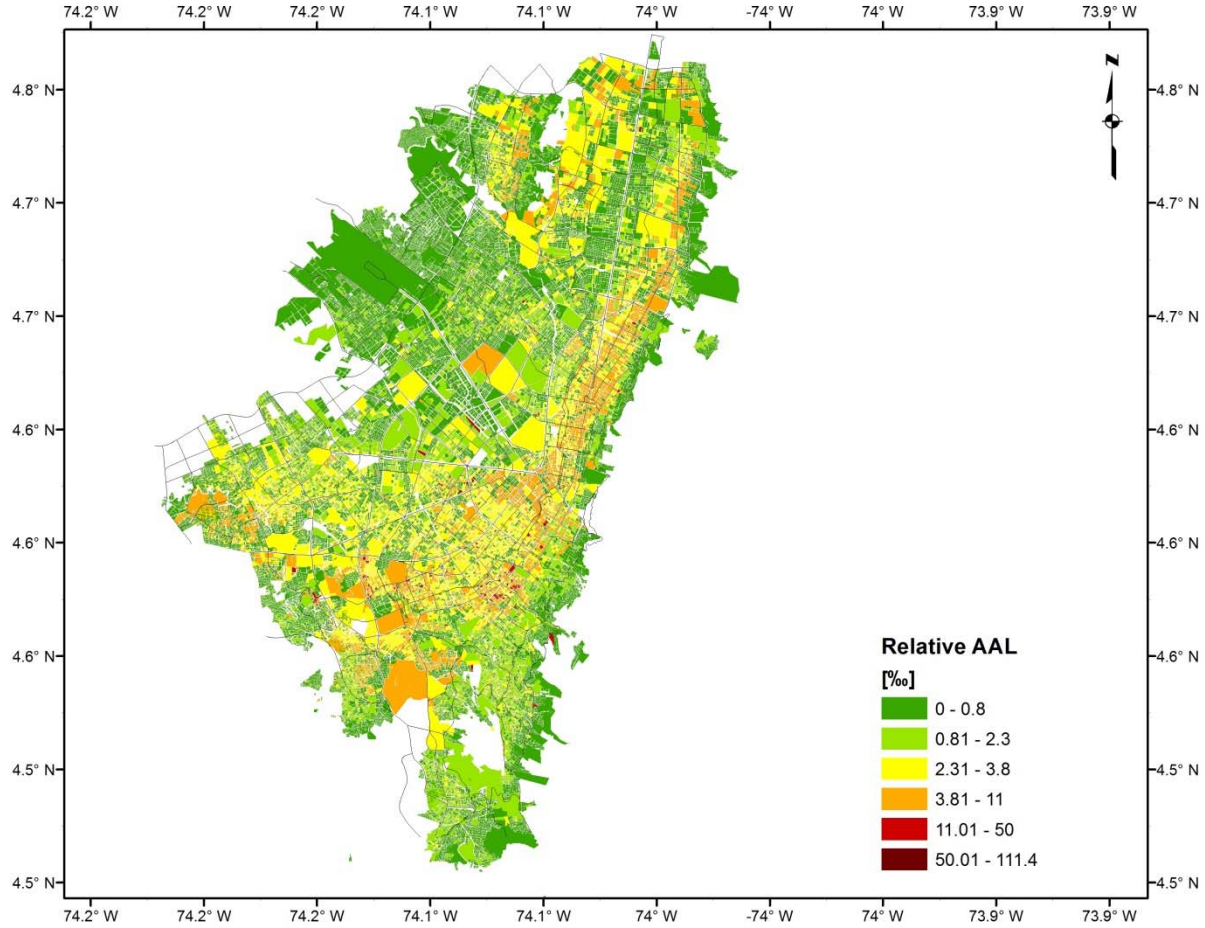


Figure A17-6. Relative AAL by dwelling with AIS-2010 hazard model

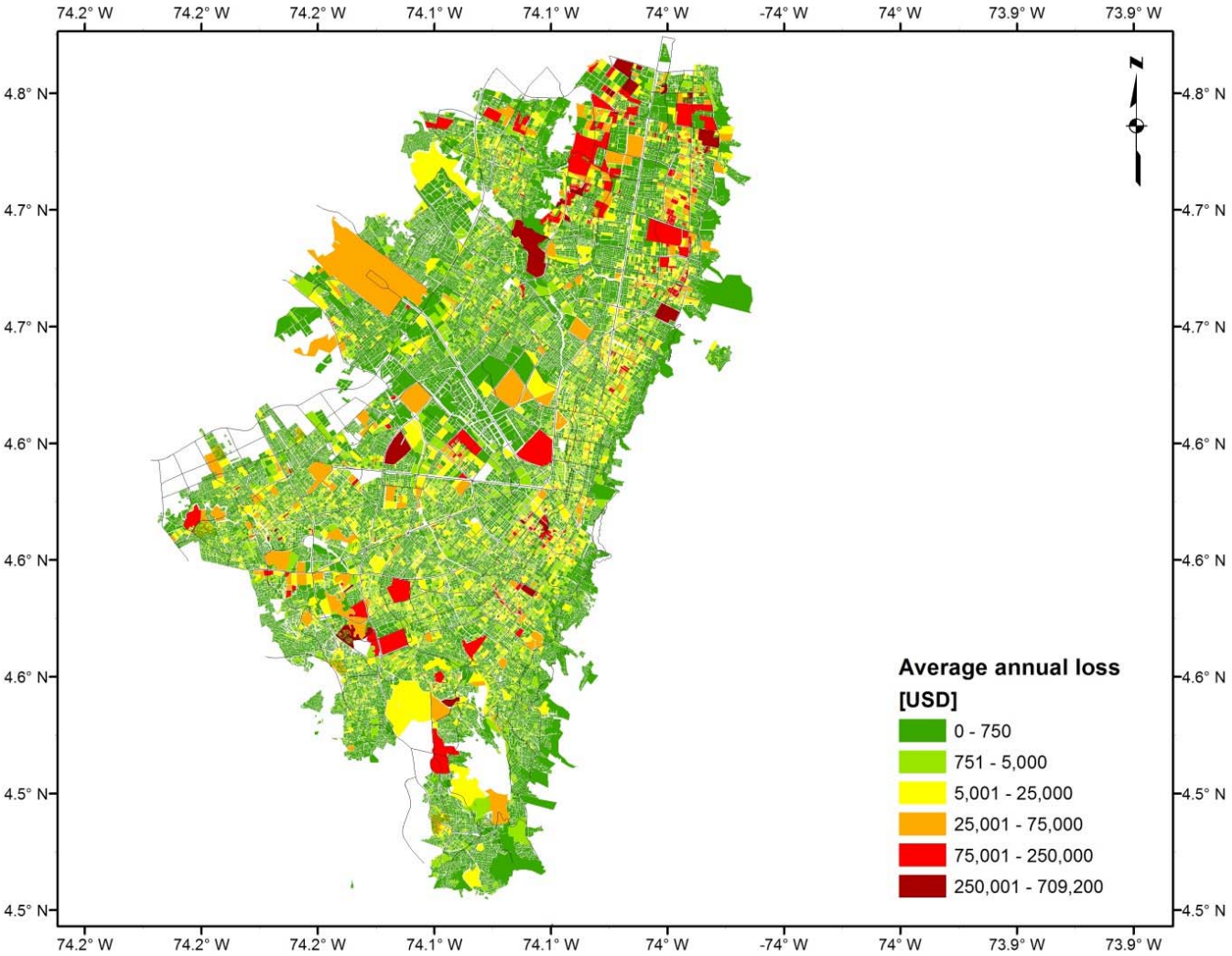


Figure A17-7. Absolute AAL by dwelling with AIS-2010 hazard model

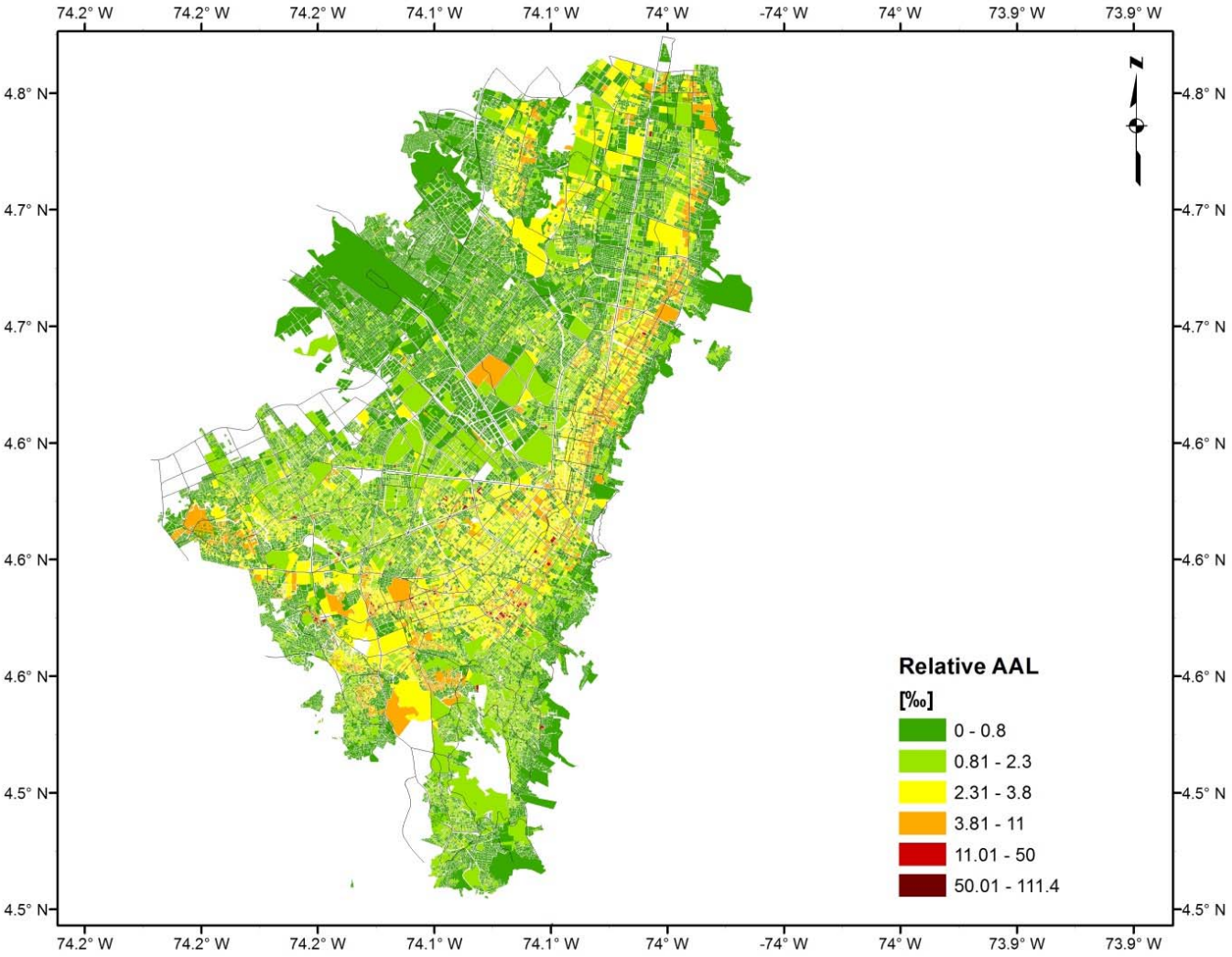


Figure A17-8. Relative AAL by dwelling with Caldas Tear hazard model

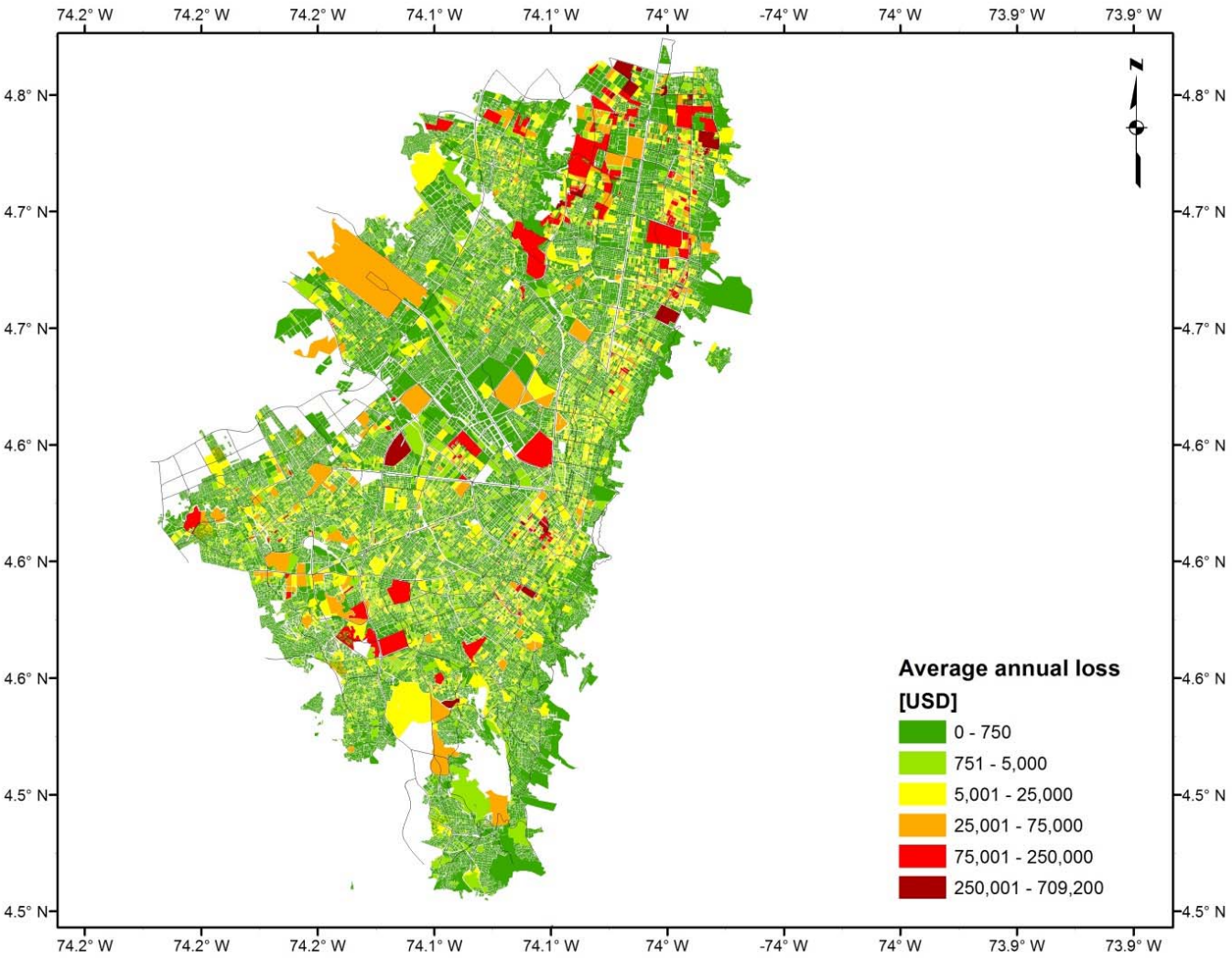


Figure A17-9. Absolute AAL by dwelling with Caldas Tear hazard model

Annex 18. Exposure, vulnerability and risk data for Belize City

Exposure Information

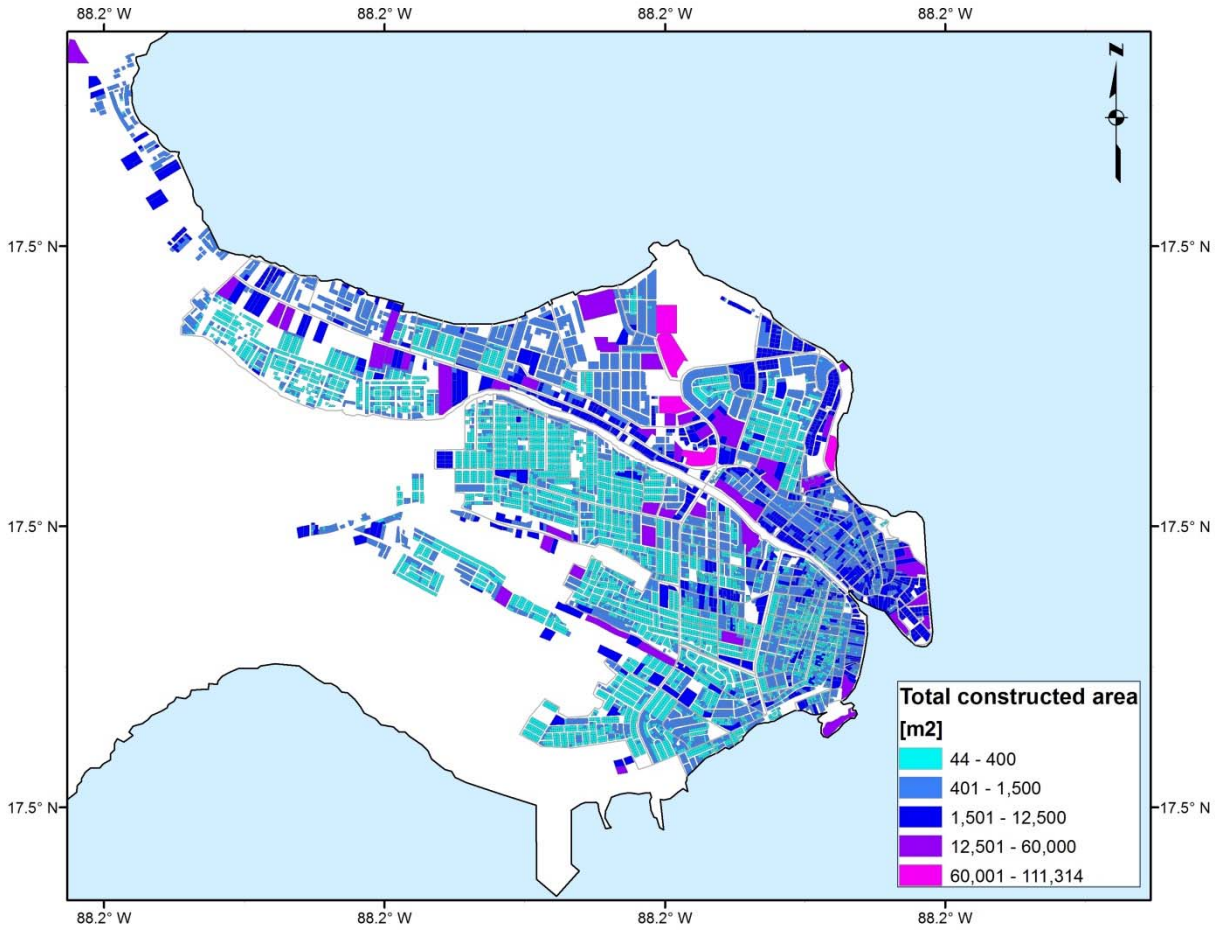


Figure A18-1. Total constructed area by dwelling in Belize City

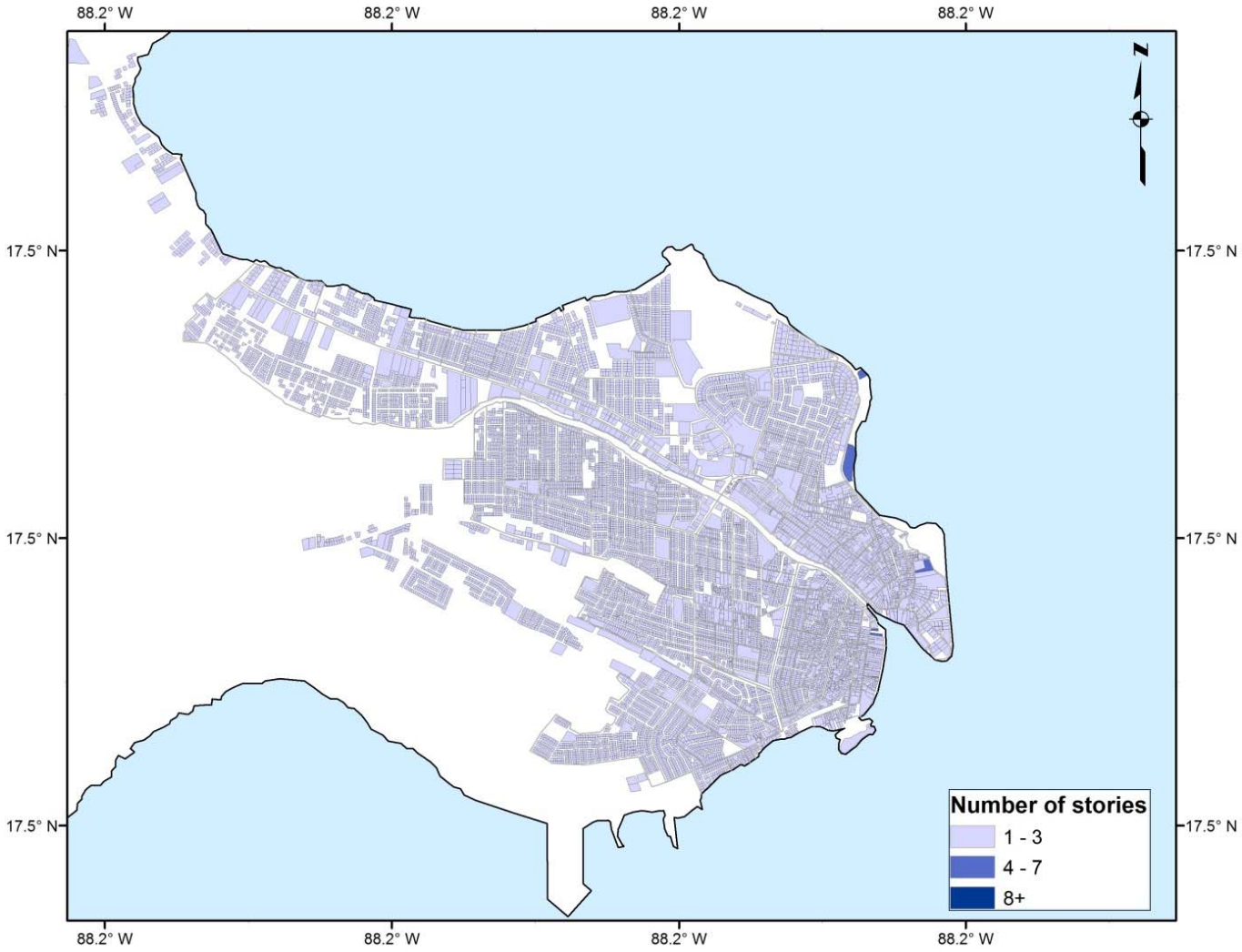


Figure A18-2. Number of stories by dwelling in Belize City

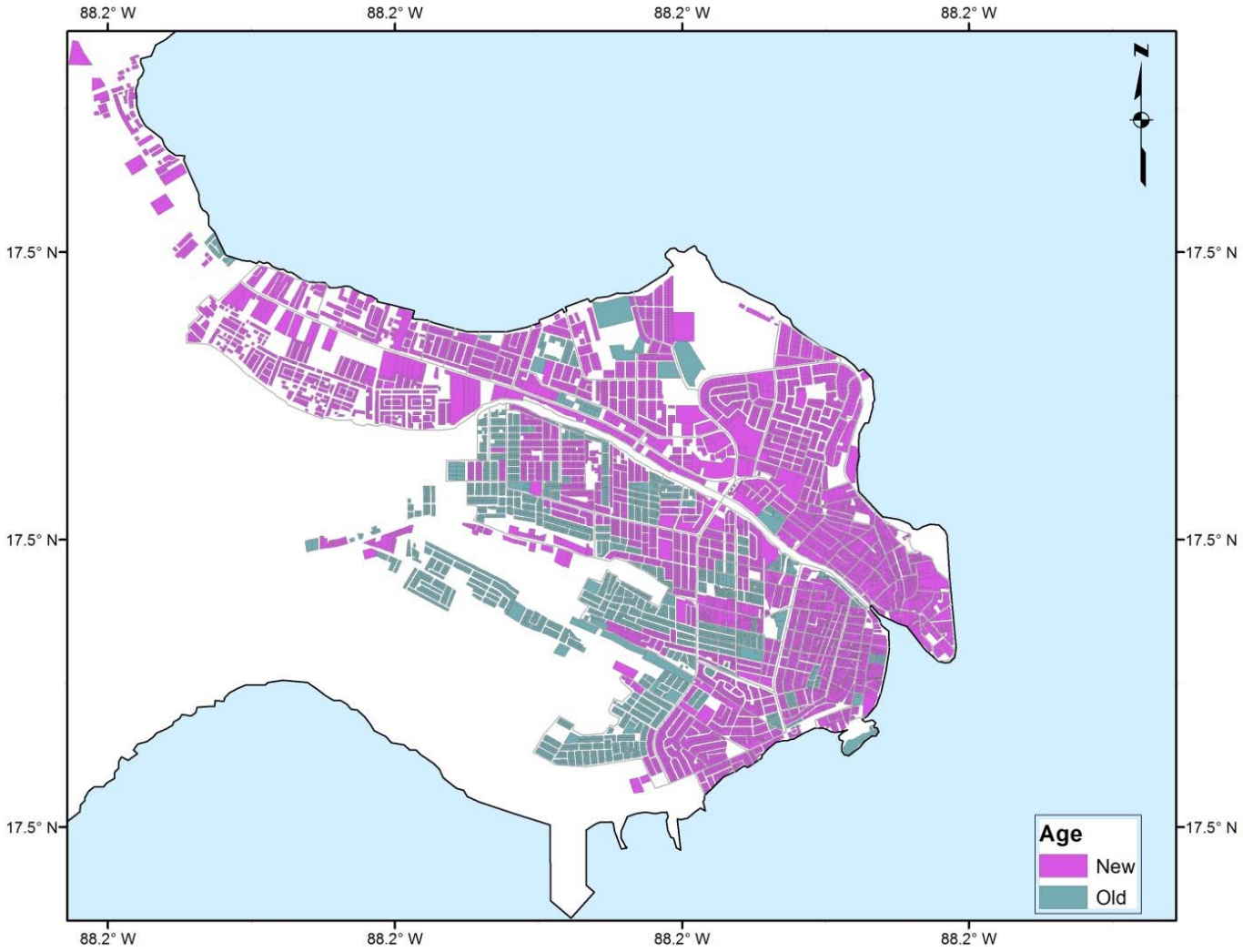


Figure A18-3. Age category by dwelling in Belize City

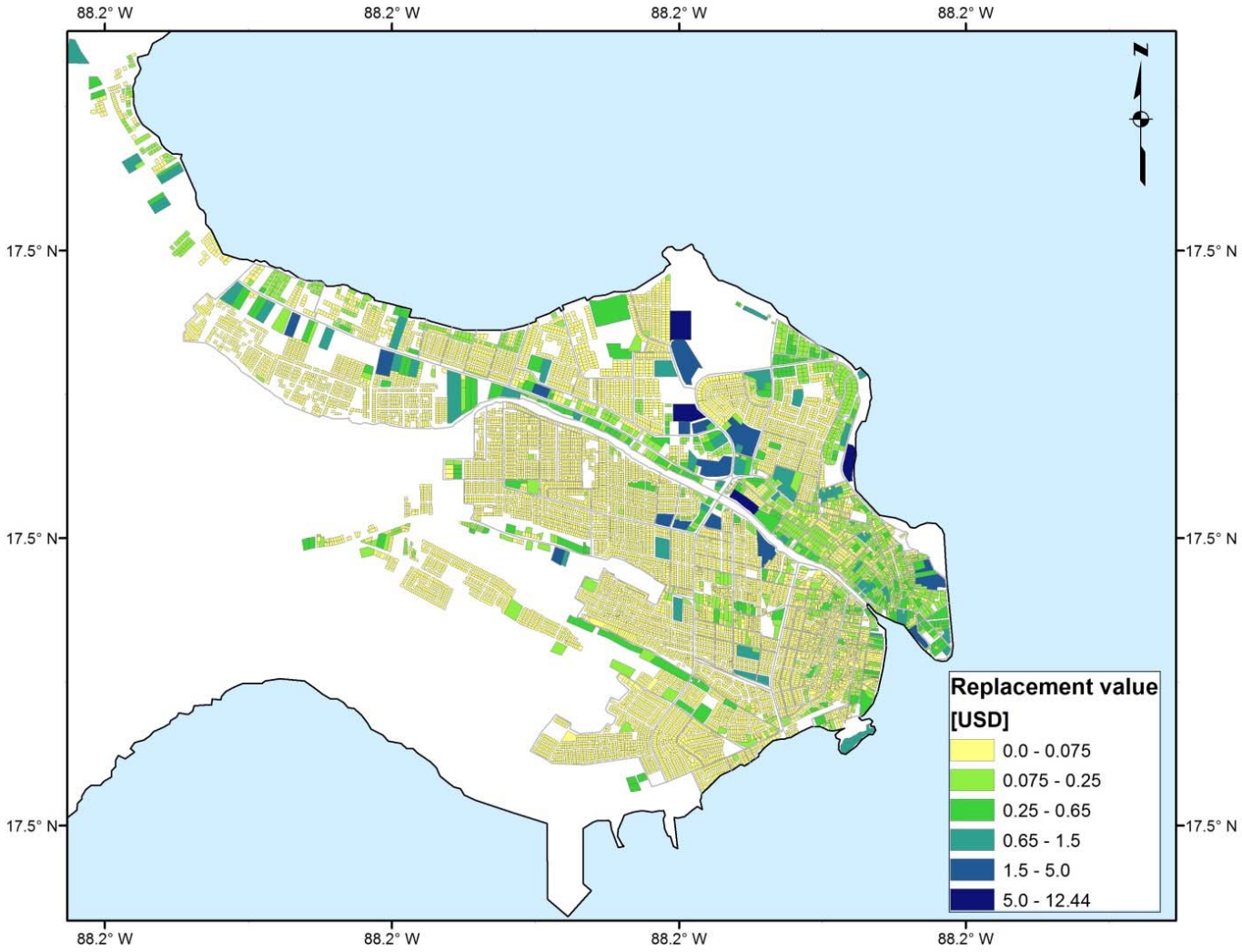


Figure A18-4. Replacement value by dwelling in Belize City

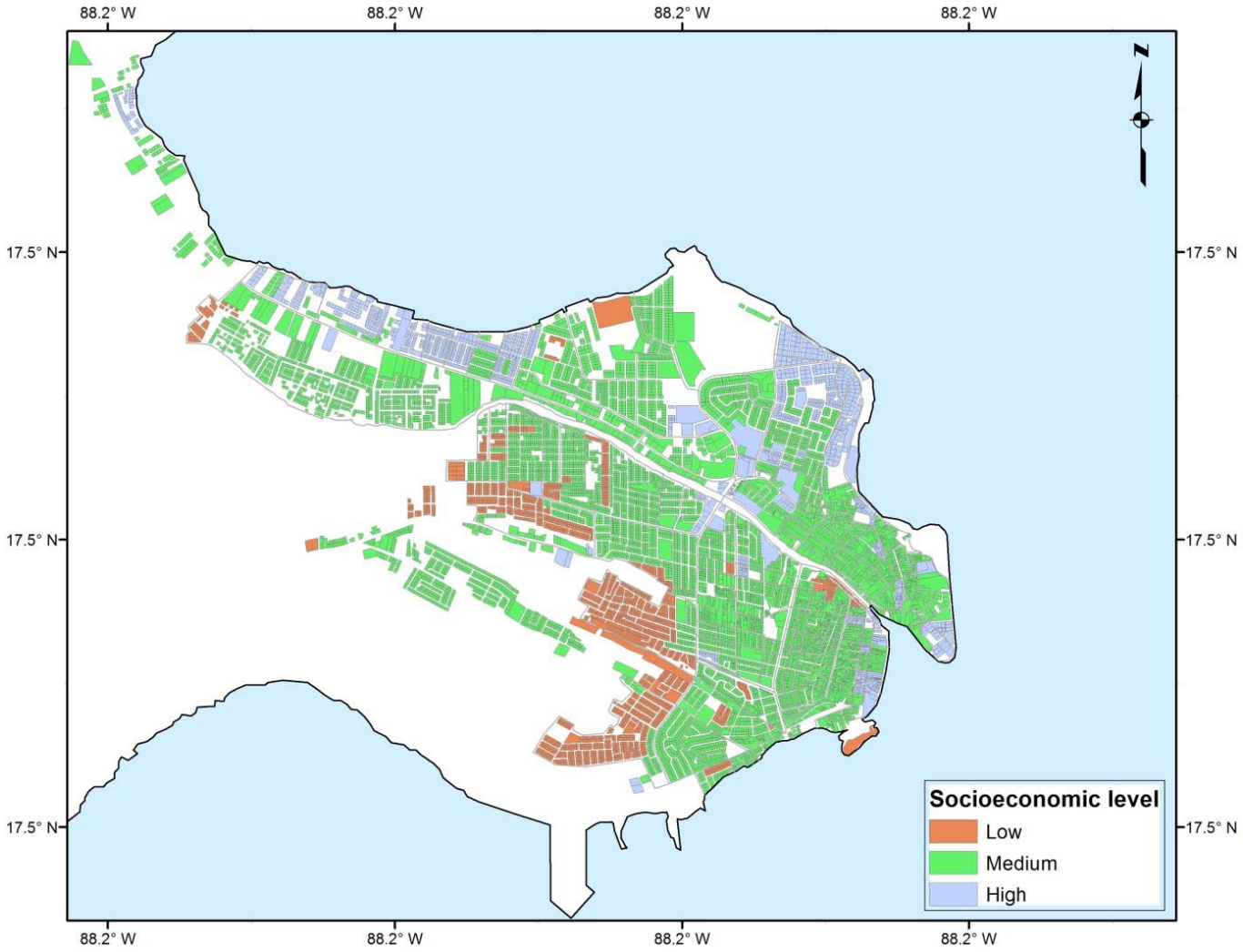


Figure A18-5. Socioeconomic category by dwelling in Belize City

Vulnerability Functions

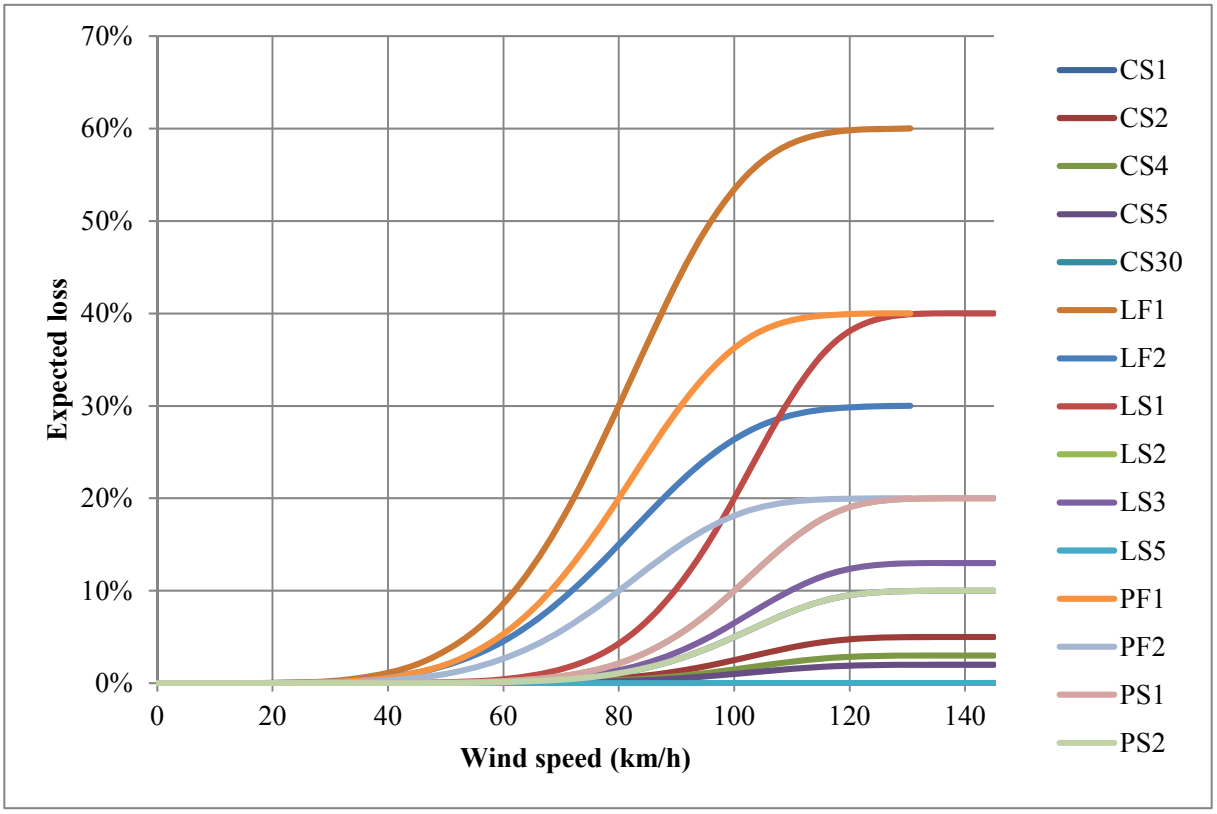


Figure A18-6. Wind vulnerability functions for the building stock of Belize City

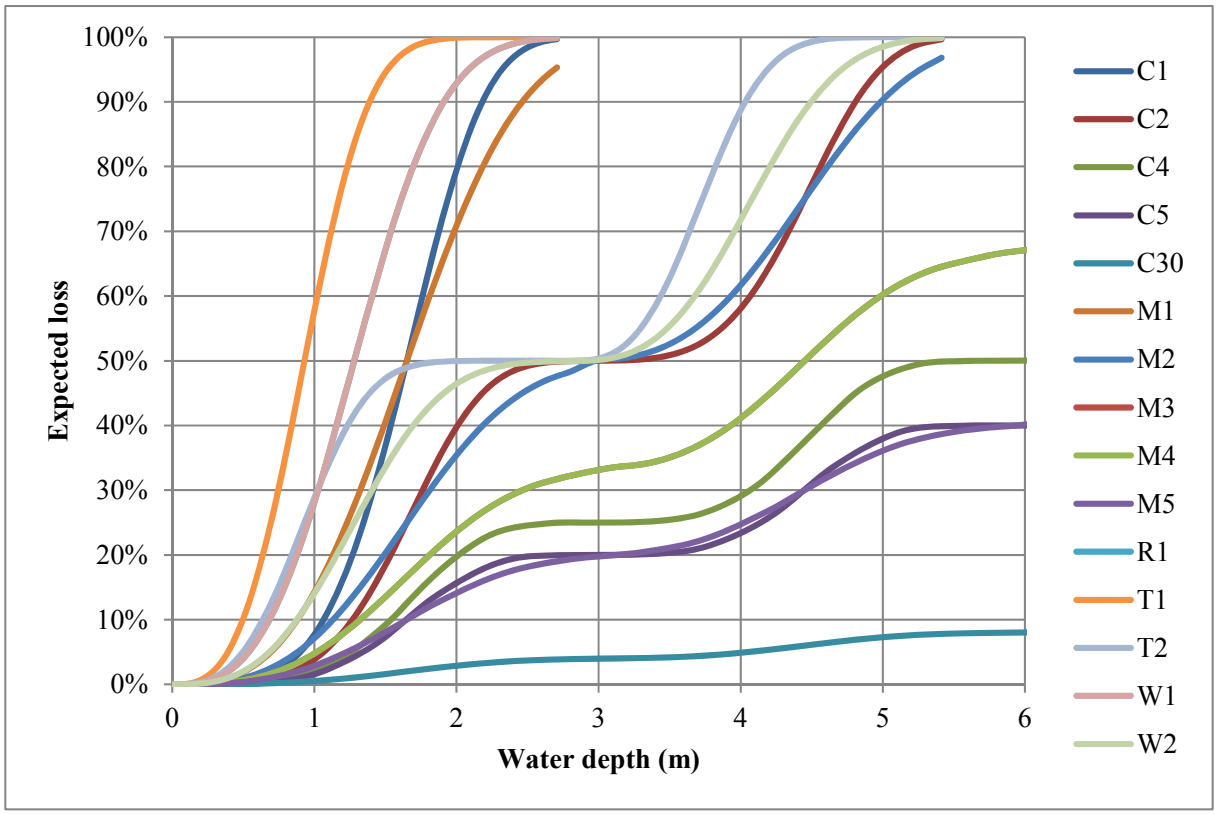


Figure A18-7. Storm surge vulnerability functions for the building stock of Belize City

Tropical Cyclonic Risk (Wind and Storm Surge)

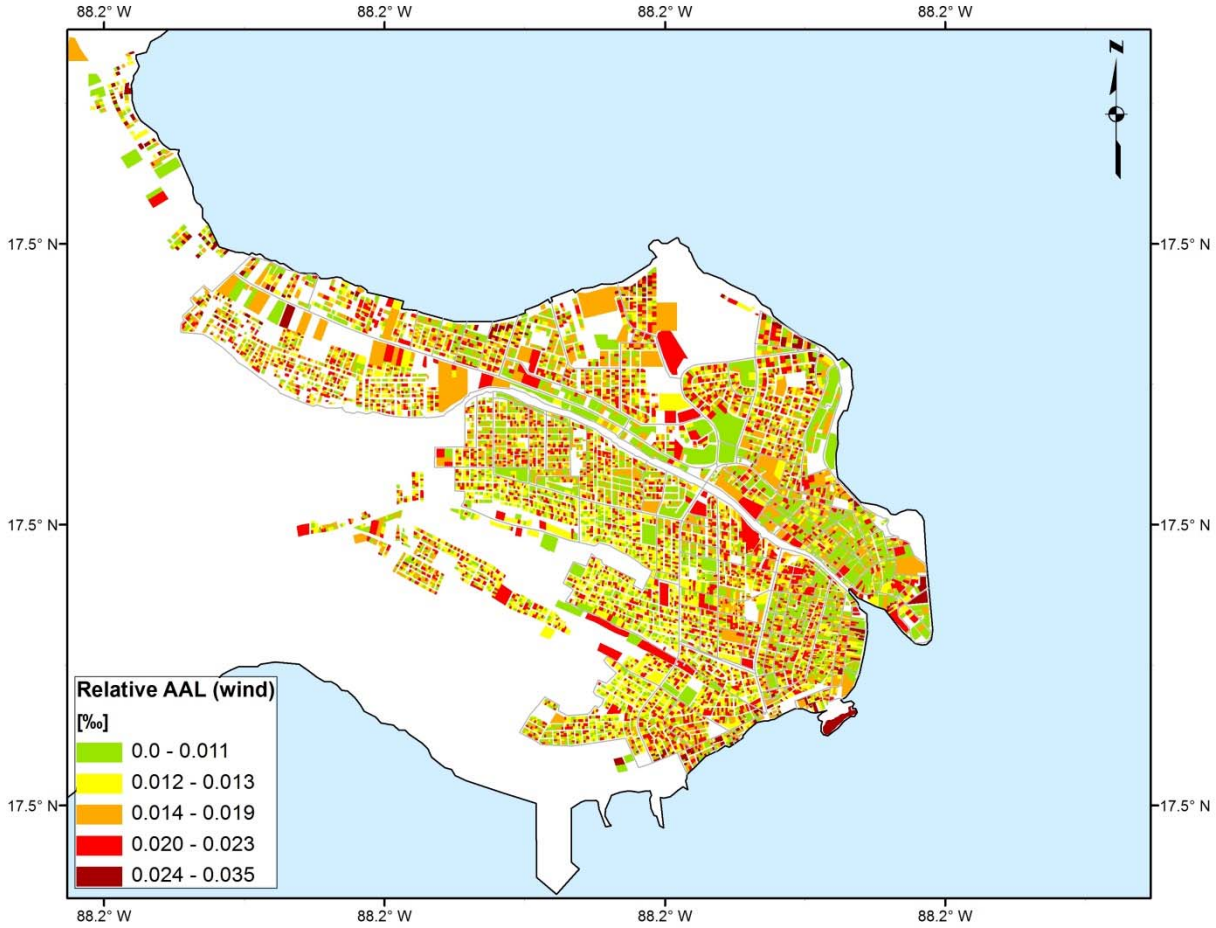


Figure A18-8. Relative AAL by dwelling in Belize City due to strong winds

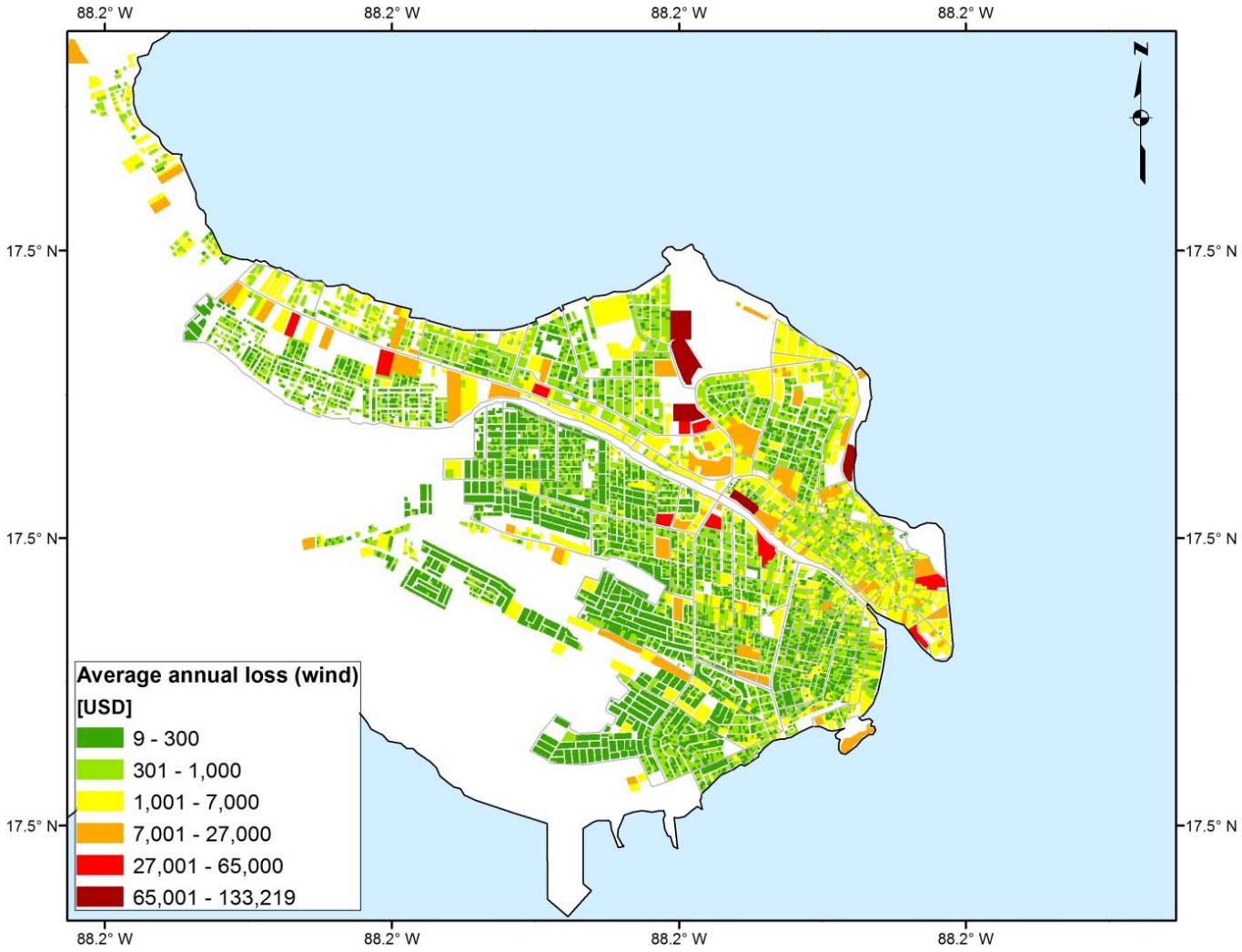


Figure A18-9. Absolute AAL by dwelling in Belize City due to strong winds

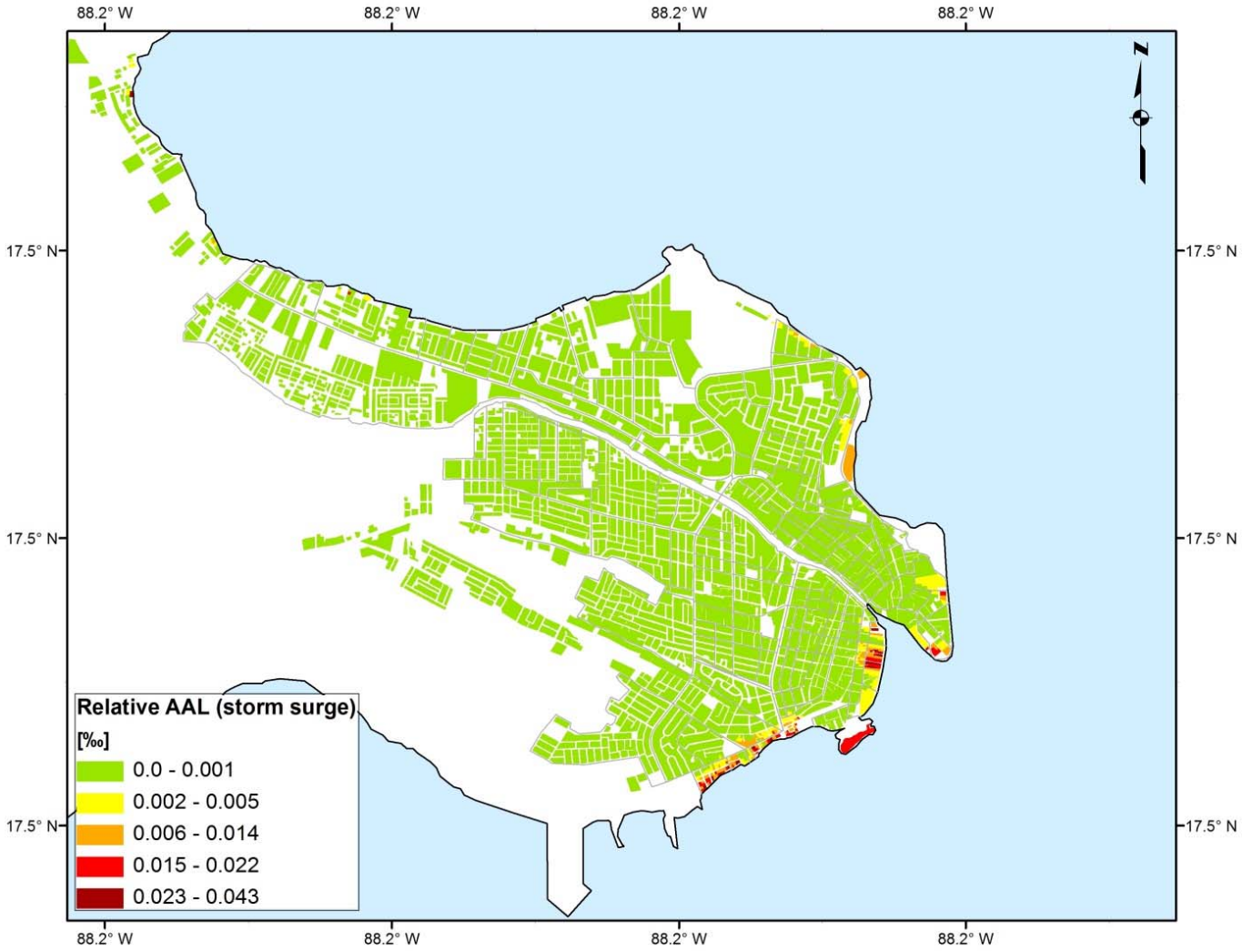


Figure A18-10. Relative AAL by dwelling in Belize City due to storm surge

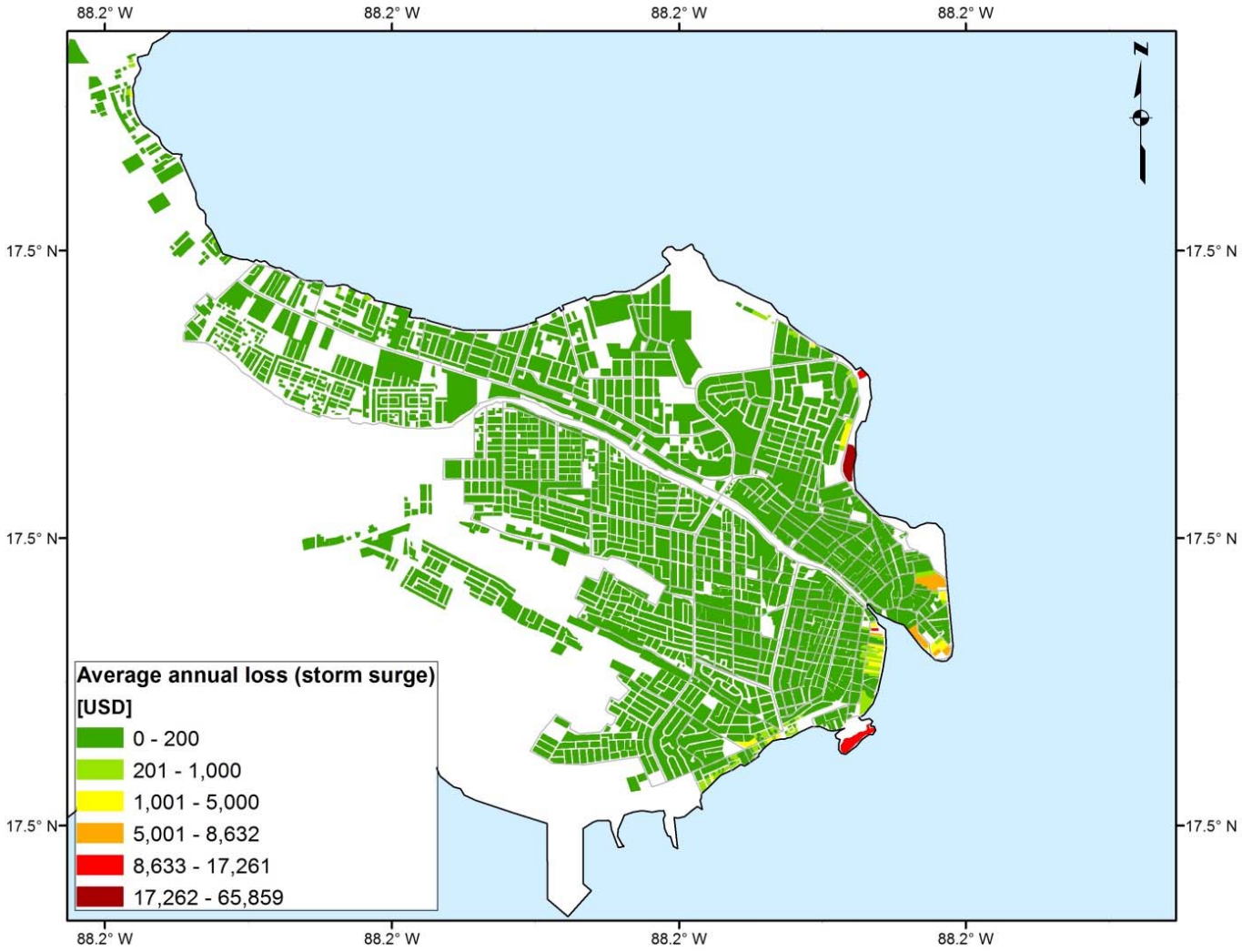


Figure A18-11. Absolute AAL by dwelling in Belize City due to storm surge

Annex 19. Exposure, Vulnerability and Risk Data for Galeras Volcano

Exposure Information

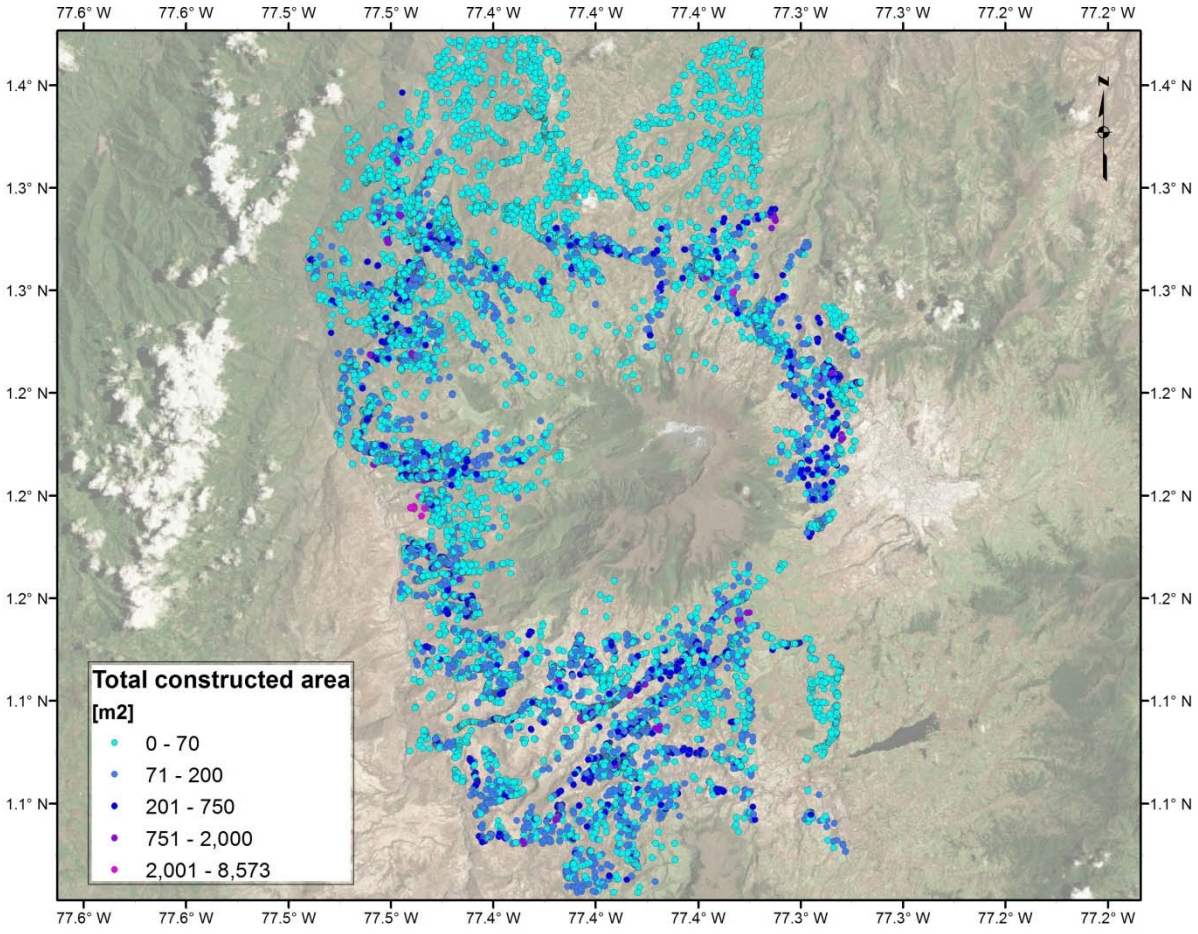


Figure A19-1. Total constructed area by dwelling

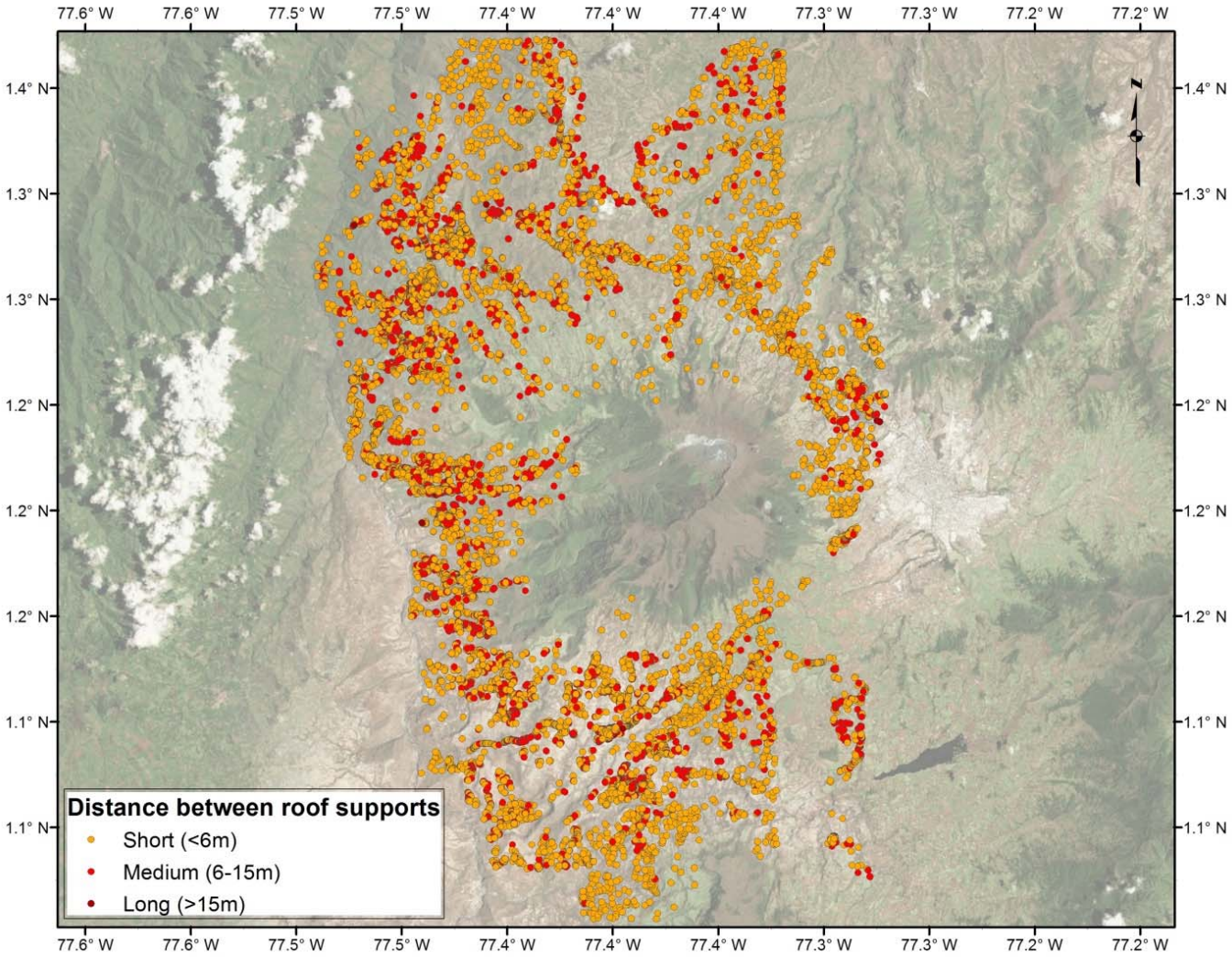


Figure A19-2. Distance between roof supports by dwelling

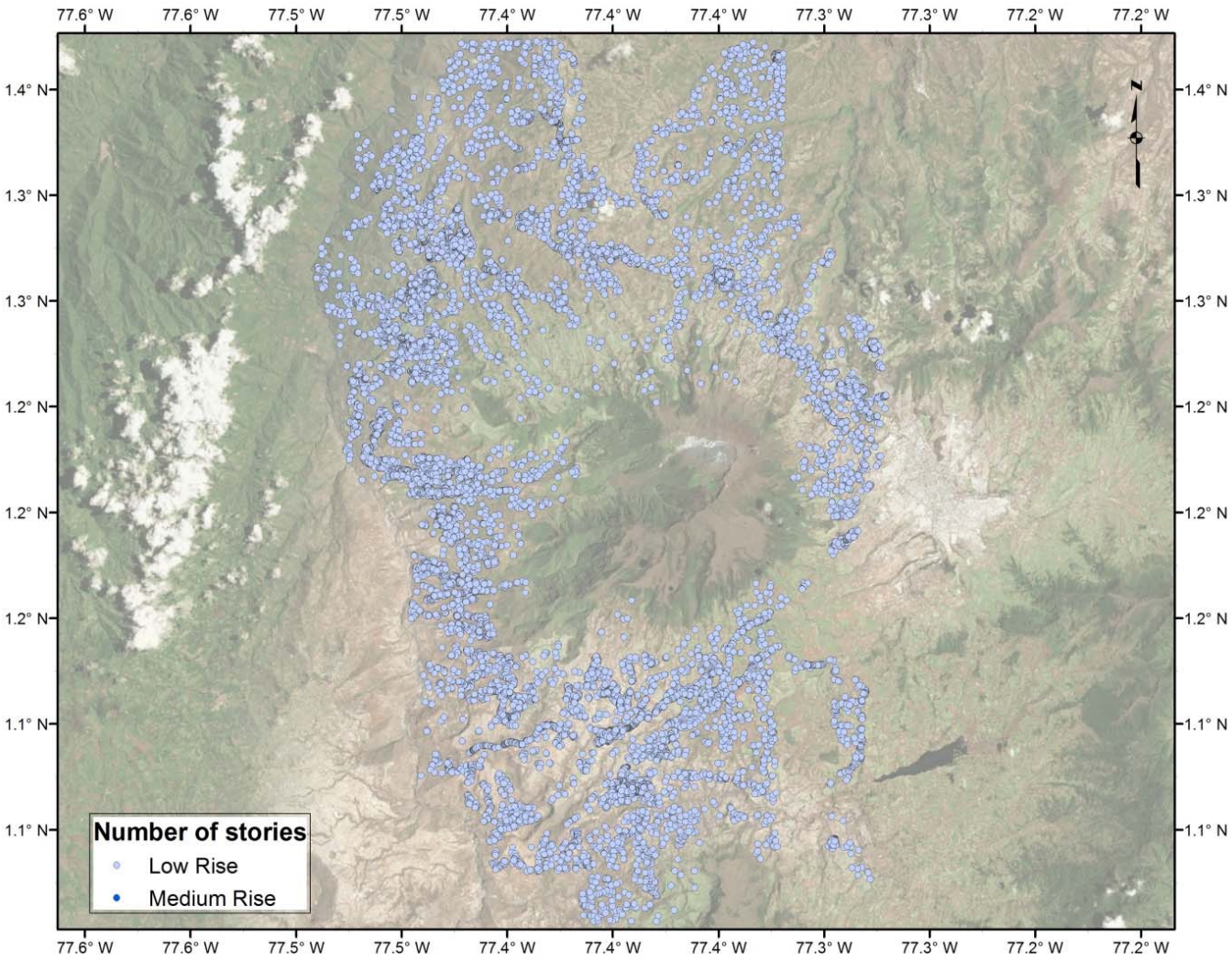


Figure A19-3. Number of stories category by dwelling

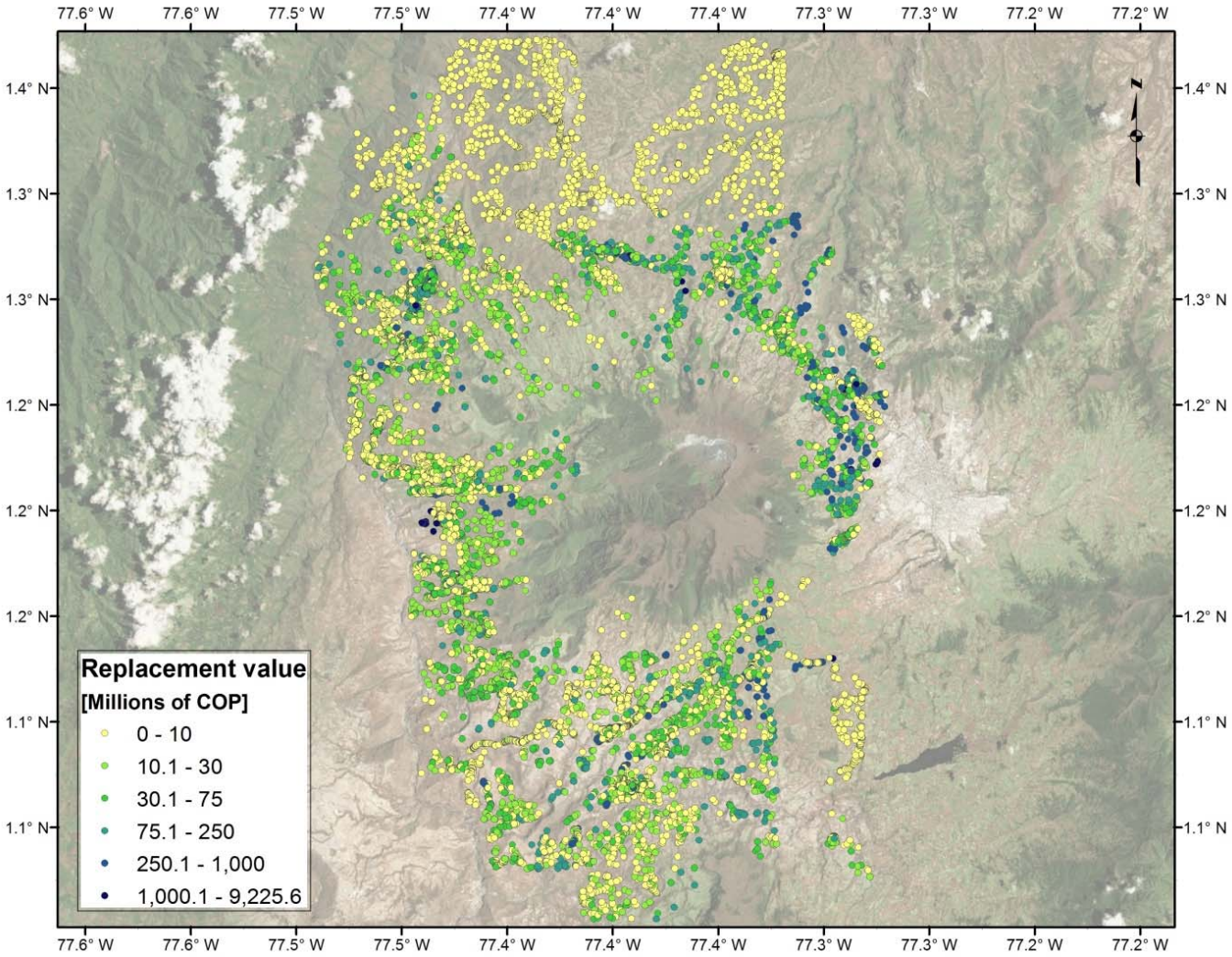


Figure A19-4. Replacement cost by dwelling

Volcanic Risk

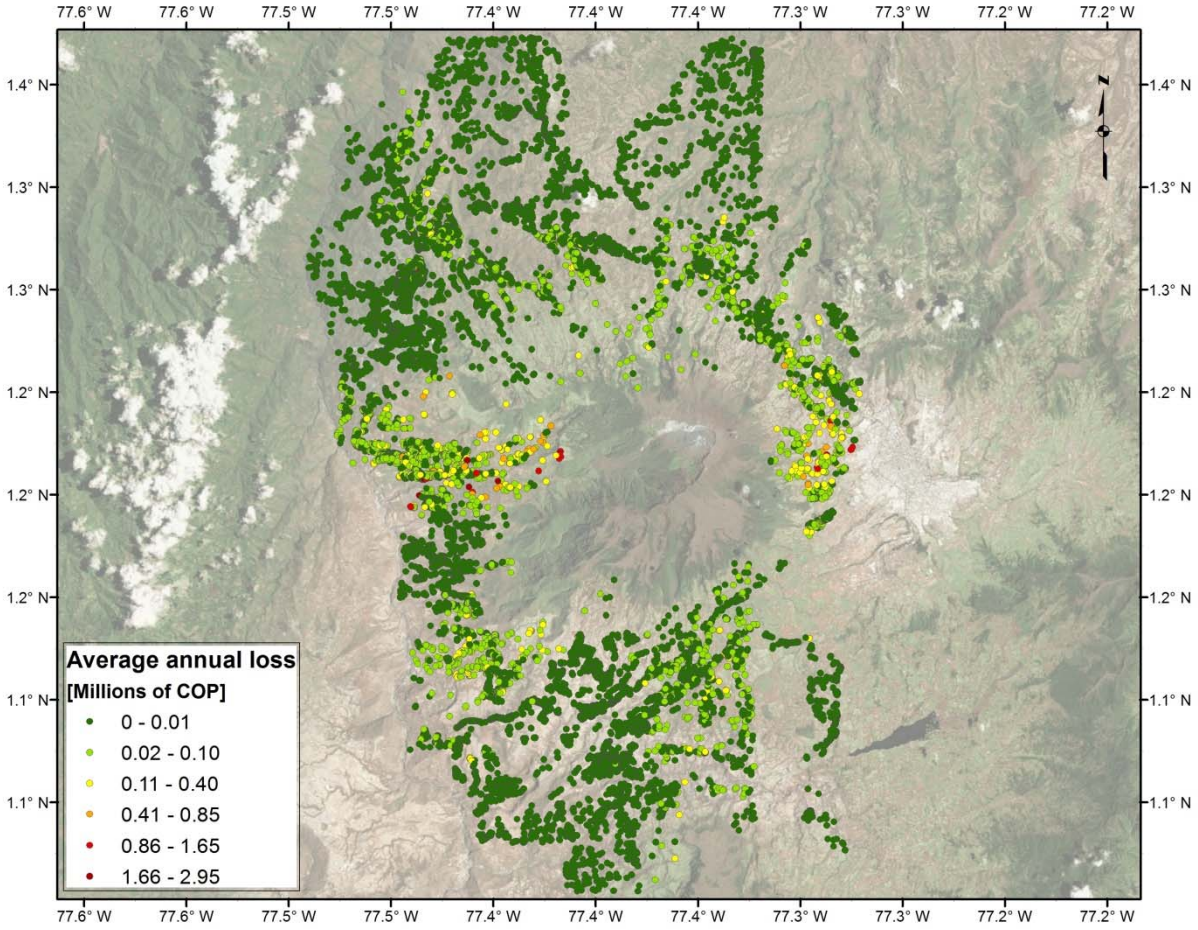


Figure A19-5. Absolute AAL by dwelling

Annex 20. Exposure and Risk Data for Lorca

Exposure Information

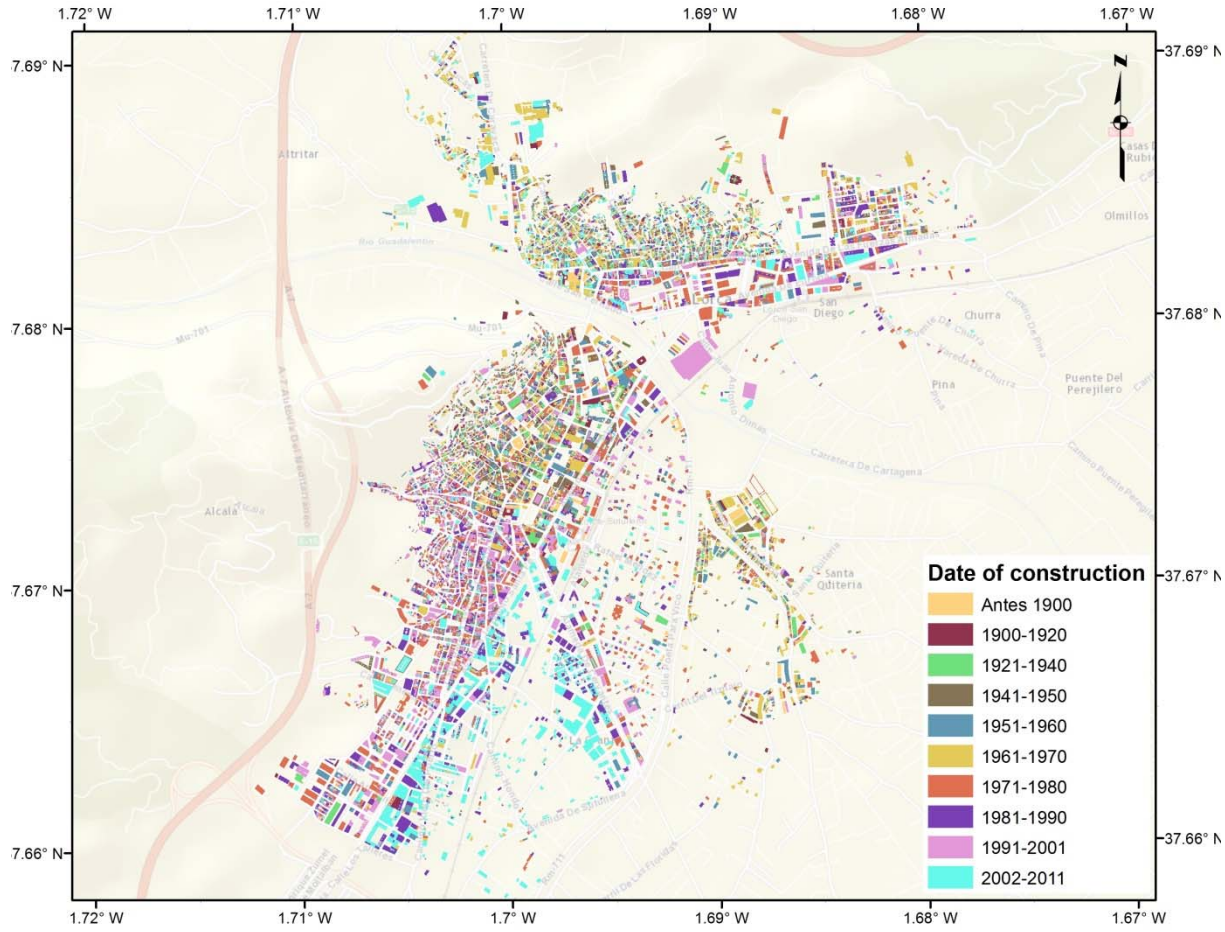


Figure A20-1. Age of construction by dwelling in Lorca

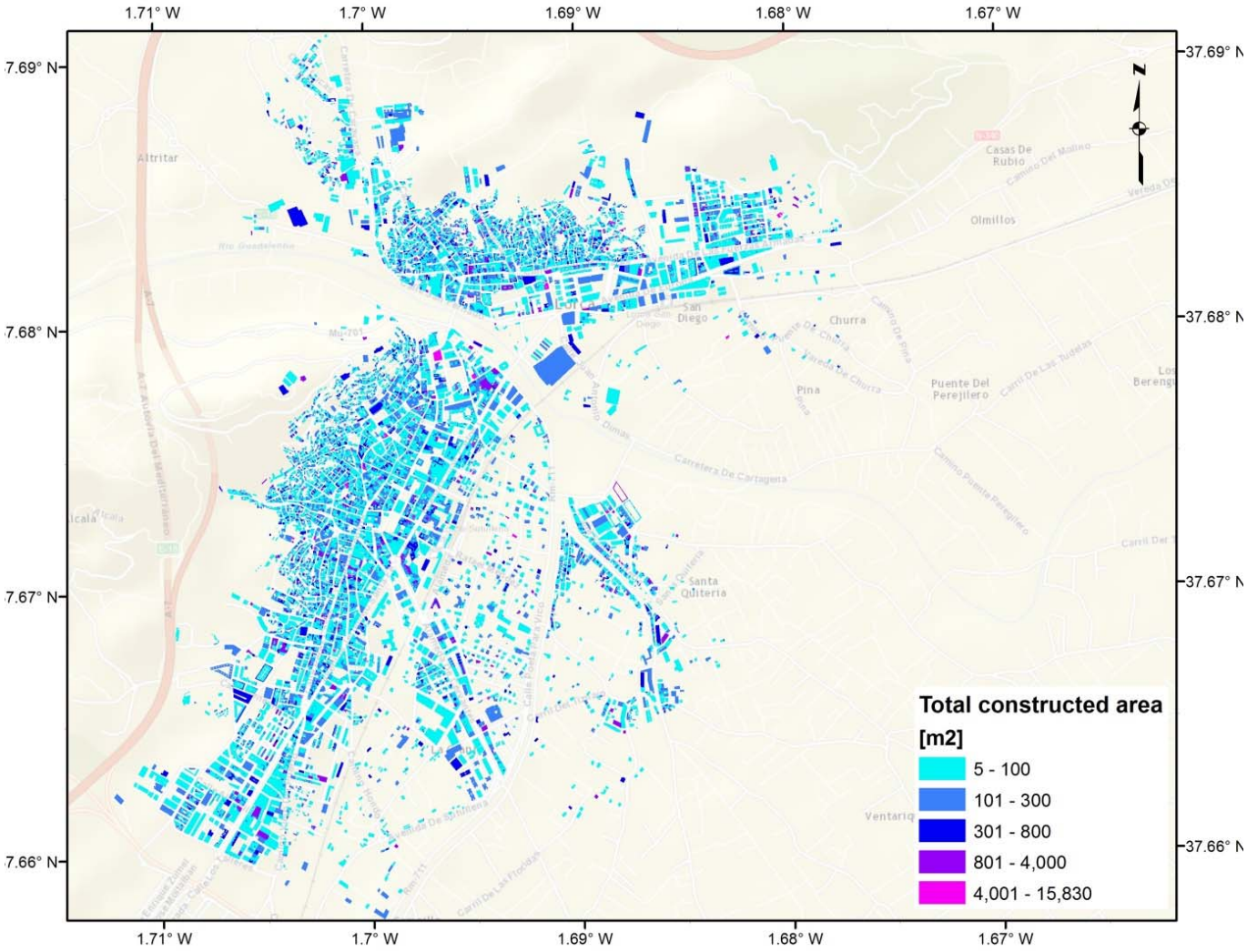


Figure A20-2. Total constructed area by dwelling in Lorca (m^2)

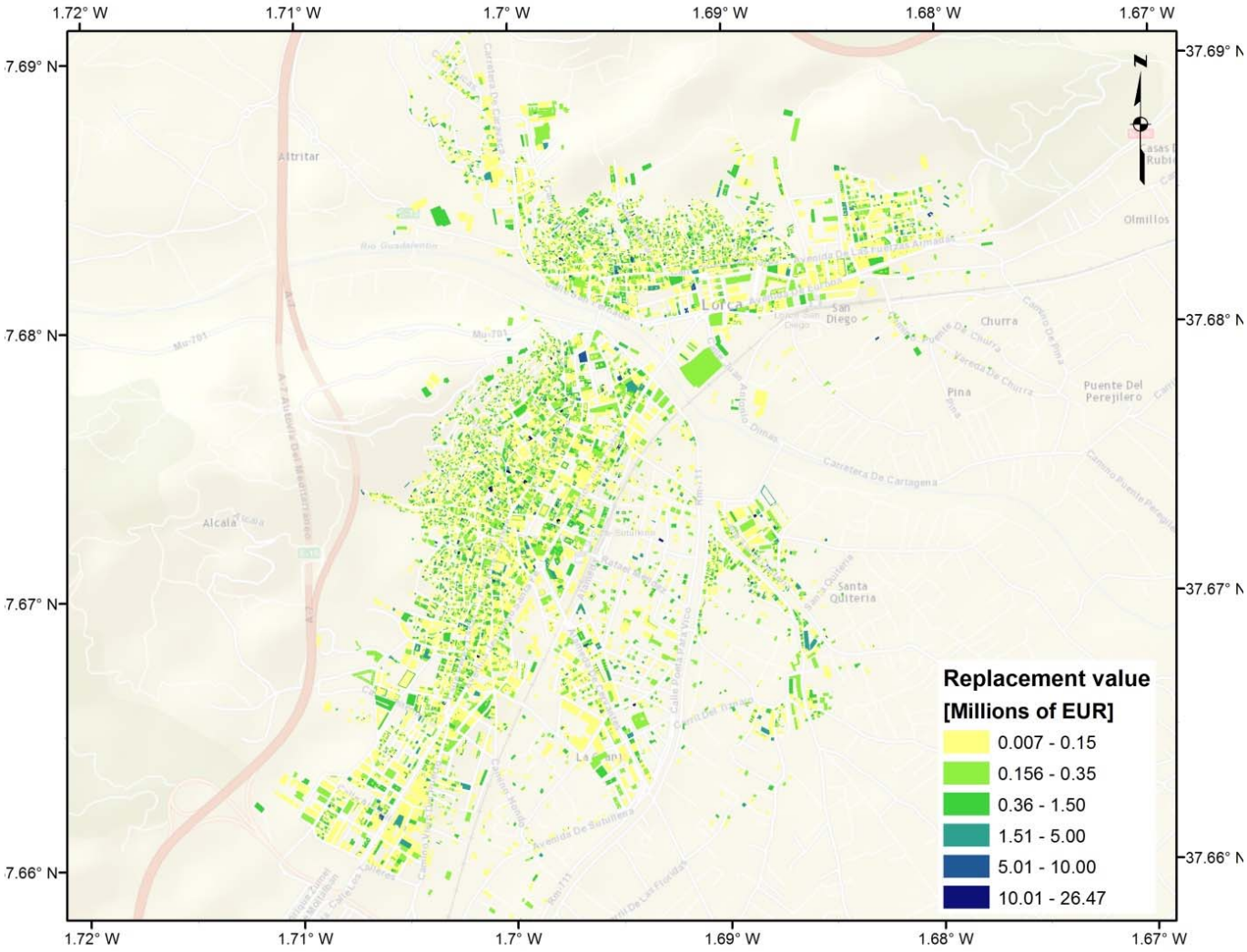


Figure A20-3. Replacement cost by dwelling in Lorca

Risk Results

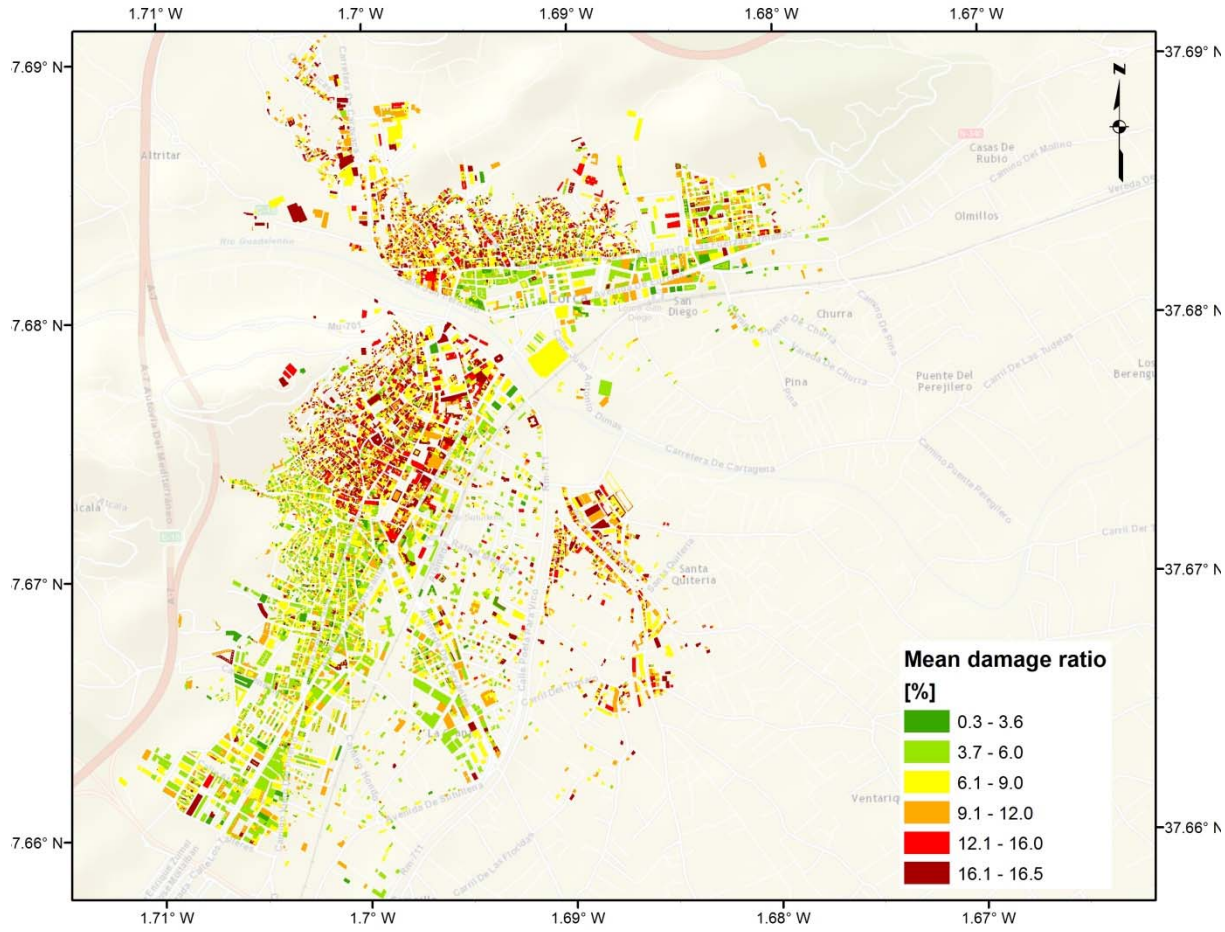


Figure A20-4. Mean Damage Ratio by dwelling in Lorca

Annex 21. Exposure, Vulnerability and Risk Data for Manizales

Landslide Hazard and Risk Assessment

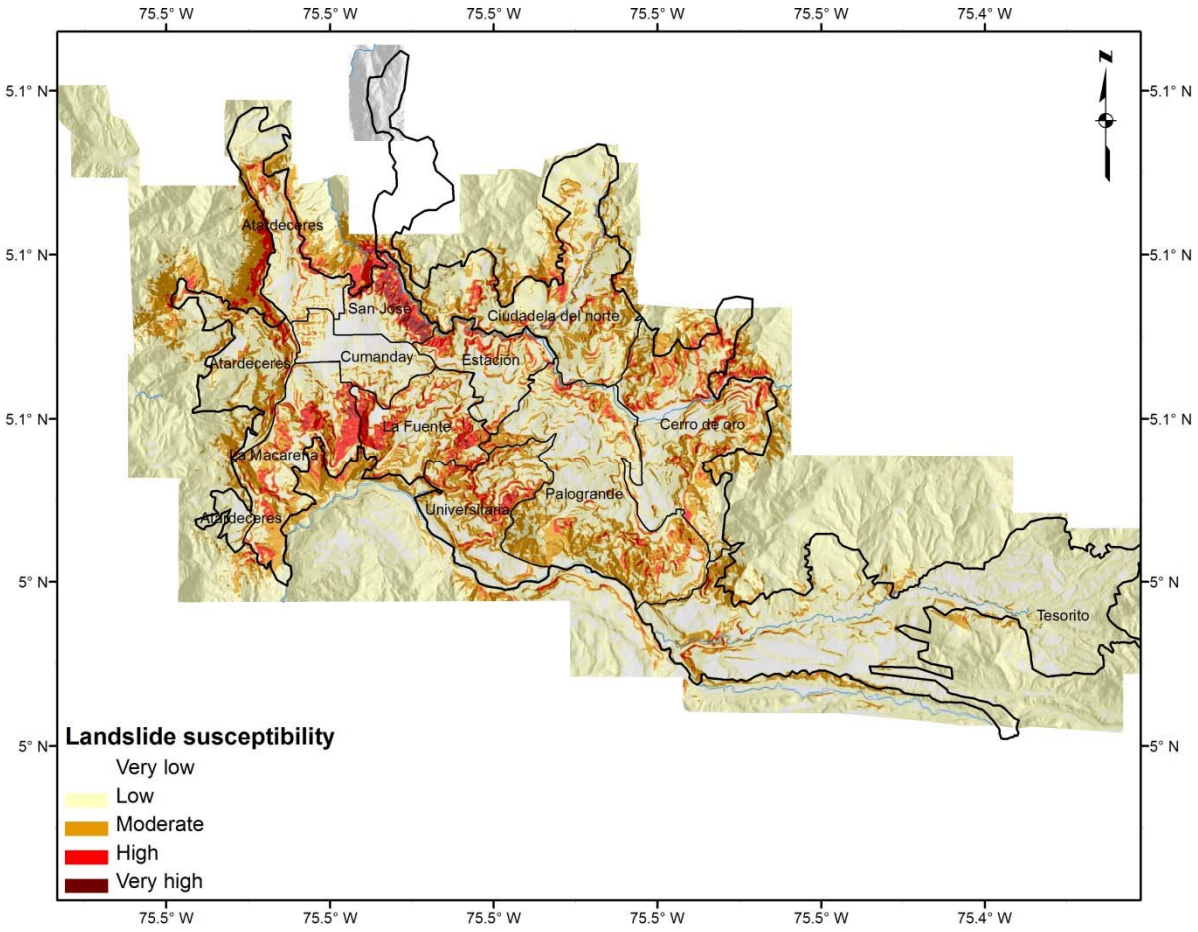


Figure A21-1. Landslide susceptibility in Manizales by dwelling

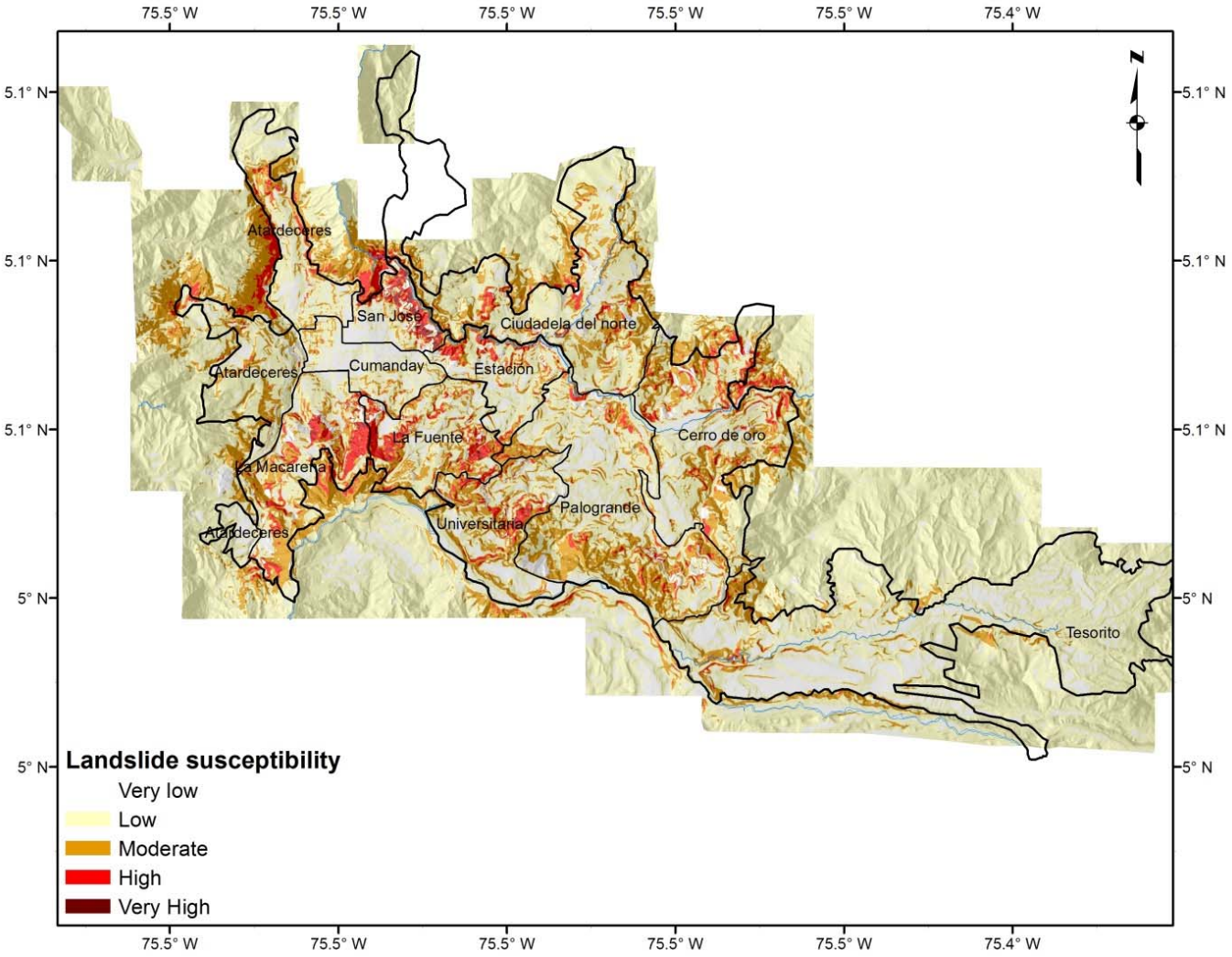


Figure A21-2. Landslide susceptibility in Manizales by polygon

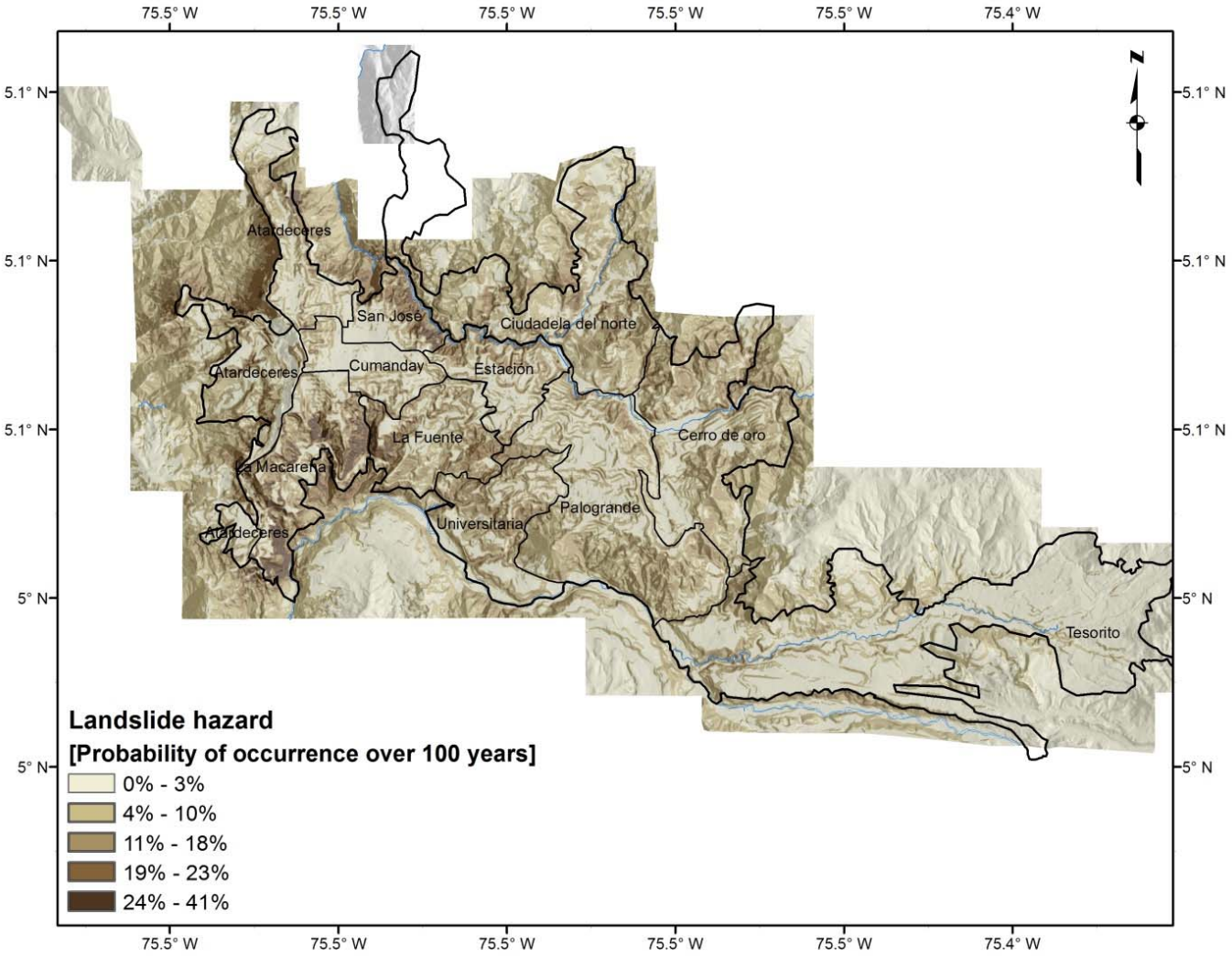


Figure A21-3. Landslide hazard map for Manizales

Exposure Information

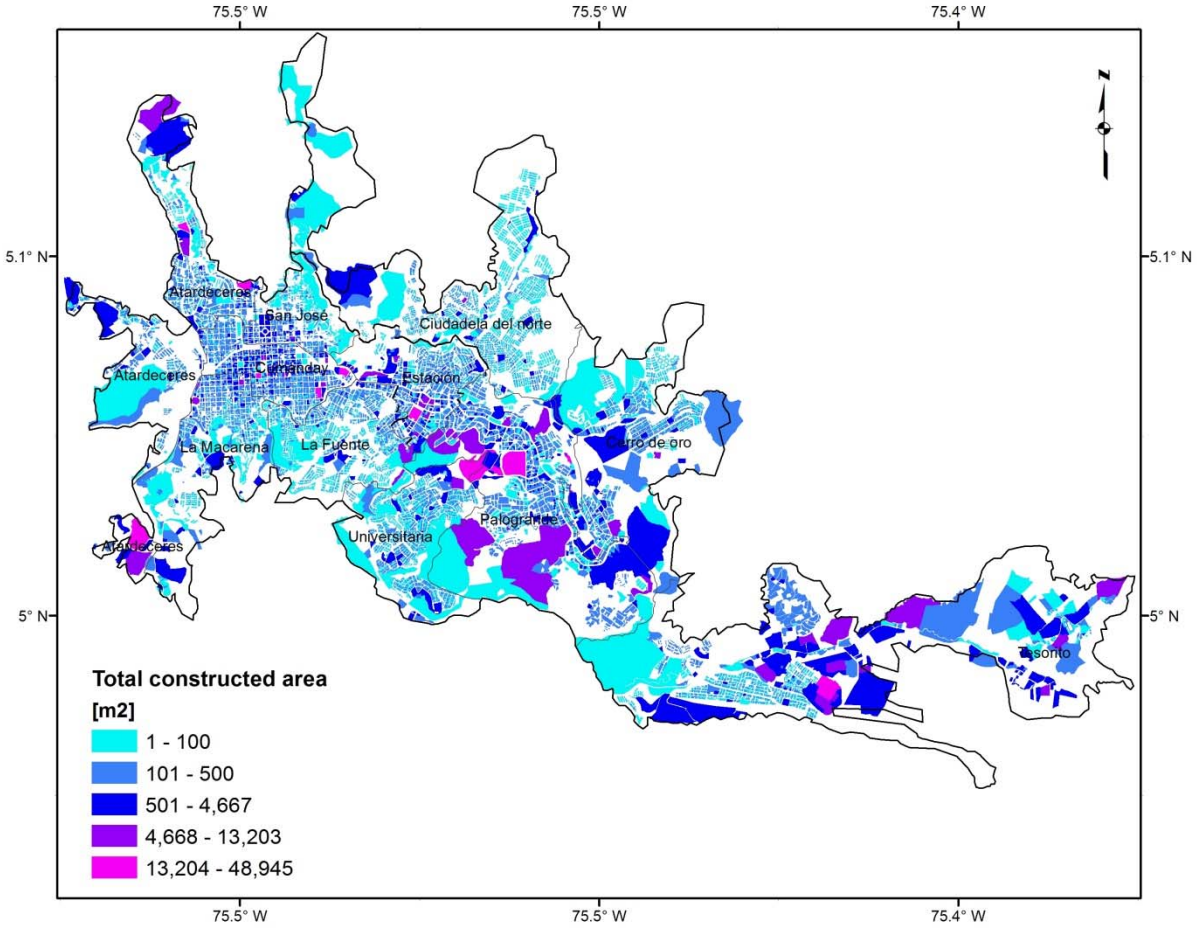


Figure A21-4. Total constructed area by dwelling

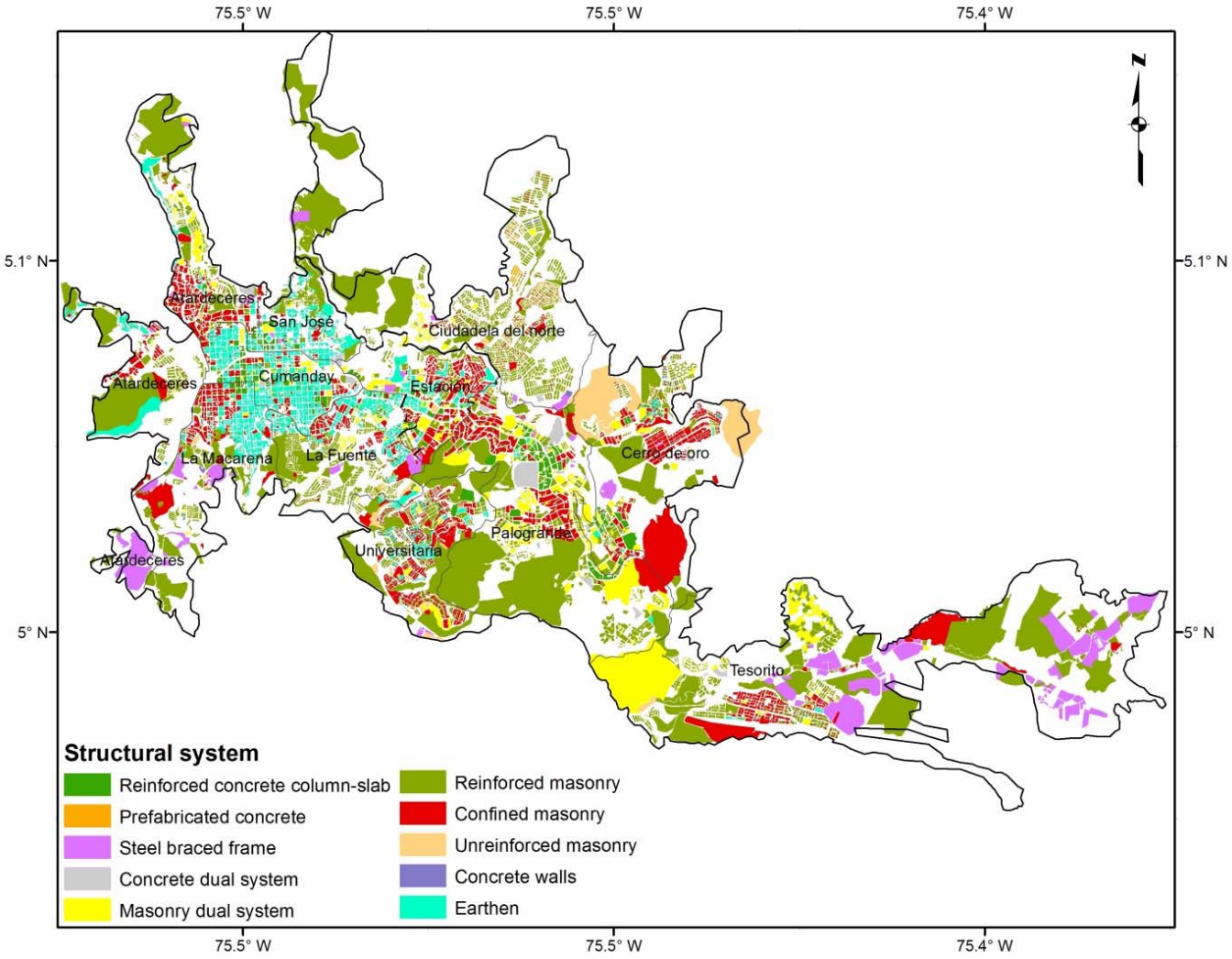


Figure A21-5. Building class by dwelling

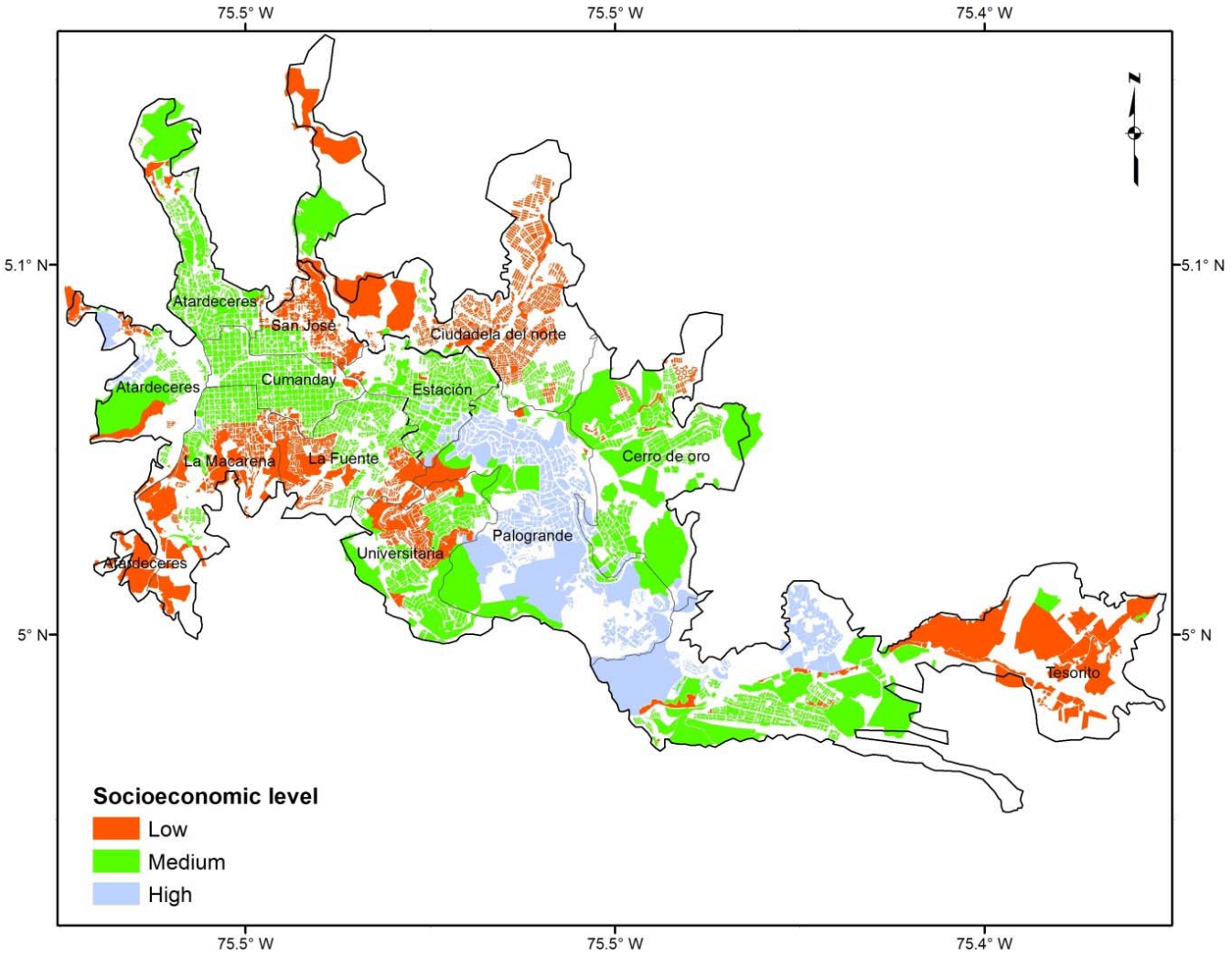


Figure A21-6. Socioeconomic level by dwelling

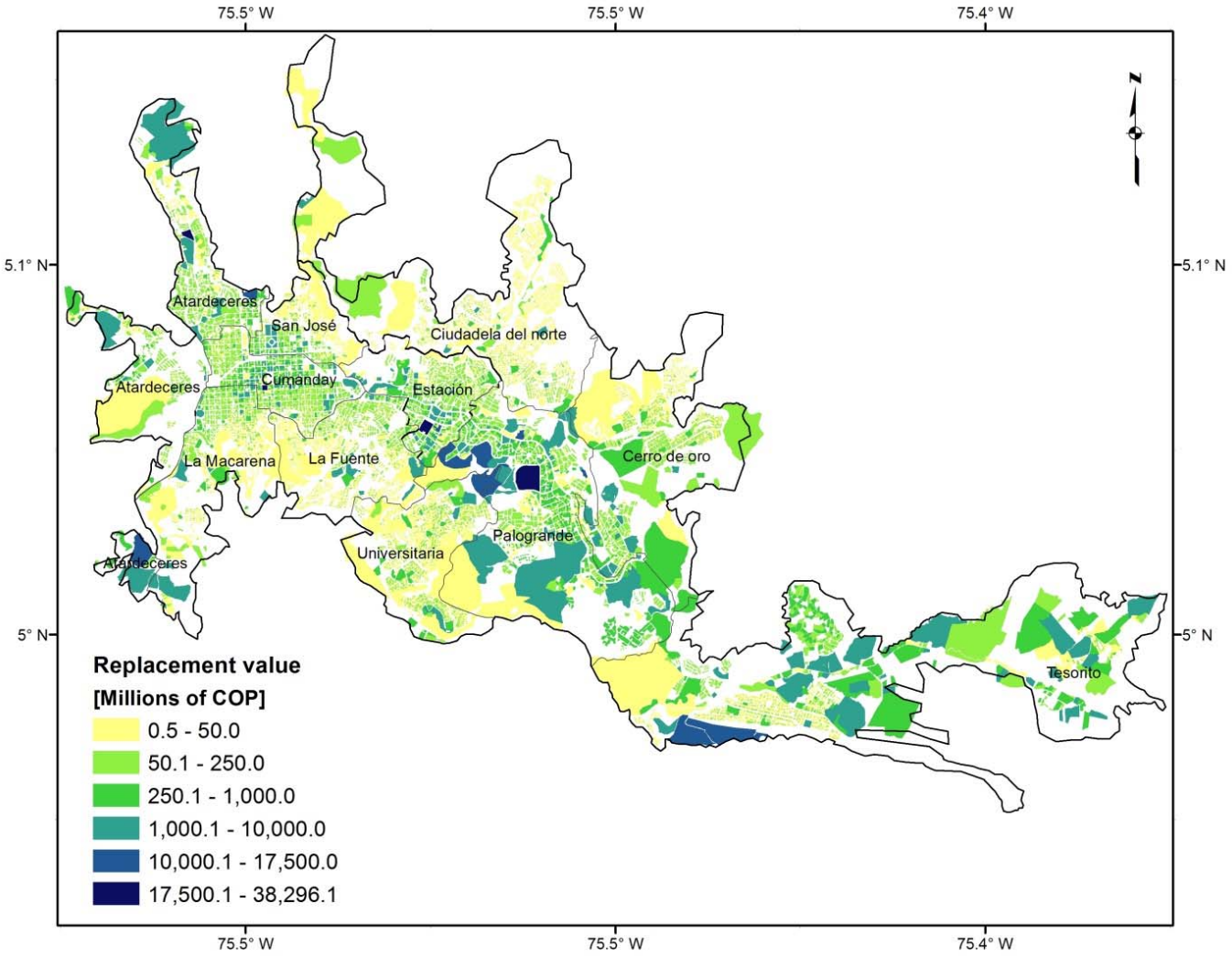


Figure A21-7. Exposed value by dwelling (COP)

Vulnerability Functions

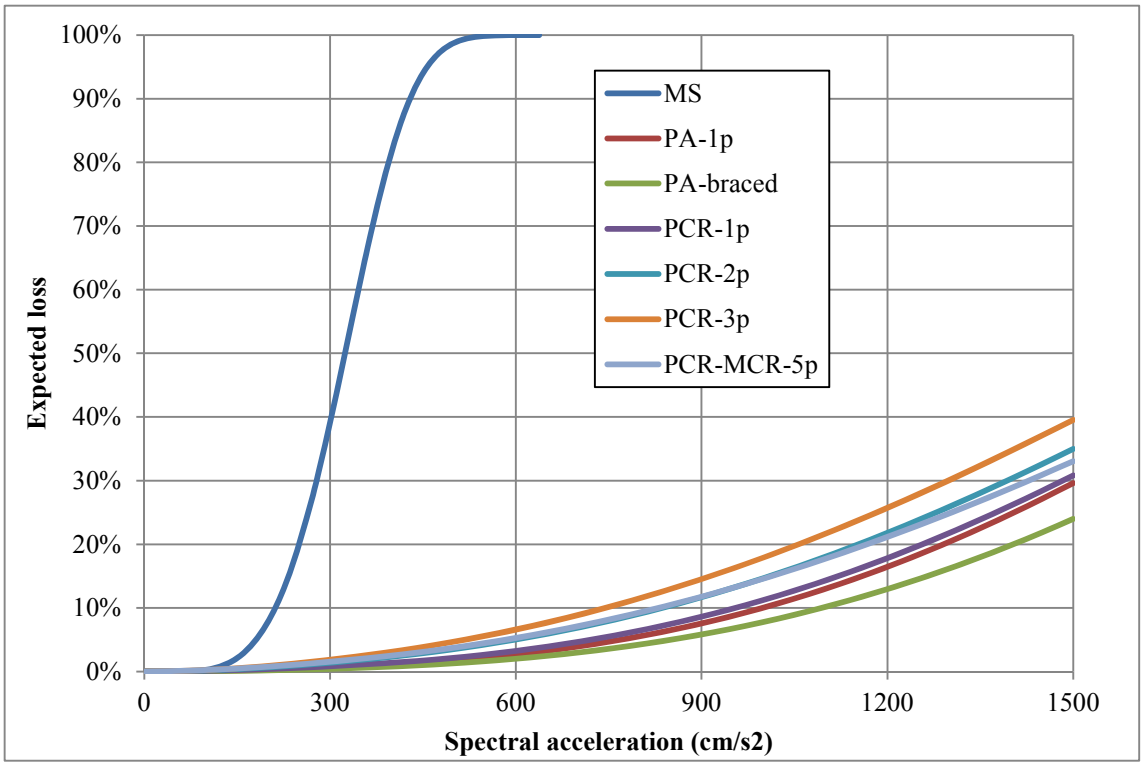


Figure A21-8. Vulnerability functions for buildings in Manizales

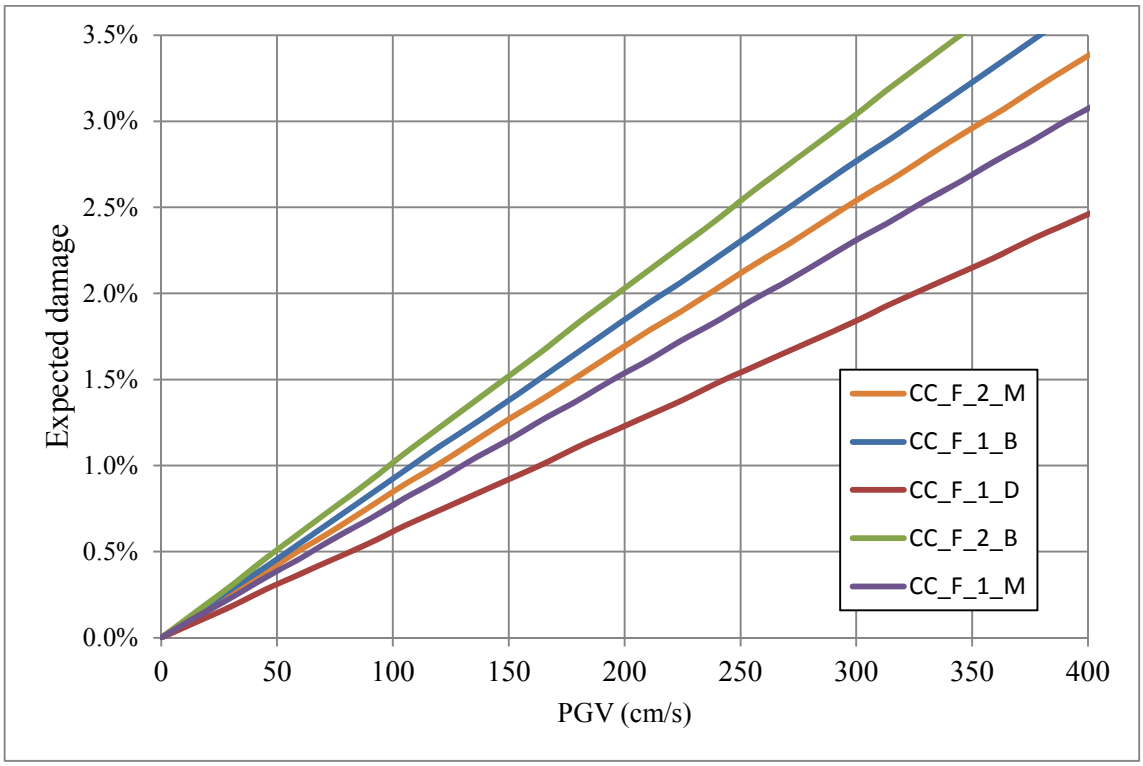


Figure A21-9. Vulnerability functions for concrete pipelines in Manizales considering different soil conditions

Seismic Risk Results

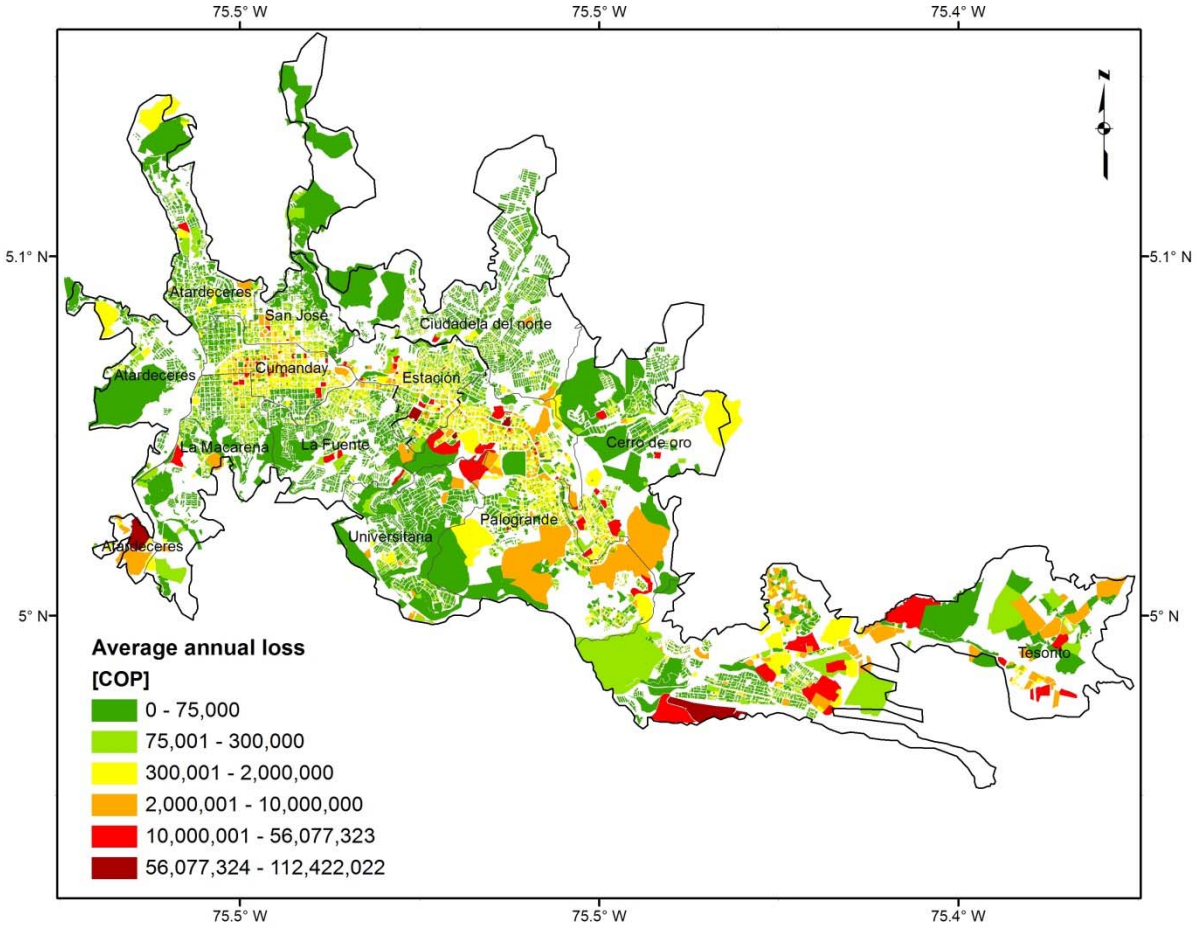
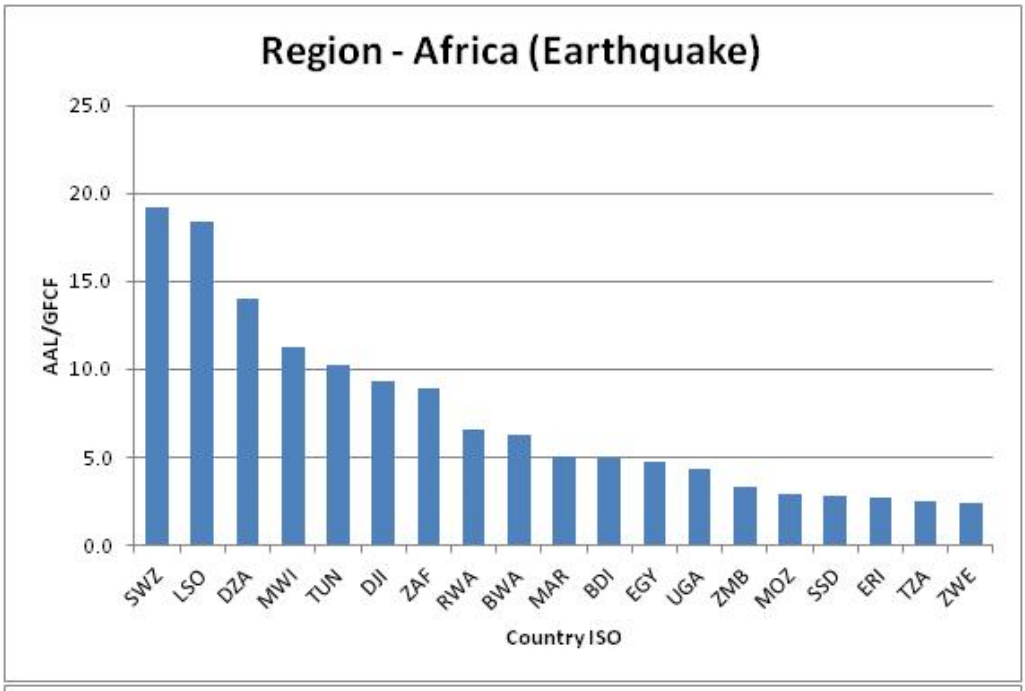


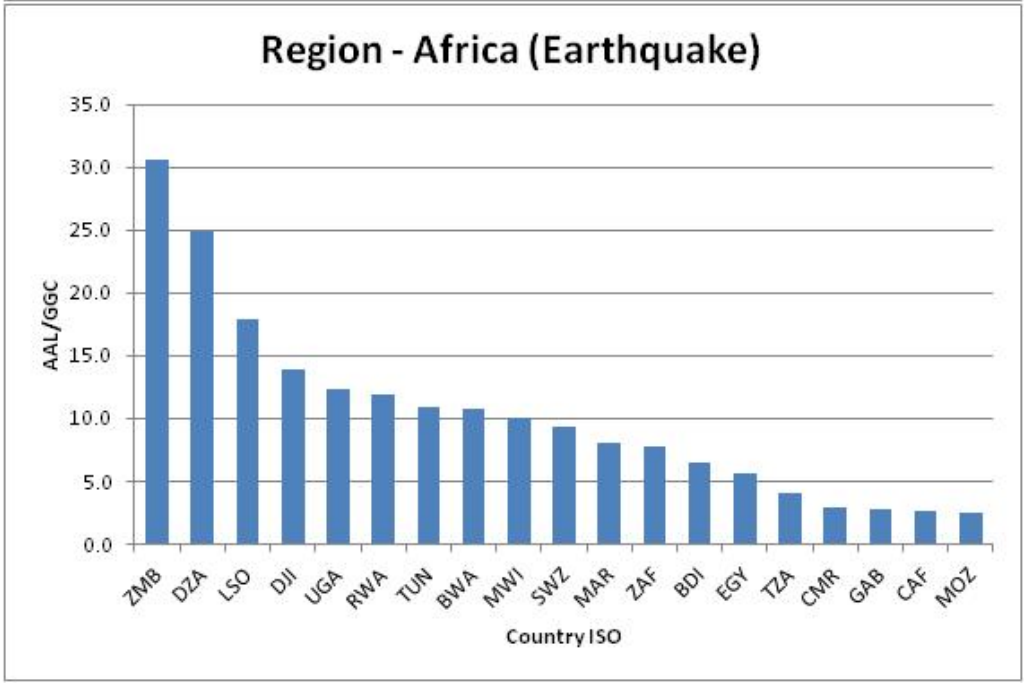
Figure A21-10. Absolute earthquake AAL by dwelling in Manizales

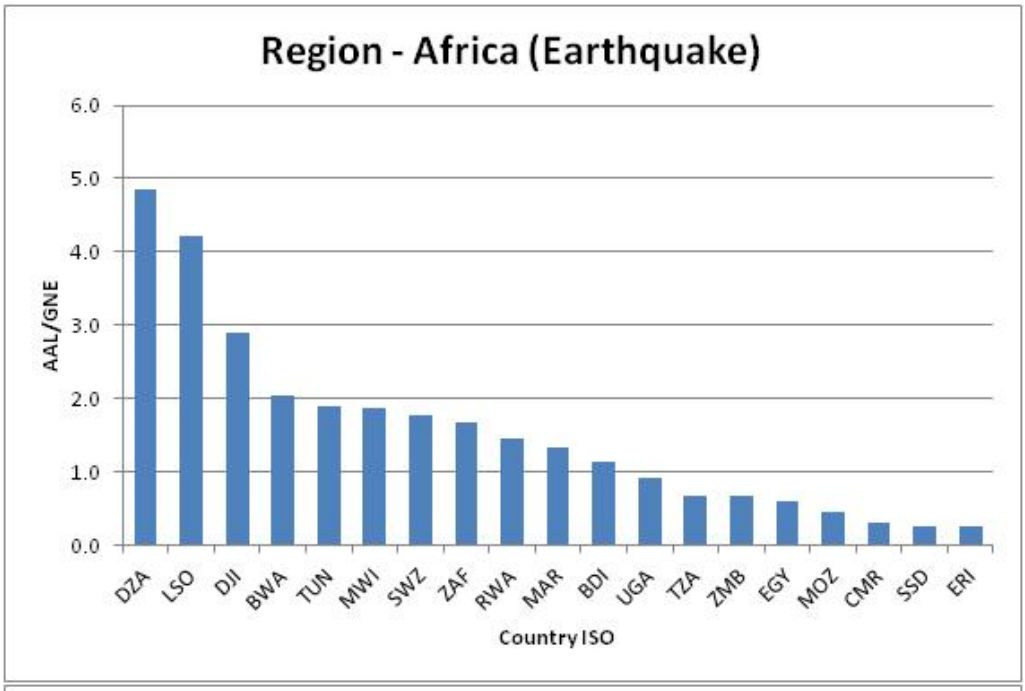
Annex 22. Rankings of Risk Indicators by Region, Eeconomy and SIDS

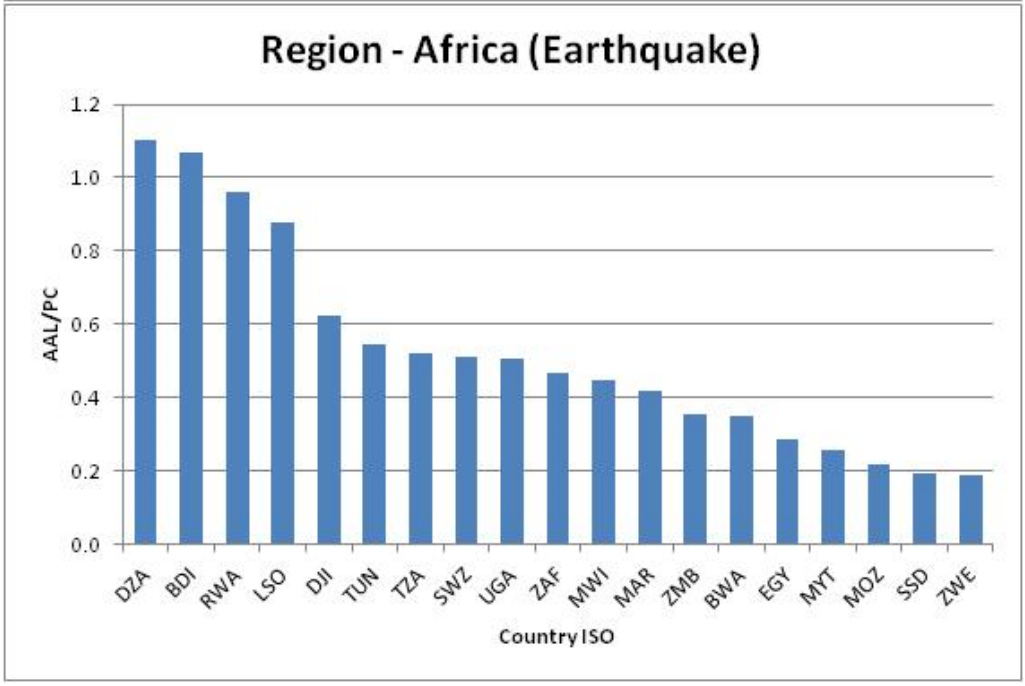
Rankings by Region

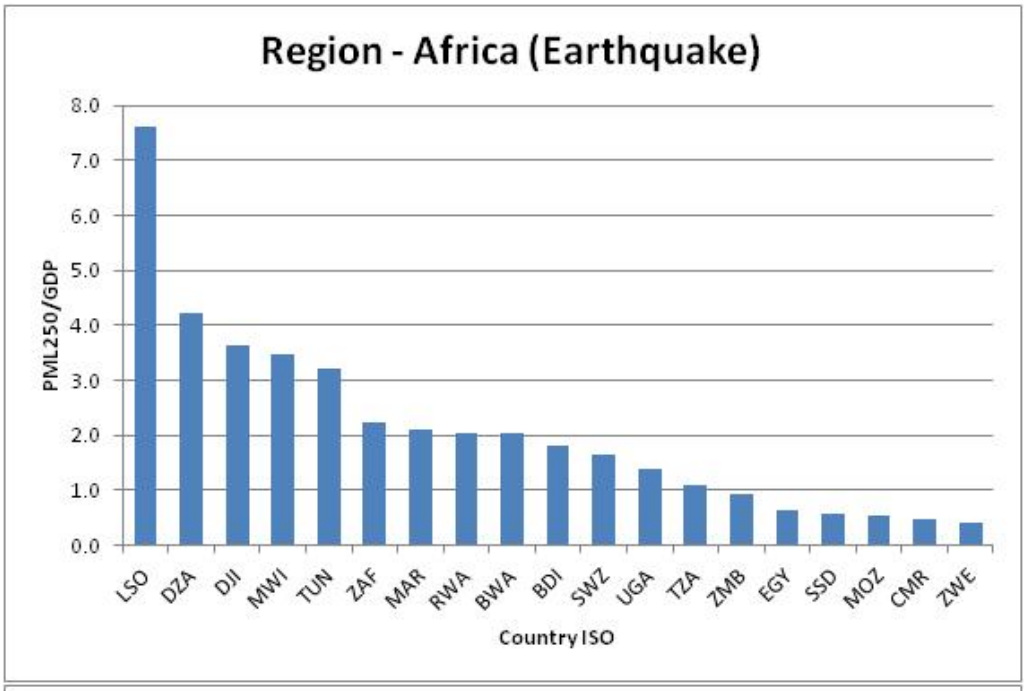
Africa

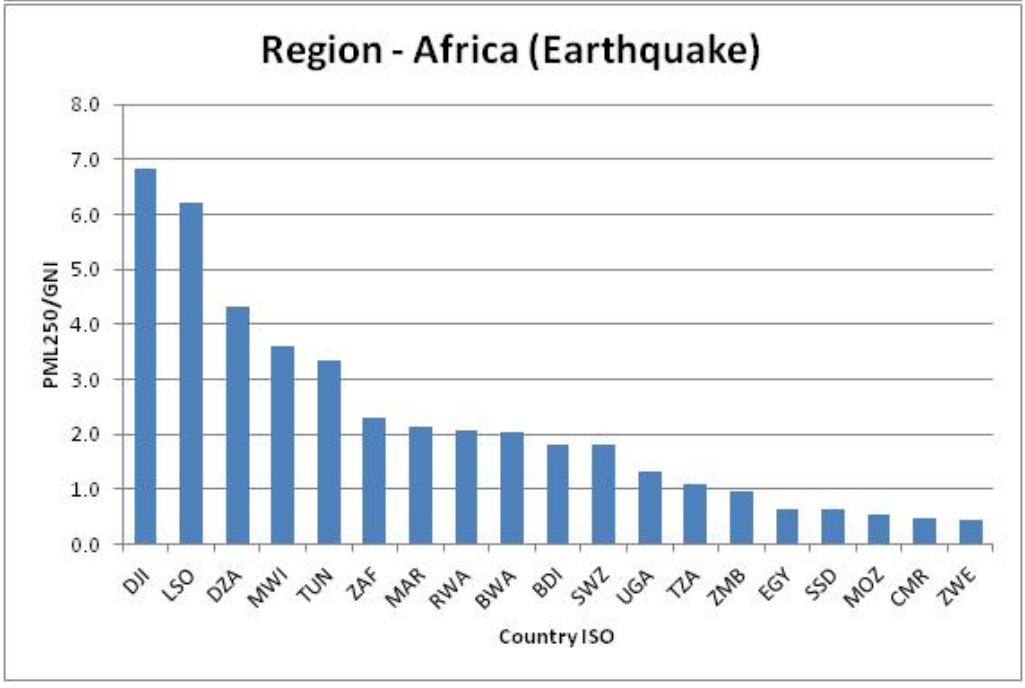

Region - Africa (Earthquake)
AAL/GFCF
25.0
20.0
15.0
10.0
5.0
0.0
SWZ
LSO
DZA
MWI
TUN
DJI
ZAF
RWA
BWA
MAR
BDI
EGY
UGA
ZMB
MOZ
SSD
ERI
TZA
ZWE
Country ISO

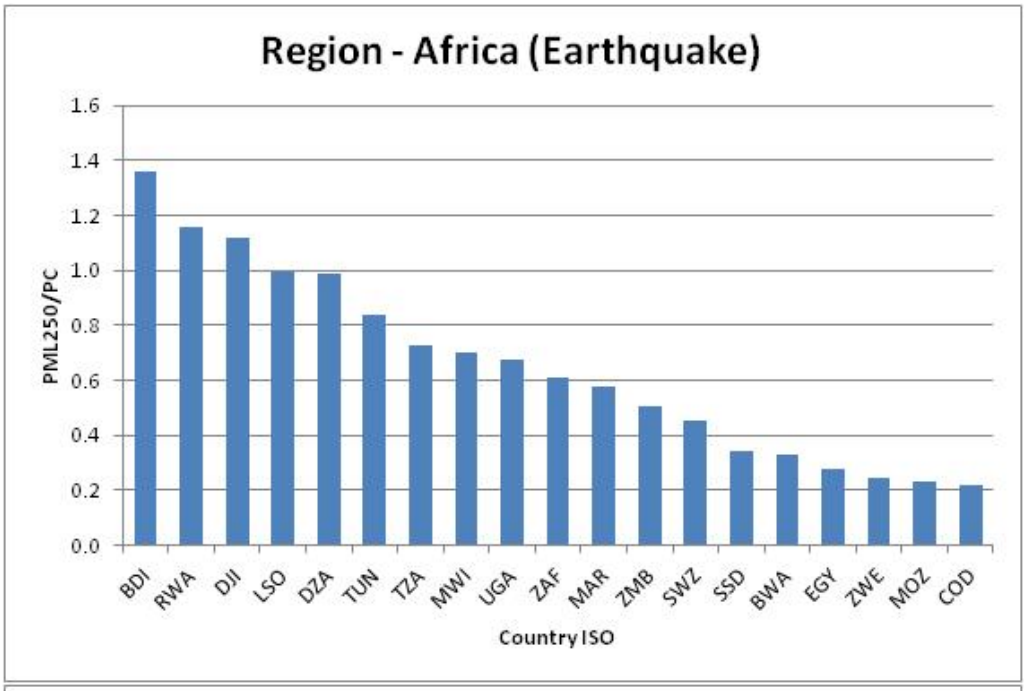

Region - Africa (Earthquake)
AAL/GGC
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
ZMB
DZA
LSO
DJI
UGA
RWA
TUN
BWA
MWI
SWZ
MAR
ZAF
BDI
EGY
TZA
CMR
GAB
CAF
MOZ
Country ISO

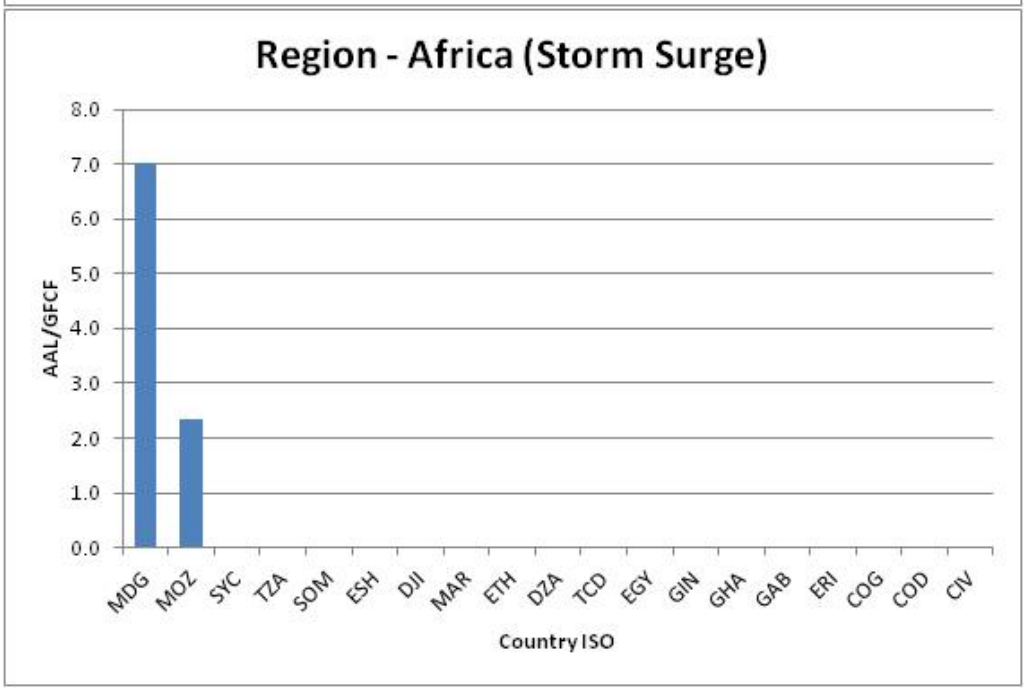

Region - Africa (Earthquake)
AAL/GNE
6.0
5.0
4.0
3.0
2.0
1.0
0.0
DZA
LSO
DJI
BWA
TUN
MWI
SWZ
ZAF
RWA
MAR
BDI
UGA
TZA
ZMB
EGY
MOZ
CMR
SSD
ERI
Country ISO

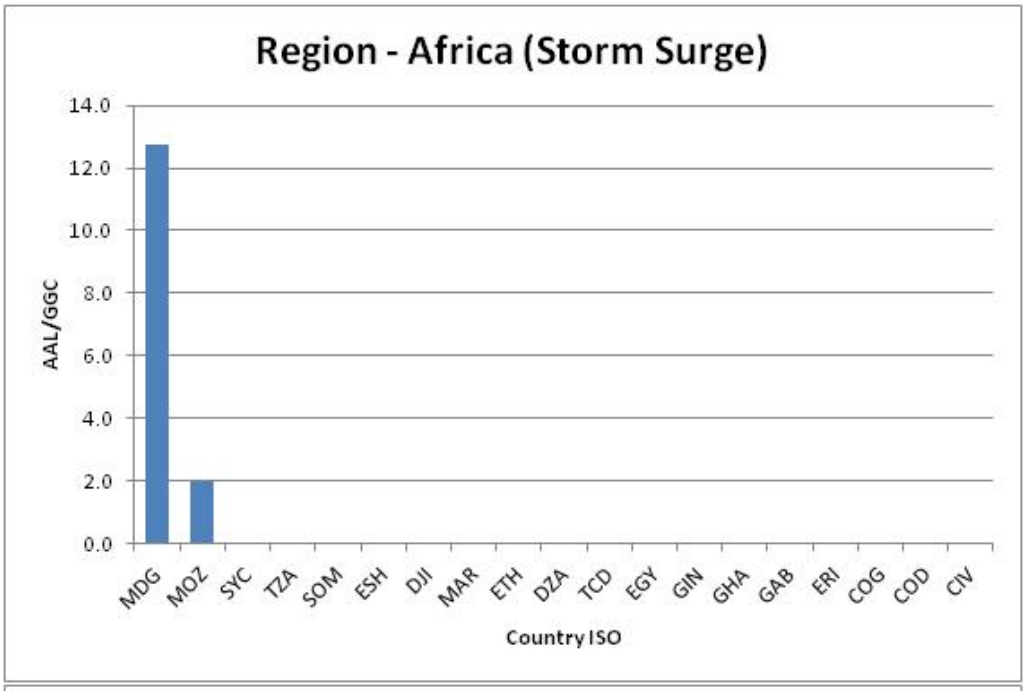

Region - Africa (Earthquake)
AAL/PC
1.2
1.0
0.8
0.6
0.4
0.2
0.0
DZA
BDI
RWA
LSO
DJI
TUN
TZA
SWZ
UGA
ZAF
MWI
MAR
ZMB
BWA
EGY
MYT
MOZ
SSD
ZWE
Country ISO

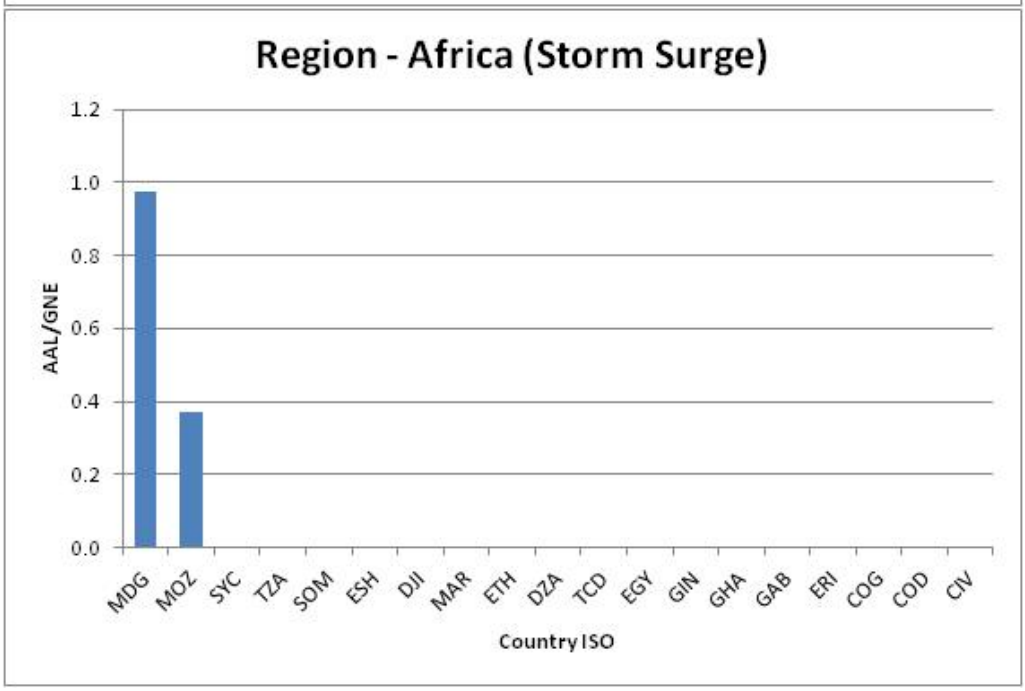

Region - Africa (Earthquake)
PML250/GDP
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
LSO
DZA
DJI
MWI
TUN
ZAF
MAR
RWA
BWA
BDI
SWZ
UGA
TZA
ZMB
EGY
SSD
MOZ
CMR
ZWE
Country ISO

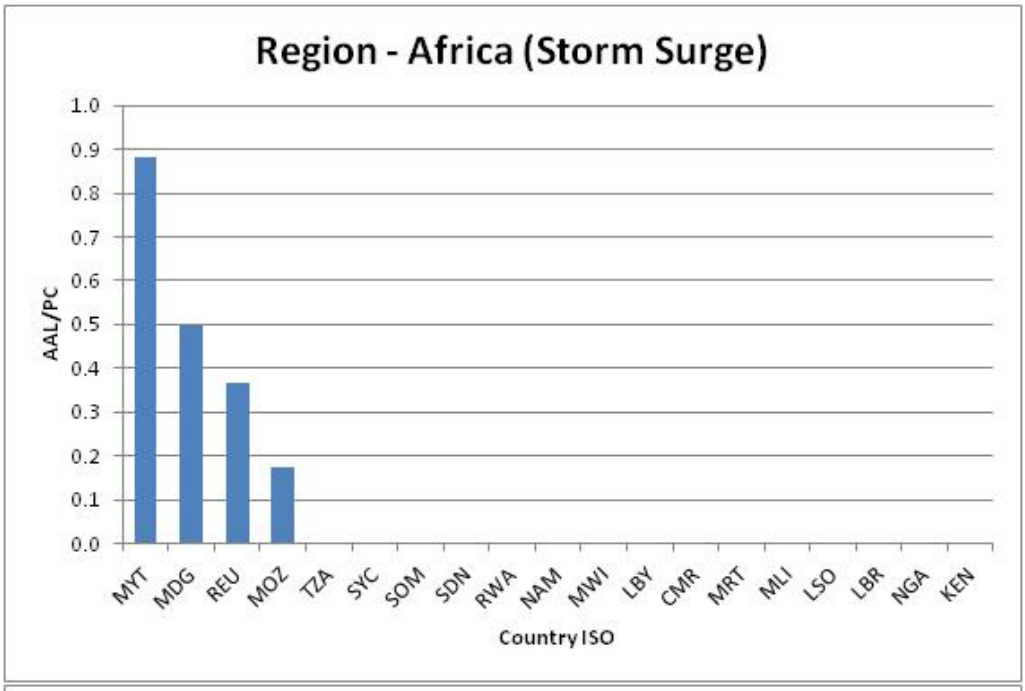

Region - Africa (Earthquake)
PML250/GNI
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
DJI
LSO
DZA
MWI
TUN
ZAF
MAR
RWA
BWA
BDI
SWZ
UGA
TZA
ZMB
EGY
SSD
MOZ
CMR
ZWE
Country ISO

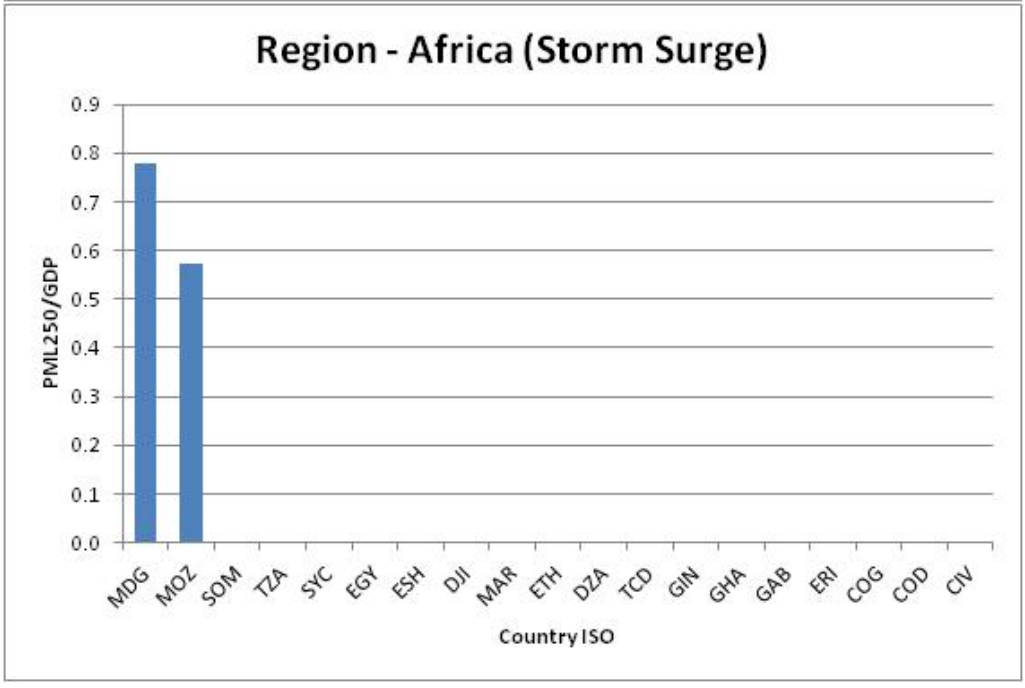

Region - Africa (Earthquake)
PML250/PC
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
BDI
RWA
DJI
LSO
DZA
TUN
TZA
MWI
UGA
ZAF
MAR
ZMB
SWZ
SSD
BWA
EGY
ZWE
MOZ
COD
Country ISO

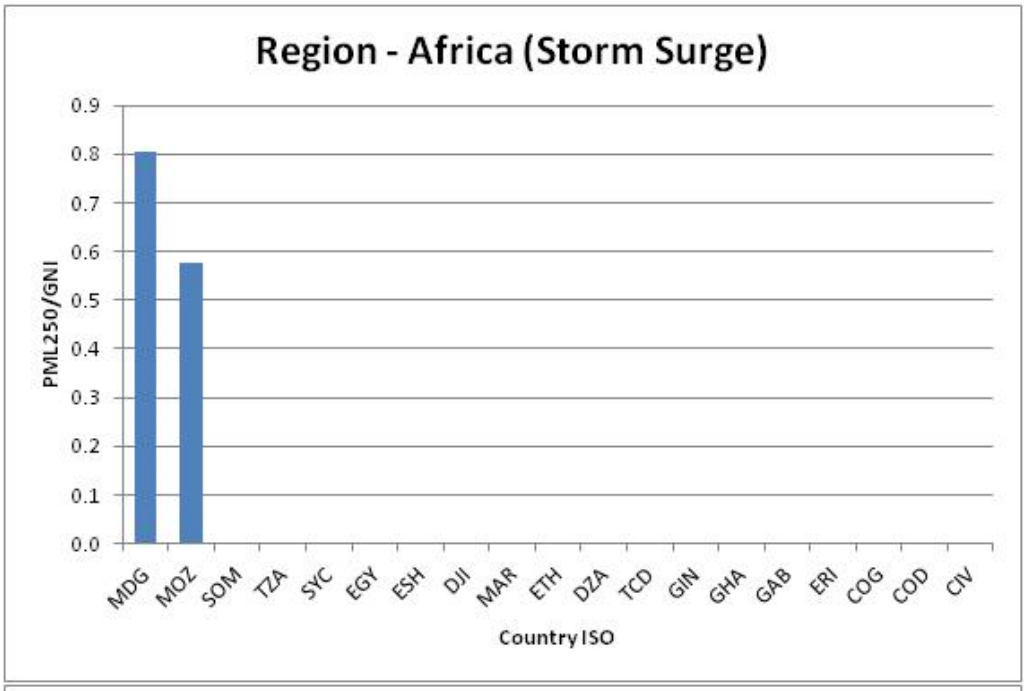

Region - Africa (Storm Surge)
AAL/GFCF
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
MDG
MOZ
SYC
TZA
SOM
ESH
DJI
MAR
ETH
DZA
TCD
EGY
GIN
GHA
GAB
ERI
COG
COD
CIV
Country ISO

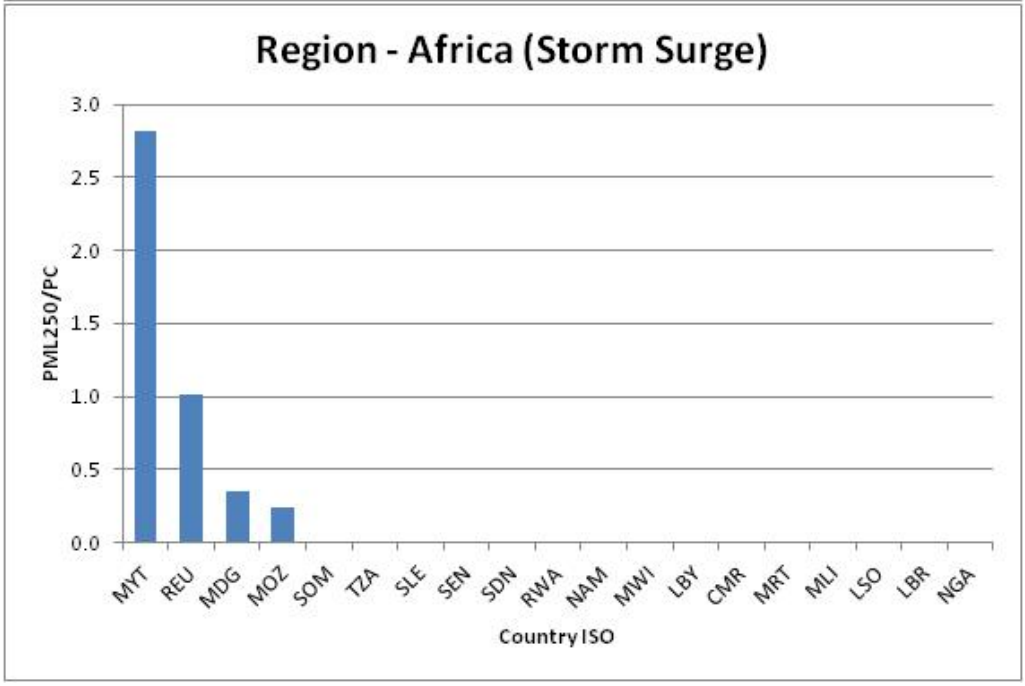

Region - Africa (Storm Surge)
AAL/GGC
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
MOZ
SYC
TZA
SOM
ESH
DJI
MAR
ETH
DZA
TCD
EGY
GIN
GHA
GAB
ERI
COG
COD
CIV
Country ISO

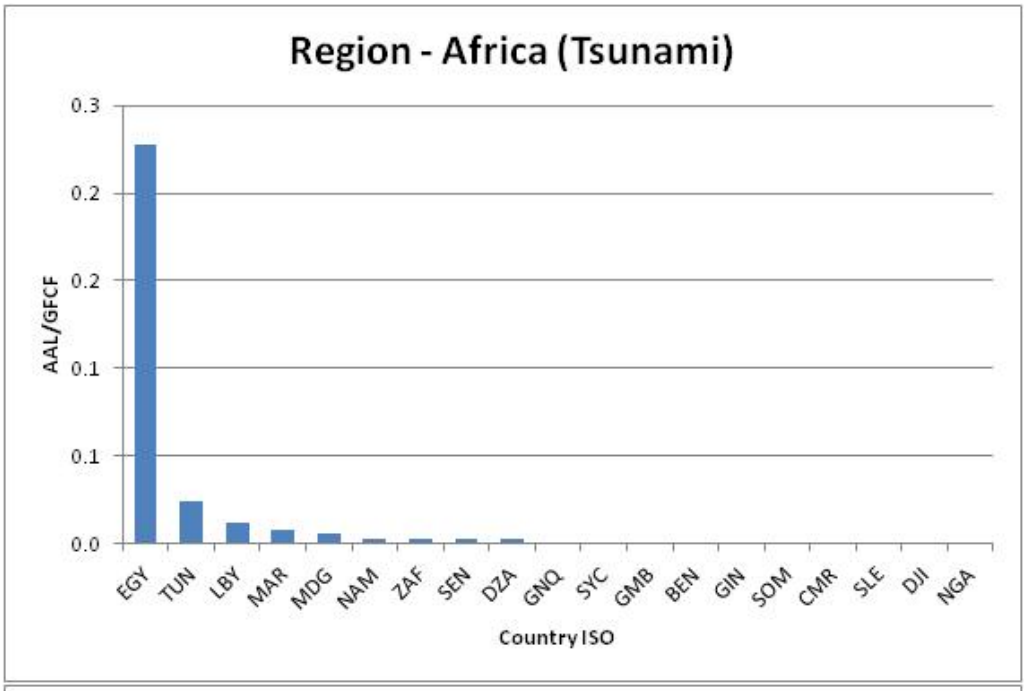

Region - Africa (Storm Surge)
AAL/GNE
1.2
1.0
0.8
0.6
0.4
0.2
0.0
MDG
MOZ
SYC
TZA
SOM
ESH
DJI
MAR
ETH
DZA
TCD
EGY
GIN
GHA
GAB
ERI
COG
COD
CIV
Country ISO

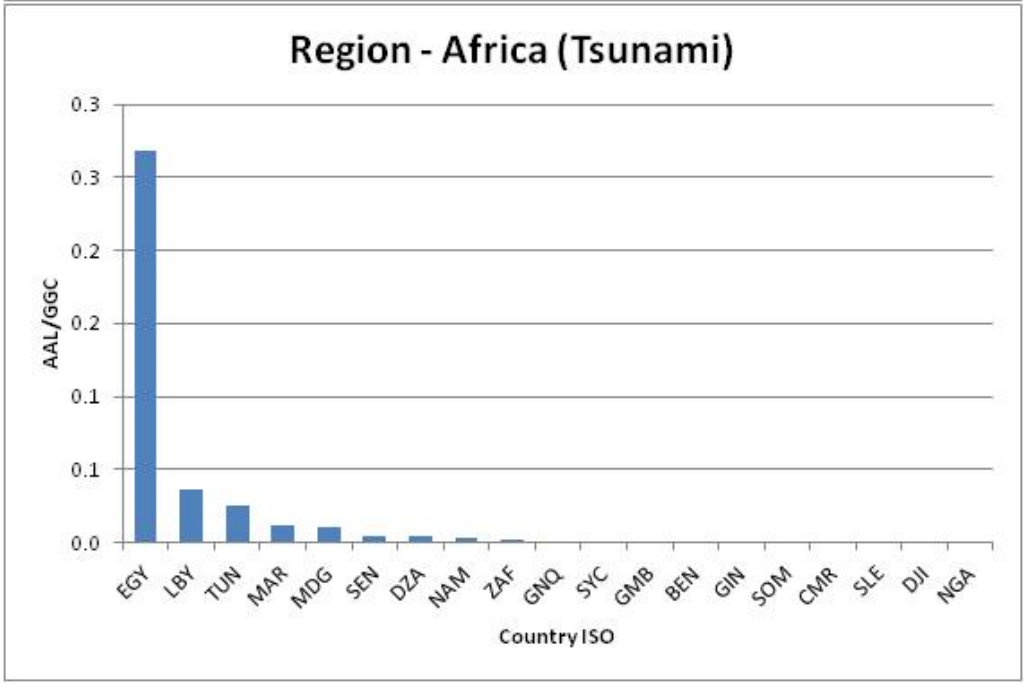

Region - Africa (Storm Surge)
AAL/PC
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MYT
MDG
REU
MOZ
TZA
SYC
SOM
SDN
RWA
NAM
MWI
LBY
CMR
MRT
MLI
LSO
LBR
NGA
KEN
Country ISO

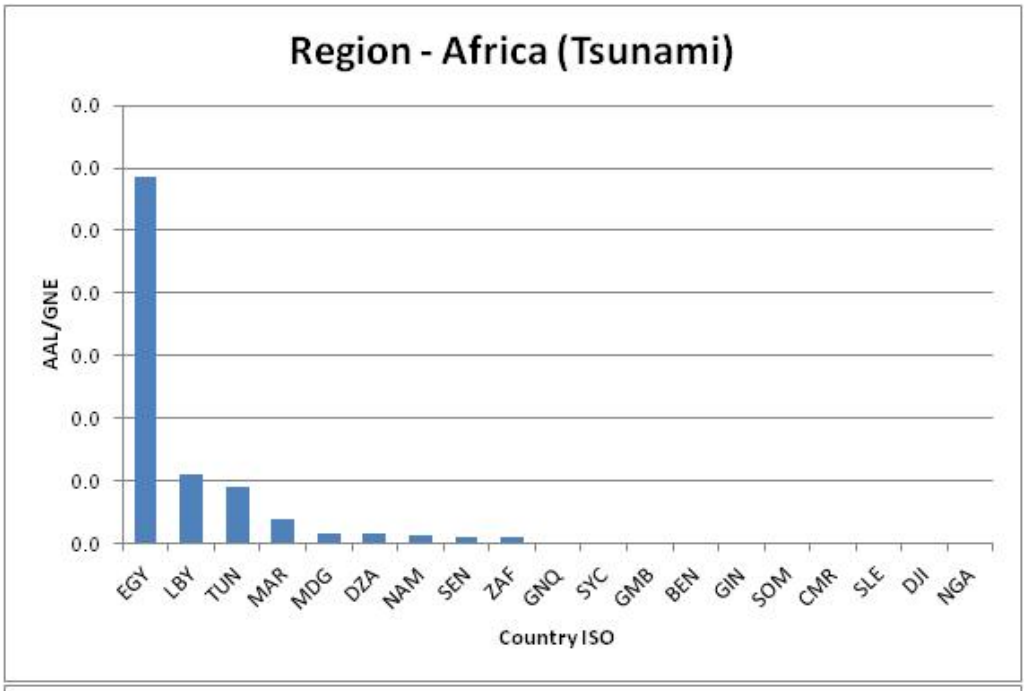

Region - Africa (Storm Surge)
PML250/GDP
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
MOZ
SOM
TZA
SYC
EGY
ESH
DJI
MAR
ETH
DZA
TCD
GIN
GHA
GAB
ERI
COG
COD
CIV
Country ISO

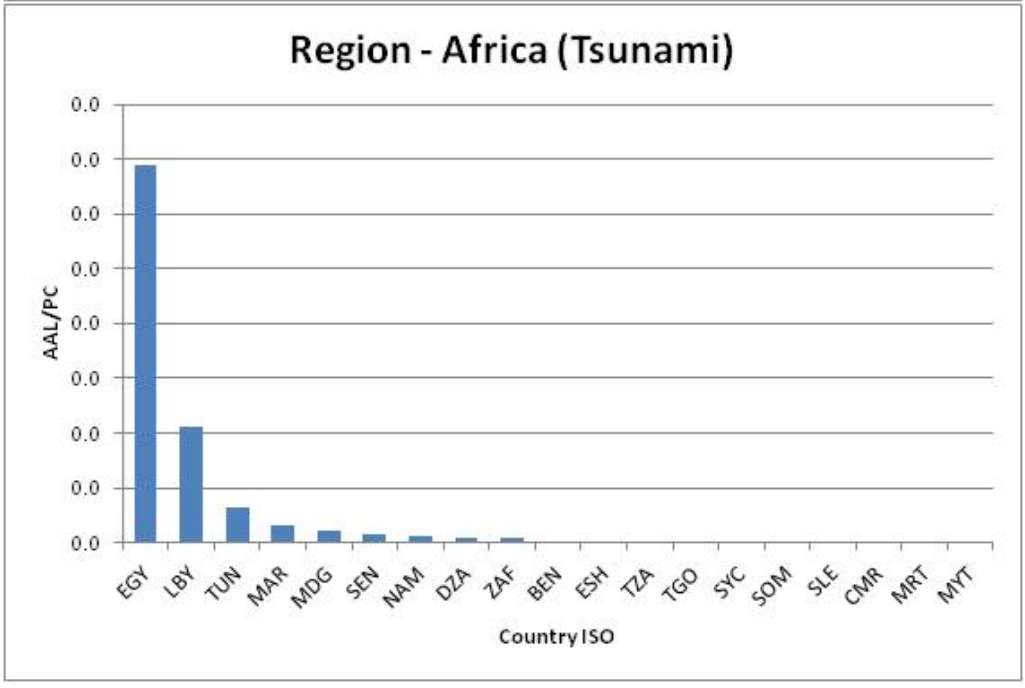

Region - Africa (Storm Surge)
PML250/GNI
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
MOZ
SOM
TZA
SYC
EGY
ESH
DJI
MAR
ETH
DZA
TCD
GIN
GHA
GAB
ERI
COG
COD
CIV
Country ISO

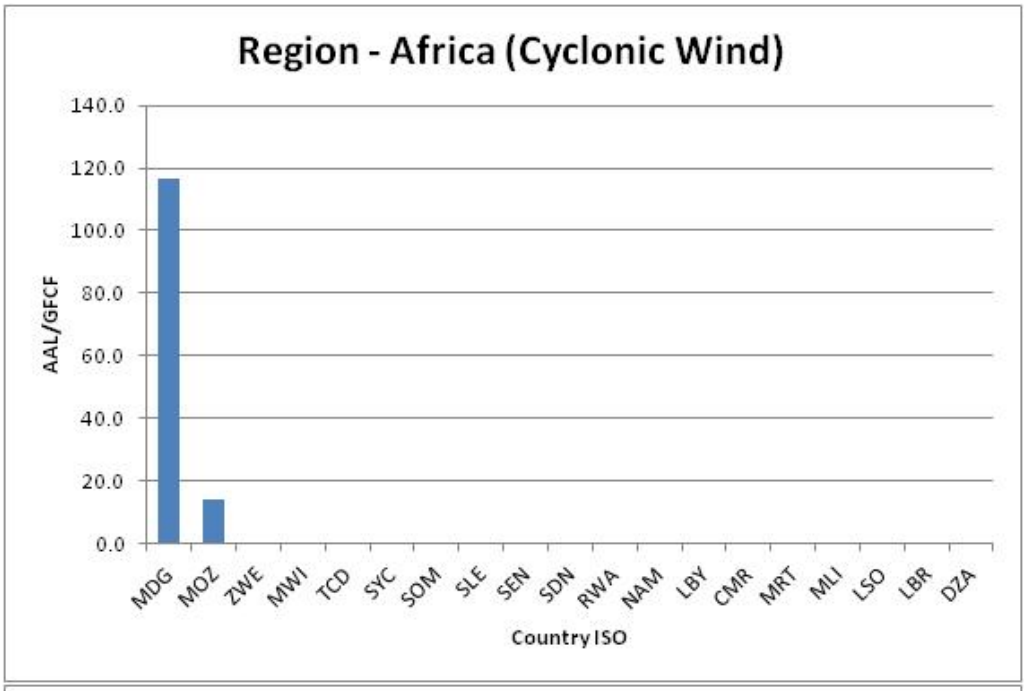

Region - Africa (Storm Surge)
PML250/PC
3.0
2.5
2.0
1.5
1.0
0.5
0.0
MYT
REU
MDG
MOZ
SOM
TZA
SLE
SEN
SDN
RWA
NAM
MWI
LBY
CMR
MRT
MLI
LSO
LBR
NGA
Country ISO

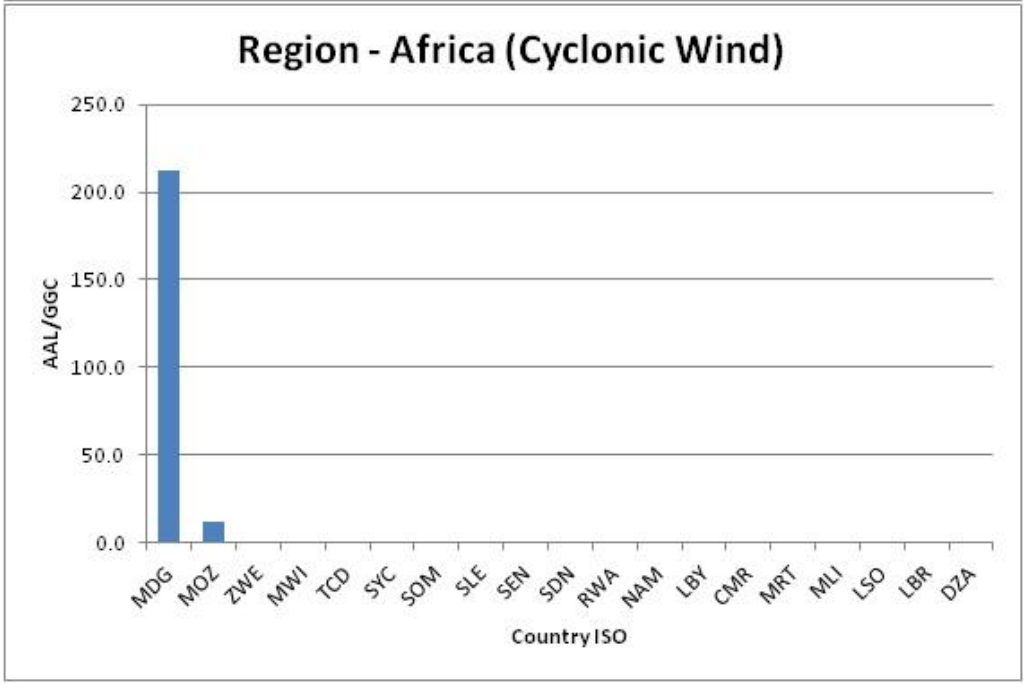

Region - Africa (Tsunami)
AAL/GFCF
0.3
0.2
0.2
0.1
0.1
0.0
EGY
TUN
LBY
MAR
MDG
NAM
ZAF
SEN
DZA
GNQ
SYC
GMB
BEN
GIN
SOM
CMR
SLE
DJI
NGA
Country ISO

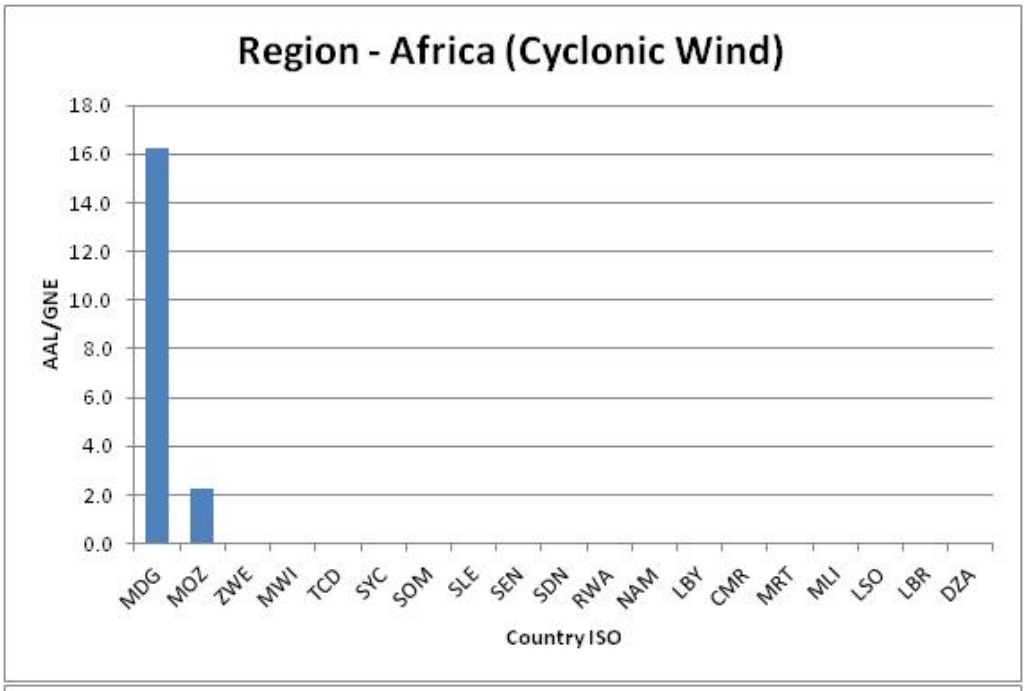

Region - Africa (Tsunami)
AAL/GGC
0.3
0.3
0.2
0.2
0.1
0.1
0.0
EGY
LBY
TUN
MAR
MDG
SEN
DZA
NAM
ZAF
GNQ
SYC
GMB
BEN
GIN
SOM
CMR
SLE
DJI
NGA
Country ISO

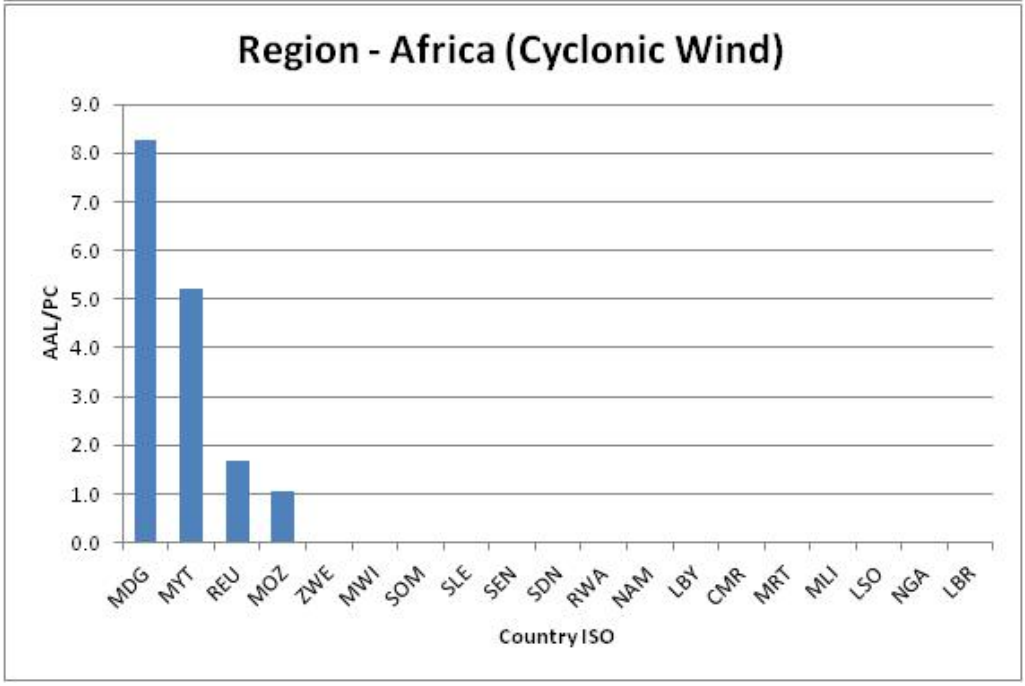

Region - Africa (Tsunami)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
EGY
LBY
TUN
MAR
MDG
DZA
NAM
SEN
ZAF
GNQ
SYC
GMB
BEN
GIN
SOM
CMR
SLE
DJI
NGA
Country ISO

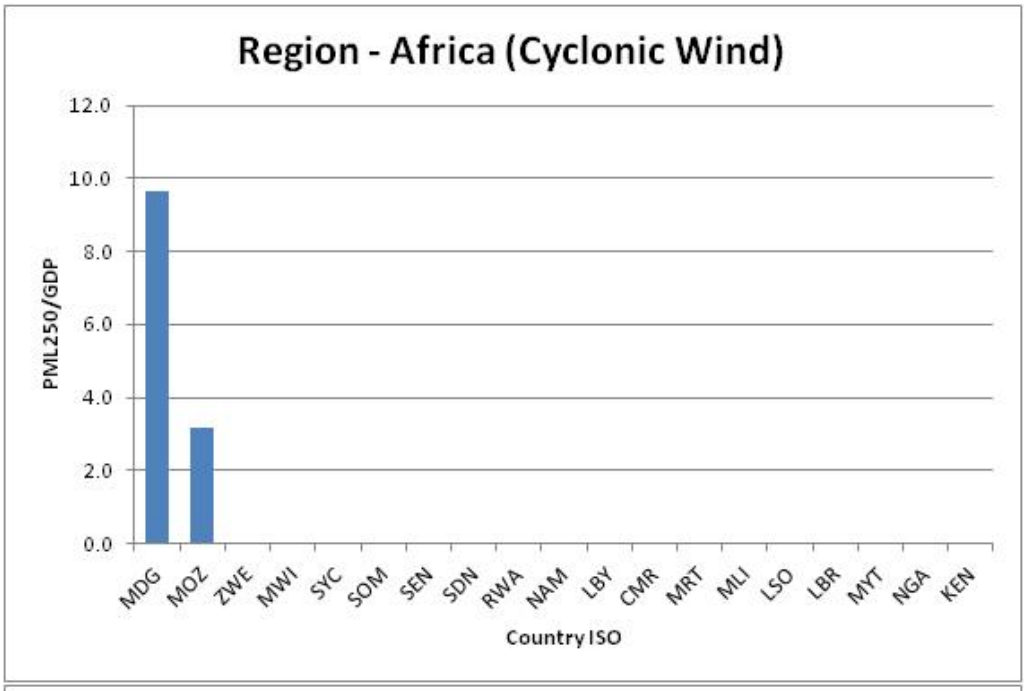

Region - Africa (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
EGY
LBY
TUN
MAR
MDG
SEN
NAM
DZA
ZAF
BEN
ESH
TZA
TGO
SYC
SOM
SLE
CMR
MRT
MYT
Country ISO

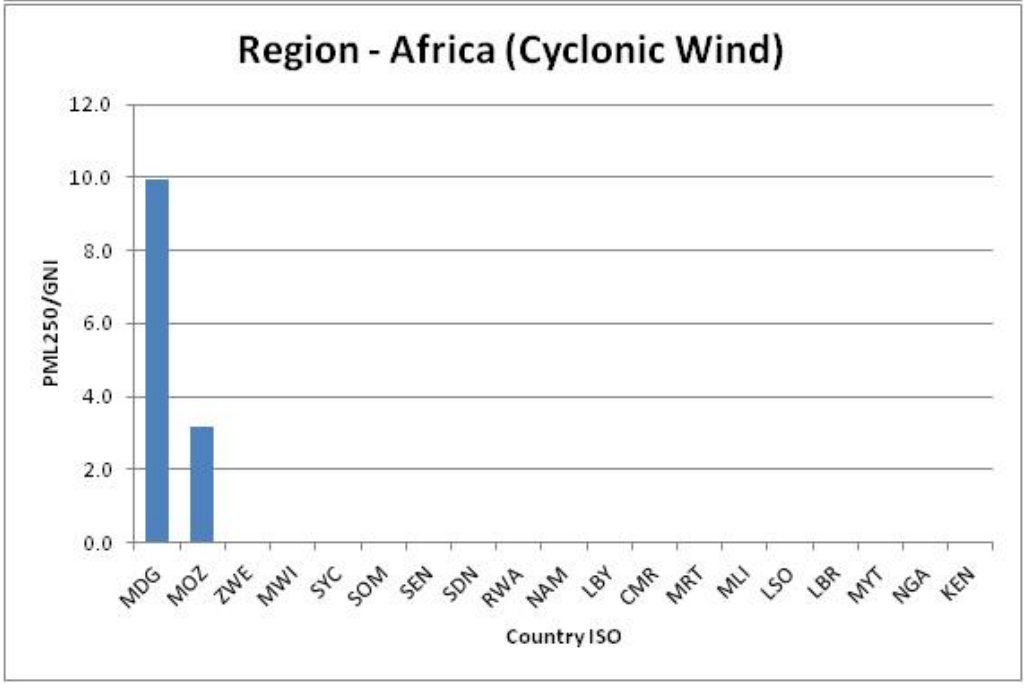

Region - Africa (Cyclonic Wind)
AAL/GFCF
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
MDG
MOZ
ZWE
MWI
TCD
SYC
SOM
SLE
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
LBR
DZA
Country ISO

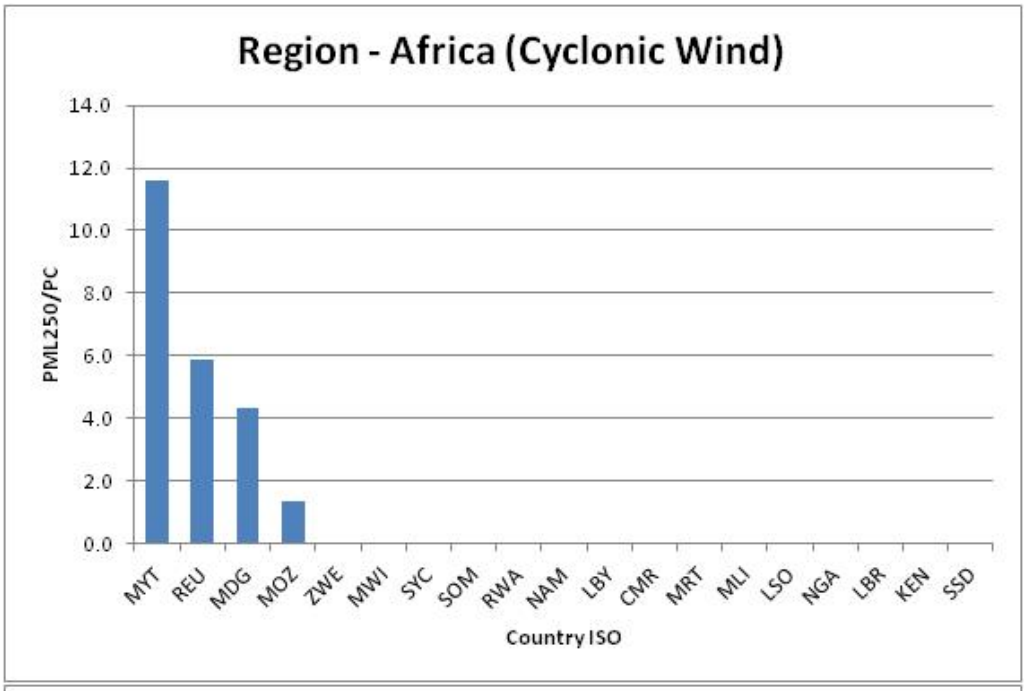

Region - Africa (Cyclonic Wind)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
MDG
MOZ
ZWE
MWI
TCD
SYC
SOM
SLE
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
LBR
DZA
Country ISO

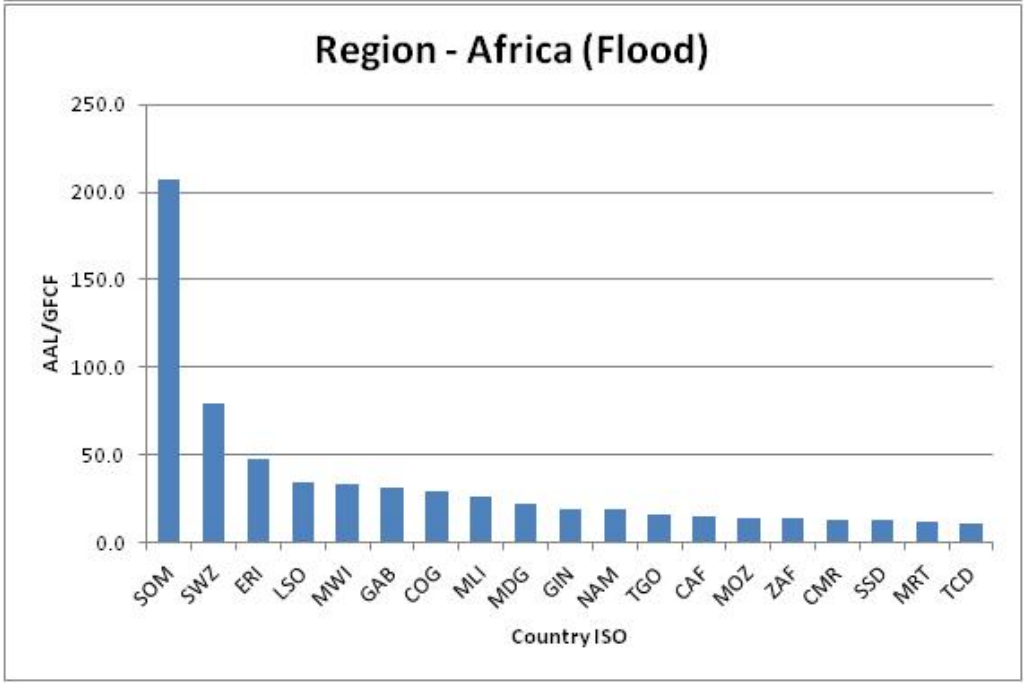

Region - Africa (Cyclonic Wind)
AAL/GNE
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
MOZ
ZWE
MWI
TCD
SYC
SOM
SLE
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
LBR
DZA
Country ISO

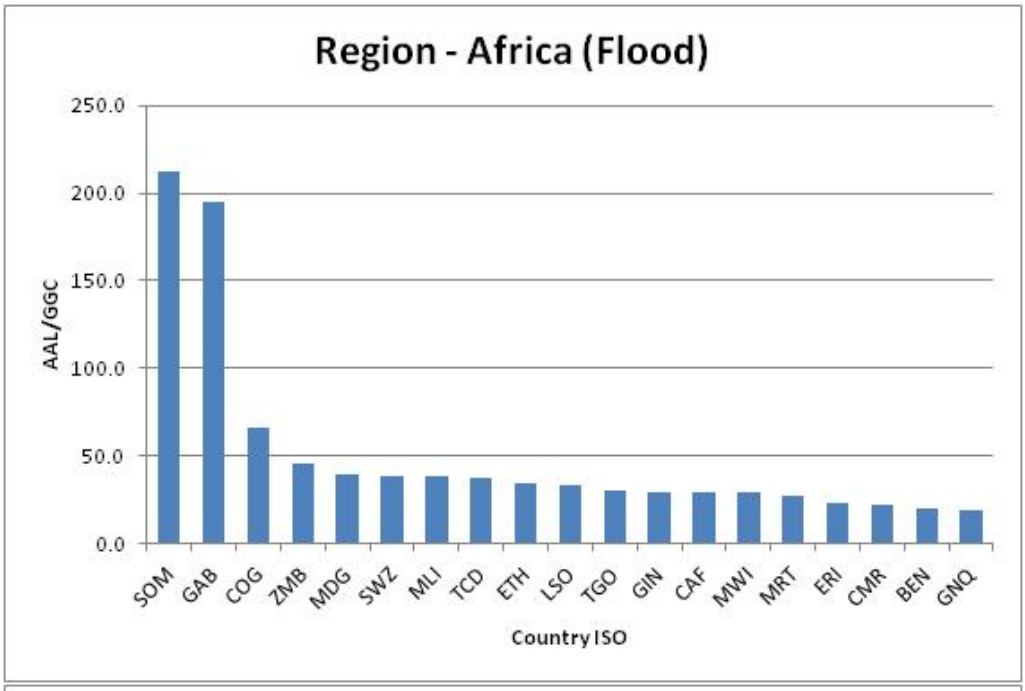

Region - Africa (Cyclonic Wind)
AAL/PC
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
MDG
MYT
REU
MOZ
ZWE
MWI
SOM
SLE
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
NGA
LBR
Country ISO

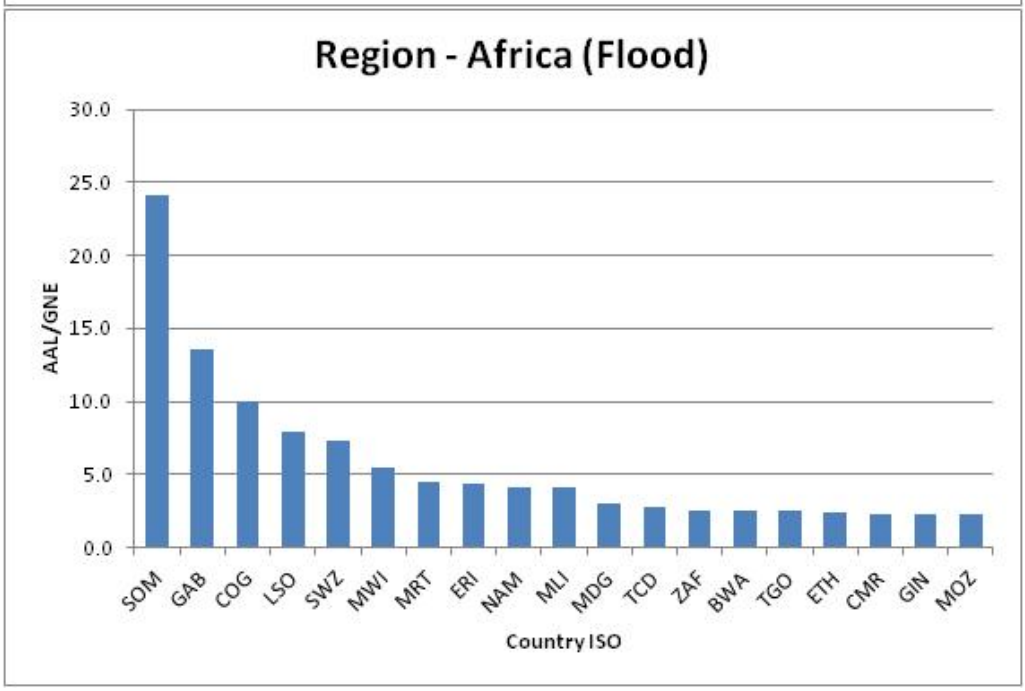

Region - Africa (Cyclonic Wind)
PML250/GDP
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
MOZ
ZWE
MWI
SYC
SOM
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
LBR
MYT
NGA
KEN
Country ISO

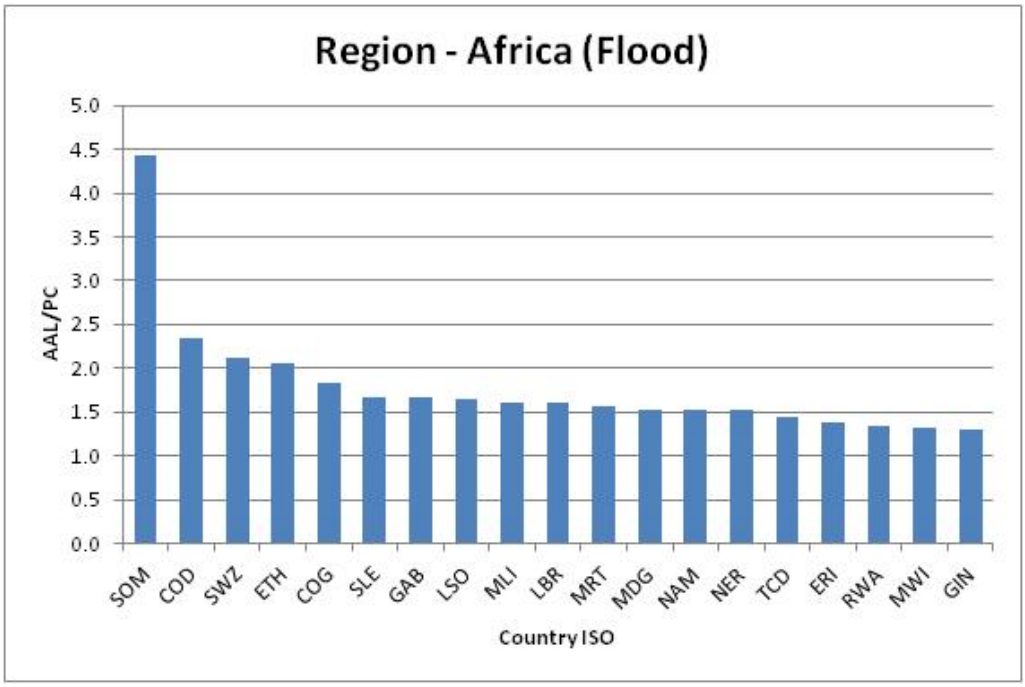

Region - Africa (Cyclonic Wind)
PML250/GNI
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
MOZ
ZWE
MWI
SYC
SOM
SEN
SDN
RWA
NAM
LBY
CMR
MRT
MLI
LSO
LBR
MYT
NGA
KEN
Country ISO


Region - Africa (Cyclonic Wind)
PML250/PC
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MYT
REU
MDG
MOZ
ZWE
MWI
SYC
SOM
RWA
NAM
LBY
CMR
MRT
MLI
LSO
NGA
LBR
KEN
SSD
Country ISO

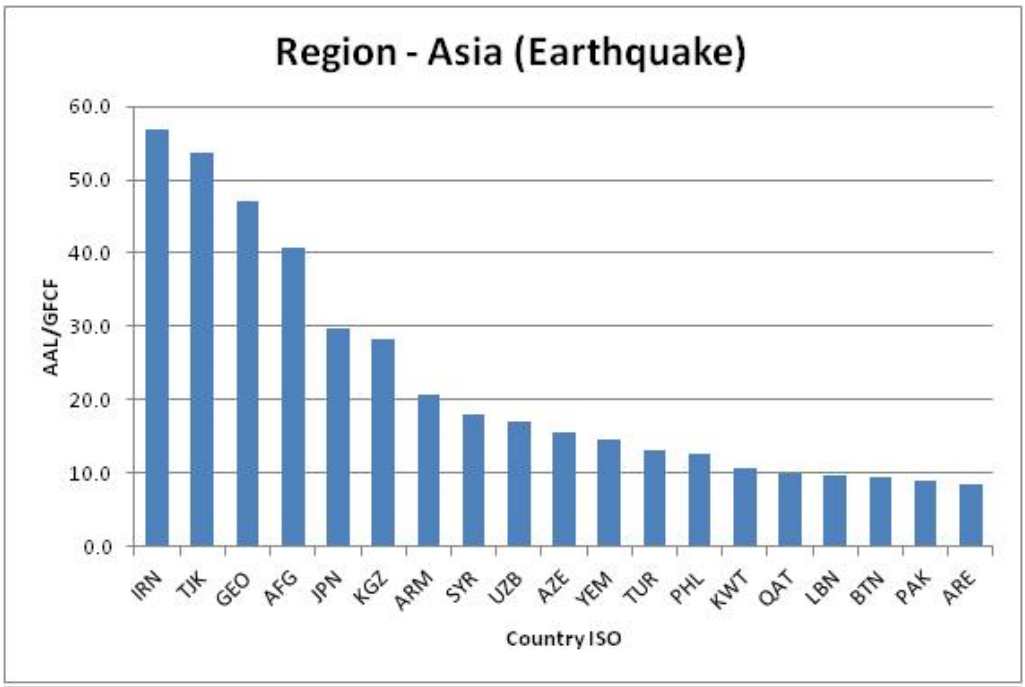

Region - Africa (Flood)
AAL/GFCF
250.0
200.0
150.0
100.0
50.0
0.0
SOM
SWZ
ERI
LSO
MWI
GAB
COG
MLI
MDG
GIN
NAM
TGO
CAF
MOZ
ZAF
CMR
SSD
MRT
TCD
Country ISO

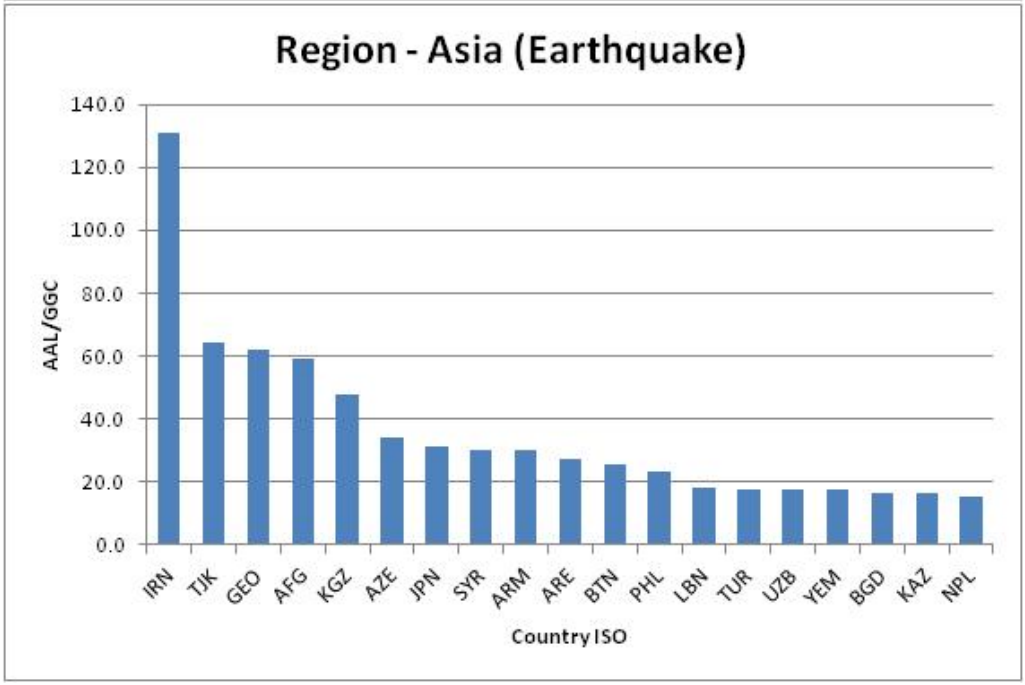

Region - Africa (Flood)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
SOM
GAB
COG
ZMB
MDG
SWZ
MLI
TCD
ETH
LSO
TGO
GIN
CAF
MWI
MRT
ERI
CMR
BEN
GNQ
Country ISO

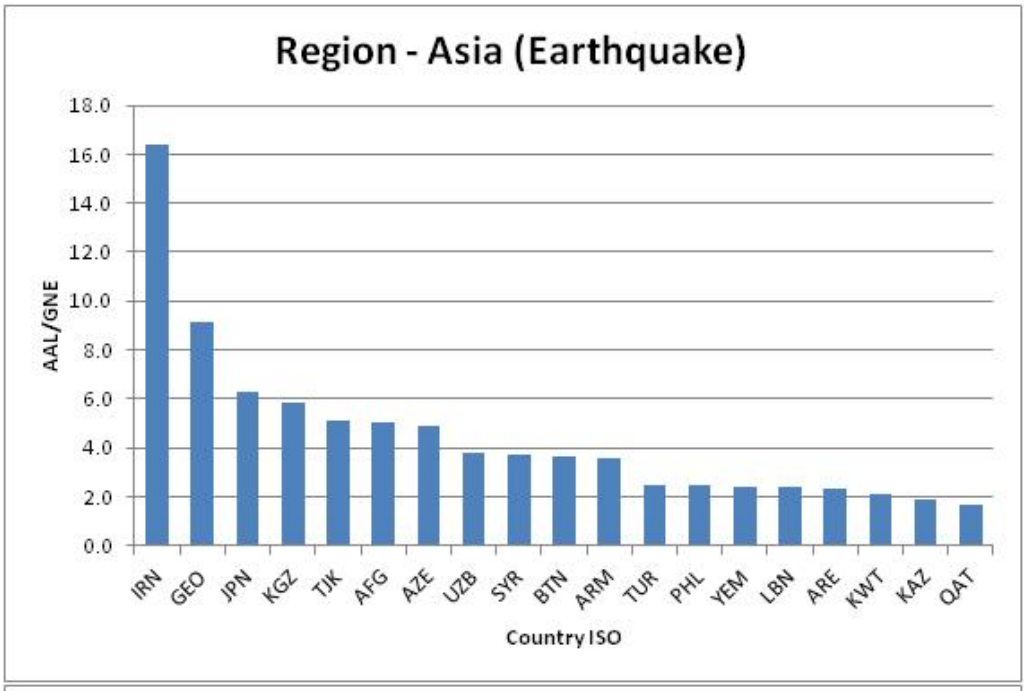

Region - Africa (Flood)
AAL/GNE
30.0
25.0
20.0
15.0
10.0
5.0
0.0
SOM
GAB
COG
LSO
SWZ
MWI
MRT
ERI
NAM
MLI
MDG
TCD
ZAF
BWA
TGO
ETH
CMR
GIN
MOZ
Country ISO

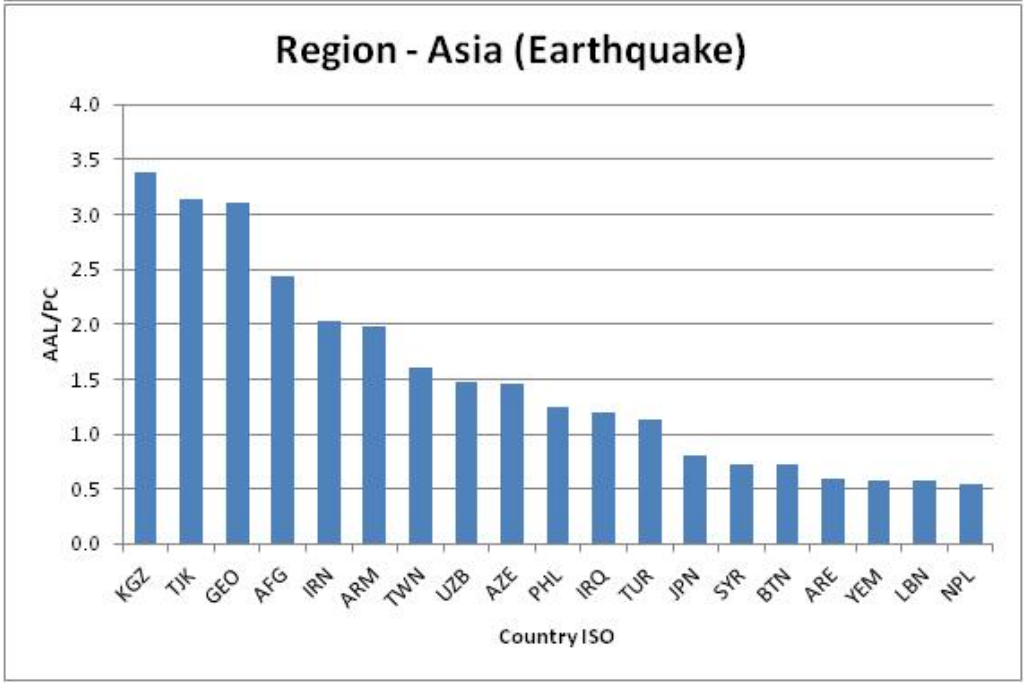

Region - Africa (Flood)
AAL/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
SOM
COD
SWZ
ETH
COG
SLE
GAB
LSO
MLI
LBR
MRT
MDG
NAM
NER
TCD
ERI
RWA
MWI
GIN
Country ISO

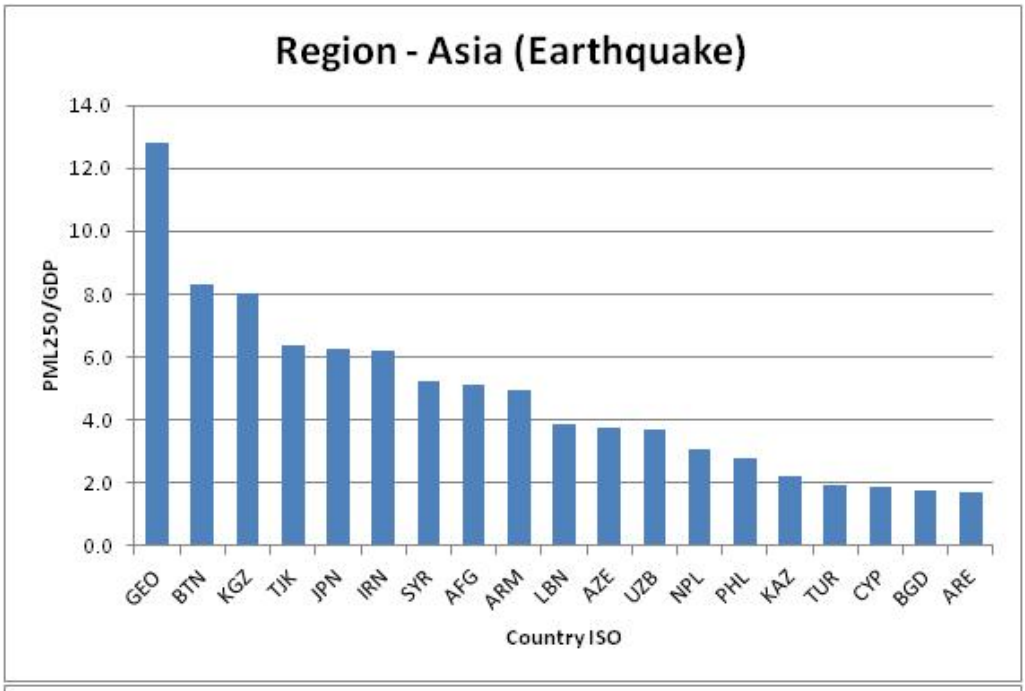
Asia

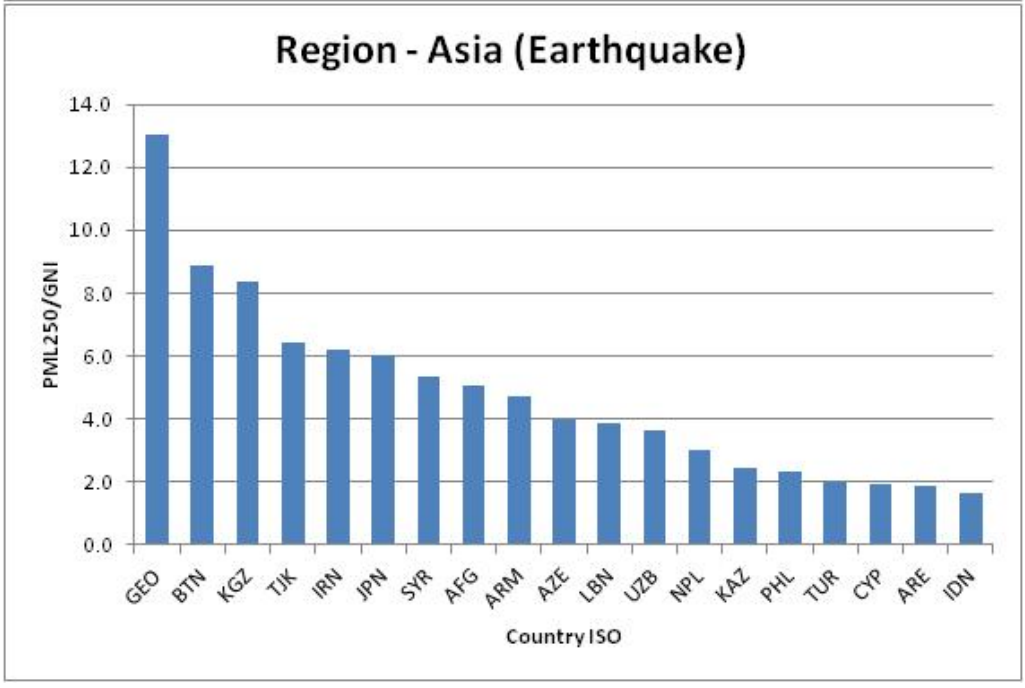

Region - Asia (Earthquake)
AAL/GFCF
60.0
50.0
40.0
30.0
20.0
10.0
0.0
IRN
TJK
GEO
AFG
JPN
KGZ
ARM
SYR
UZB
AZE
YEM
TUR
PHL
KWT
QAT
LBN
BTN
PAK
ARE
Country ISO

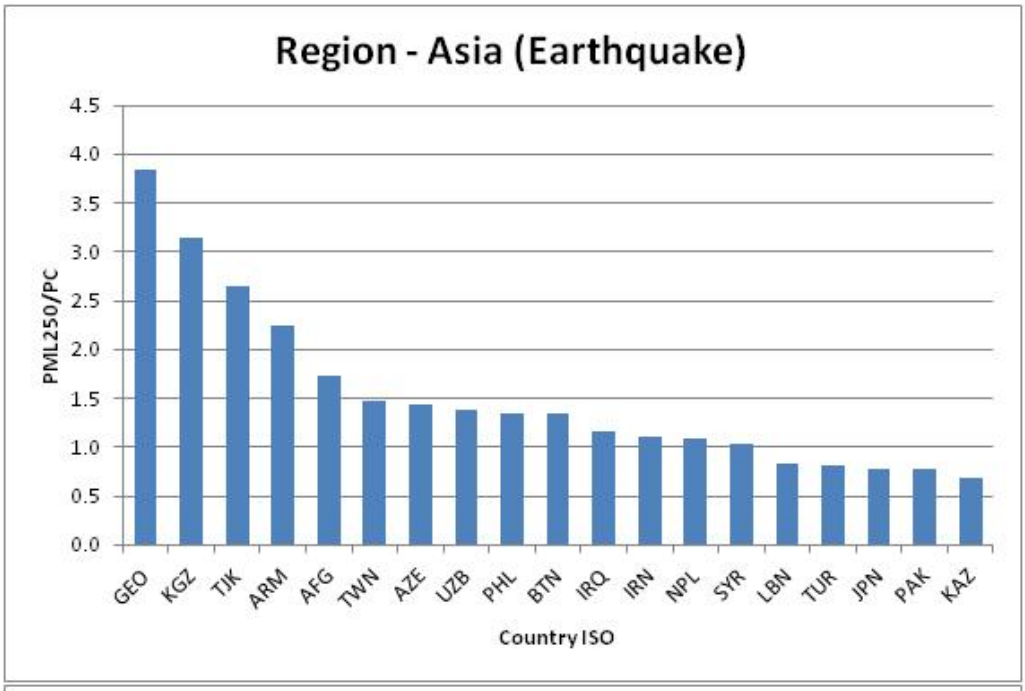

Region - Asia (Earthquake)
AAL/GGC
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
IRN
TJK
GEO
AFG
KGZ
AZE
JPN
SYR
ARM
ARE
BTN
PHL
LBN
TUR
UZB
YEM
BGD
KAZ
NPL
Country ISO

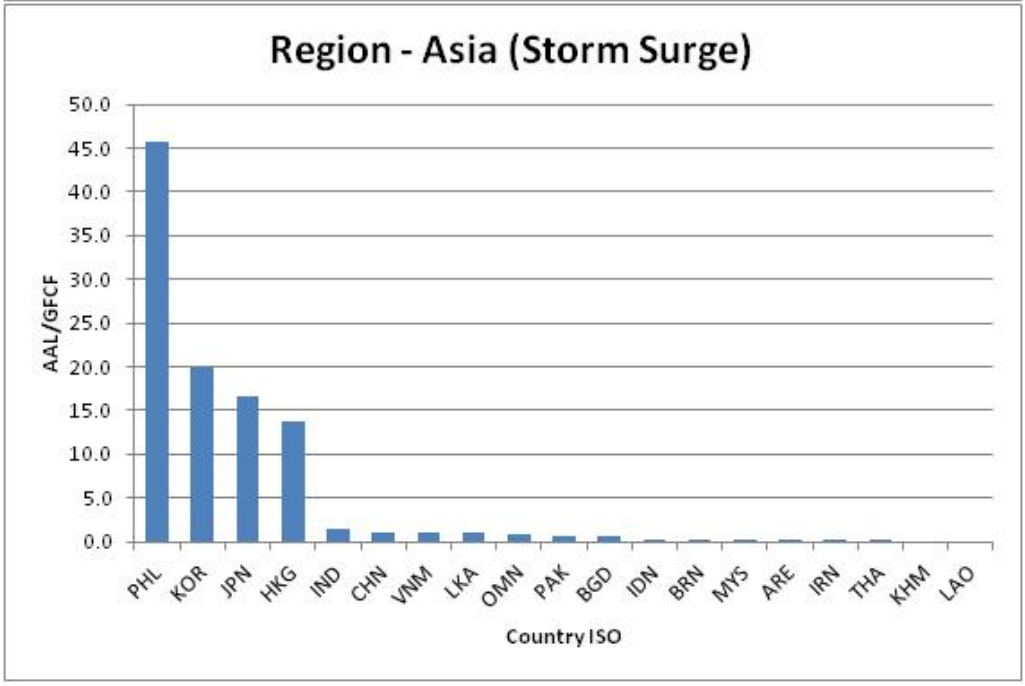

Region - Asia (Earthquake)
AAL/GNE
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
IRN
GEO
JPN
KGZ
TJK
AFG
AZE
UZB
SYR
BTN
ARM
TUR
PHL
YEM
LBN
ARE
KWT
KAZ
QAT
Country ISO

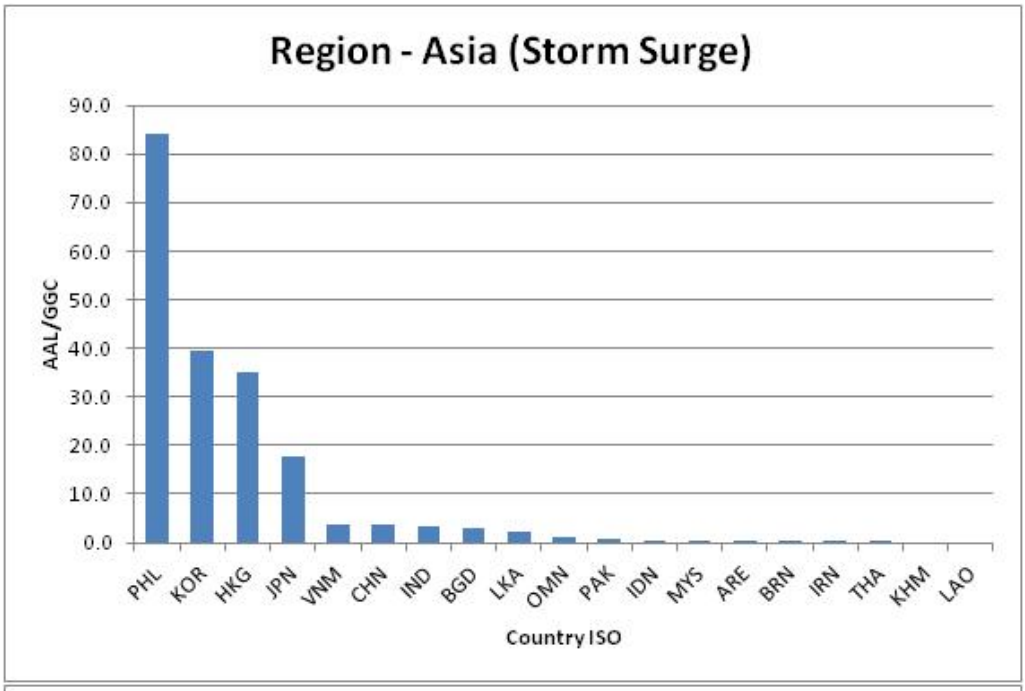

Region - Asia (Earthquake)
AAL/PC
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
KGZ
TJK
GEO
AFG
IRN
ARM
TWN
UZB
AZE
PHL
IRQ
TUR
JPN
SYR
BTN
ARE
YEM
LBN
NPL
Country ISO

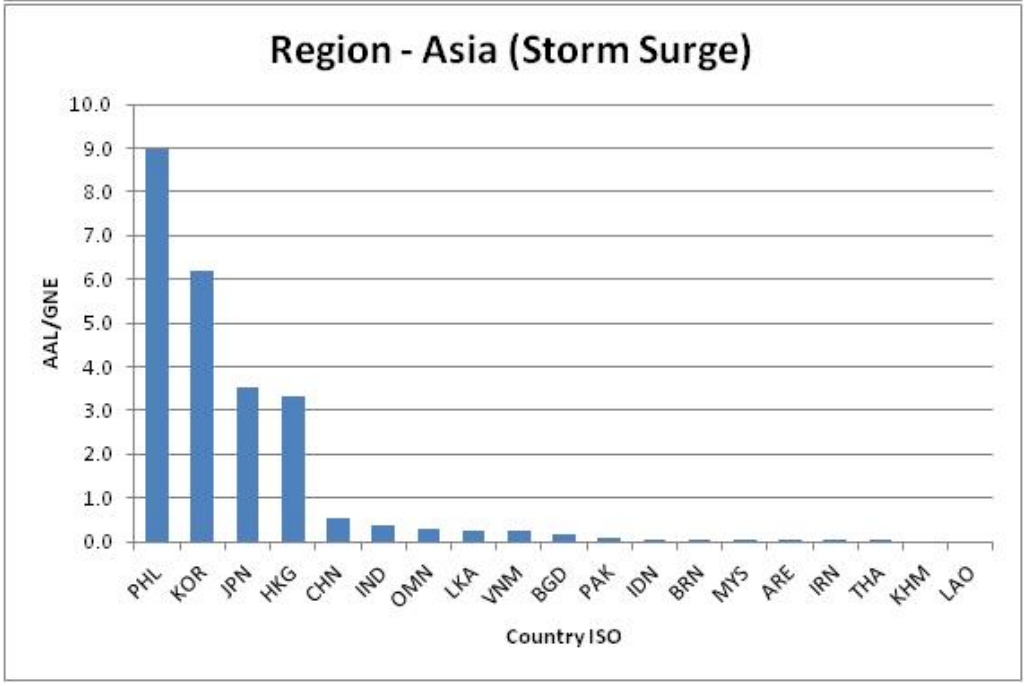

Region - Asia (Earthquake)
PML250/GDP
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GEO
BTN
KGZ
TJK
JPN
IRN
SYR
AFG
ARM
LBN
AZE
UZB
NPL
PHL
KAZ
TUR
CYP
BGD
ARE
Country ISO

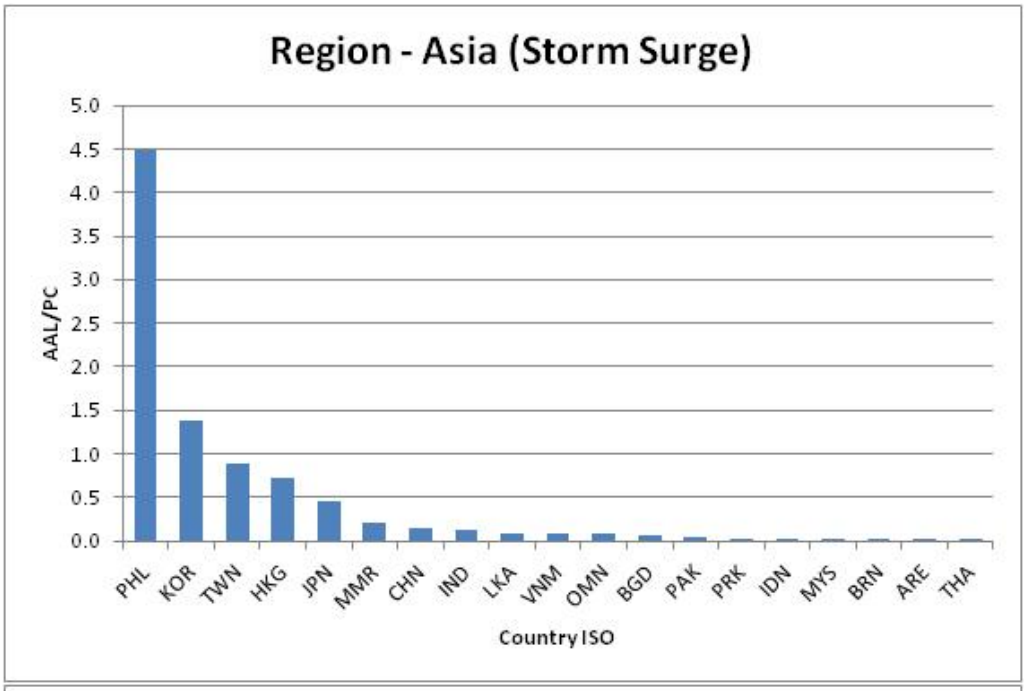

Region - Asia (Earthquake)
PML250/GNI
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GEO
BTN
KGZ
TJK
IRN
JPN
SYR
AFG
ARM
AZE
LBN
UZB
NPL
KAZ
PHL
TUR
CYP
ARE
IDN
Country ISO

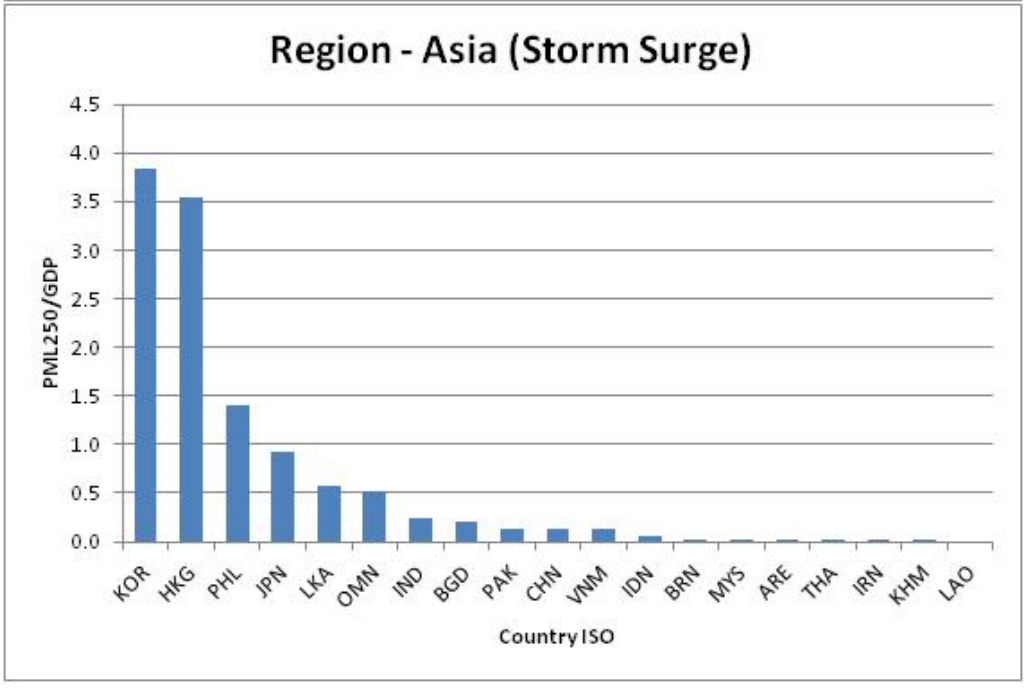

Region - Asia (Earthquake)
PML250/PC
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
GEO
KGZ
TJK
ARM
AFG
TWN
AZE
UZB
PHL
BTN
IRQ
IRN
NPL
SYR
LBN
TUR
JPN
PAK
KAZ
Country ISO

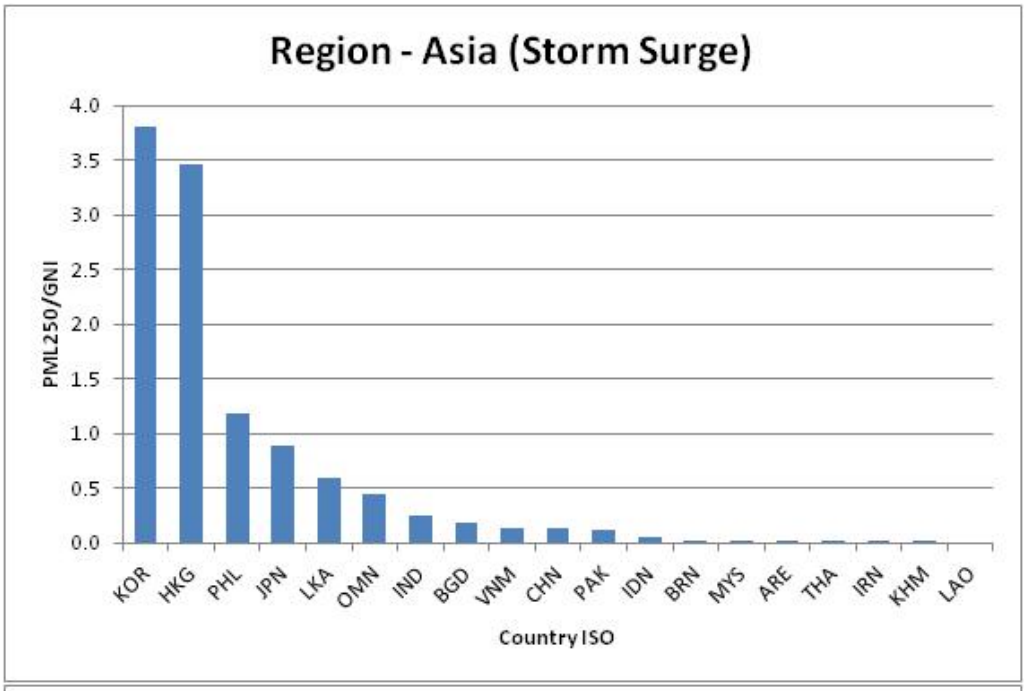

Region - Asia (Storm Surge)
AAL/GFCF
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
PHL
KOR
JPN
HKG
IND
CHN
VNM
LKA
OMN
PAK
BGD
IDN
BRN
MYS
ARE
IRN
THA
KHM
LAO
Country ISO

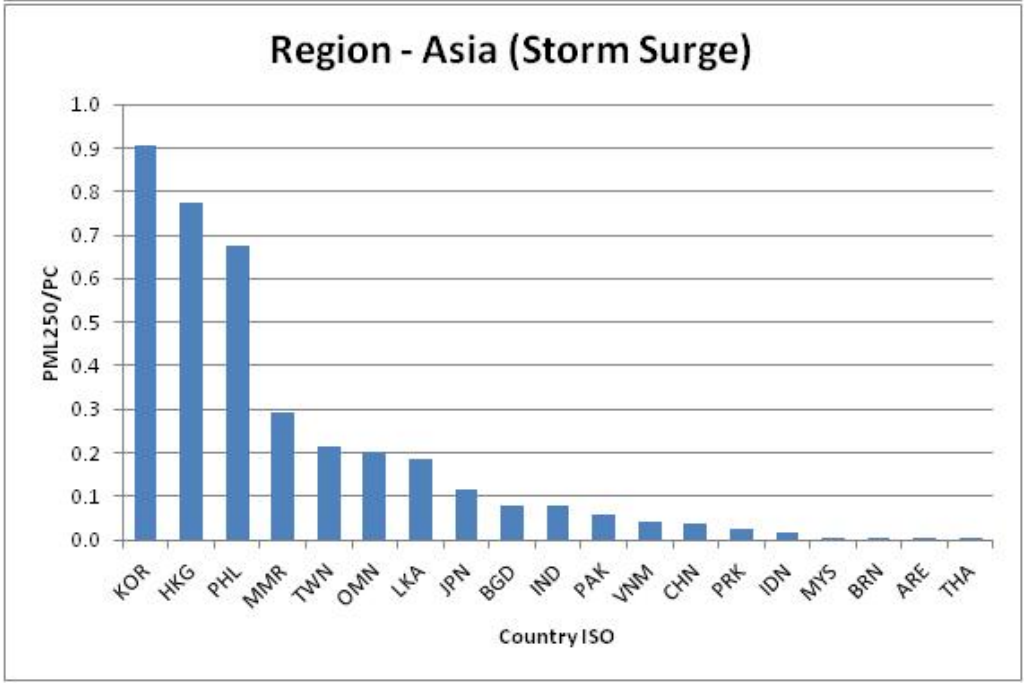

Region - Asia (Storm Surge)
AAL/GGC
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PHL
KOR
HKG
JPN
VNM
CHN
IND
BGD
LKA
OMN
PAK
IDN
MYS
ARE
BRN
IRN
THA
KHM
LAO
Country ISO

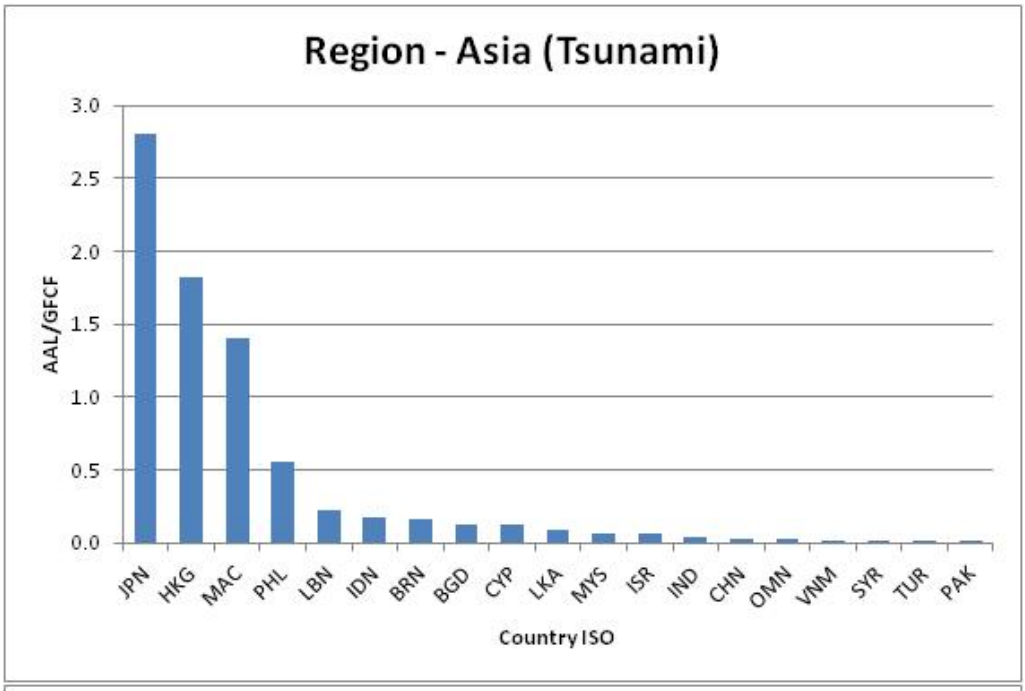

Region - Asia (Storm Surge)
AAL/GNE
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
KOR
JPN
HKG
CHN
IND
OMN
LKA
VNM
BGD
PAK
IDN
BRN
MYS
ARE
IRN
THA
KHM
LAO
Country ISO

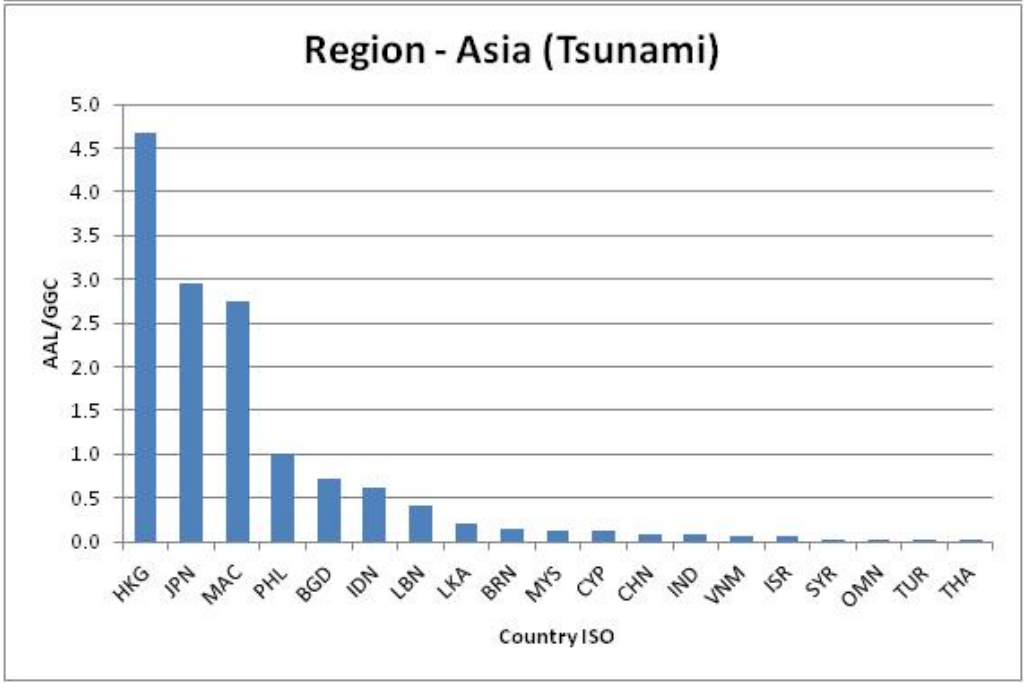

Region - Asia (Storm Surge)
AAL/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PHL
KOR
TWN
HKG
JPN
MMR
CHN
IND
LKA
VNM
OMN
BGD
PAK
PRK
IDN
MYS
BRN
ARE
THA
Country ISO

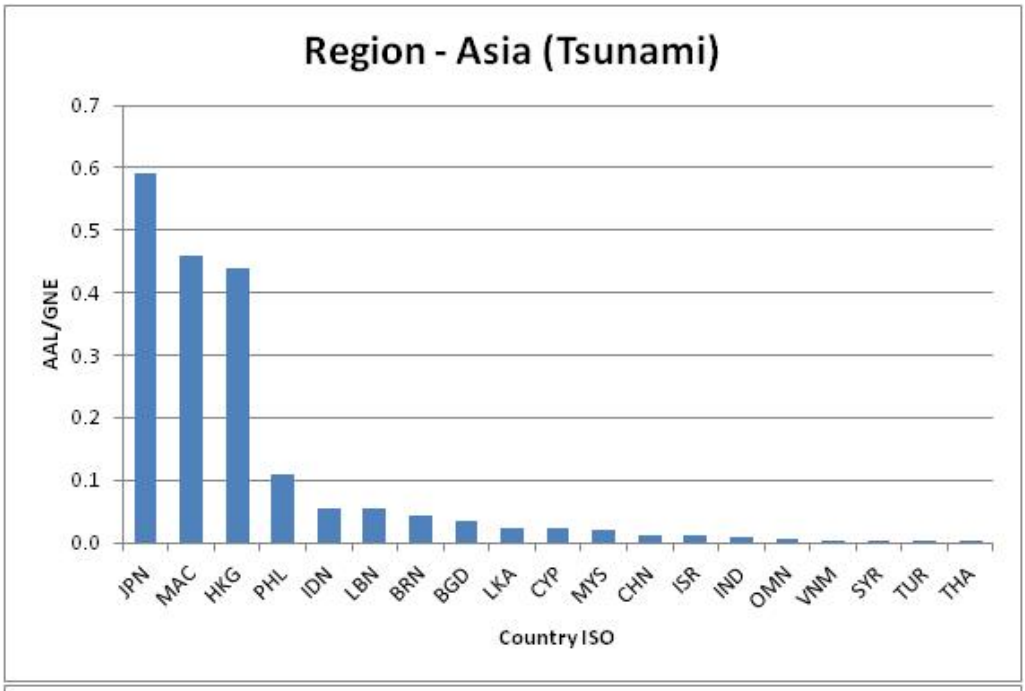

Region - Asia (Storm Surge)
PML250/GDP
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
KOR
HKG
PHL
JPN
LKA
OMN
IND
BGD
PAK
CHN
VNM
IDN
BRN
MYS
ARE
THA
IRN
KHM
LAO
Country ISO

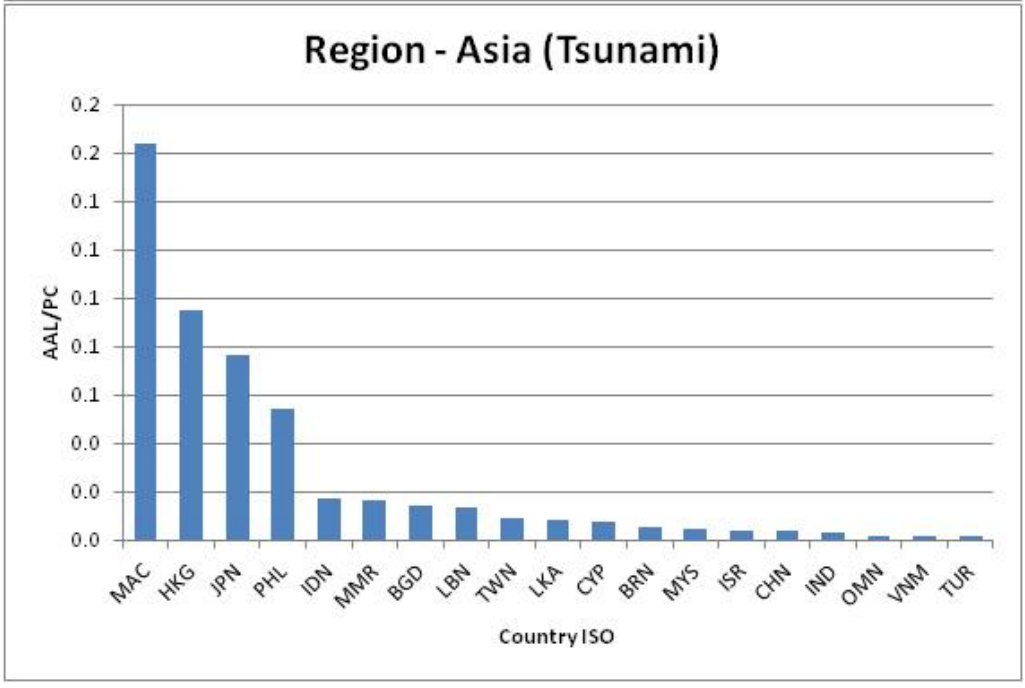

Region - Asia (Storm Surge)
PML250/GNI
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
KOR
HKG
PHL
JPN
LKA
OMN
IND
BGD
VNM
CHN
PAK
IDN
BRN
MYS
ARE
THA
IRN
KHM
LAO
Country ISO

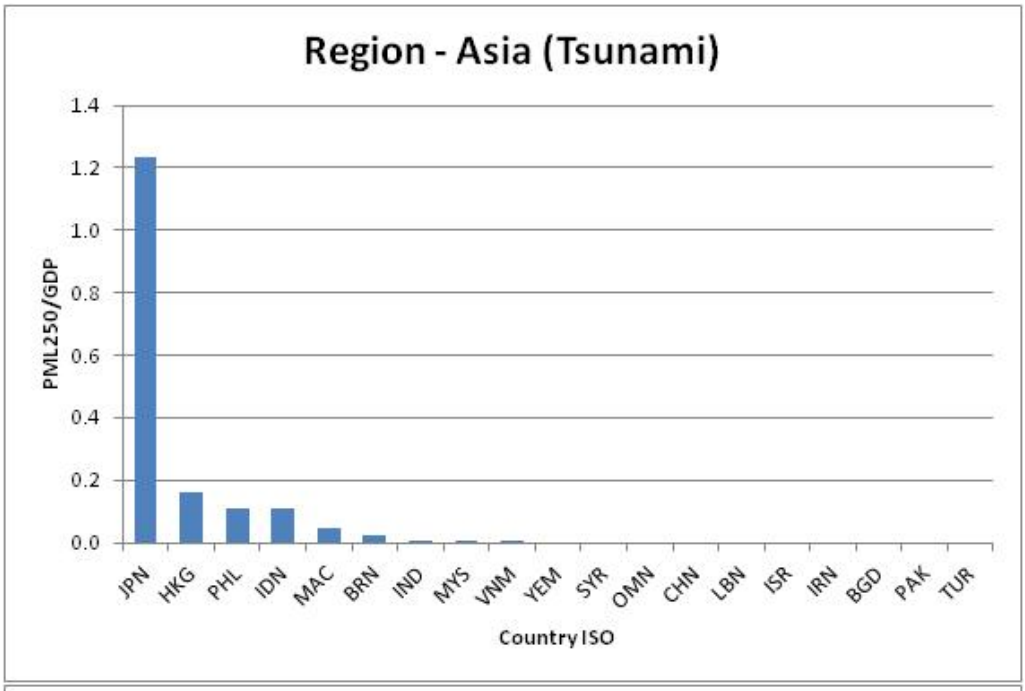

Region - Asia (Storm Surge)
PML250/PC
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
KOR
HKG
PHL
MMR
TWN
OMN
LKA
JPN
BGD
IND
PAK
VNM
CHN
PRK
IDN
MYS
BRN
ARE
THA
Country ISO

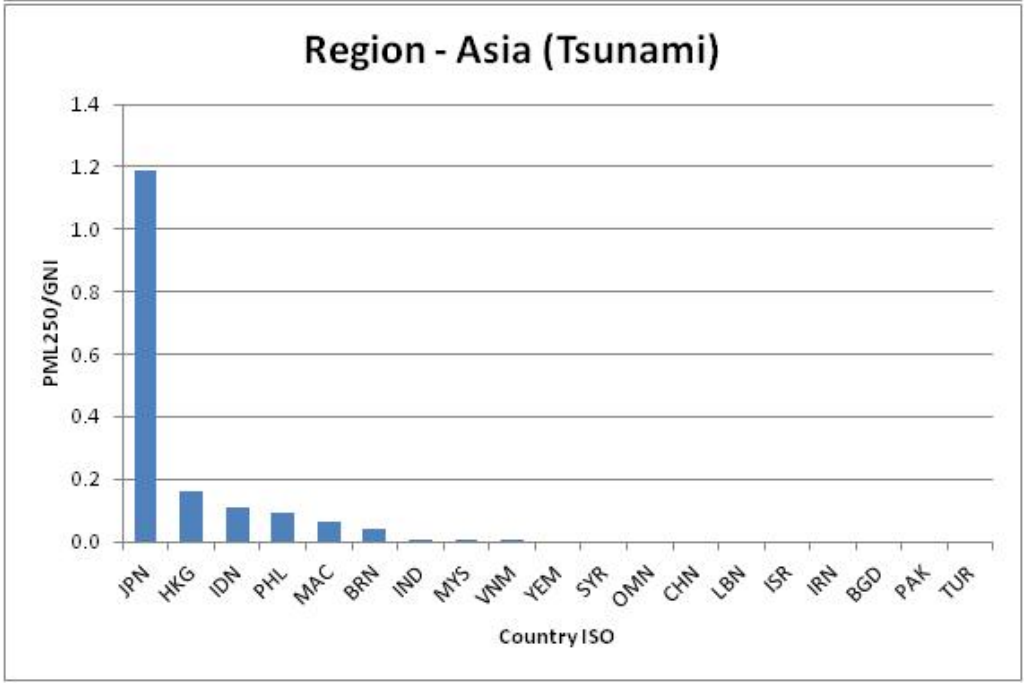

Region - Asia (Tsunami)
AAL/GFCF
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JPN
HKG
MAC
PHL
LBN
IDN
BRN
BGD
CYP
LKA
MYS
ISR
IND
CHN
OMN
VNM
SYR
TUR
PAK
Country ISO

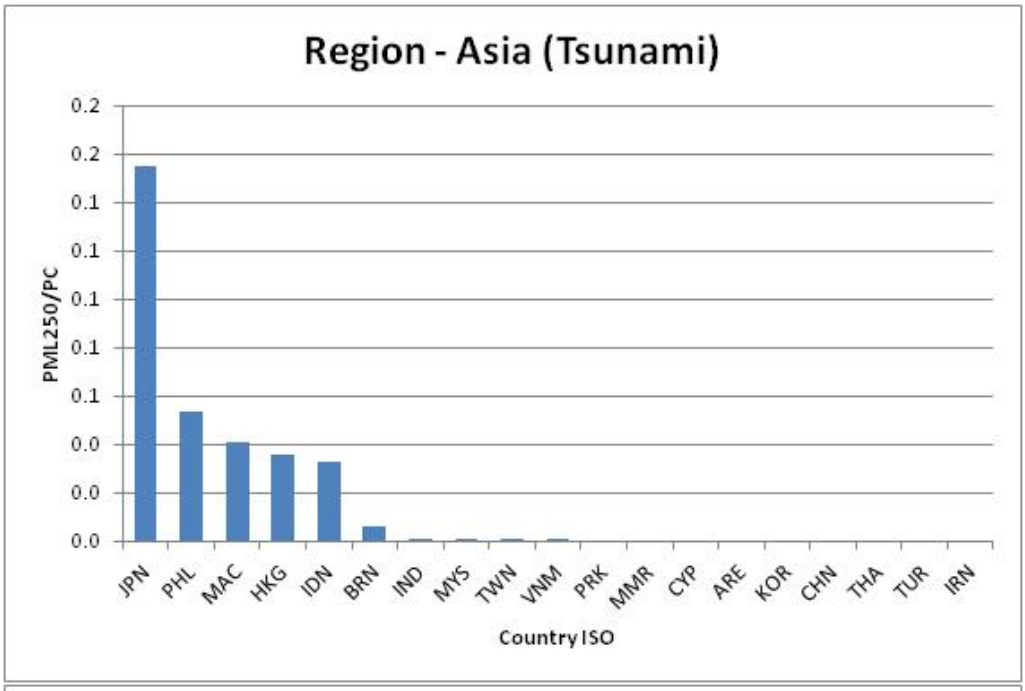

Region - Asia (Tsunami)
AAL/GGC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
HKG
JPN
MAC
PHL
BGD
IDN
LBN
LKA
BRN
MYS
CYP
CHN
IND
VNM
ISR
SYR
OMN
TUR
THA
Country ISO

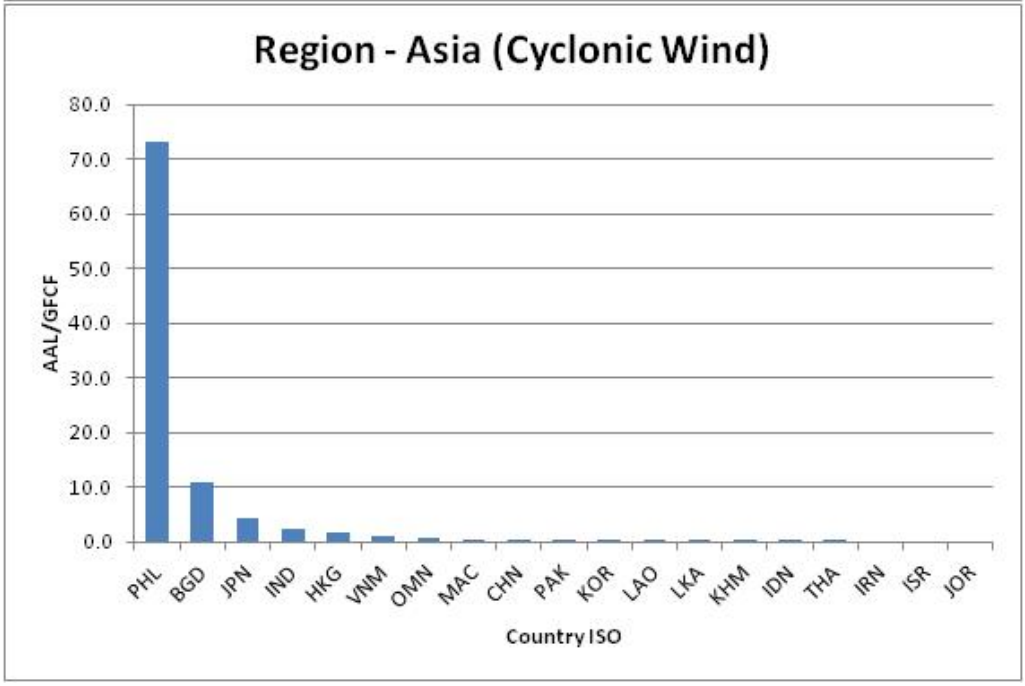

Region - Asia (Tsunami)
AAL/GNE
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
JPN
MAC
HKG
PHL
IDN
LBN
BRN
BGD
LKA
CYP
MYS
CHN
ISR
IND
OMN
VNM
SYR
TUR
THA
Country ISO

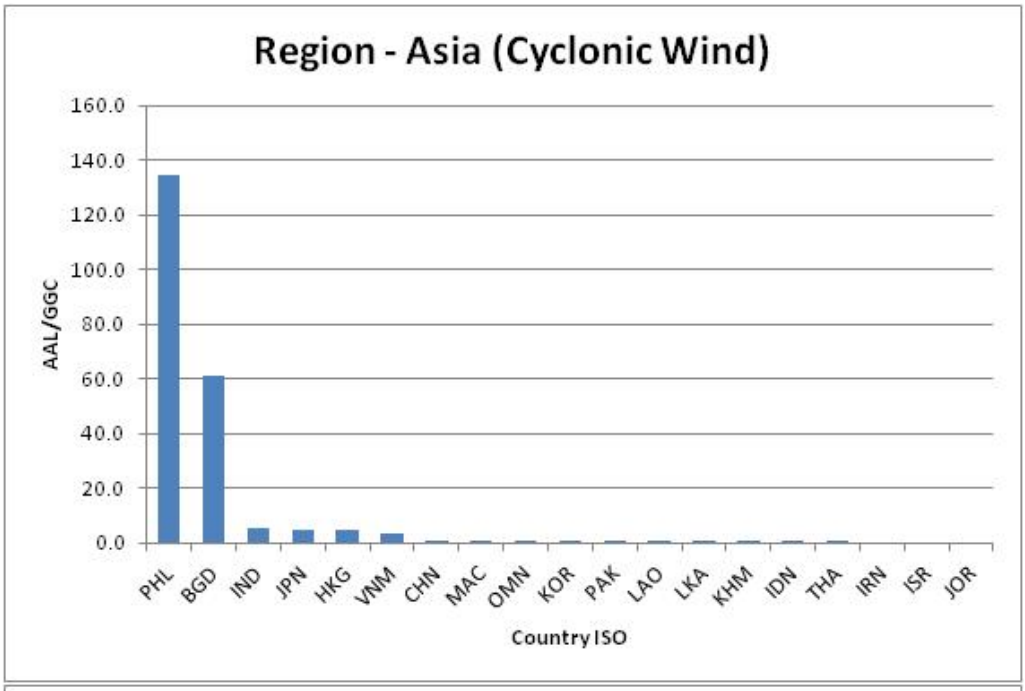

Region - Asia (Tsunami)
AAL/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
MAC
HKG
JPN
PHL
IDN
MMR
BGD
LBN
TWN
LKA
CYP
BRN
MYS
ISR
CHN
IND
OMN
VNM
TUR
Country ISO

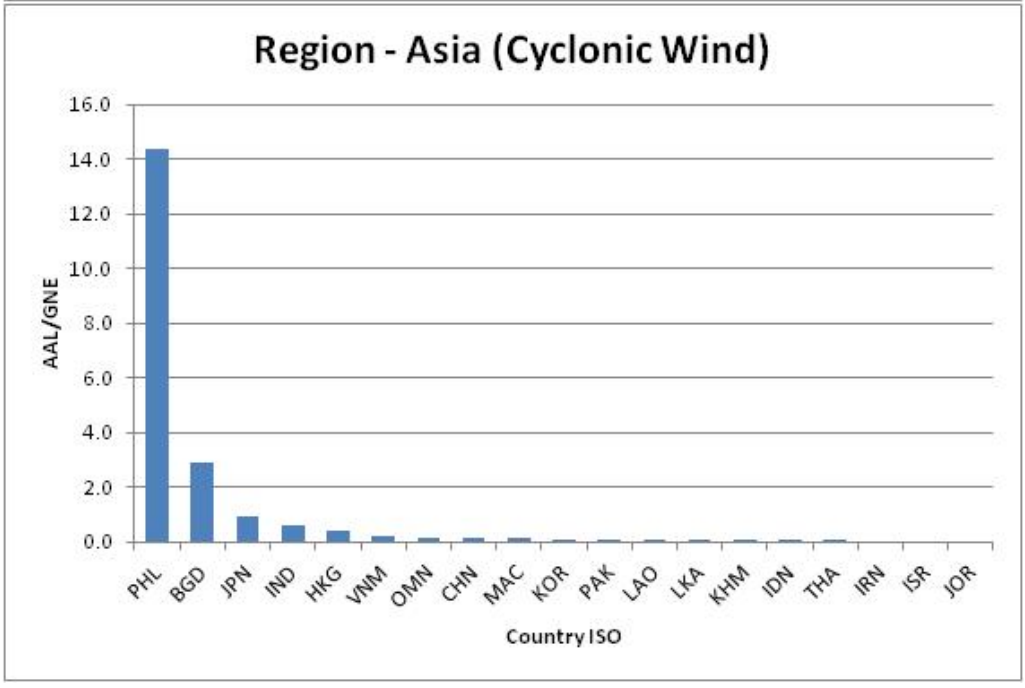

Region - Asia (Tsunami)
PML250/GDP
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JPN
HKG
PHL
IDN
MAC
BRN
IND
MYS
VNM
YEM
SYR
OMN
CHN
LBN
ISR
IRN
BGD
PAK
TUR
Country ISO

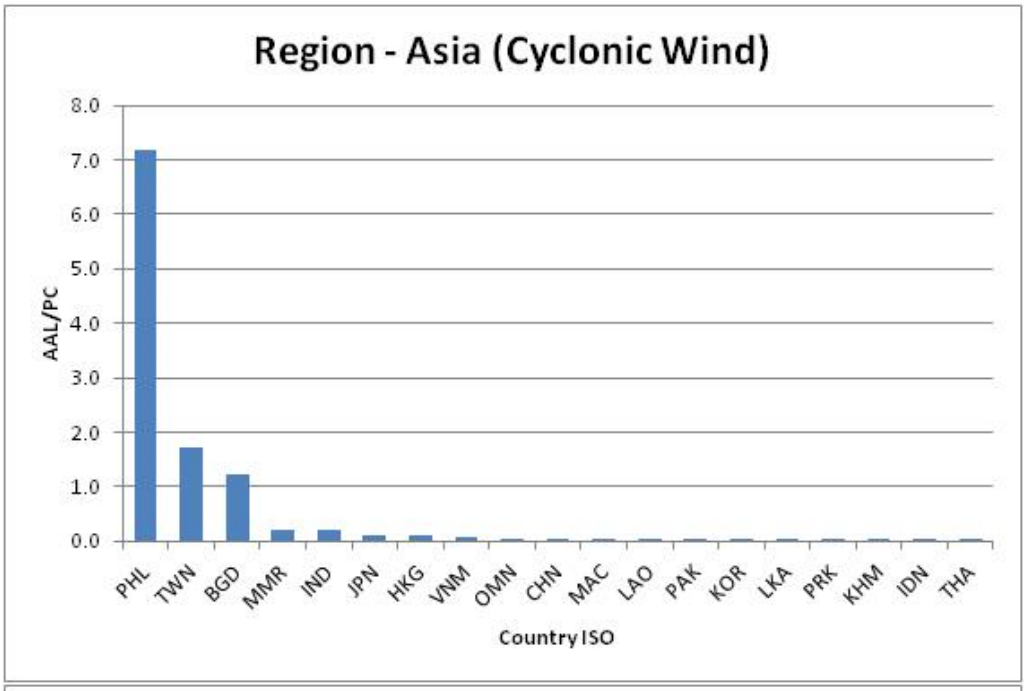

Region - Asia (Tsunami)
PML250/GNI
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JPN
HKG
IDN
PHL
MAC
BRN
IND
MYS
VNM
YEM
SYR
OMN
CHN
LBN
ISR
IRN
BGD
PAK
TUR
Country ISO

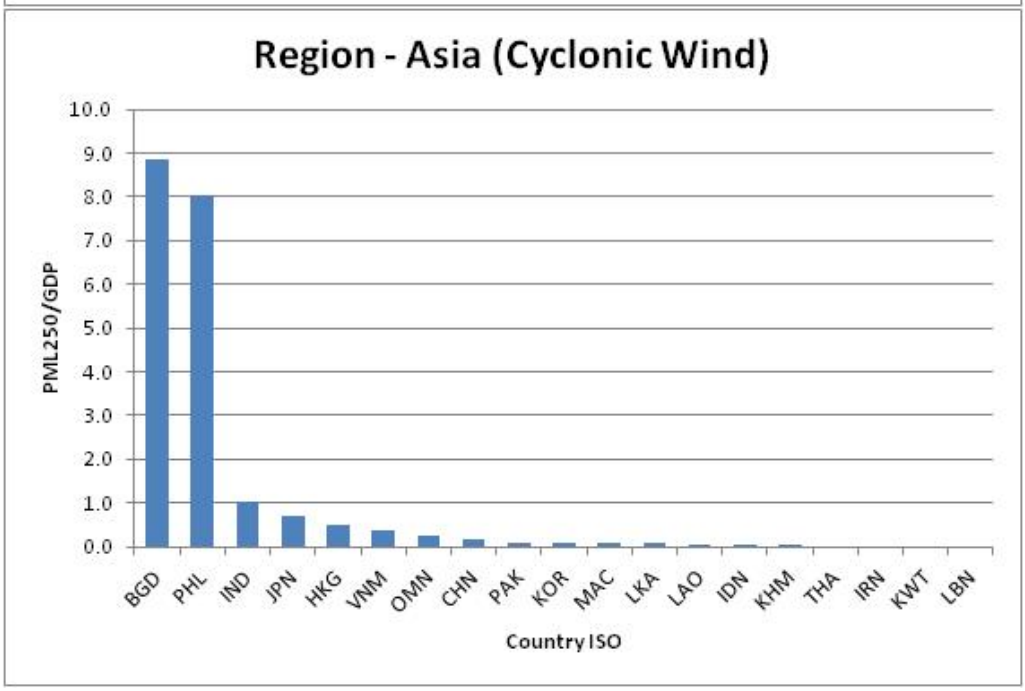

Region - Asia (Tsunami)
PML250/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
JPN
PHL
MAC
HKG
IDN
BRN
IND
MYS
TWN
VNM
PRK
MMR
CYP
ARE
KOR
CHN
THA
TUR
IRN
Country ISO

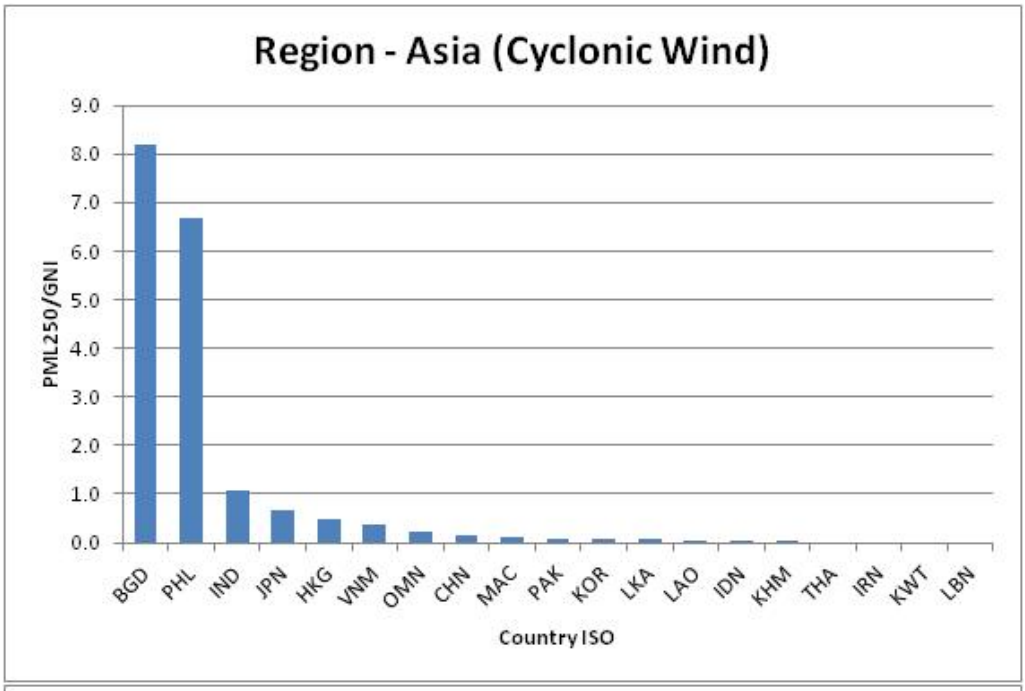

Region - Asia (Cyclonic Wind)
AAL/GFCF
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PHL
BGD
JPN
IND
HKG
VNM
OMN
MAC
CHN
PAK
KOR
LAO
LKA
KHM
IDN
THA
IRN
ISR
JOR
Country ISO

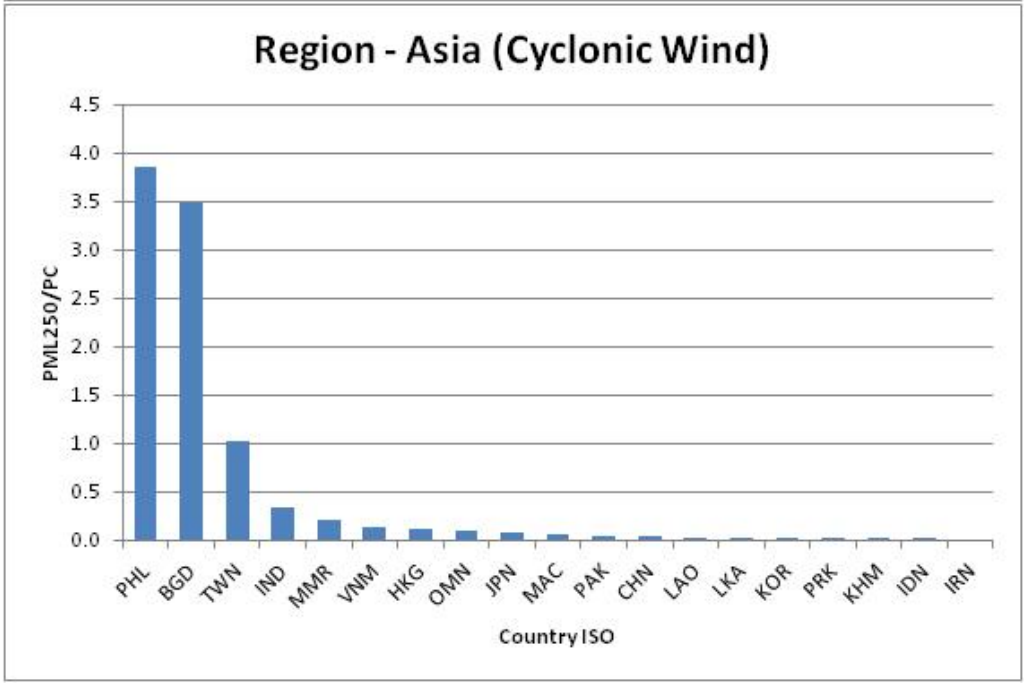

Region - Asia (Cyclonic Wind)
AAL/GGC
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PHL
BGD
IND
JPN
HKG
VNM
CHN
MAC
OMN
KOR
PAK
LAO
LKA
KHM
IDN
THA
IRN
ISR
JOR
Country ISO

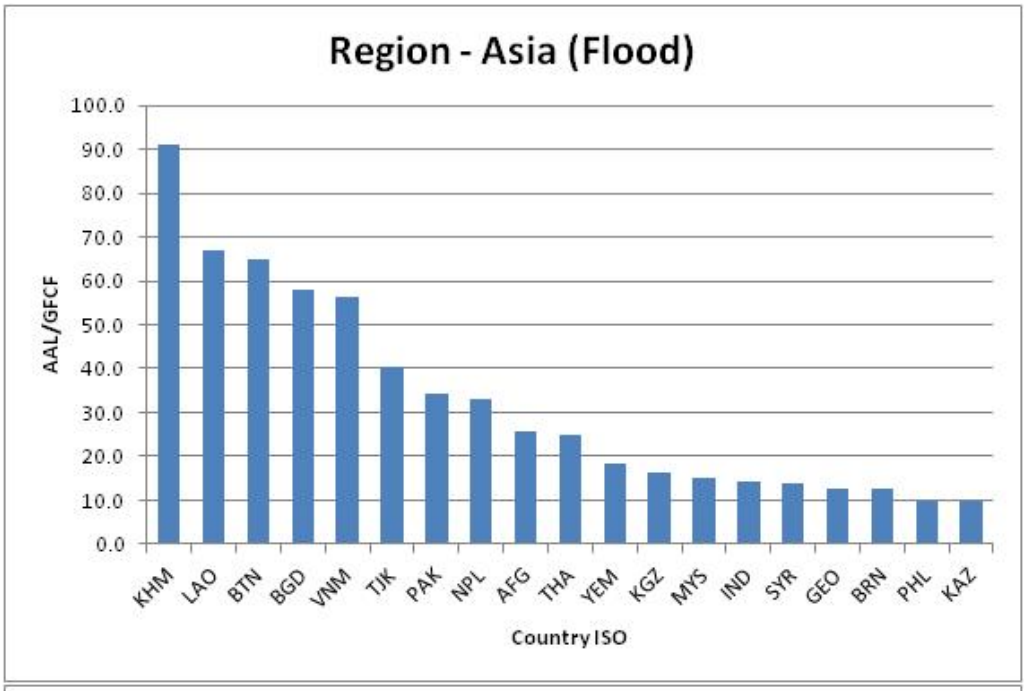

Region - Asia (Cyclonic Wind)
AAL/GNE
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
PHL
BGD
JPN
IND
HKG
VNM
OMN
CHN
MAC
KOR
PAK
LAO
LKA
KHM
IDN
THA
IRN
ISR
JOR
Country ISO

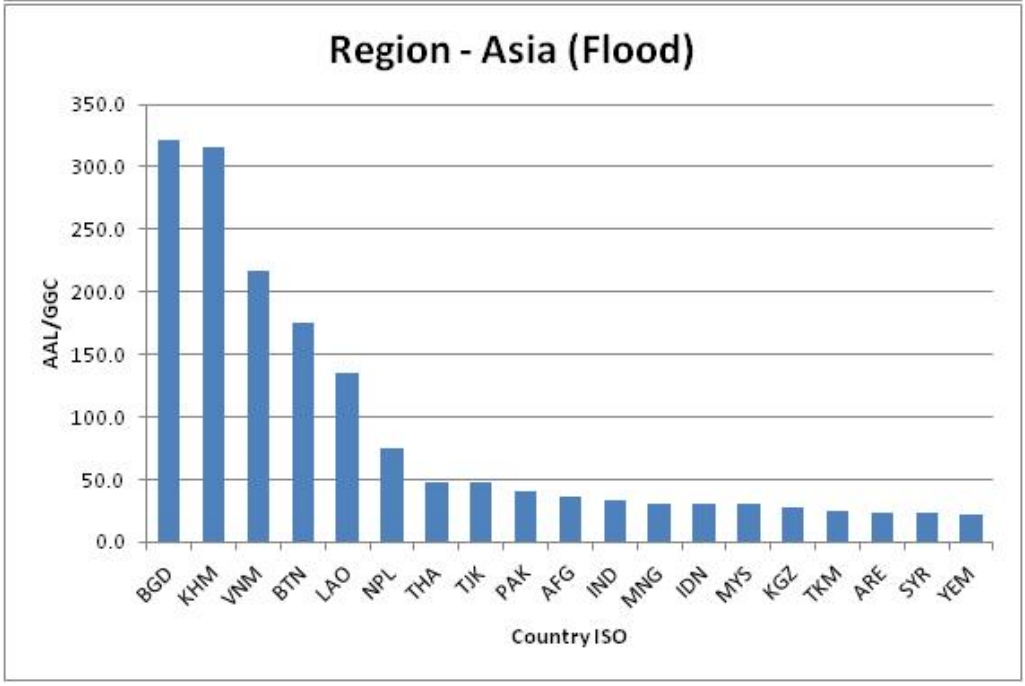

Region - Asia (Cyclonic Wind)
AAL/PC
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
TWN
BGD
MMR
IND
JPN
HKG
VNM
OMN
CHN
MAC
LAO
PAK
KOR
LKA
PRK
KHM
IDN
THA
Country ISO

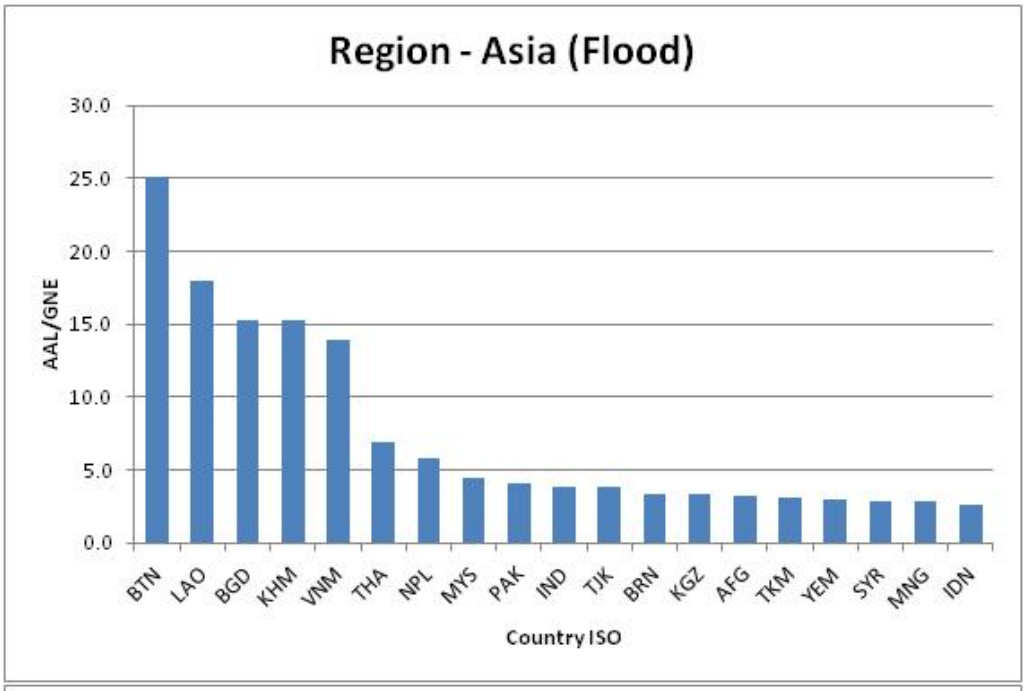

Region - Asia (Cyclonic Wind)
PML250/GDP
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
BGD
PHL
IND
JPN
HKG
VNM
OMN
CHN
PAK
KOR
MAC
LKA
LAO
IDN
KHM
THA
IRN
KWT
LBN
Country ISO

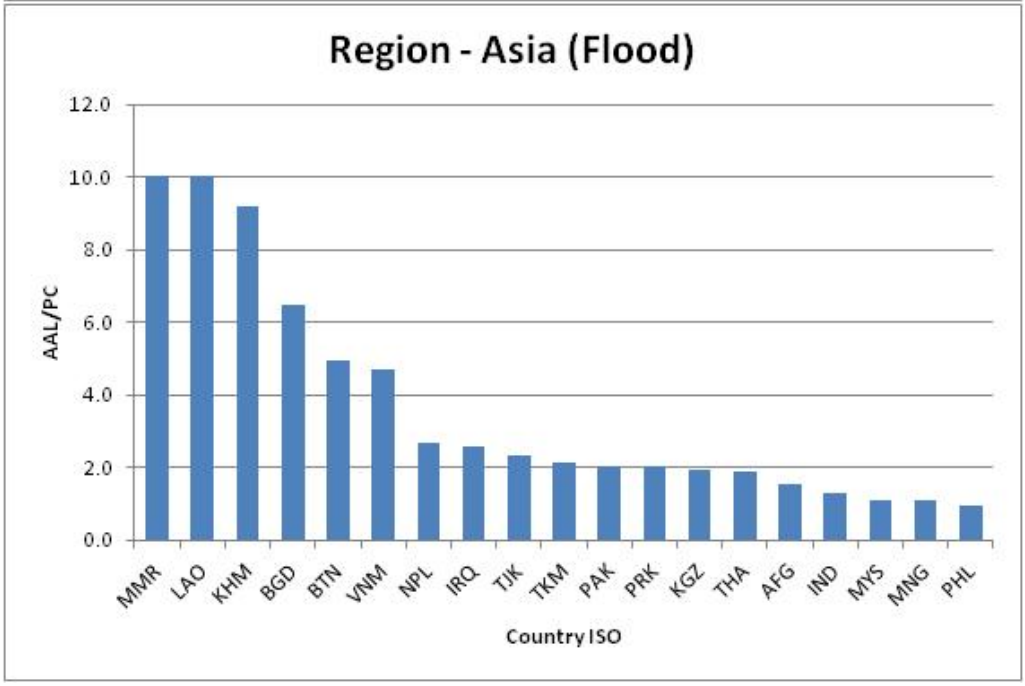

Region - Asia (Cyclonic Wind)
PML250/GNI
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
BGD
PHL
IND
JPN
HKG
VNM
OMN
CHN
MAC
PAK
KOR
LKA
LAO
IDN
KHM
THA
IRN
KWT
LBN
Country ISO


Region - Asia (Cyclonic Wind)
PML250/PC
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PHL
BGD
TWN
IND
MMR
VNM
HKG
OMN
JPN
MAC
PAK
CHN
LAO
LKA
KOR
PRK
KHM
IDN
IRN
Country ISO

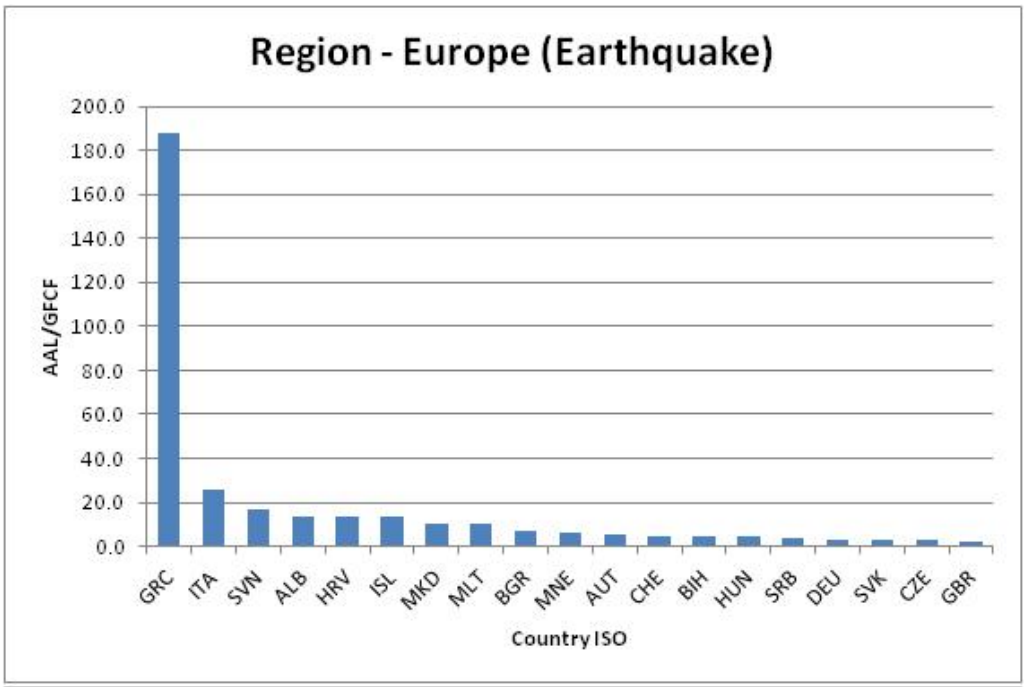

Region - Asia (Flood)
AAL/GFCF
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
KHM
LAO
BTN
BGD
VNM
TJK
PAK
NPL
AFG
THA
YEM
KGZ
MYS
IND
SYR
GEO
BRN
PHL
KAZ
Country ISO

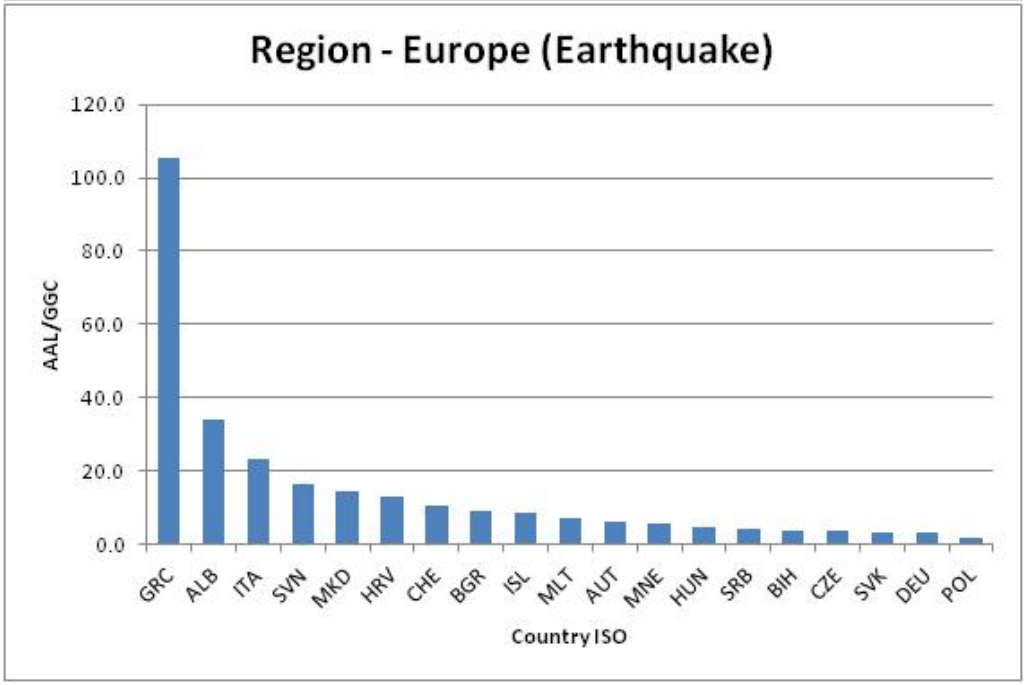

Region - Asia (Flood)
AAL/GGC
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
BGD
KHM
VNM
BTN
LAO
NPL
THA
TJK
PAK
AFG
IND
MNG
IDN
MYS
KGZ
TKM
ARE
SYR
YEM
Country ISO

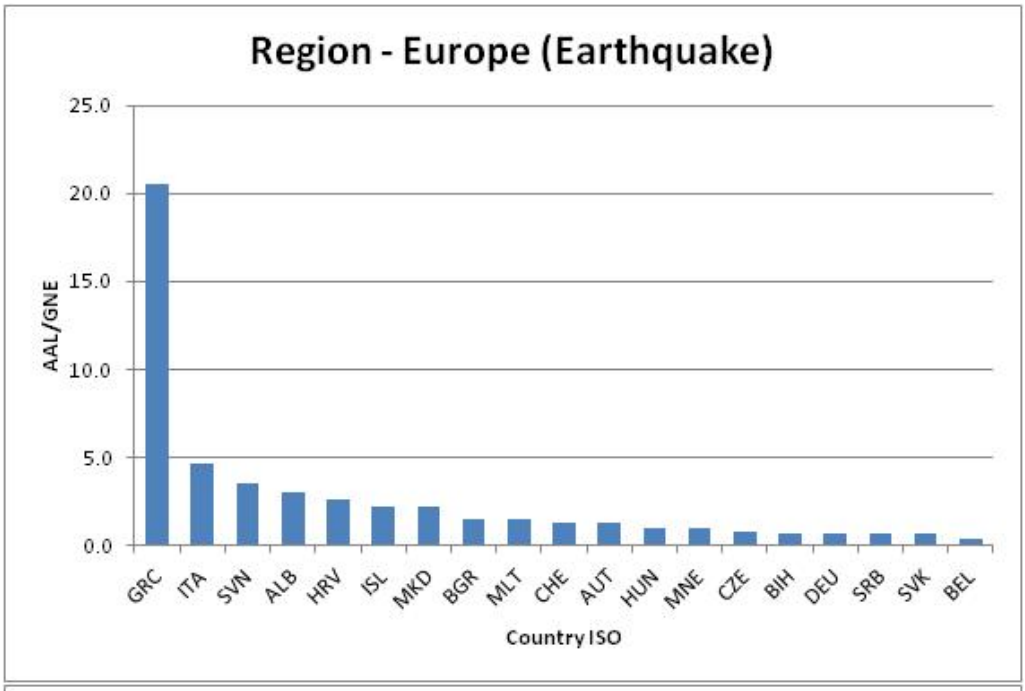

Region - Asia (Flood)
AAL/GNE
30.0
25.0
20.0
15.0
10.0
5.0
0.0
BTN
LAO
BGD
KHM
VNM
THA
NPL
MYS
PAK
IND
TJK
BRN
KGZ
AFG
TKM
YEM
SYR
MNG
IDN
Country ISO

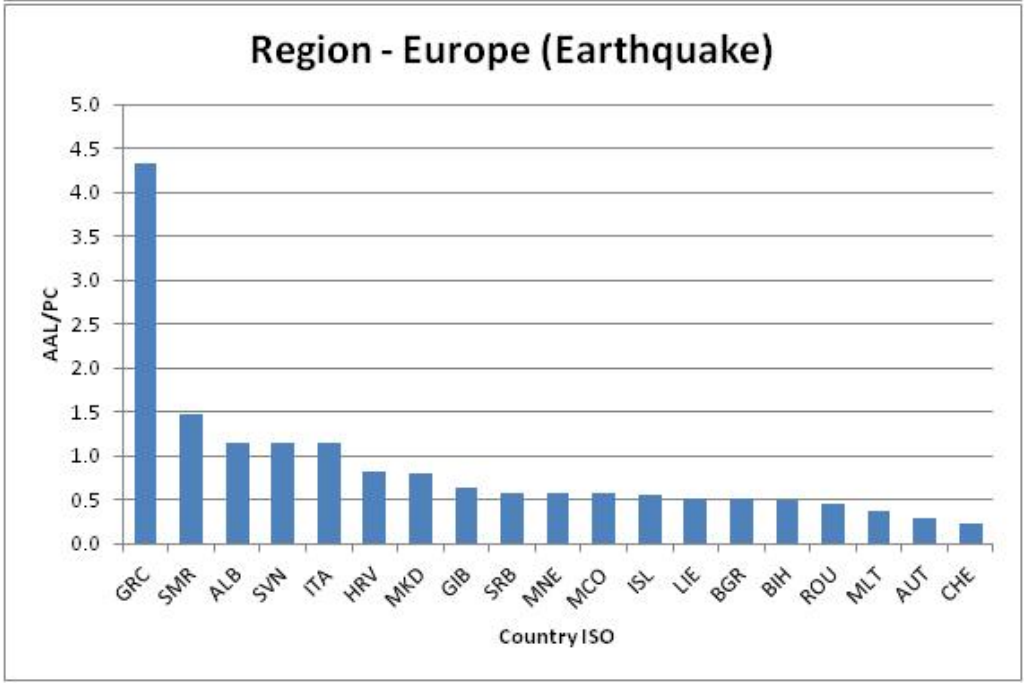

Region - Asia (Flood)
AAL/PC
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MMR
LAO
KHM
BGD
BTN
VNM
NPL
IRQ
TJK
TKM
PAK
PRK
KGZ
THA
AFG
IND
MYS
MNG
PHL
Country ISO

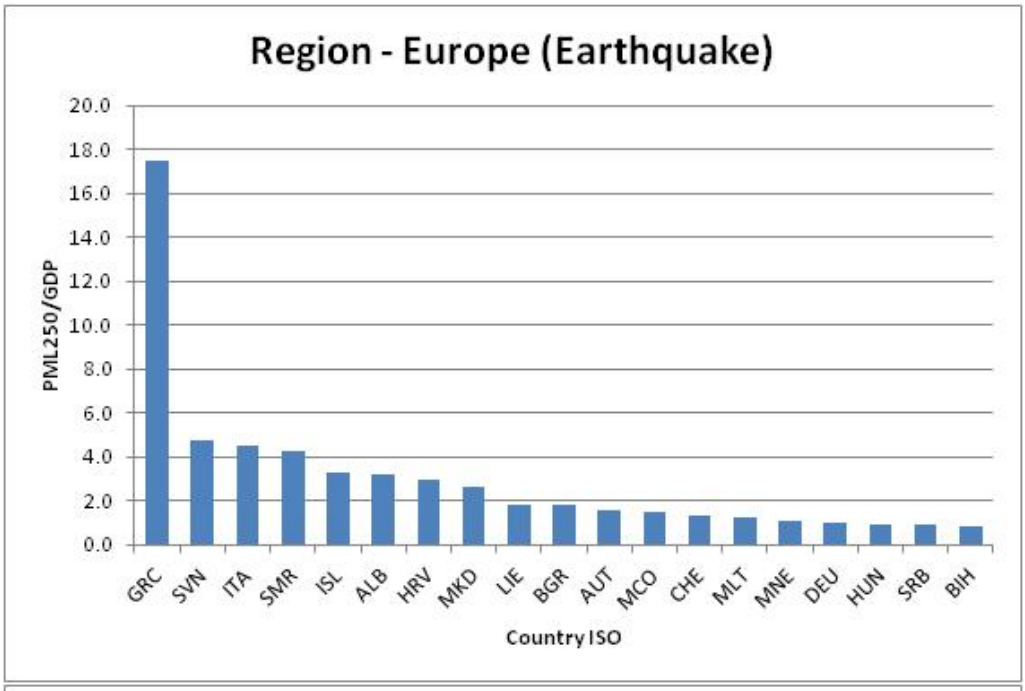
Europe

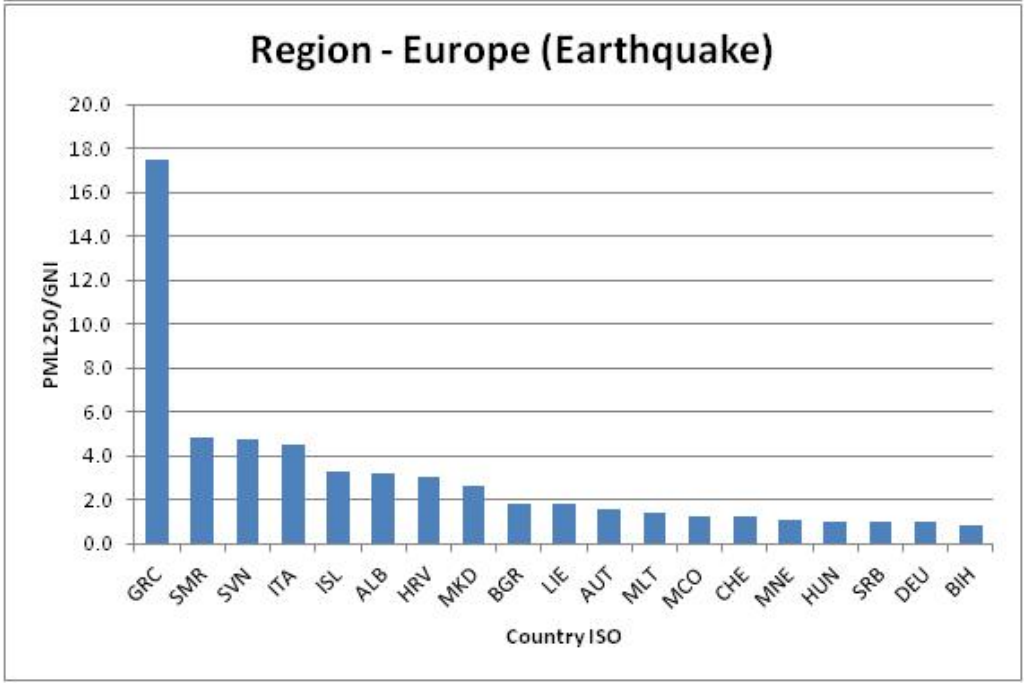

Region - Europe (Earthquake)
AAL/GFCF
200.0
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
GRC
ITA
SVN
ALB
HRV
ISL
MKD
MLT
BGR
MNE
AUT
CHE
BIH
HUN
SRB
DEU
SVK
CZE
GBR
Country ISO

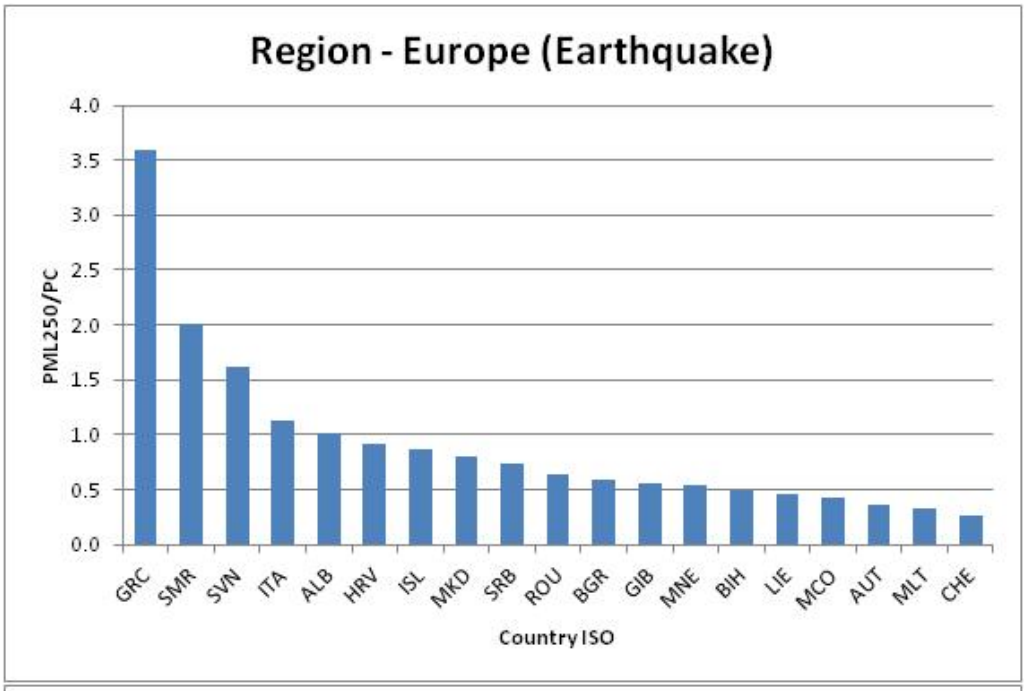

Region - Europe (Earthquake)
AAL/GGC
120.0
100.0
80.0
60.0
40.0
20.0
0.0
GRC
ALB
ITA
SVN
MKD
HRV
CHE
BGR
ISL
MLT
AUT
MNE
HUN
SRB
BIH
CZE
SVK
DEU
POL
Country ISO

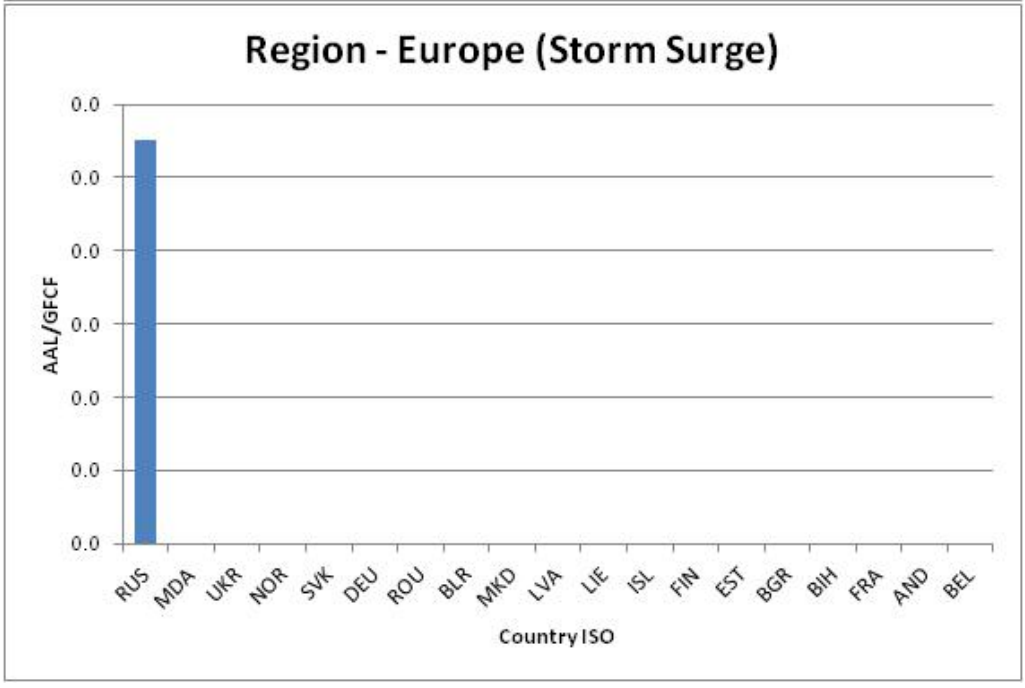

Region - Europe (Earthquake)
AAL/GNE
25.0
20.0
15.0
10.0
5.0
0.0
GRC
ITA
SVN
ALB
HRV
ISL
MKD
BGR
MLT
CHE
AUT
HUN
MNE
CZE
BIH
DEU
SRB
SVK
BEL
Country ISO

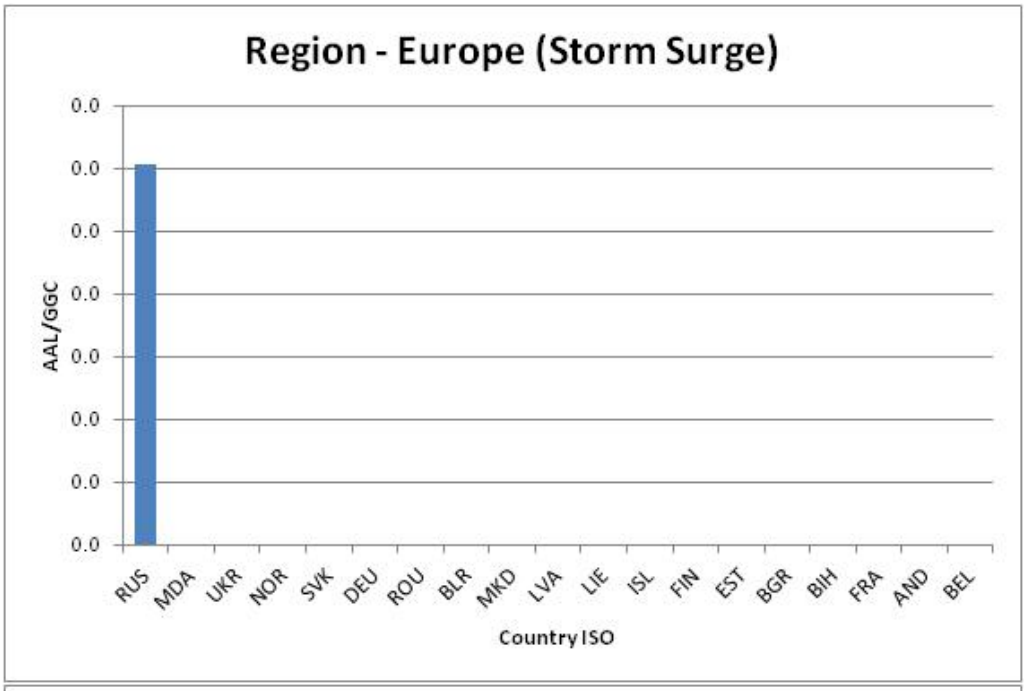

Region - Europe (Earthquake)
AAL/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
GRC
SMR
ALB
SVN
ITA
HRV
MKD
GIB
SRB
MNE
MCO
ISL
LIE
BGR
BIH
ROU
MLT
AUT
CHE
Country ISO

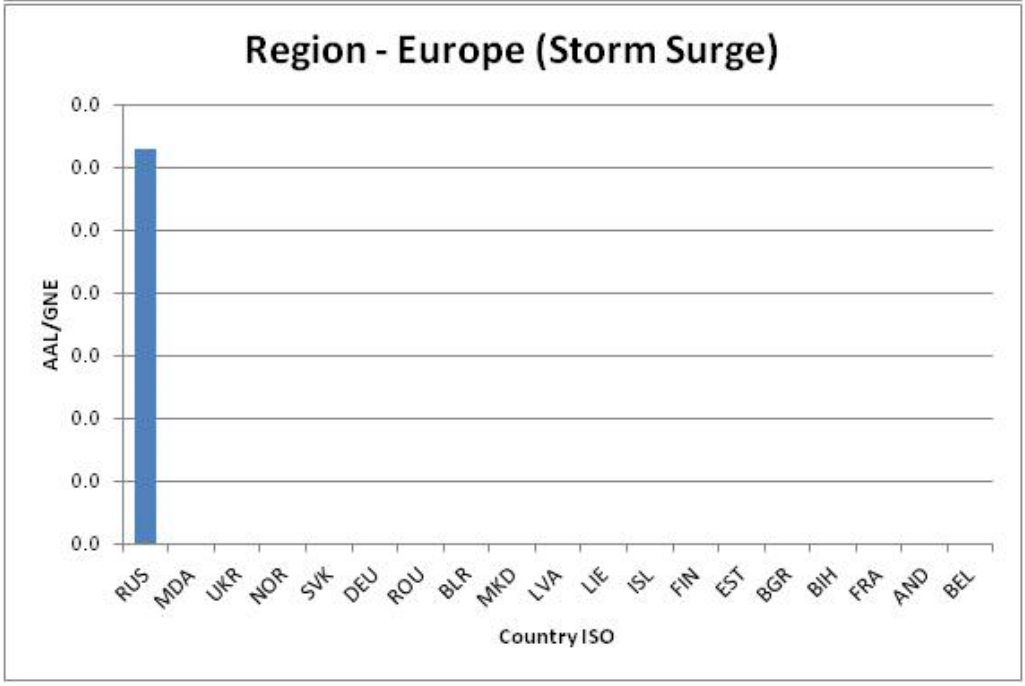

Region - Europe (Earthquake)
PML250/GDP
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GRC
SVN
ITA
SMR
ISL
ALB
HRV
MKD
LIE
BGR
AUT
MCO
CHE
MLT
MNE
DEU
HUN
SRB
BIH
Country ISO

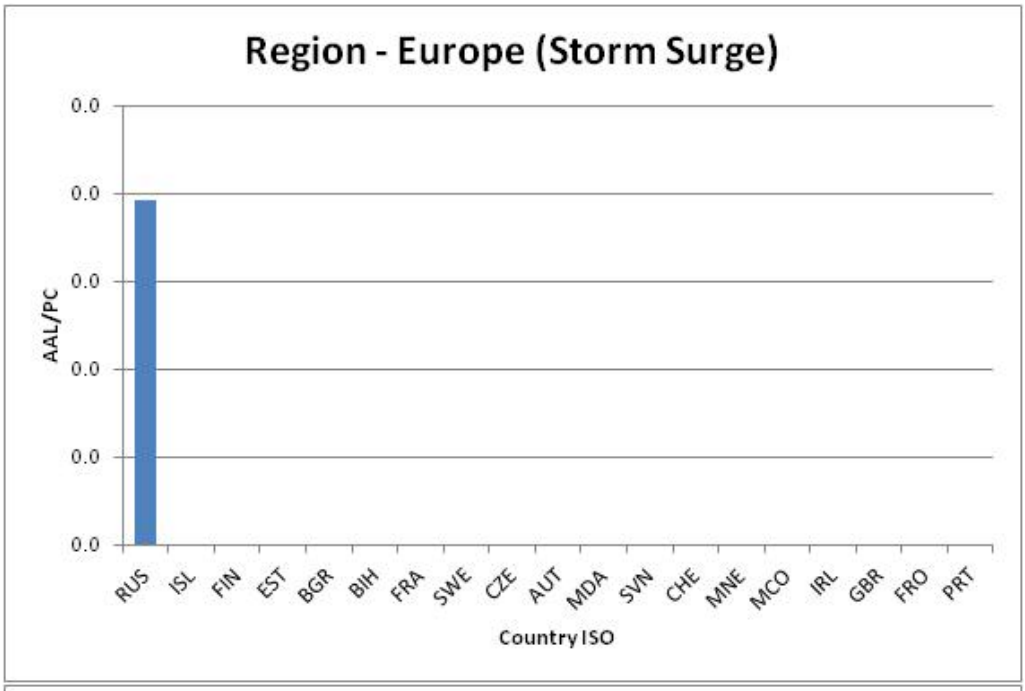

Region - Europe (Earthquake)
PML250/GNI
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GRC
SMR
SVN
ITA
ISL
ALB
HRV
MKD
BGR
LIE
AUT
MLT
MCO
CHE
MNE
HUN
SRB
DEU
BIH
Country ISO

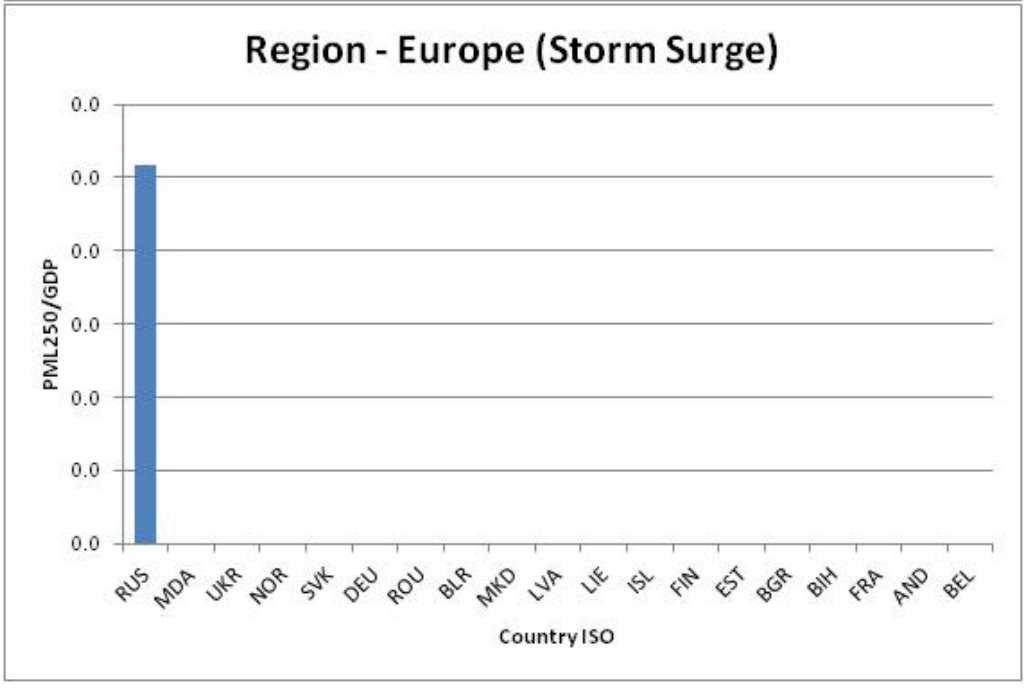

Region - Europe (Earthquake)
PML250/PC
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
GRC
SMR
SVN
ITA
ALB
HRV
ISL
MKD
SRB
ROU
BGR
GIB
MNE
BIH
LIE
MCO
AUT
MLT
CHE
Country ISO

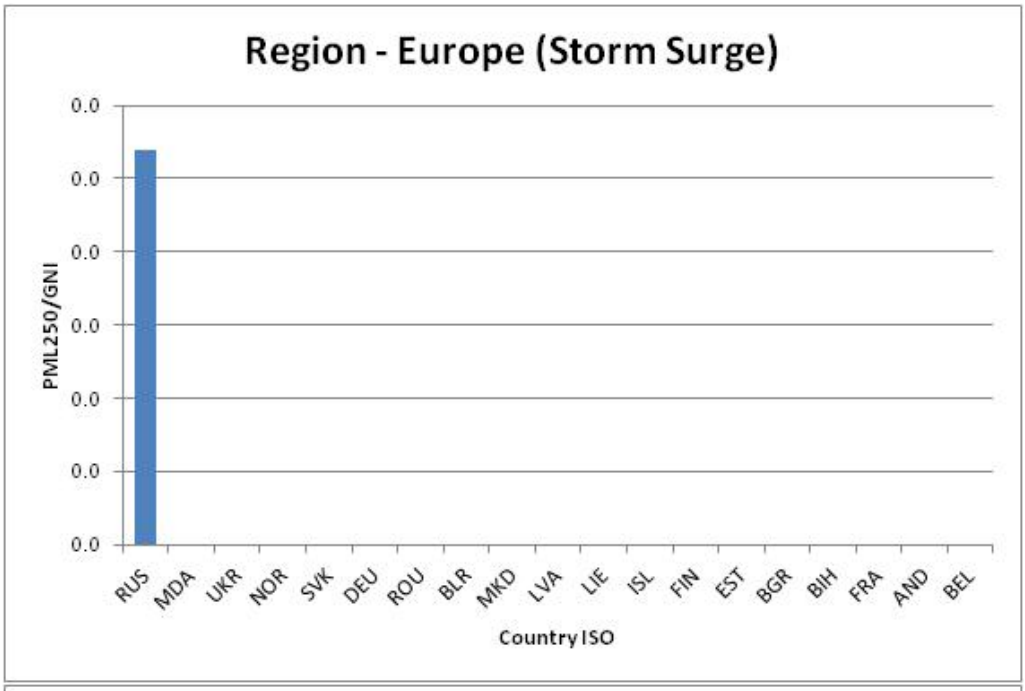

Region - Europe (Storm Surge)
AAL/GFCF
0.0
0.0
0.0
0.0
0.0
0.0
RUS
MDA
UKR
NOR
SVK
DEU
ROU
BLR
MKD
LVA
LIE
ISL
FIN
EST
BGR
BIH
FRA
AND
BEL
Country ISO

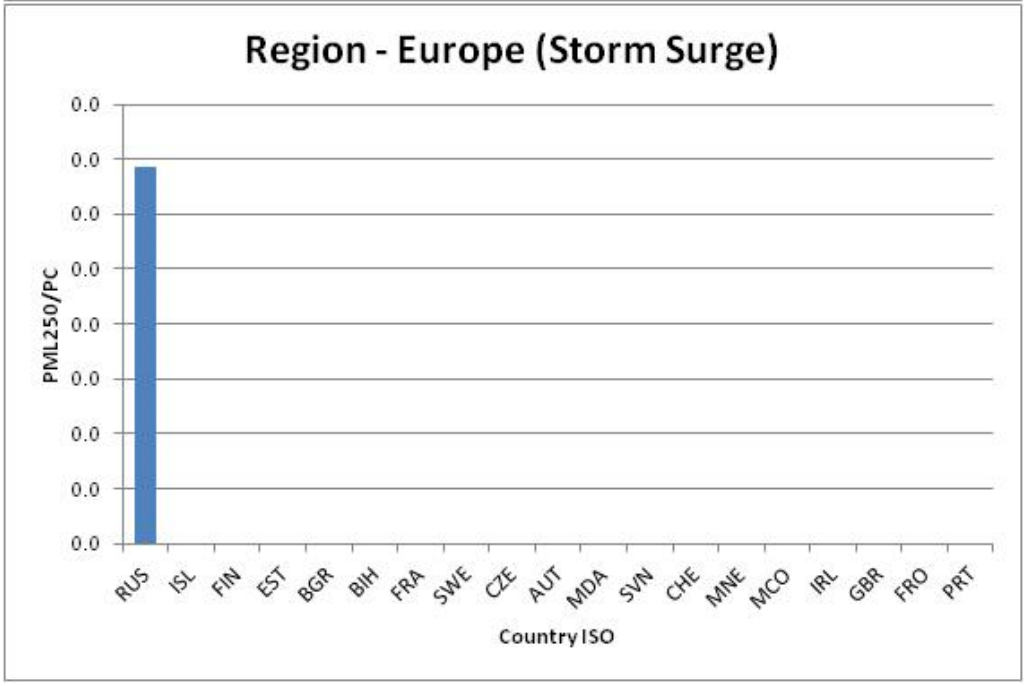

Region - Europe (Storm Surge)
AAL/GGC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
RUS
MDA
UKR
NOR
SVK
DEU
ROU
BLR
MKD
LVA
LIE
ISL
FIN
EST
BGR
BIH
FRA
AND
BEL
Country ISO

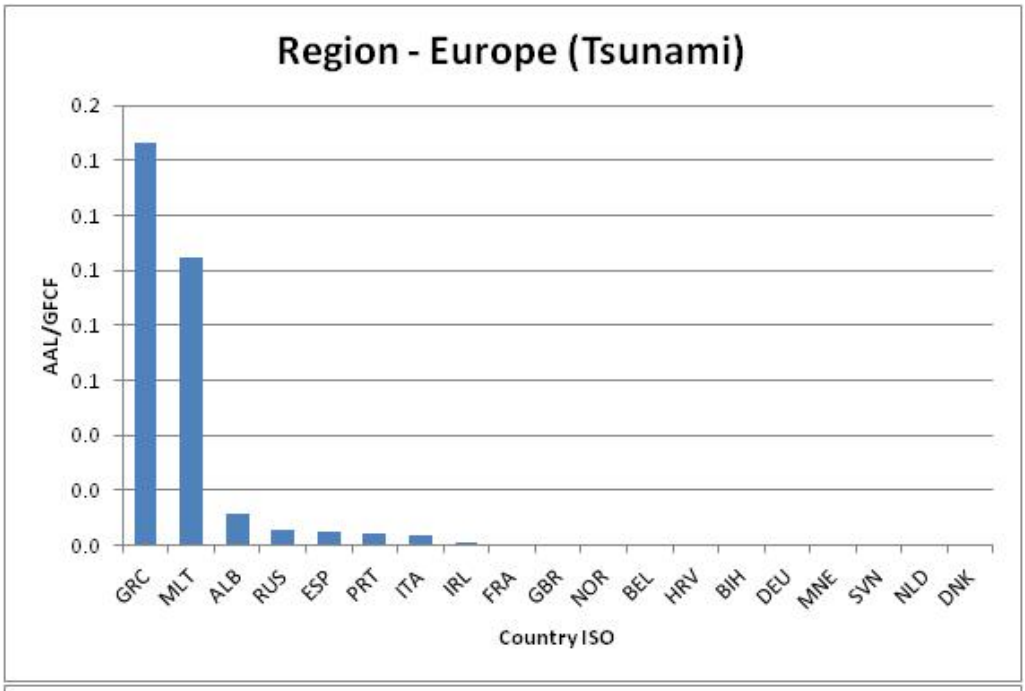

Region - Europe (Storm Surge)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
RUS
MDA
UKR
NOR
SVK
DEU
ROU
BLR
MKD
LVA
LIE
ISL
FIN
EST
BGR
BIH
FRA
AND
BEL
Country ISO

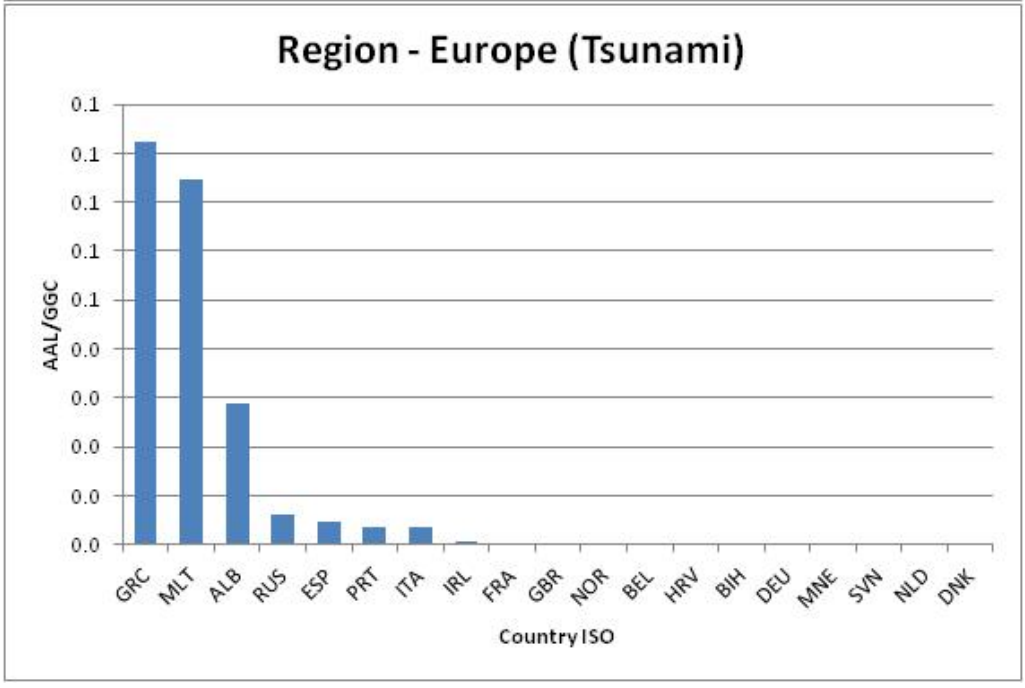

Region - Europe (Storm Surge)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
RUS
ISL
FIN
EST
BGR
BIH
FRA
SWE
CZE
AUT
MDA
SVN
CHE
MNE
MCO
IRL
GBR
FRO
PRT
Country ISO

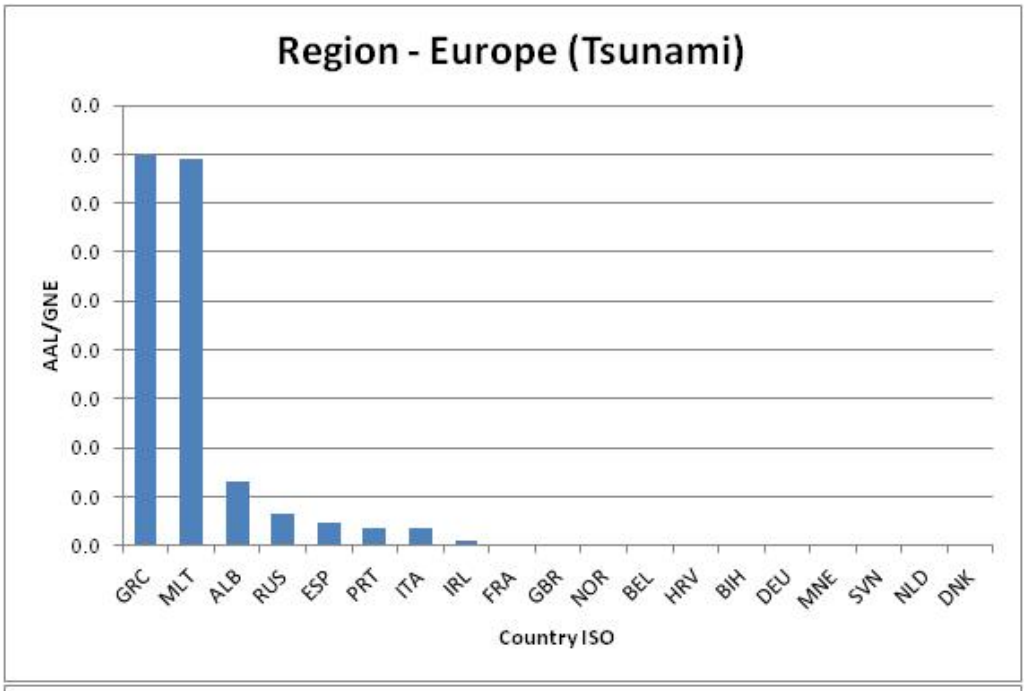

Region - Europe (Storm Surge)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
0.0
RUS
MDA
UKR
NOR
SVK
DEU
ROU
BLR
MKD
LVA
LIE
ISL
FIN
EST
BGR
BIH
FRA
AND
BEL
Country ISO

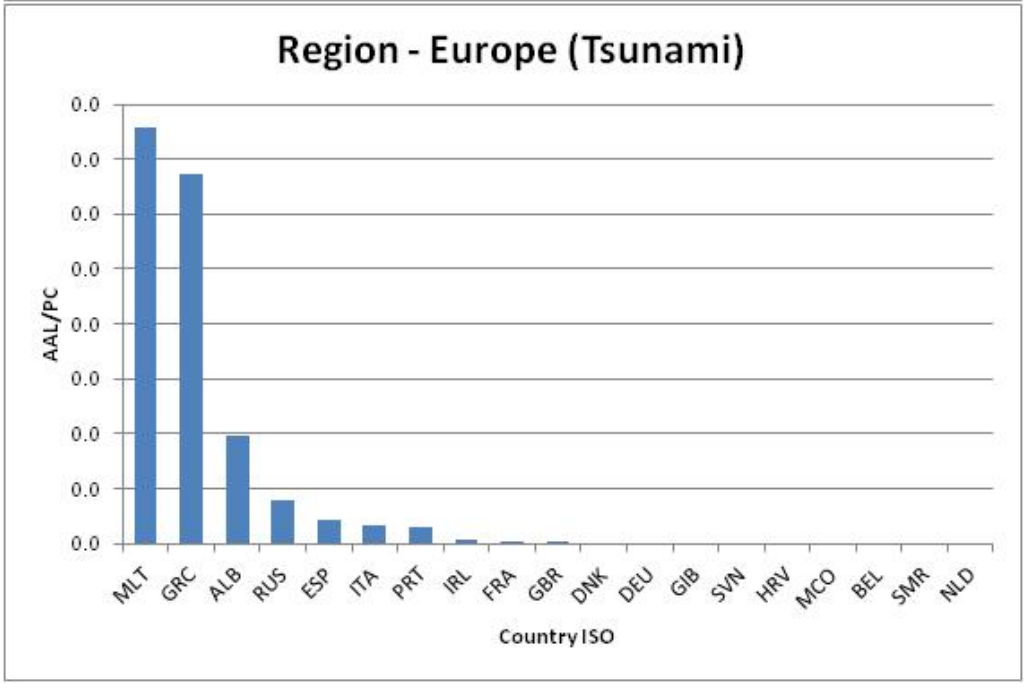

Region - Europe (Storm Surge)
PML250/GNI
0.0
0.0
0.0
0.0
0.0
0.0
0.0
RUS
MDA
UKR
NOR
SVK
DEU
ROU
BLR
MKD
LVA
LIE
ISL
FIN
EST
BGR
BIH
FRA
AND
BEL
Country ISO

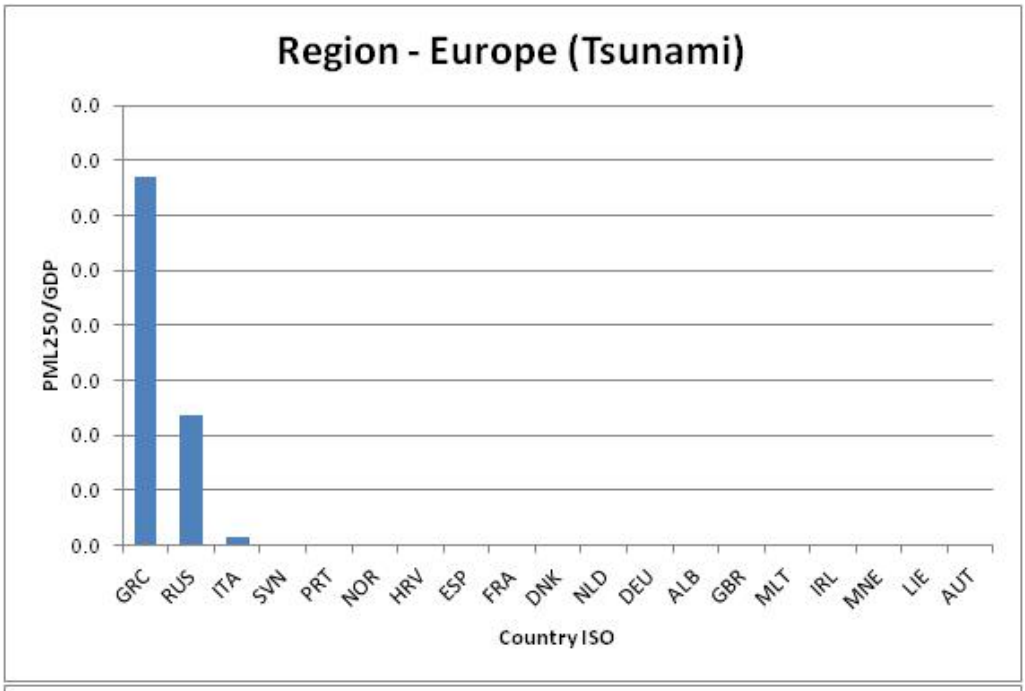

Region - Europe (Storm Surge)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
RUS
ISL
FIN
EST
BGR
BIH
FRA
SWE
CZE
AUT
MDA
SVN
CHE
MNE
MCO
IRL
GBR
FRO
PRT
Country ISO

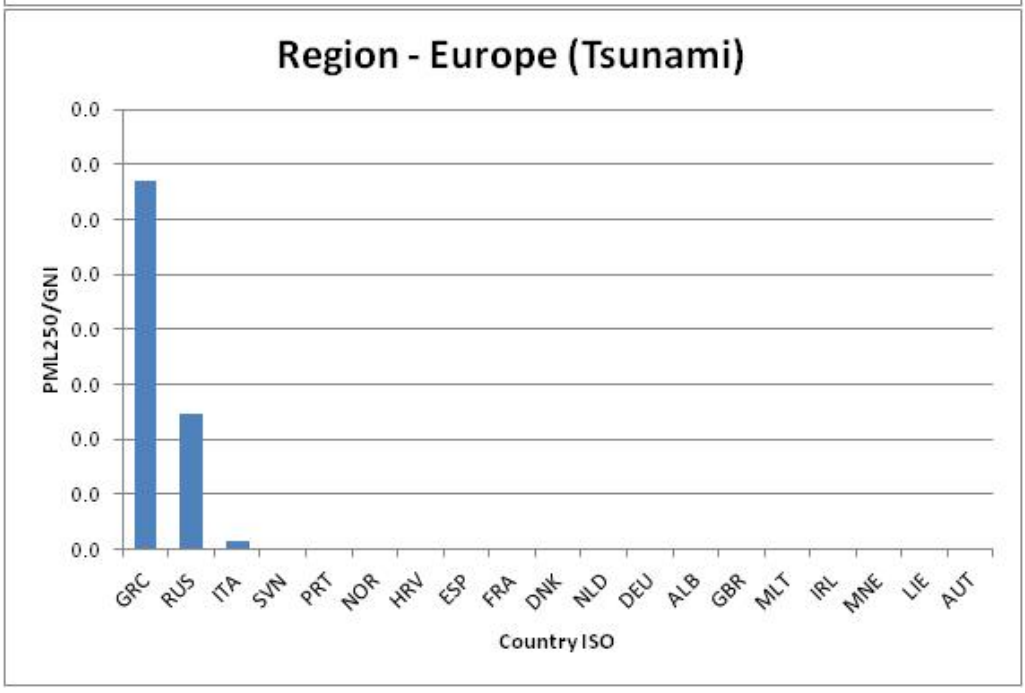

Region - Europe (Tsunami)
AAL/GFCF
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
GRC
MLT
ALB
RUS
ESP
PRT
ITA
IRL
FRA
GBR
NOR
BEL
HRV
BIH
DEU
MNE
SVN
NLD
DNK
Country ISO

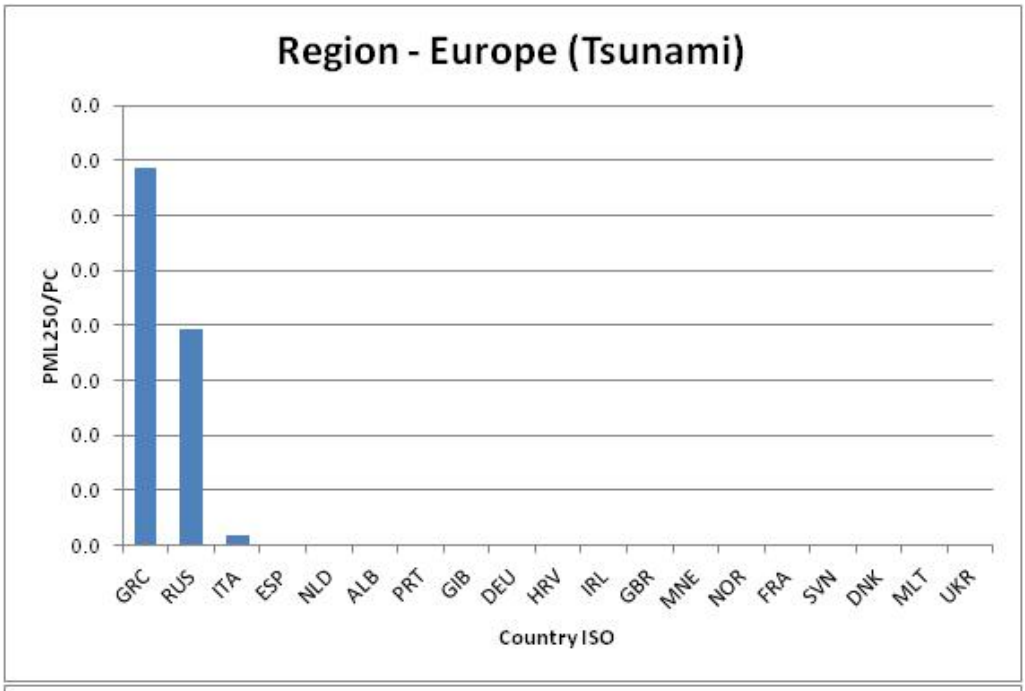

Region - Europe (Tsunami)
AAL/GGC
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
GRC
MLT
ALB
RUS
ESP
PRT
ITA
IRL
FRA
GBR
NOR
BEL
HRV
BIH
DEU
MNE
SVN
NLD
DNK
Country ISO

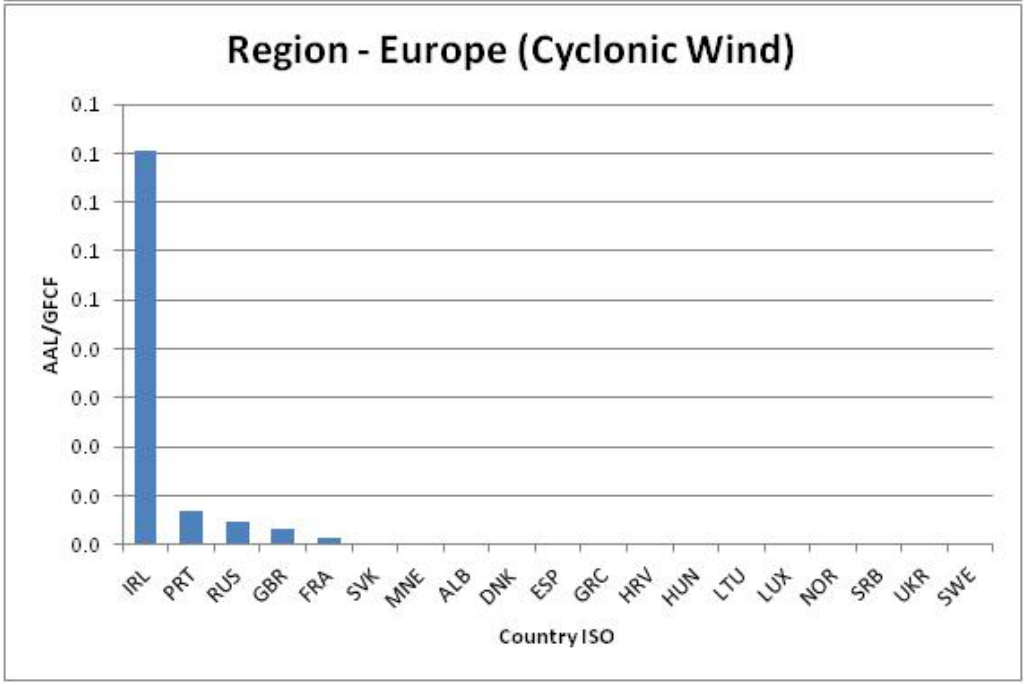

Region - Europe (Tsunami)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
GRC
MLT
ALB
RUS
ESP
PRT
ITA
IRL
FRA
GBR
NOR
BEL
HRV
BIH
DEU
MNE
SVN
NLD
DNK
Country ISO

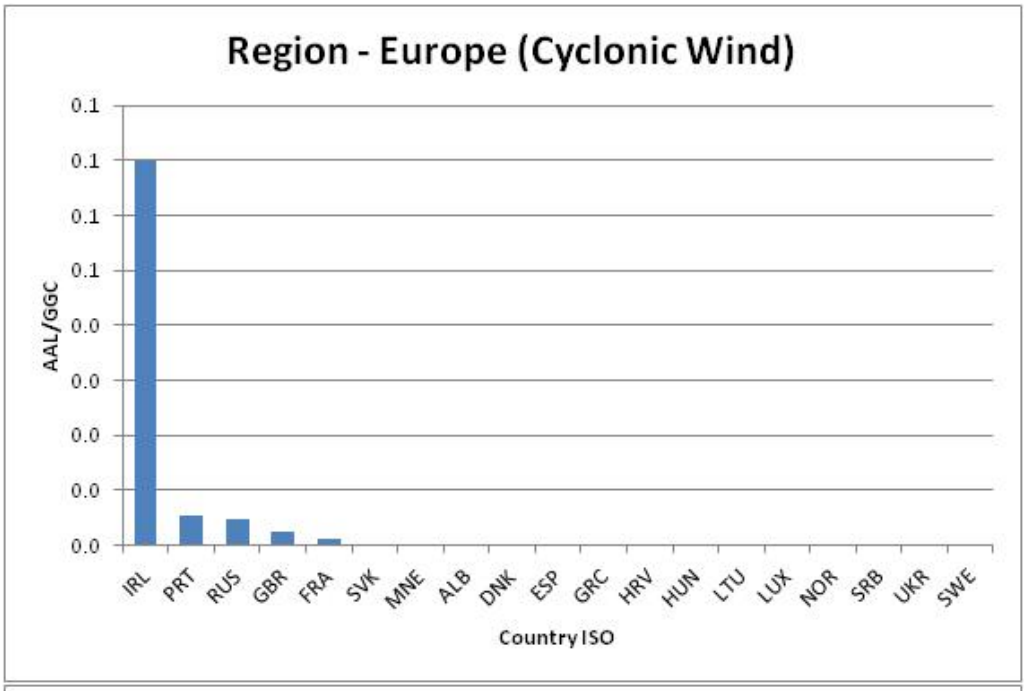

Region - Europe (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
MLT
GRC
ALB
RUS
ESP
ITA
PRT
IRL
FRA
GBR
DNK
DEU
GIB
SVN
HRV
MCO
BEL
SMR
NLD
Country ISO

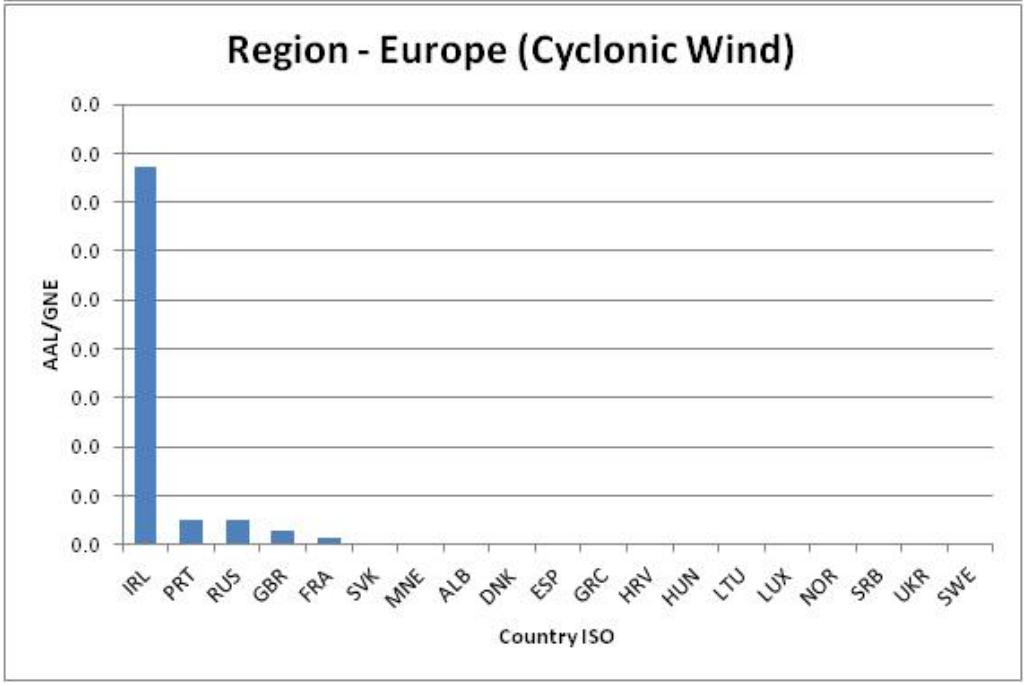

Region - Europe (Tsunami)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
GRC
RUS
ITA
SVN
PRT
NOR
HRV
ESP
FRA
DNK
NLD
DEU
ALB
GBR
MLT
IRL
MNE
LIE
AUT
Country ISO

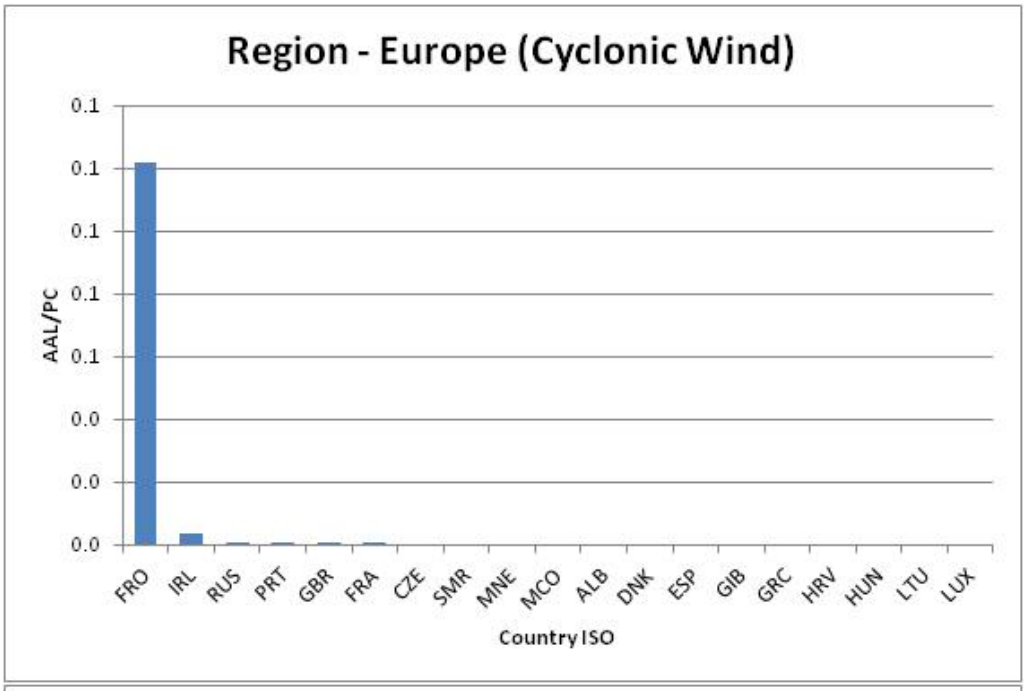

Region - Europe (Tsunami)
PML250/GNI
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
GRC
RUS
ITA
SVN
PRT
NOR
HRV
ESP
FRA
DNK
NLD
DEU
ALB
GBR
MLT
IRL
MNE
LIE
AUT
Country ISO

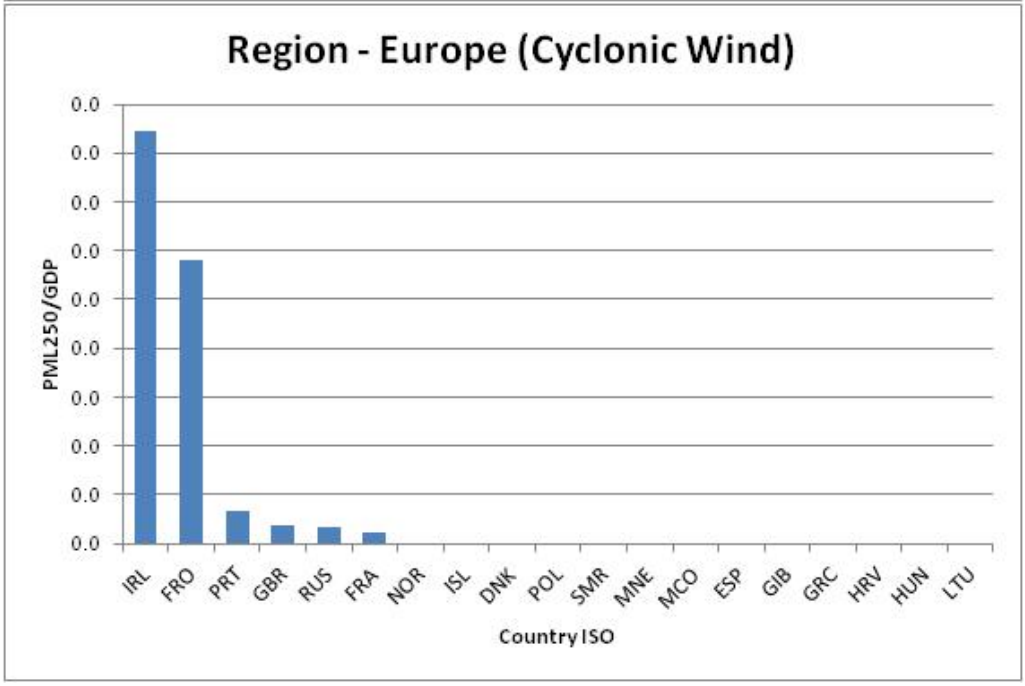

Region - Europe (Tsunami)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
GRC
RUS
ITA
ESP
NLD
ALB
PRT
GIB
DEU
HRV
IRL
GBR
MNE
NOR
FRA
SVN
DNK
MLT
UKR
Country ISO

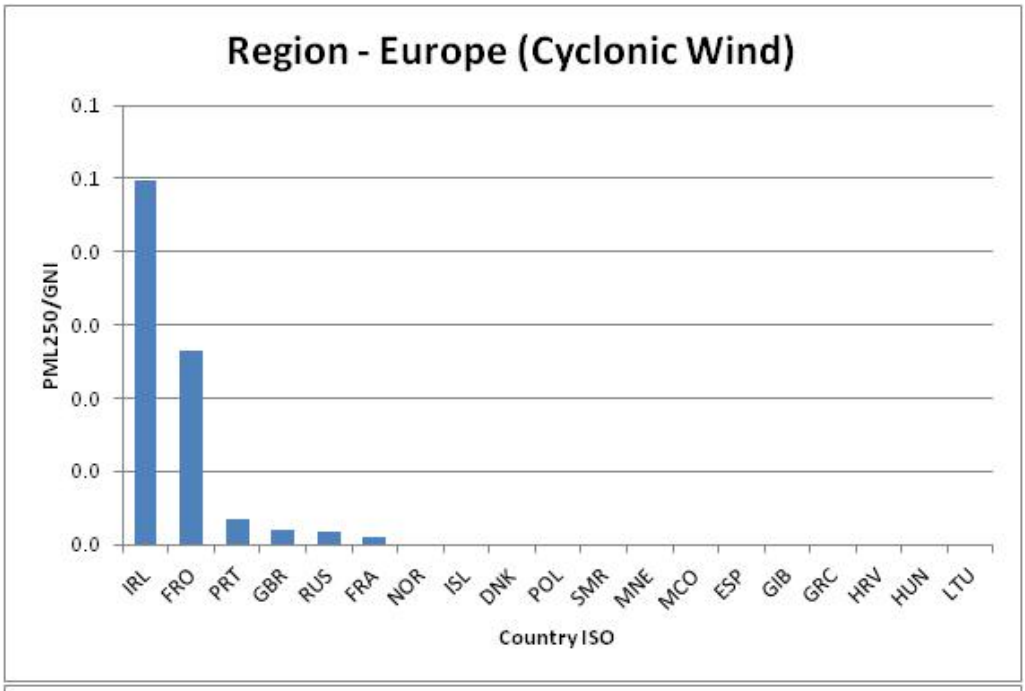

Region - Europe (Cyclonic Wind)
AAL/GFCF
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
IRL
PRT
RUS
GBR
FRA
SVK
MNE
ALB
DNK
ESP
GRC
HRV
HUN
LTU
LUX
NOR
SRB
UKR
SWE
Country ISO

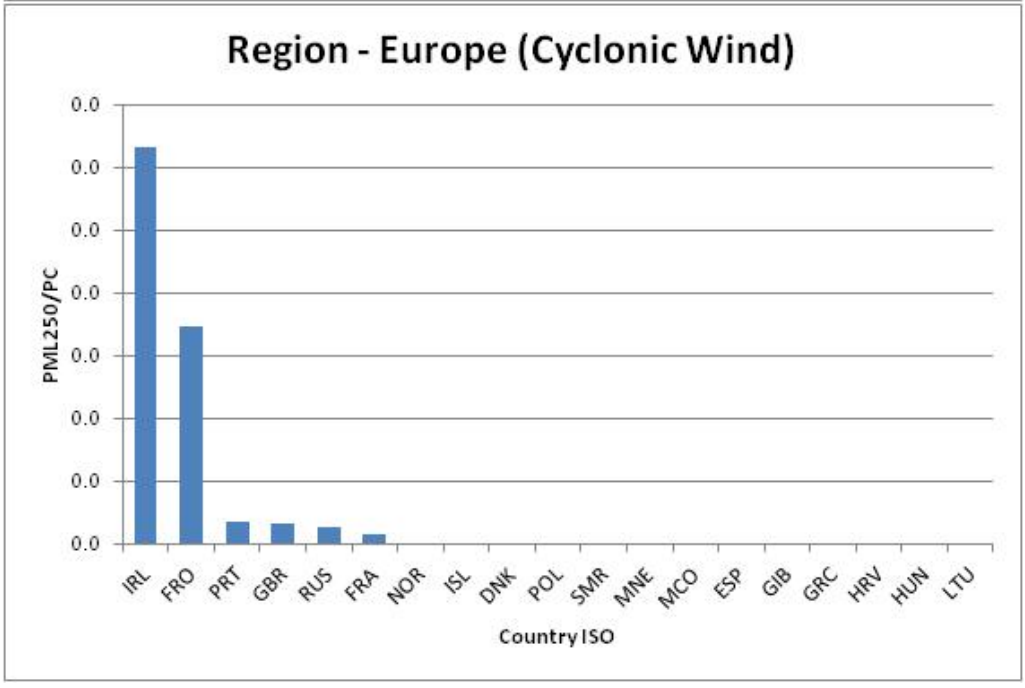

Region - Europe (Cyclonic Wind)
AAL/GGC
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
IRL
PRT
RUS
GBR
FRA
SVK
MNE
ALB
DNK
ESP
GRC
HRV
HUN
LTU
LUX
NOR
SRB
UKR
SWE
Country ISO

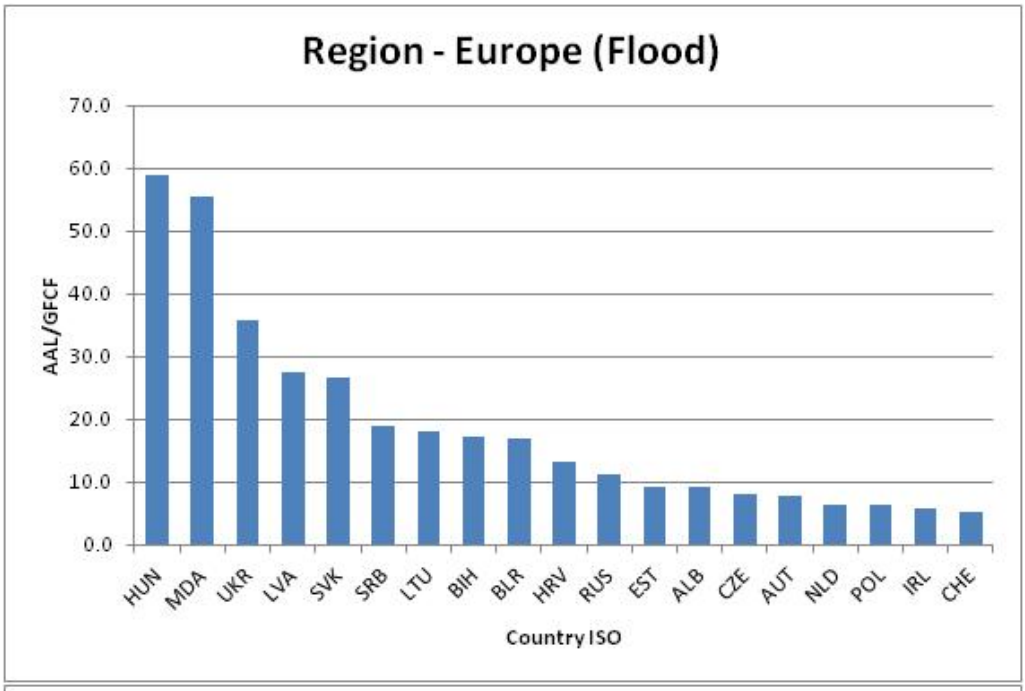

Region - Europe (Cyclonic Wind)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
IRL
PRT
RUS
GBR
FRA
SVK
MNE
ALB
DNK
ESP
GRC
HRV
HUN
LTU
LUX
NOR
SRB
UKR
SWE
Country ISO

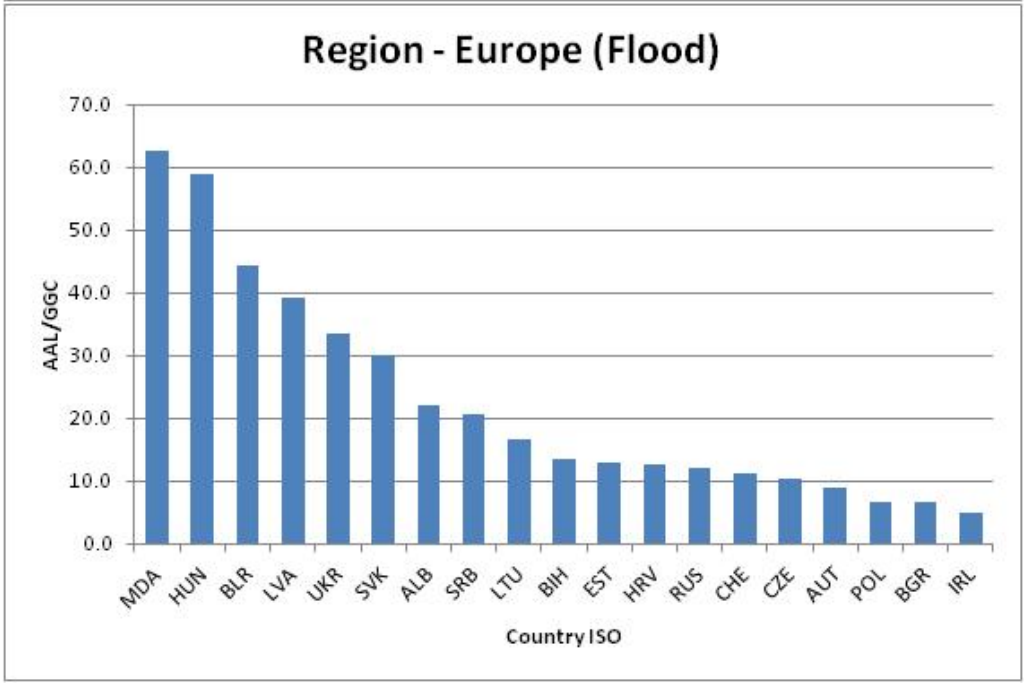

Region - Europe (Cyclonic Wind)
AAL/PC
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
FRO
IRL
RUS
PRT
GBR
FRA
CZE
SMR
MNE
MCO
ALB
DNK
ESP
GIB
GRC
HRV
HUN
LTU
LUX
Country ISO

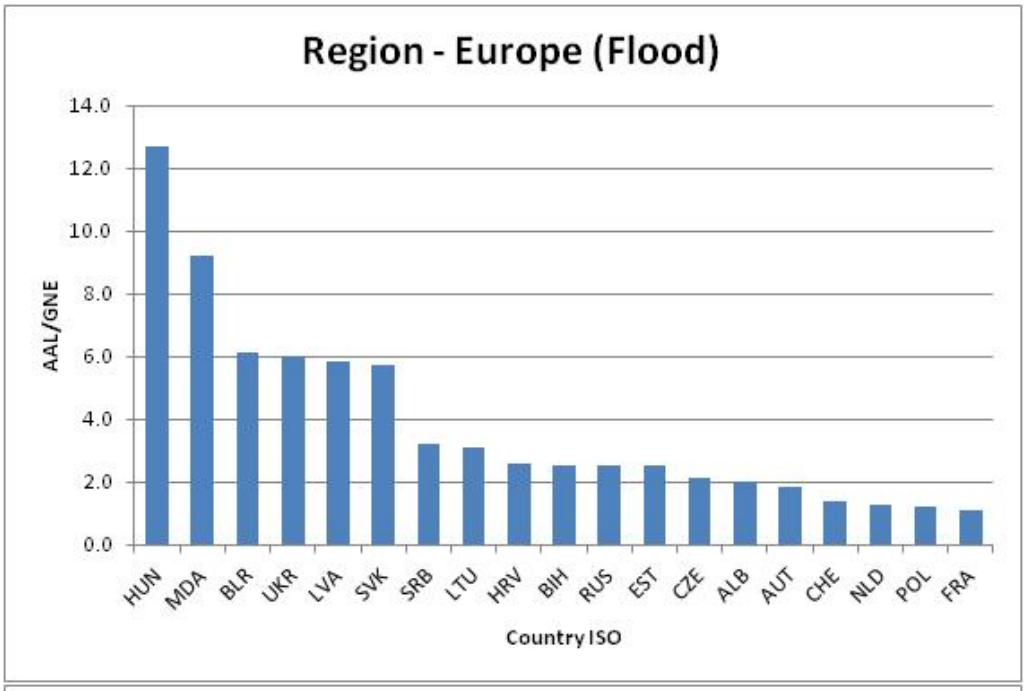

Region - Europe (Cyclonic Wind)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
IRL
FRO
PRT
GBR
RUS
FRA
NOR
ISL
DNK
POL
SMR
MNE
MCO
ESP
GIB
GRC
HRV
HUN
LTU
Country ISO

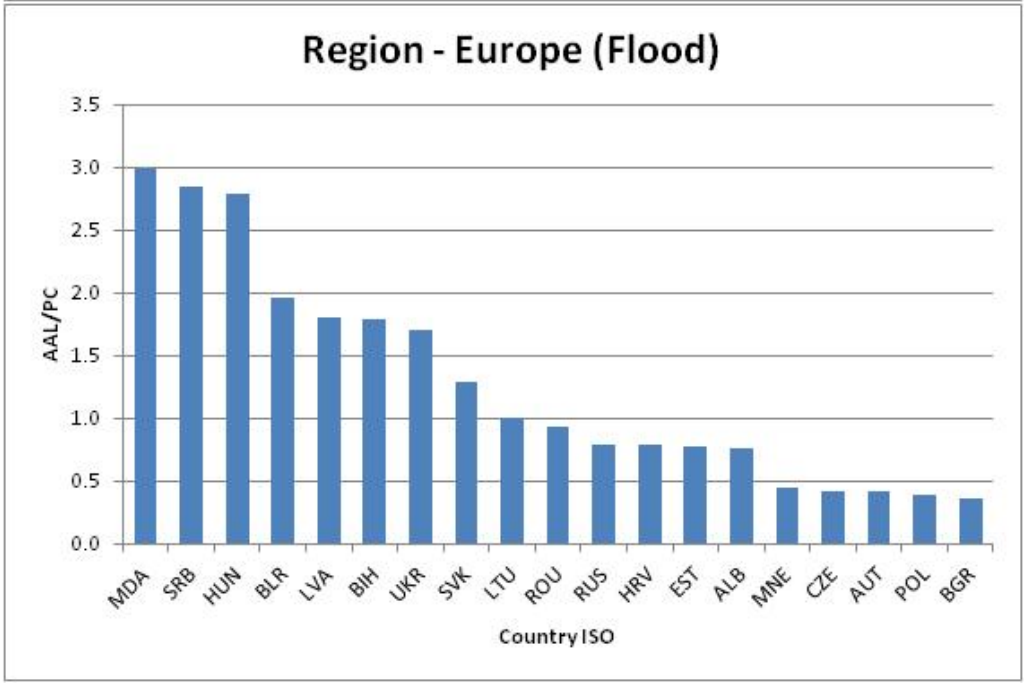

Region - Europe (Cyclonic Wind)
PML250/GNI
0.1
0.1
0.0
0.0
0.0
0.0
0.0
IRL
FRO
PRT
GBR
RUS
FRA
NOR
ISL
DNK
POL
SMR
MNE
MCO
ESP
GIB
GRC
HRV
HUN
LTU
Country ISO


Region - Europe (Cyclonic Wind)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
IRL
FRO
PRT
GBR
RUS
FRA
NOR
ISL
DNK
POL
SMR
MNE
MCO
ESP
GIB
GRC
HRV
HUN
LTU
Country ISO

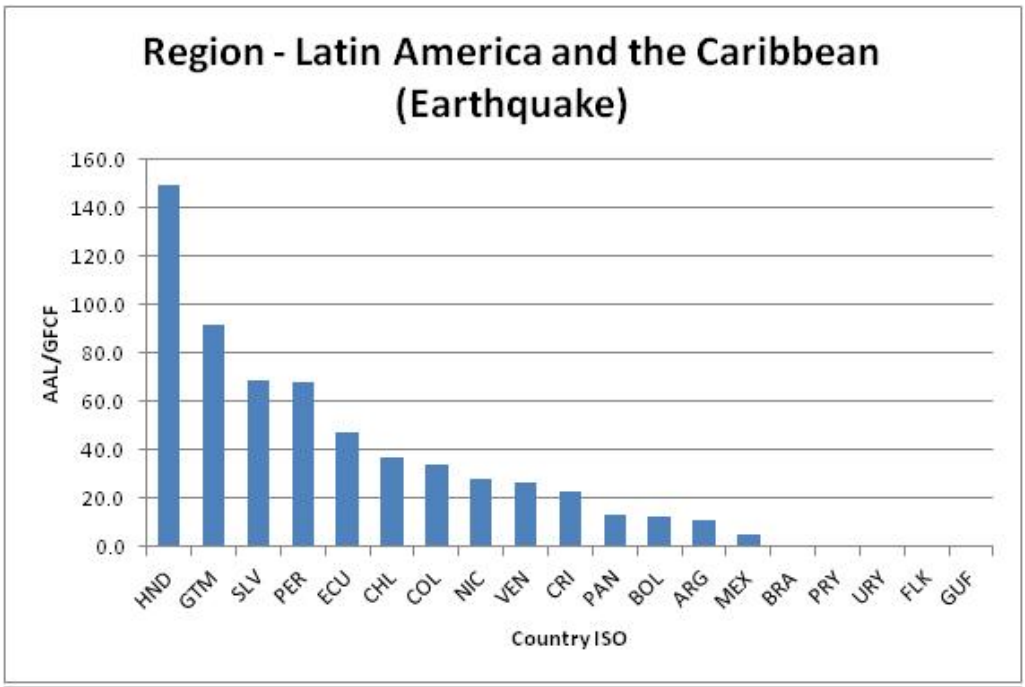

Region - Europe (Flood)
AAL/GFCF
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
HUN
MDA
UKR
LVA
SVK
SRB
LTU
BIH
BLR
HRV
RUS
EST
ALB
CZE
AUT
NLD
POL
IRL
CHE
Country ISO

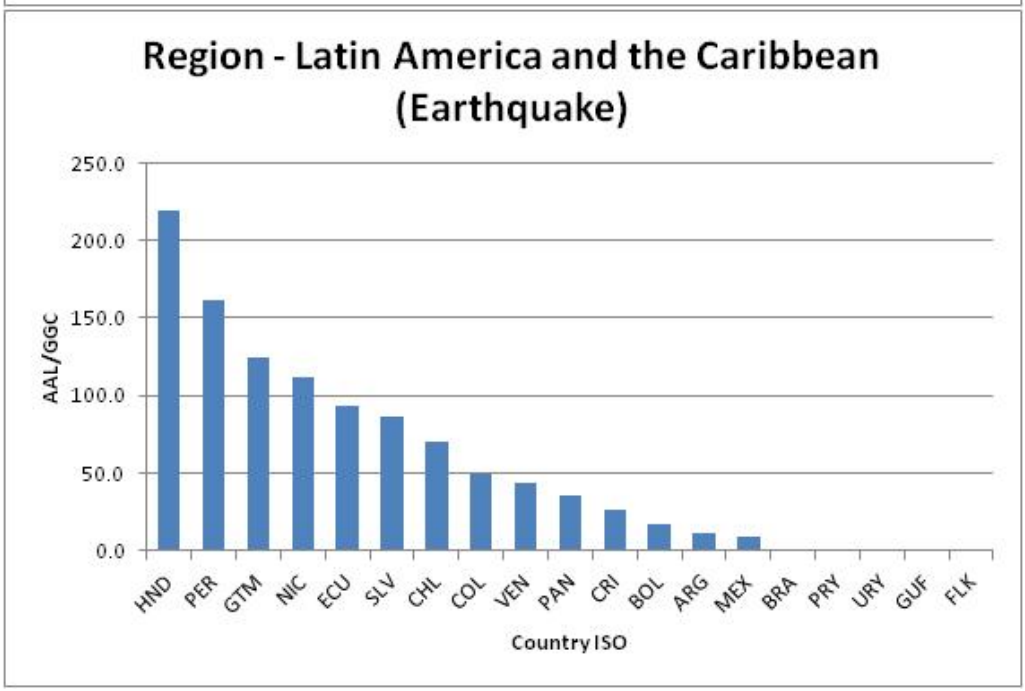

Region - Europe (Flood)
AAL/GGC
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
MDA
HUN
BLR
LVA
UKR
SVK
ALB
SRB
LTU
BIH
EST
HRV
RUS
CHE
CZE
AUT
POL
BGR
IRL
Country ISO

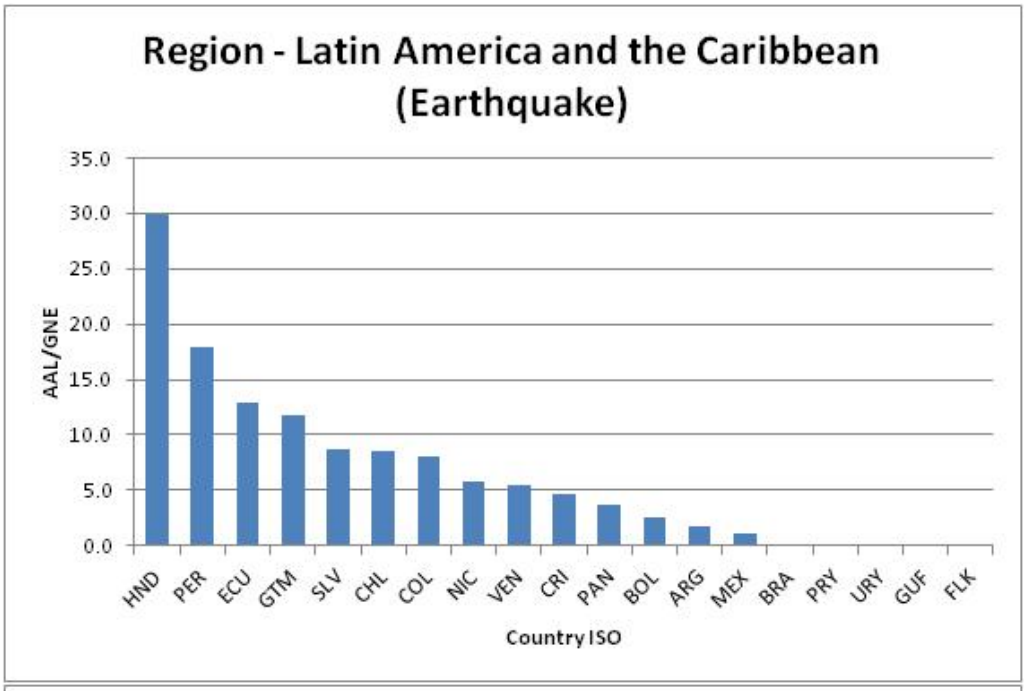

Region - Europe (Flood)
AAL/GNE
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
HUN
MDA
BLR
UKR
LVA
SVK
SRB
LTU
HRV
BIH
RUS
EST
CZE
ALB
AUT
CHE
NLD
POL
FRA
Country ISO

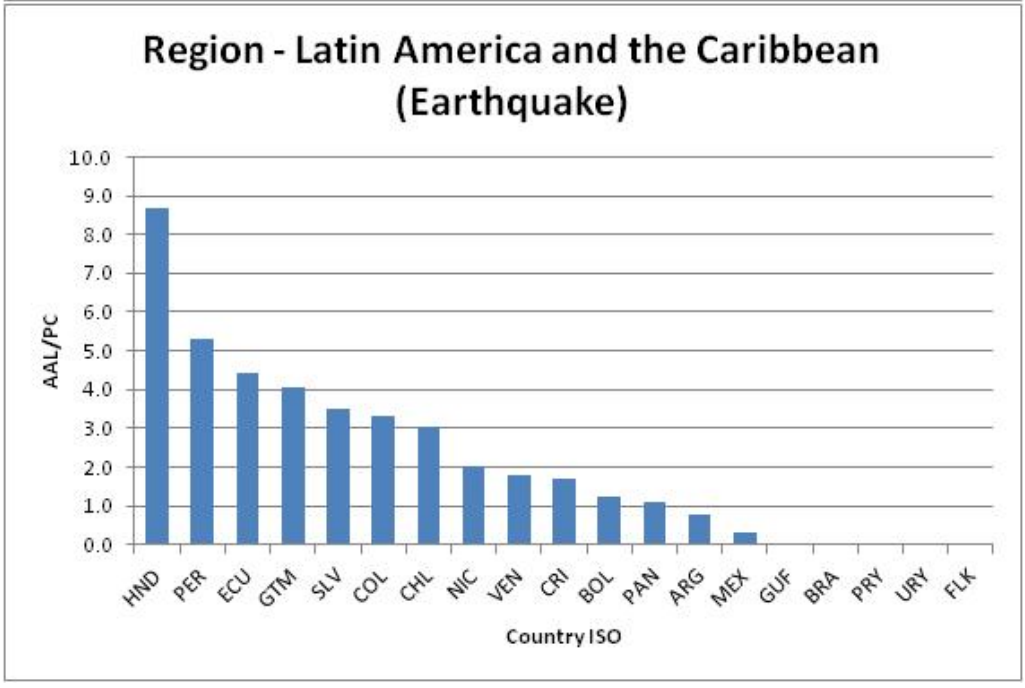

Region - Europe (Flood)
AAL/PC
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
MDA
SRB
HUN
BLR
LVA
BIH
UKR
SVK
LTU
ROU
RUS
HRV
EST
ALB
MNE
CZE
AUT
POL
BGR
Country ISO

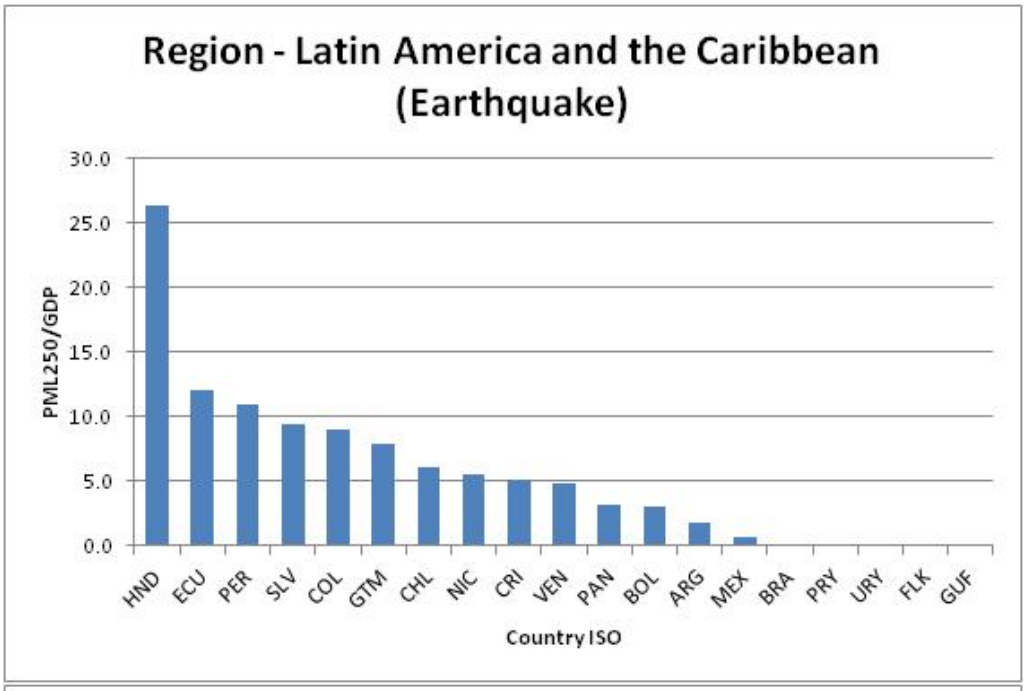
Latin-America and the Caribbean

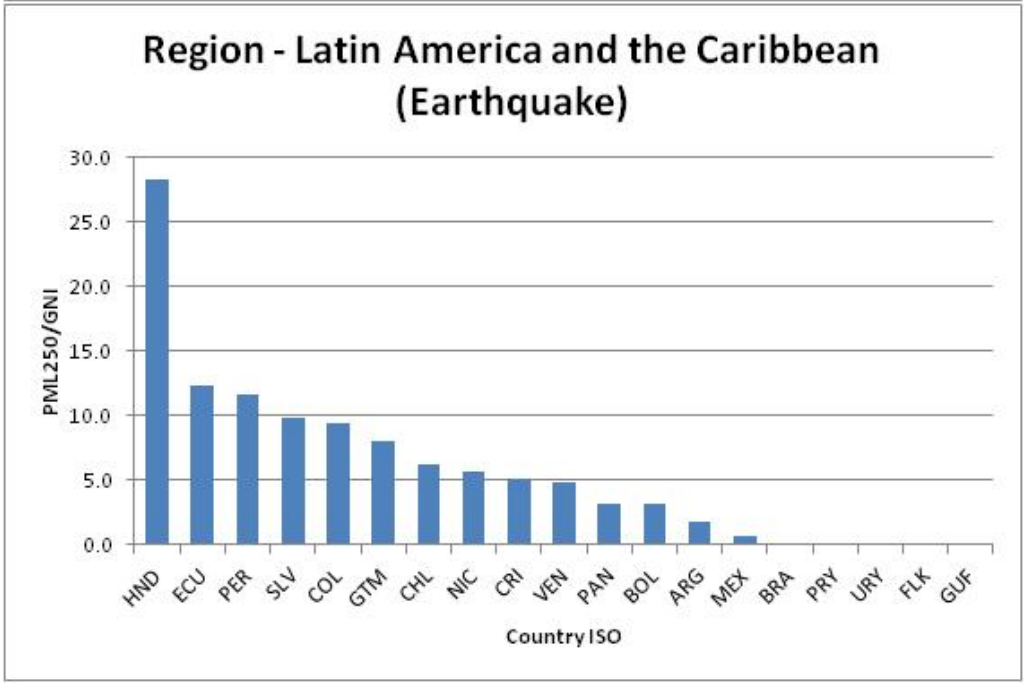


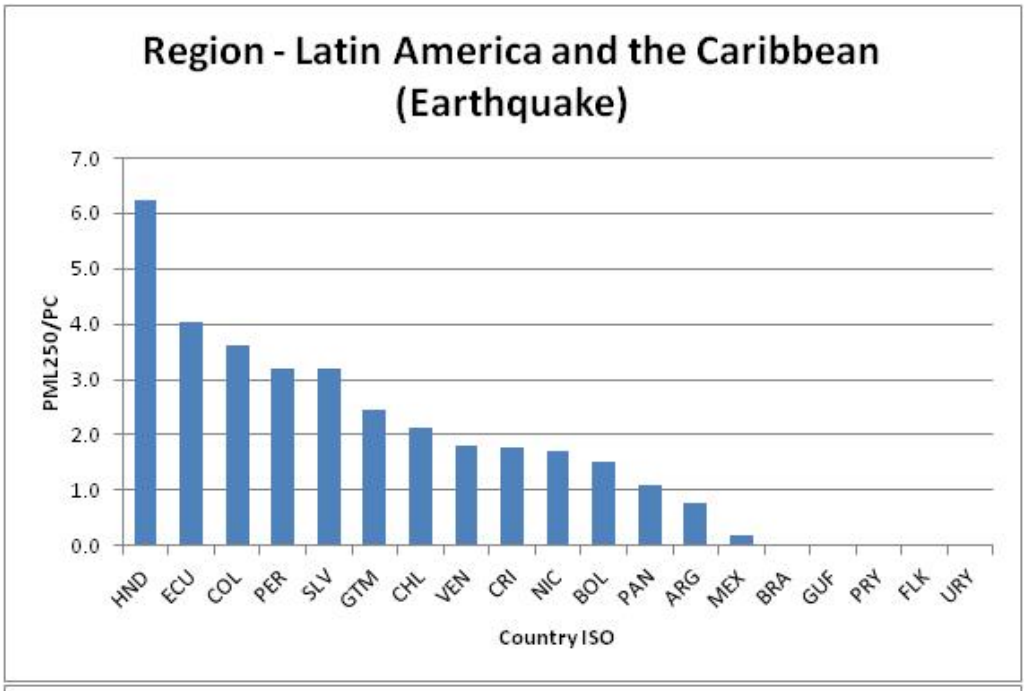


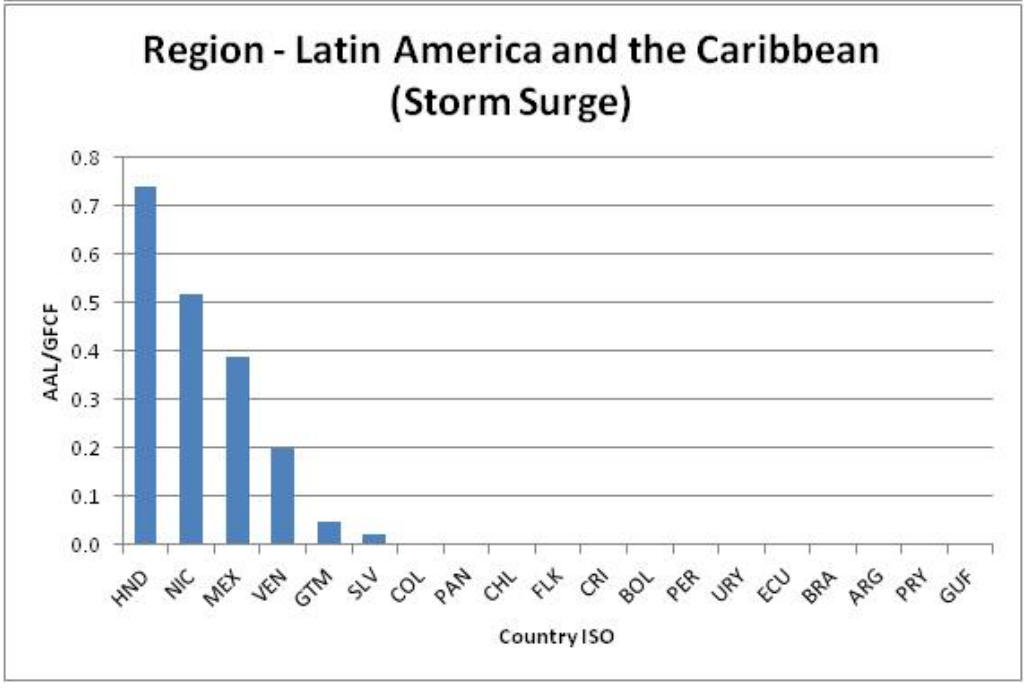

Region - Latin America and the Caribbean
(Earthquake)
AAL/GNE
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
PER
ECU
GTM
SLV
CHL
COL
NIC
VEN
CRI
PAN
BOL
ARG
MEX
BRA
PRY
URY
GUF
FLK
Country ISO

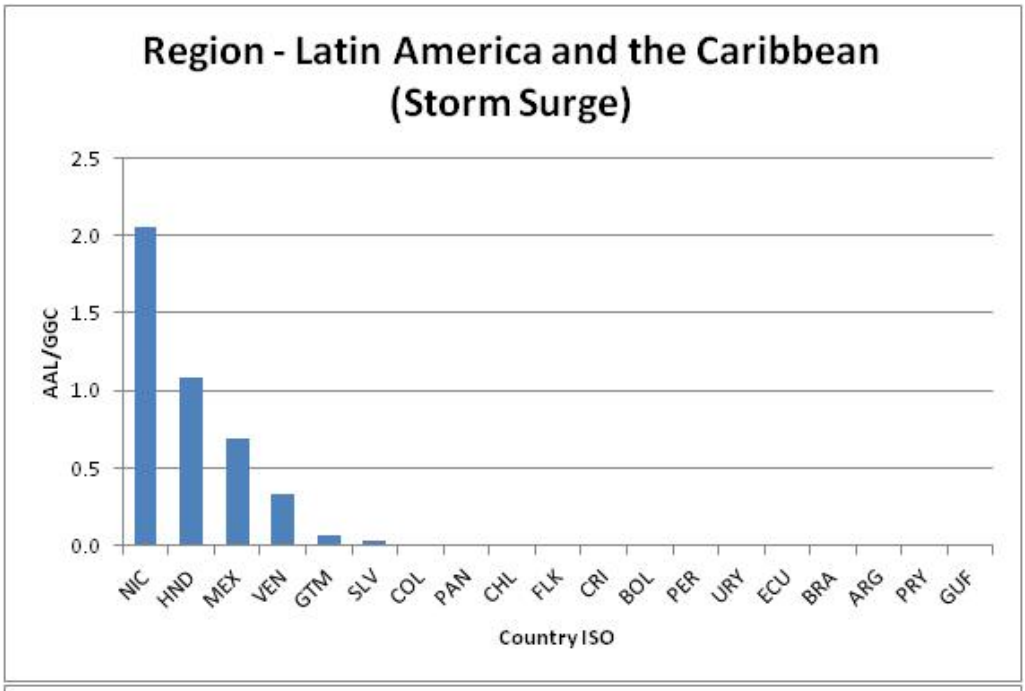

Region - Latin America and the Caribbean
(Earthquake)
AAL/PC
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND
PER
ECU
GTM
SLV
COL
CHL
NIC
VEN
CRI
BOL
PAN
ARG
MEX
GUF
BRA
PRY
URY
FLK
Country ISO

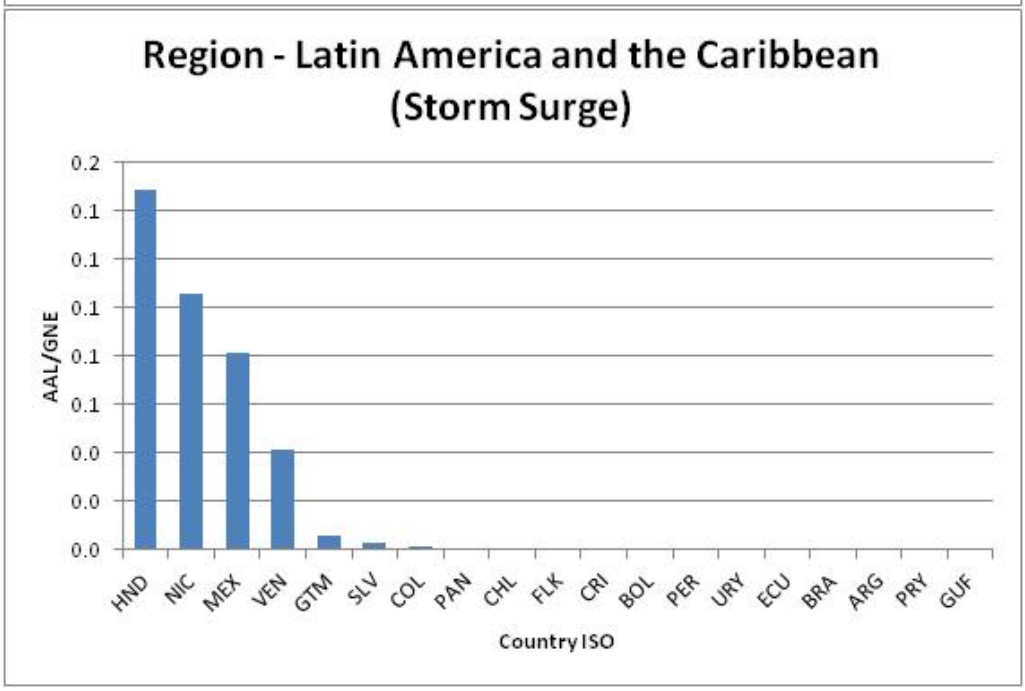

Region - Latin America and the Caribbean
(Earthquake)
PML250/GDP
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
ECU
PER
SLV
COL
GTM
CHL
NIC
CRI
VEN
PAN
BOL
ARG
MEX
BRA
PRY
URY
FLK
GUF
Country ISO

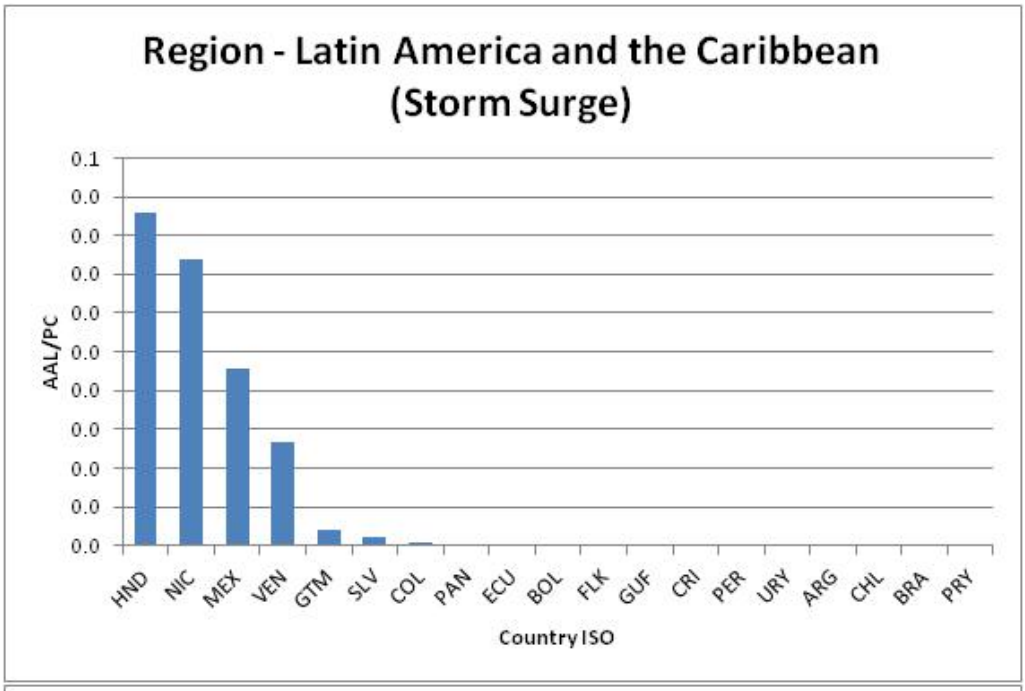

Region - Latin America and the Caribbean
(Earthquake)
PML250/GNI
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
ECU
PER
SLV
COL
GTM
CHL
NIC
CRI
VEN
PAN
BOL
ARG
MEX
BRA
PRY
URY
FLK
GUF
Country ISO

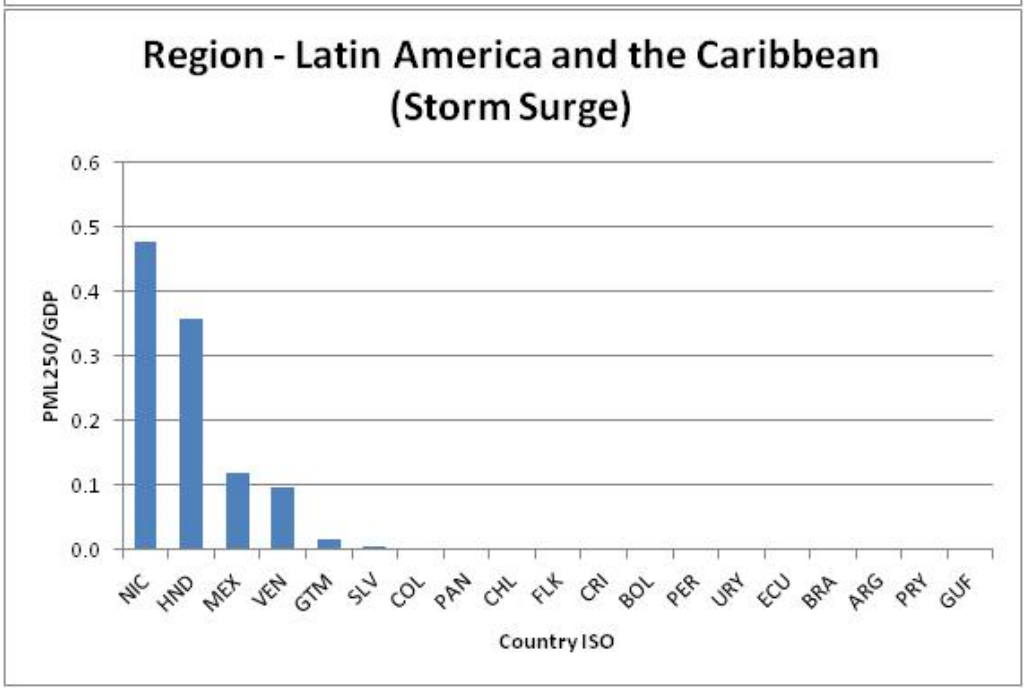

Region - Latin America and the Caribbean
(Earthquake)
PML250/PC
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND
ECU
COL
PER
SLV
GTM
CHL
VEN
CRI
NIC
BOL
PAN
ARG
MEX
BRA
GUF
PRY
FLK
URY
Country ISO

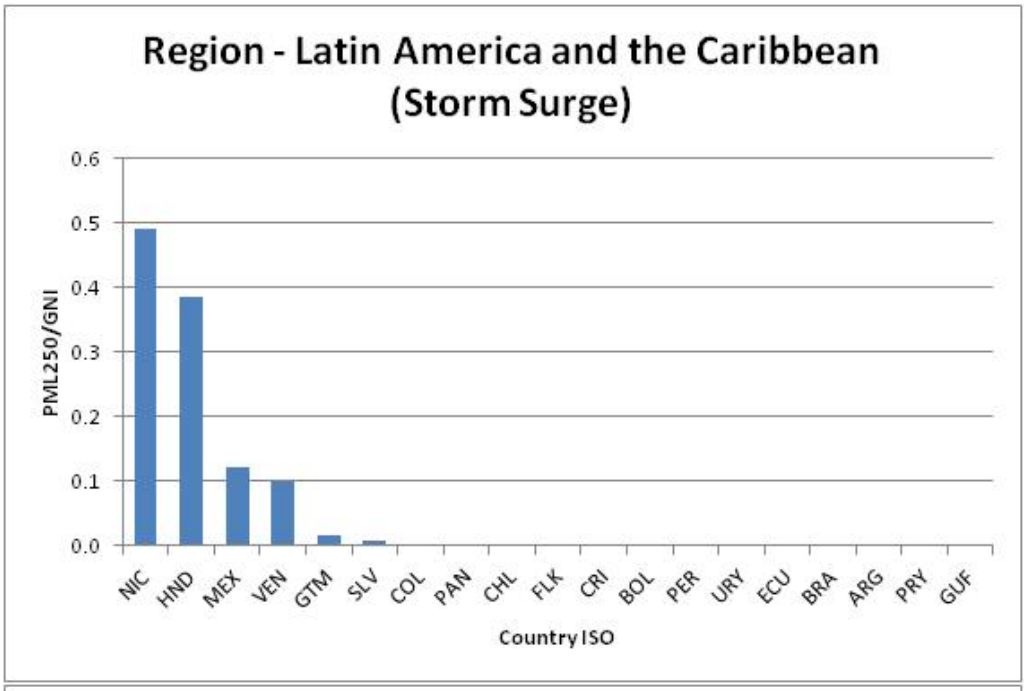

Region - Latin America and the Caribbean
(Storm Surge)
AAL/GFCF
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
HND
NIC
MEX
VEN
GTM
SLV
COL
PAN
CHL
FLK
CRI
BOL
PER
URY
ECU
BRA
ARG
PRY
GUF
Country ISO

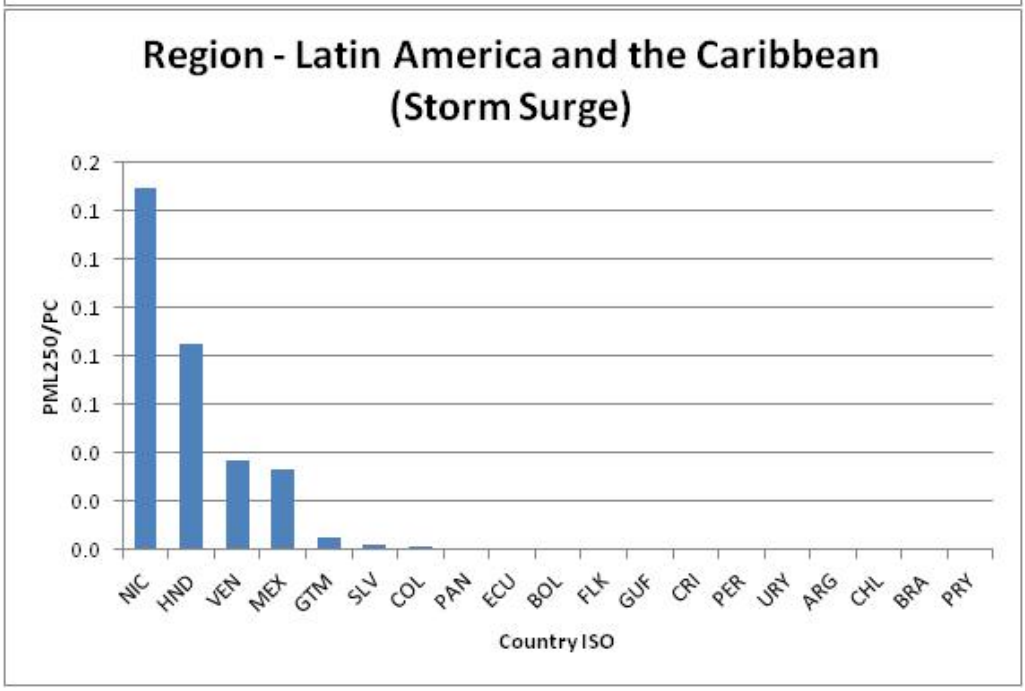

Region - Latin America and the Caribbean
(Storm Surge)
AAL/GGC
2.5
2.0
1.5
1.0
0.5
0.0
NIC
HND
MEX
VEN
GTM
SLV
COL
PAN
CHL
FLK
CRI
BOL
PER
URY
ECU
BRA
ARG
PRY
GUF
Country ISO

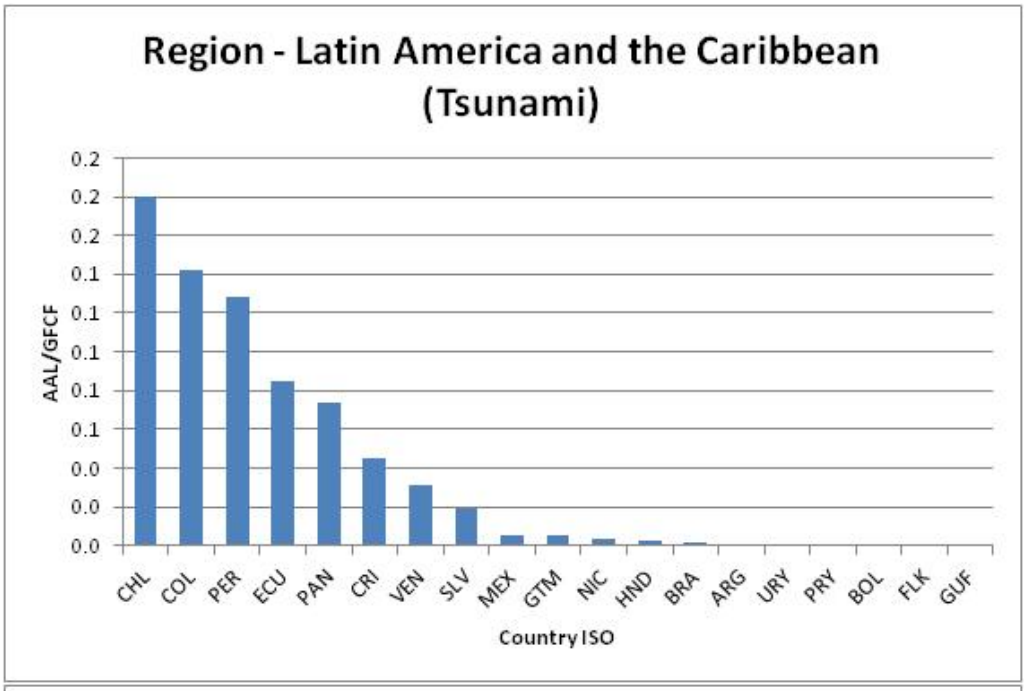

Region - Latin America and the Caribbean
(Storm Surge)
AAL/GNE
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
HND
NIC
MEX
VEN
GTM
SLV
COL
PAN
CHL
FLK
CRI
BOL
PER
URY
ECU
BRA
ARG
PRY
GUF
Country ISO

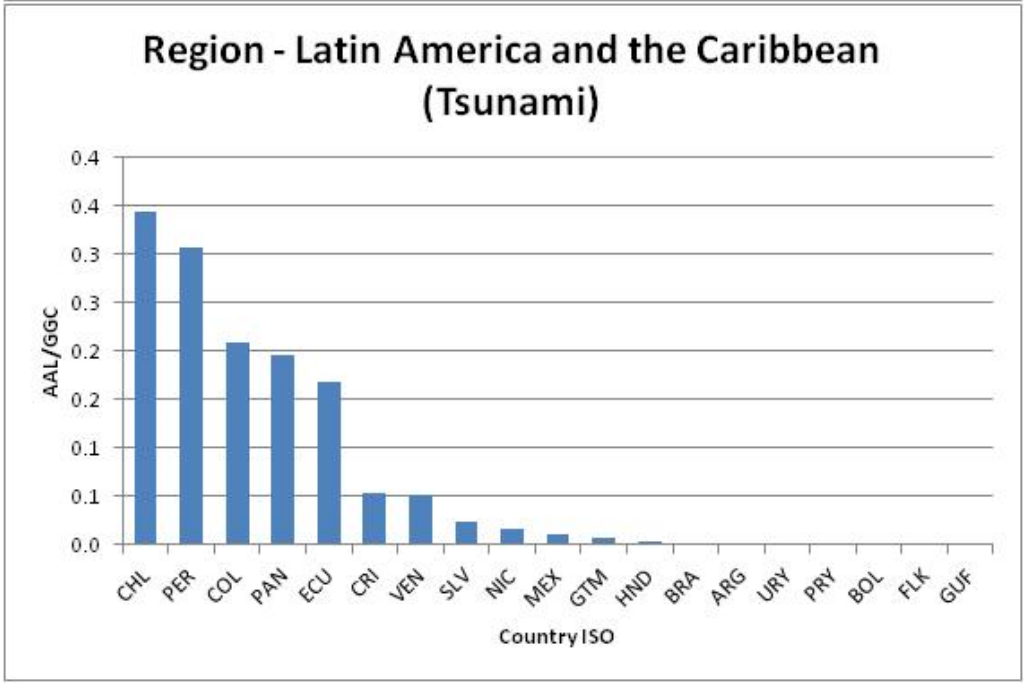

Region - Latin America and the Caribbean
(Storm Surge)
AAL/PC
0.1
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
HND
NIC
MEX
VEN
GTM
SLV
COL
PAN
ECU
BOL
FLK
GUF
CRI
PER
URY
ARG
CHL
BRA
PRY
Country ISO

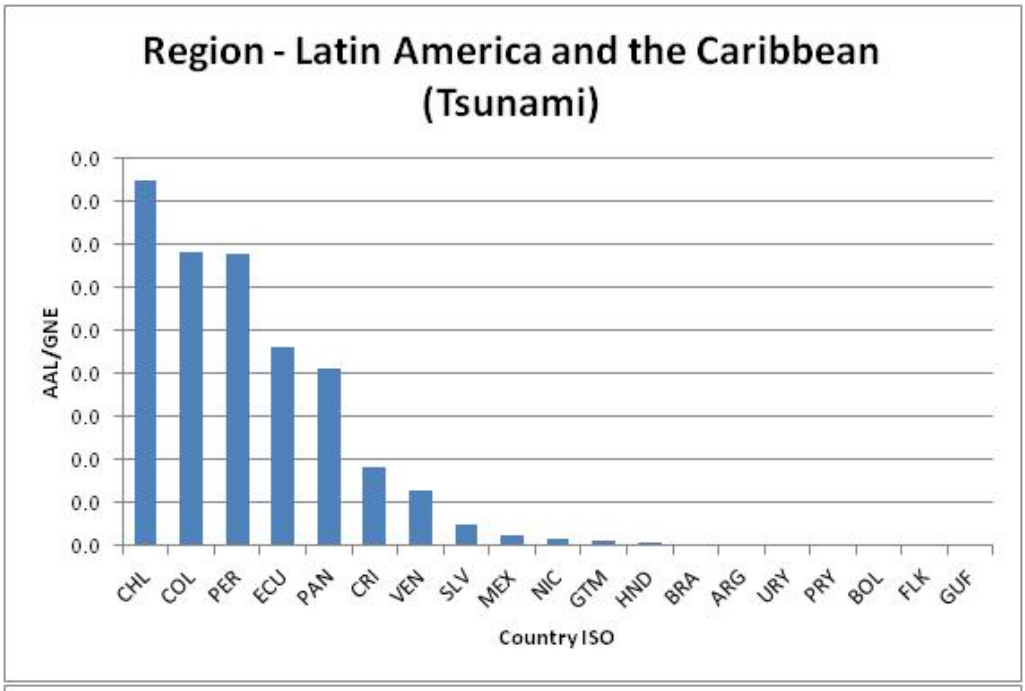

Region - Latin America and the Caribbean
(Storm Surge)
PML250/GDP
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NIC
HND
MEX
VEN
GTM
SLV
COL
PAN
CHL
FLK
CRI
BOL
PER
URY
ECU
BRA
ARG
PRY
GUF
Country ISO

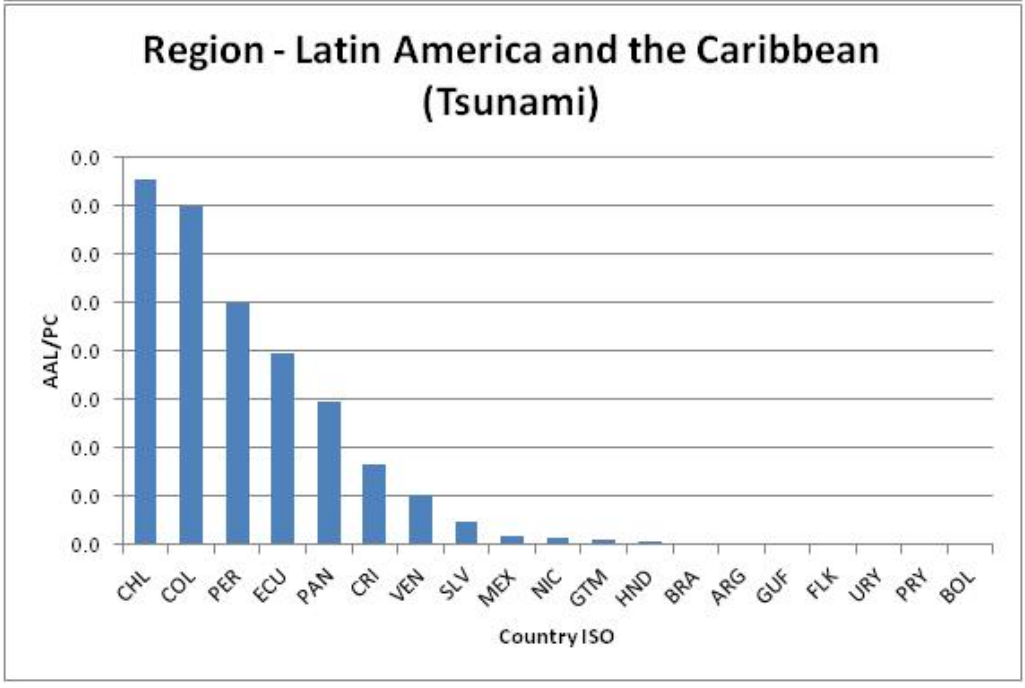

Region - Latin America and the Caribbean
(Storm Surge)
PML250/GNI
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NIC
HND
MEX
VEN
GTM
SLV
COL
PAN
CHL
FLK
CRI
BOL
PER
URY
ECU
BRA
ARG
PRY
GUF
Country ISO

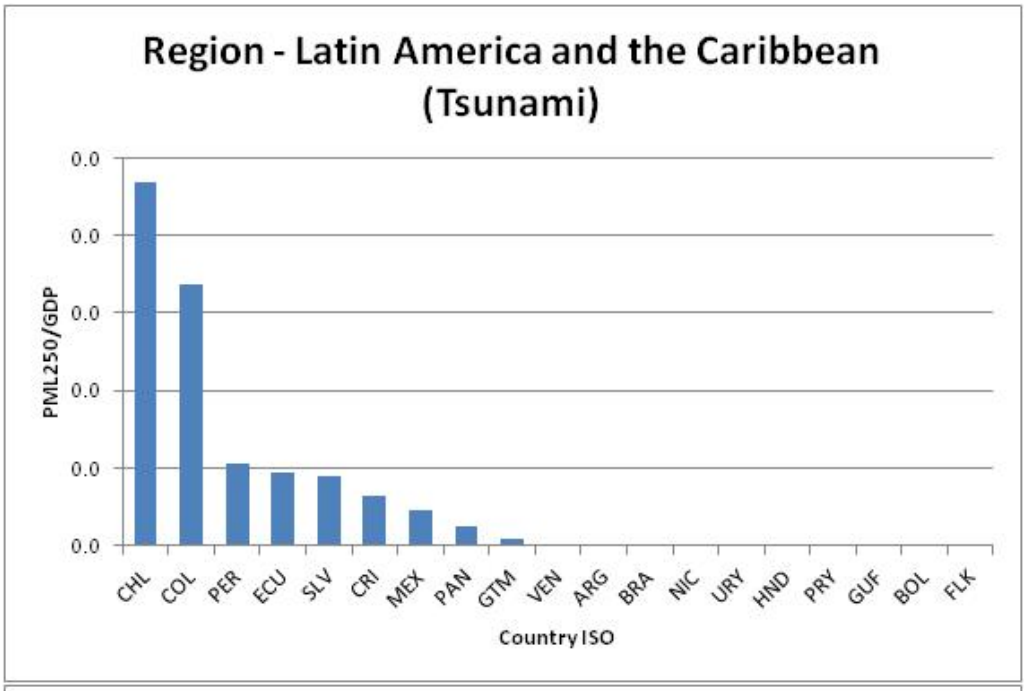

Region - Latin America and the Caribbean
(Storm Surge)
PML250/PC
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
NIC
HND
VEN
MEX
GTM
SLV
COL
PAN
ECU
BOL
FLK
GUF
CRI
PER
URY
ARG
CHL
BRA
PRY
Country ISO

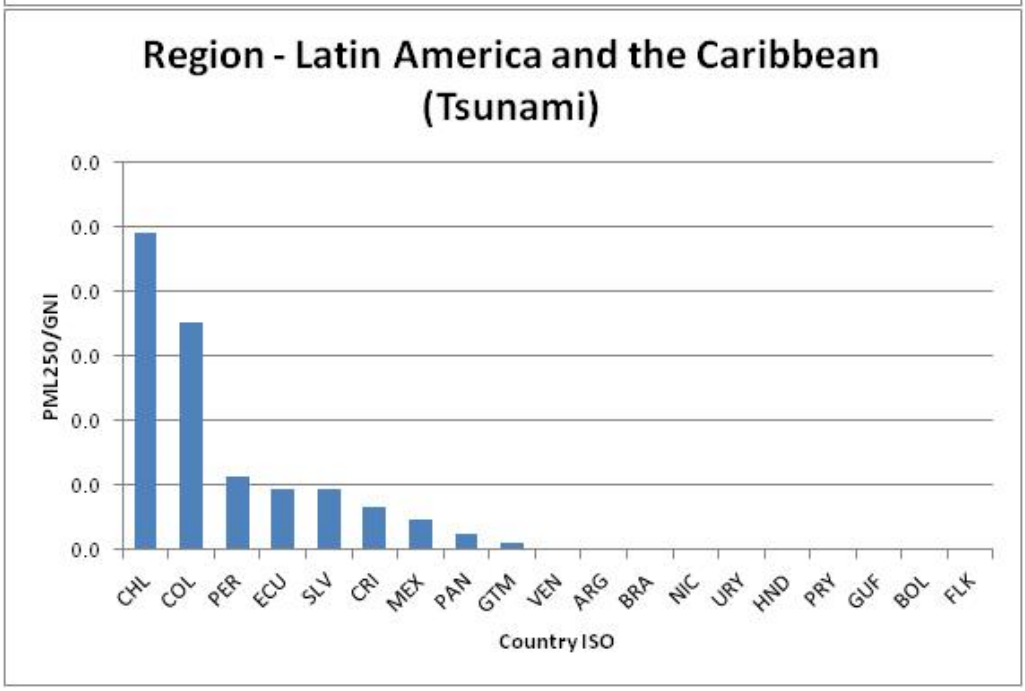

Region - Latin America and the Caribbean
(Tsunami)
AAL/GFCF
0.2
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
CHL
COL
PER
ECU
PAN
CRI
VEN
SLV
MEX
GTM
NIC
HND
BRA
ARG
URY
PRY
BOL
FLK
GUF
Country ISO

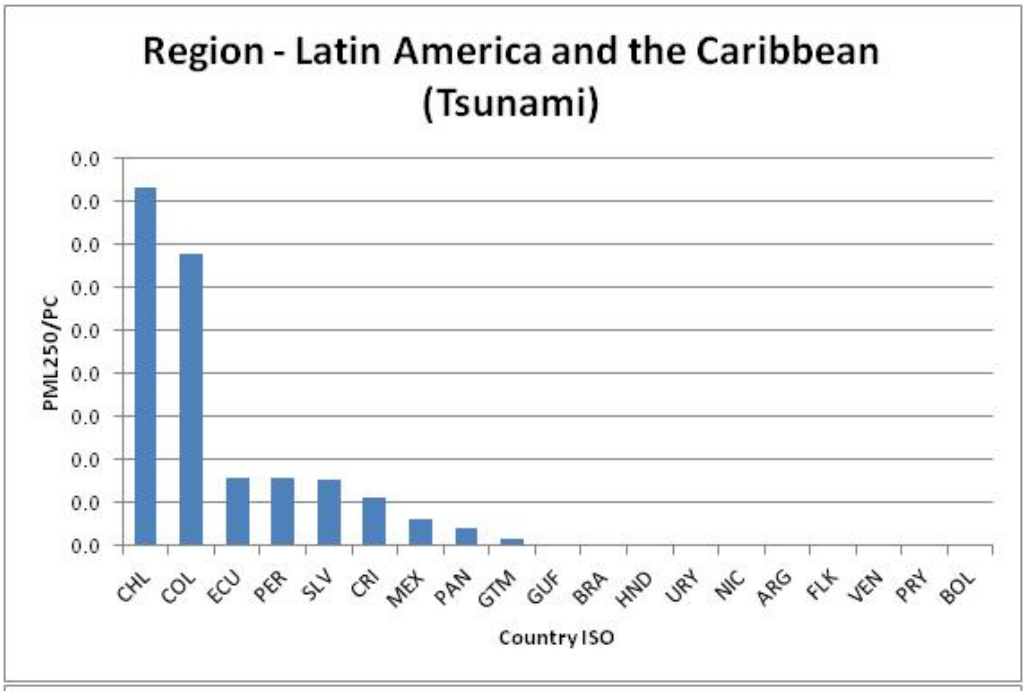

Region - Latin America and the Caribbean
(Tsunami)
AAL/GGC
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
CHL
PER
COL
PAN
ECU
CRI
VEN
SLV
NIC
MEX
GTM
HND
BRA
ARG
URY
PRY
BOL
FLK
GUF
Country ISO

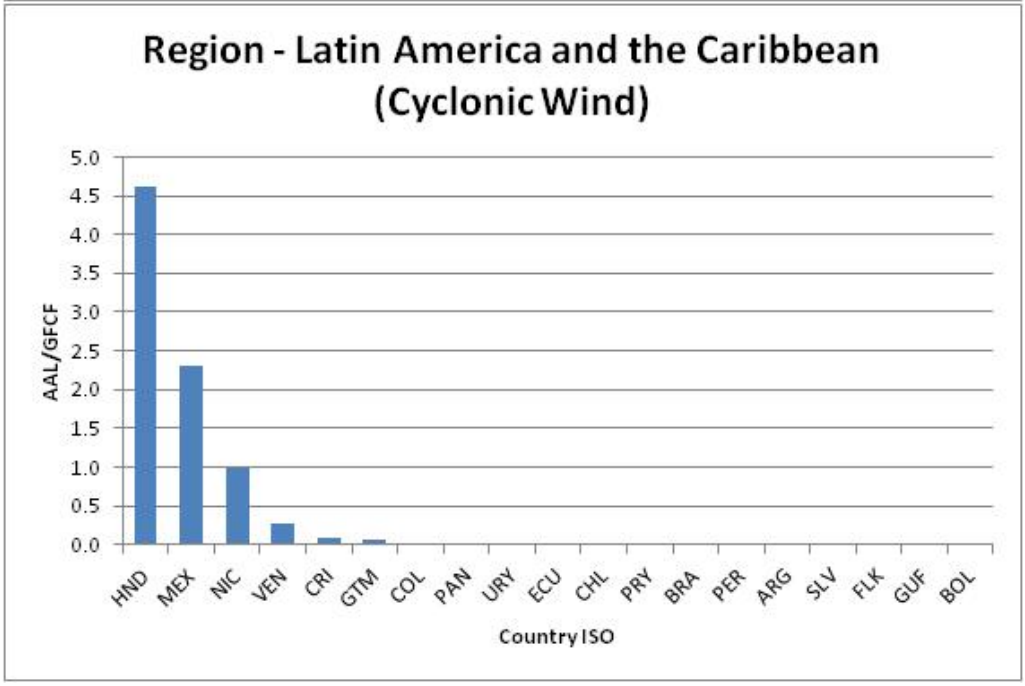

Region - Latin America and the Caribbean
(Tsunami)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
CHL
COL
PER
ECU
PAN
CRI
VEN
SLV
MEX
NIC
GTM
HND
BRA
ARG
URY
PRY
BOL
FLK
GUF
Country ISO

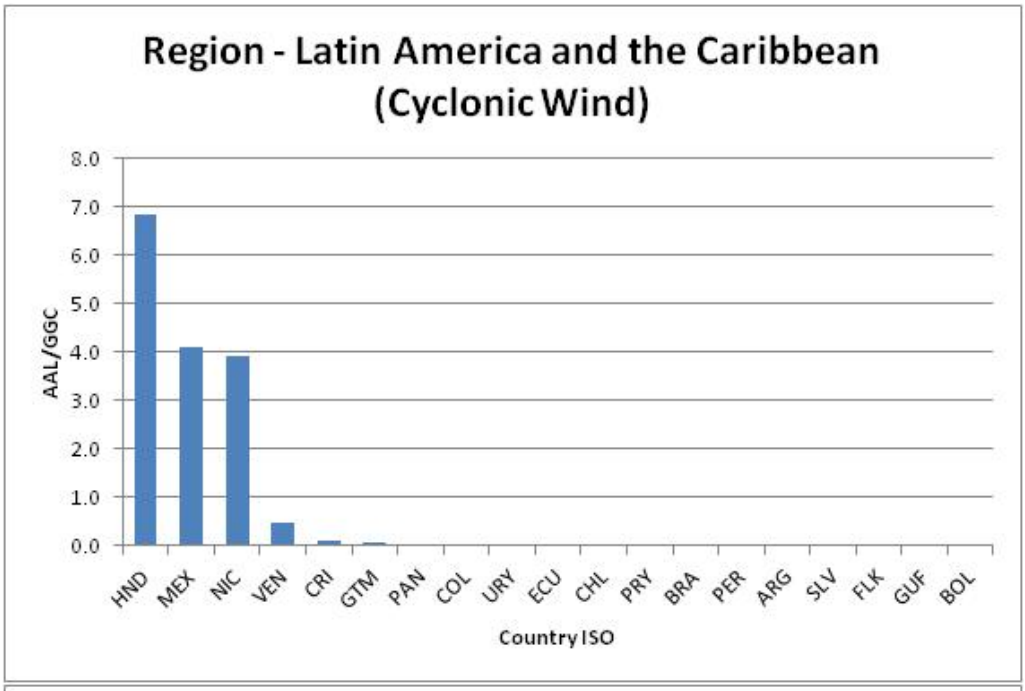

Region - Latin America and the Caribbean
(Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
CHL
COL
PER
ECU
PAN
CRI
VEN
SLV
MEX
NIC
GTM
HND
BRA
ARG
GUF
FLK
URY
PRY
BOL
Country ISO

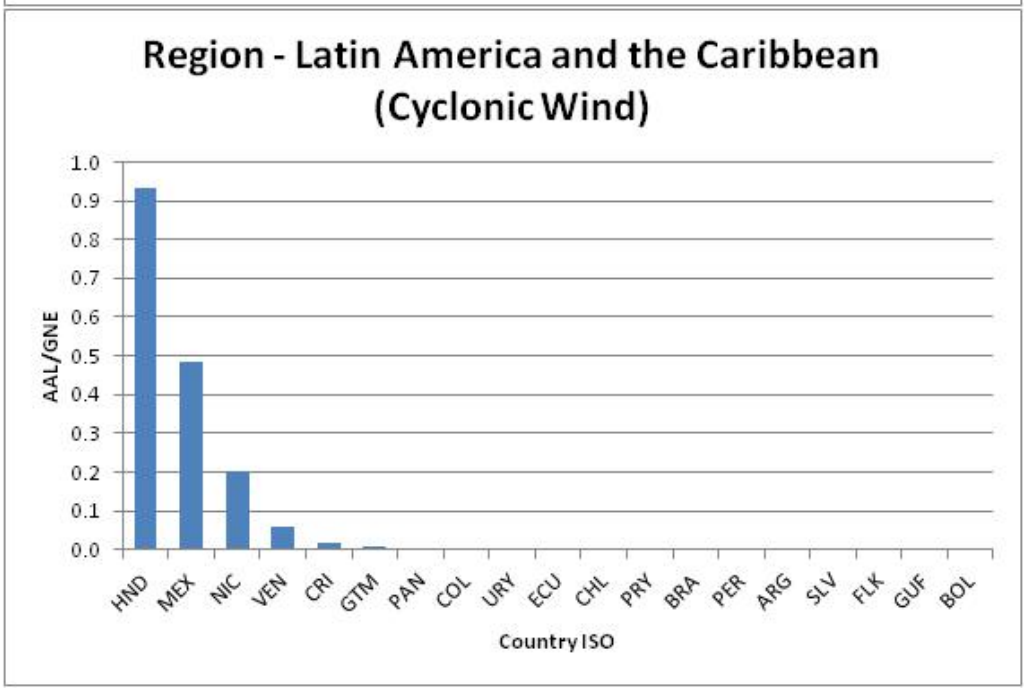

Region - Latin America and the Caribbean
(Tsunami)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
CHL
COL
PER
ECU
SLV
CRI
MEX
PAN
GTM
VEN
ARG
BRA
NIC
URY
HND
PRY
GUF
BOL
FLK
Country ISO

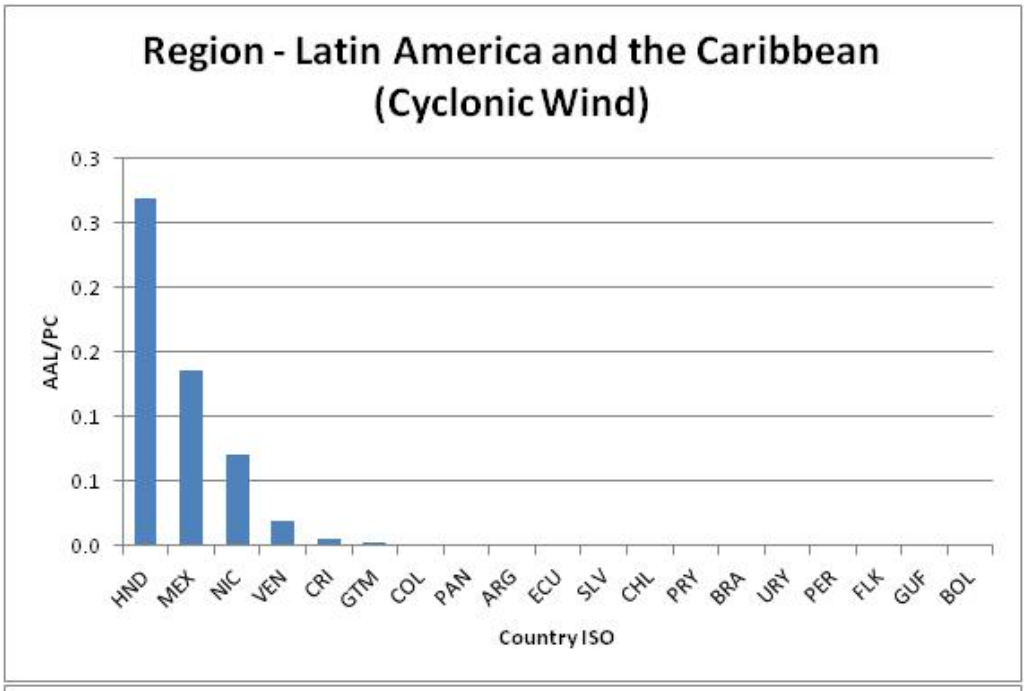

Region - Latin America and the Caribbean
(Tsunami)
PML250/GNI
0.0
0.0
0.0
0.0
0.0
0.0
CHL
COL
PER
ECU
SLV
CRI
MEX
PAN
GTM
VEN
ARG
BRA
NIC
URY
HND
PRY
GUF
BOL
FLK
Country ISO

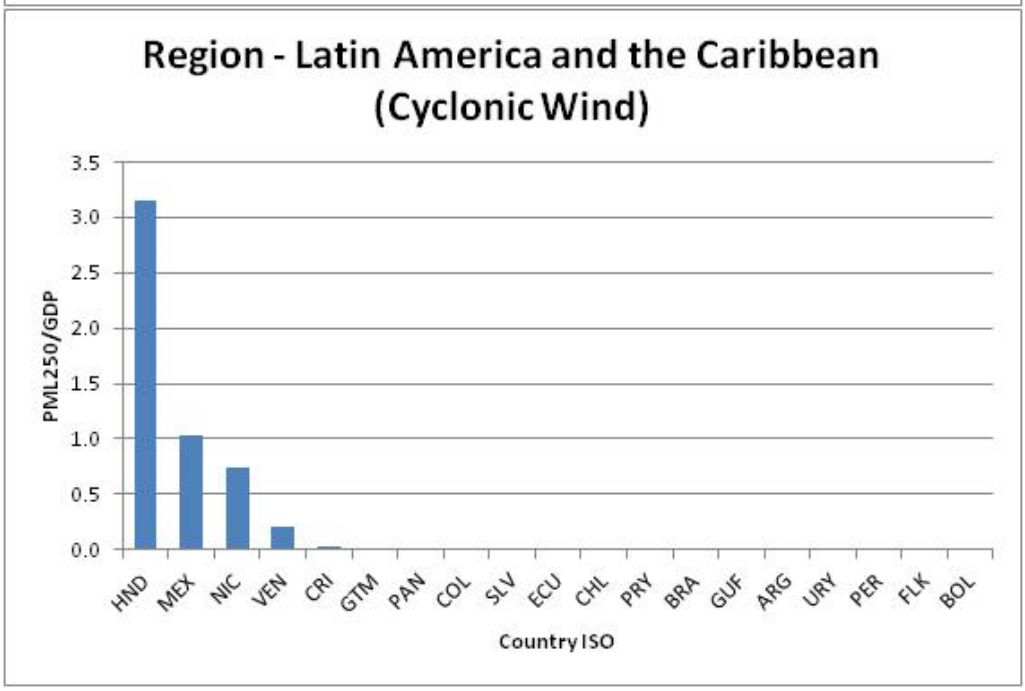

Region - Latin America and the Caribbean
(Tsunami)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
CHL
COL
ECU
PER
SLV
CRI
MEX
PAN
GTM
GUF
BRA
HND
URY
NIC
ARG
FLK
VEN
PRY
BOL
Country ISO

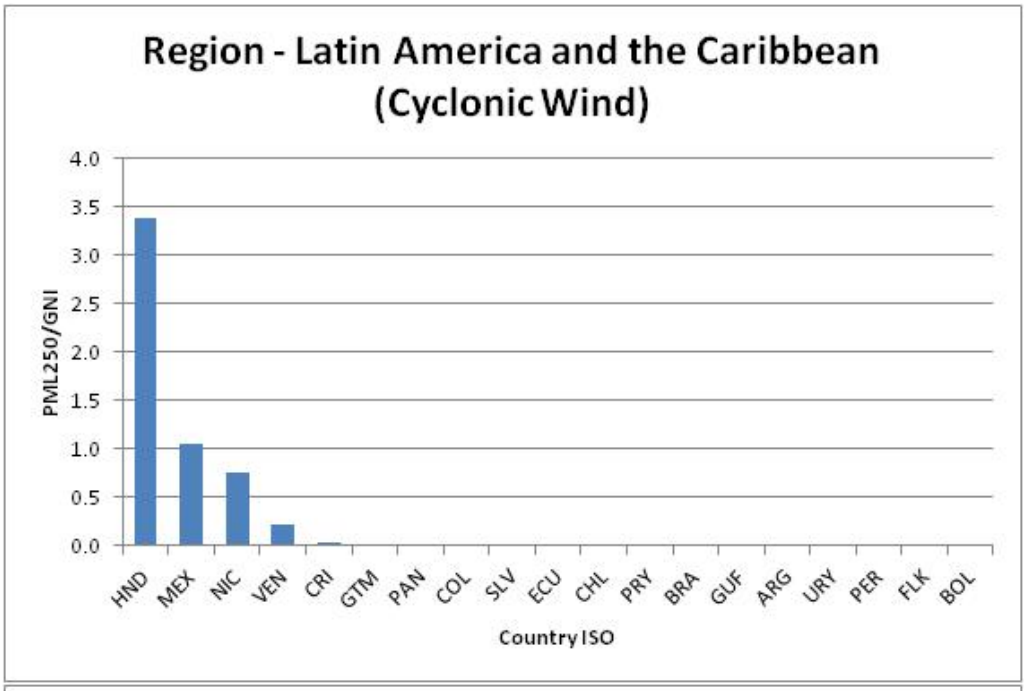

Region - Latin America and the Caribbean
(Cyclonic Wind)
AAL/GFCF
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
HND
MEX
NIC
VEN
CRI
GTM
COL
PAN
URY
ECU
CHL
PRY
BRA
PER
ARG
SLV
FLK
GUF
BOL
Country ISO

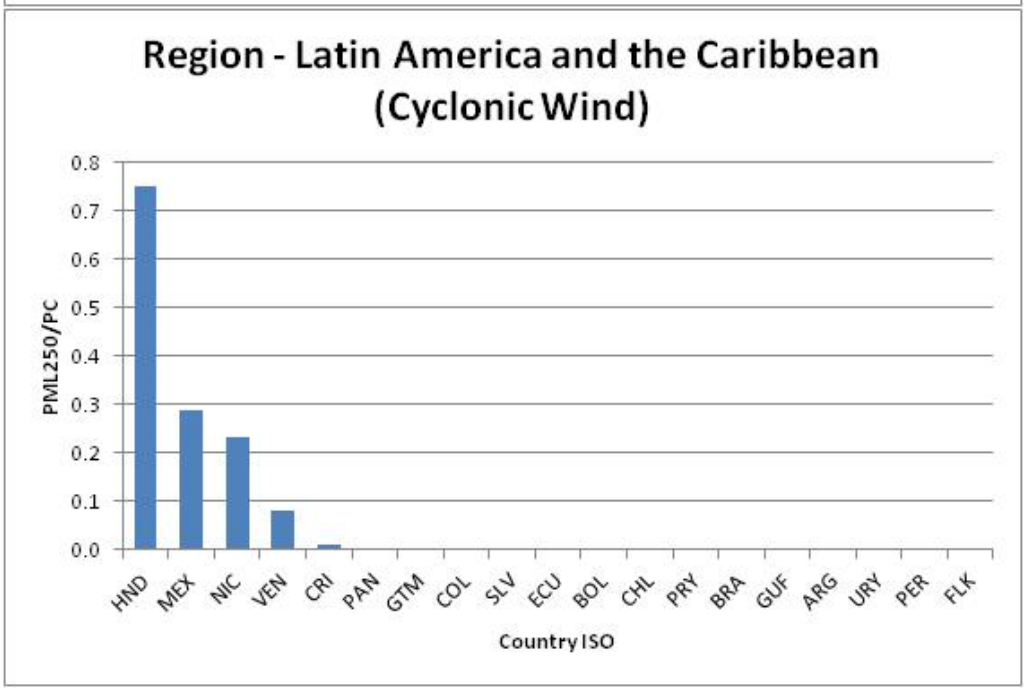

Region - Latin America and the Caribbean
(Cyclonic Wind)
AAL/GGC
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND
MEX
NIC
VEN
CRI
GTM
PAN
COL
URY
ECU
CHL
PRY
BRA
PER
ARG
SLV
FLK
GUF
BOL
Country ISO

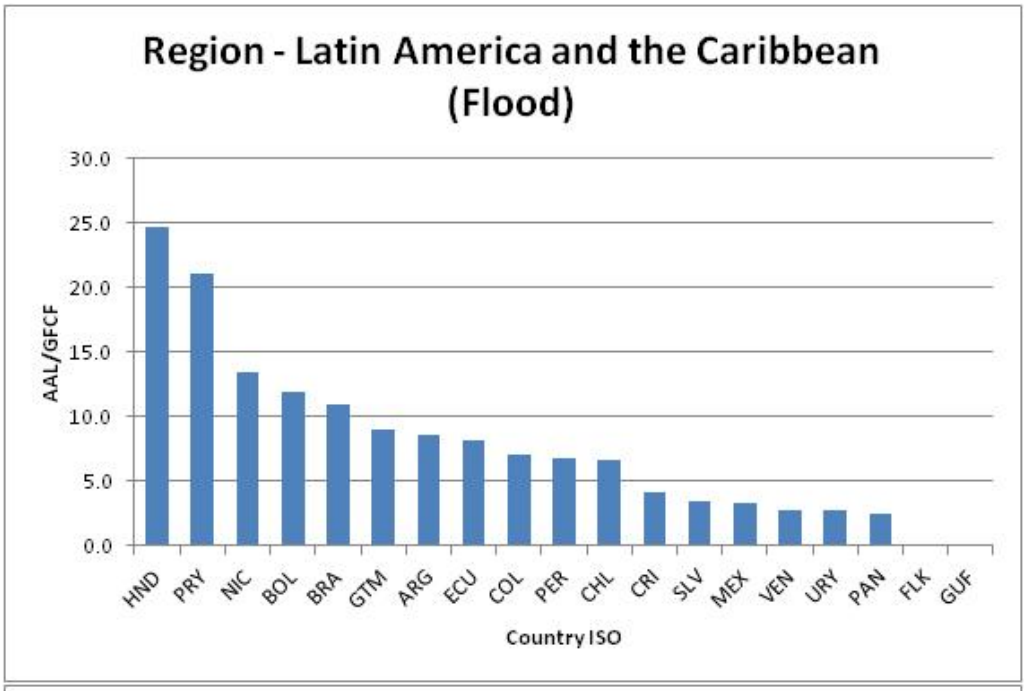

Region - Latin America and the Caribbean
(Cyclonic Wind)
AAL/GNE
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
HND
MEX
NIC
VEN
CRI
GTM
PAN
COL
URY
ECU
CHL
PRY
BRA
PER
ARG
SLV
FLK
GUF
BOL
Country ISO

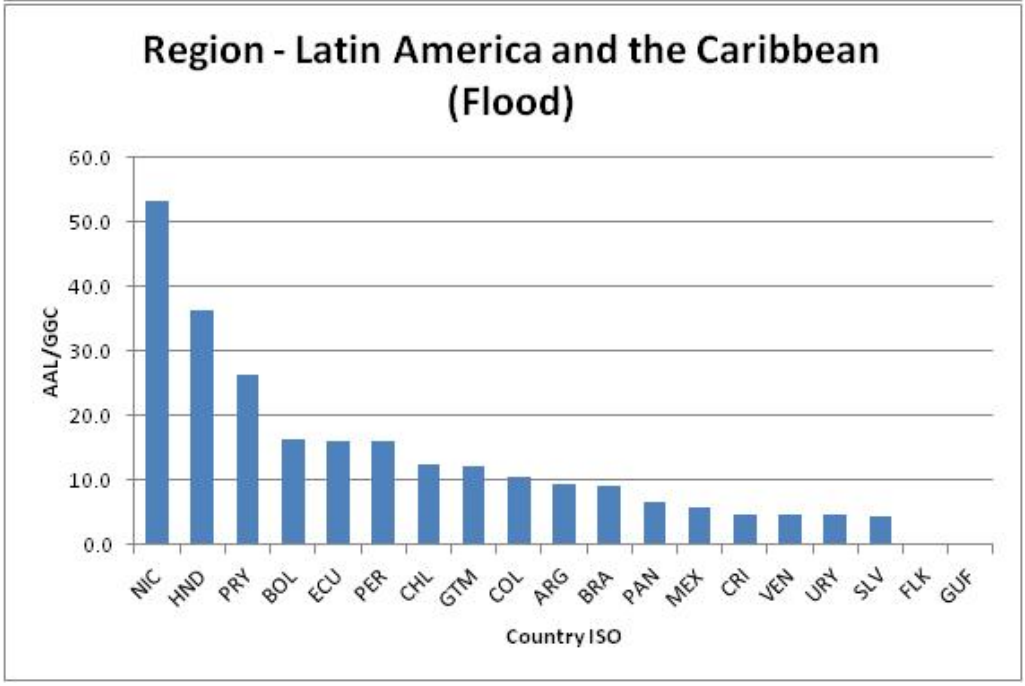

Region - Latin America and the Caribbean
(Cyclonic Wind)
AAL/PC
0.3
0.3
0.2
0.2
0.1
0.1
0.0
HND
MEX
NIC
VEN
CRI
GTM
COL
PAN
ARG
ECU
SLV
CHL
PRY
BRA
URY
PER
FLK
GUF
BOL
Country ISO

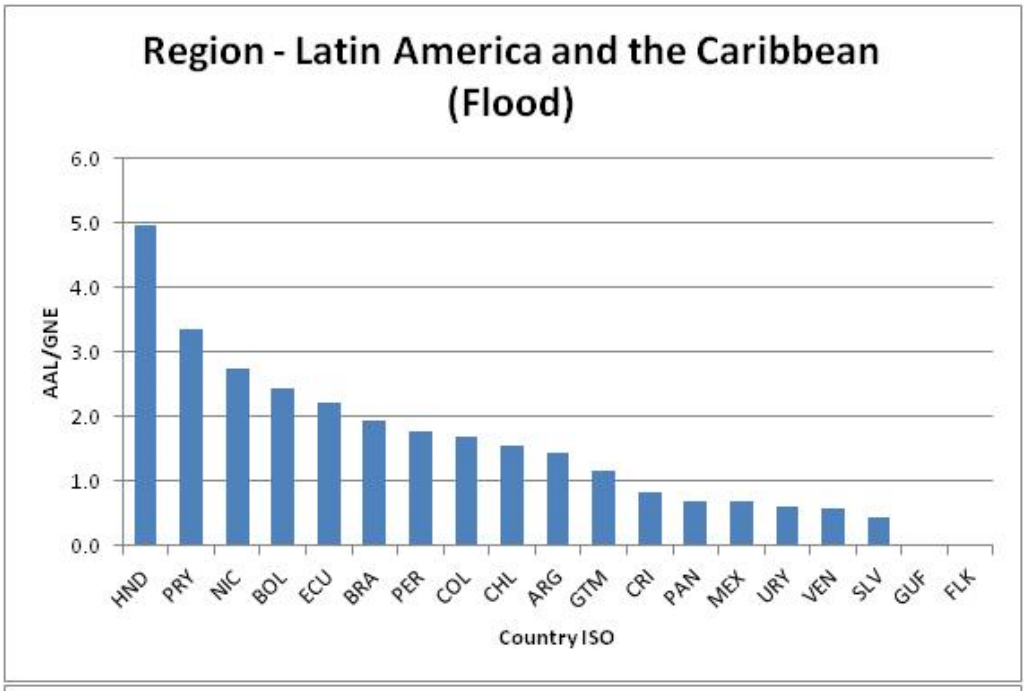

Region - Latin America and the Caribbean
(Cyclonic Wind)
PML250/GDP
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
HND
MEX
NIC
VEN
CRI
GTM
PAN
COL
SLV
ECU
CHL
PRY
BRA
GUF
ARG
URY
PER
FLK
BOL
Country ISO

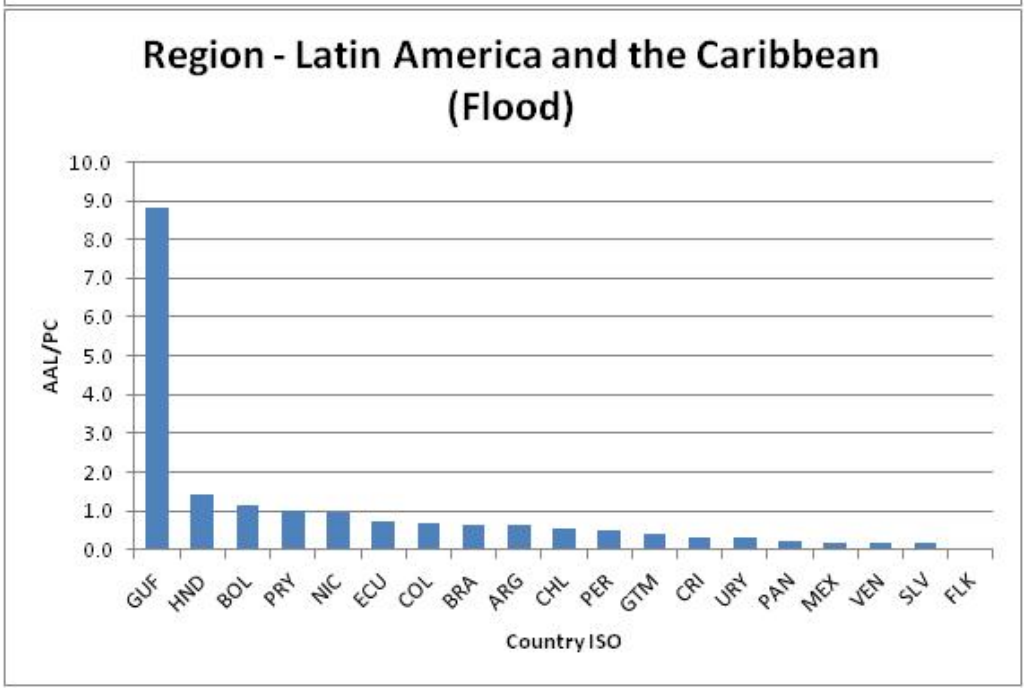

Region - Latin America and the Caribbean
(Cyclonic Wind)
PML250/GNI
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
HND
MEX
NIC
VEN
CRI
GTM
PAN
COL
SLV
ECU
CHL
PRY
BRA
GUF
ARG
URY
PER
FLK
BOL
Country ISO


Region - Latin America and the Caribbean
(Cyclonic Wind)
PML250/PC
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
HND
MEX
NIC
VEN
CRI
PAN
GTM
COL
SLV
ECU
BOL
CHL
PRY
BRA
GUF
ARG
URY
PER
FLK
Country ISO

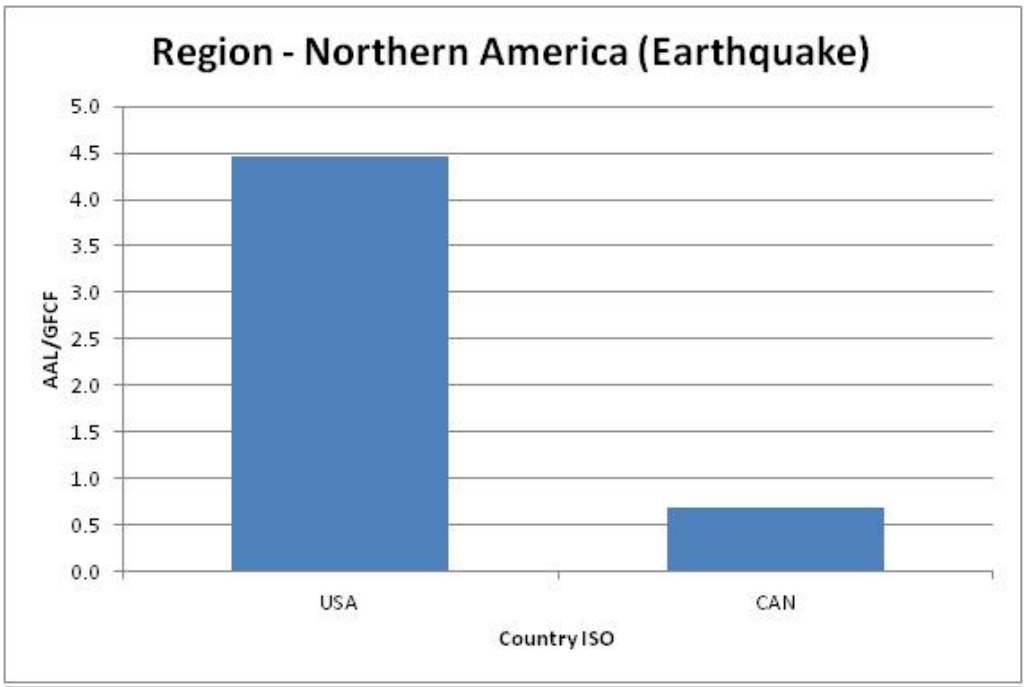

Region - Latin America and the Caribbean
(Flood)
AAL/GFCF
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
PRY
NIC
BOL
BRA
GTM
ARG
ECU
COL
PER
CHL
CRI
SLV
MEX
VEN
URY
PAN
FLK
GUF
Country ISO

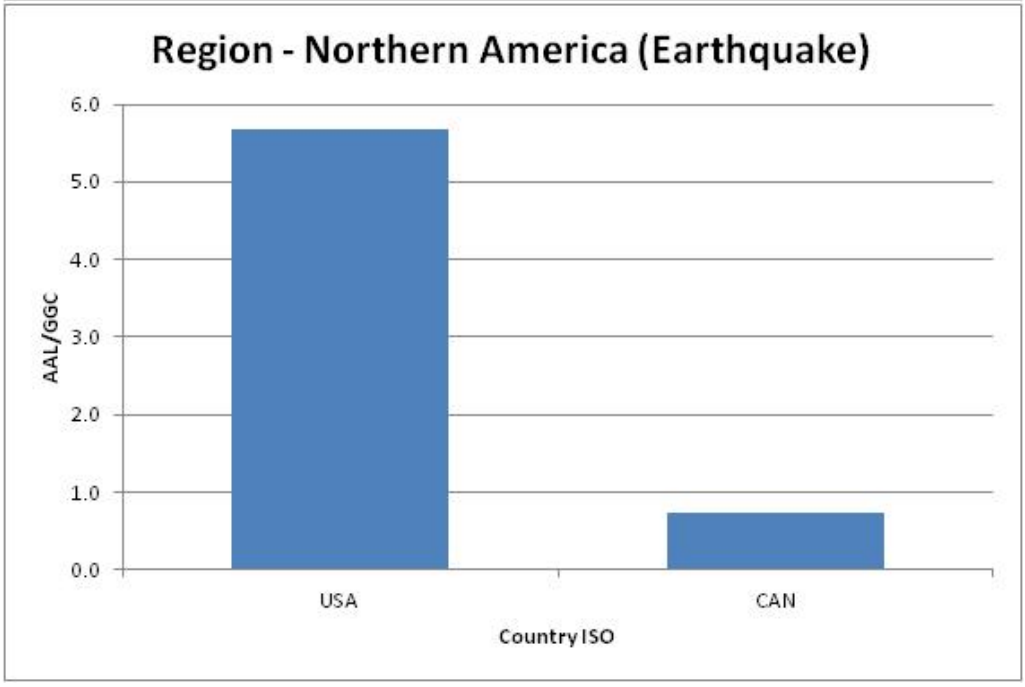

Region - Latin America and the Caribbean
(Flood)
AAL/GGC
60.0
50.0
40.0
30.0
20.0
10.0
0.0
NIC
HND
PRY
BOL
ECU
PER
CHL
GTM
COL
ARG
BRA
PAN
MEX
CRI
VEN
URY
SLV
FLK
GUF
Country ISO

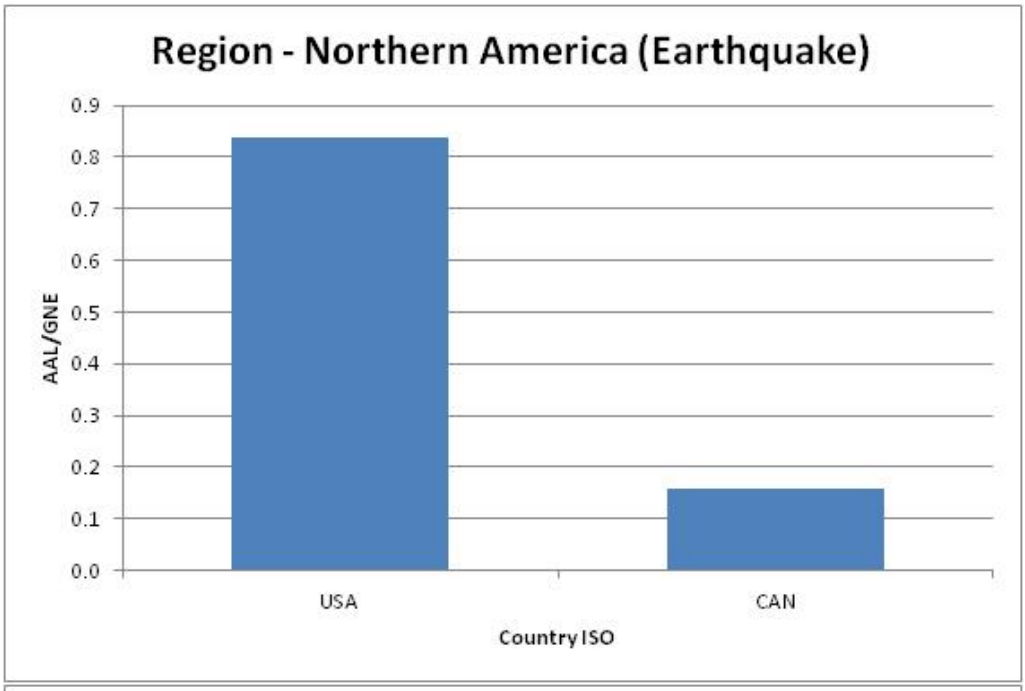

Region - Latin America and the Caribbean
(Flood)
AAL/GNE
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND
PRY
NIC
BOL
ECU
BRA
PER
COL
CHL
ARG
GTM
CRI
PAN
MEX
URY
VEN
SLV
GUF
FLK
Country ISO

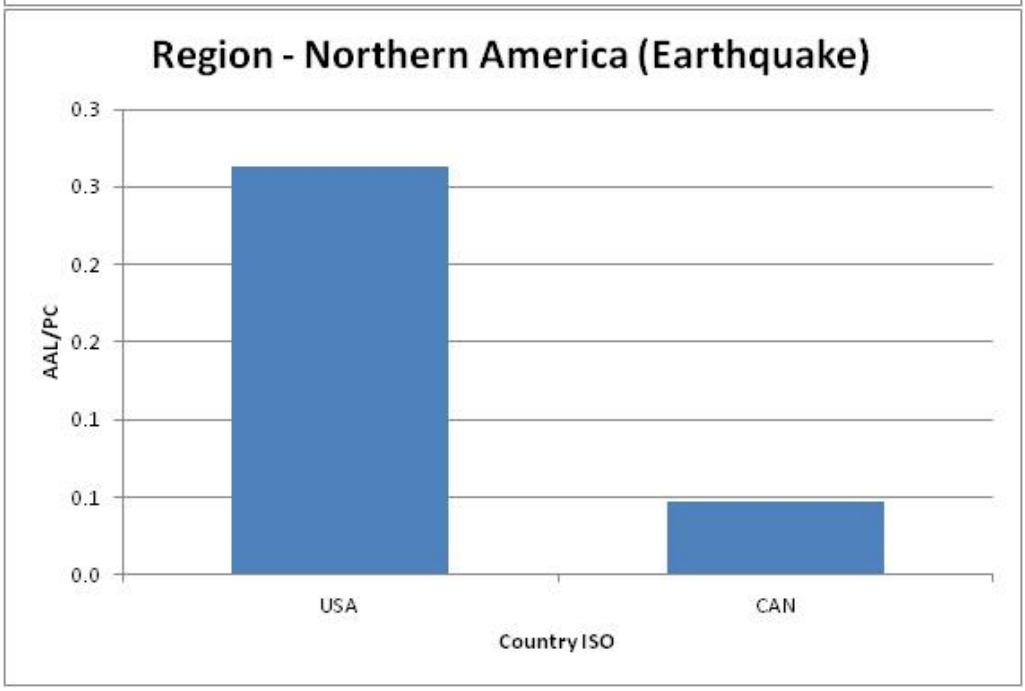

Region - Latin America and the Caribbean
(Flood)
AAL/PC
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
GUF
HND
BOL
PRY
NIC
ECU
COL
BRA
ARG
CHL
PER
GTM
CRI
URY
PAN
MEX
VEN
SLV
FLK
Country ISO

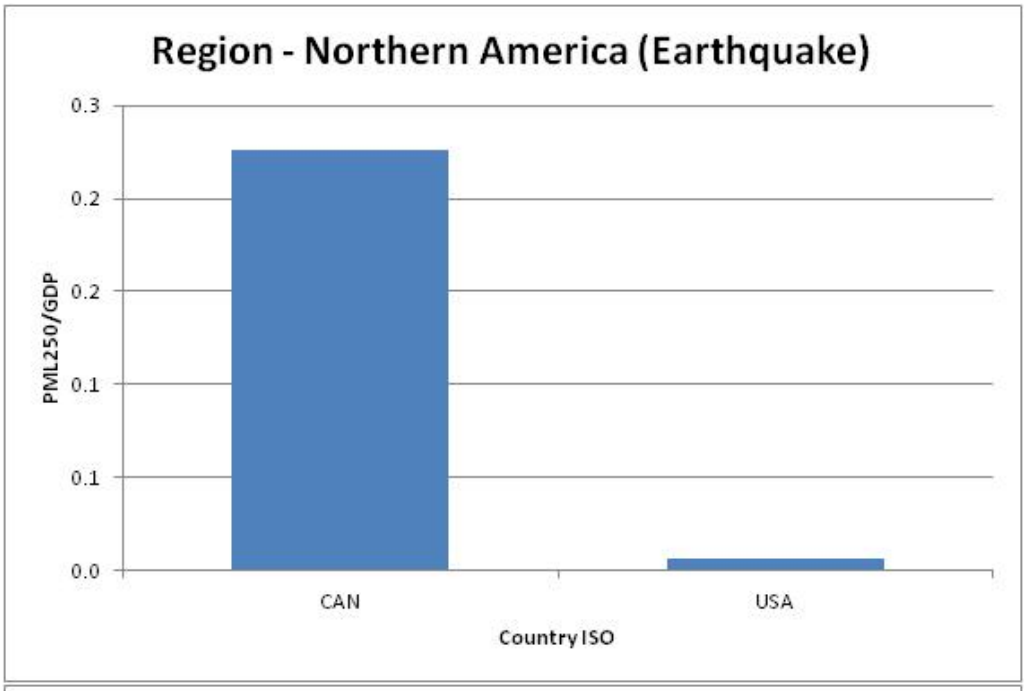
Northern America

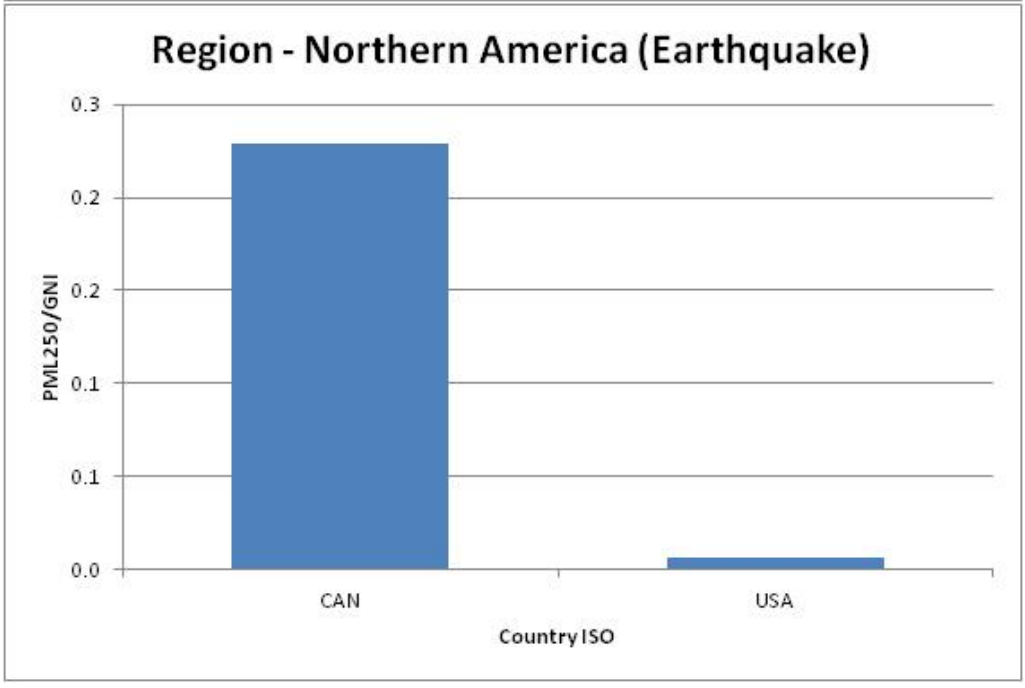


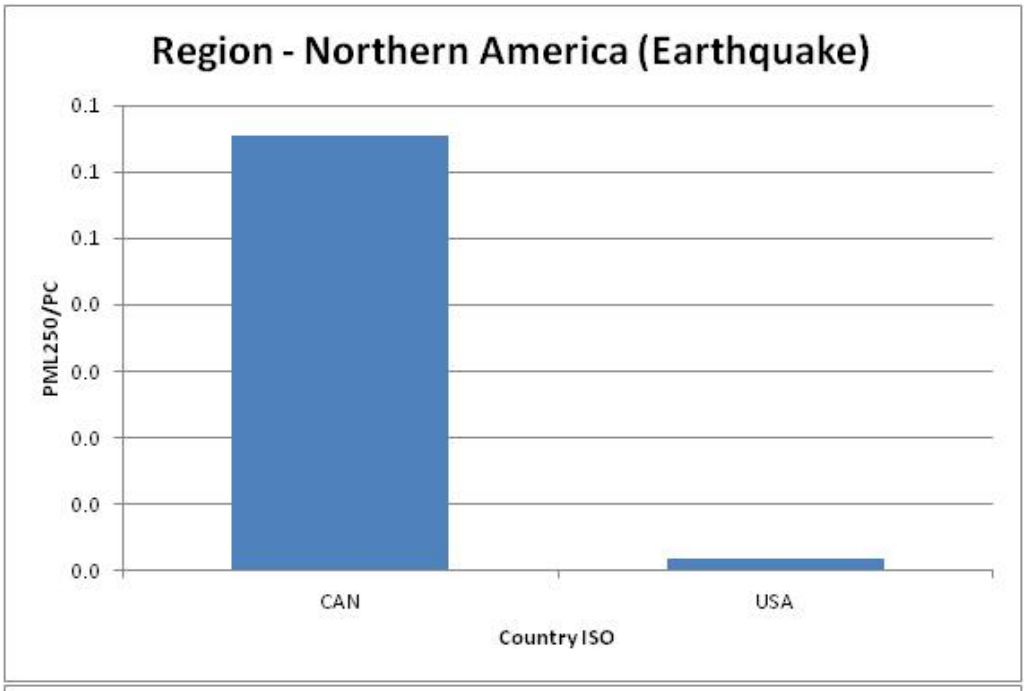


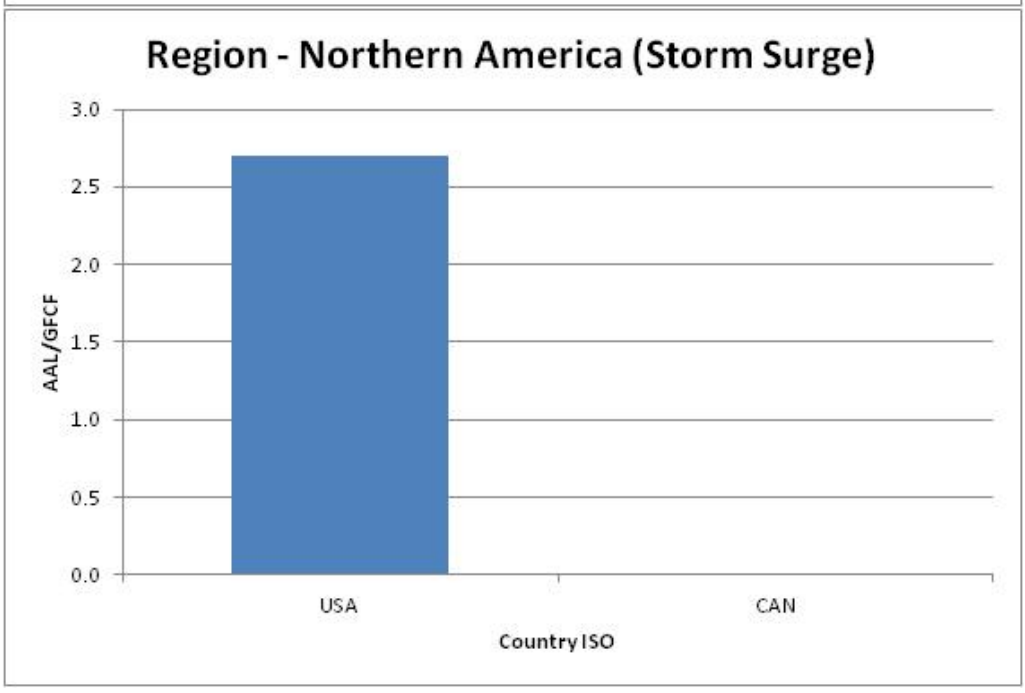

Region - Northern America (Earthquake)
AAL/GNE
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
USA
CAN
Country ISO

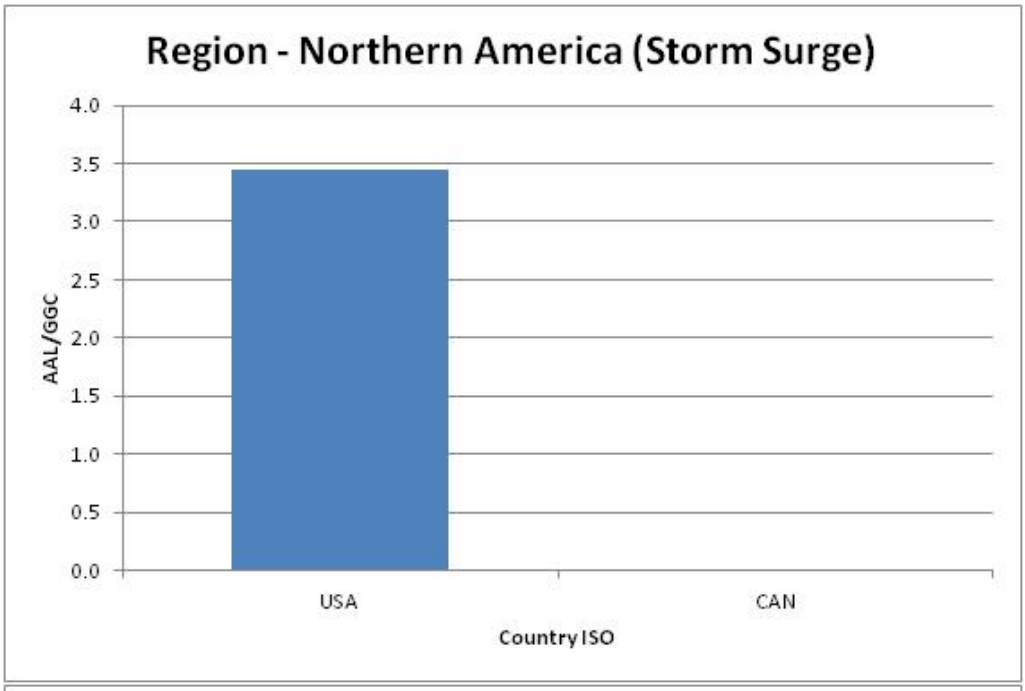

Region - Northern America (Earthquake)
AAL/PC
0.3
0.3
0.2
0.2
0.1
0.1
0.0
USA
CAN
Country ISO

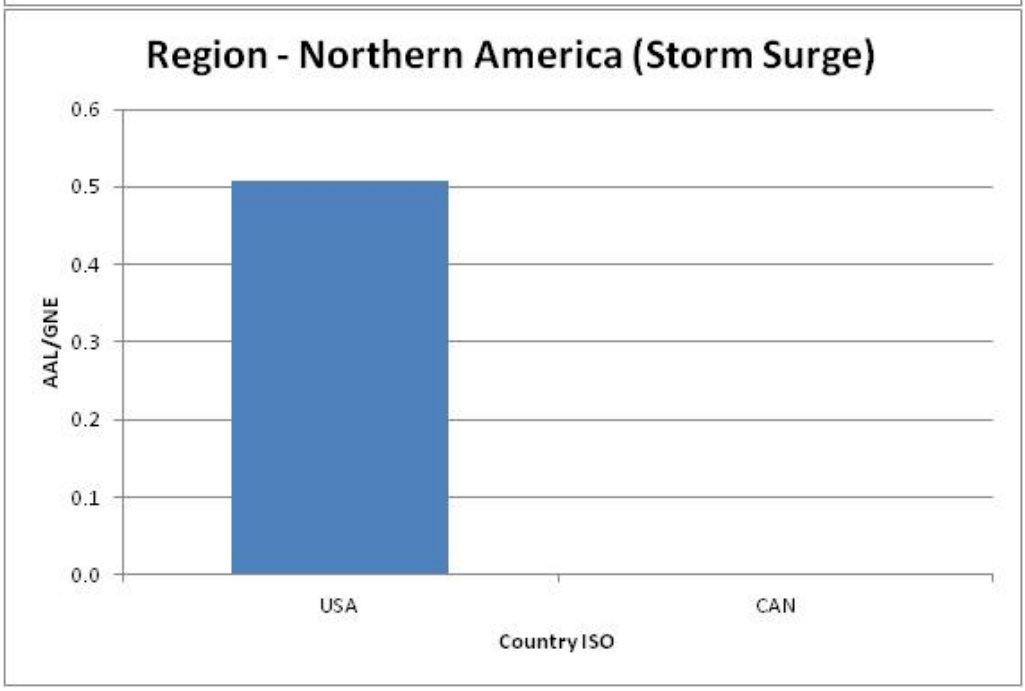

Region - Northern America (Earthquake)
PML250/GDP
0.3
0.2
0.2
0.1
0.1
0.0
CAN
USA
Country ISO

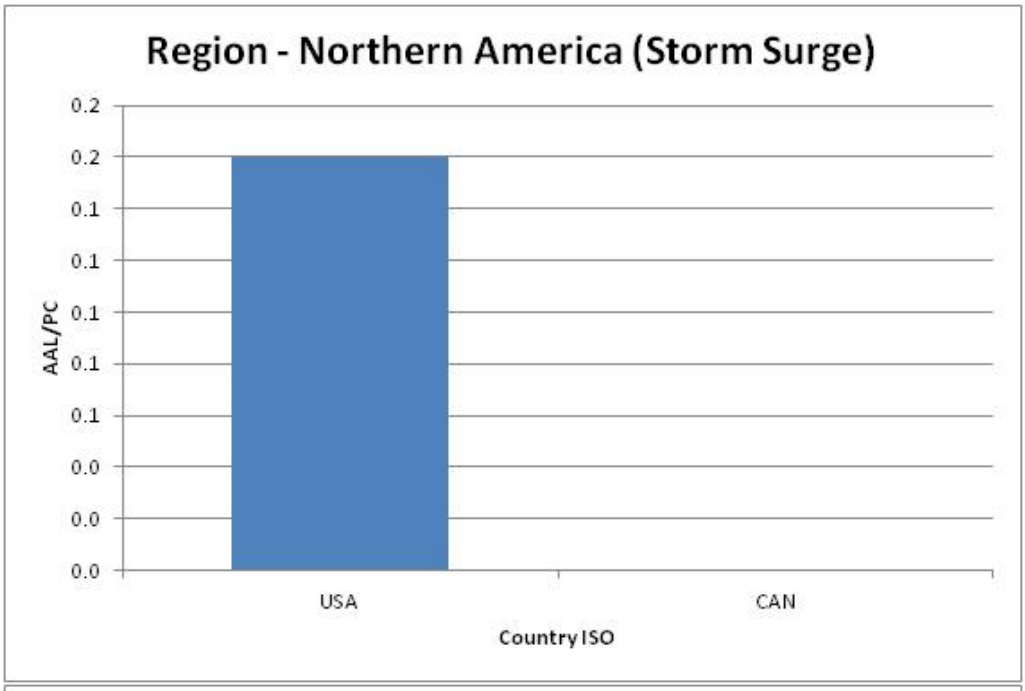

Region - Northern America (Earthquake)
PML250/GNI
0.3
0.2
0.2
0.1
0.1
0.0
CAN
USA
Country ISO

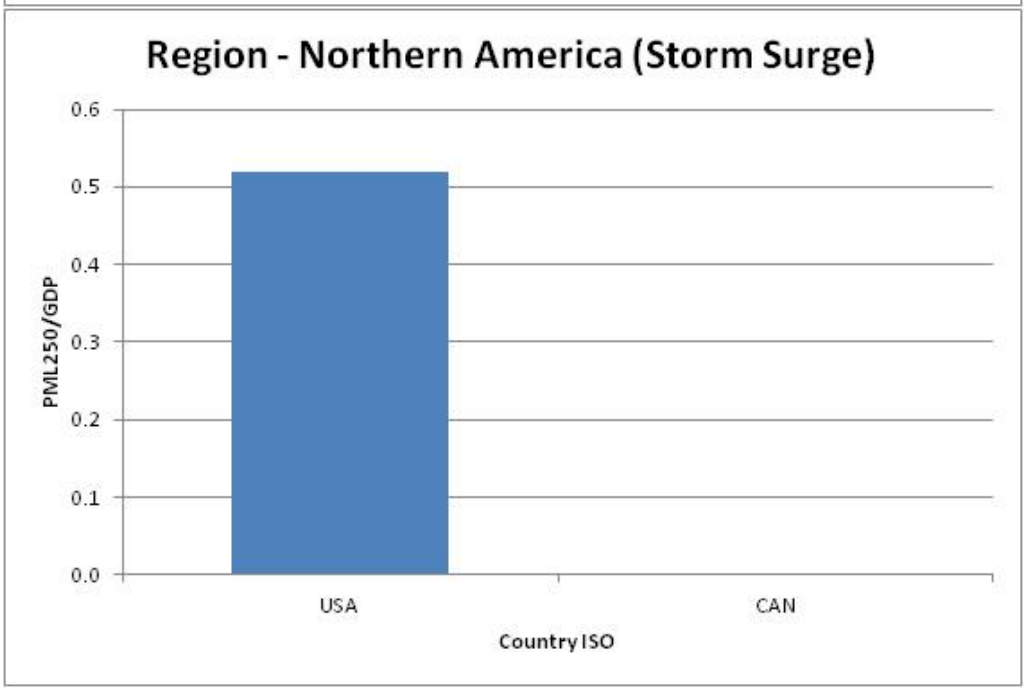

Region - Northern America (Earthquake)
PML250/PC
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
CAN
USA
Country ISO

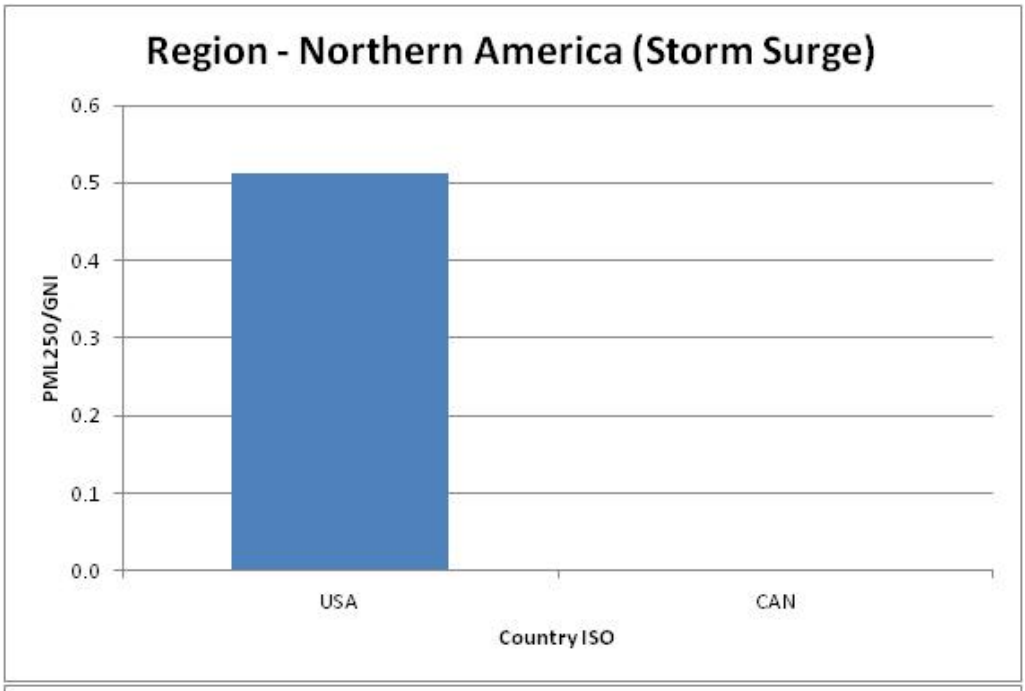

Region - Northern America (Storm Surge)
AAL/GFCF
3.0
2.5
2.0
1.5
1.0
0.5
0.0
USA
CAN
Country ISO

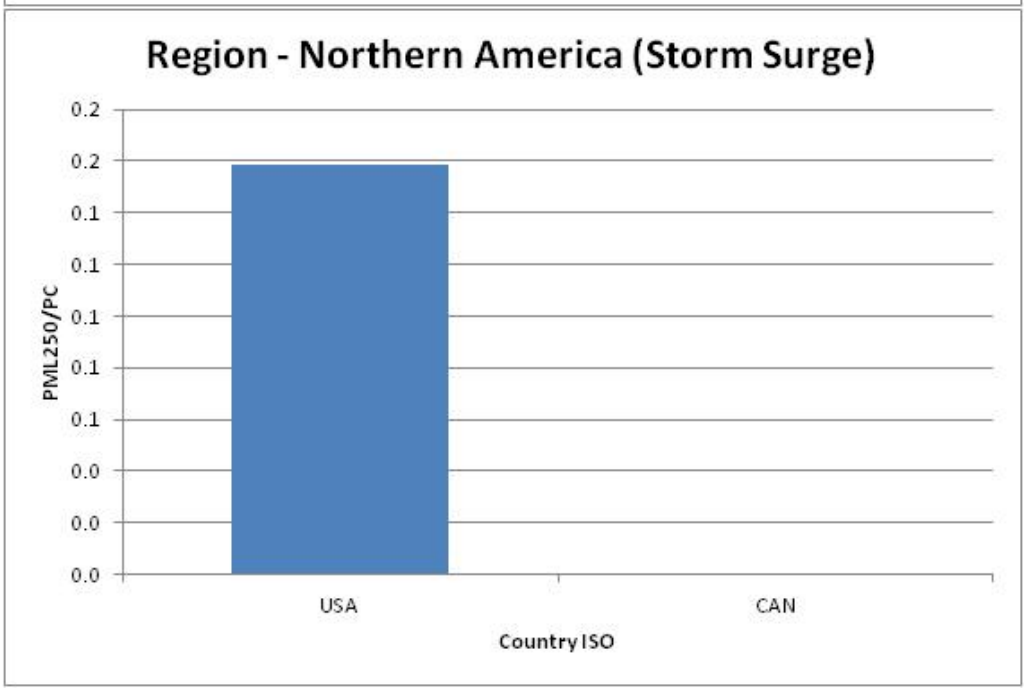

Region - Northern America (Storm Surge)
AAL/GGC
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
USA
CAN
Country ISO

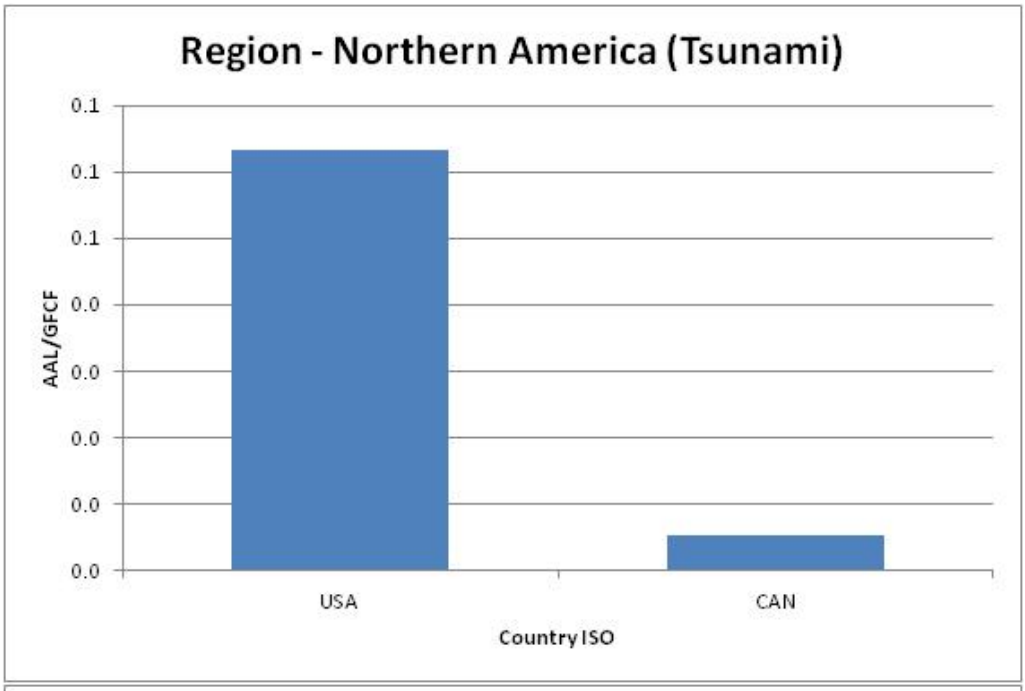

Region - Northern America (Storm Surge)
AAL/GNE
0.6
0.5
0.4
0.3
0.2
0.1
0.0
USA
CAN
Country ISO

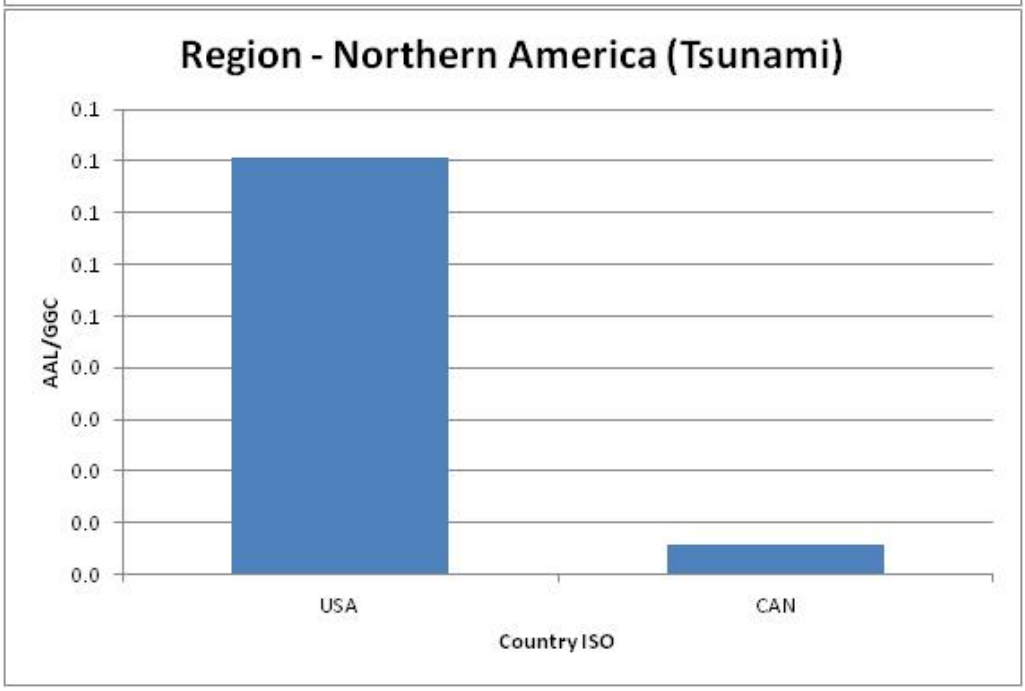

Region - Northern America (Storm Surge)
AAL/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
USA
CAN
Country ISO

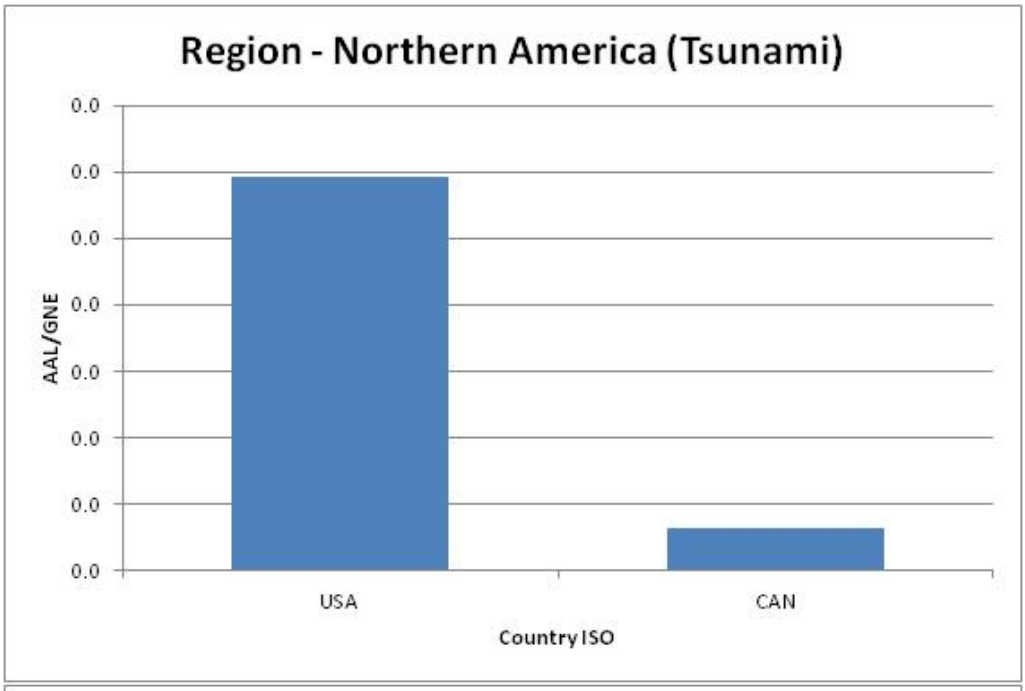

Region - Northern America (Storm Surge)
PML250/GDP
0.6
0.5
0.4
0.3
0.2
0.1
0.0
USA
CAN
Country ISO

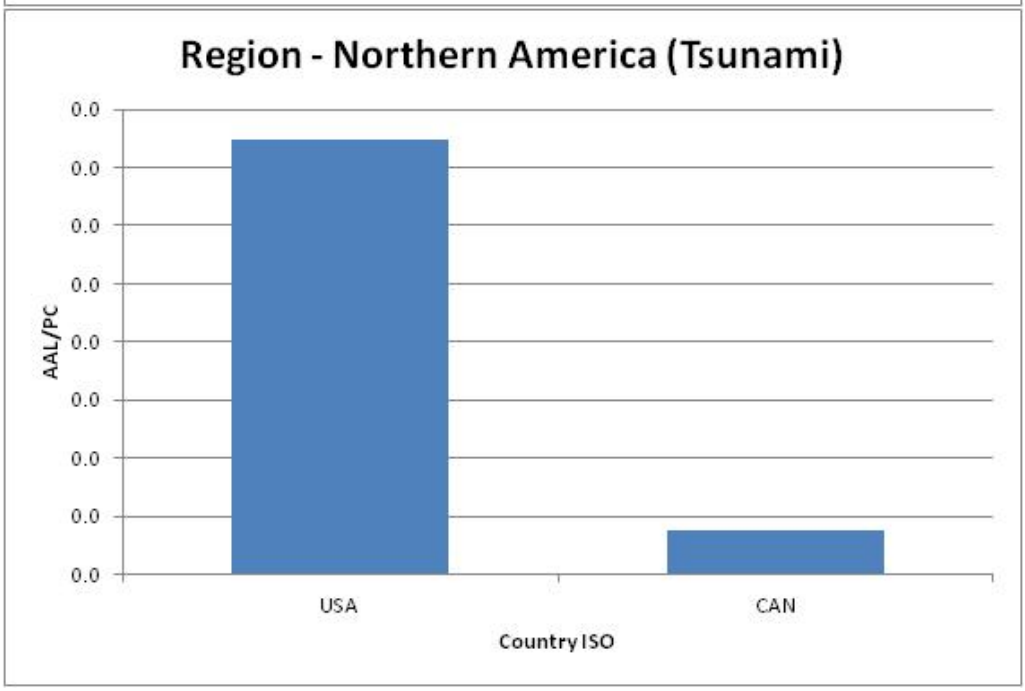

Region - Northern America (Storm Surge)
PML250/GNI
0.6
0.5
0.4
0.3
0.2
0.1
0.0
USA
CAN
Country ISO

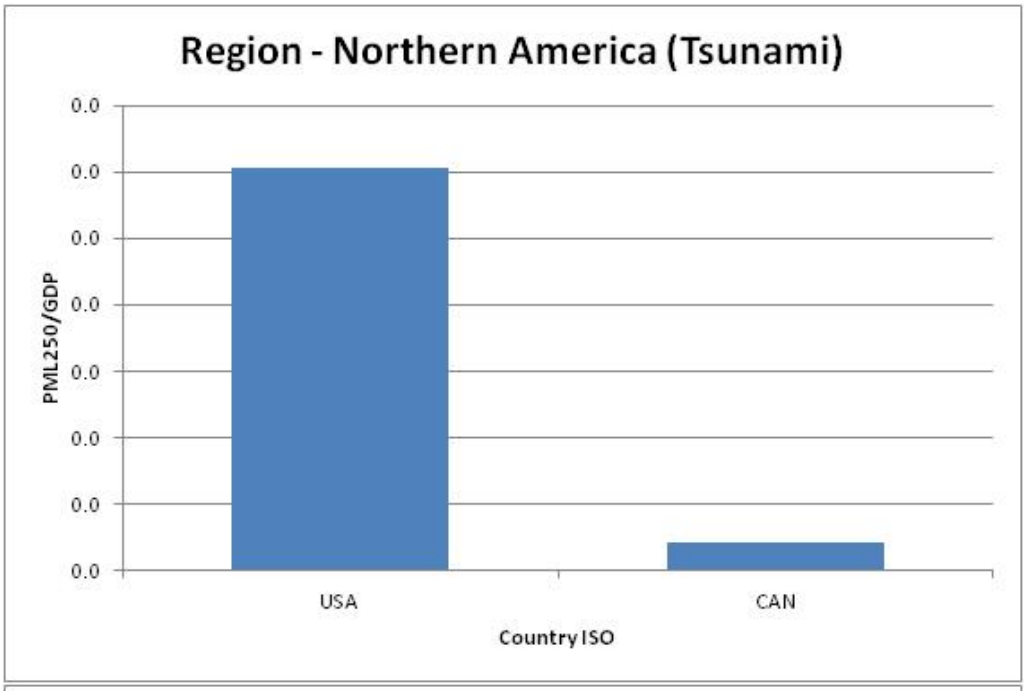

Region - Northern America (Storm Surge)
PML250/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
USA
CAN
Country ISO

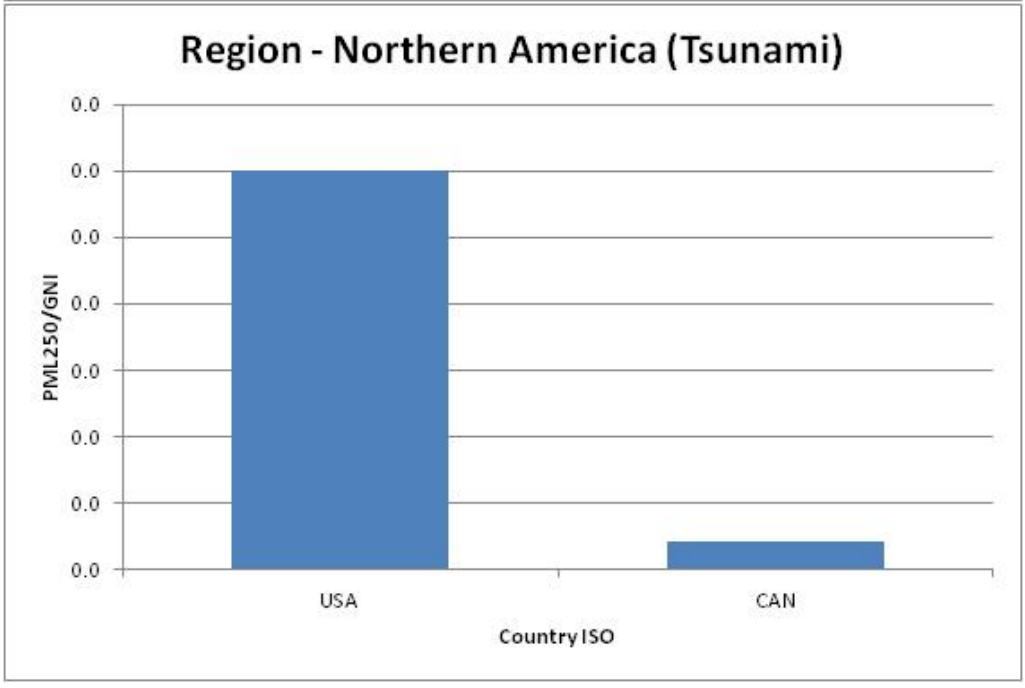

Region - Northern America (Tsunami)
AAL/GFCF
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

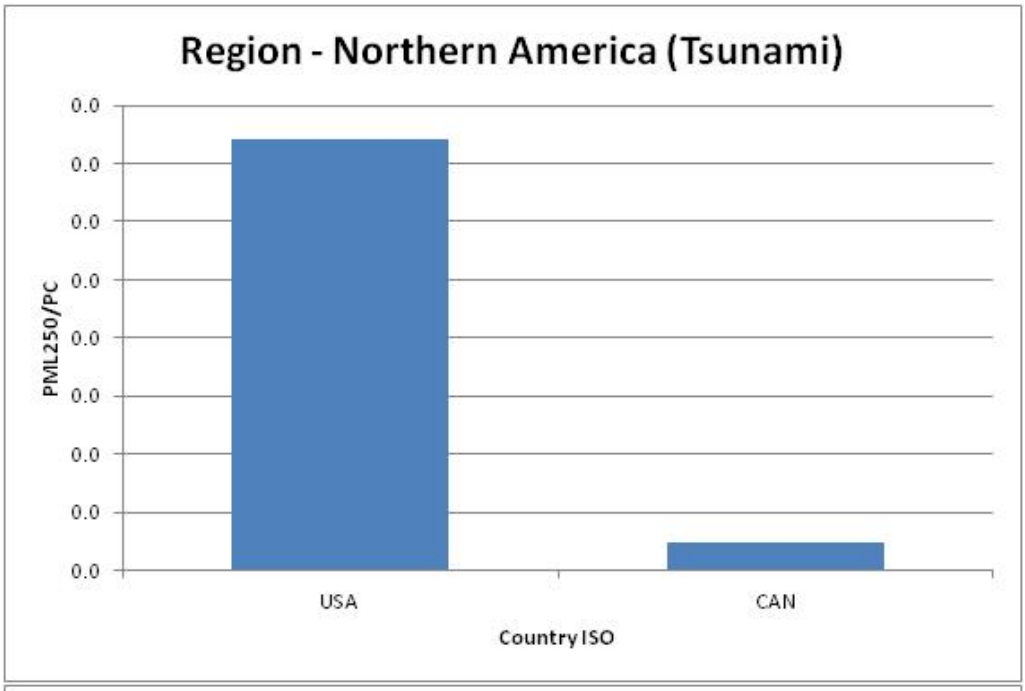

Region - Northern America (Tsunami)
AAL/GGC
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

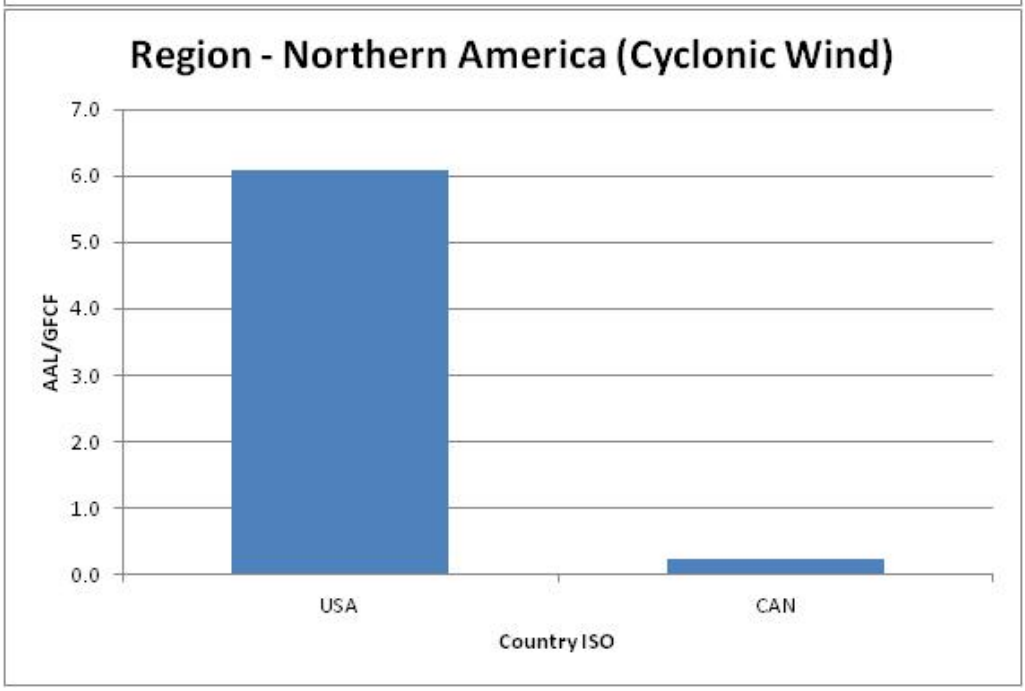

Region - Northern America (Tsunami)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

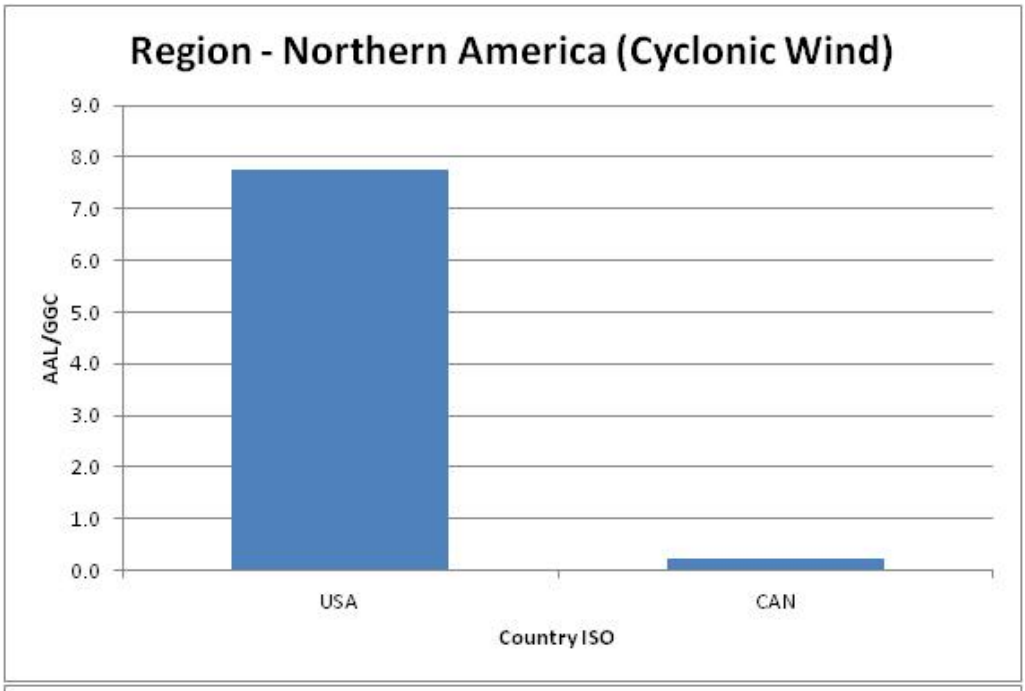

Region - Northern America (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

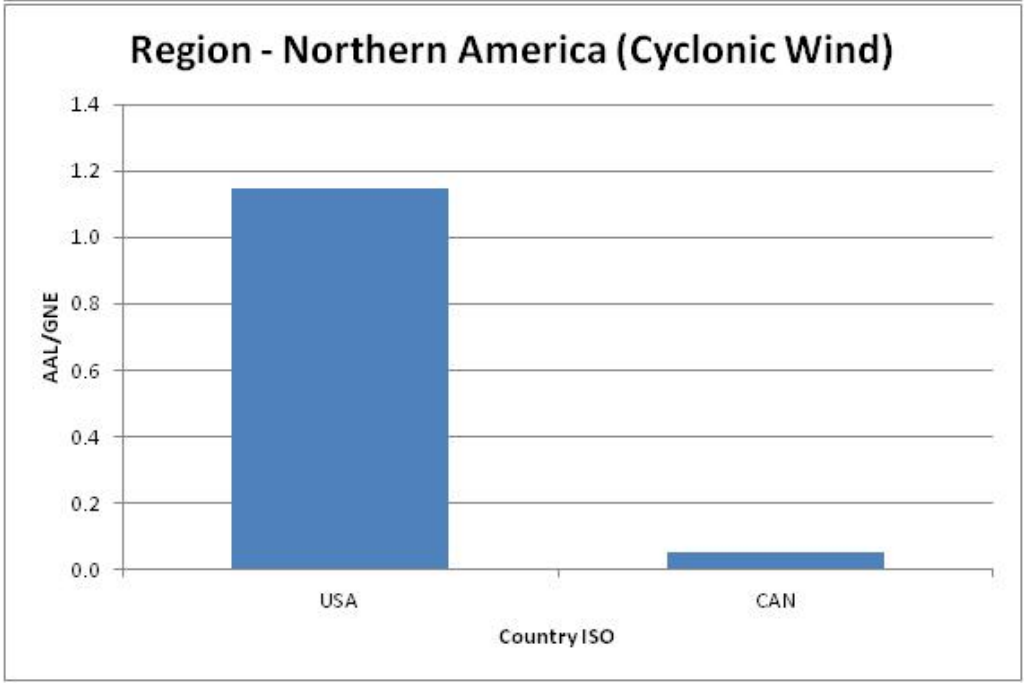

Region - Northern America (Tsunami)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

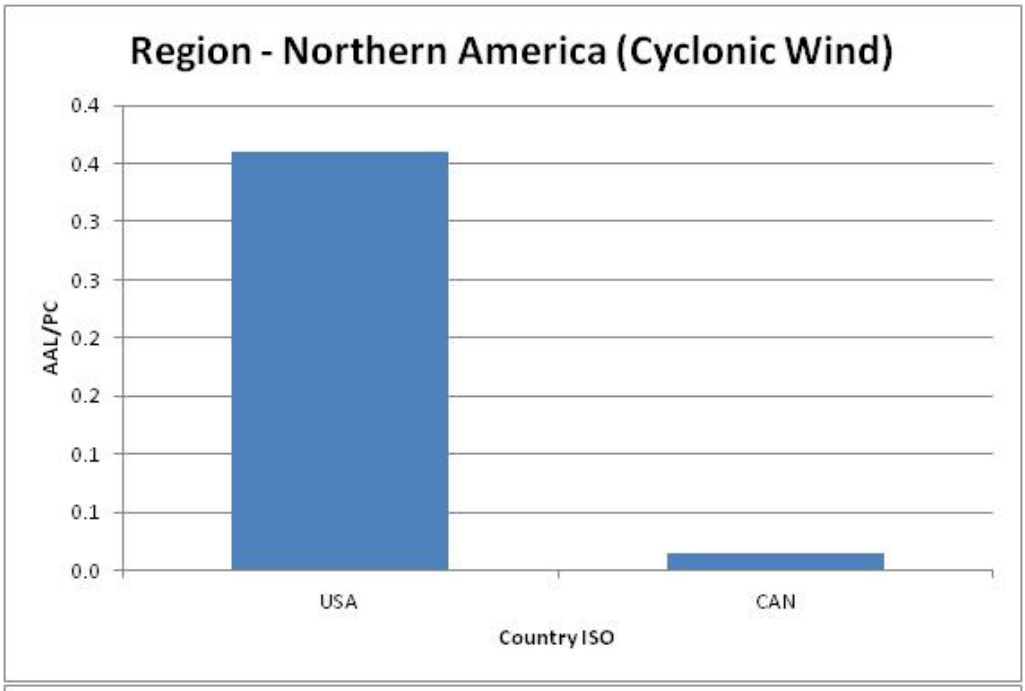

Region - Northern America (Tsunami)
PML250/GNI
0.0
0.0
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

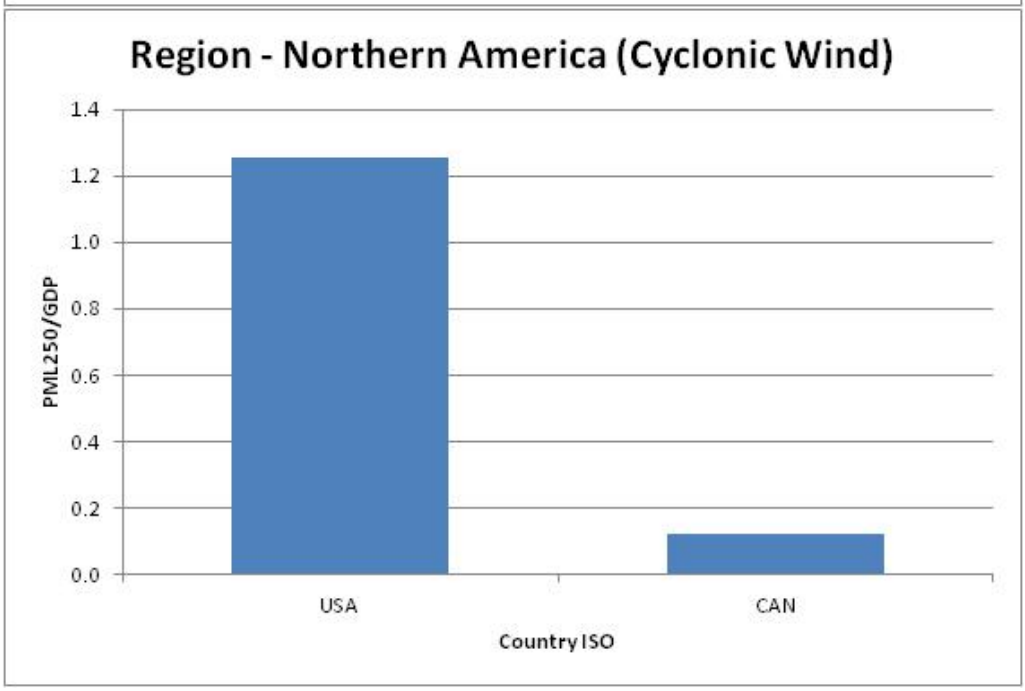

Region - Northern America (Tsunami)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
USA
CAN
Country ISO

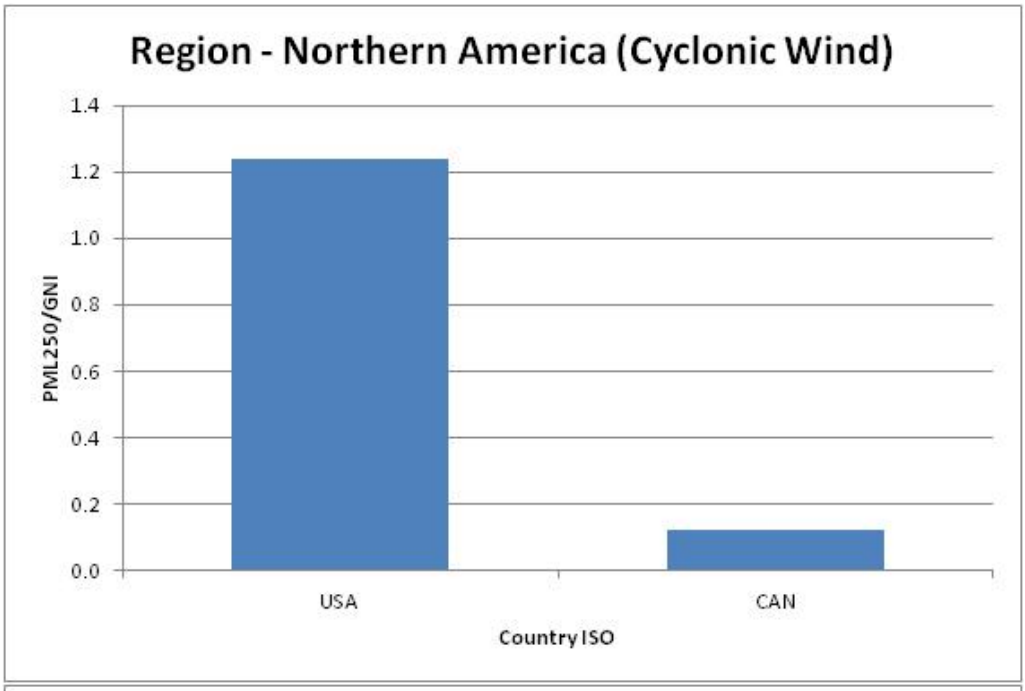

Region - Northern America (Cyclonic Wind)
AAL/GFCF
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
USA
CAN
Country ISO

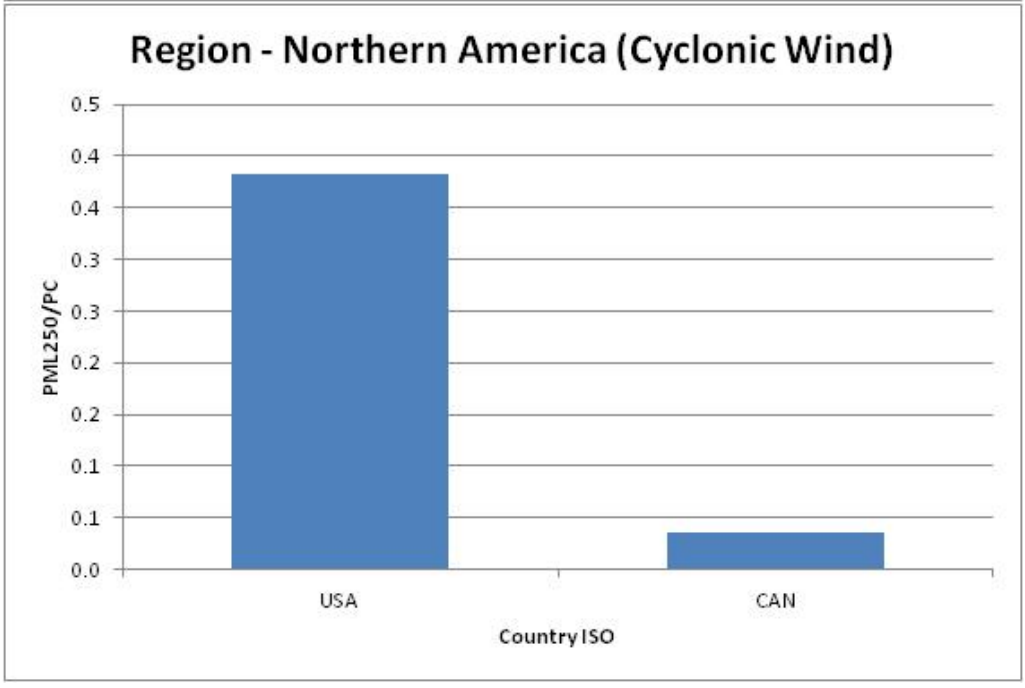

Region - Northern America (Cyclonic Wind)
AAL/GGC
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
USA
CAN
Country ISO

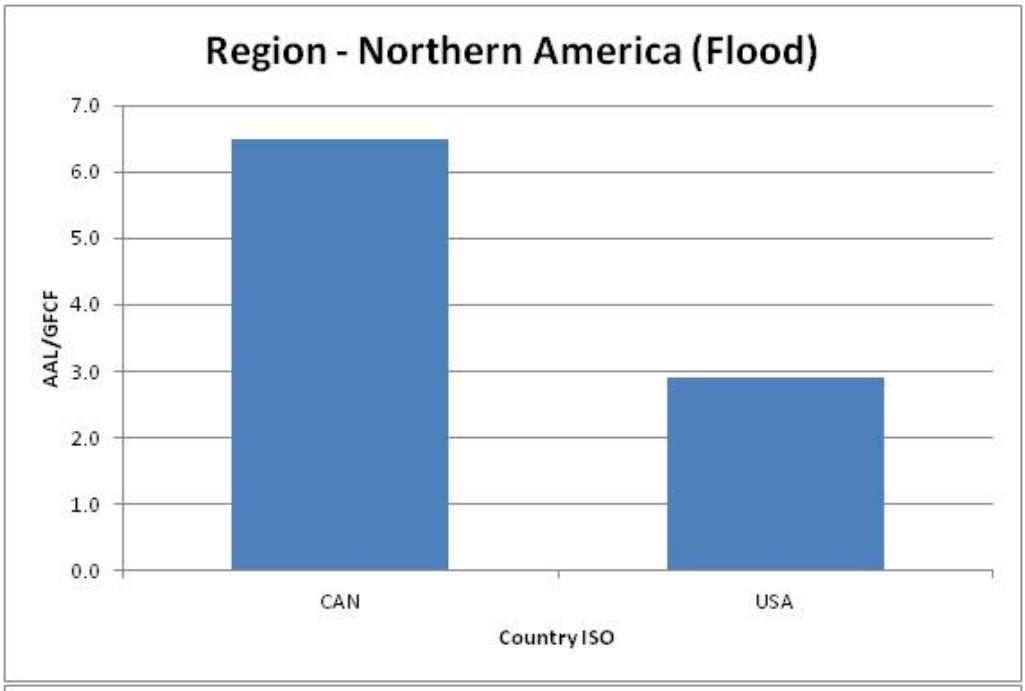

Region - Northern America (Cyclonic Wind)
AAL/GNE
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA
CAN
Country ISO

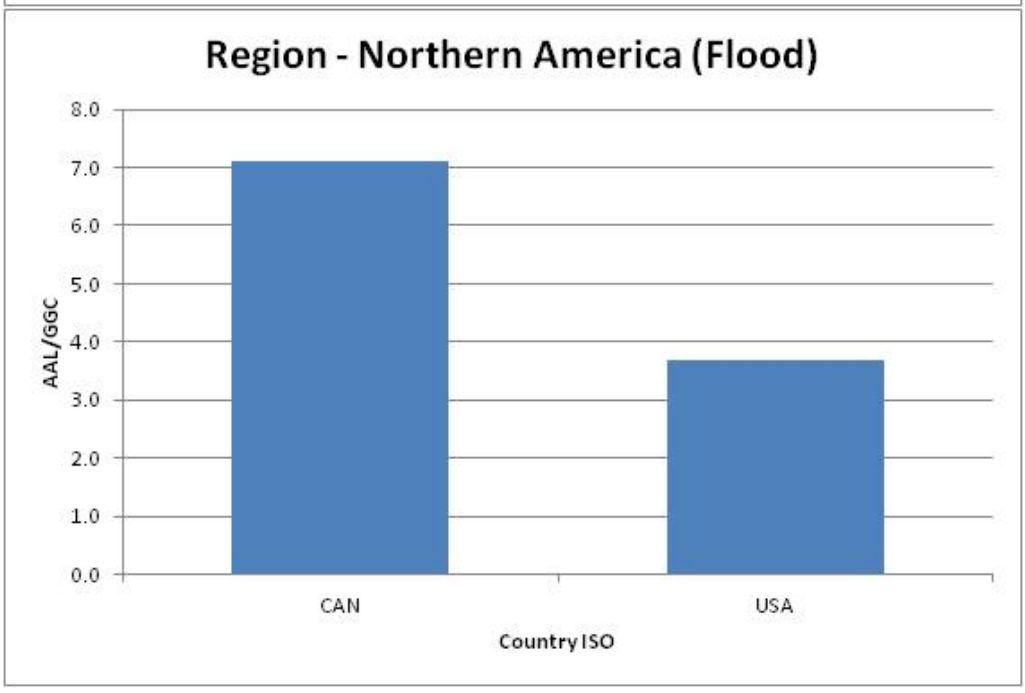

Region - Northern America (Cyclonic Wind)
AAL/PC
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
USA
CAN
Country ISO

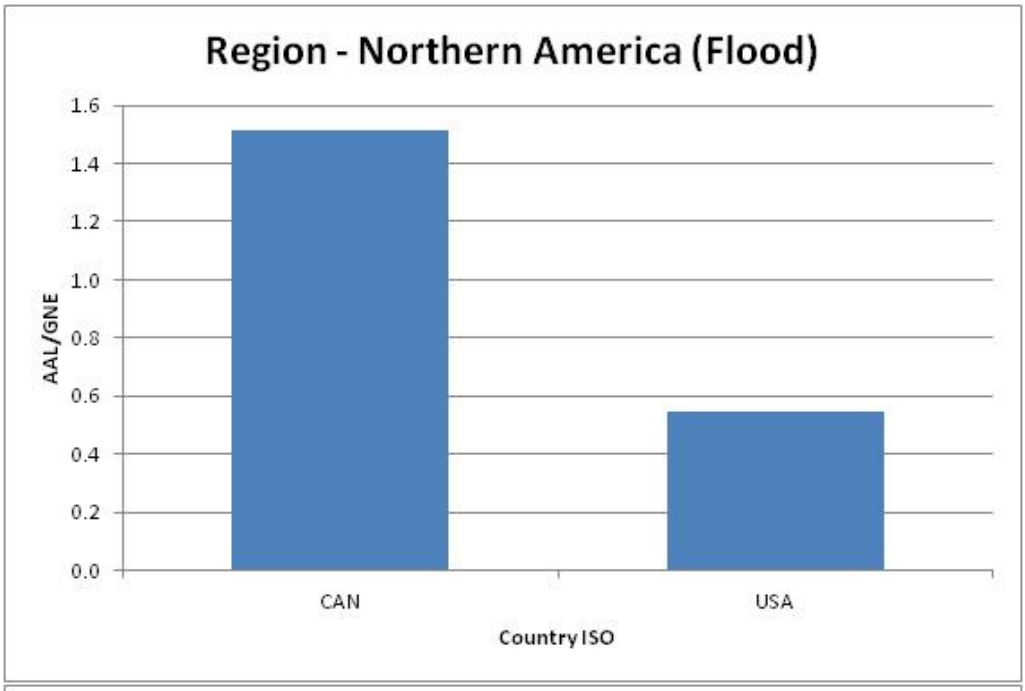

Region - Northern America (Cyclonic Wind)
PML250/GDP
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA
CAN
Country ISO

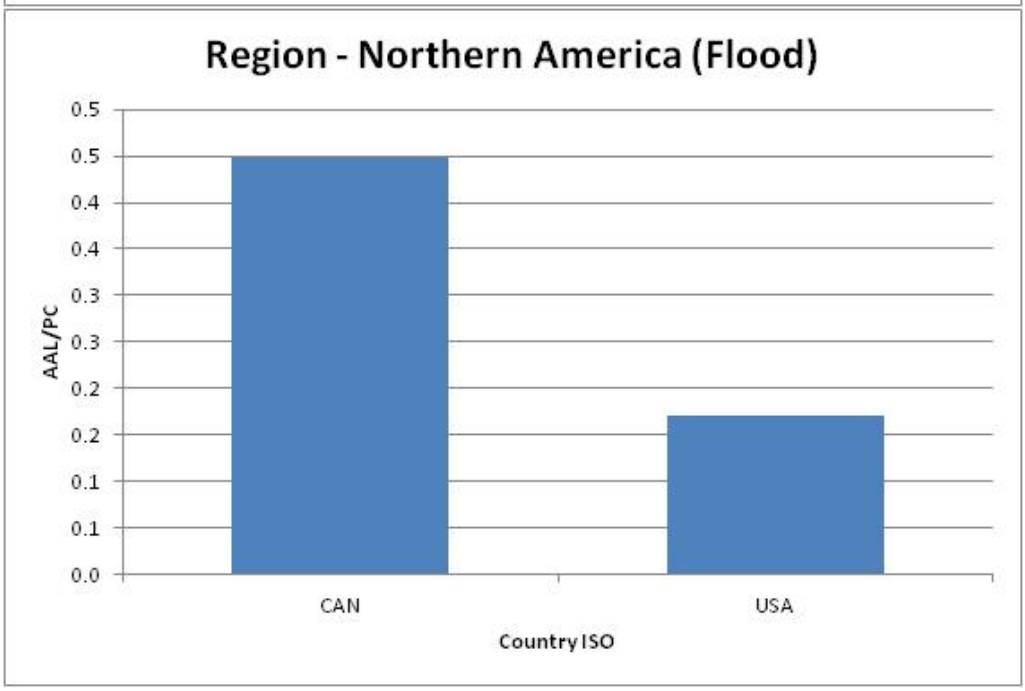

Region - Northern America (Cyclonic Wind)
PML250/GNI
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA
CAN
Country ISO


Region - Northern America (Cyclonic Wind)
PML250/PC
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
USA
CAN
Country ISO

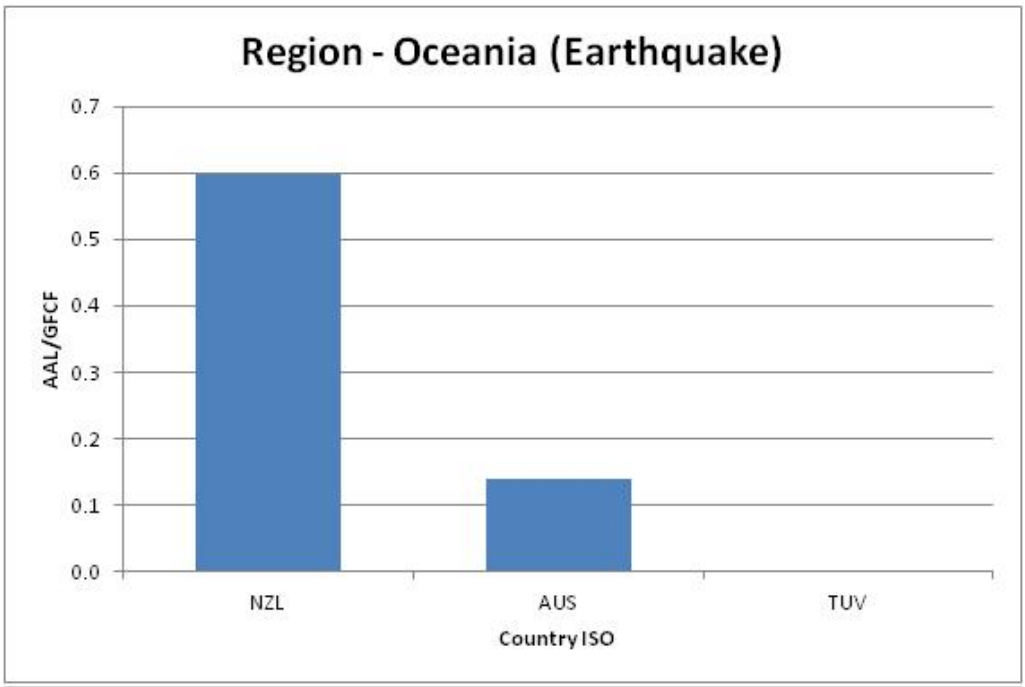

Region - Northern America (Flood)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
AAL/GFCF
CAN
USA
Country ISO

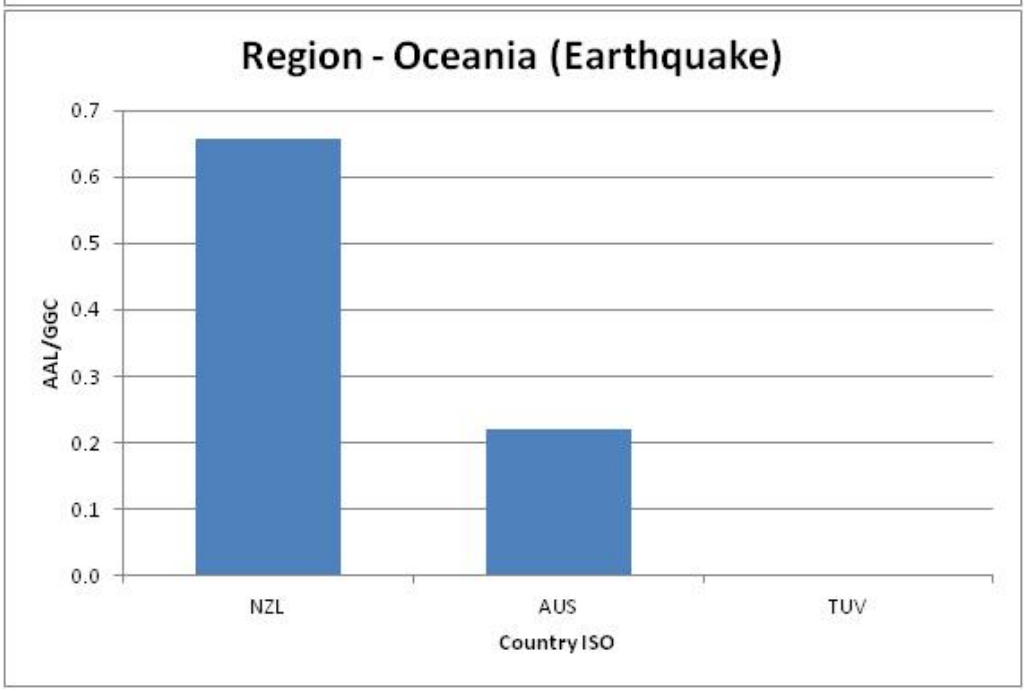

Region - Northern America (Flood)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
AAL/GGC
CAN
USA
Country ISO

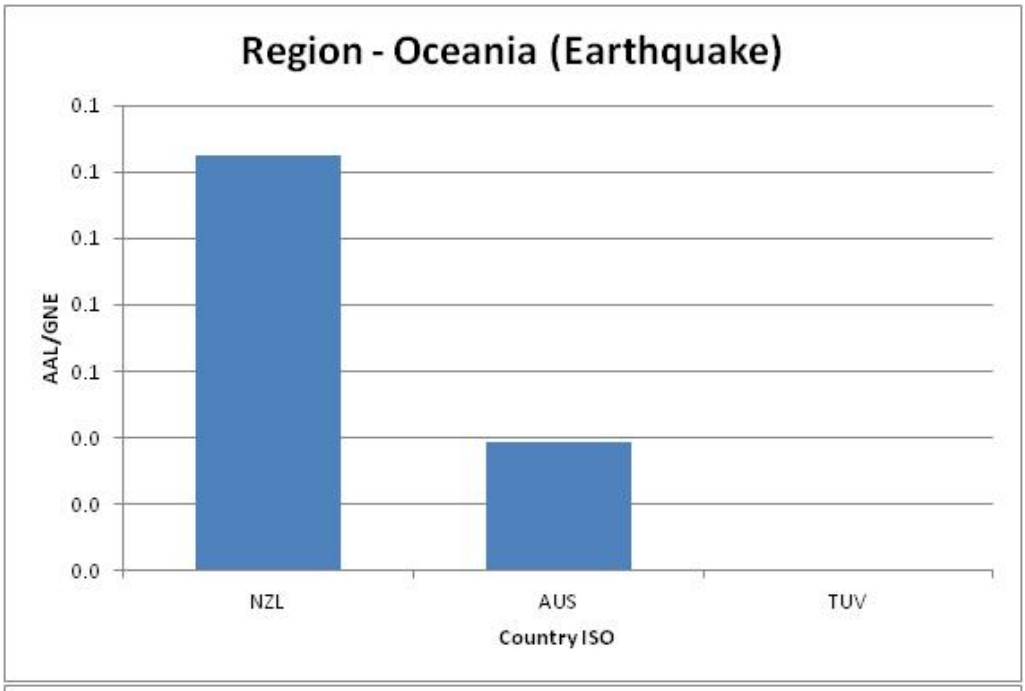

Region - Northern America (Flood)
AAL/GNE
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
CAN
USA
Country ISO

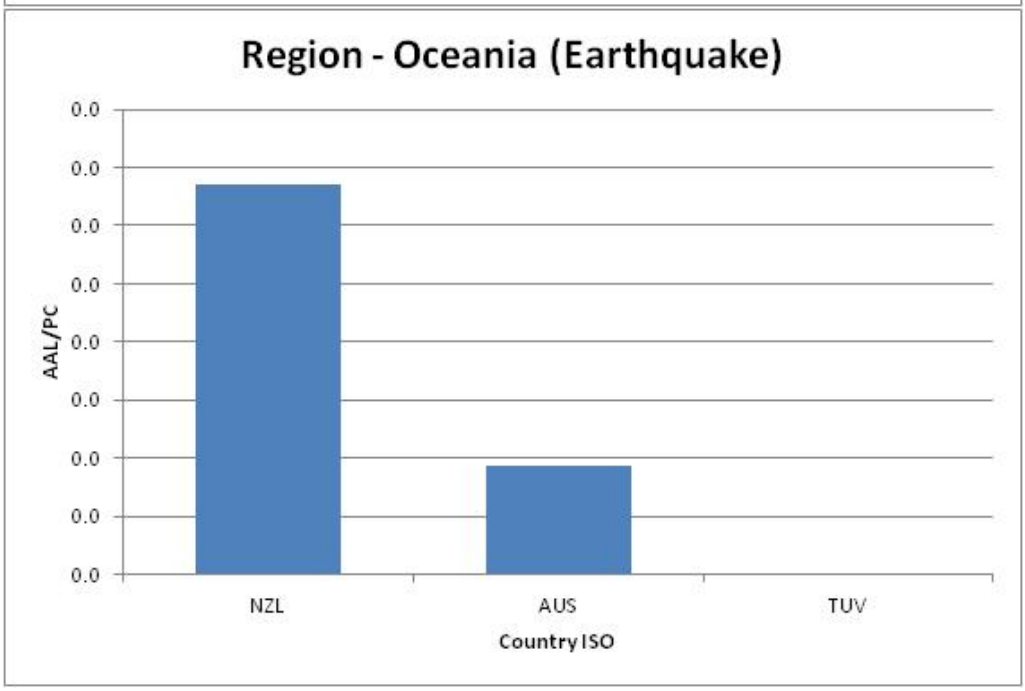

Region - Northern America (Flood)
AAL/PC
0.5
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
CAN
USA
Country ISO

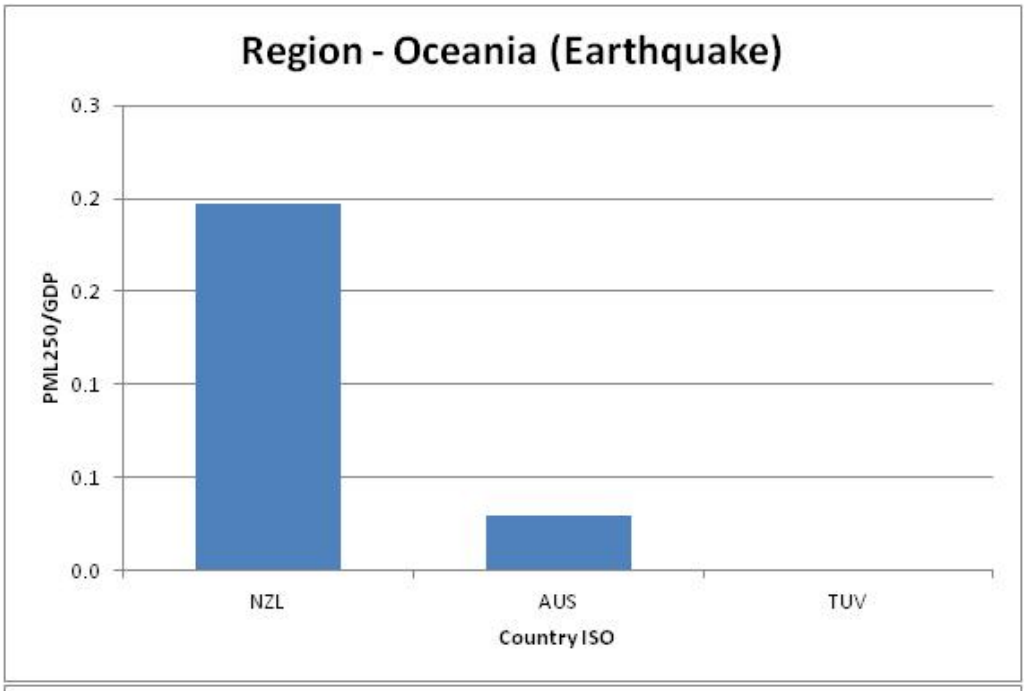
Oceania

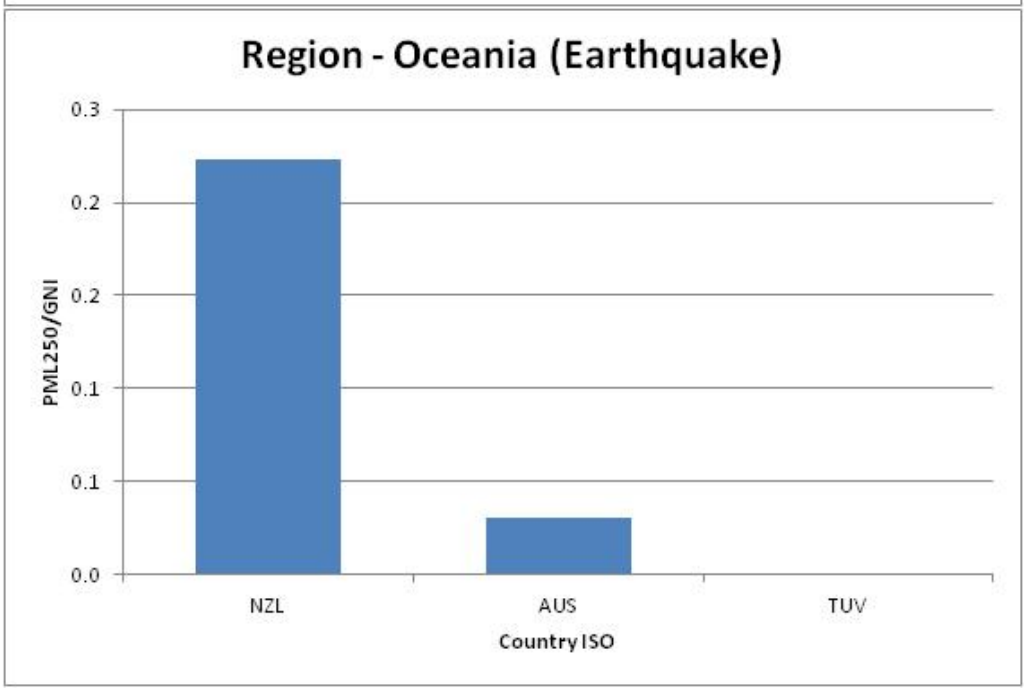

Region - Oceania (Earthquake)
AAL/GFCF
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NZL
AUS
TUV
Country ISO

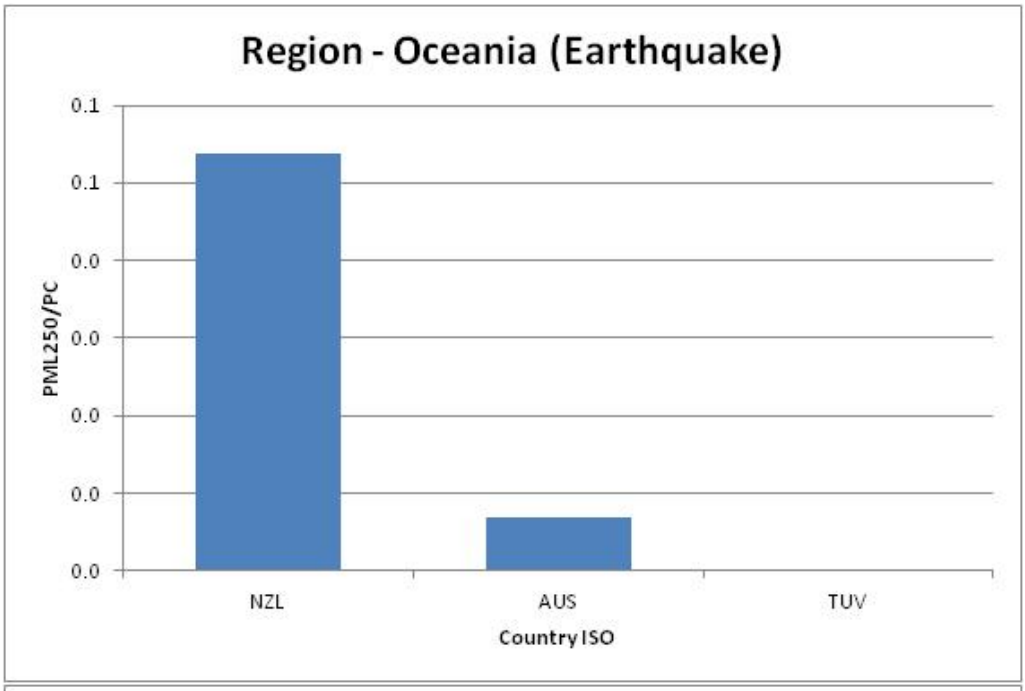

Region - Oceania (Earthquake)
AAL/GGC
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NZL
AUS
TUV
Country ISO

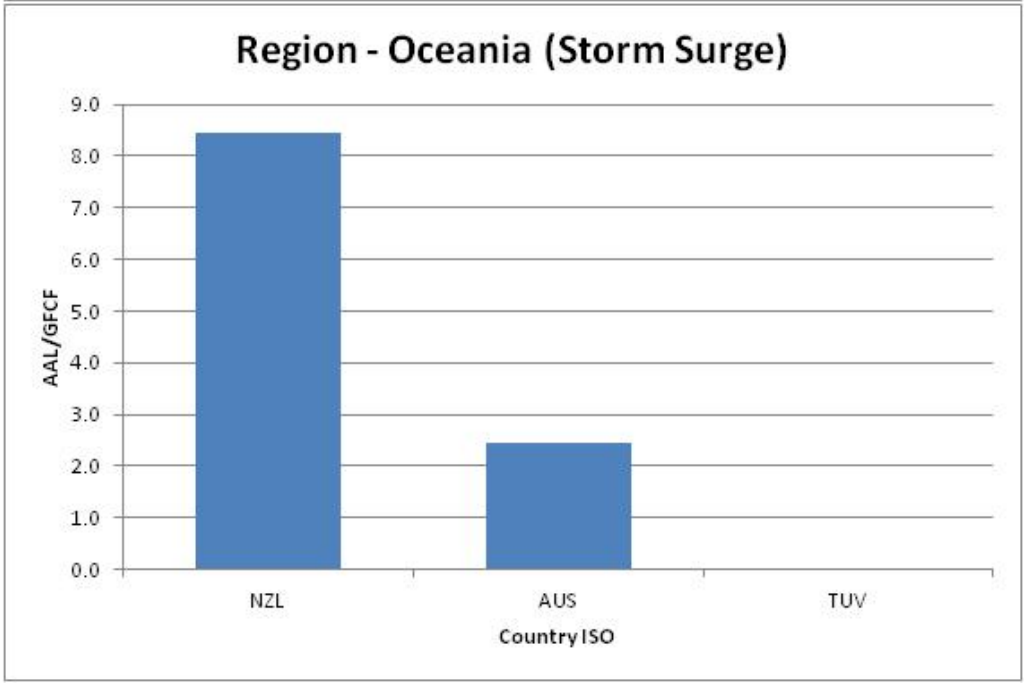

Region - Oceania (Earthquake)
AAL/GNE
0.1
0.1
0.1
0.1
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

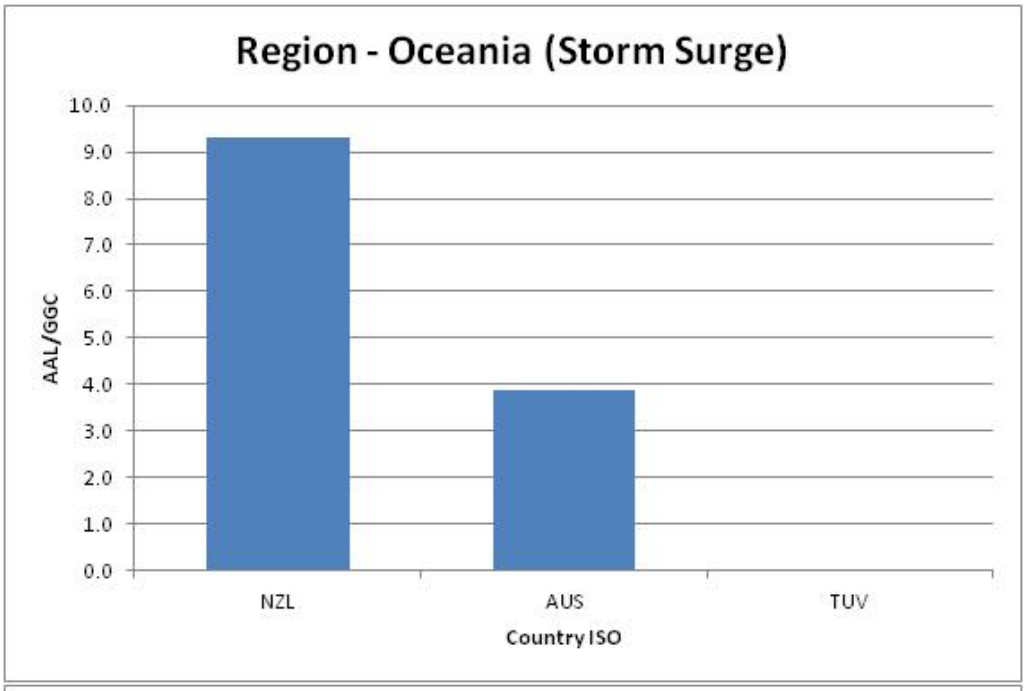

Region - Oceania (Earthquake)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

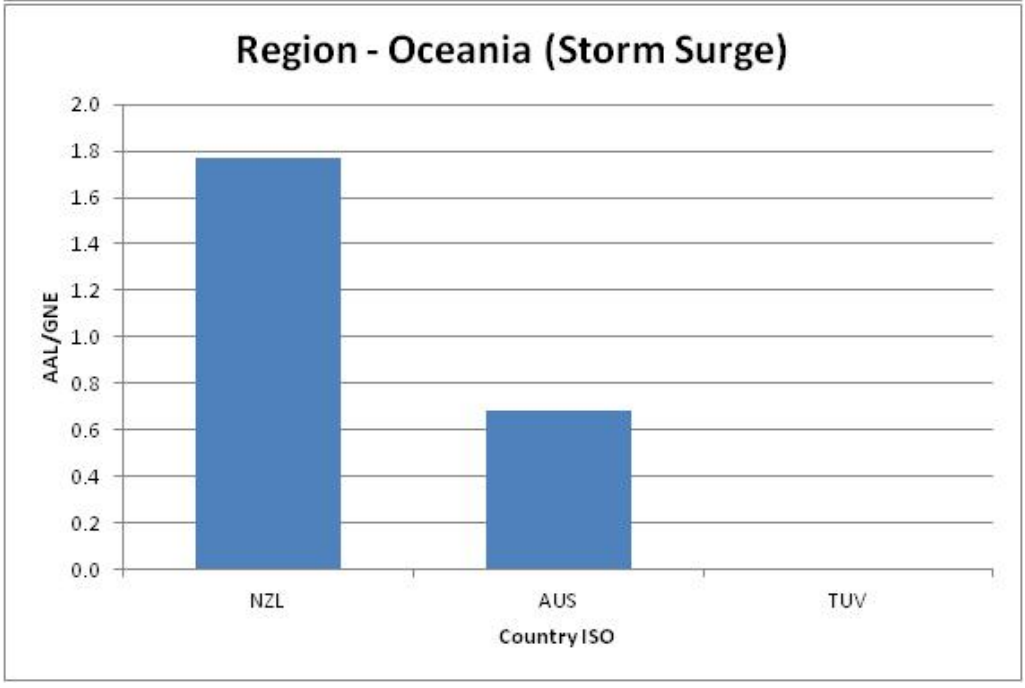

Region - Oceania (Earthquake)
PML250/GDP
0.3
0.2
0.2
0.1
0.1
0.0
NZL
AUS
TUV
Country ISO

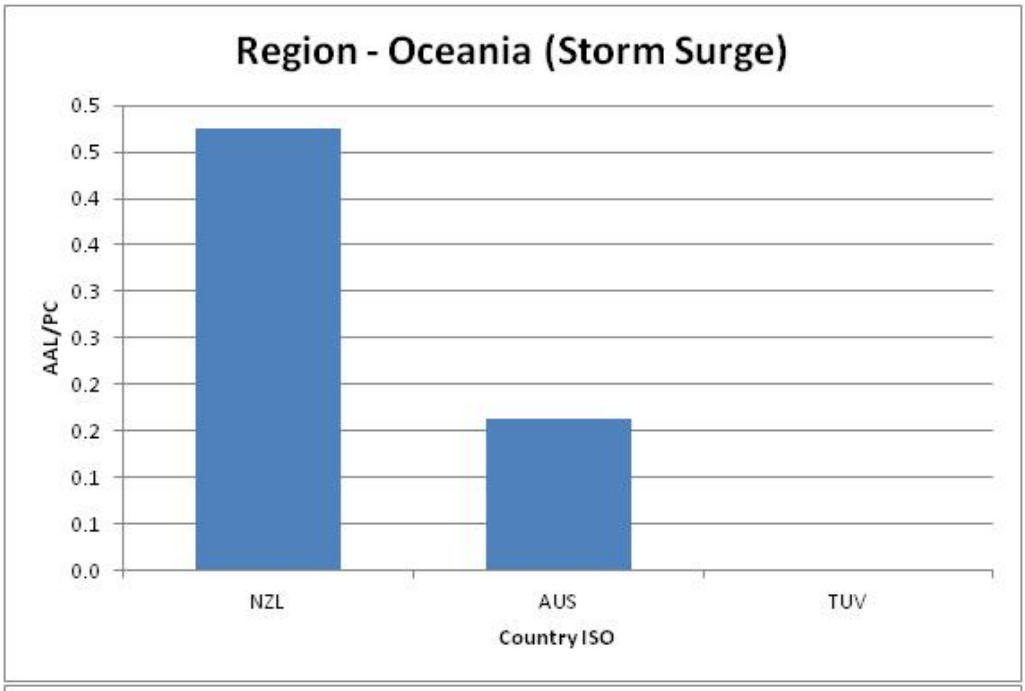

Region - Oceania (Earthquake)
PML250/GNI
0.3
0.2
0.2
0.1
0.1
0.0
NZL
AUS
TUV
Country ISO

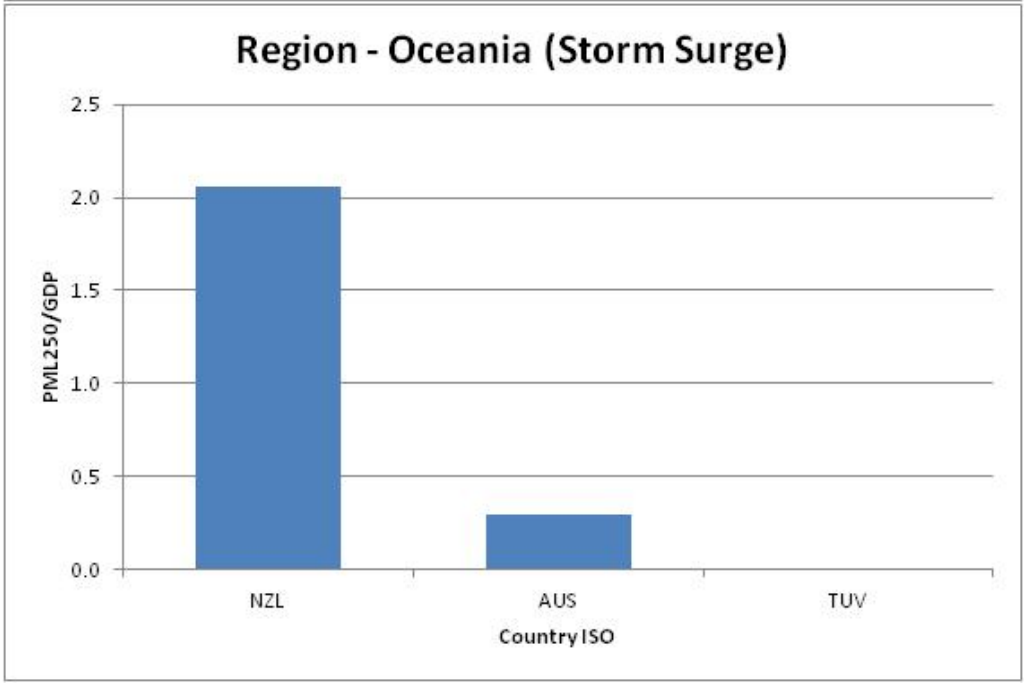

Region - Oceania (Earthquake)
PML250/PC
0.1
0.1
0.0
0.0
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

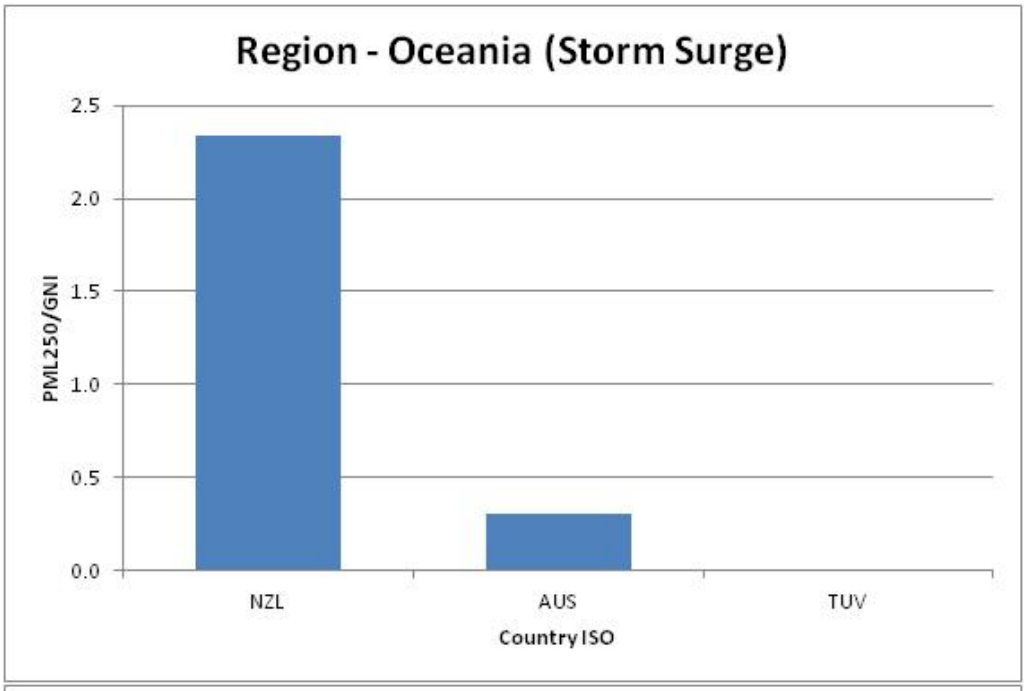

Region - Oceania (Storm Surge)
AAL/GFCF
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NZL
AUS
TUV
Country ISO

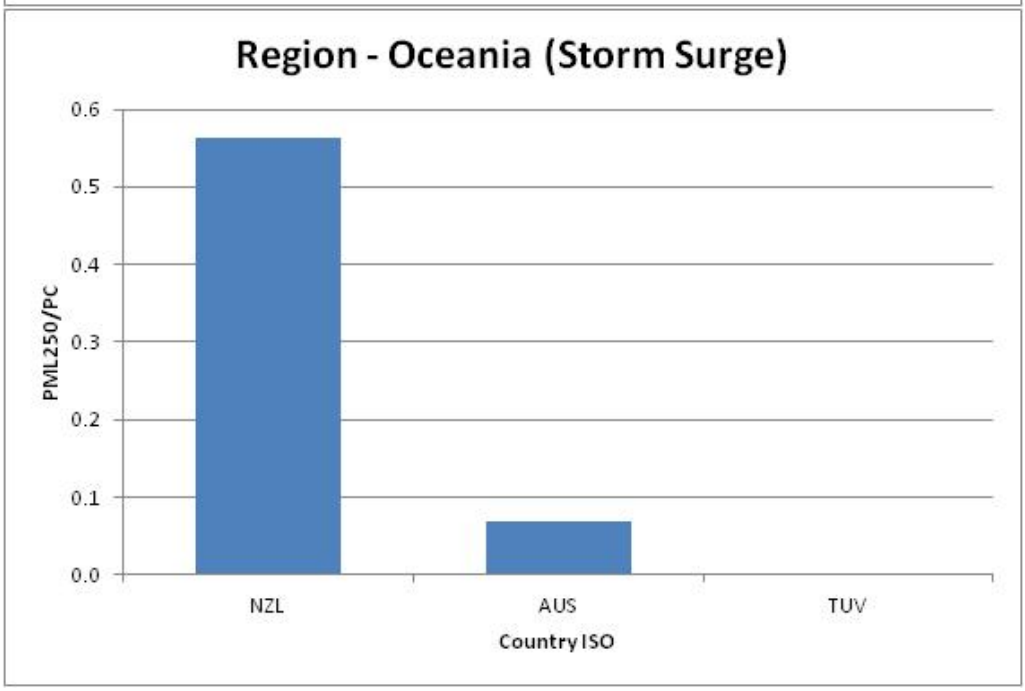

Region - Oceania (Storm Surge)
AAL/GGC
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NZL
AUS
TUV
Country ISO

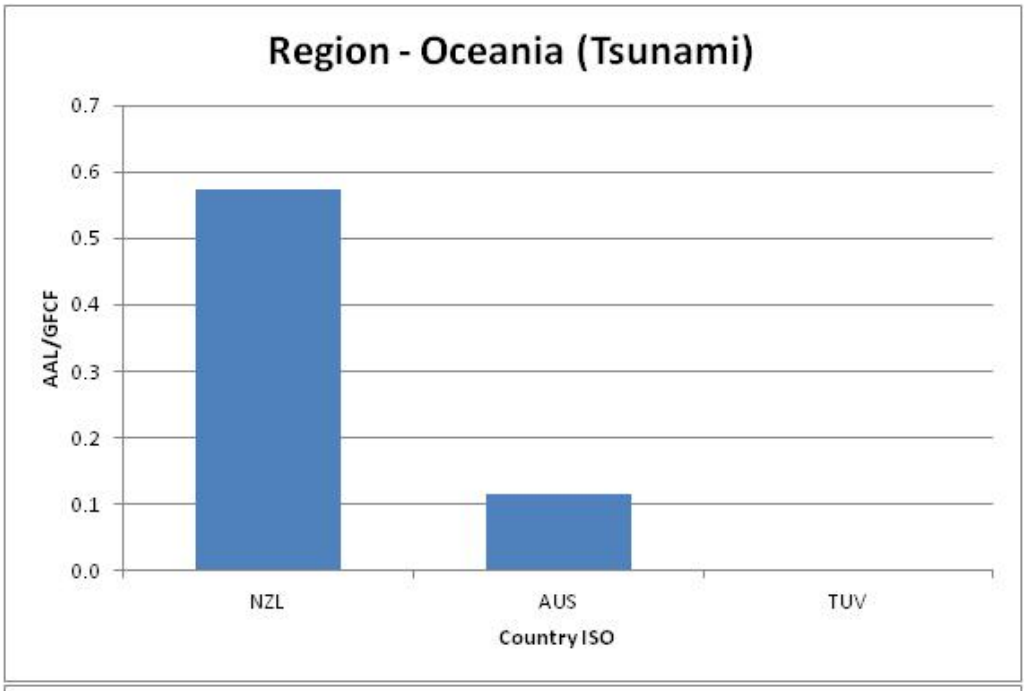

Region - Oceania (Storm Surge)
AAL/GNE
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
NZL
AUS
TUV
Country ISO

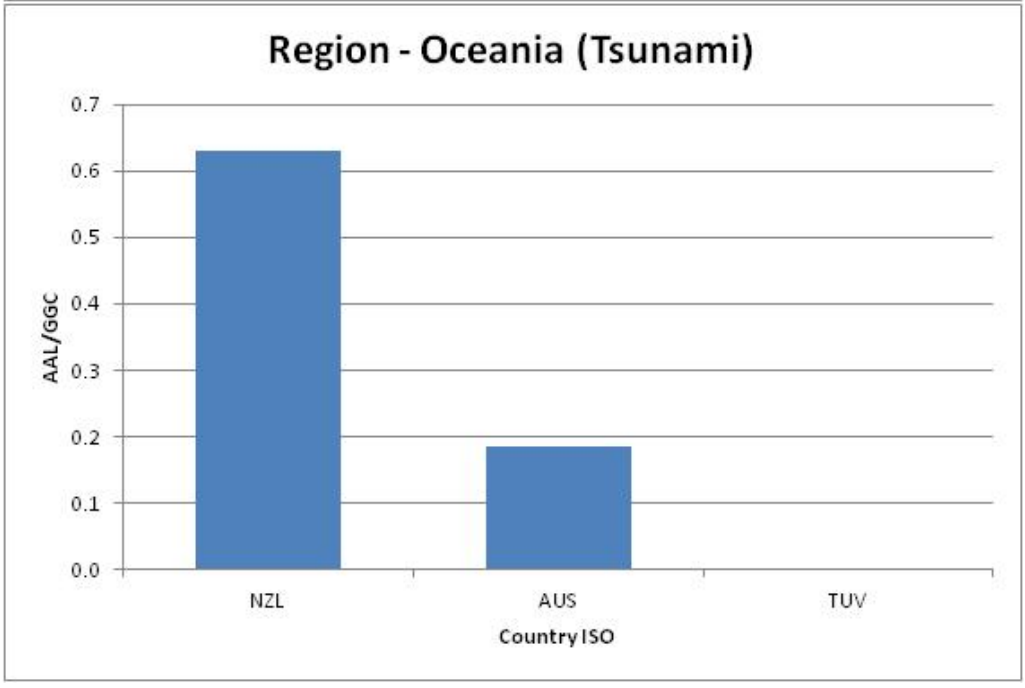

Region - Oceania (Storm Surge)
AAL/PC
0.5
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
NZL
AUS
TUV
Country ISO

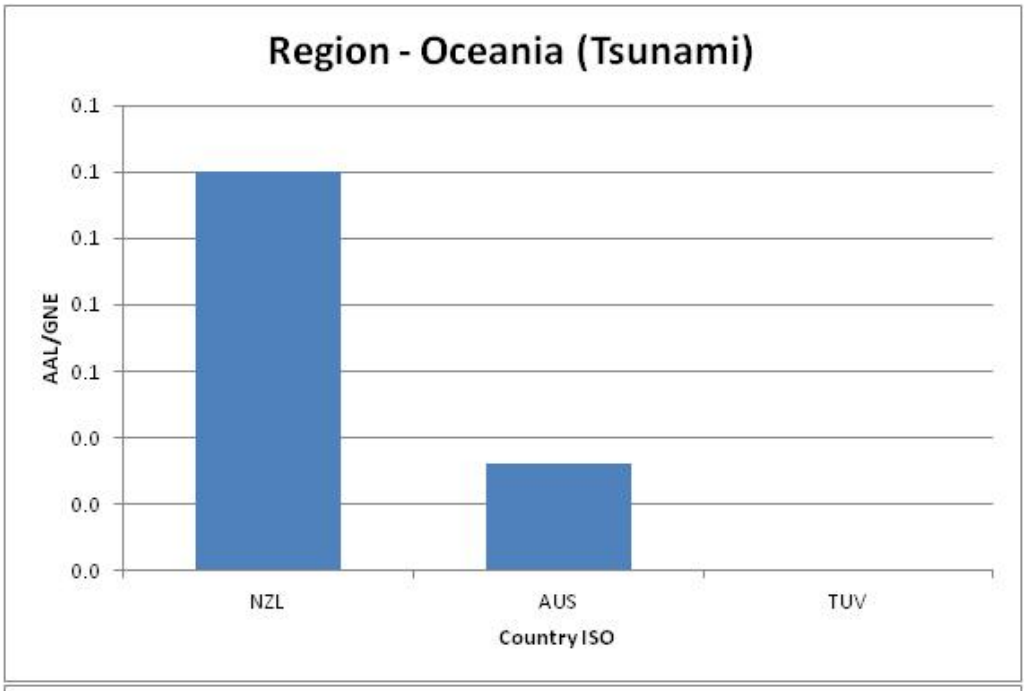

Region - Oceania (Storm Surge)
PML250/GDP
2.5
2.0
1.5
1.0
0.5
0.0
NZL
AUS
TUV
Country ISO

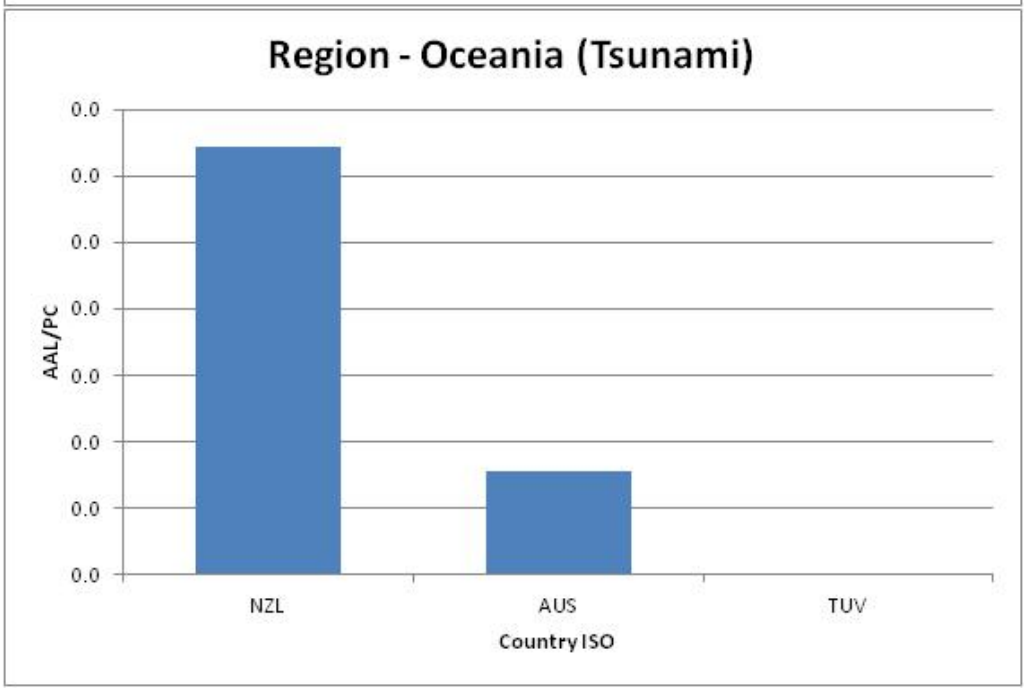

Region - Oceania (Storm Surge)
PML250/GNI
2.5
2.0
1.5
1.0
0.5
0.0
NZL
AUS
TUV
Country ISO

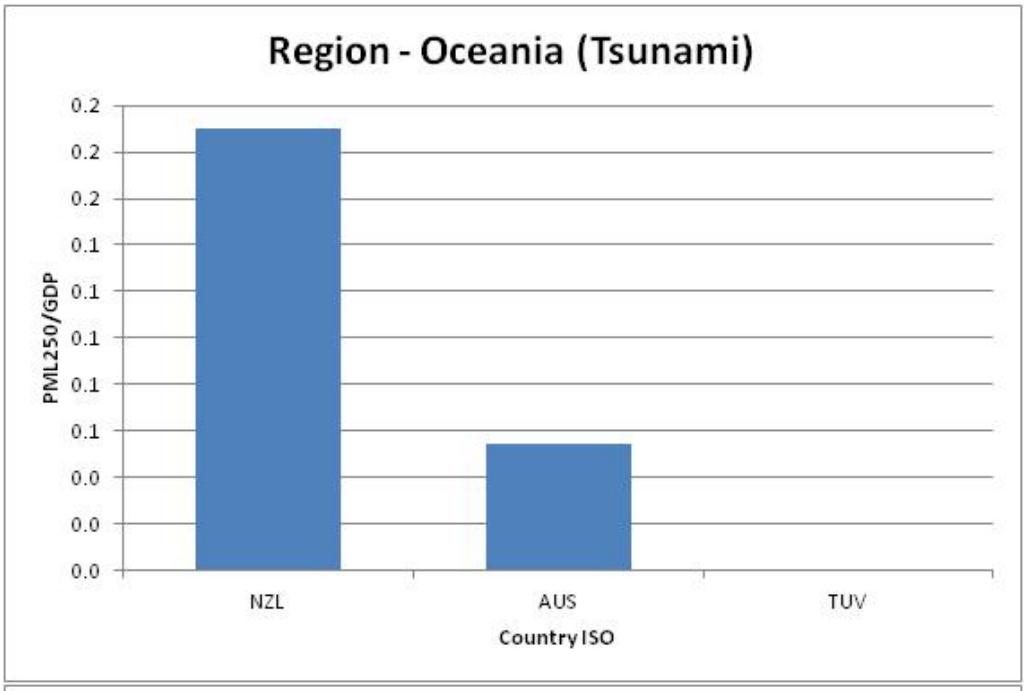

Region - Oceania (Storm Surge)
PML250/PC
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NZL
AUS
TUV
Country ISO

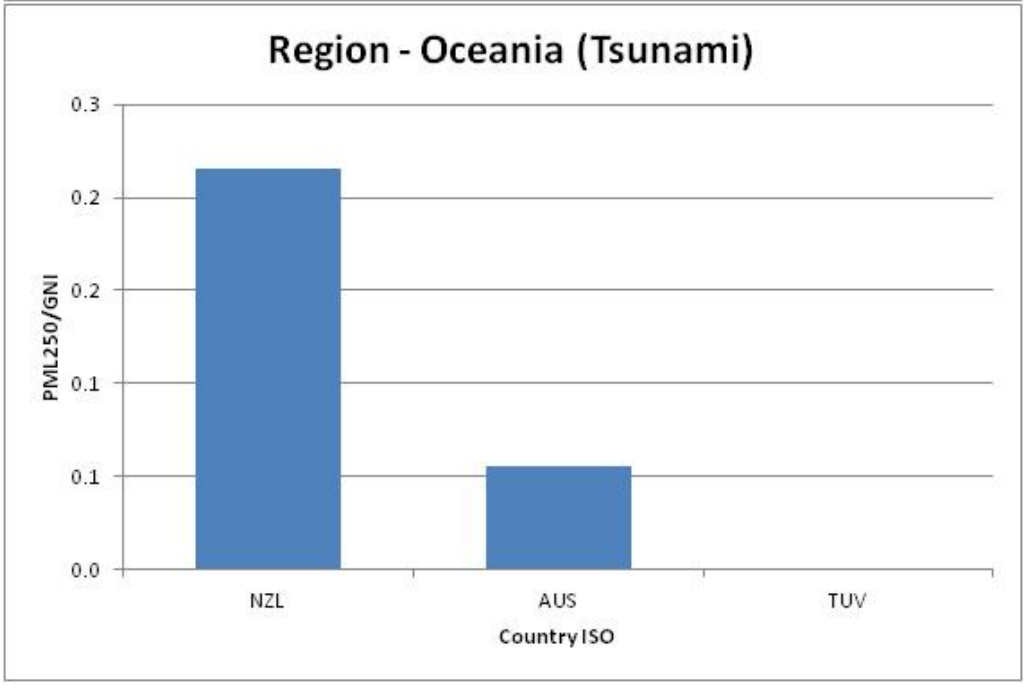

Region - Oceania (Tsunami)
AAL/GFCF
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NZL
AUS
TUV
Country ISO

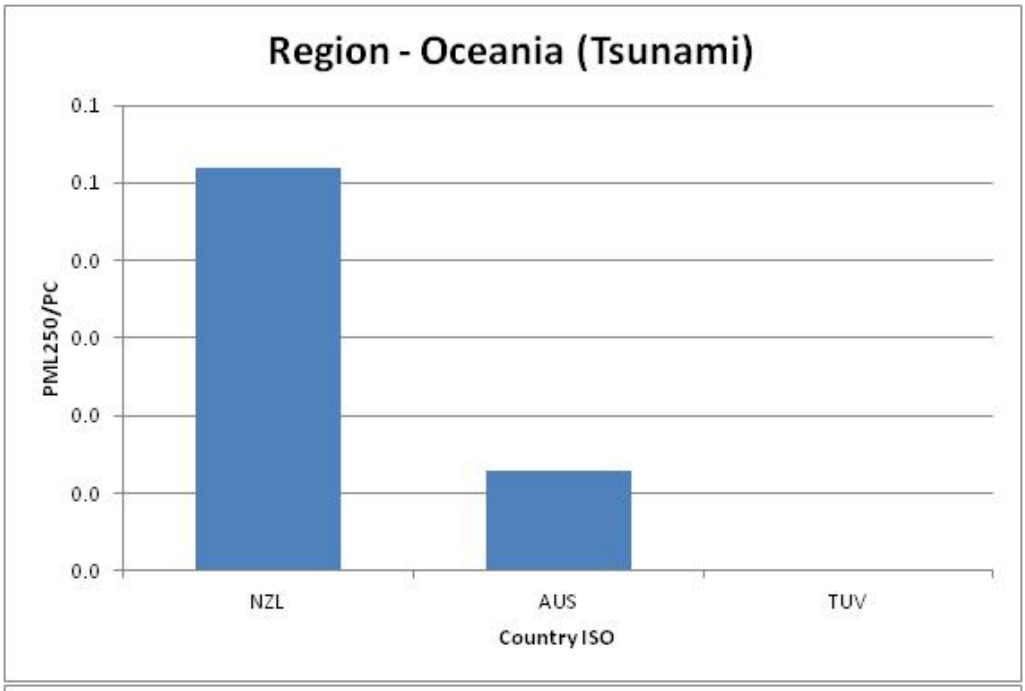

Region - Oceania (Tsunami)
AAL/GGC
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
NZL
AUS
TUV
Country ISO

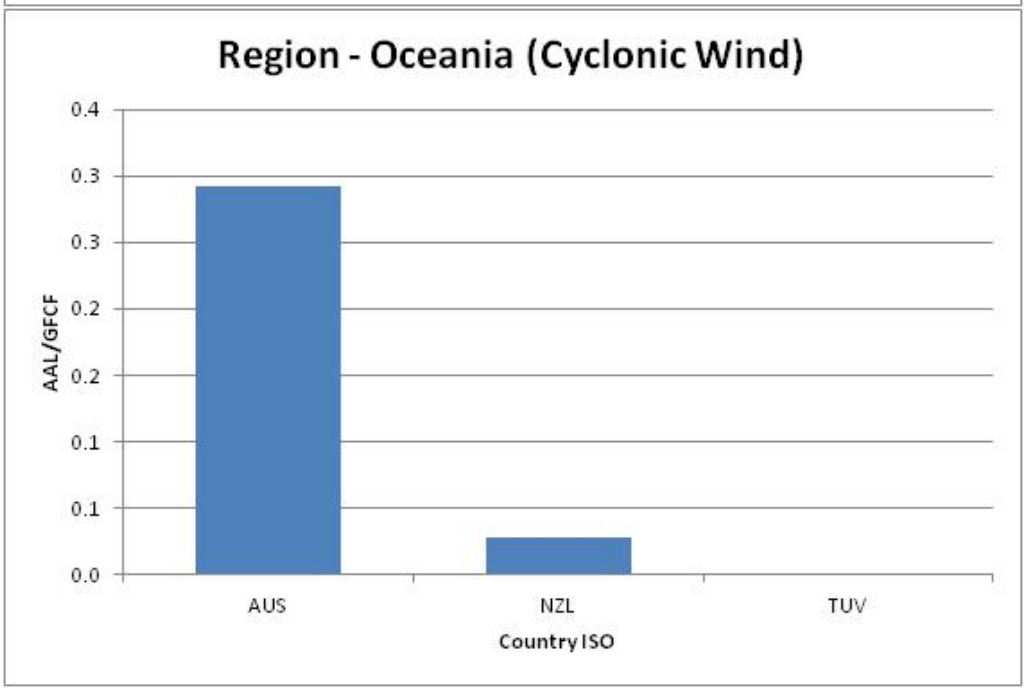

Region - Oceania (Tsunami)
AAL/GNE
0.1
0.1
0.1
0.1
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

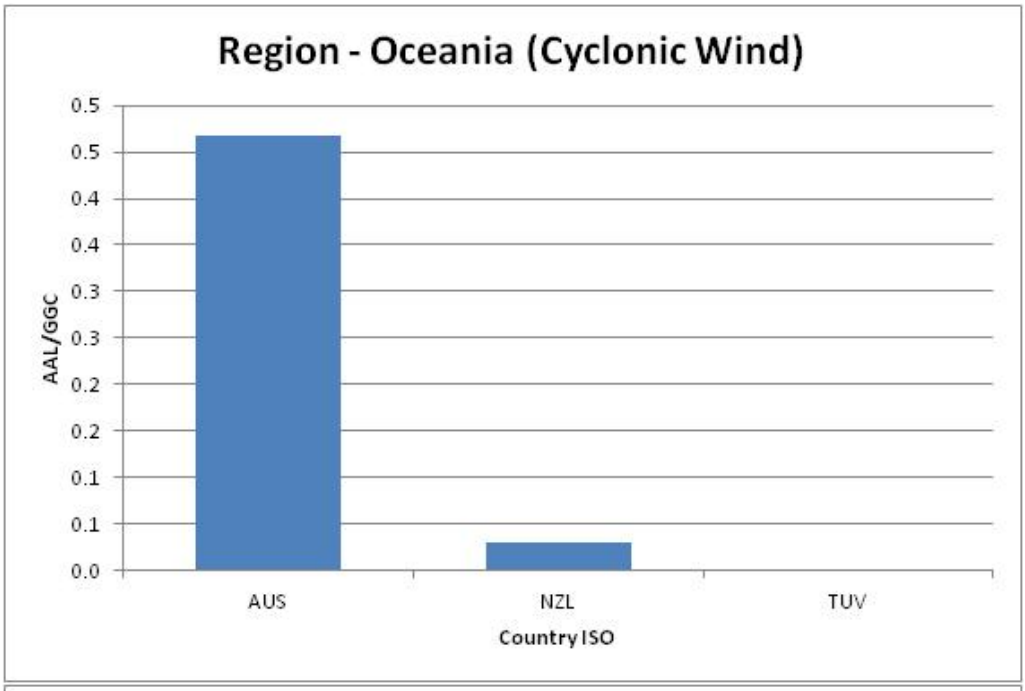

Region - Oceania (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

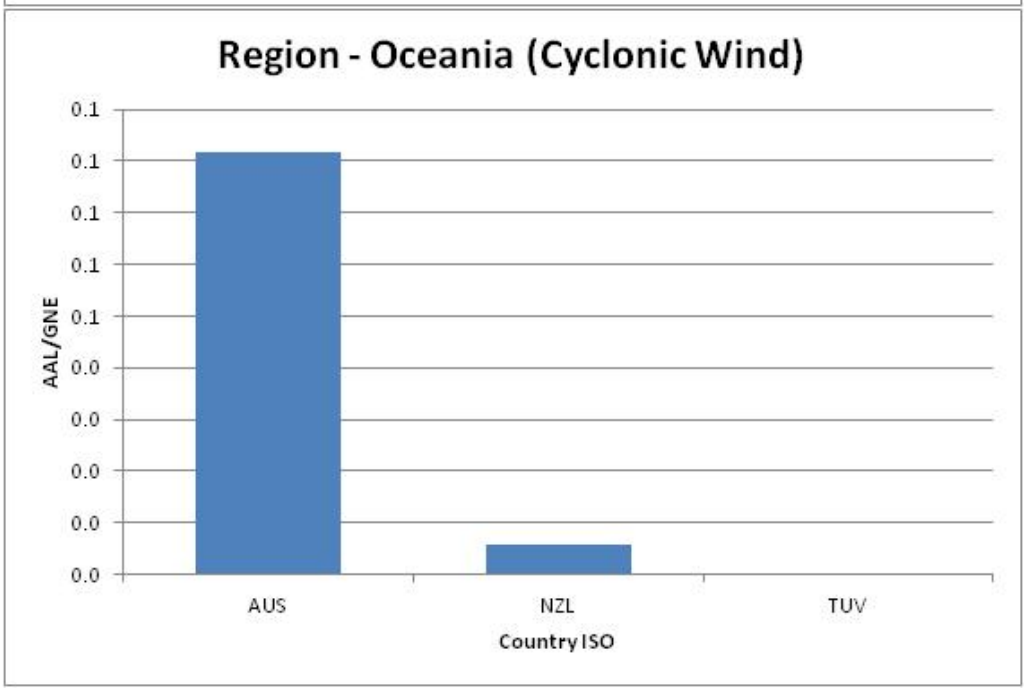

Region - Oceania (Tsunami)
PML250/GDP
0.2
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

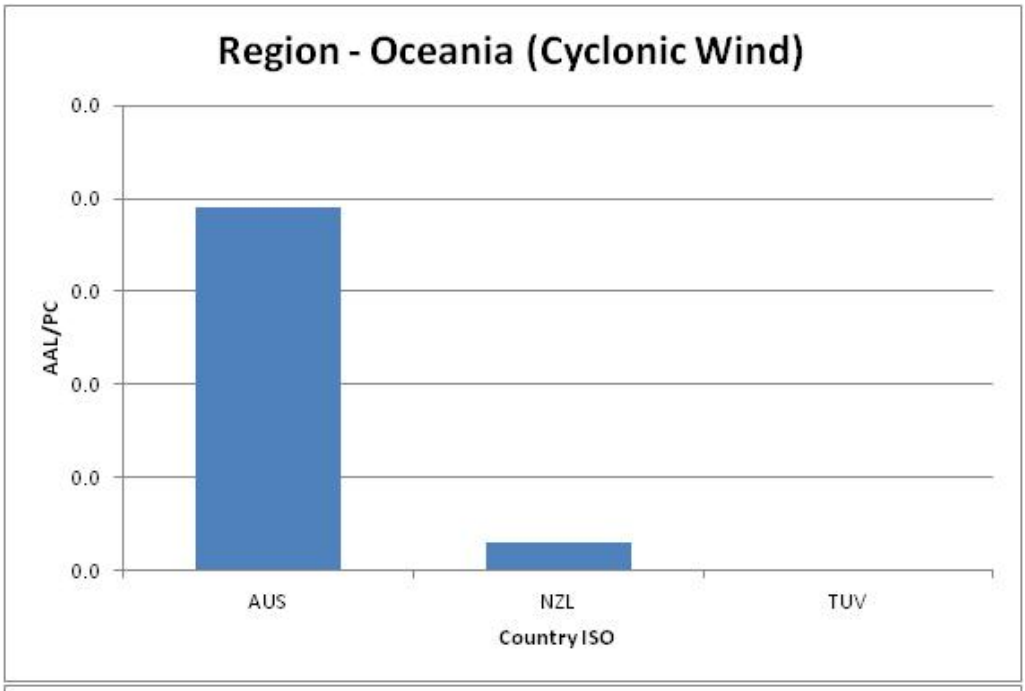

Region - Oceania (Tsunami)
PML250/GNI
0.3
0.2
0.2
0.1
0.1
0.0
NZL
AUS
TUV
Country ISO

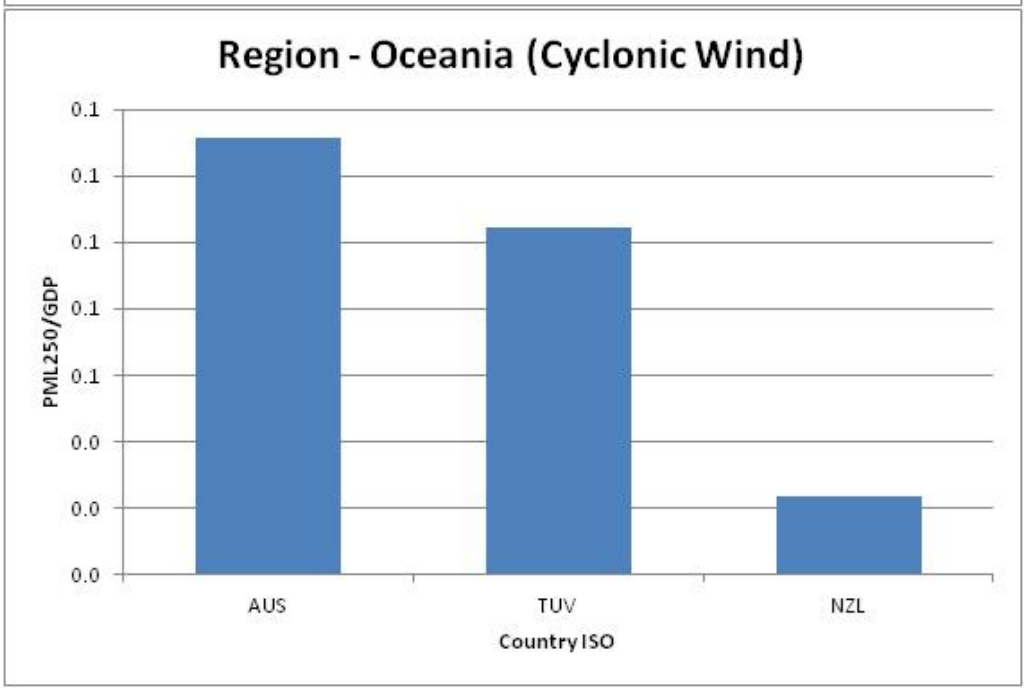

Region - Oceania (Tsunami)
PML250/PC
0.1
0.1
0.0
0.0
0.0
0.0
0.0
NZL
AUS
TUV
Country ISO

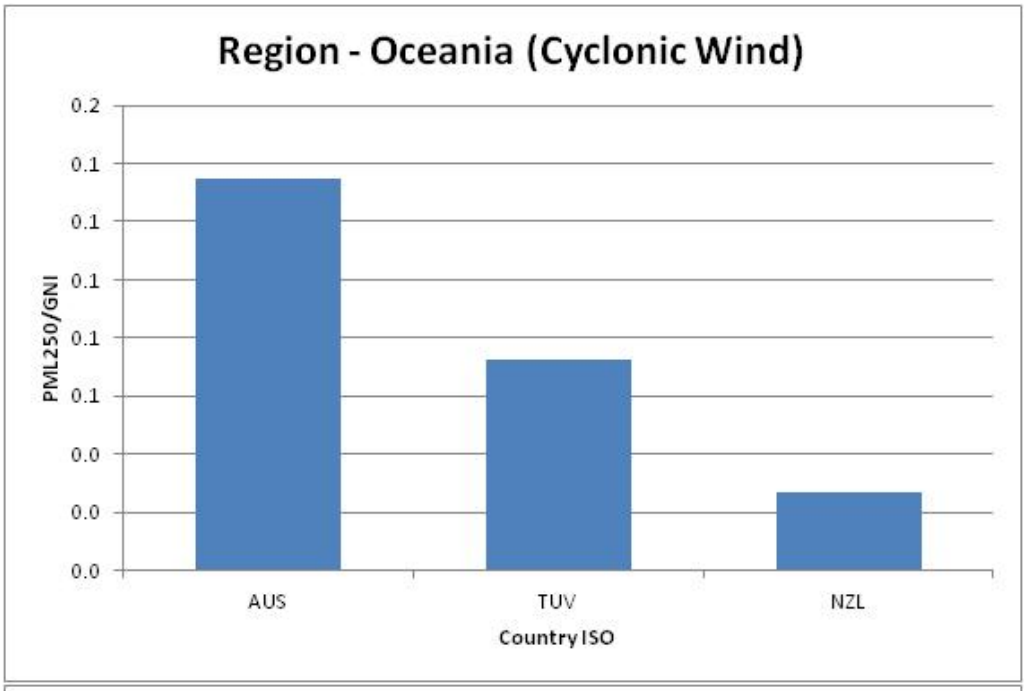

Region - Oceania (Cyclonic Wind)
AAL/GFCF
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
AUS
NZL
TUV
Country ISO

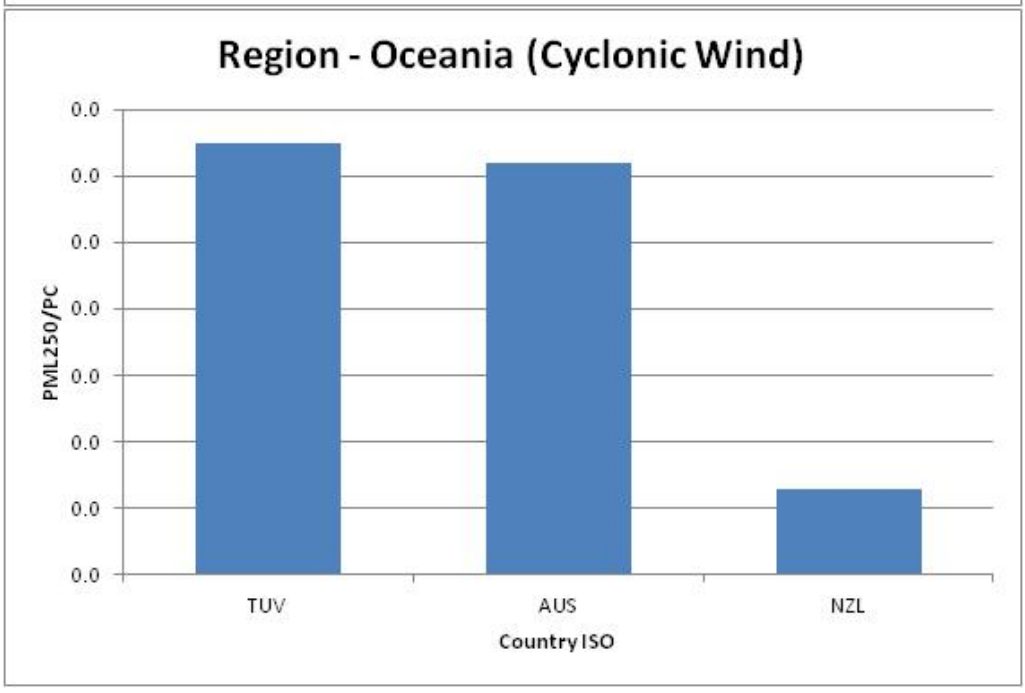

Region - Oceania (Cyclonic Wind)
AAL/GGC
0.5
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
AUS
NZL
TUV
Country ISO

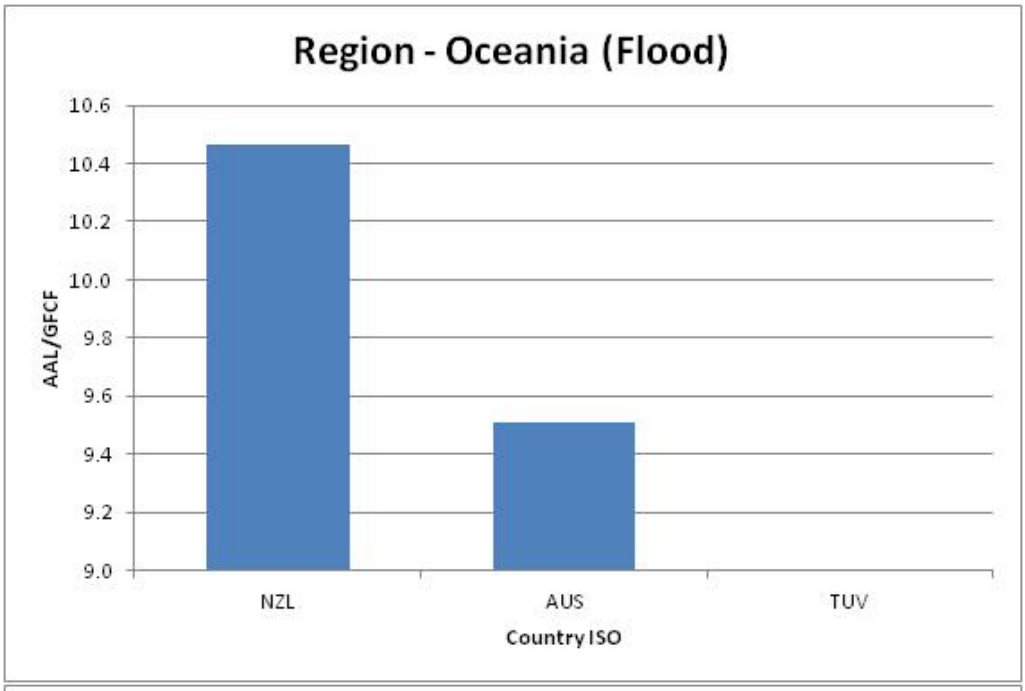

Region - Oceania (Cyclonic Wind)
AAL/GNE
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
0.0
AUS
NZL
TUV
Country ISO

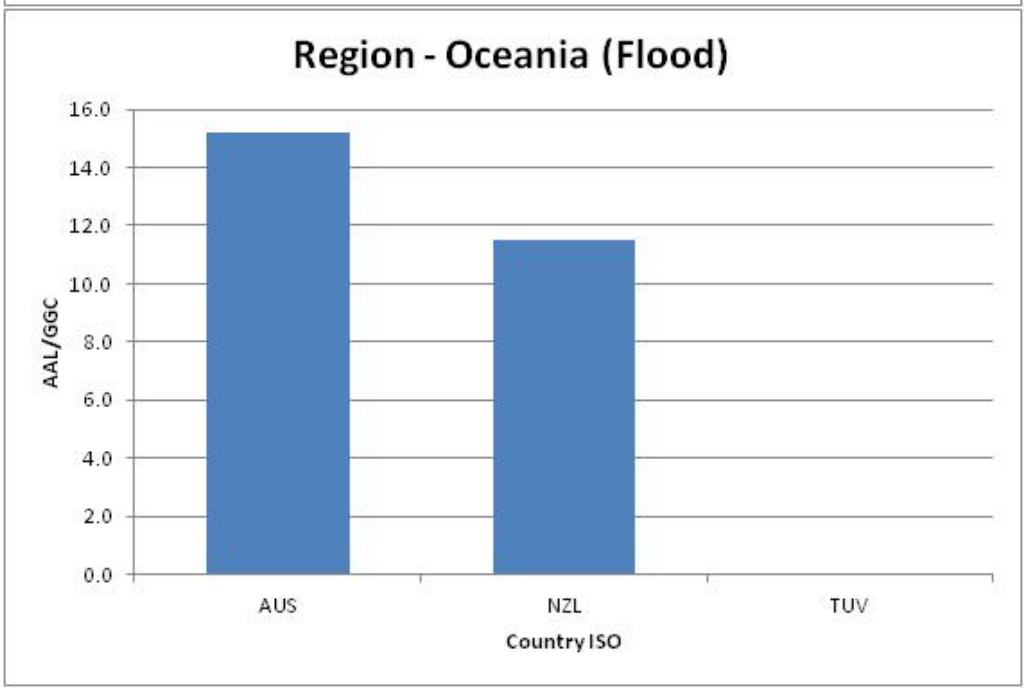

Region - Oceania (Cyclonic Wind)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
AUS
NZL
TUV
Country ISO

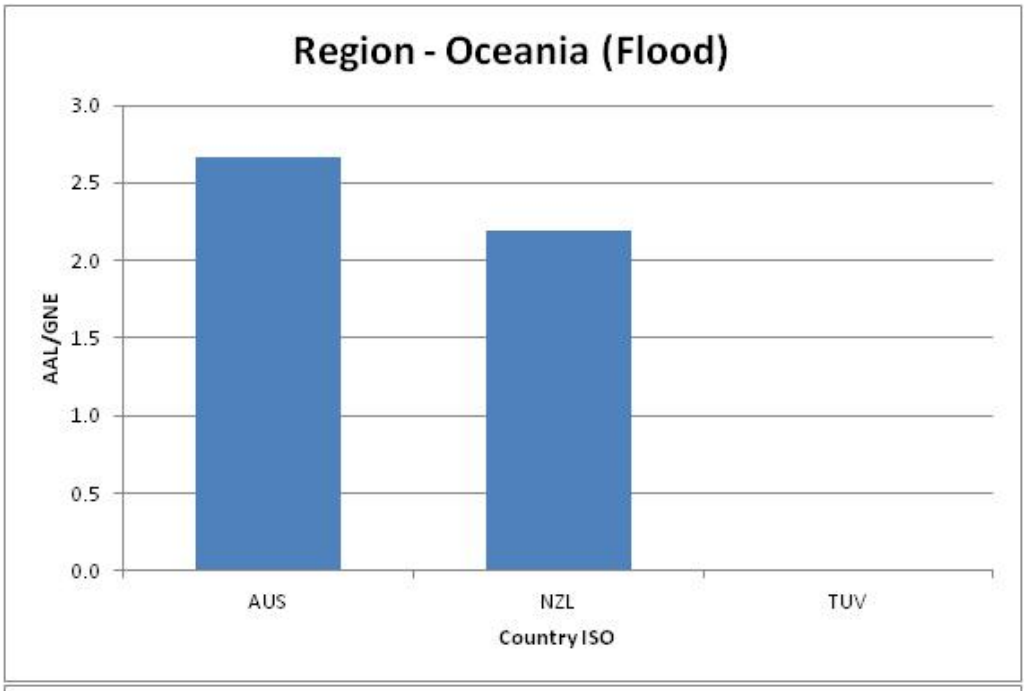

Region - Oceania (Cyclonic Wind)
PML250/GDP
0.1
0.1
0.1
0.1
0.0
0.0
0.0
AUS
TUV
NZL
Country ISO

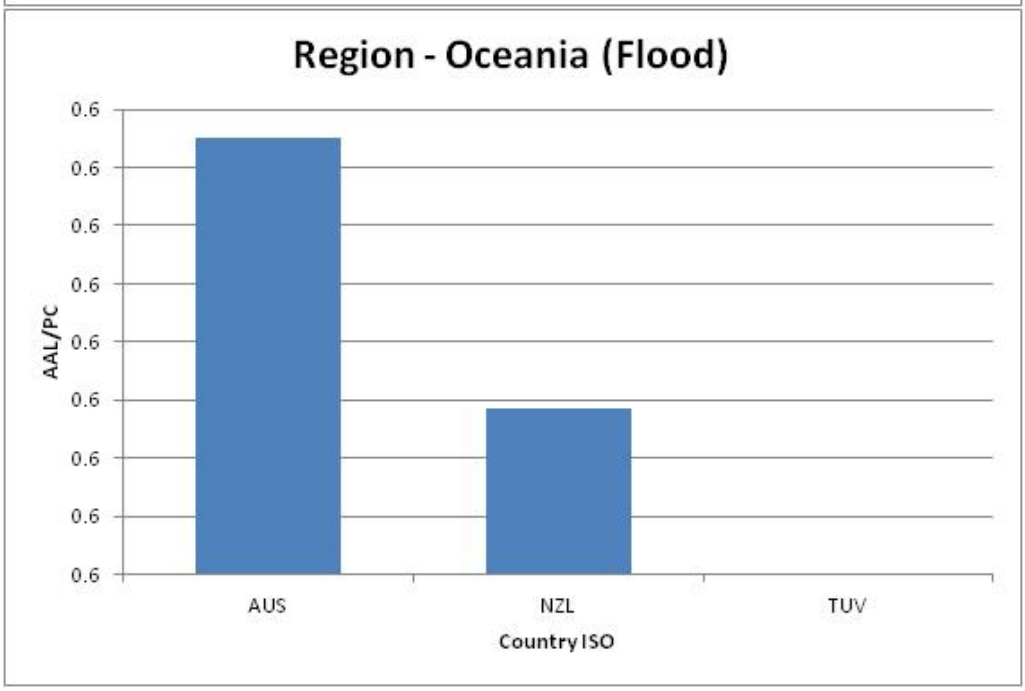

Region - Oceania (Cyclonic Wind)
PML250/GNI
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
AUS
TUV
NZL
Country ISO


Region - Oceania (Cyclonic Wind)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
TUV
AUS
NZL
Country ISO

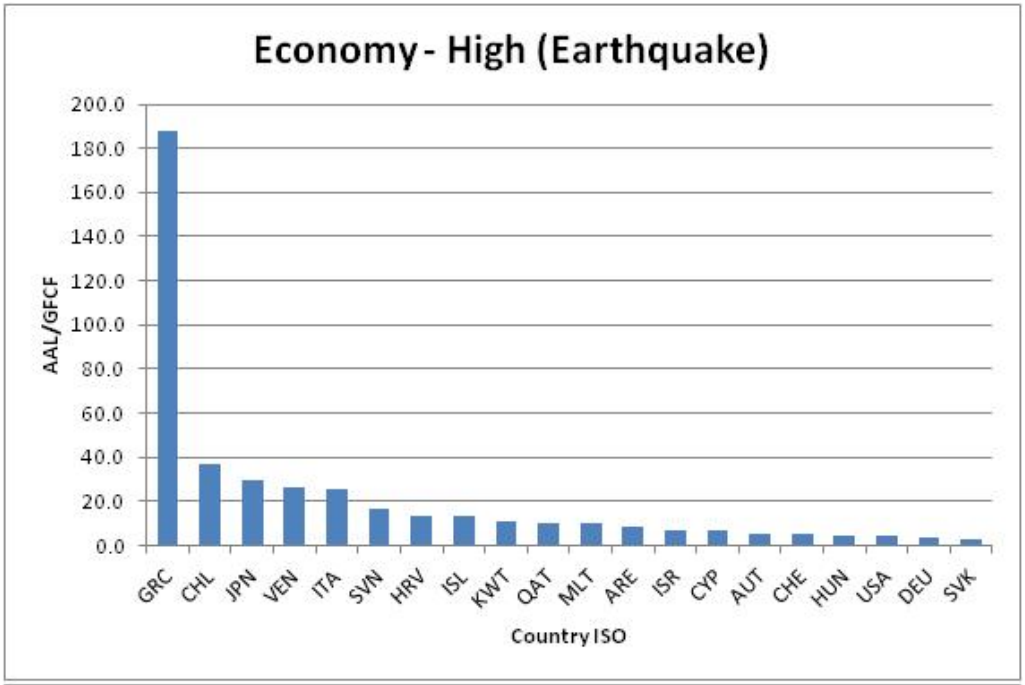

Region - Oceania (Flood)
AAL/GFCF
10.6
10.4
10.2
10.0
9.8
9.6
9.4
9.2
9.0
NZL
AUS
TUV
Country ISO

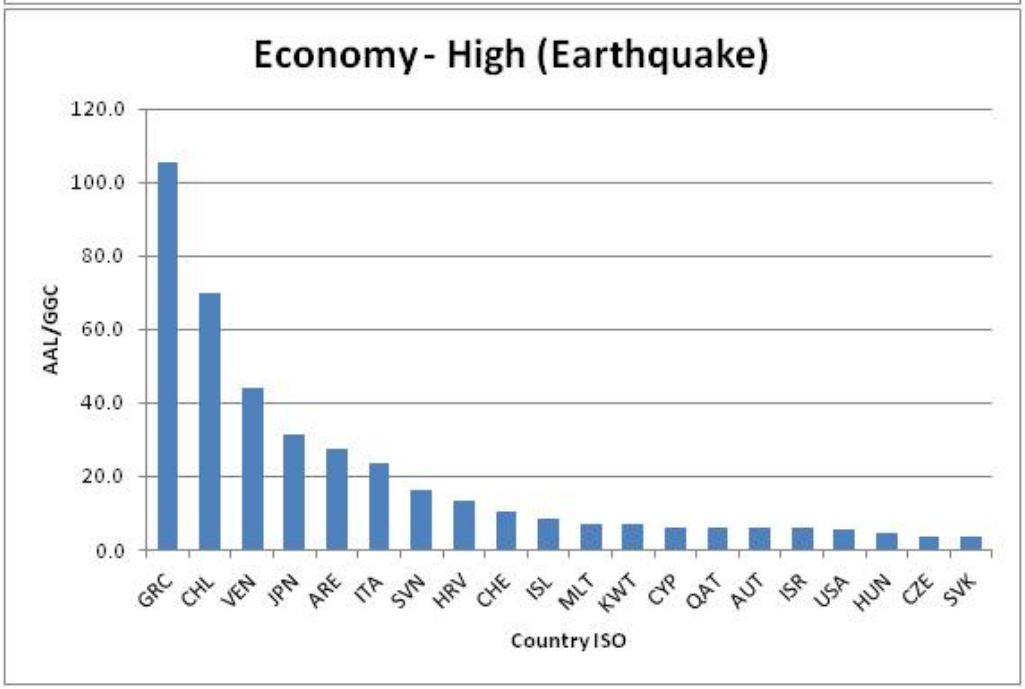

Region - Oceania (Flood)
AAL/GGC
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
AUS
NZL
TUV
Country ISO

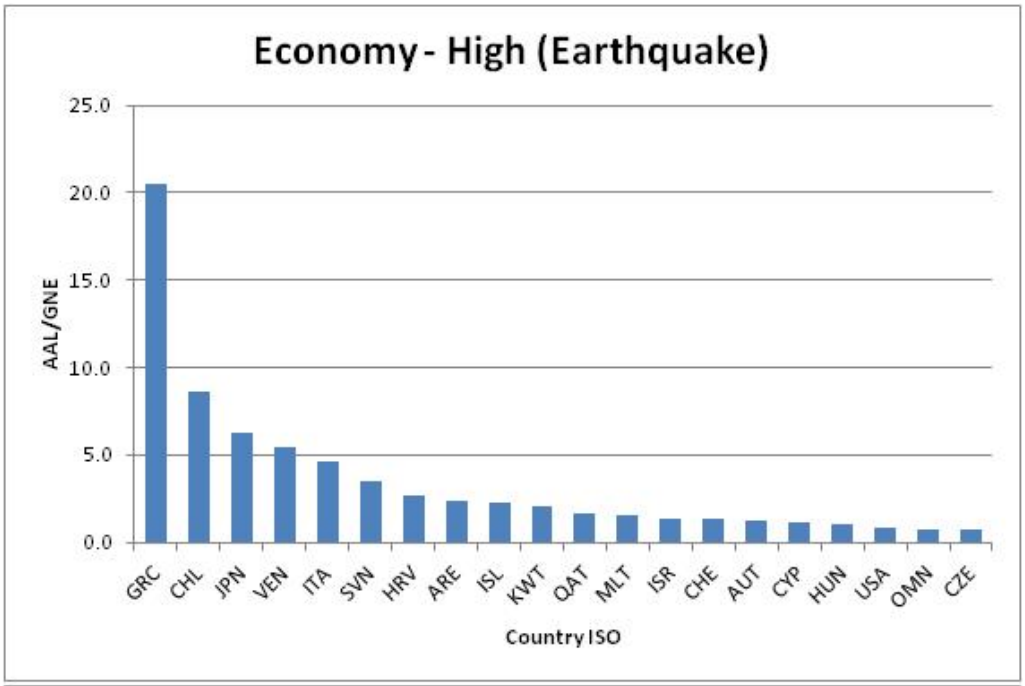

Region - Oceania (Flood)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
AAL/GNE
AUS
NZL
TUV
Country ISO

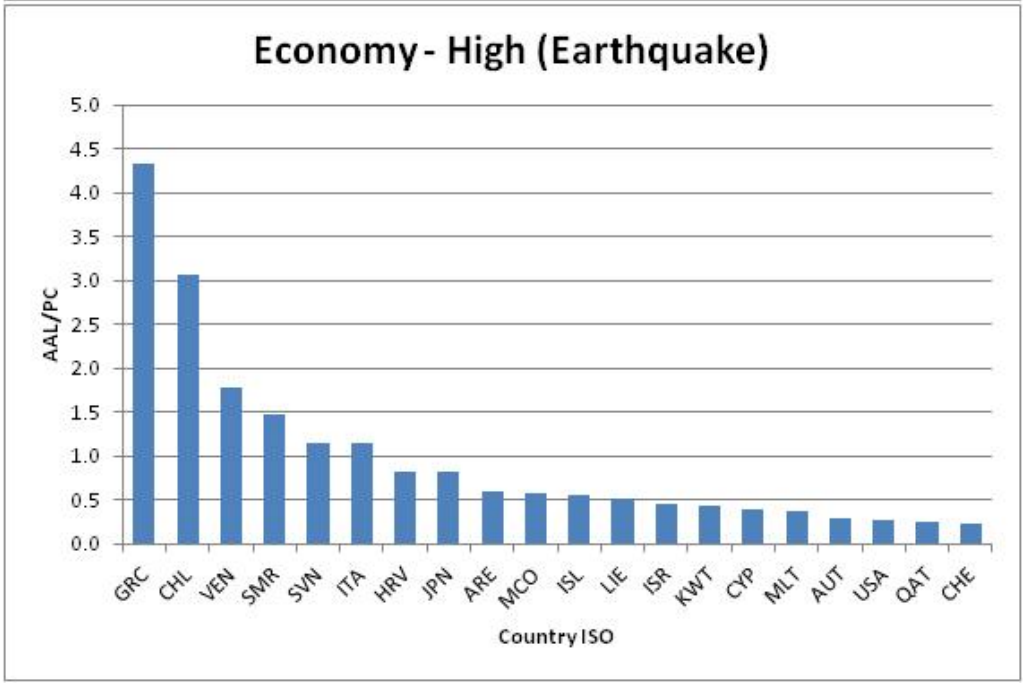

Region - Oceania (Flood)
0.6
0.6
0.6
0.6
0.6
0.6
0.6
0.6
AAL/PC
AUS
NZL
TUV
Country ISO

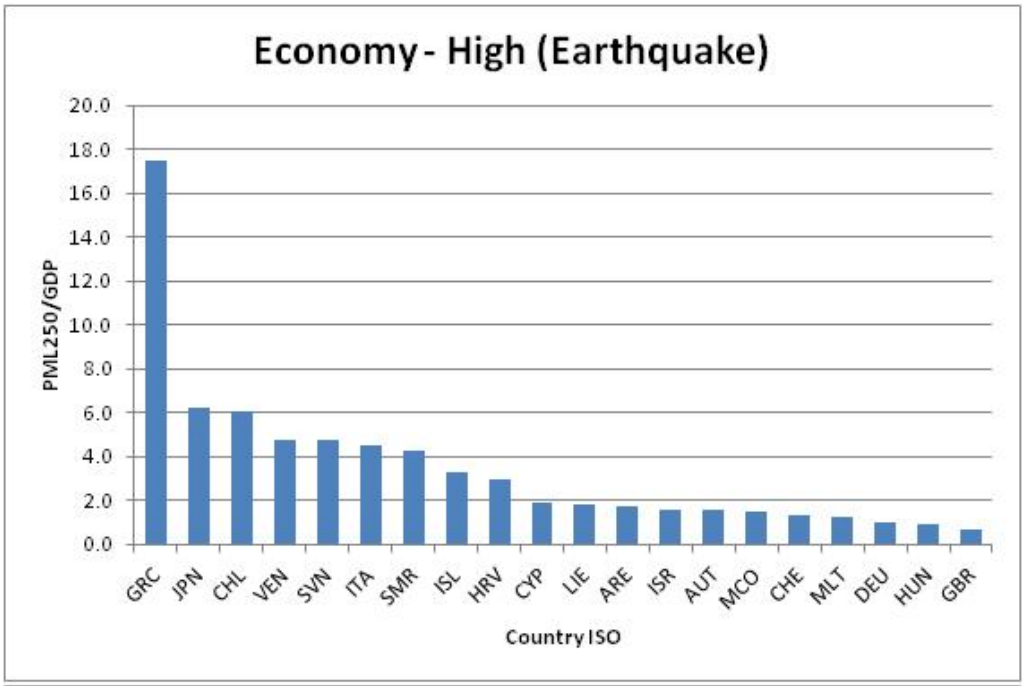
Rankings by Economy

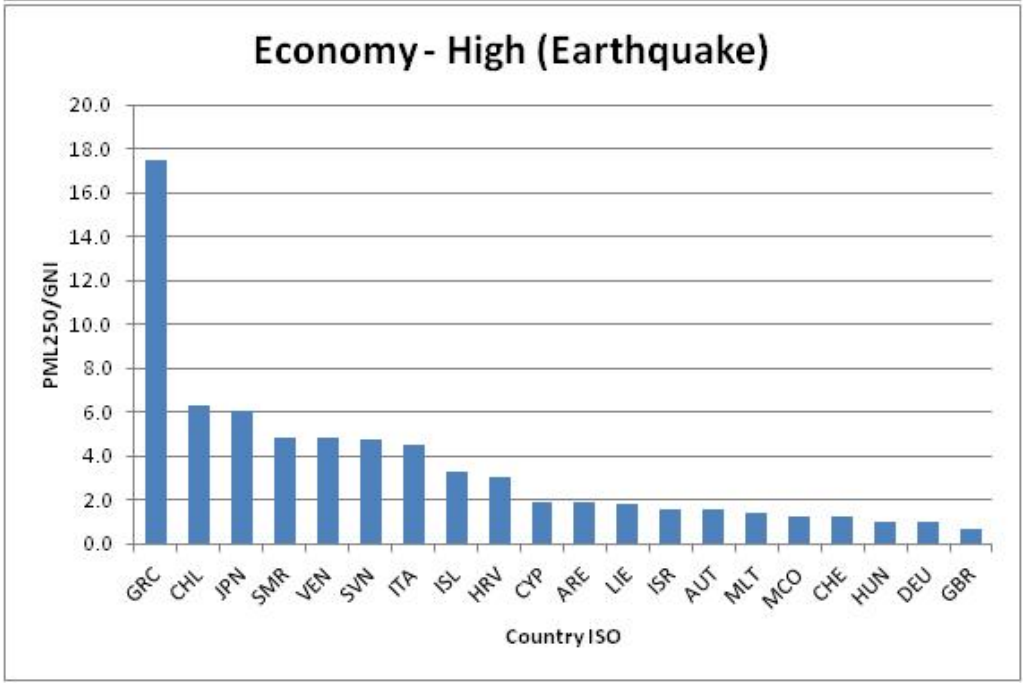


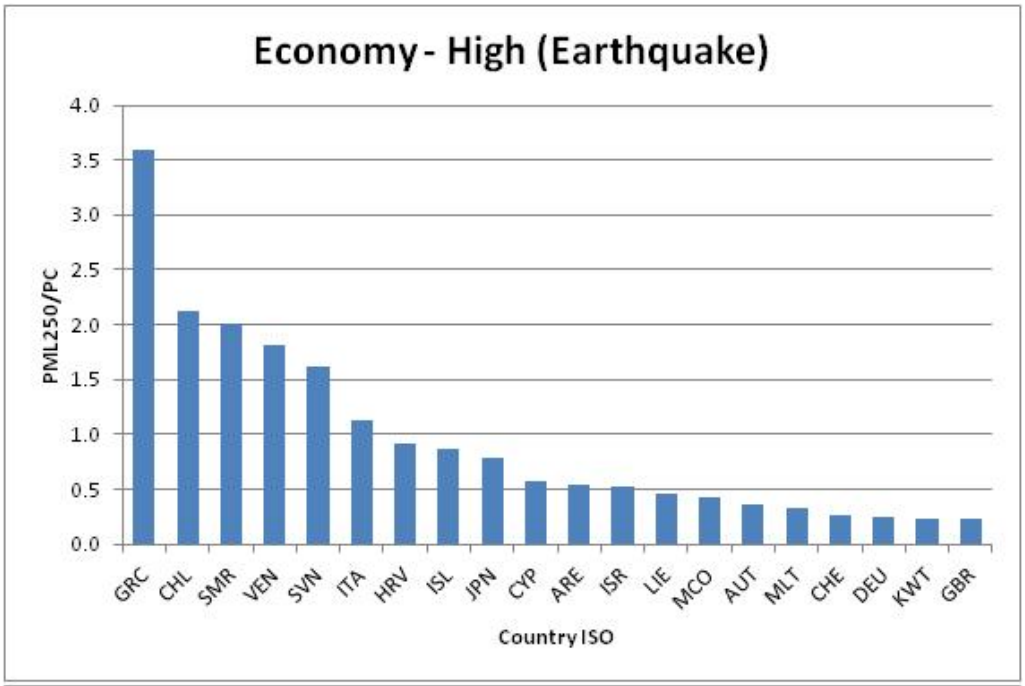


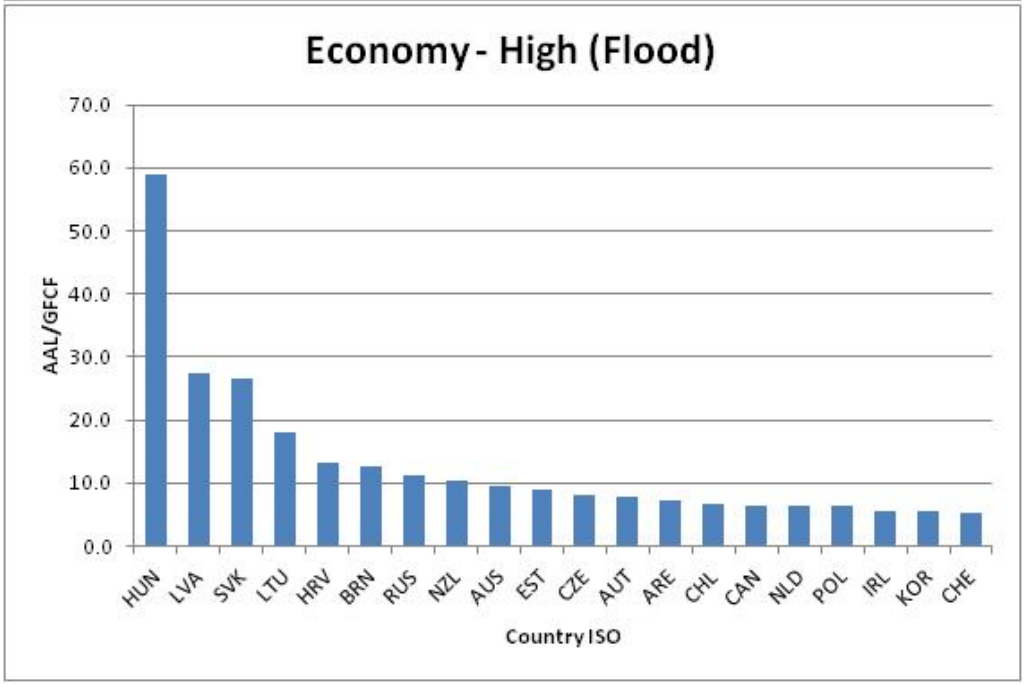

Economy - High (Earthquake)
AAL/GNE
25.0
20.0
15.0
10.0
5.0
0.0
GRC
CHL
JPN
VEN
ITA
SVN
HRV
ARE
ISL
KWT
QAT
MLT
ISR
CHE
AUT
CYP
HUN
USA
OMN
CZE
Country ISO

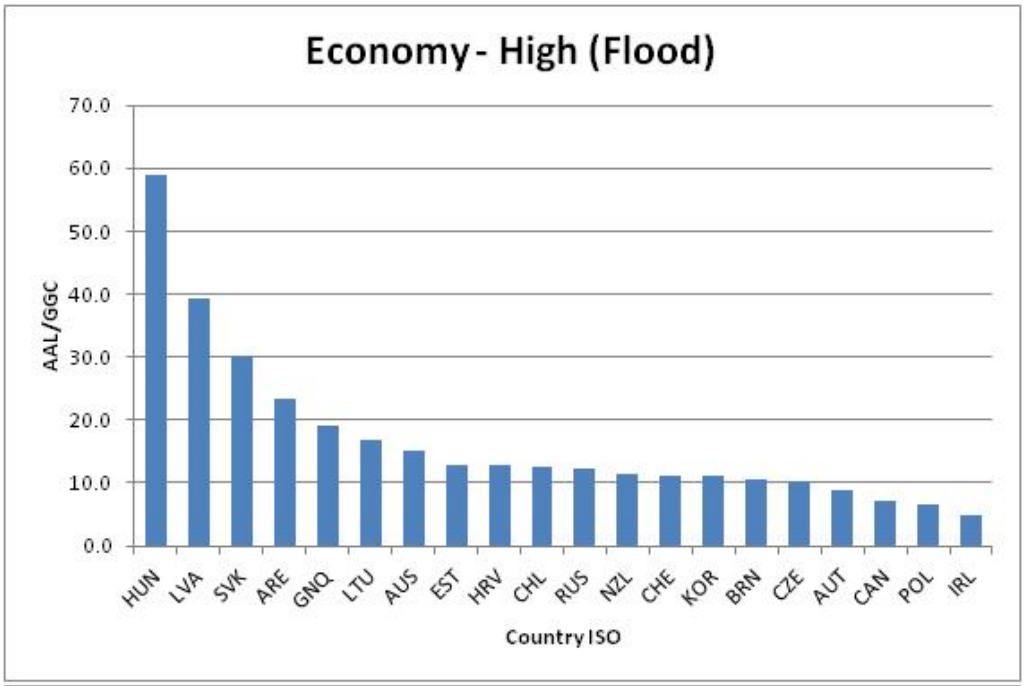

Economy - High (Earthquake)
AAL/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
GRC
CHL
VEN
SMR
SVN
ITA
HRV
JPN
ARE
MCO
ISL
LIE
ISR
KWT
CYP
MLT
AUT
USA
QAT
CHE
Country ISO

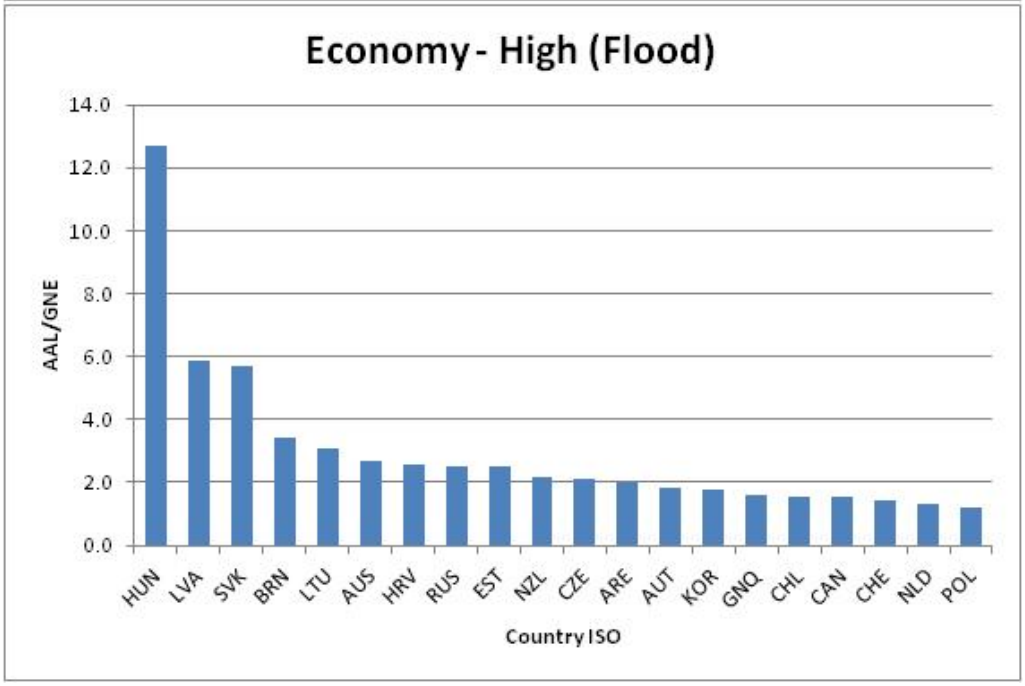

Economy - High (Earthquake)
PML250/GDP
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GRC
JPN
CHL
VEN
SVN
ITA
SMR
ISL
HRV
CYP
LIE
ARE
ISR
AUT
MCO
CHE
MLT
DEU
HUN
GBR
Country ISO

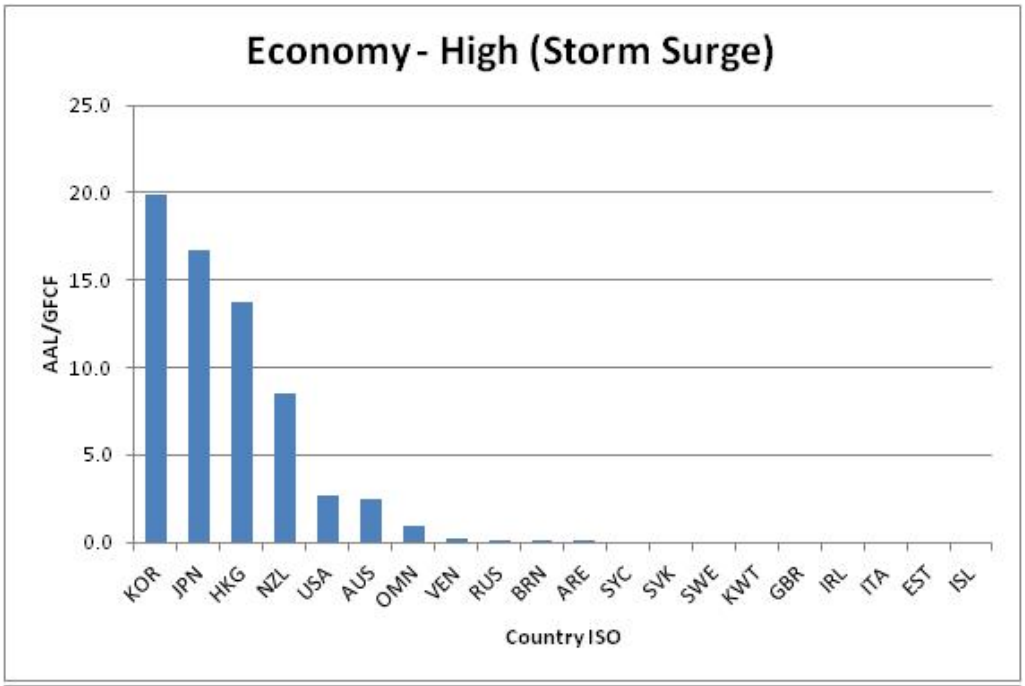

Economy - High (Earthquake)
PML250/GNI
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GRC
CHL
JPN
SMR
VEN
SVN
ITA
ISL
HRV
CYP
ARE
LIE
ISR
AUT
MLT
MCO
CHE
HUN
DEU
GBR
Country ISO

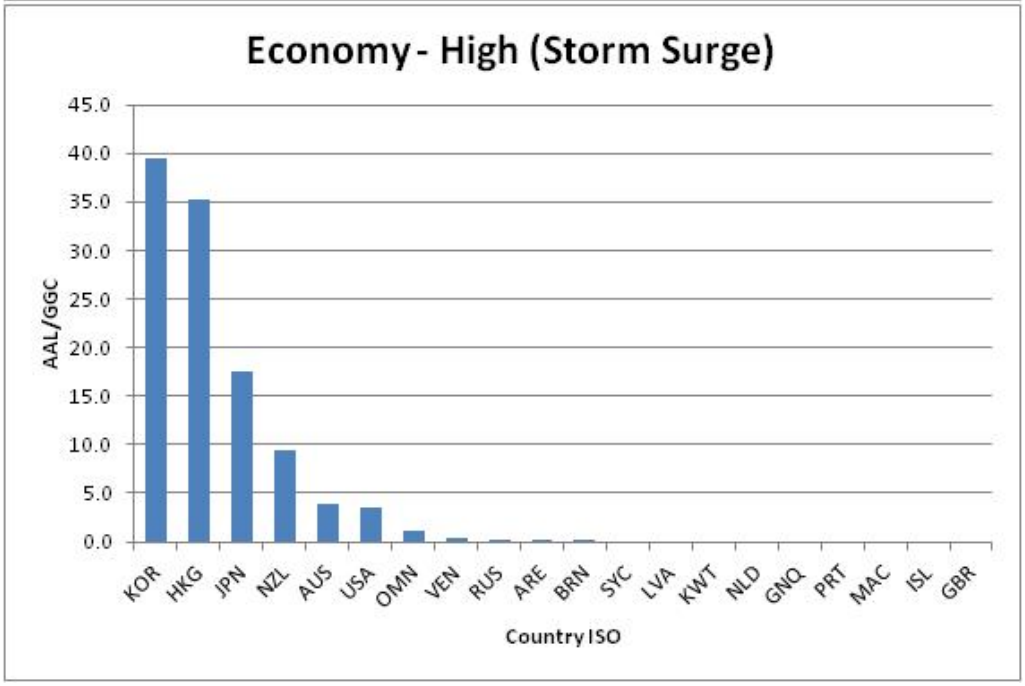

Economy - High (Earthquake)
PML250/PC
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
GRC
CHL
SMR
VEN
SVN
ITA
HRV
ISL
JPN
CYP
ARE
ISR
LIE
MCO
AUT
MLT
CHE
DEU
KWT
GBR
Country ISO

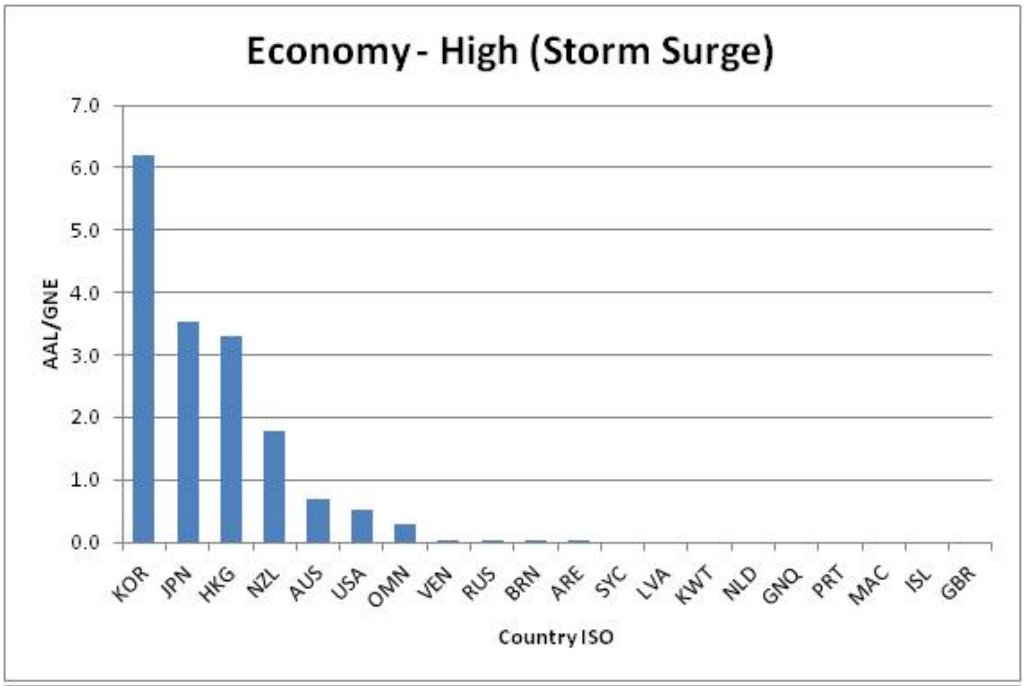

Economy - High (Flood)
AAL/GFCF
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
HUN
LVA
SVK
LTU
HRV
BRN
RUS
NZL
AUS
EST
CZE
AUT
ARE
CHL
CAN
NLD
POL
IRL
KOR
CHE
Country ISO

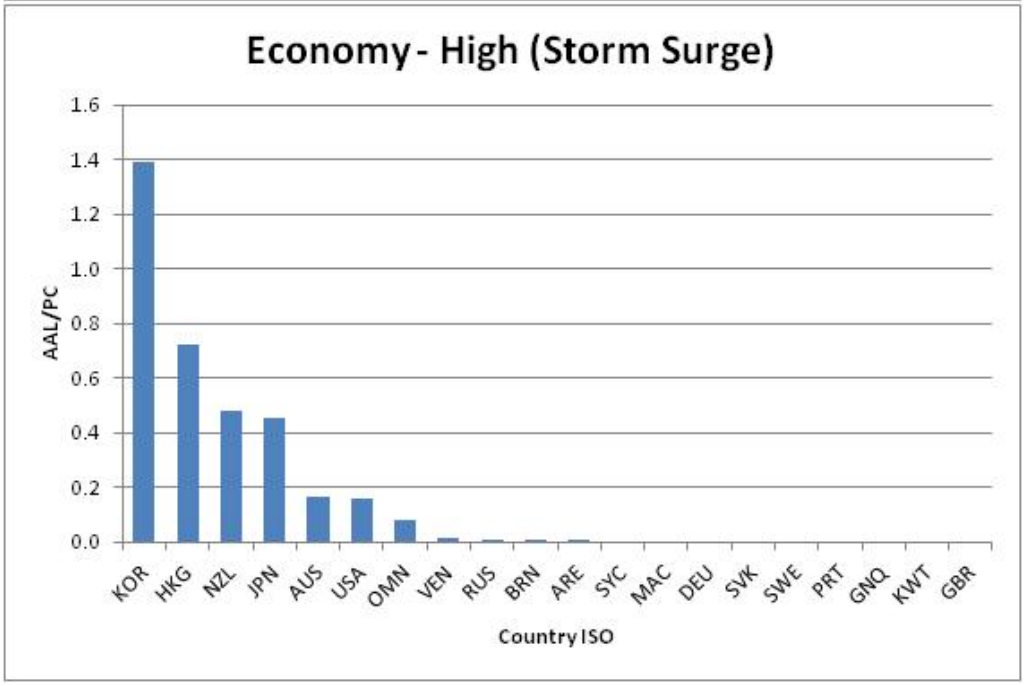

Economy - High (Flood)
AAL/GGC
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
HUN
LVA
SVK
ARE
GNQ
LTU
AUS
EST
HRV
CHL
RUS
NZL
CHE
KOR
BRN
CZE
AUT
CAN
POL
IRL
Country ISO

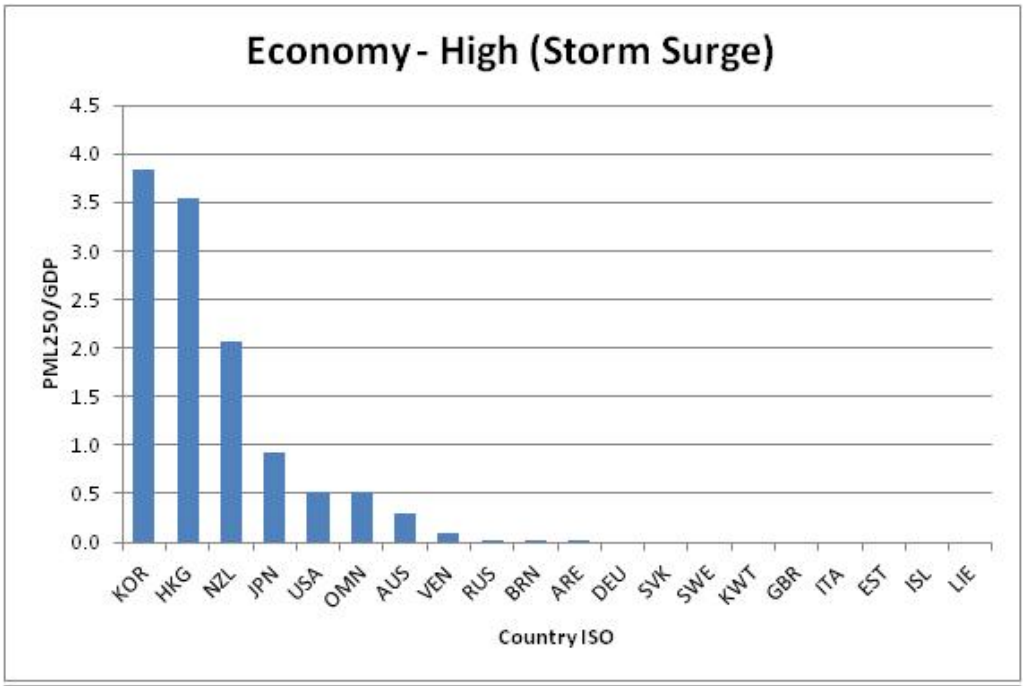

Economy - High (Flood)
AAL/GNE
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
HUN
LVA
SVK
BRN
LTU
AUS
HRV
RUS
EST
NZL
CZE
ARE
AUT
KOR
GNQ
CHL
CAN
CHE
NLD
POL
Country ISO

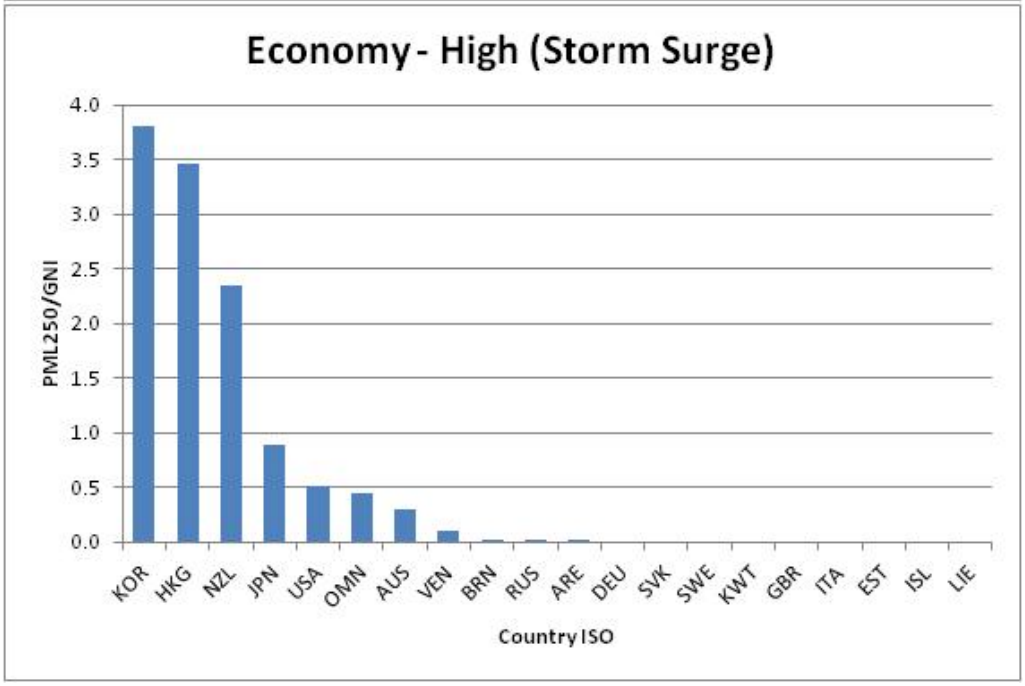

Economy - High (Storm Surge)
AAL/GFCF
25.0
20.0
15.0
10.0
5.0
0.0
KOR
JPN
HKG
NZL
USA
AUS
OMN
VEN
RUS
BRN
ARE
SYC
SVK
SWE
KWT
GBR
IRL
ITA
EST
ISL
Country ISO

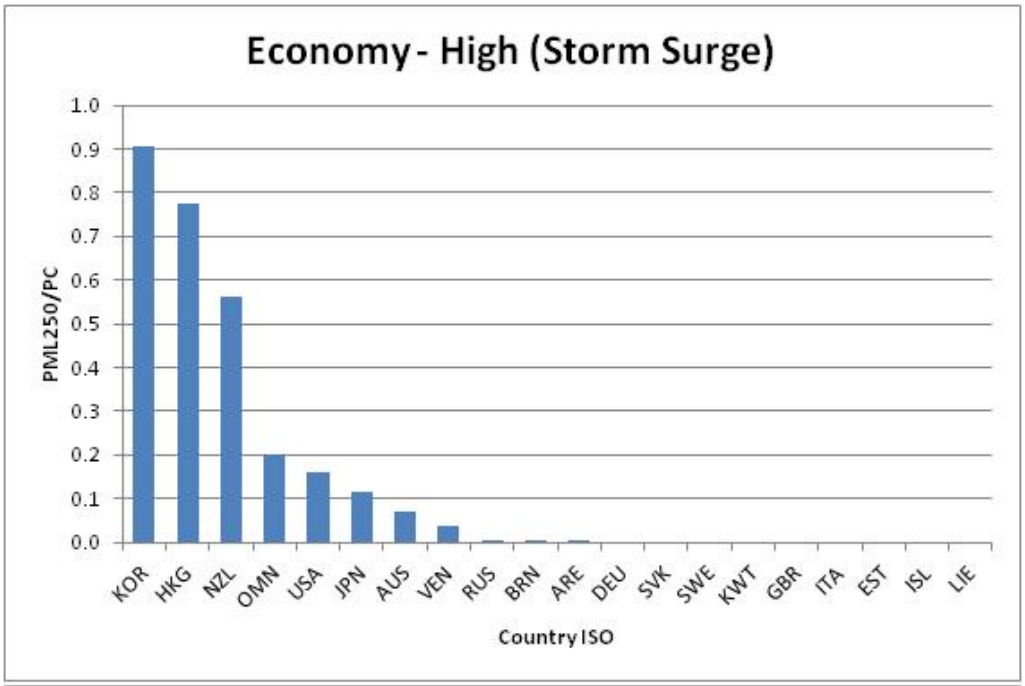

Economy - High (Storm Surge)
AAL/GGC
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
KOR
HKG
JPN
NZL
AUS
USA
OMN
VEN
RUS
ARE
BRN
SYC
LVA
KWT
NLD
GNQ
PRT
MAC
ISL
GBR
Country ISO

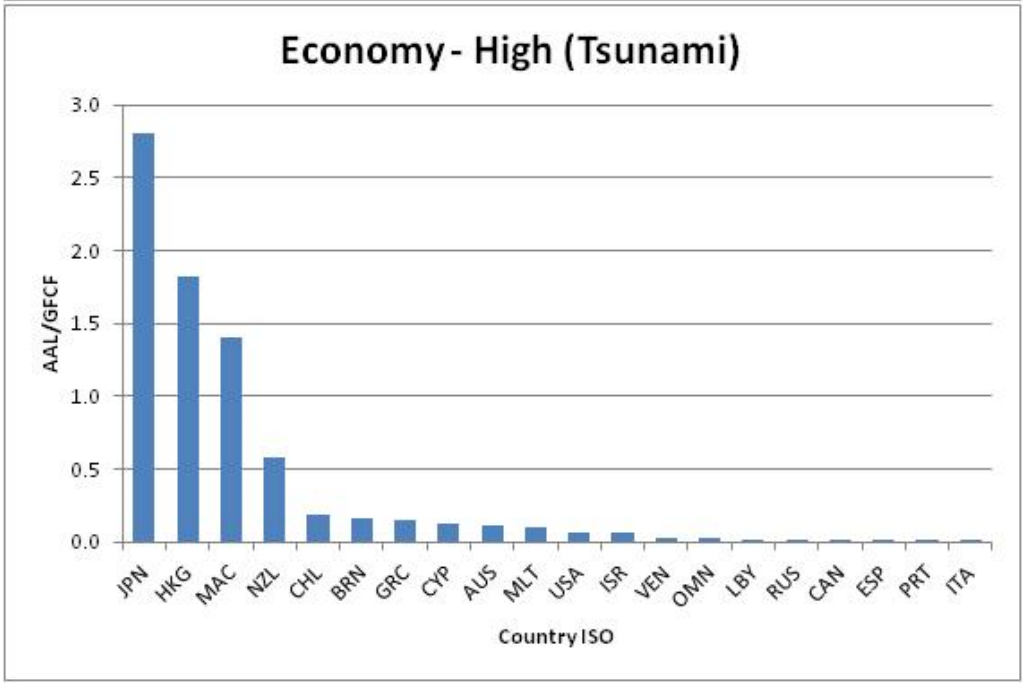

Economy - High (Storm Surge)
AAL/GNE
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
KOR
JPN
HKG
NZL
AUS
USA
OMN
VEN
RUS
BRN
ARE
SYC
LVA
KWT
NLD
GNQ
PRT
MAC
ISL
GBR
Country ISO

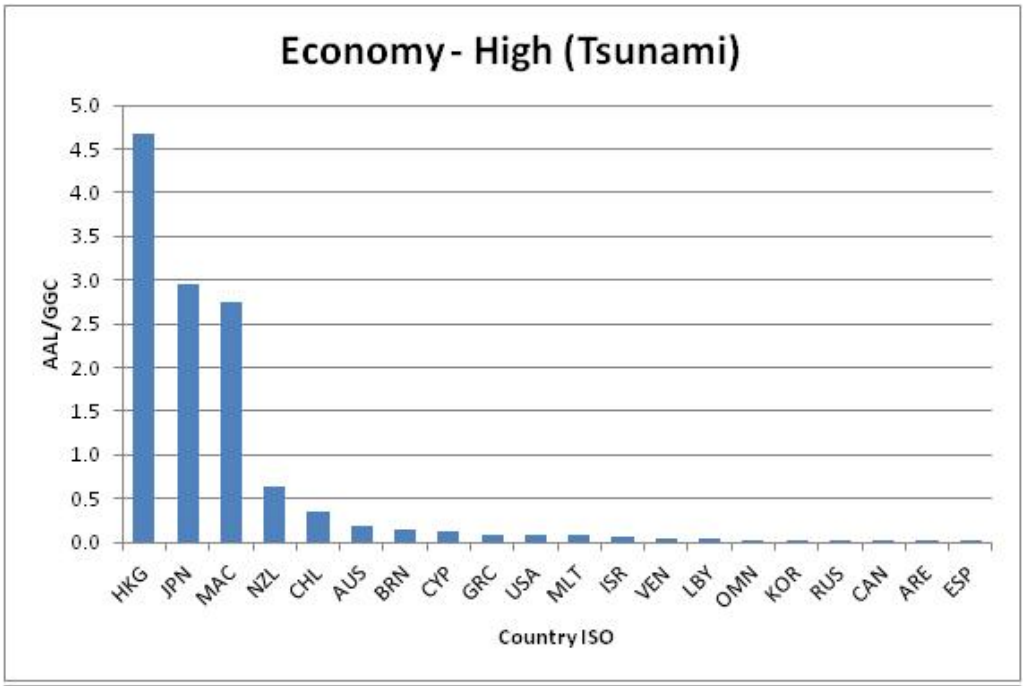

Economy - High (Storm Surge)
AAL/PC
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
KOR
HKG
NZL
JPN
AUS
USA
OMN
VEN
RUS
BRN
ARE
SYC
MAC
DEU
SVK
SWE
PRT
GNQ
KWT
GBR
Country ISO

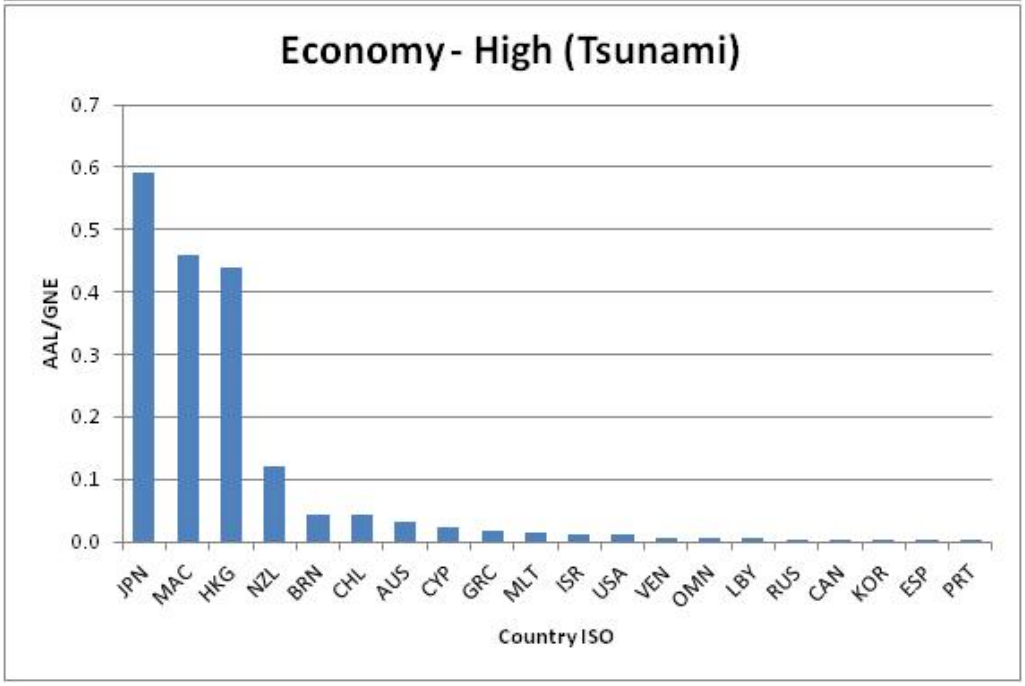

Economy - High (Storm Surge)
PML250/GDP
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
KOR HKG NZL JPN USA OMN AUS VEN RUS BRN ARE DEU SVK SWE KWT GBR ITA EST ISL LIE
Country ISO

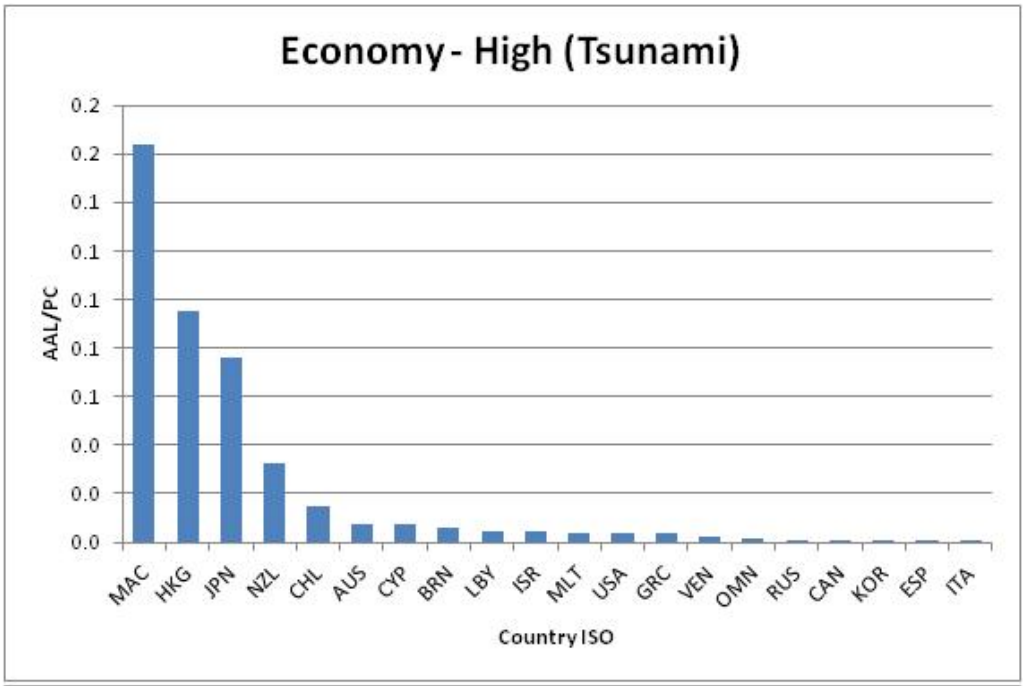

Economy - High (Storm Surge)
PML250/GNI
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
KOR HKG NZL JPN USA OMN AUS VEN BRN RUS ARE DEU SVK SWE KWT GBR ITA EST ISL LIE
Country ISO

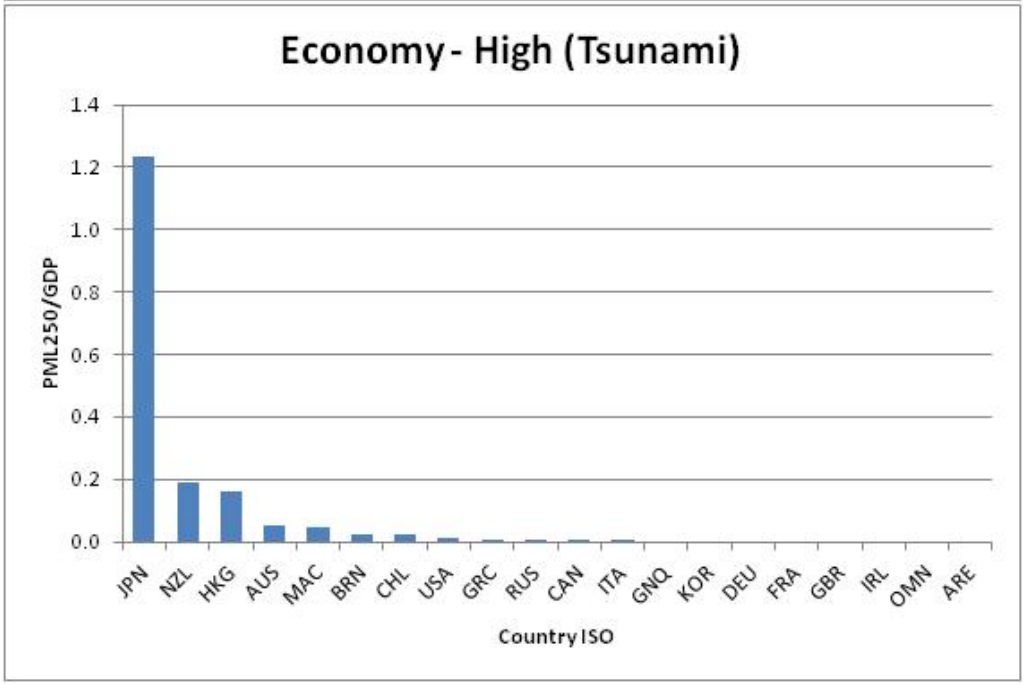

Economy - High (Storm Surge)
PML250/PC
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
KOR
HKG
NZL
OMN
USA
JPN
AUS
VEN
RUS
BRN
ARE
DEU
SVK
SWE
KWT
GBR
ITA
EST
ISL
LIE
Country ISO

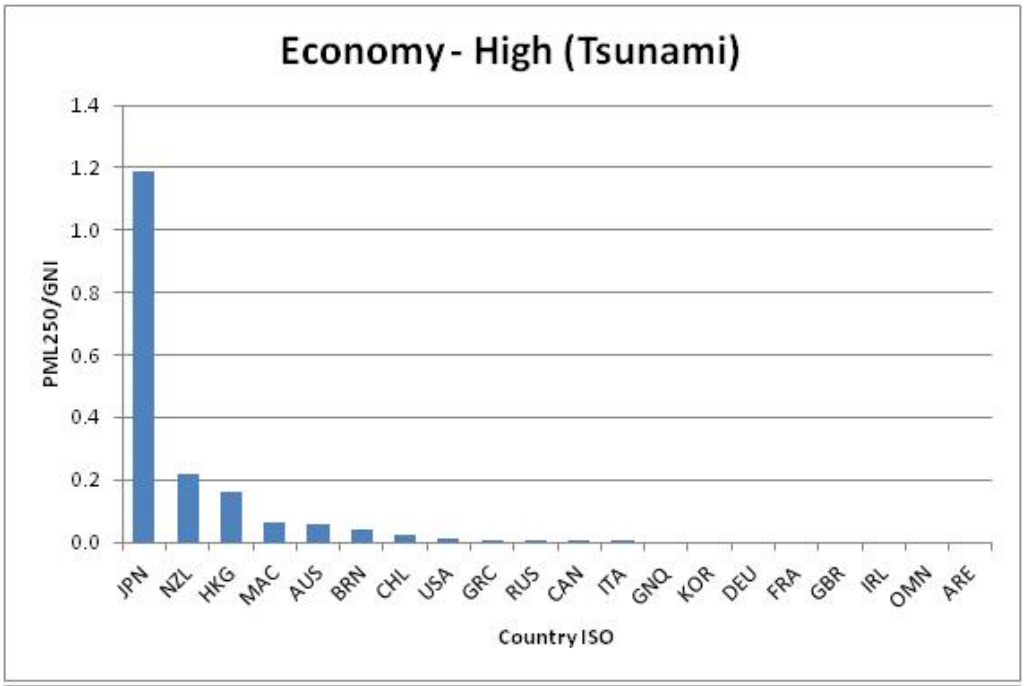

Economy - High (Tsunami)
AAL/GFCF
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JPN
HKG
MAC
NZL
CHL
BRN
GRC
CYP
AUS
MLT
USA
ISR
VEN
OMN
LBY
RUS
CAN
ESP
PRT
ITA
Country ISO

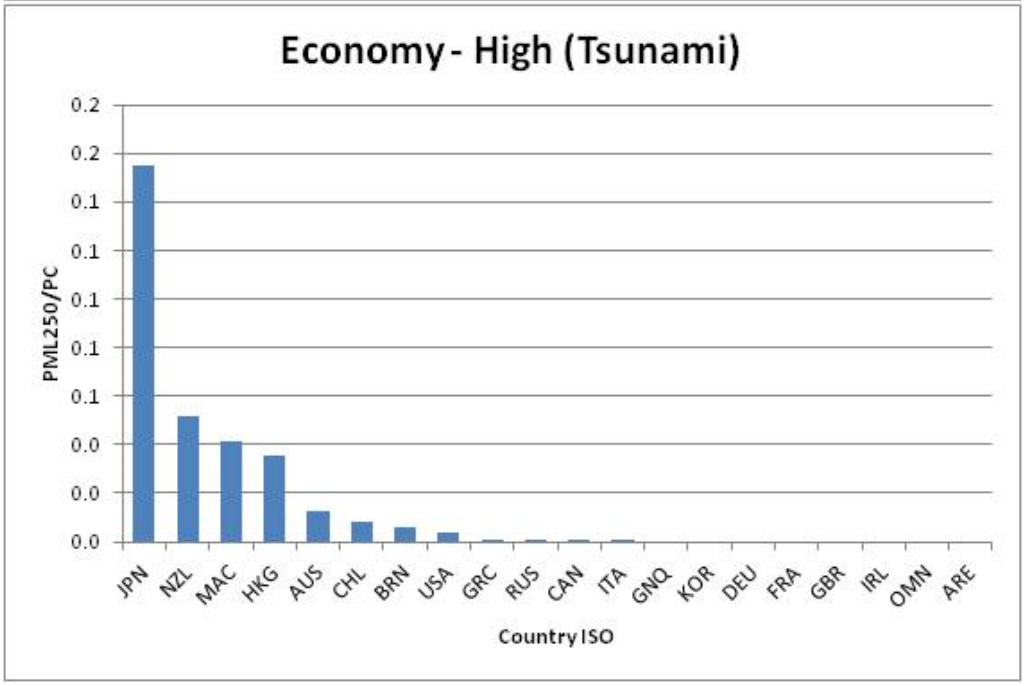

Economy - High (Tsunami)
AAL/GGC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
HKG
JPN
MAC
NZL
CHL
AUS
BRN
CYP
GRC
USA
MLT
ISR
VEN
LBY
OMN
KOR
RUS
CAN
ARE
ESP
Country ISO

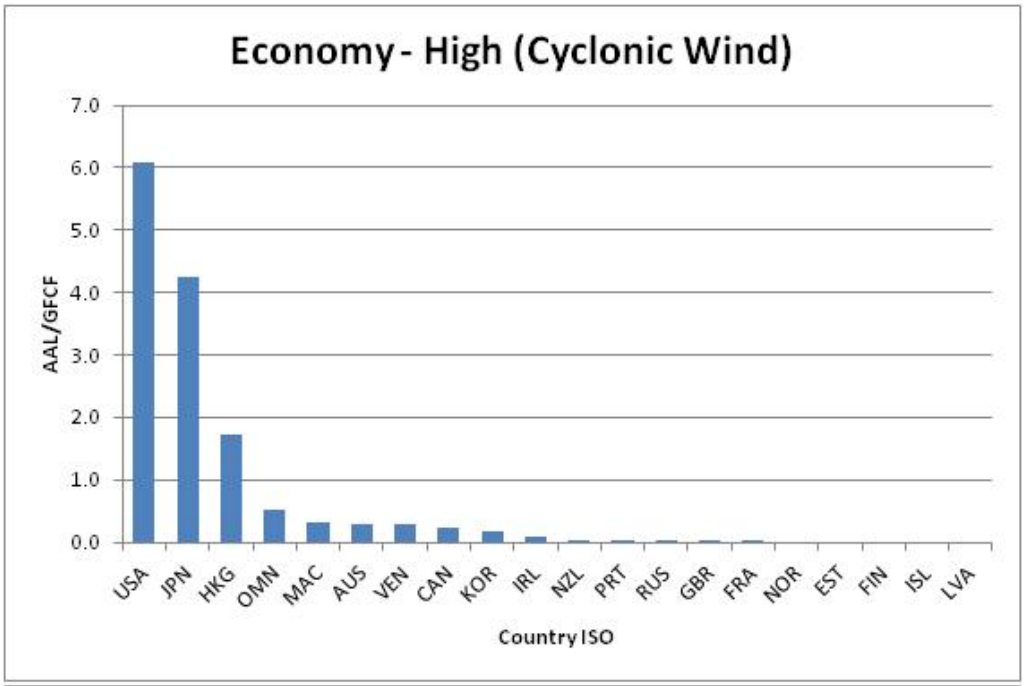

Economy - High (Tsunami)
AAL/GNE
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
JPN
MAC
HKG
NZL
BRN
CHL
AUS
CYP
GRC
MLT
ISR
USA
VEN
OMN
LBY
RUS
CAN
KOR
ESP
PRT
Country ISO

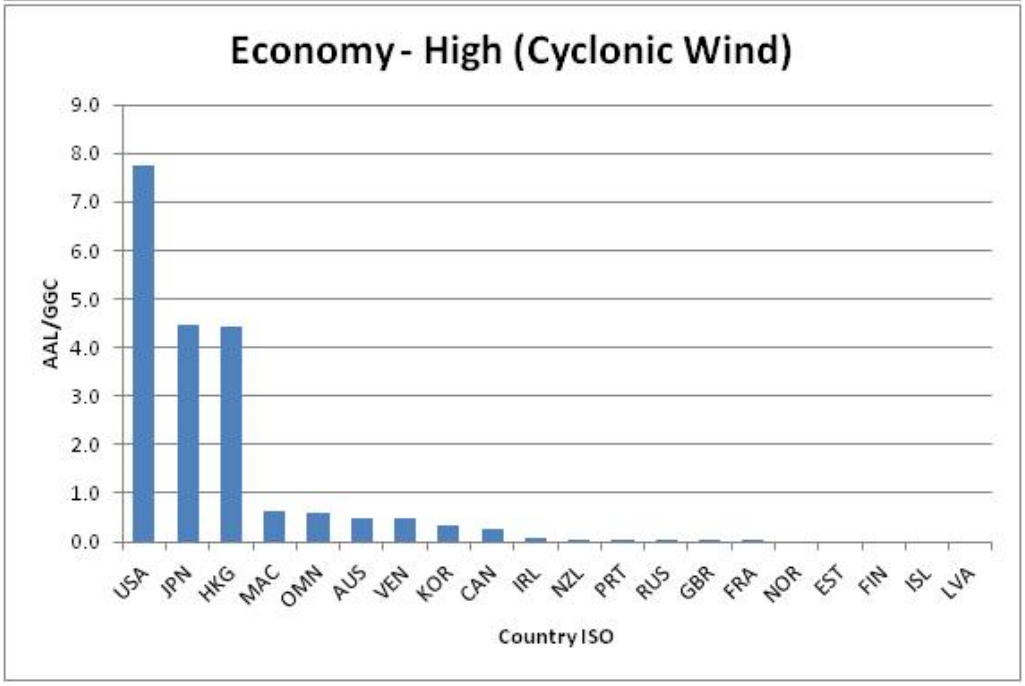

Economy - High (Tsunami)
AAL/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.0
0.0
0.0
MAC
HKG
JPN
NZL
CHL
AUS
CYP
BRN
LBY
ISR
MLT
USA
GRC
VEN
OMN
RUS
CAN
KOR
ESP
ITA
Country ISO

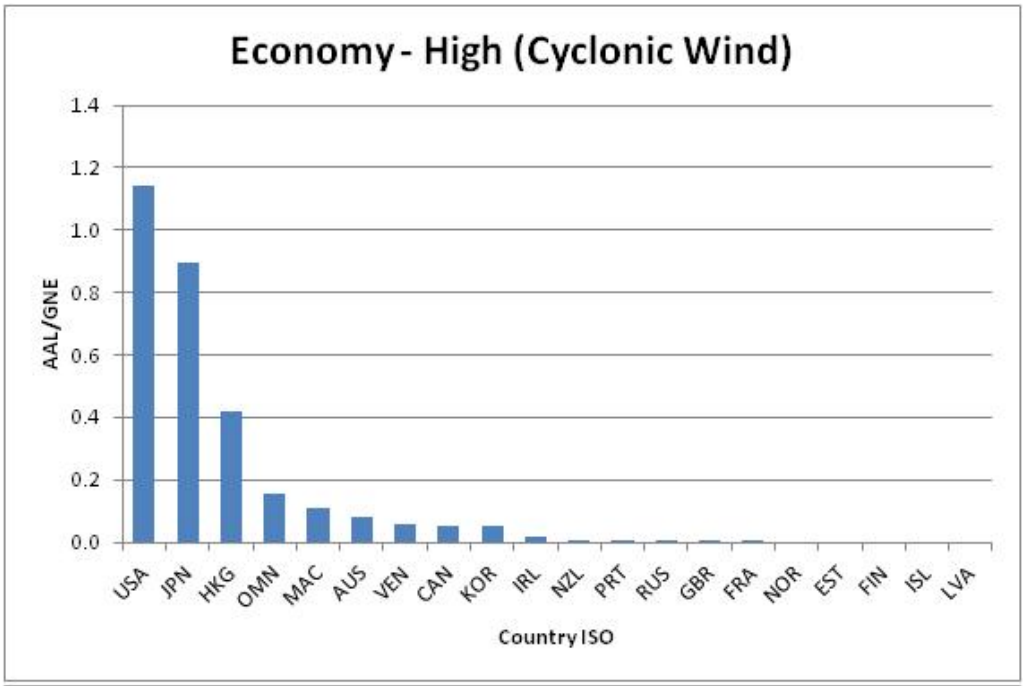

Economy - High (Tsunami)
PML250/GDP
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JPN
NZL
HKG
AUS
MAC
BRN
CHL
USA
GRC
RUS
CAN
ITA
GNQ
KOR
DEU
FRA
GBR
IRL
OMN
ARE
Country ISO

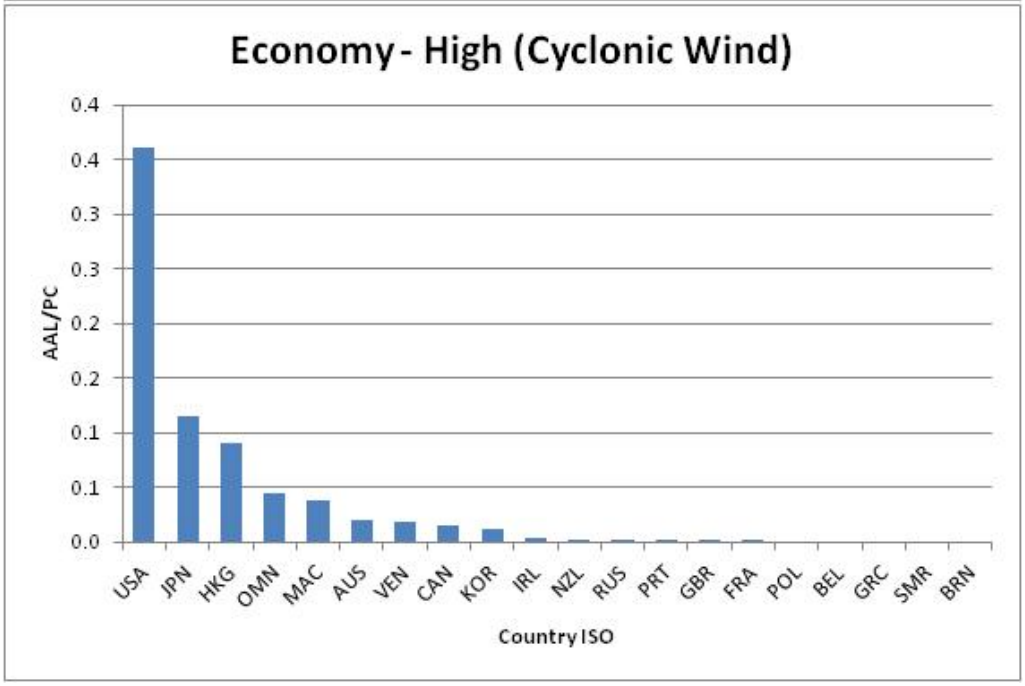

Economy - High (Tsunami)
PML250/GNI
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JPN NZL HKG MAC AUS BRN CHL USA GRC RUS CAN ITA GNQ KOR DEU FRA GBR IRL OMN ARE
Country ISO

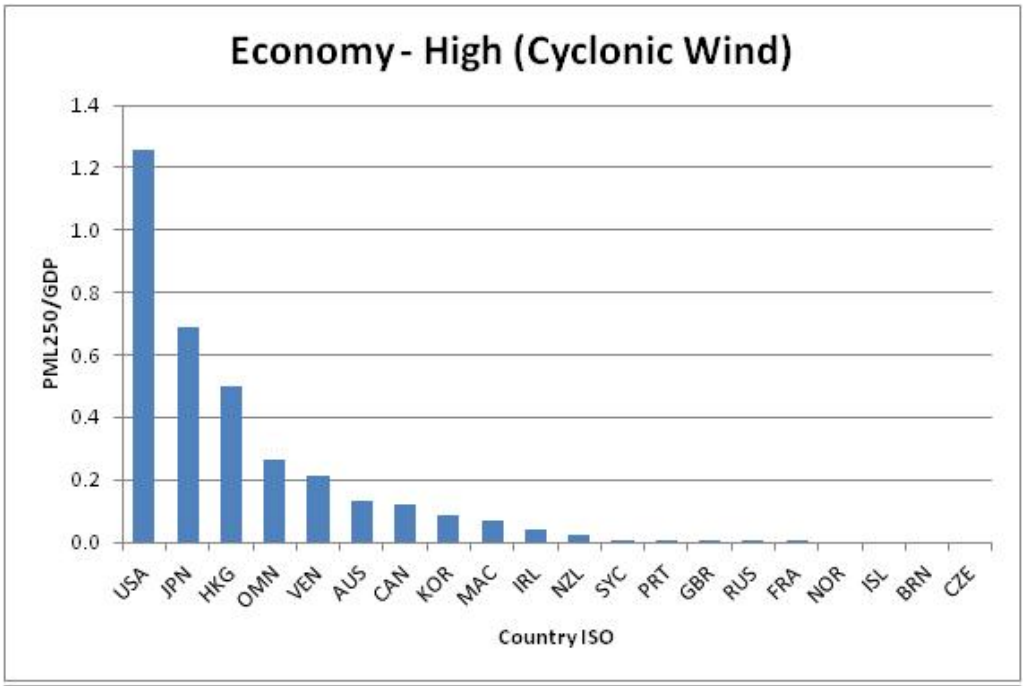

Economy - High (Tsunami)
PML250/PC
0.2
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
JPN NZL MAC HKG AUS CHL BRN USA GRC RUS CAN ITA GNQ KOR DEU FRA GBR IRL OMN ARE
Country ISO

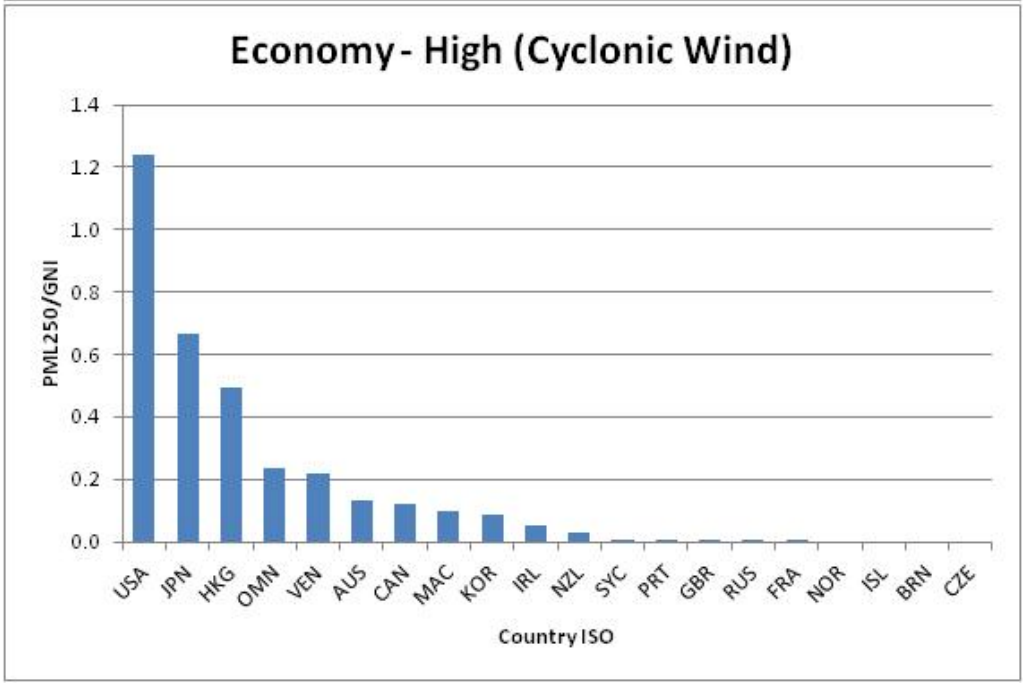

Economy - High (Cyclonic Wind)
AAL/GFCF
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
USA JPN HKG OMN MAC AUS VEN CAN KOR IRL NZL PRT RUS GBR FRA NOR EST FIN ISL LVA
Country ISO

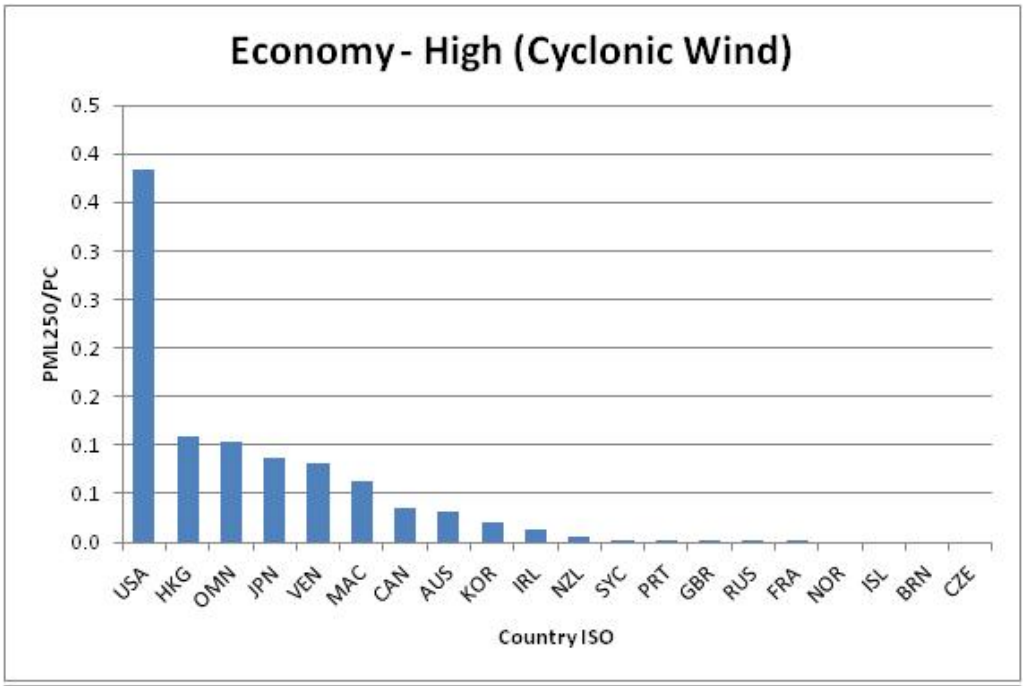

Economy - High (Cyclonic Wind)
AAL/GGC
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
USA JPN HKG MAC OMN AUS VEN KOR CAN IRL NZL PRT RUS GBR FRA NOR EST FIN ISL LVA
Country ISO

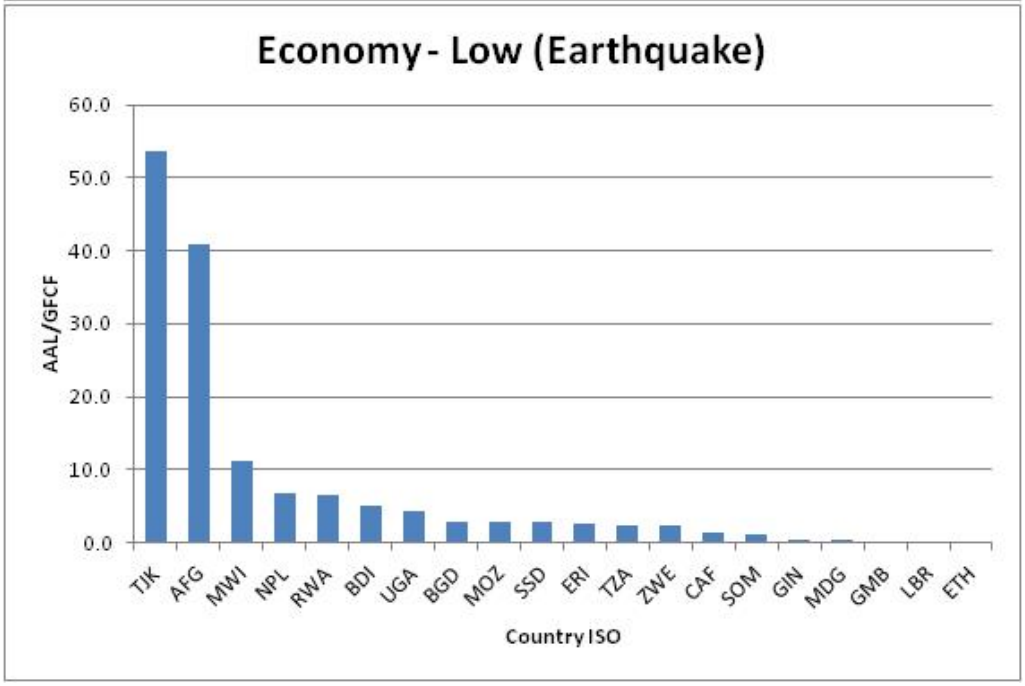

Economy - High (Cyclonic Wind)
AAL/GNE
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA
JPN
HKG
OMN
MAC
AUS
VEN
CAN
KOR
IRL
NZL
PRT
RUS
GBR
FRA
NOR
EST
FIN
ISL
LVA
Country ISO

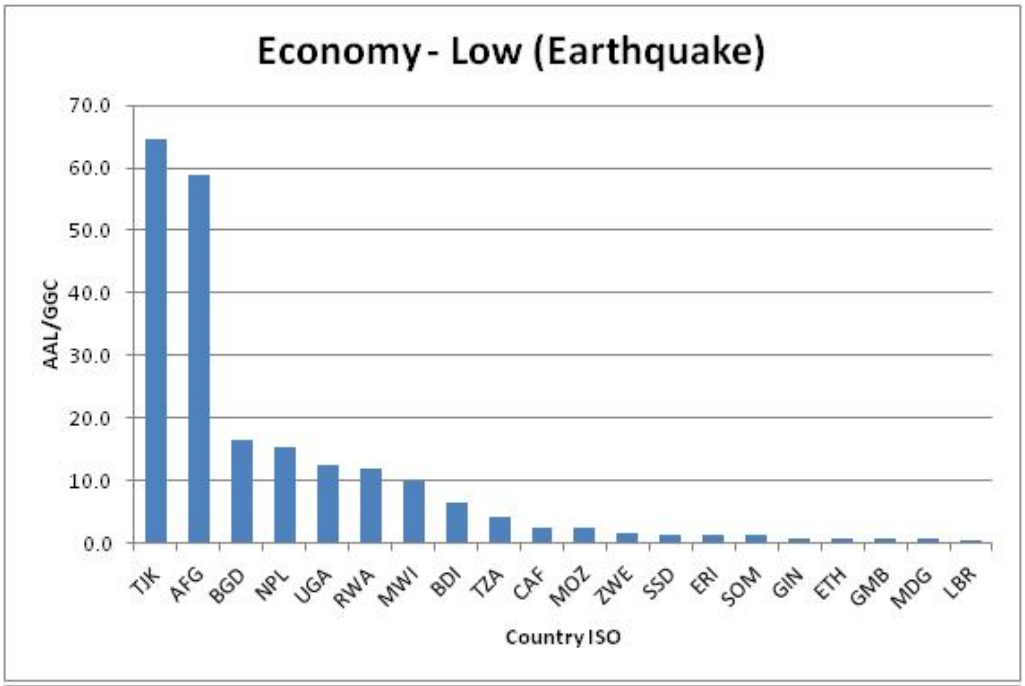

Economy - High (Cyclonic Wind)
AAL/PC
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
USA
JPN
HKG
OMN
MAC
AUS
VEN
CAN
KOR
IRL
NZL
RUS
PRT
GBR
FRA
POL
BEL
GRC
SMR
BRN
Country ISO

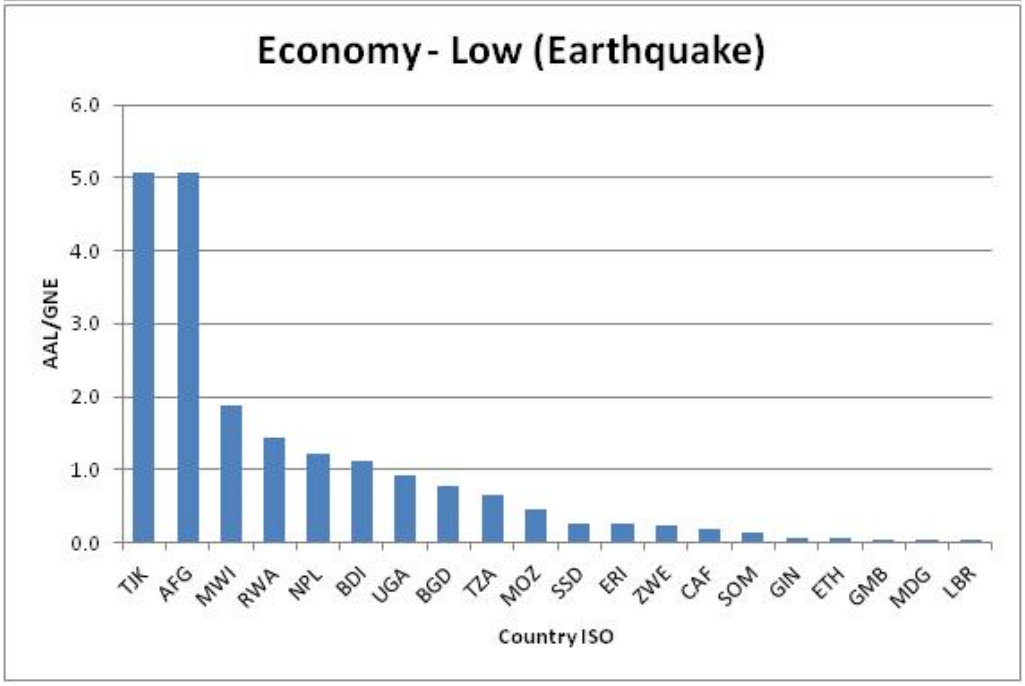

Economy - High (Cyclonic Wind)
PML250/GDP
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA JPN HKG OMN VEN AUS CAN KOR MAC IRL NZL SYC PRT GBR RUS FRA NOR ISL BRN CZE
Country ISO

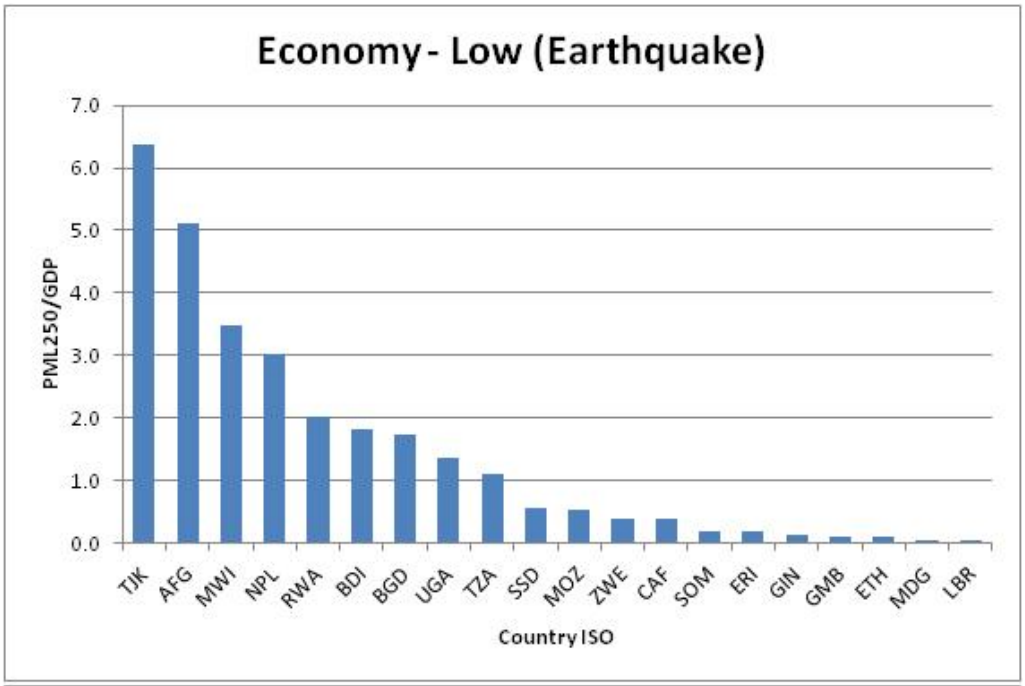

Economy - High (Cyclonic Wind)
PML250/GNI
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
USA JPN HKG OMN VEN AUS CAN MAC KOR IRL NZL SYC PRT GBR RUS FRA NOR ISL BRN CZE
Country ISO

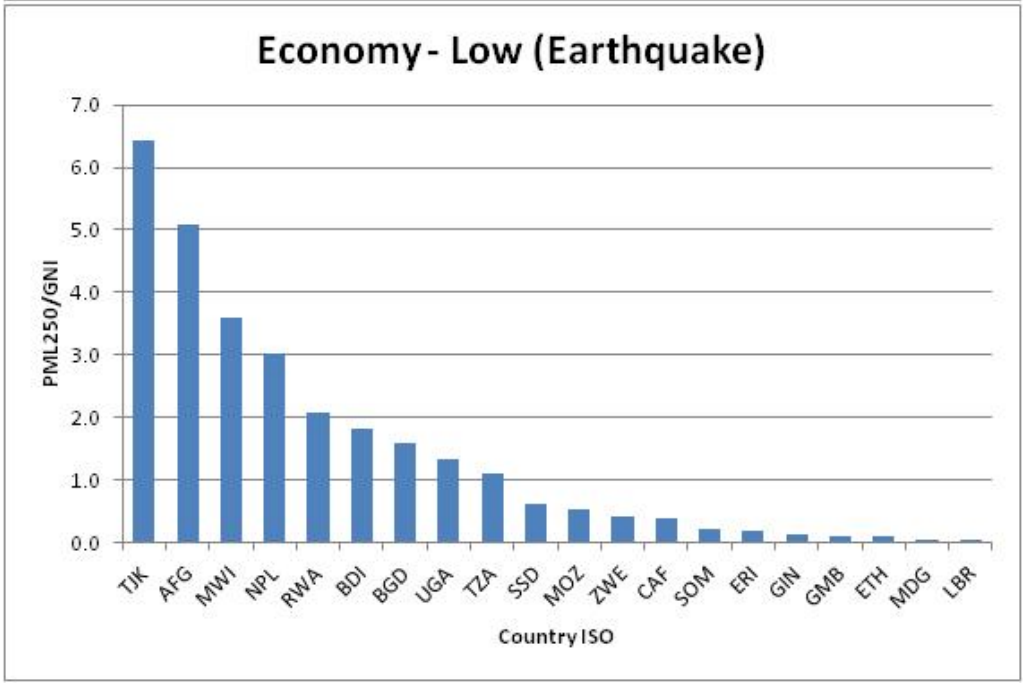

Economy - High (Cyclonic Wind)
PML250/PC
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
USA
HKG
OMN
JPN
VEN
MAC
CAN
AUS
KOR
IRL
NZL
SYC
PRT
GBR
RUS
FRA
NOR
ISL
BRN
CZE
Country ISO

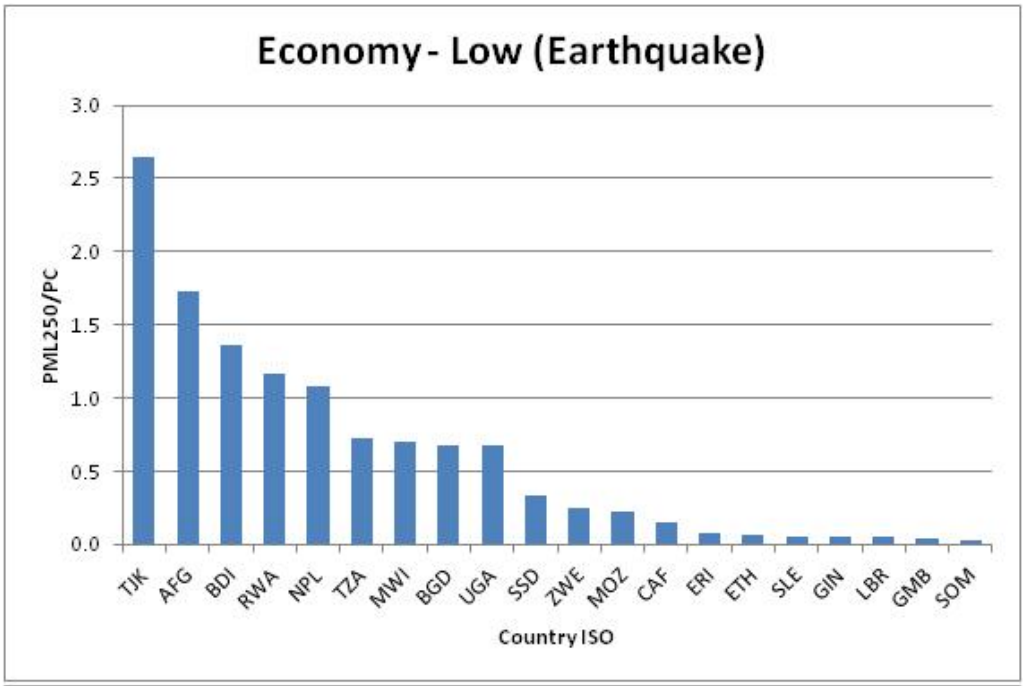

Economy - Low (Earthquake)
AAL/GFCF
60.0
50.0
40.0
30.0
20.0
10.0
0.0
TJK
AFG
MWI
NPL
RWA
BDI
UGA
BGD
MOZ
SSD
ERI
TZA
ZWE
CAF
SOM
GIN
MDG
GMB
LBR
ETH
Country ISO

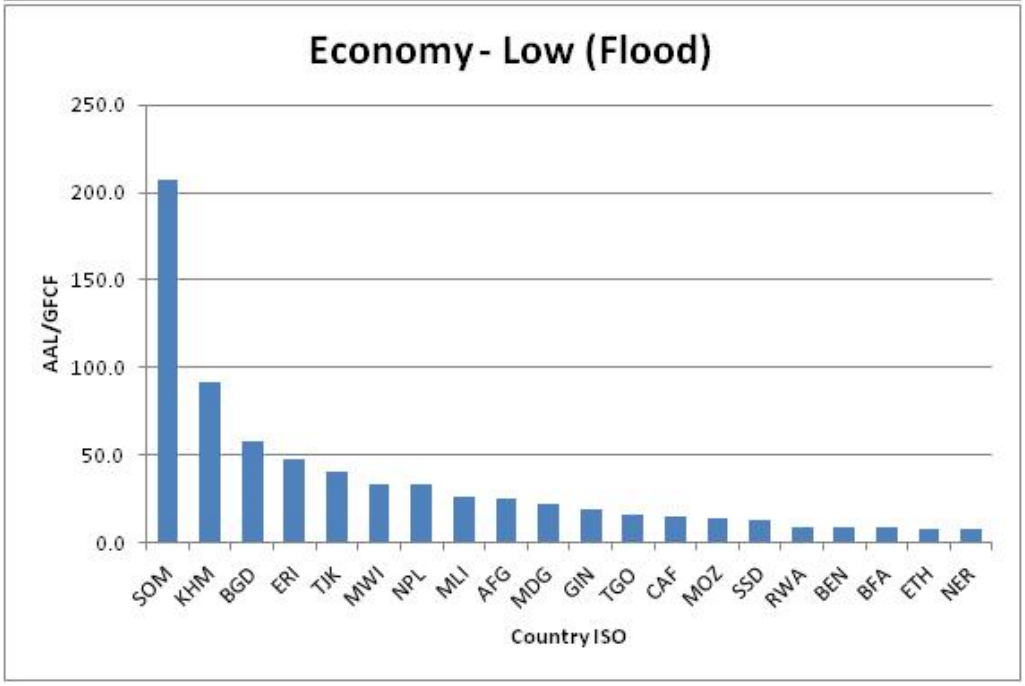

Economy - Low (Earthquake)
AAL/GGC
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
TJK AFG BGD NPL UGA RWA MWI BDI TZA CAF MOZ ZWE SSD ERI SOM GIN ETH GMB MDG LBR
Country ISO

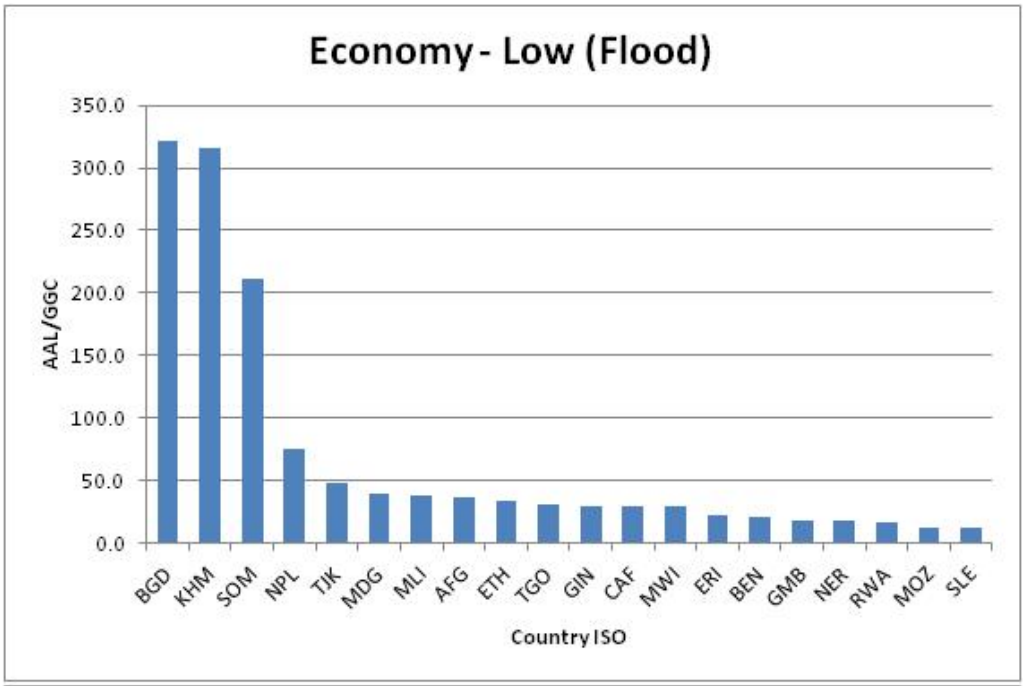

Economy - Low (Earthquake)
AAL/GNE
6.0
5.0
4.0
3.0
2.0
1.0
0.0
TJK AFG MWI RWA NPL BDI UGA BGD TZA MOZ SSD ERI ZWE CAF SOM GIN ETH GMB MDG LBR
Country ISO

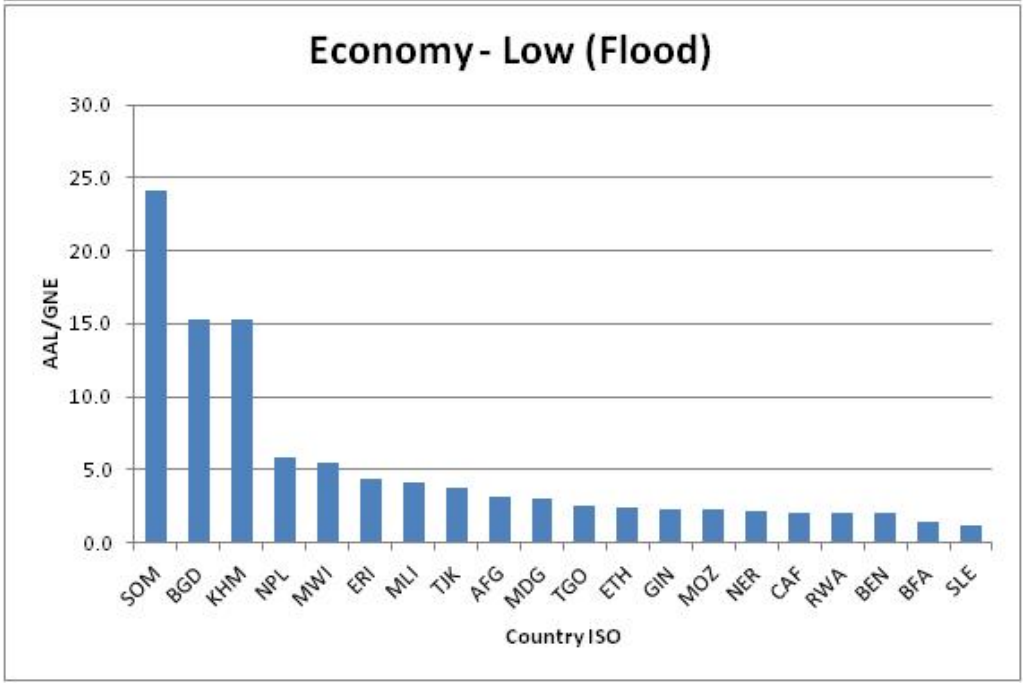

Economy - Low (Earthquake)
PML250/GDP
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
TJK AFG MWI NPL RWA BDI BGD UGA TZA SSD MOZ ZWE CAF SOM ERI GIN GMB ETH MDG LBR
Country ISO

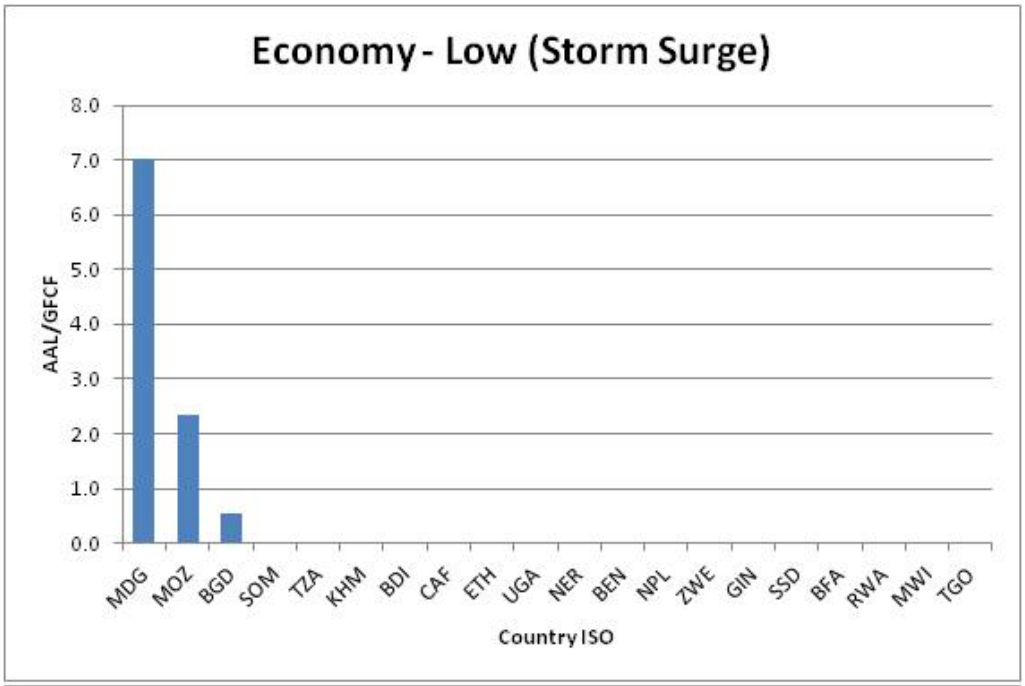

Economy - Low (Earthquake)
PML250/GNI
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
TJK AFG MWI NPL RWA BDI BGD UGA TZA SSD MOZ ZWE CAF SOM ERI GIN GMB ETH MDG LBR
Country ISO

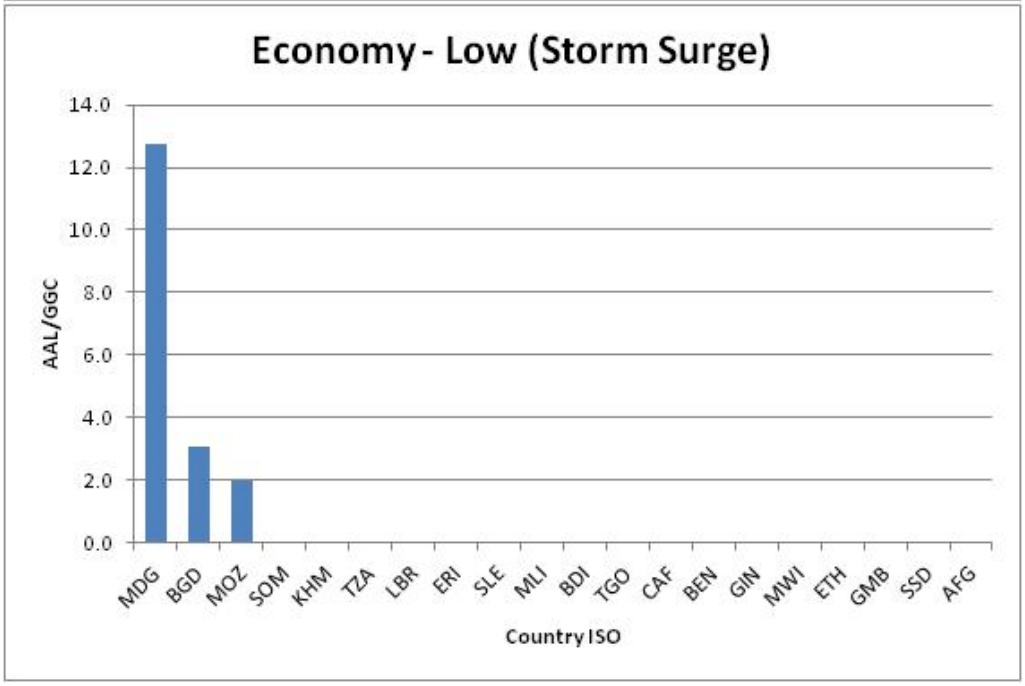

Economy - Low (Earthquake)
PML250/PC
3.0
2.5
2.0
1.5
1.0
0.5
0.0
TJK
AFG
BDI
RWA
NPL
TZA
MWI
BGD
UGA
SSD
ZWE
MOZ
CAF
ERI
ETH
SLE
GIN
LBR
GMB
SOM
Country ISO

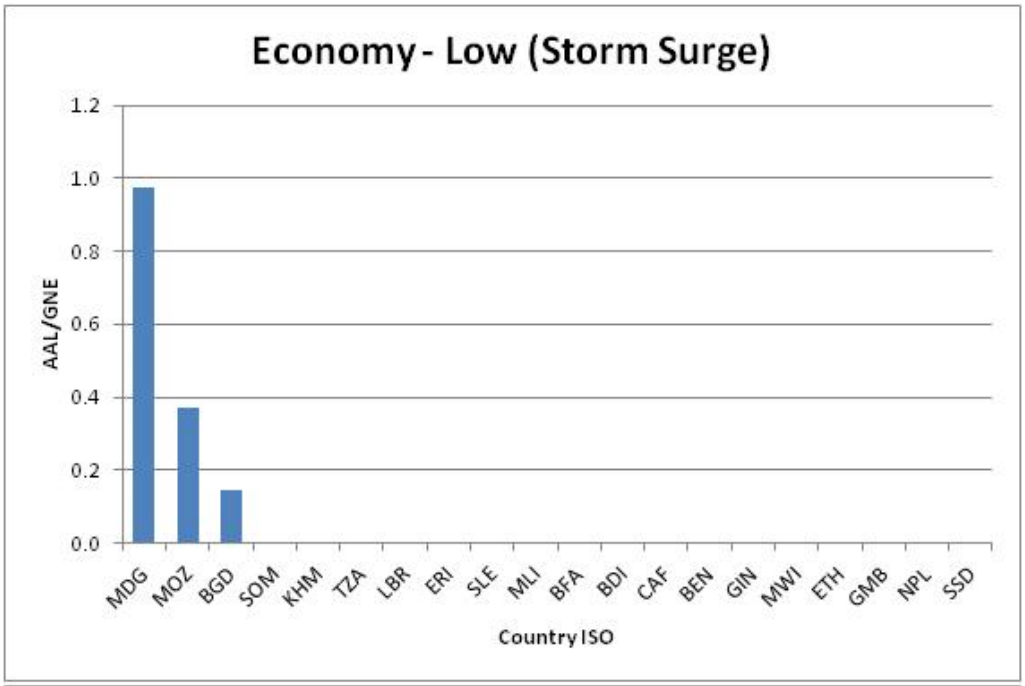

Economy - Low (Flood)
AAL/GFCF
250.0
200.0
150.0
100.0
50.0
0.0
SOM
KHM
BGD
ERI
TJK
MWI
NPL
MLI
AFG
MDG
GIN
TGO
CAF
MOZ
SSD
RWA
BEN
BFA
ETH
NER
Country ISO

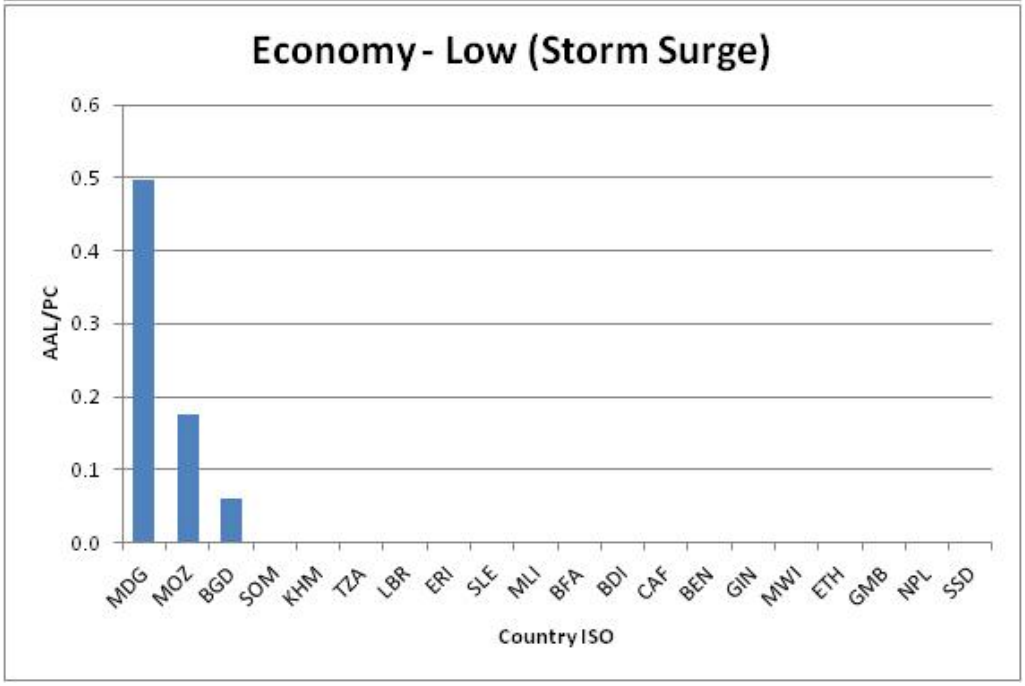

Economy - Low (Flood)
AAL/GGC
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
BGD
KHM
SOM
NPL
TJK
MDG
MLI
AFG
ETH
TGO
GIN
CAF
MWI
ERI
BEN
GMB
NER
RWA
MOZ
SLE
Country ISO

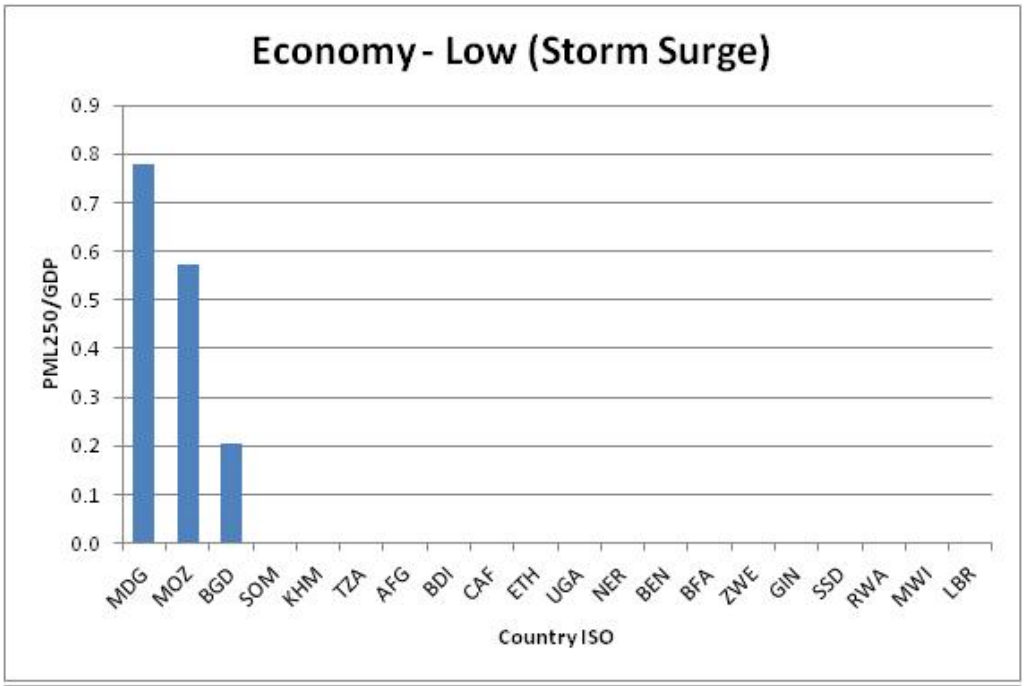

Economy - Low (Flood)
AAL/GNE
30.0
25.0
20.0
15.0
10.0
5.0
0.0
SOM
BGD
KHM
NPL
MWI
ERI
MLI
TJK
AFG
MDG
TGO
ETH
GIN
MOZ
NER
CAF
RWA
BEN
BFA
SLE
Country ISO

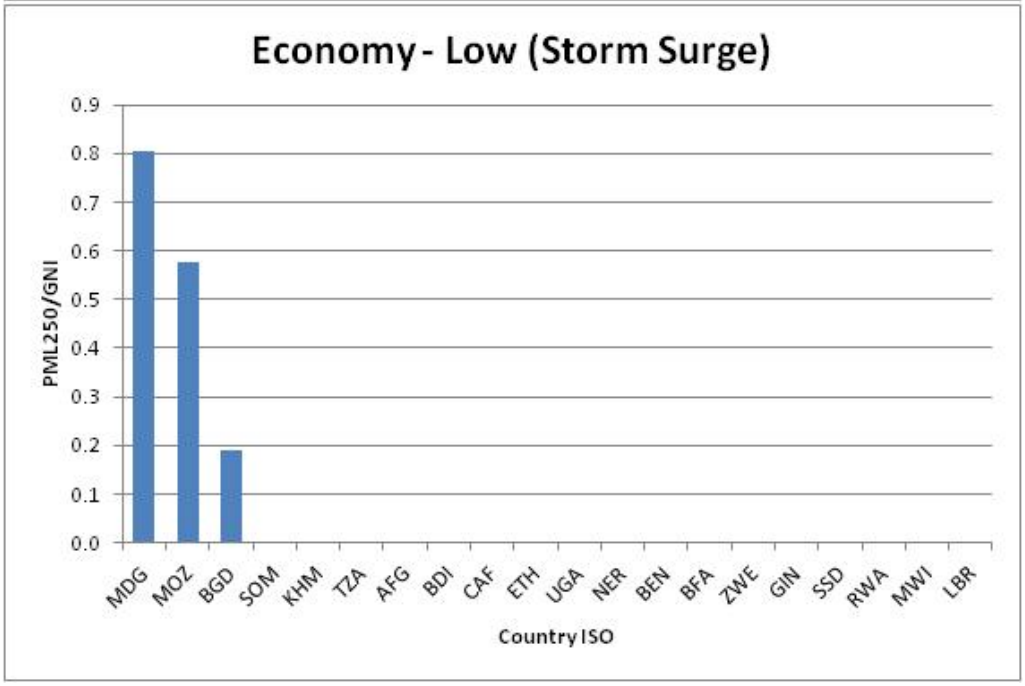

Economy - Low (Storm Surge)
AAL/GFCF
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
MDG
MOZ
BGD
SOM
TZA
KHM
BDI
CAF
ETH
UGA
NER
BEN
NPL
ZWE
GIN
SSD
BFA
RWA
MWI
TGO
Country ISO

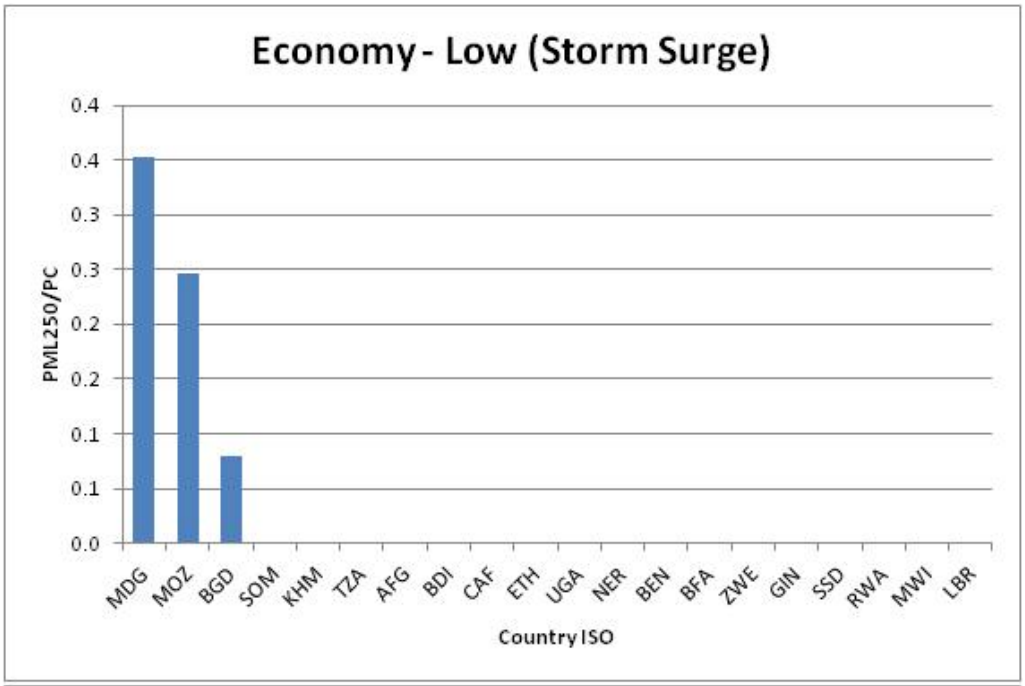

Economy - Low (Storm Surge)
AAL/GGC
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
BGD
MOZ
SOM
KHM
TZA
LBR
ERI
SLE
MLI
BDI
TGO
CAF
BEN
GIN
MWI
ETH
GMB
SSD
AFG
Country ISO

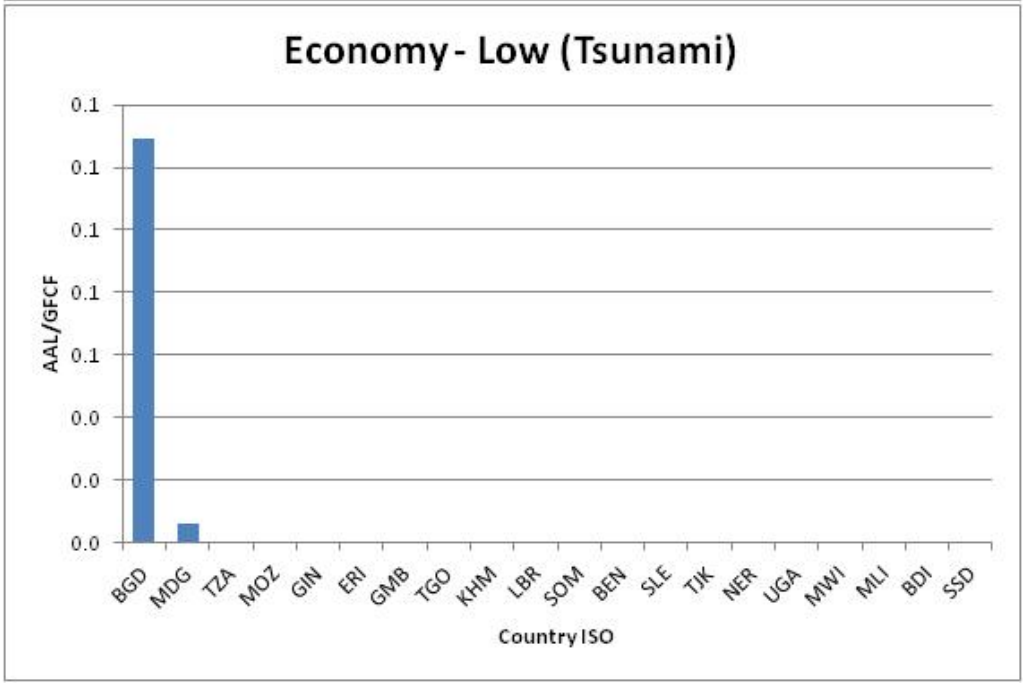

Economy - Low (Storm Surge)
AAL/GNE
1.2
1.0
0.8
0.6
0.4
0.2
0.0
MDG
MOZ
BGD
SOM
KHM
TZA
LBR
ERI
SLE
MLI
BFA
BDI
CAF
BEN
GIN
MWI
ETH
GMB
NPL
SSD
Country ISO

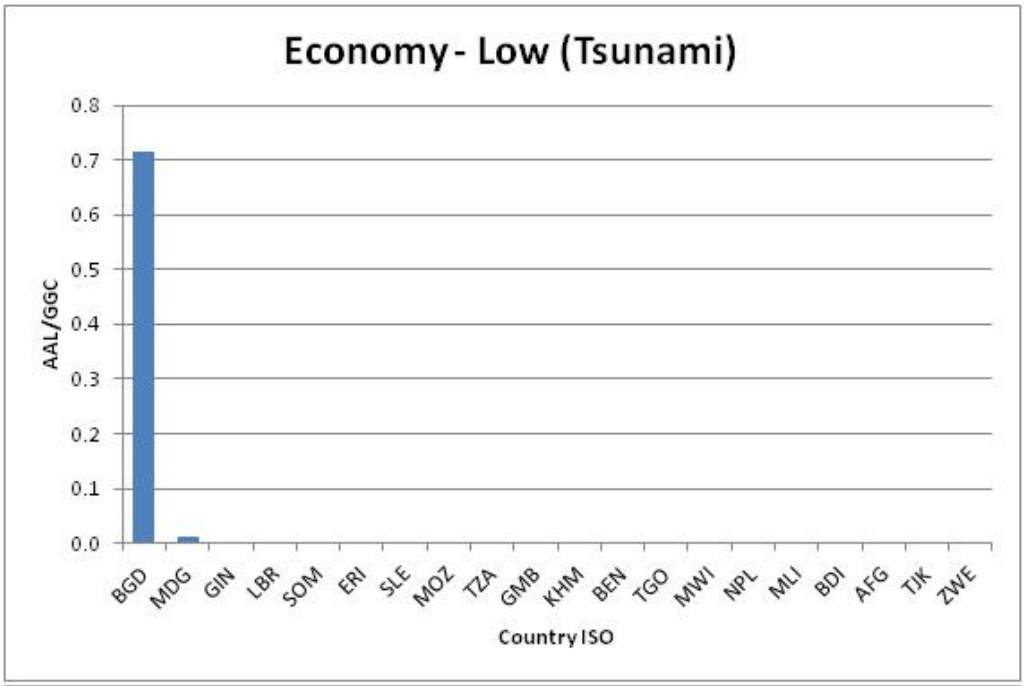

Economy - Low (Storm Surge)
AAL/PC
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
MOZ
BGD
SOM
KHM
TZA
LBR
ERI
SLE
MLI
BFA
BDI
CAF
BEN
GIN
MWI
ETH
GMB
NPL
SSD
Country ISO

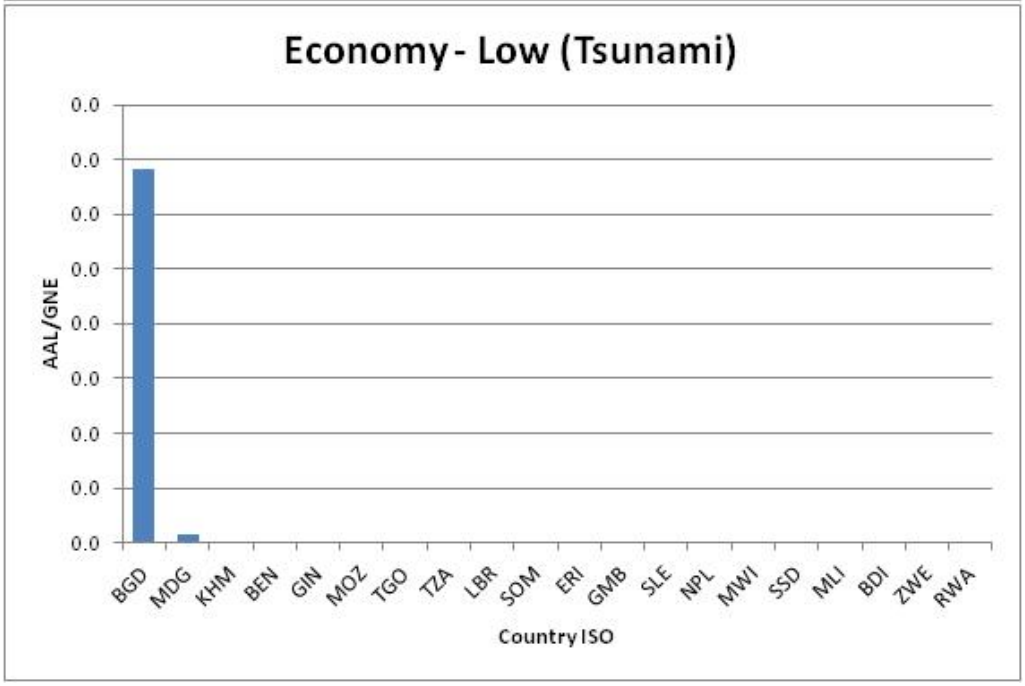

Economy - Low (Storm Surge)
PML250/GDP
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
MOZ
BGD
SOM
KHM
TZA
AFG
BDI
CAF
ETH
UGA
NER
BEN
BFA
ZWE
GIN
SSD
RWA
MWI
LBR
Country ISO

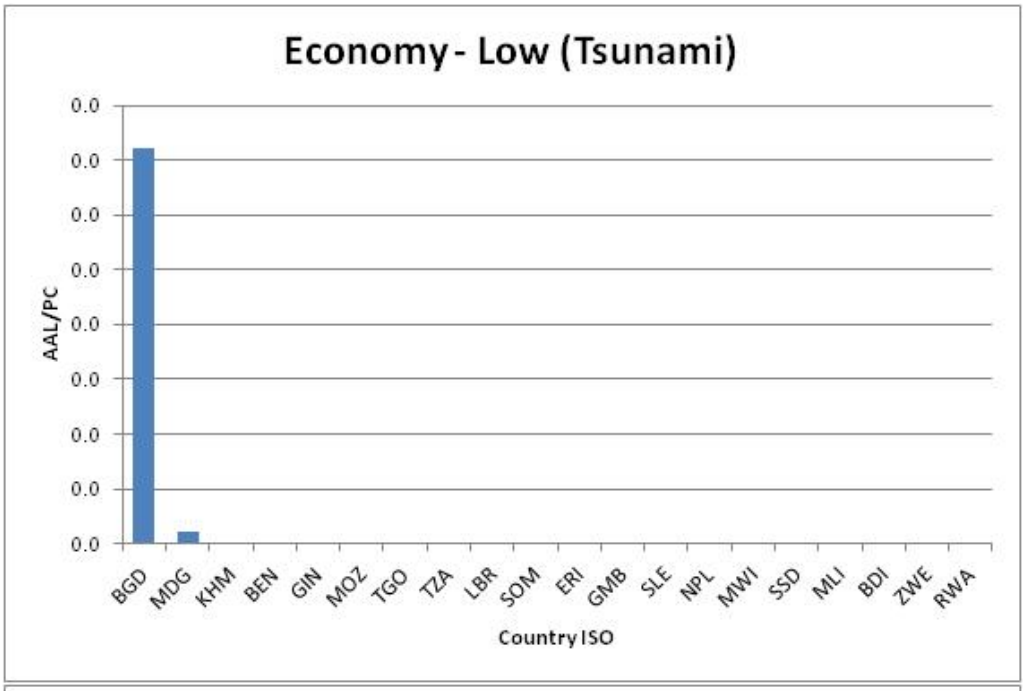

Economy - Low (Storm Surge)
PML250/GNI
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
MOZ
BGD
SOM
KHM
TZA
AFG
BDI
CAF
ETH
UGA
NER
BEN
BFA
ZWE
GIN
SSD
RWA
MWI
LBR
Country ISO

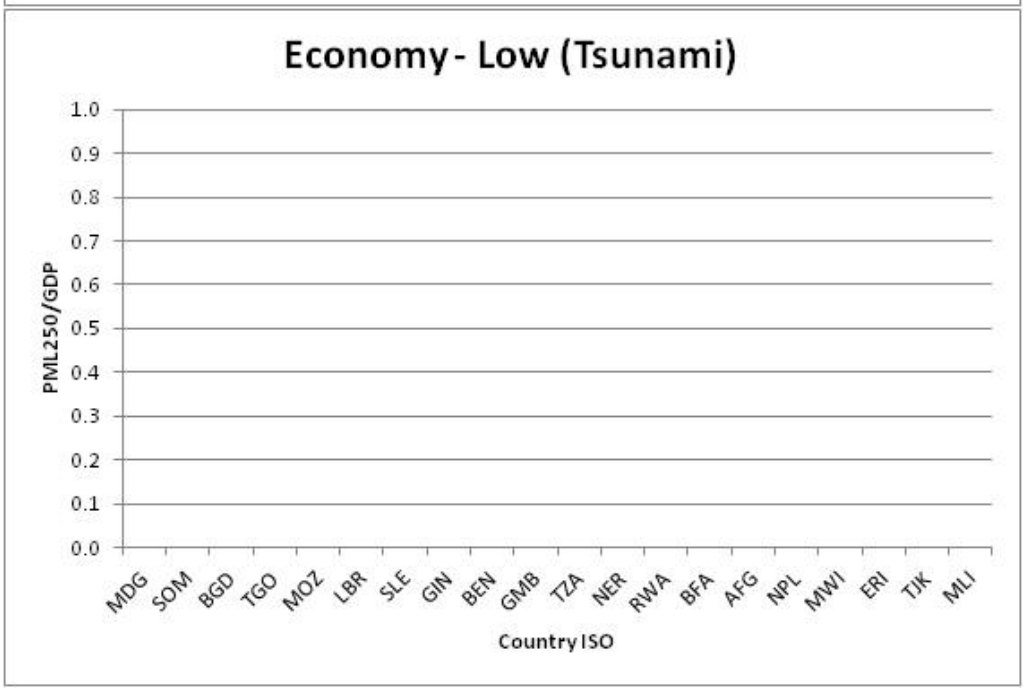

Economy - Low (Storm Surge)
PML250/PC
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
MDG
MOZ
BGD
SOM
KHM
TZA
AFG
BDI
CAF
ETH
UGA
NER
BEN
BFA
ZWE
GIN
SSD
RWA
MWI
LBR
Country ISO

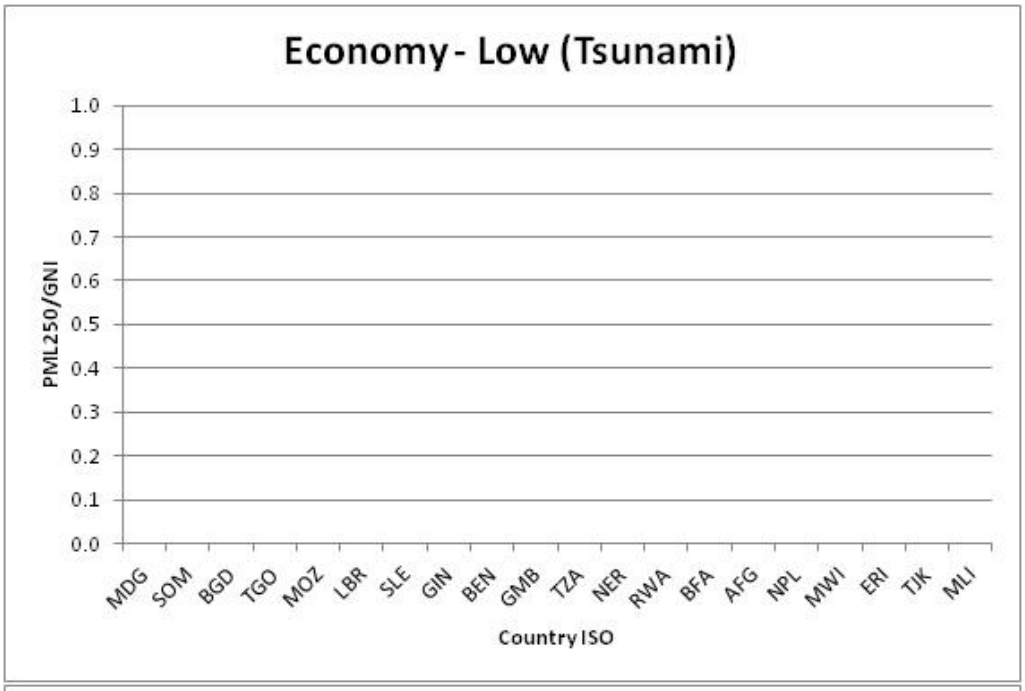

Economy - Low (Tsunami)
AAL/GFCF
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
BGD
MDG
TZA
MOZ
GIN
ERI
GMB
TGO
KHM
LBR
SOM
BEN
SLE
TJK
NER
UGA
MWI
MLI
BDI
SSD
Country ISO

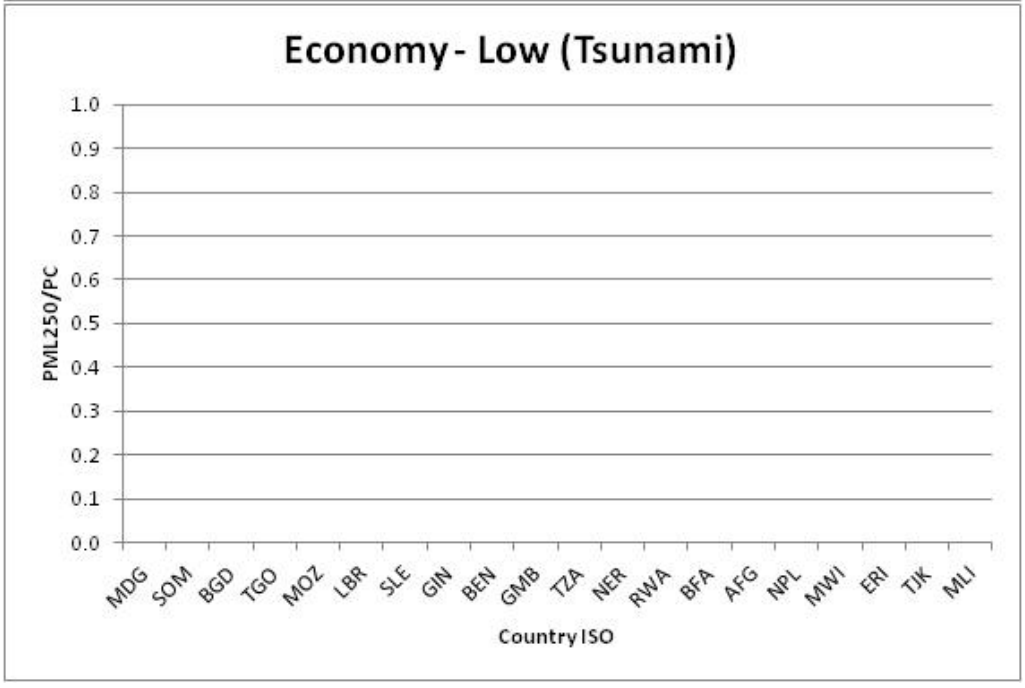

Economy - Low (Tsunami)
AAL/GGC
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
BGD
MDG
GIN
LBR
SOM
ERI
SLE
MOZ
TZA
GMB
KHM
BEN
TGO
MWI
NPL
MLI
BDI
AFG
TJK
ZWE
Country ISO

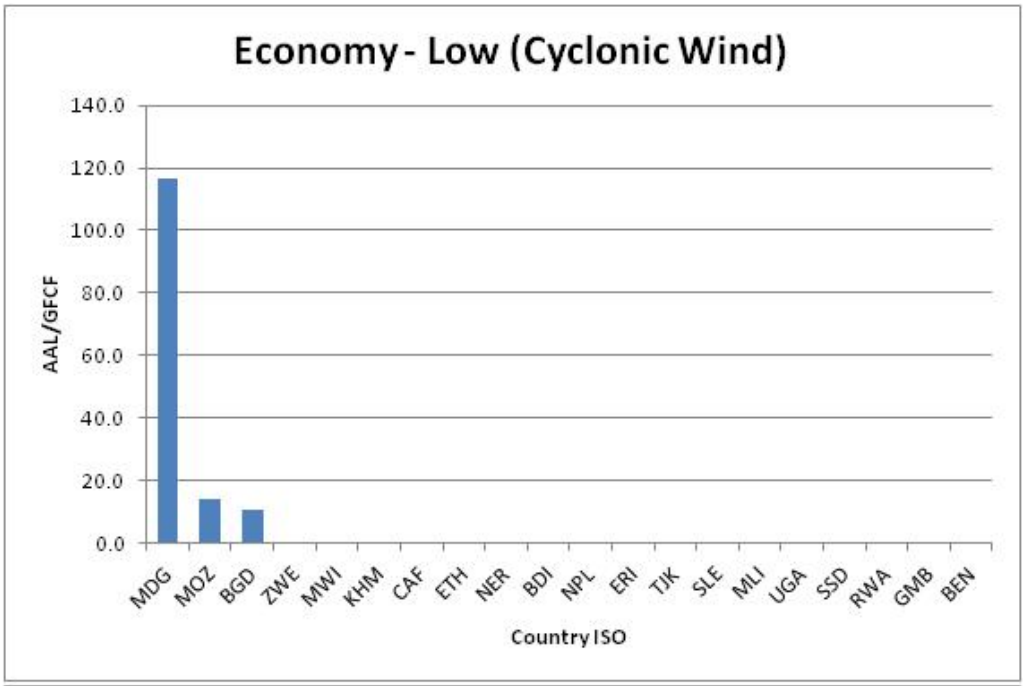

Economy - Low (Tsunami)
AAL/GNE
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
BGD
MDG
KHM
BEN
GIN
MOZ
TGO
TZA
LBR
SOM
ERI
GMB
SLE
NPL
MWI
SSD
MLI
BDI
ZWE
RWA
Country ISO

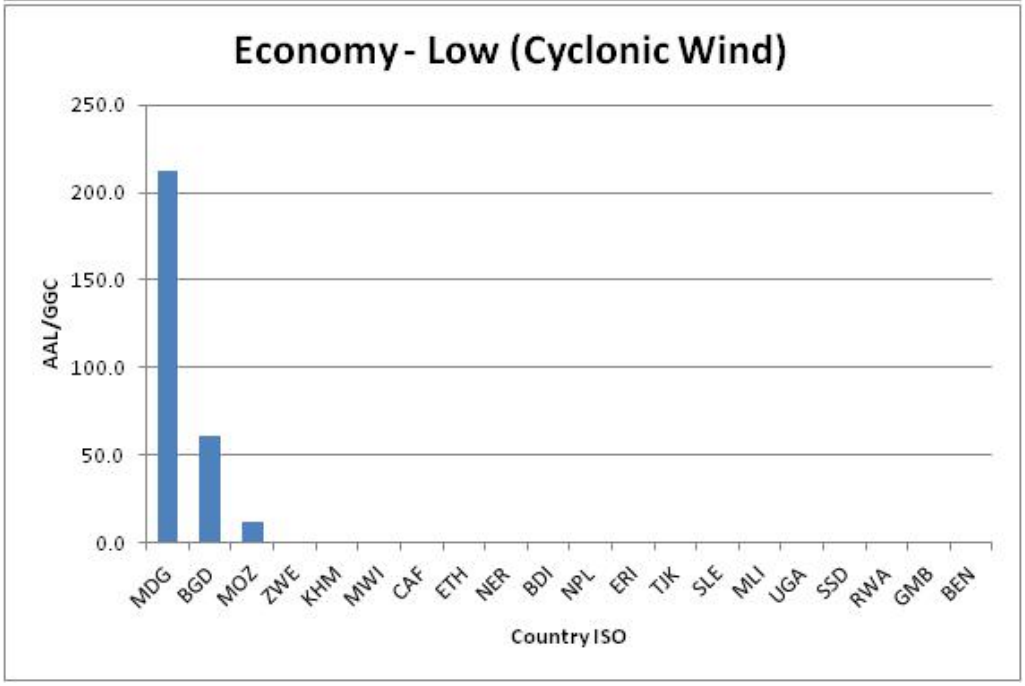

Economy - Low (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
BGD
MDG
KHM
BEN
GIN
MOZ
TGO
TZA
LBR
SOM
ERI
GMB
SLE
NPL
MWI
SSD
MLI
BDI
ZWE
RWA
Country ISO

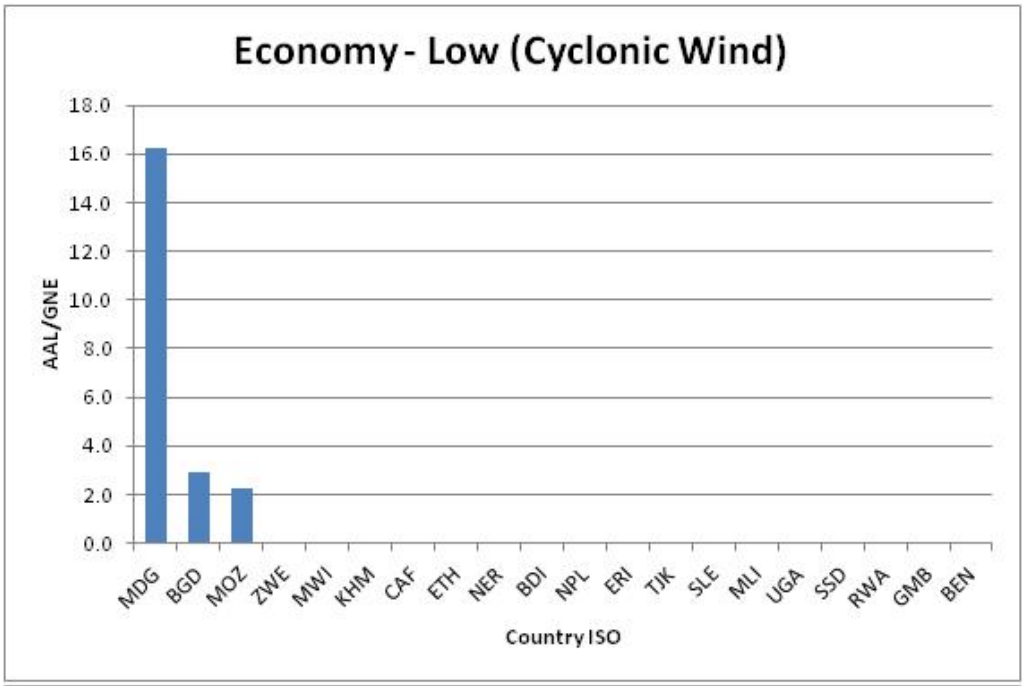

Economy - Low (Tsunami)
PML250/GDP
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG
SOM
BGD
TGO
MOZ
LBR
SLE
GIN
BEN
GMB
TZA
NER
RWA
BFA
AFG
NPL
MWI
ERI
TJK
MLI
Country ISO

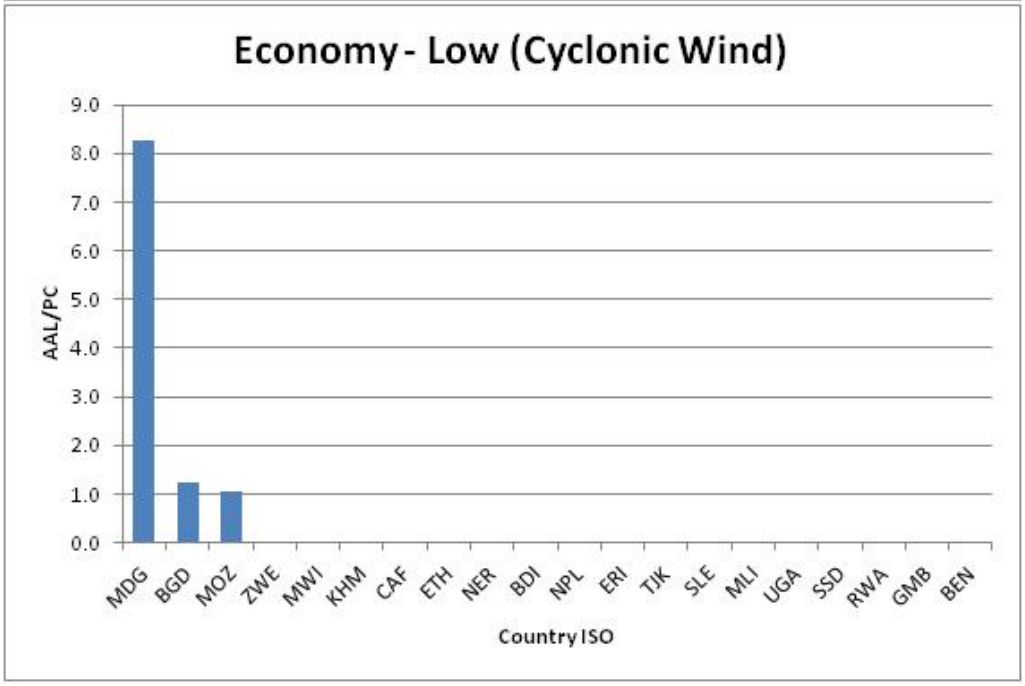

Economy - Low (Tsunami)
PML250/GNI
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG SOM BGD TGO MOZ LBR SLE GIN BEN GMB TZA NER RWA BFA AFG NPL MWI ERI TJK MLI
Country ISO

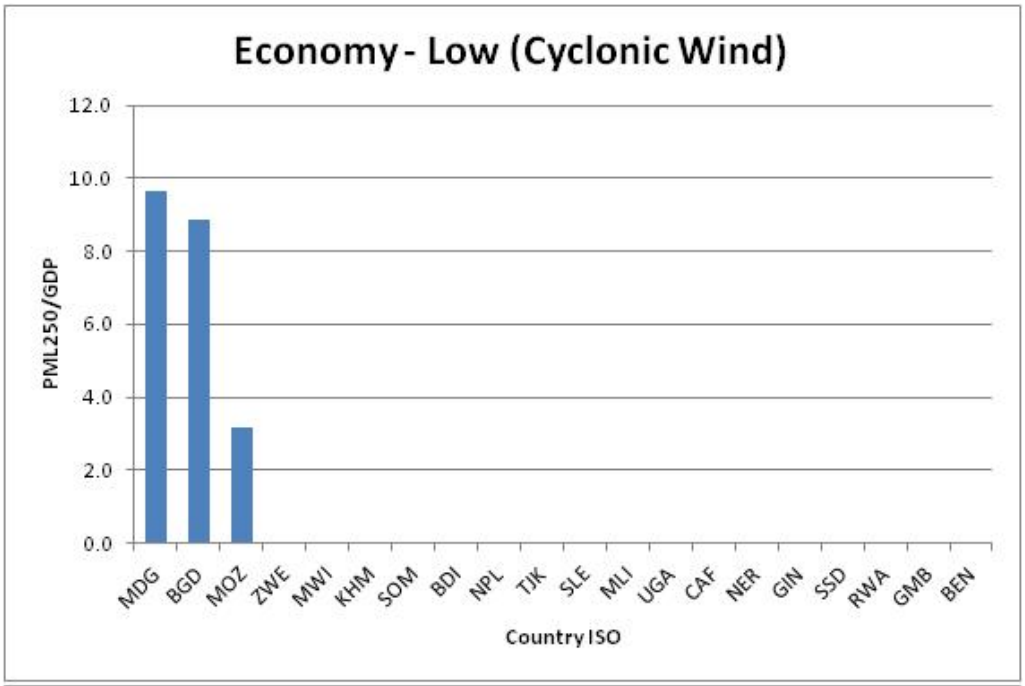

Economy - Low (Tsunami)
PML250/PC
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MDG SOM BGD TGO MOZ LBR SLE GIN BEN GMB TZA NER RWA BFA AFG NPL MWI ERI TJK MLI
Country ISO

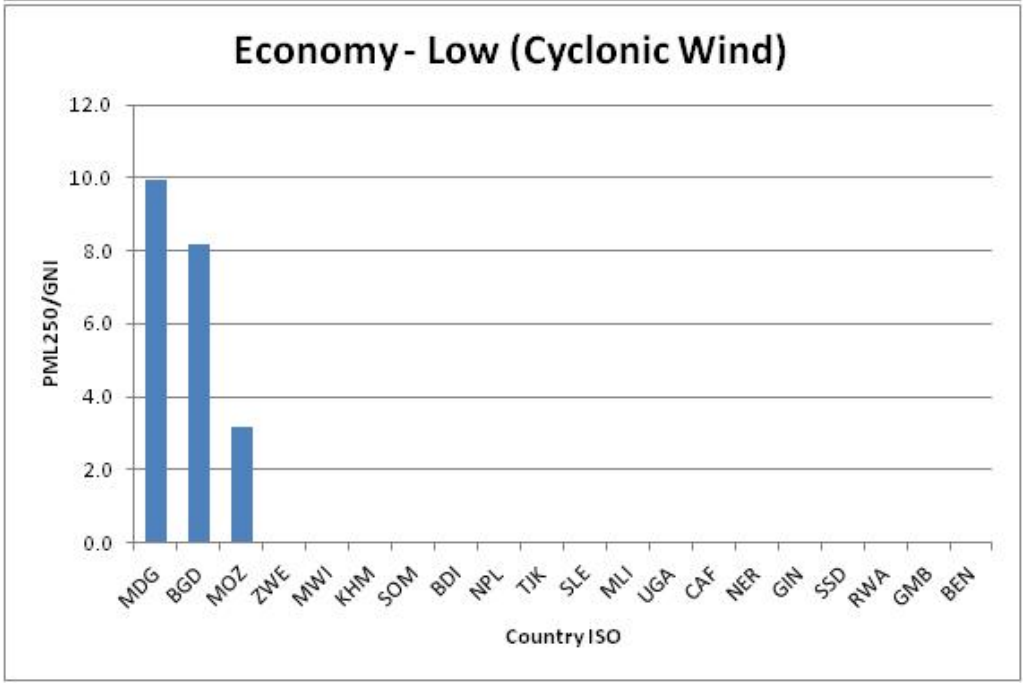

Economy - Low (Cyclonic Wind)
AAL/GFCF
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
MDG
MOZ
BGD
ZWE
MWI
KHM
CAF
ETH
NER
BDI
NPL
ERI
TJK
SLE
MLI
UGA
SSD
RWA
GMB
BEN
Country ISO

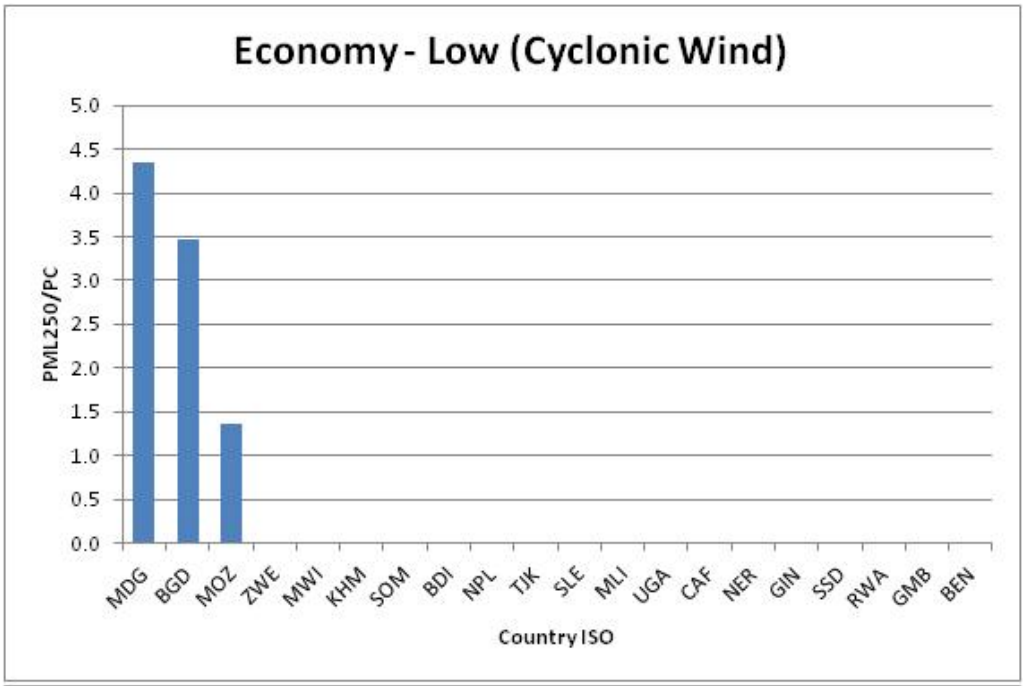

Economy - Low (Cyclonic Wind)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
MDG
BGD
MOZ
ZWE
KHM
MWI
CAF
ETH
NER
BDI
NPL
ERI
TJK
SLE
MLI
UGA
SSD
RWA
GMB
BEN
Country ISO

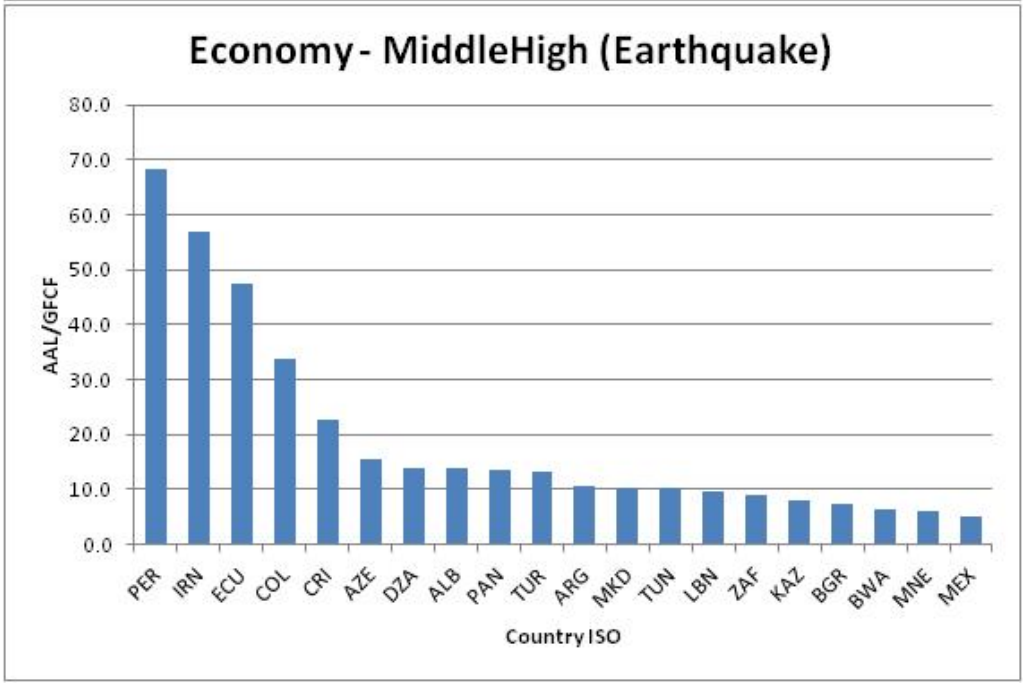

Economy - Low (Cyclonic Wind)
AAL/GNE
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
BGD
MOZ
ZWE
MWI
KHM
CAF
ETH
NER
BDI
NPL
ERI
TJK
SLE
MLI
UGA
SSD
RWA
GMB
BEN
Country ISO

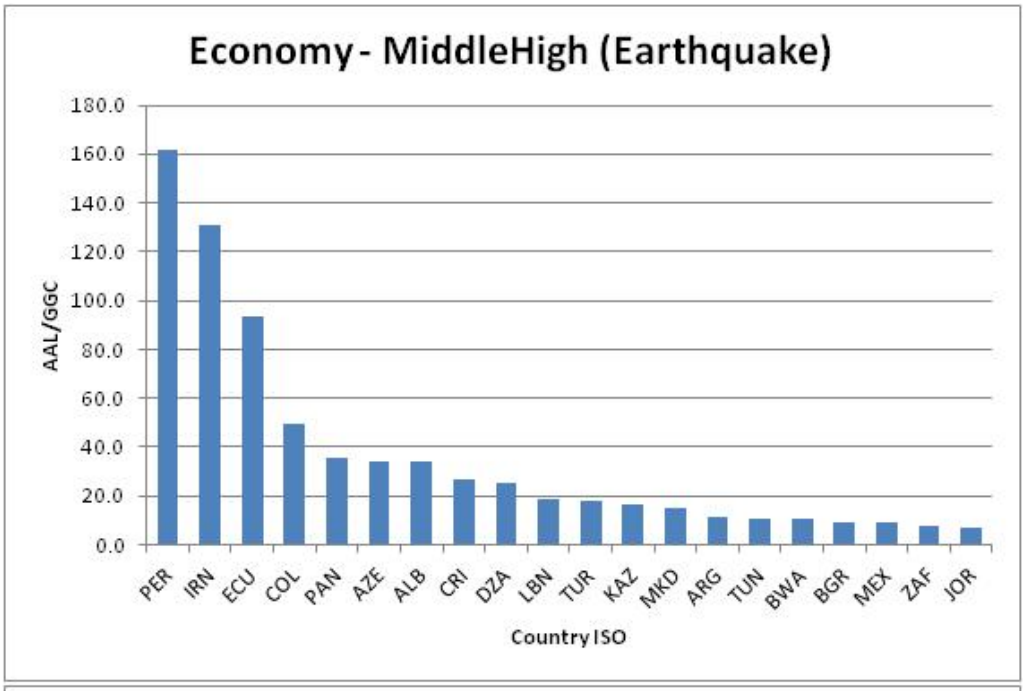

Economy - Low (Cyclonic Wind)
AAL/PC
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
MDG
BGD
MOZ
ZWE
MWI
KHM
CAF
ETH
NER
BDI
NPL
ERI
TJK
SLE
MLI
UGA
SSD
RWA
GMB
BEN
Country ISO

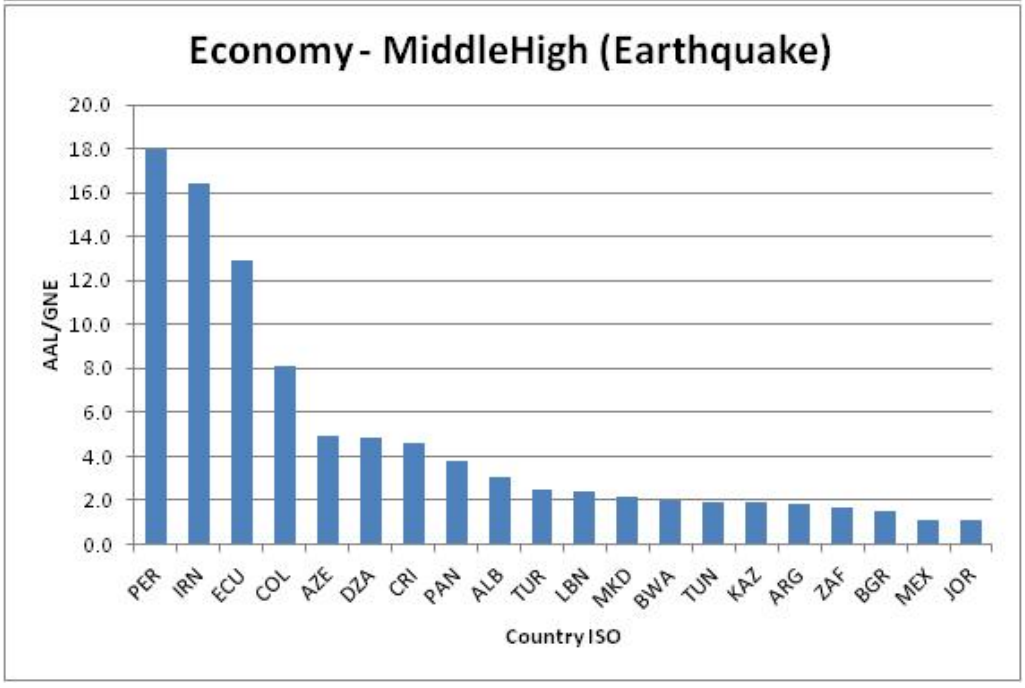

Economy - Low (Cyclonic Wind)
PML250/GDP
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
BGD
MOZ
ZWE
MWI
KHM
SOM
BDI
NPL
TJK
SLE
MLI
UGA
CAF
NER
GIN
SSD
RWA
GMB
BEN
Country ISO

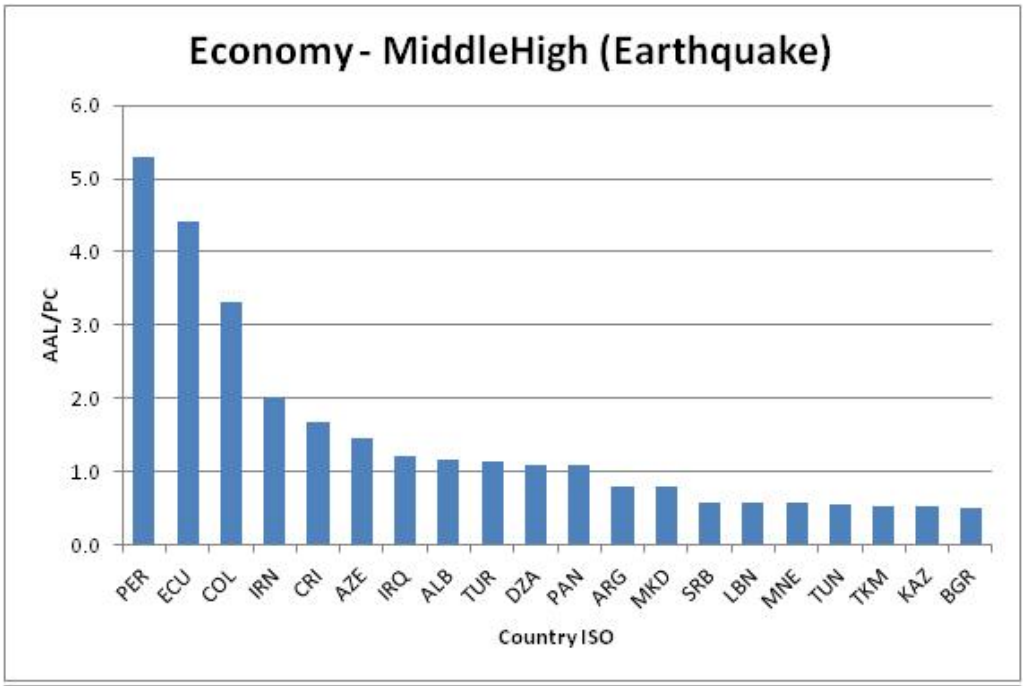

Economy - Low (Cyclonic Wind)
PML250/GNI
12.0
10.0
8.0
6.0
4.0
2.0
0.0
MDG
BGD
MOZ
ZWE
MWI
KHM
SOM
BDI
NPL
TJK
SLE
MLI
UGA
CAF
NER
GIN
SSD
RWA
GMB
BEN
Country ISO

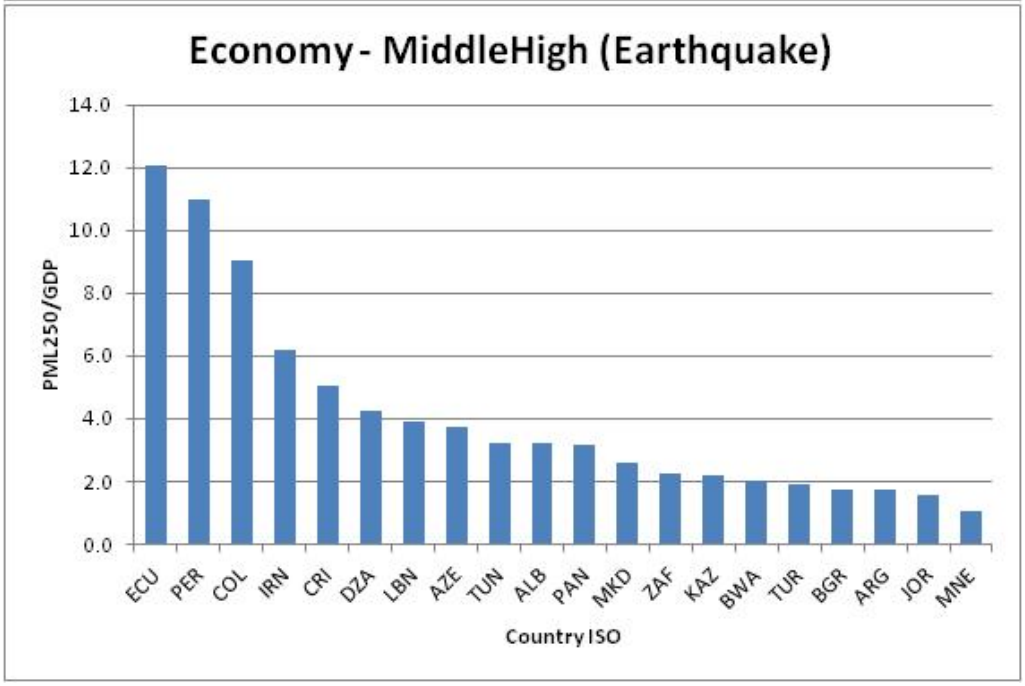

Economy - Low (Cyclonic Wind)
PML250/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
MDG
BGD
MOZ
ZWE
MWI
KHM
SOM
BDI
NPL
TJK
SLE
MLI
UGA
CAF
NER
GIN
SSD
RWA
GMB
BEN
Country ISO

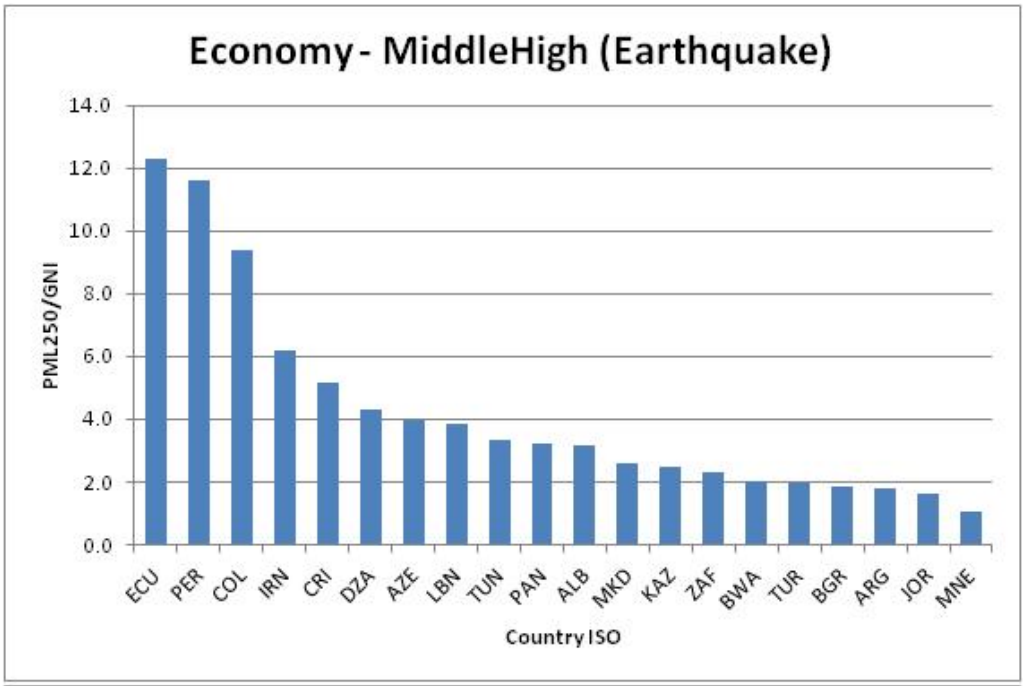

Economy - MiddleHigh (Earthquake)
AAL/GFCF
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PER
IRN
ECU
COL
CRI
AZE
DZA
ALB
PAN
TUR
ARG
MKD
TUN
LBN
ZAF
KAZ
BGR
BWA
MNE
MEX
Country ISO

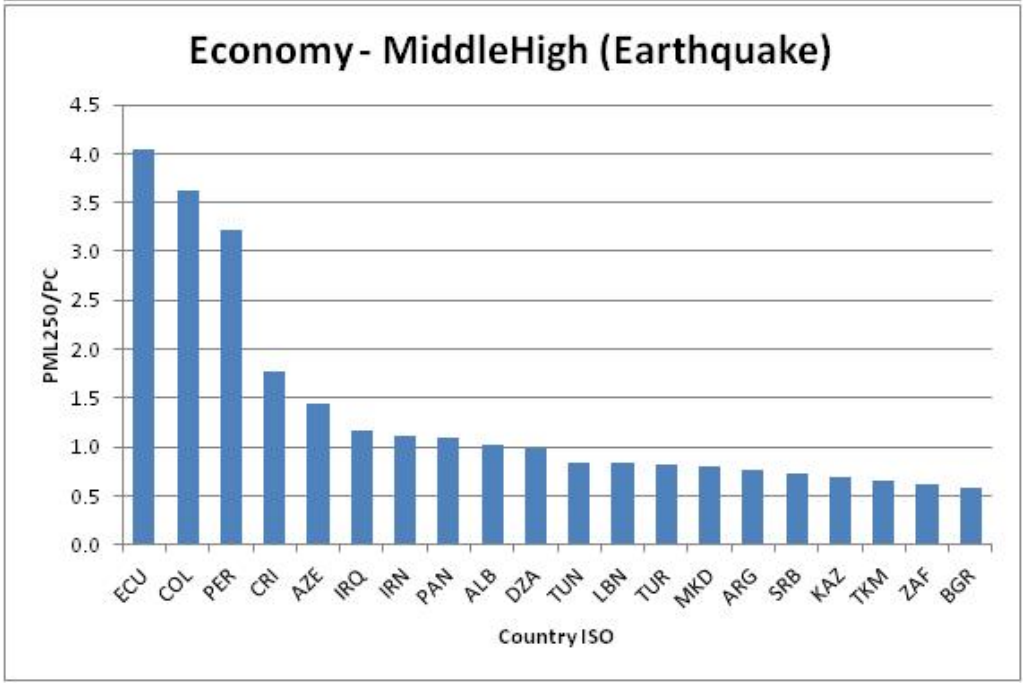

Economy - MiddleHigh (Earthquake)
AAL/GGC
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PER IRN ECU COL PAN AZE ALB CRI DZA LBN TUR KAZ MKD ARG TUN BWA BGR MEX ZAF JOR
Country ISO

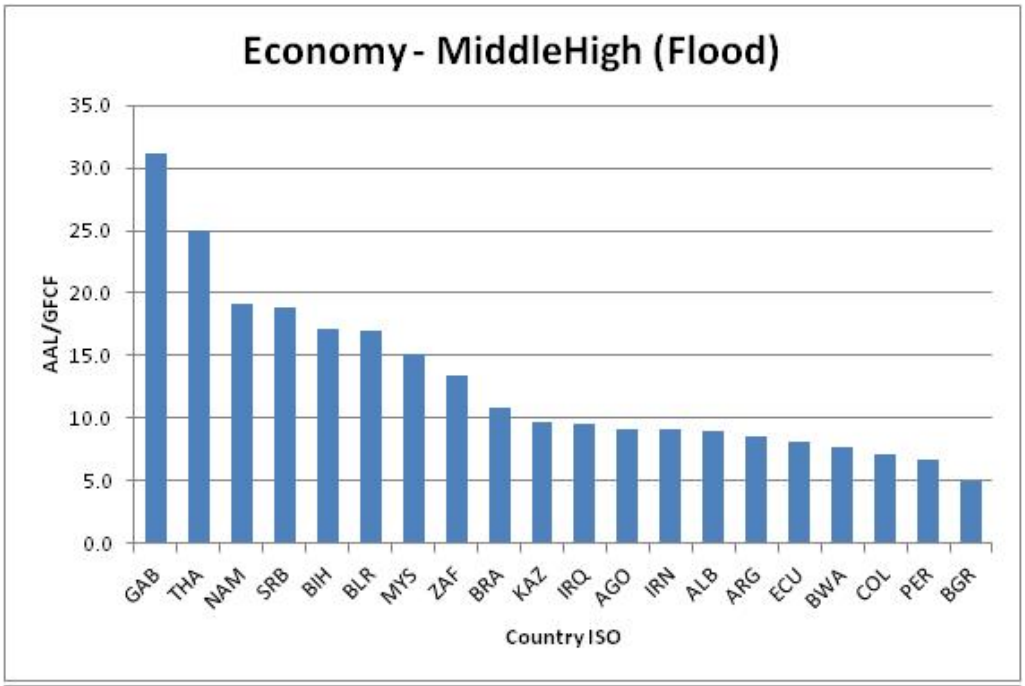

Economy - MiddleHigh (Earthquake)
AAL/GNE
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
PER IRN ECU COL AZE DZA CRI PAN ALB TUR LBN MKD BWA TUN KAZ ARG ZAF BGR MEX JOR
Country ISO

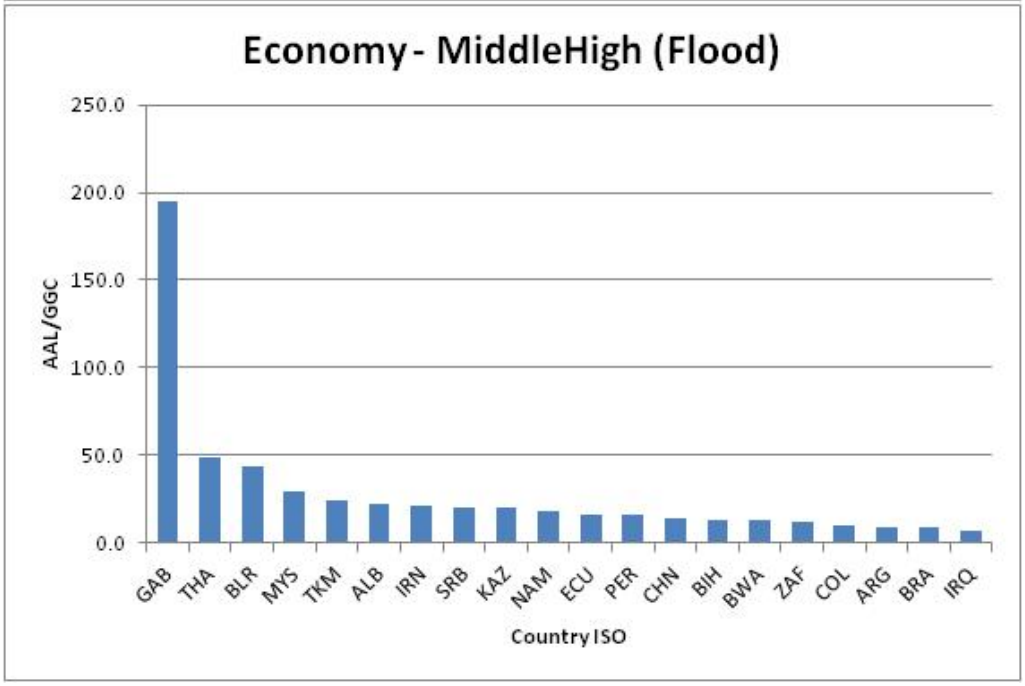

Economy - MiddleHigh (Earthquake)
AAL/PC
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PER
ECU
COL
IRN
CRI
AZE
IRQ
ALB
TUR
DZA
PAN
ARG
MKD
SRB
LBN
MNE
TUN
TKM
KAZ
BGR
Country ISO

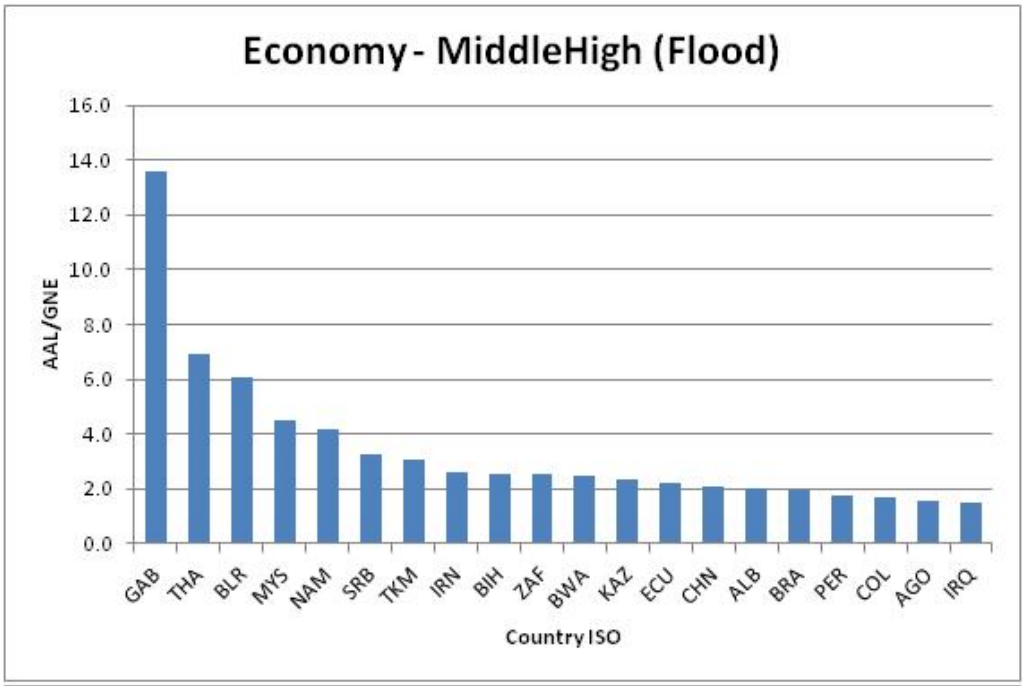

Economy - MiddleHigh (Earthquake)
PML250/GDP
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
ECU
PER
COL
IRN
CRI
DZA
LBN
AZE
TUN
ALB
PAN
MKD
ZAF
KAZ
BWA
TUR
BGR
ARG
JOR
MNE
Country ISO

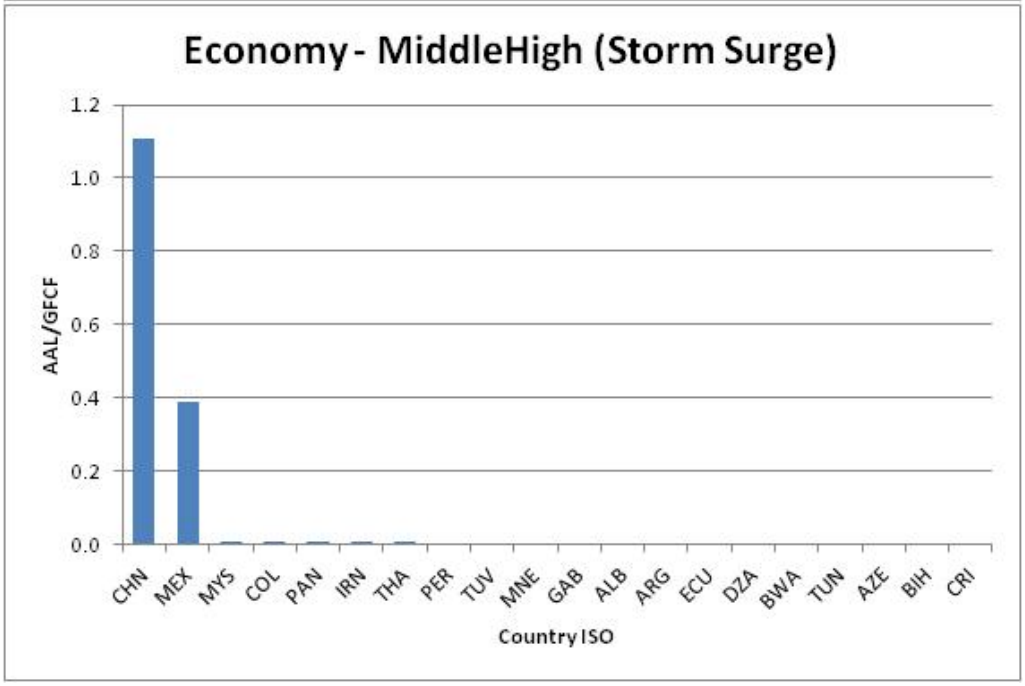

Economy - MiddleHigh (Earthquake)
PML250/GNI
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
ECU PER COL IRN CRI DZA AZE LBN TUN PAN ALB MKD KAZ ZAF BWA TUR BGR ARG JOR MNE
Country ISO

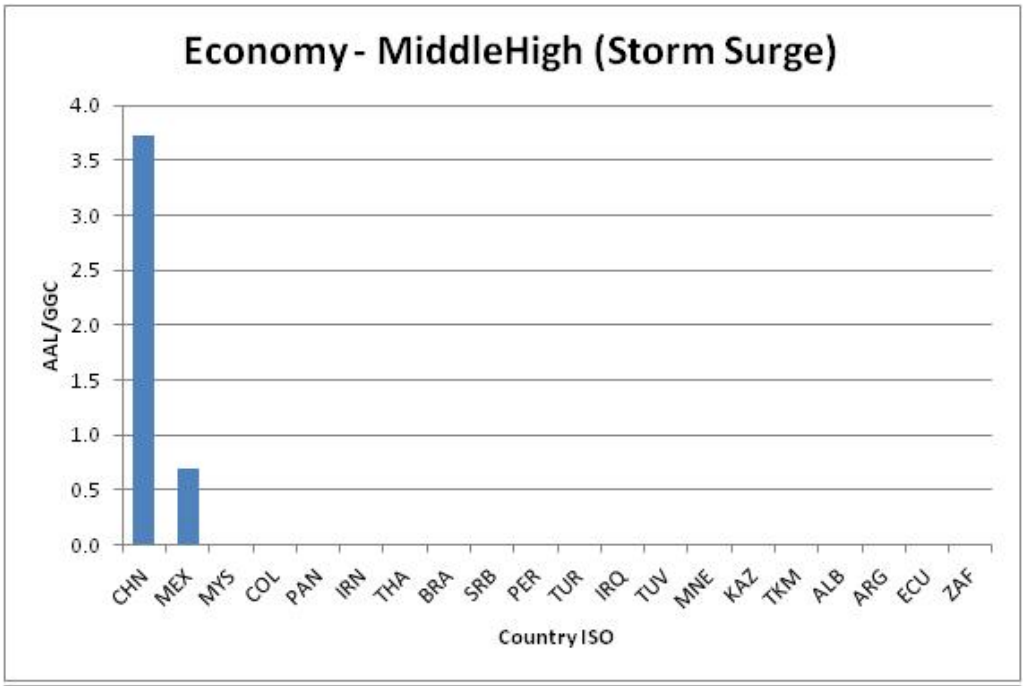

Economy - MiddleHigh (Earthquake)
PML250/PC
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ECU COL PER CRI AZE IRQ IRN PAN ALB DZA TUN LBN TUR MKD ARG SRB KAZ TKM ZAF BGR
Country ISO

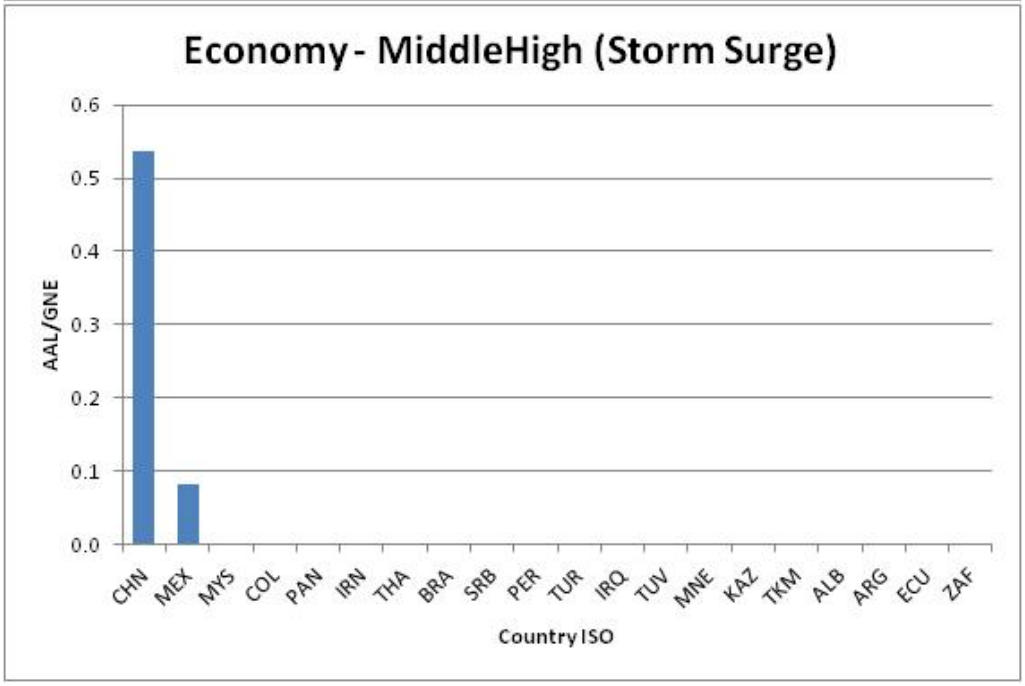

Economy - MiddleHigh (Flood)
AAL/GFCF
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
GAB
THA
NAM
SRB
BIH
BLR
MYS
ZAF
BRA
KAZ
IRQ
AGO
IRN
ALB
ARG
ECU
BWA
COL
PER
BGR
Country ISO

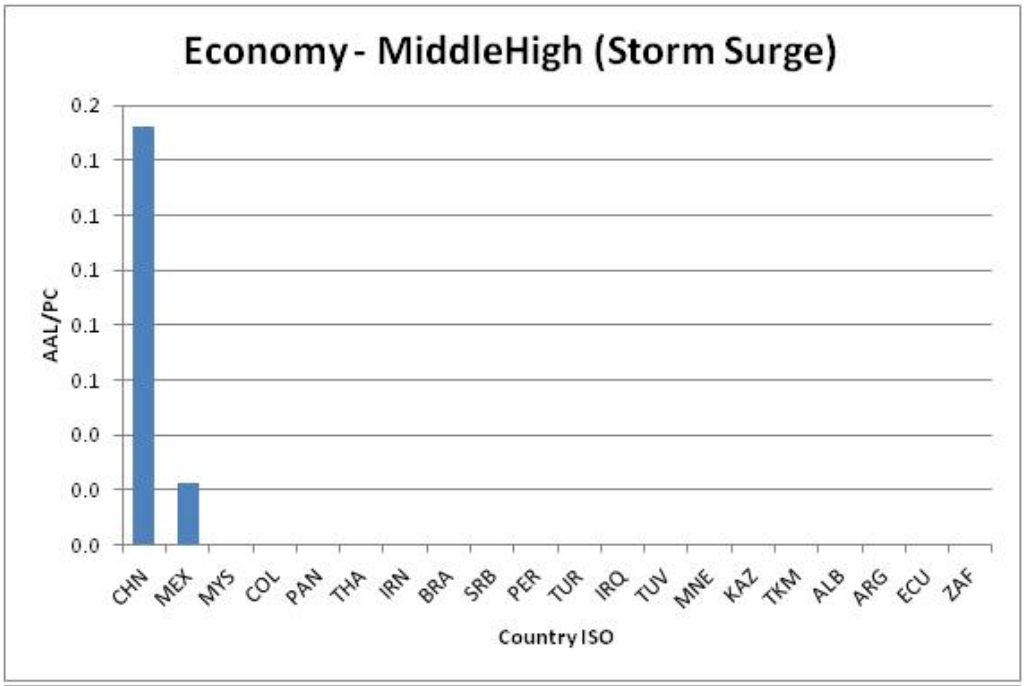

Economy - MiddleHigh (Flood)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
GAB
THA
BLR
MYS
TKM
ALB
IRN
SRB
KAZ
NAM
ECU
PER
CHN
BIH
BWA
ZAF
COL
ARG
BRA
IRQ
Country ISO

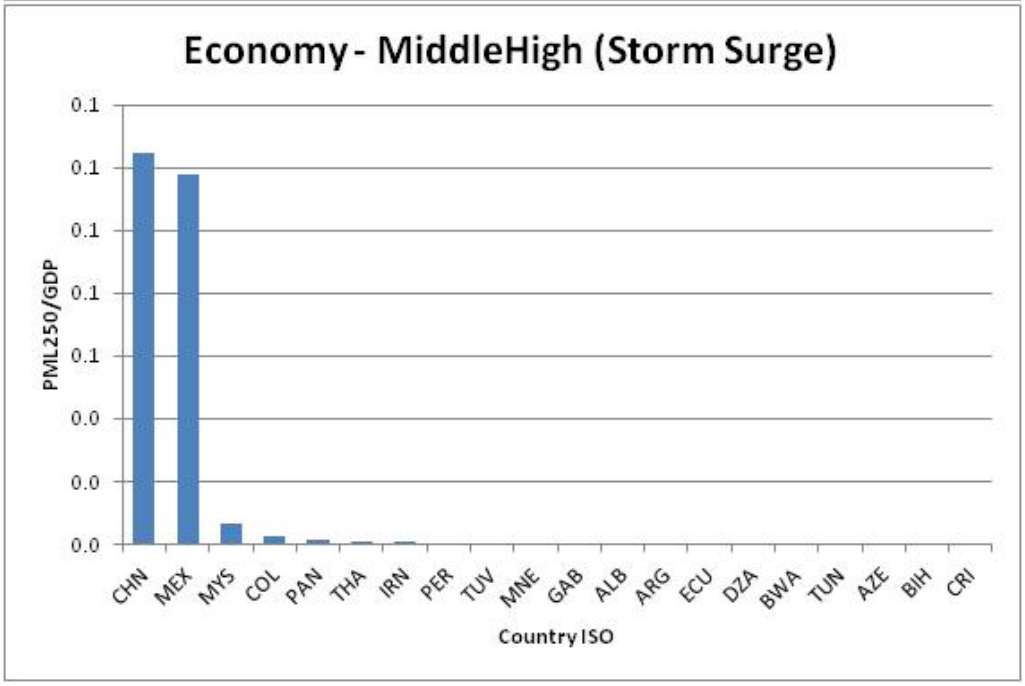

Economy - MiddleHigh (Flood)
AAL/GNE
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
GAB
THA
BLR
MYS
NAM
SRB
TKM
IRN
BIH
ZAF
BWA
KAZ
ECU
CHN
ALB
BRA
PER
COL
AGO
IRQ
Country ISO

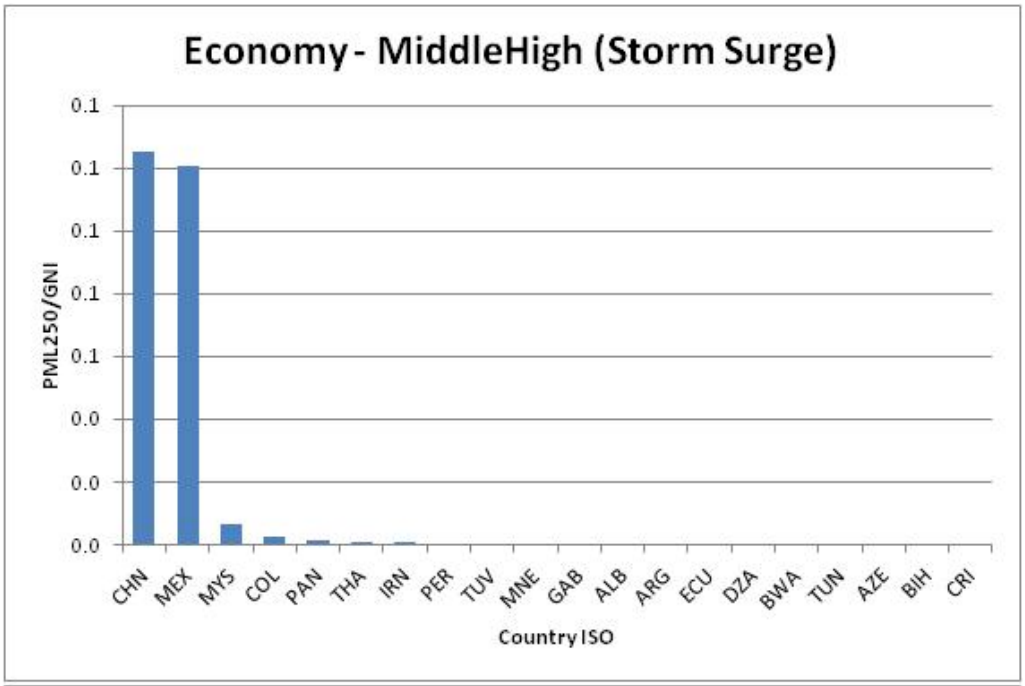

Economy - MiddleHigh (Storm Surge)
AAL/GFCF
1.2
1.0
0.8
0.6
0.4
0.2
0.0
CHN
MEX
MYS
COL
PAN
IRN
THA
PER
TUV
MNE
GAB
ALB
ARG
ECU
DZA
BWA
TUN
AZE
BIH
CRI
Country ISO

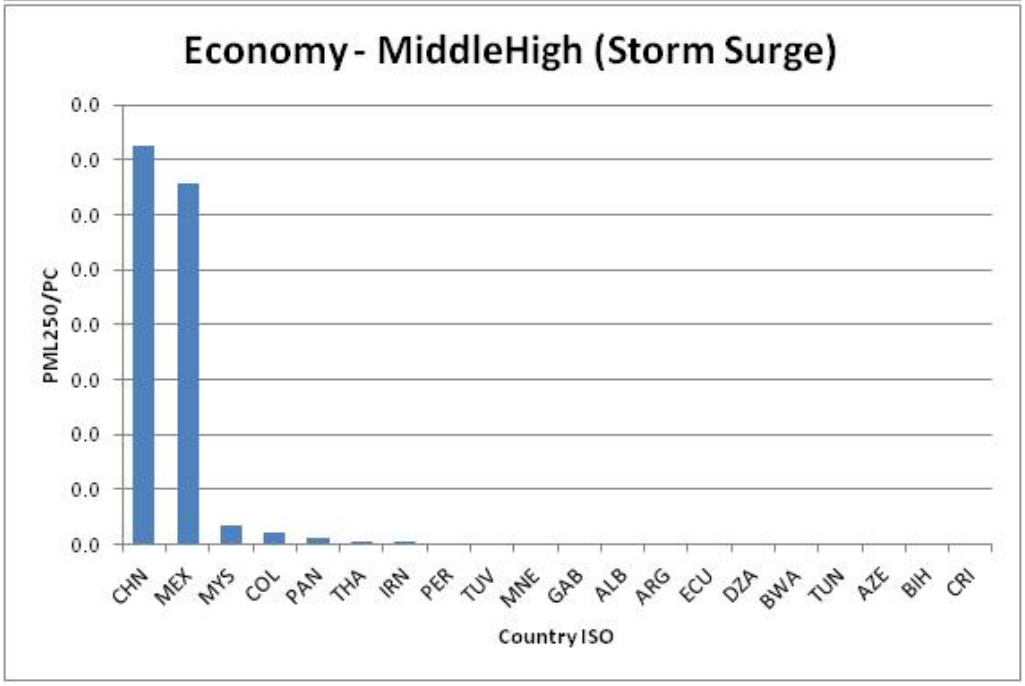

Economy - MiddleHigh (Storm Surge)
AAL/GGC
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
CHN
MEX
MYS
COL
PAN
IRN
THA
BRA
SRB
PER
TUR
IRQ
TUV
MNE
KAZ
TKM
ALB
ARG
ECU
ZAF
Country ISO

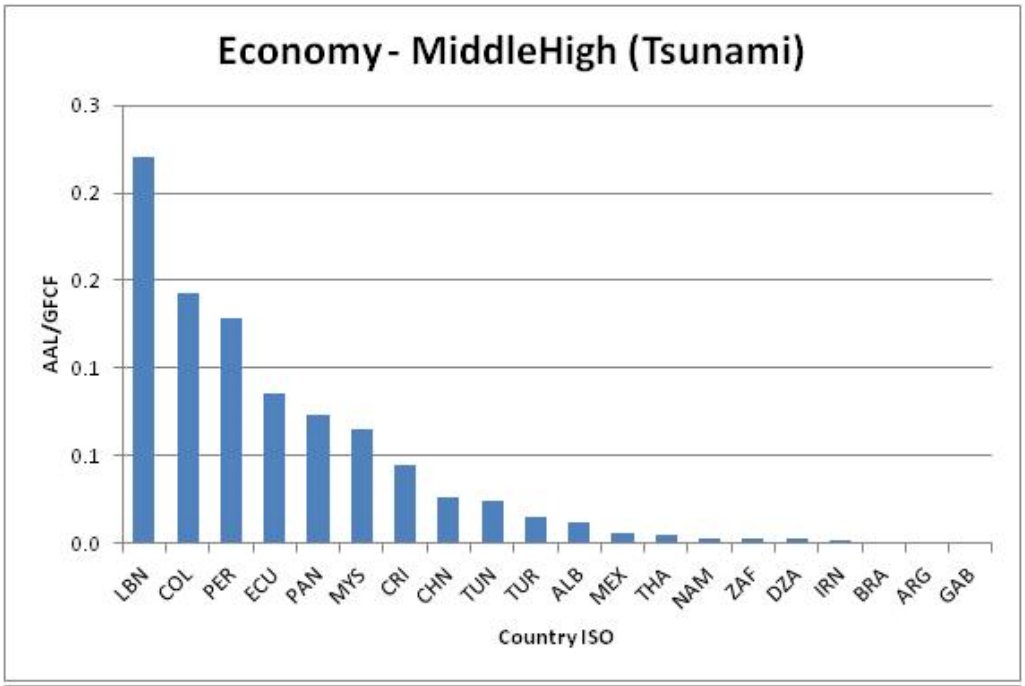

Economy - MiddleHigh (Storm Surge)
AAL/GNE
0.6
0.5
0.4
0.3
0.2
0.1
0.0
CHN
MEX
MYS
COL
PAN
IRN
THA
BRA
SRB
PER
TUR
IRQ
TUV
MNE
KAZ
TKM
ALB
ARG
ECU
ZAF
Country ISO

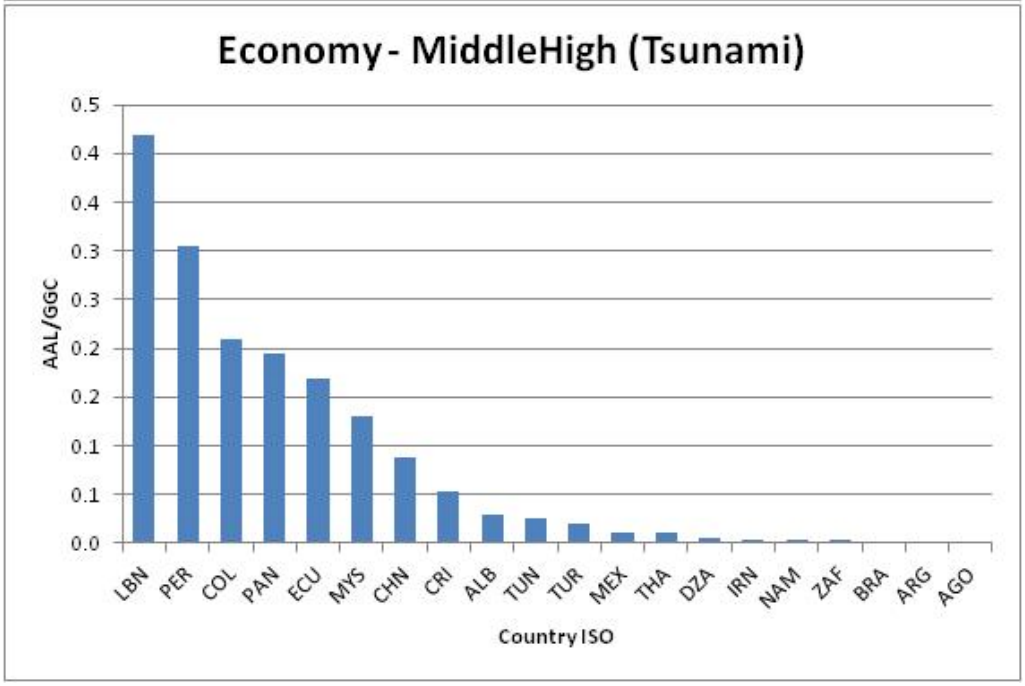

Economy - MiddleHigh (Storm Surge)
AAL/PC
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
CHN
MEX
MYS
COL
PAN
THA
IRN
BRA
SRB
PER
TUR
IRQ
TUV
MNE
KAZ
TKM
ALB
ARG
ECU
ZAF
Country ISO

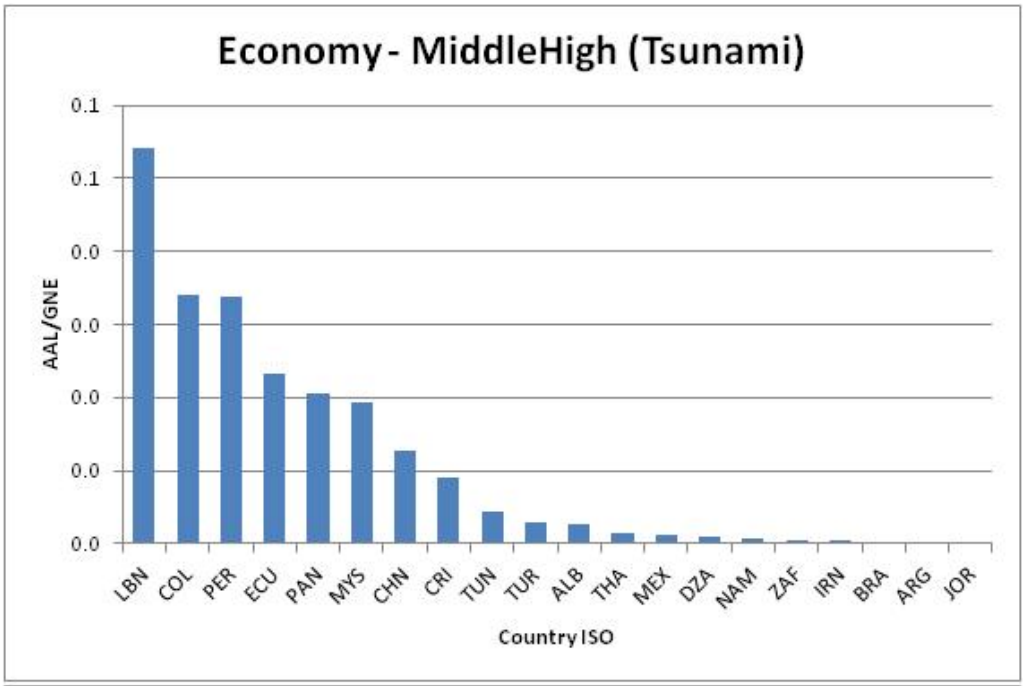

Economy - MiddleHigh (Storm Surge)
PML250/GDP
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
CHN
MEX
MYS
COL
PAN
THA
IRN
PER
TUV
MNE
GAB
ALB
ARG
ECU
DZA
BWA
TUN
AZE
BIH
CRI
Country ISO

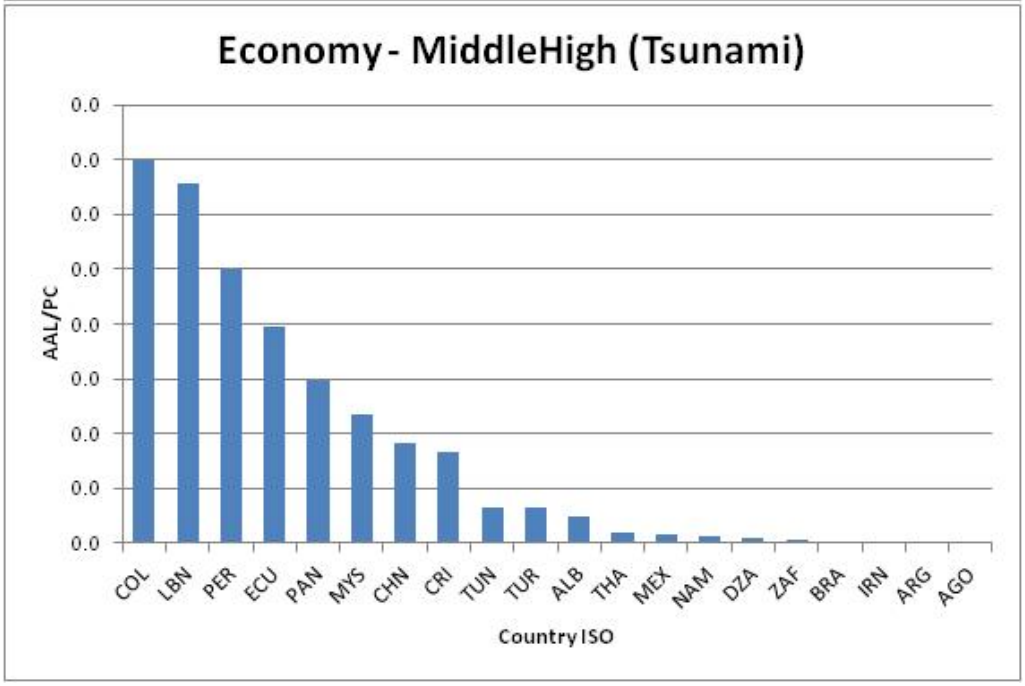

Economy - MiddleHigh (Storm Surge)
PML250/GNI
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
CHN
MEX
MYS
COL
PAN
THA
IRN
PER
TUV
MNE
GAB
ALB
ARG
ECU
DZA
BWA
TUN
AZE
BIH
CRI
Country ISO

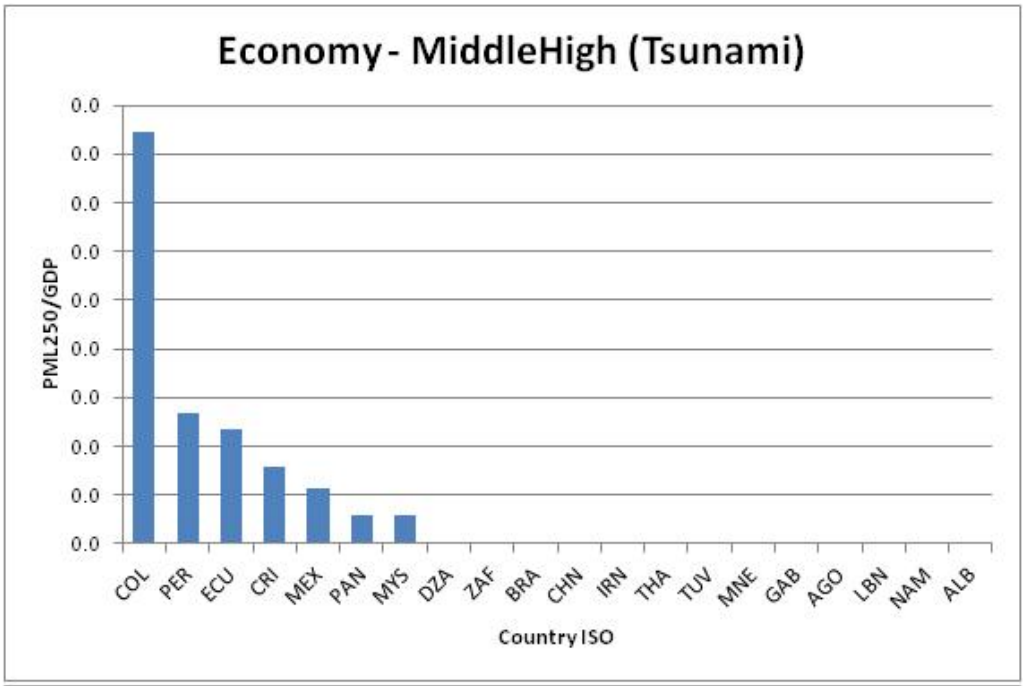

Economy - MiddleHigh (Storm Surge)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
CHN
MEX
MYS
COL
PAN
THA
IRN
PER
TUV
MNE
GAB
ALB
ARG
ECU
DZA
BWA
TUN
AZE
BIH
CRI
Country ISO

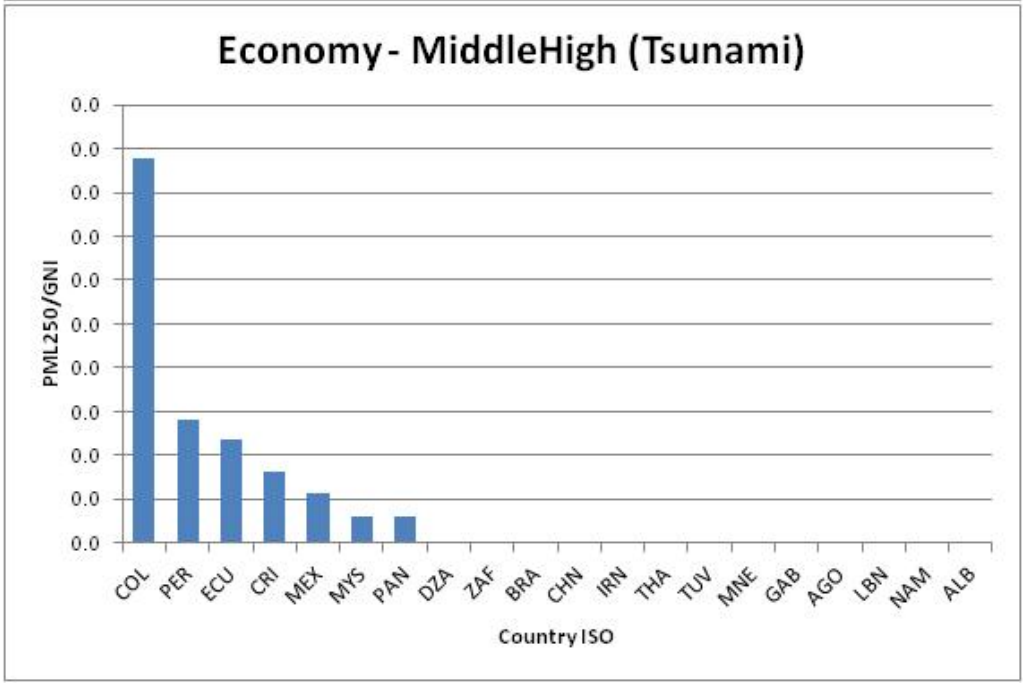

Economy - MiddleHigh (Tsunami)
AAL/GFCF
0.3
0.2
0.2
0.1
0.1
0.0
LBN
COL
PER
ECU
PAN
MYS
CRI
CHN
TUN
TUR
ALB
MEX
THA
NAM
ZAF
DZA
IRN
BRA
ARG
GAB
Country ISO

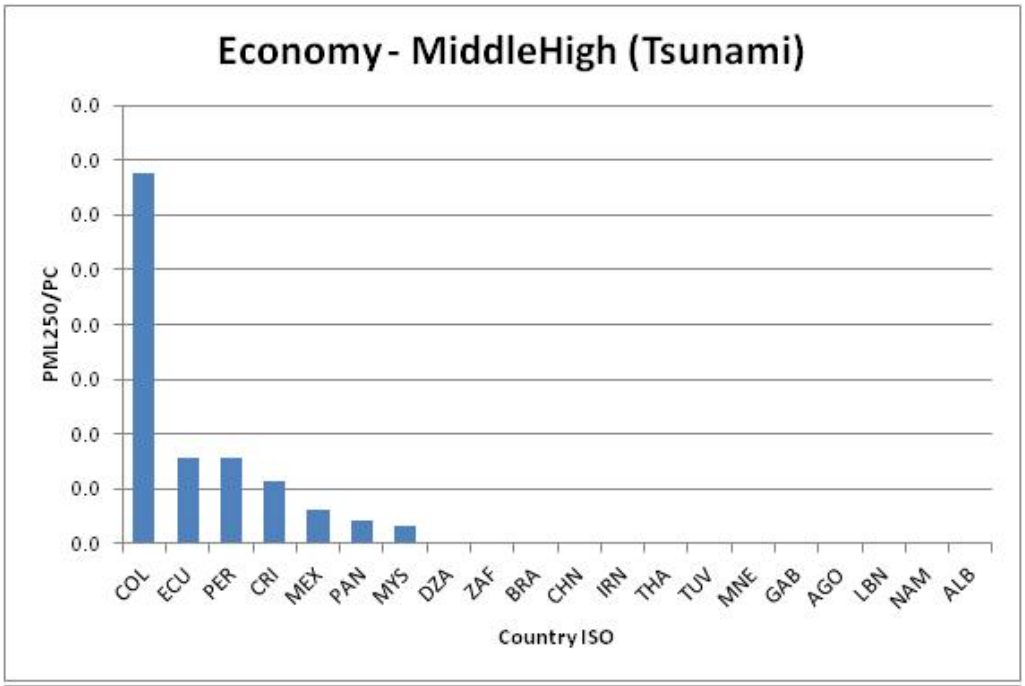

Economy - MiddleHigh (Tsunami)
AAL/GGC
0.5
0.4
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
LBN
PER
COL
PAN
ECU
MYS
CHN
CRI
ALB
TUN
TUR
MEX
THA
DZA
IRN
NAM
ZAF
BRA
ARG
AGO
Country ISO

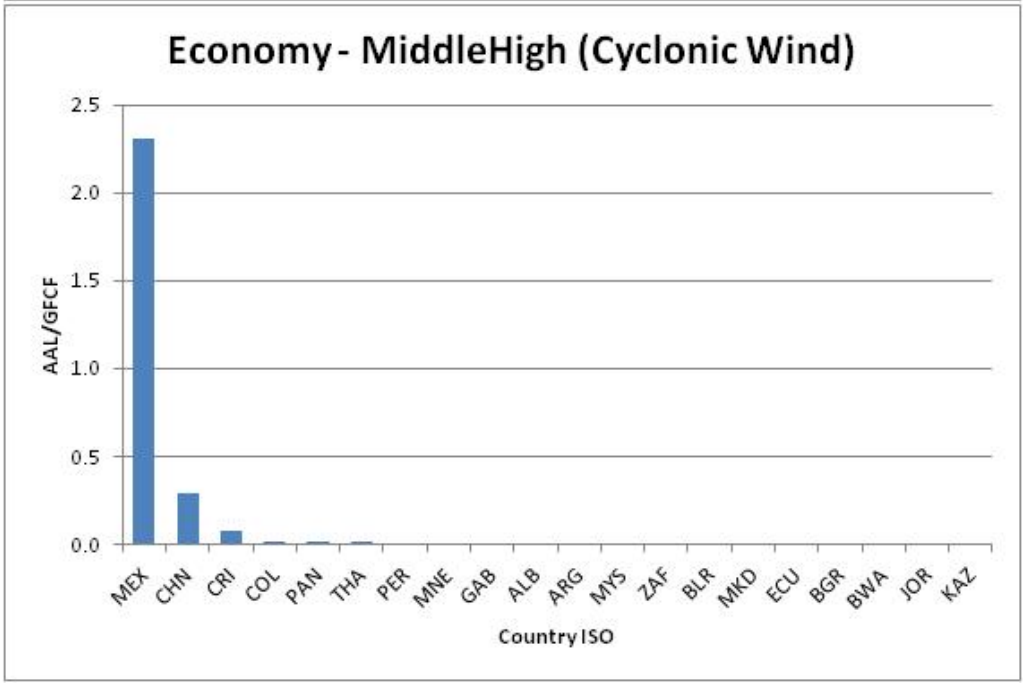

Economy - MiddleHigh (Tsunami)
AAL/GNE
0.1
0.1
0.0
0.0
0.0
0.0
0.0
LBN
COL
PER
ECU
PAN
MYS
CHN
CRI
TUN
TUR
ALB
THA
MEX
DZA
NAM
ZAF
IRN
BRA
ARG
JOR
Country ISO

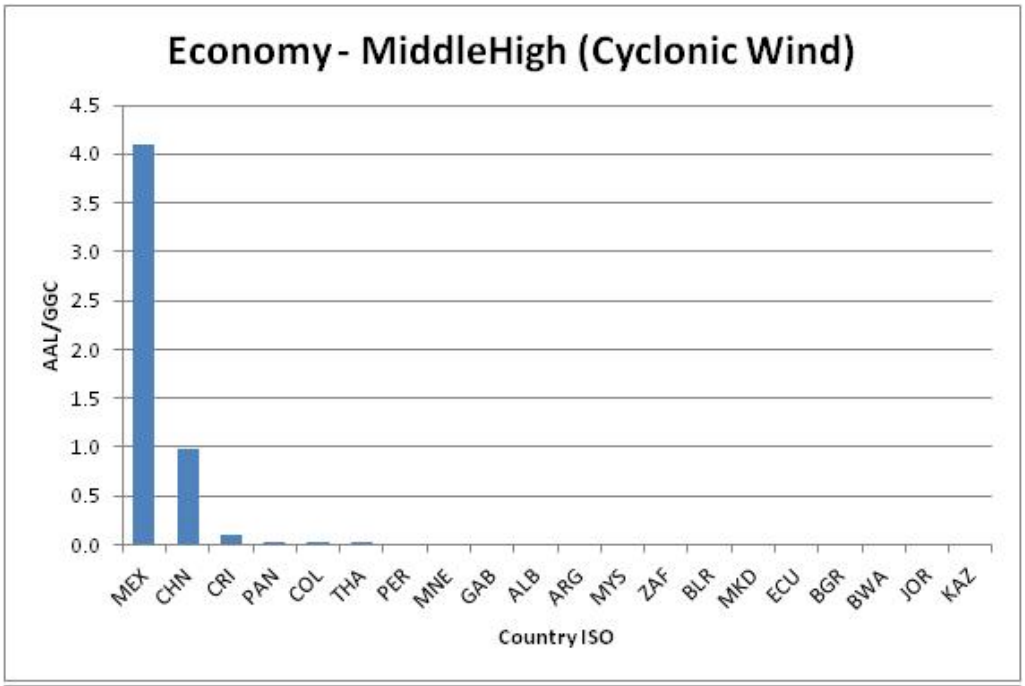

Economy - MiddleHigh (Tsunami)
AAL/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
COL
LBN
PER
ECU
PAN
MYS
CHN
CRI
TUN
TUR
ALB
THA
MEX
NAM
DZA
ZAF
BRA
IRN
ARG
AGO
Country ISO

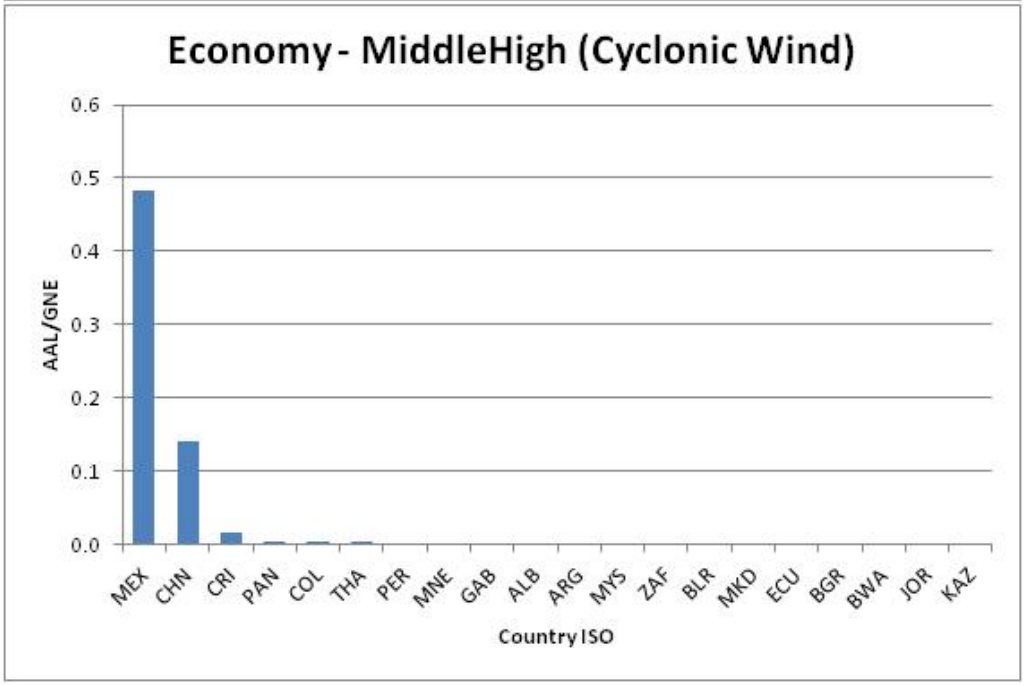

Economy - MiddleHigh (Tsunami)
PML250/GDP
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
COL
PER
ECU
CRI
MEX
PAN
MYS
DZA
ZAF
BRA
CHN
IRN
THA
TUV
MNE
GAB
AGO
LBN
NAM
ALB
Country ISO

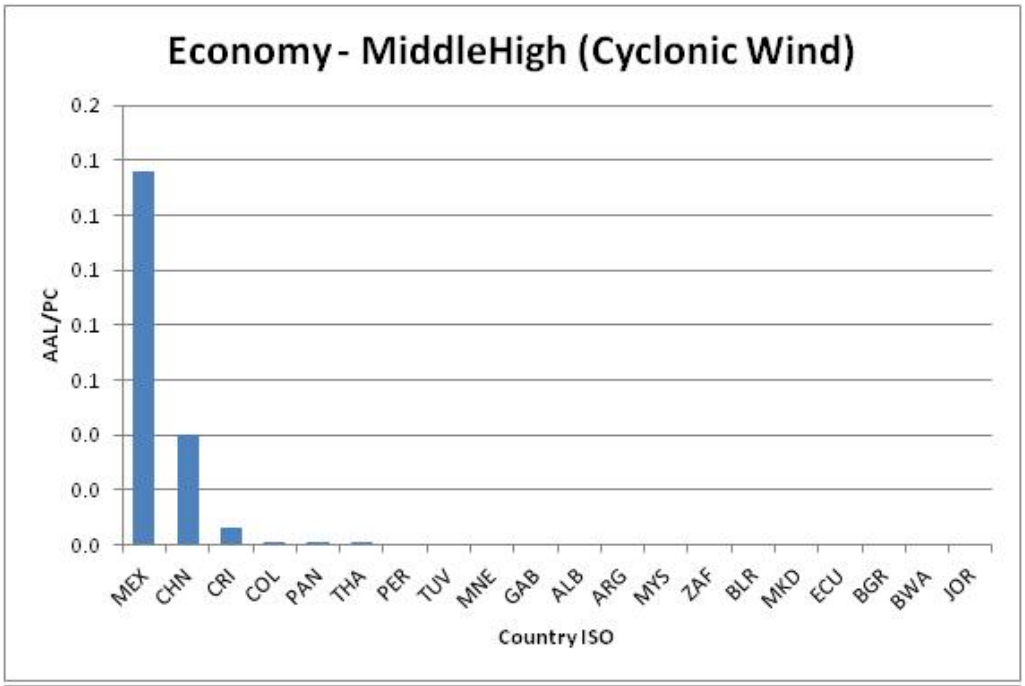

Economy - MiddleHigh (Tsunami)
PML250/GNI
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
COL
PER
ECU
CRI
MEX
MYS
PAN
DZA
ZAF
BRA
CHN
IRN
THA
TUV
MNE
GAB
AGO
LBN
NAM
ALB
Country ISO

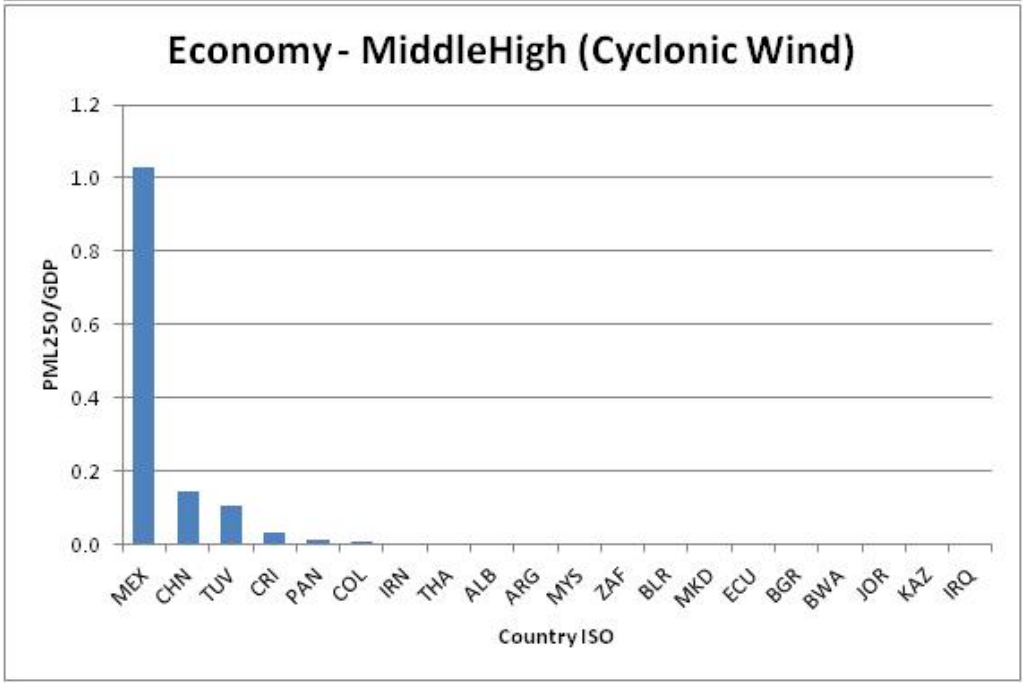

Economy - MiddleHigh (Tsunami)
PML250/PC
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
COL
ECU
PER
CRI
MEX
PAN
MYS
DZA
ZAF
BRA
CHN
IRN
THA
TUV
MNE
GAB
AGO
LBN
NAM
ALB
Country ISO

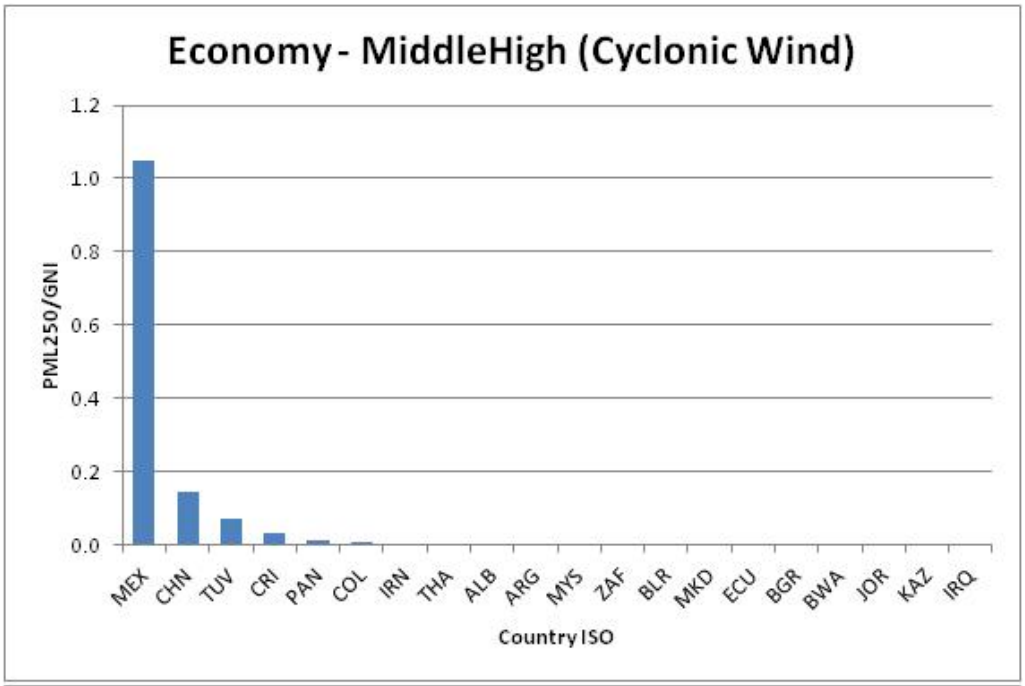

Economy - MiddleHigh (Cyclonic Wind)
AAL/GFCF
2.5
2.0
1.5
1.0
0.5
0.0
MEX
CHN
CRI
COL
PAN
THA
PER
MNE
GAB
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
Country ISO

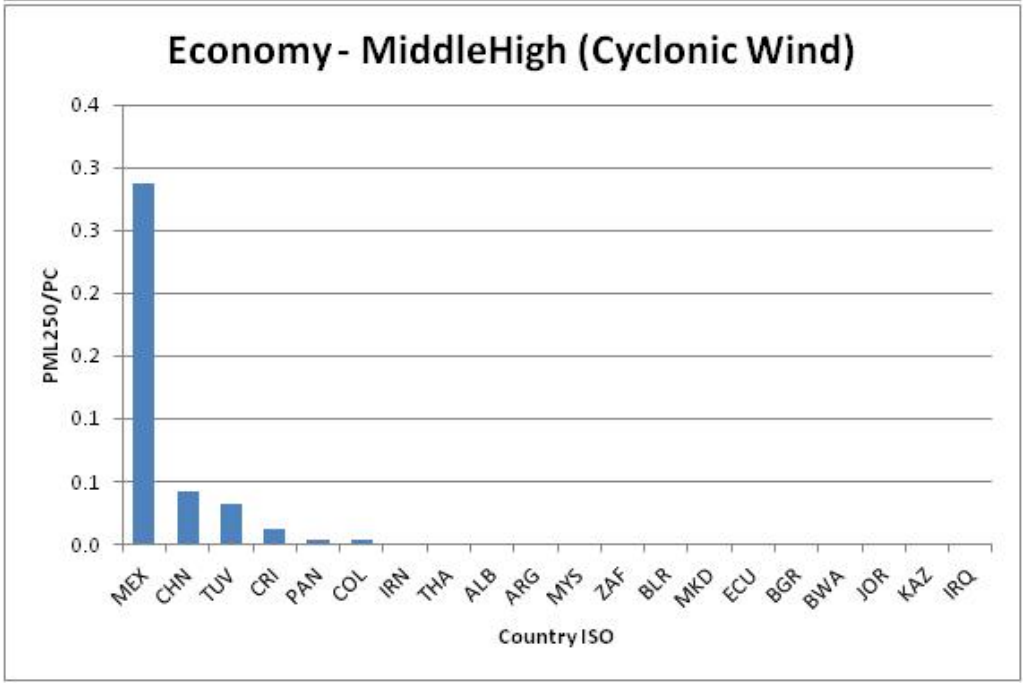

Economy - MiddleHigh (Cyclonic Wind)
AAL/GGC
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
MEX
CHN
CRI
PAN
COL
THA
PER
MNE
GAB
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
Country ISO

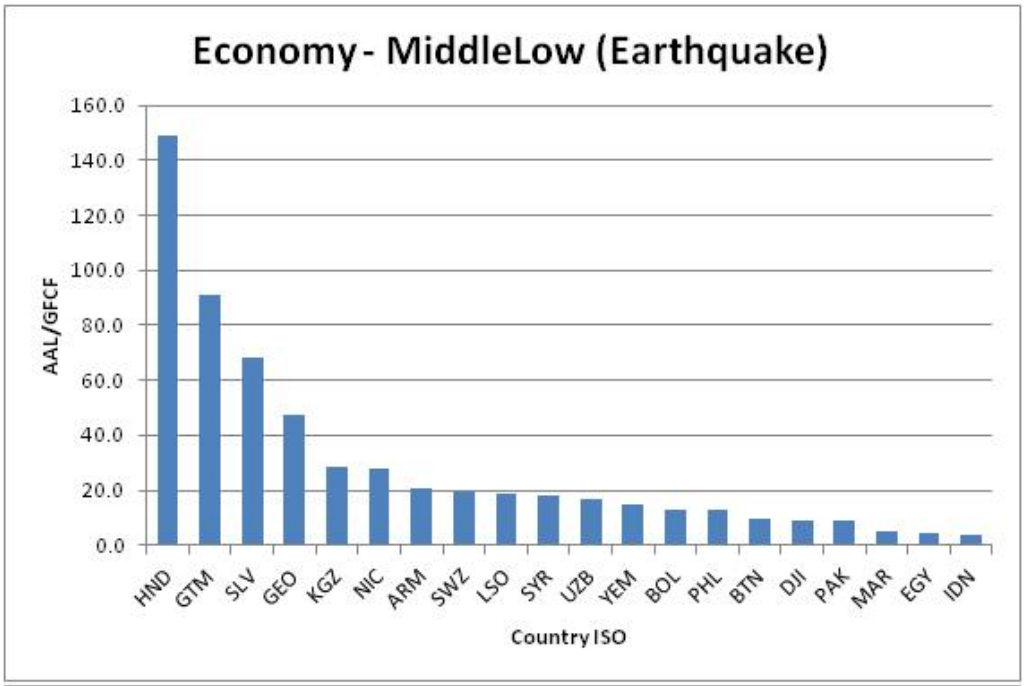

Economy - MiddleHigh (Cyclonic Wind)
AAL/GNE
0.6
0.5
0.4
0.3
0.2
0.1
0.0
MEX
CHN
CRI
PAN
COL
THA
PER
MNE
GAB
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
Country ISO

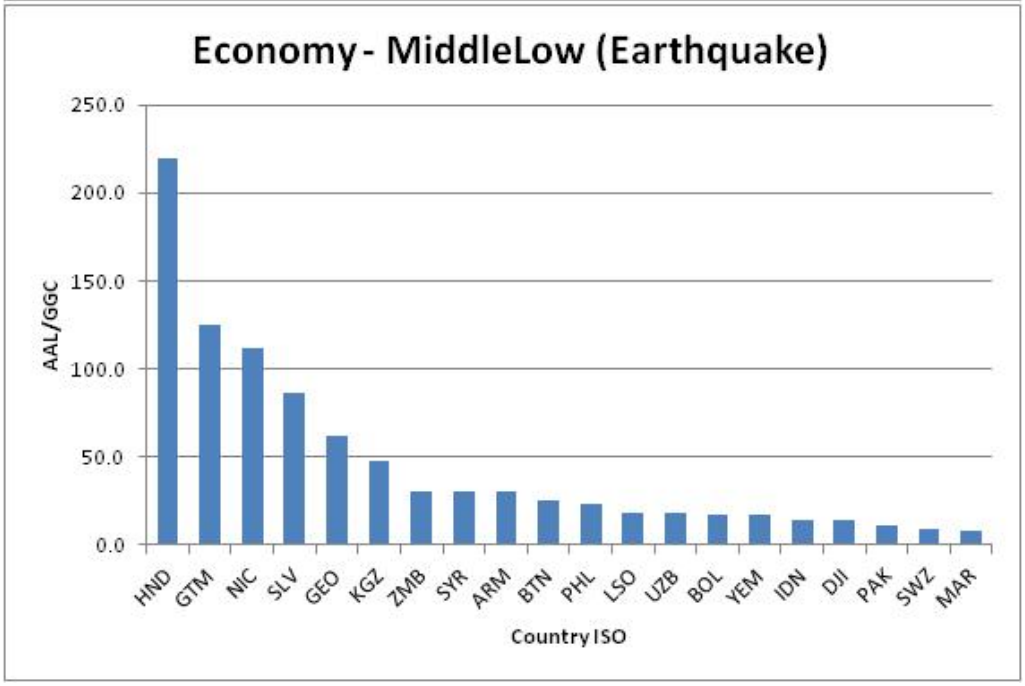

Economy - MiddleHigh (Cyclonic Wind)
AAL/PC
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
MEX
CHN
CRI
COL
PAN
THA
PER
TUV
MNE
GAB
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
Country ISO

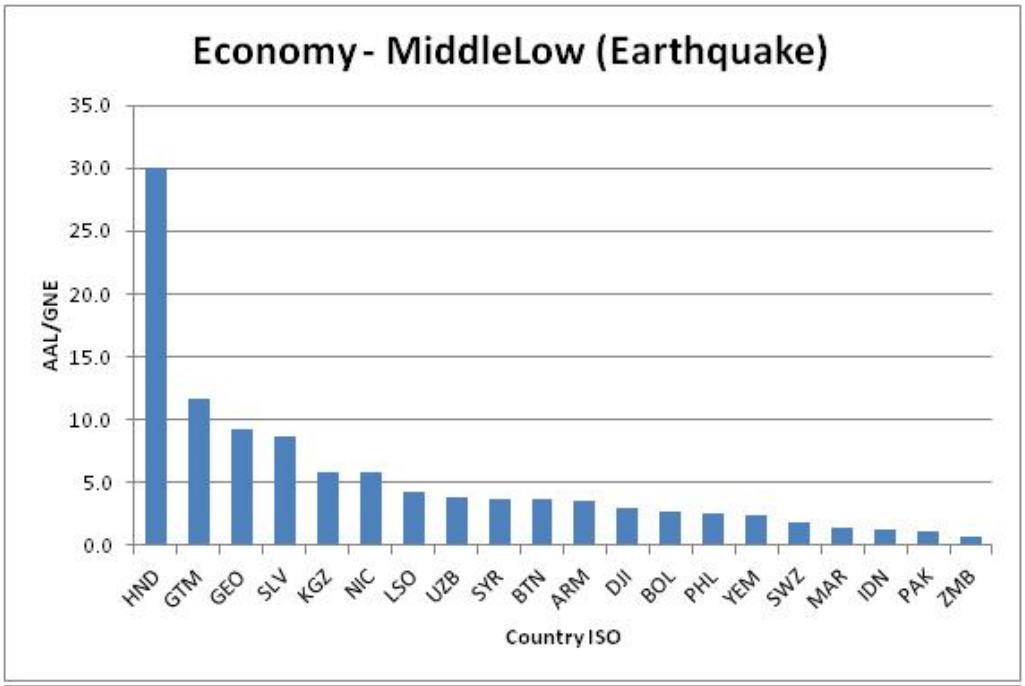

Economy - MiddleHigh (Cyclonic Wind)
PML250/GDP
1.2
1.0
0.8
0.6
0.4
0.2
0.0
MEX
CHN
TUV
CRI
PAN
COL
IRN
THA
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
IRQ
Country ISO

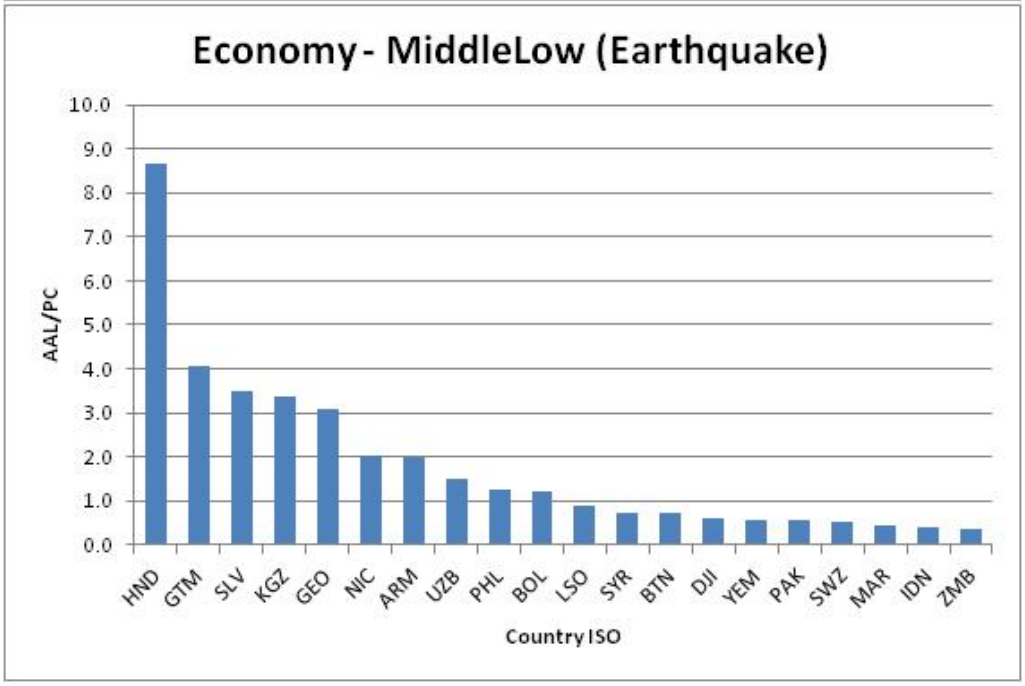

Economy - MiddleHigh (Cyclonic Wind)
PML250/GNI
1.2
1.0
0.8
0.6
0.4
0.2
0.0
MEX
CHN
TUV
CRI
PAN
COL
IRN
THA
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
IRQ
Country ISO

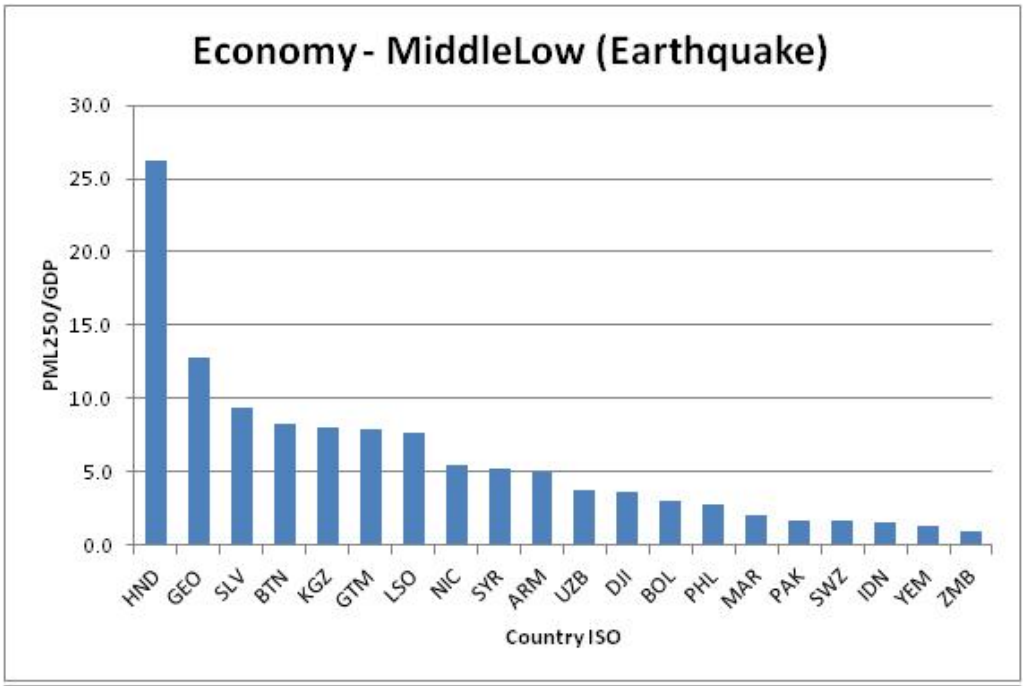

Economy - MiddleHigh (Cyclonic Wind)
PML250/PC
0.4
0.3
0.3
0.2
0.2
0.1
0.1
0.0
MEX
CHN
TUV
CRI
PAN
COL
IRN
THA
ALB
ARG
MYS
ZAF
BLR
MKD
ECU
BGR
BWA
JOR
KAZ
IRQ
Country ISO

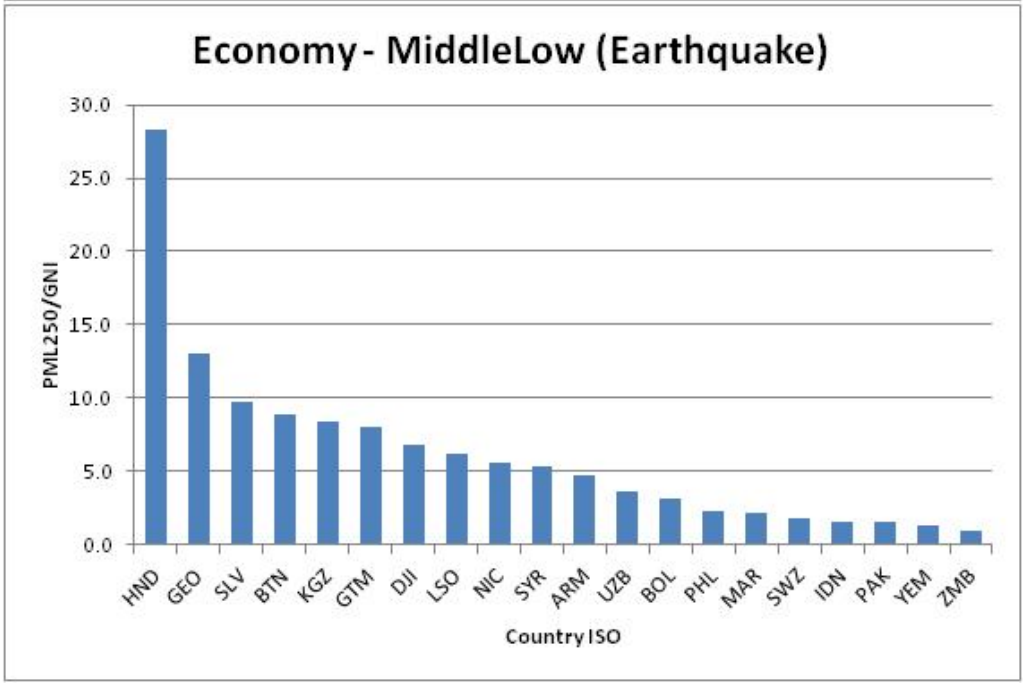

Economy - MiddleLow (Earthquake)
AAL/GFCF
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
HND GTM SLV GEO KGZ NIC ARM SWZ LSO SYR UZB YEM BOL PHL BTN DJI PAK MAR EGY IDN
Country ISO

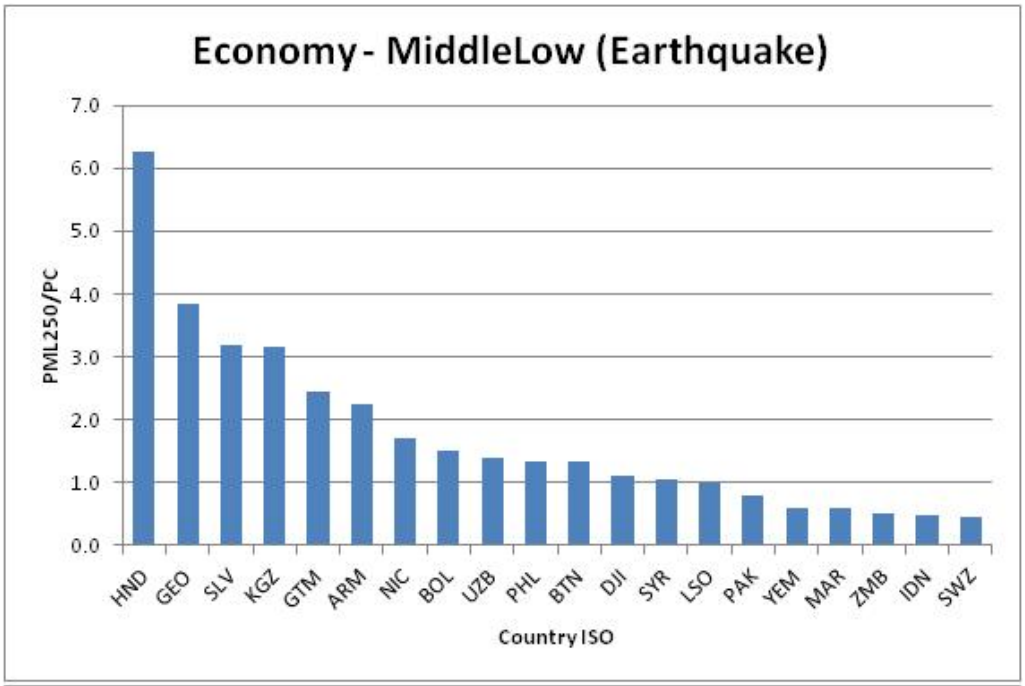

Economy - MiddleLow (Earthquake)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
HND GTM NIC SLV GEO KGZ ZMB SYR ARM BTN PHL LSO UZB BOL YEM IDN DJI PAK SWZ MAR
Country ISO

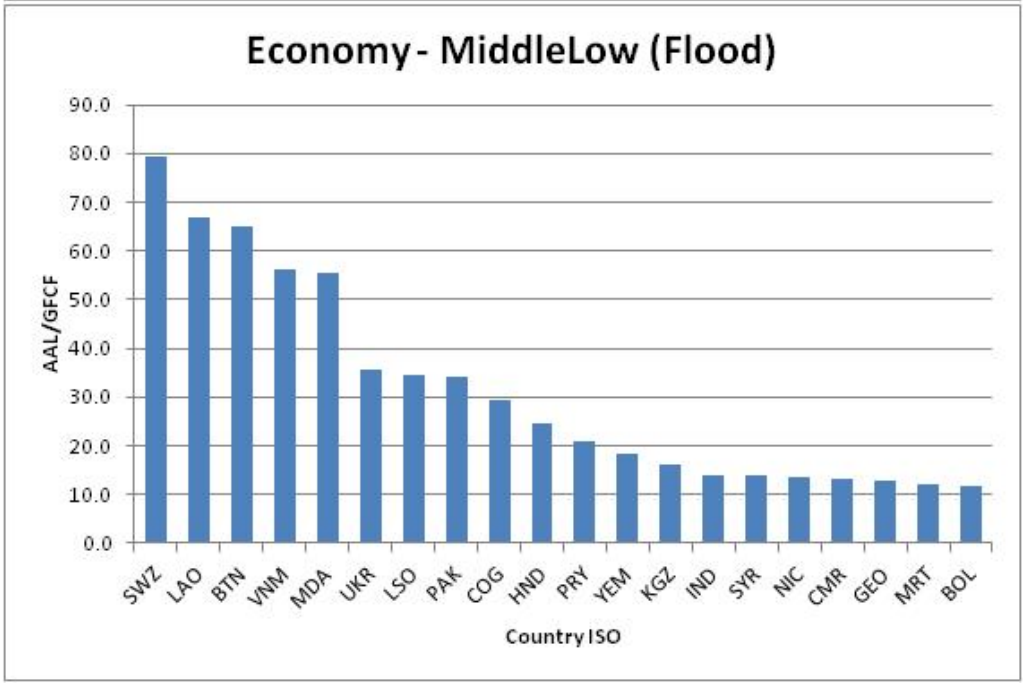

Economy - MiddleLow (Earthquake)
AAL/GNE
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND GTM GEO SLV KGZ NIC LSO UZB SYR BTN ARM DJI BOL PHL YEM SWZ MAR IDN PAK ZMB
Country ISO

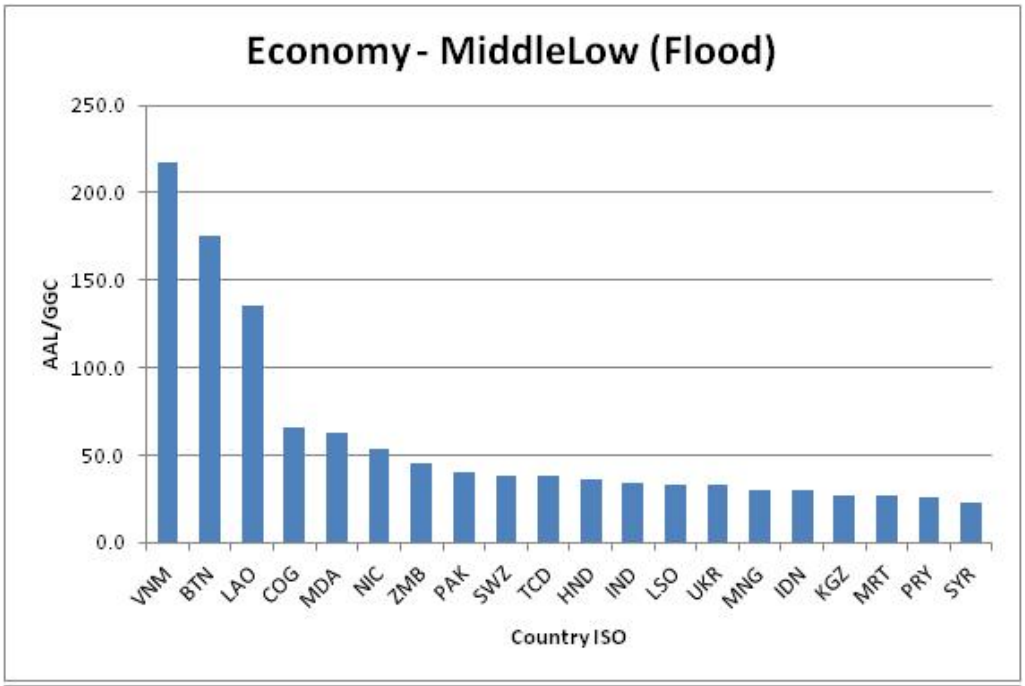

Economy - MiddleLow (Earthquake)
AAL/PC
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND GTM SLV KGZ GEO NIC ARM UZB PHL BOL LSO SYR BTN DJI YEM PAK SWZ MAR IDN ZMB
Country ISO

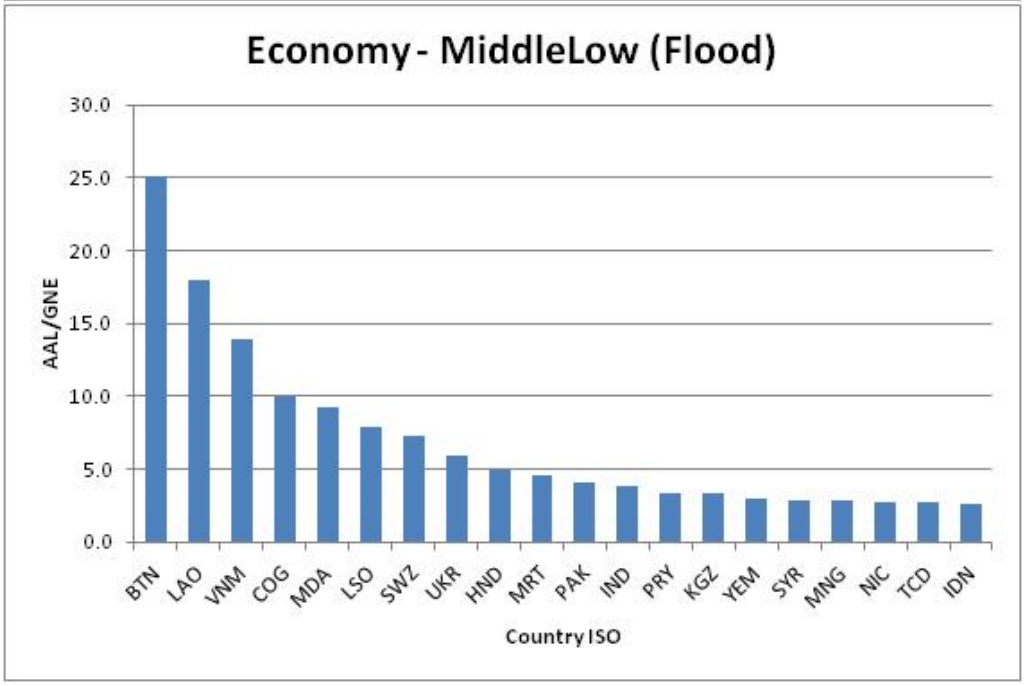

Economy - MiddleLow (Earthquake)
PML250/GDP
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
GEO
SLV
BTN
KGZ
GTM
LSO
NIC
SYR
ARM
UZB
DJI
BOL
PHL
MAR
PAK
SWZ
IDN
YEM
ZMB
Country ISO

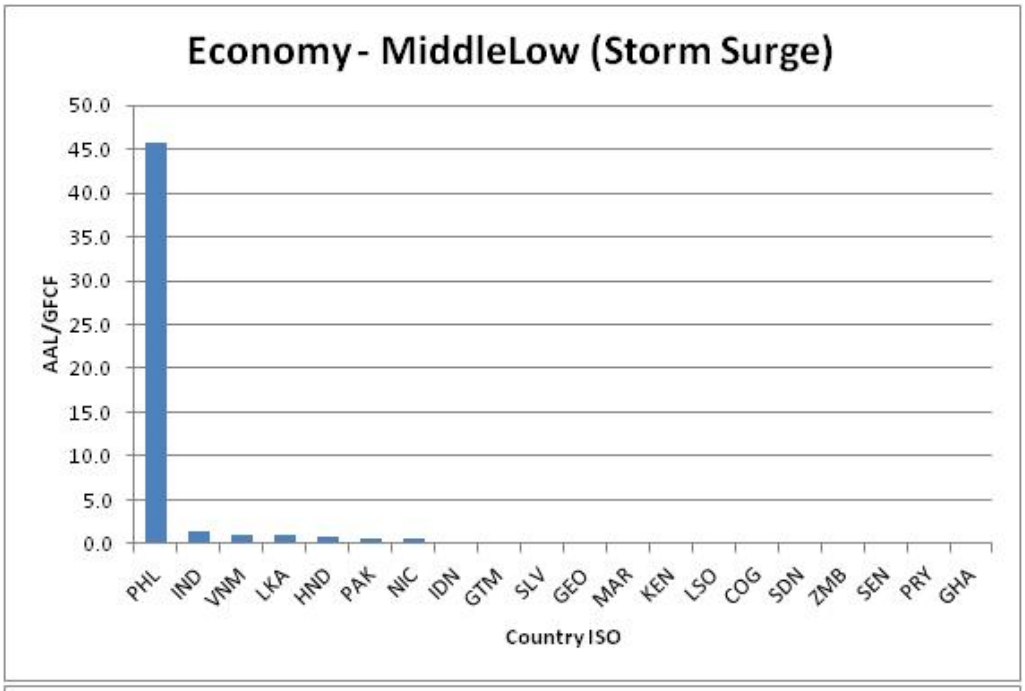

Economy - MiddleLow (Earthquake)
PML250/GNI
30.0
25.0
20.0
15.0
10.0
5.0
0.0
HND
GEO
SLV
BTN
KGZ
GTM
DJI
LSO
NIC
SYR
ARM
UZB
BOL
PHL
MAR
SWZ
IDN
PAK
YEM
ZMB
Country ISO

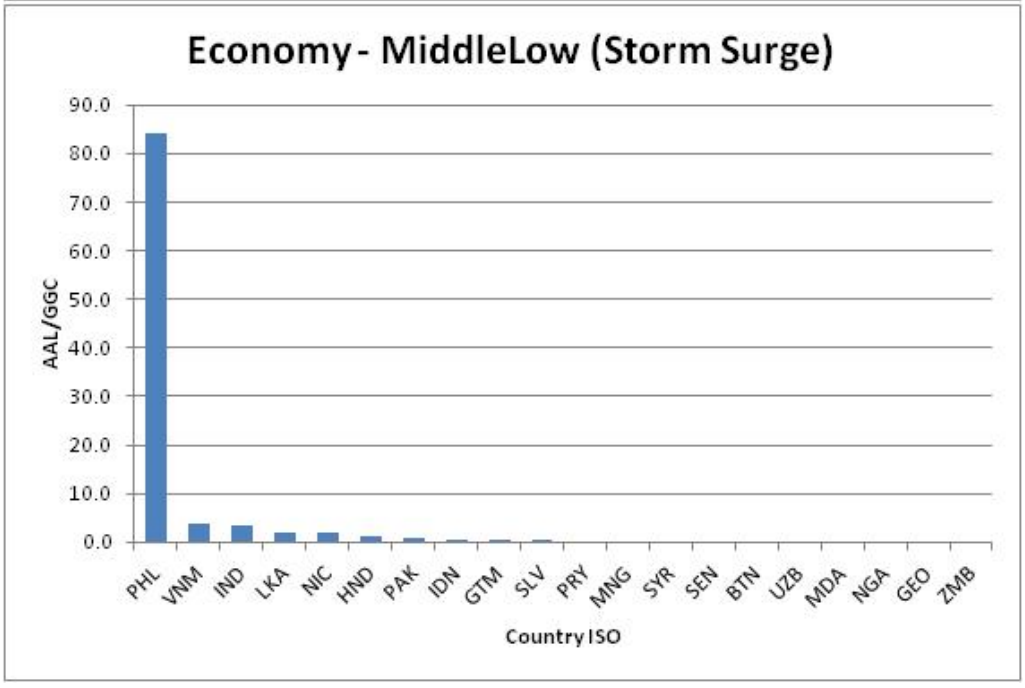

Economy - MiddleLow (Earthquake)
PML250/PC
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
HND
GEO
SLV
KGZ
GTM
ARM
NIC
BOL
UZB
PHL
BTN
DJI
SYR
LSO
PAK
YEM
MAR
ZMB
IDN
SWZ
Country ISO

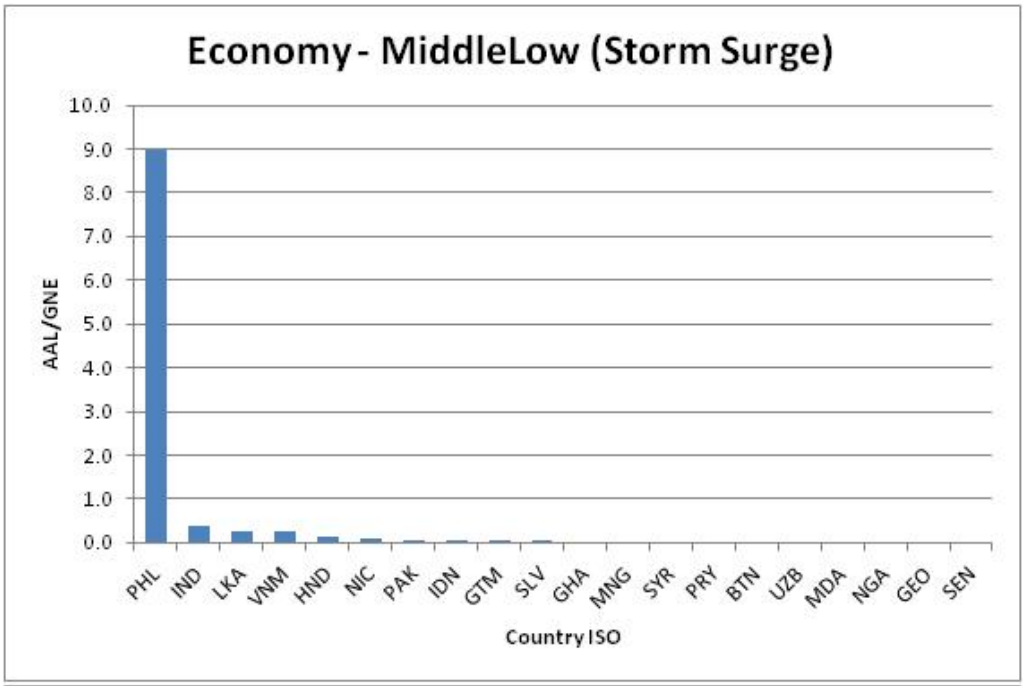

Economy - MiddleLow (Flood)
AAL/GFCF
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
SWZ
LAO
BTN
VNM
MDA
UKR
LSO
PAK
COG
HND
PRY
YEM
KGZ
IND
SYR
NIC
CMR
GEO
MRT
BOL
Country ISO

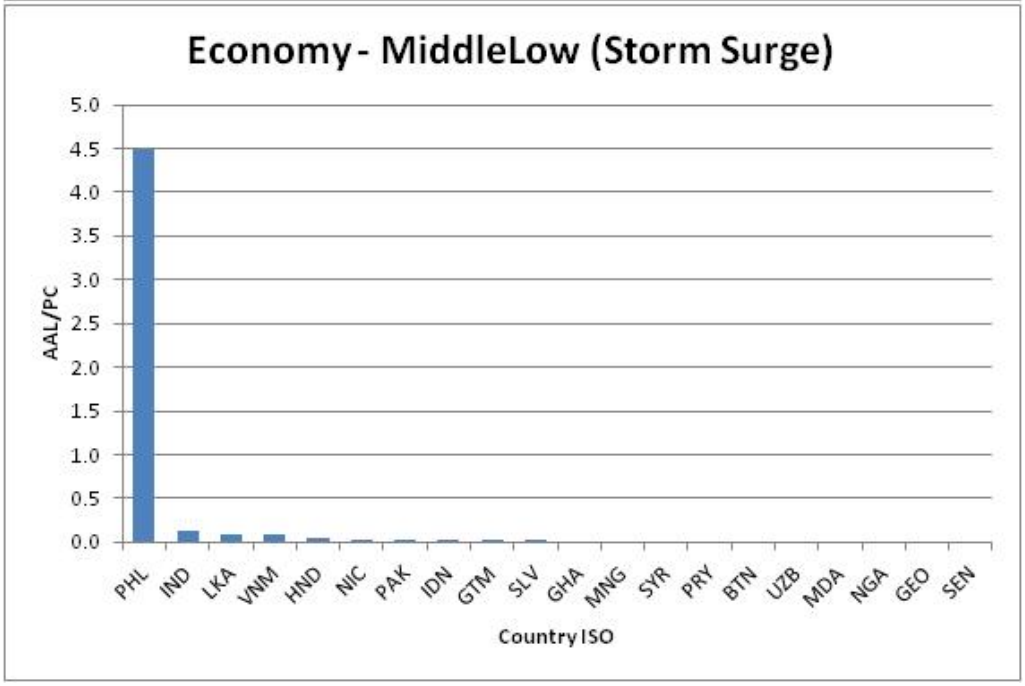

Economy - MiddleLow (Flood)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
VNM
BTN
LAO
COG
MDA
NIC
ZMB
PAK
SWZ
TCD
HND
IND
LSO
UKR
MNG
IDN
KGZ
MRT
PRY
SYR
Country ISO

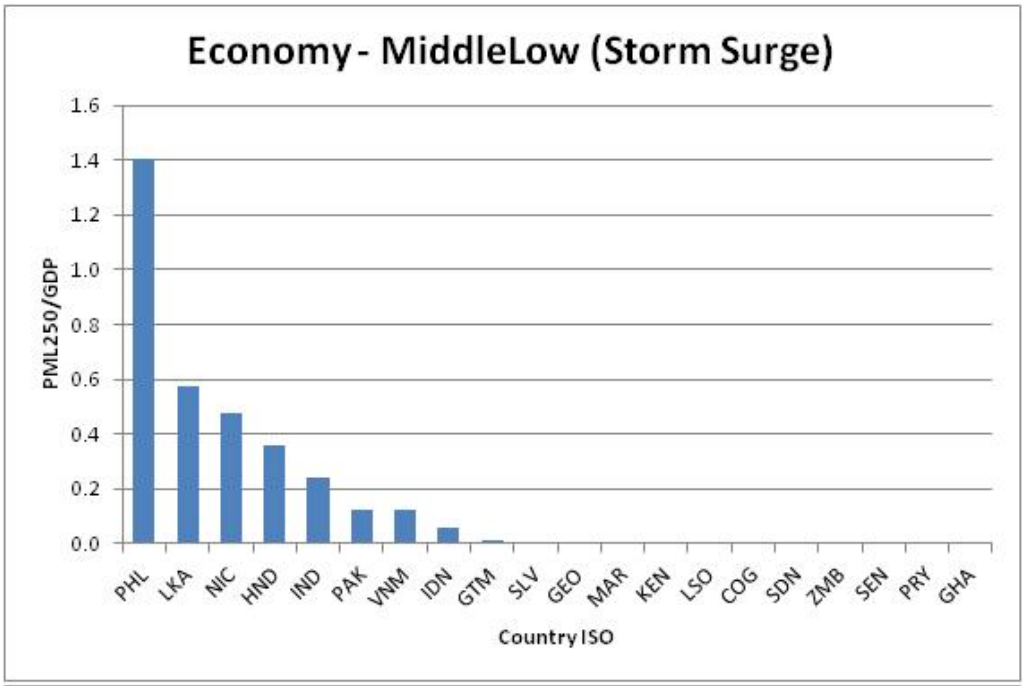

Economy - MiddleLow (Flood)
AAL/GNE
30.0
25.0
20.0
15.0
10.0
5.0
0.0
BTN
LAO
VNM
COG
MDA
LSO
SWZ
UKR
HND
MRT
PAK
IND
PRY
KGZ
YEM
SYR
MNG
NIC
TCD
IDN
Country ISO

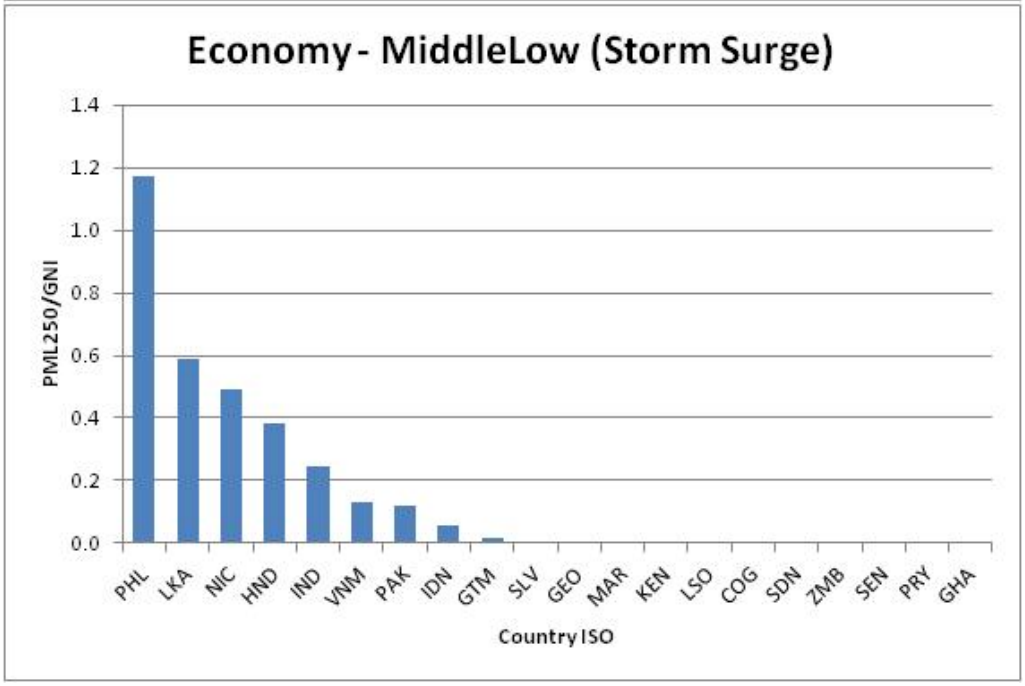

Economy - MiddleLow (Storm Surge)
AAL/GFCF
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
PHL
IND
VNM
LKA
HND
PAK
NIC
IDN
GTM
SLV
GEO
MAR
KEN
LSO
COG
SDN
ZMB
SEN
PRY
GHA
Country ISO

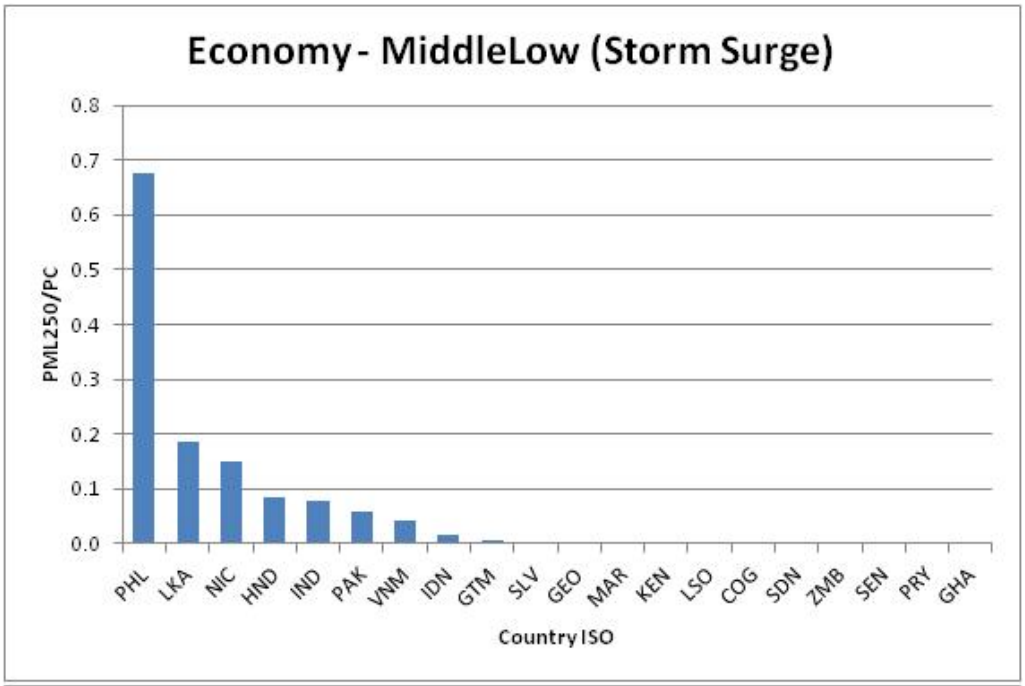

Economy - MiddleLow (Storm Surge)
AAL/GGC
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PHL
VNM
IND
LKA
NIC
HND
PAK
IDN
GTM
SLV
PRY
MNG
SYR
SEN
BTN
UZB
MDA
NGA
GEO
ZMB
Country ISO

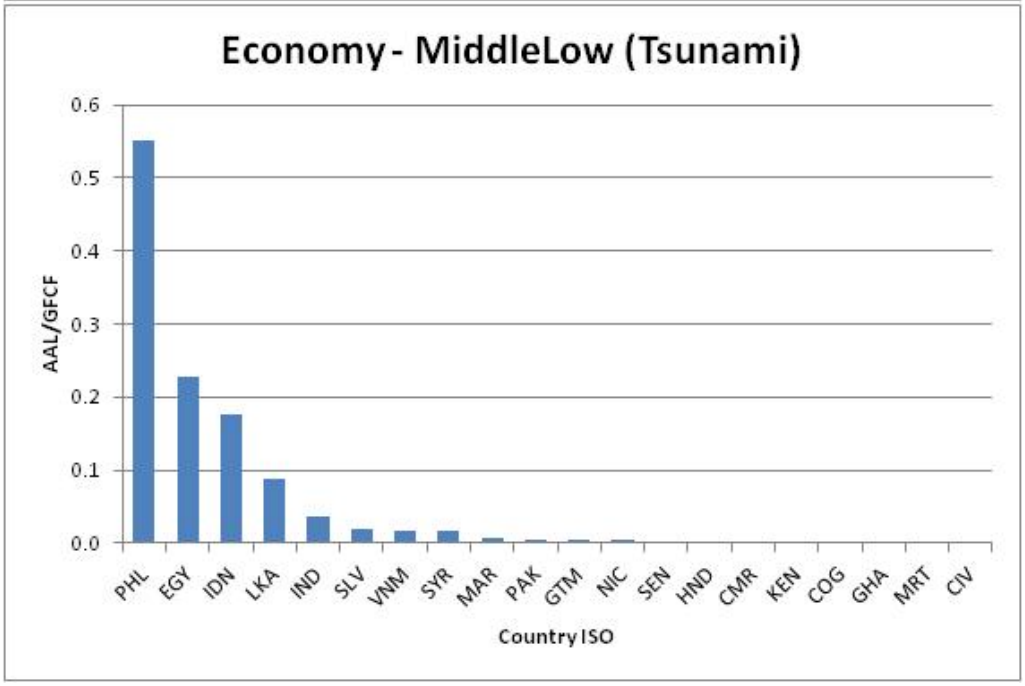

Economy - MiddleLow (Storm Surge)
AAL/GNE
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
IND
LKA
VNM
HND
NIC
PAK
IDN
GTM
SLV
GHA
MNG
SYR
PRY
BTN
UZB
MDA
NGA
GEO
SEN
Country ISO

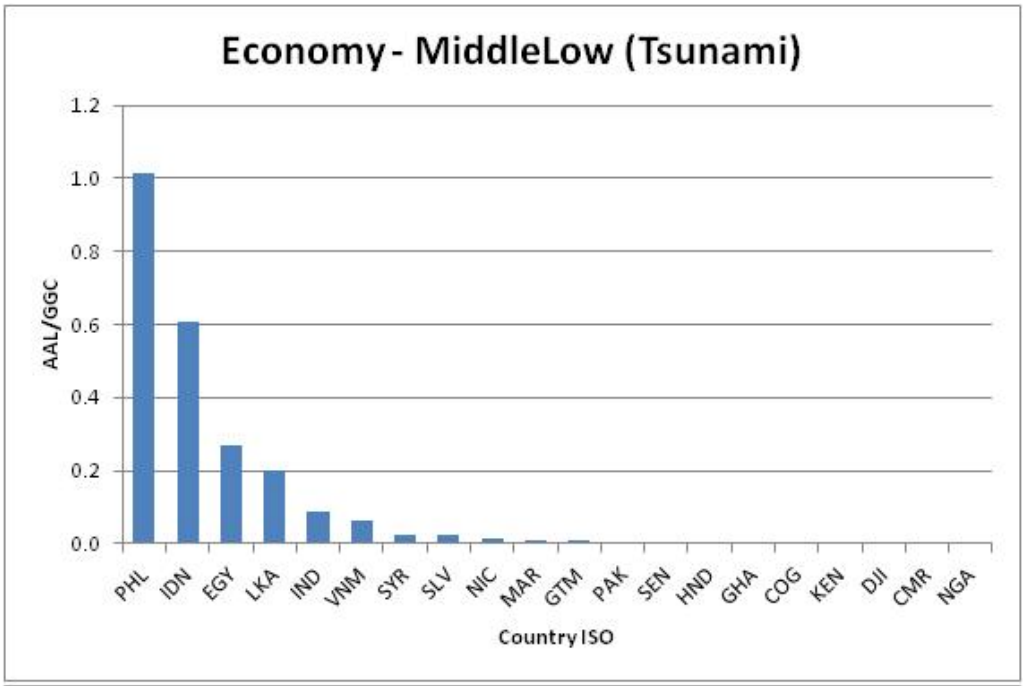

Economy - MiddleLow (Storm Surge)
AAL/PC
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PHL
IND
LKA
VNM
HND
NIC
PAK
IDN
GTM
SLV
GHA
MNG
SYR
PRY
BTN
UZB
MDA
NGA
GEO
SEN
Country ISO

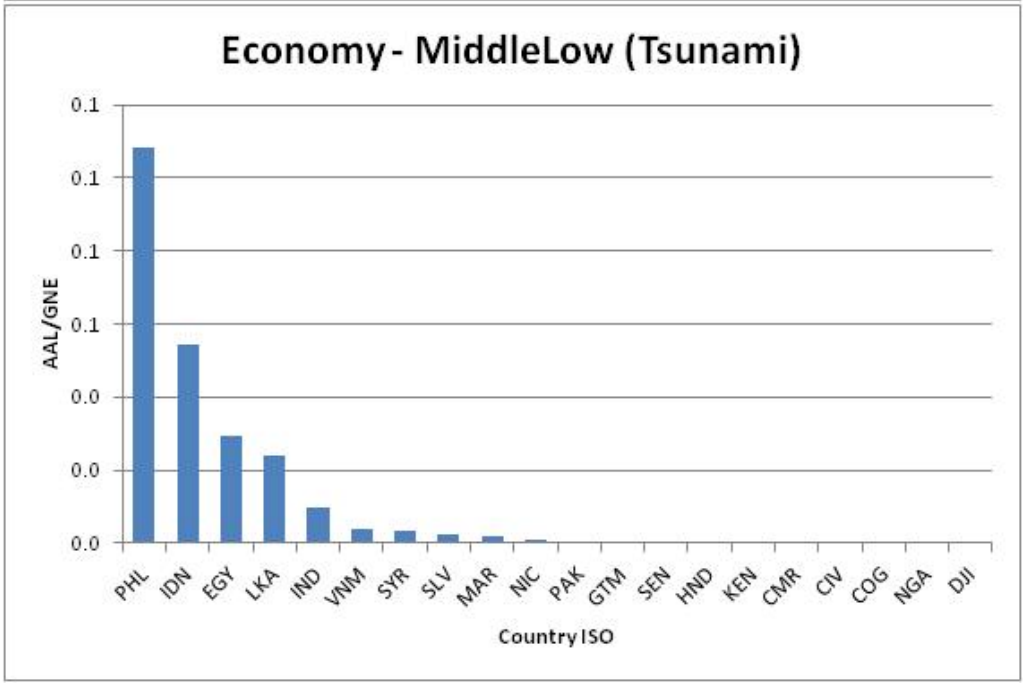

Economy - MiddleLow (Storm Surge)
PML250/GDP
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
PHL
LKA
NIC
HND
IND
PAK
VNM
IDN
GTM
SLV
GEO
MAR
KEN
LSO
COG
SDN
ZMB
SEN
PRY
GHA
Country ISO

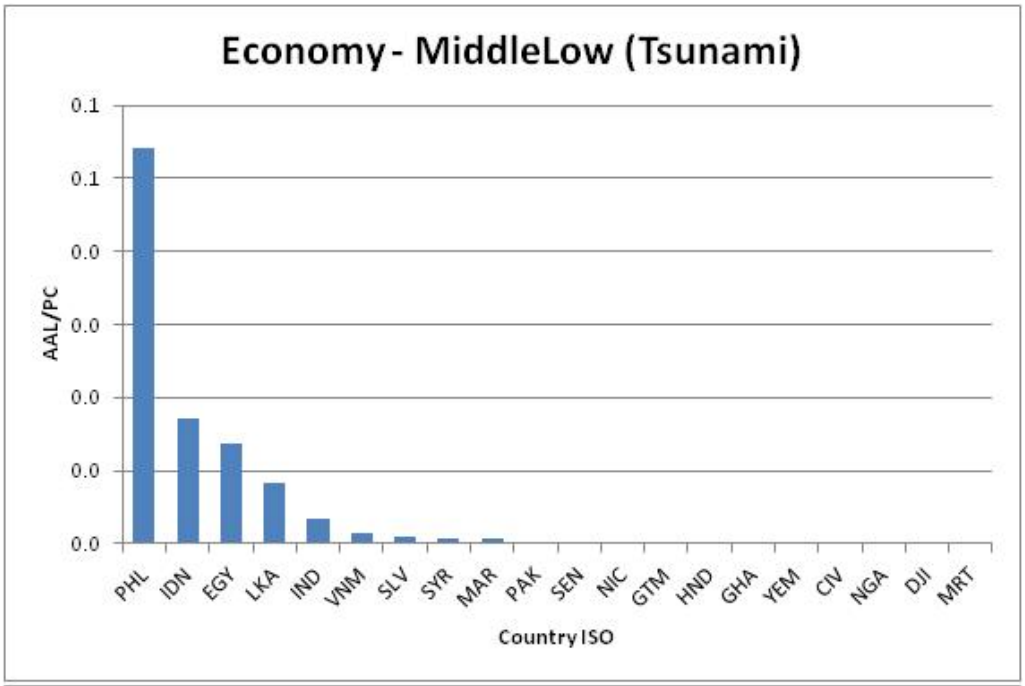

Economy - MiddleLow (Storm Surge)
PML250/GNI
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
PHL
LKA
NIC
HND
IND
VNM
PAK
IDN
GTM
SLV
GEO
MAR
KEN
LSO
COG
SDN
ZMB
SEN
PRY
GHA
Country ISO

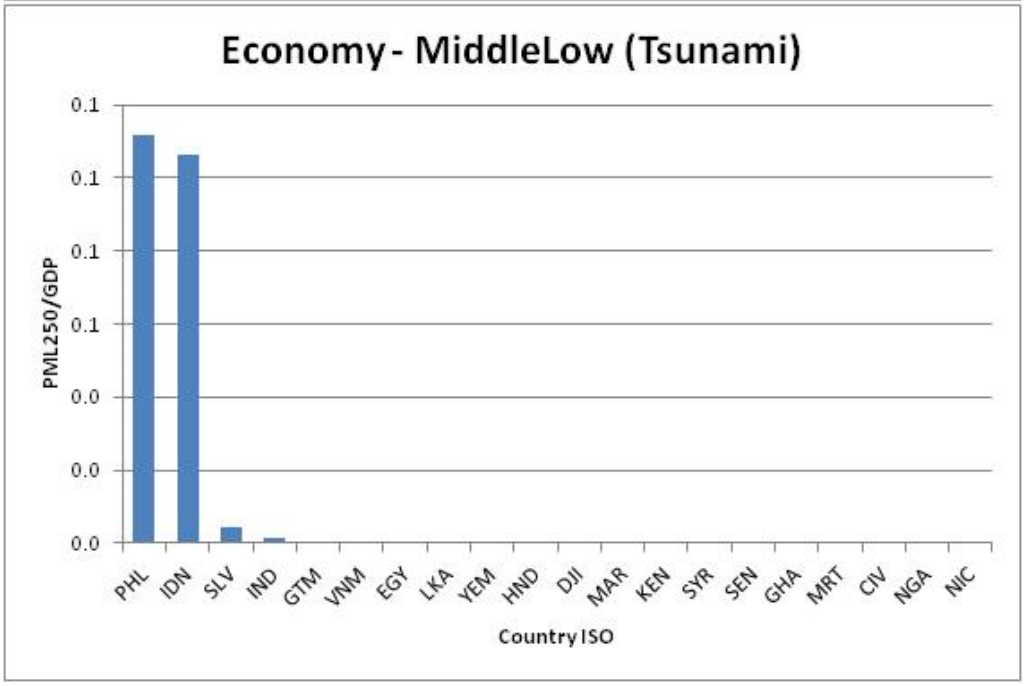

Economy - MiddleLow (Storm Surge)
PML250/PC
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
PHL
LKA
NIC
HND
IND
PAK
VNM
IDN
GTM
SLV
GEO
MAR
KEN
LSO
COG
SDN
ZMB
SEN
PRY
GHA
Country ISO

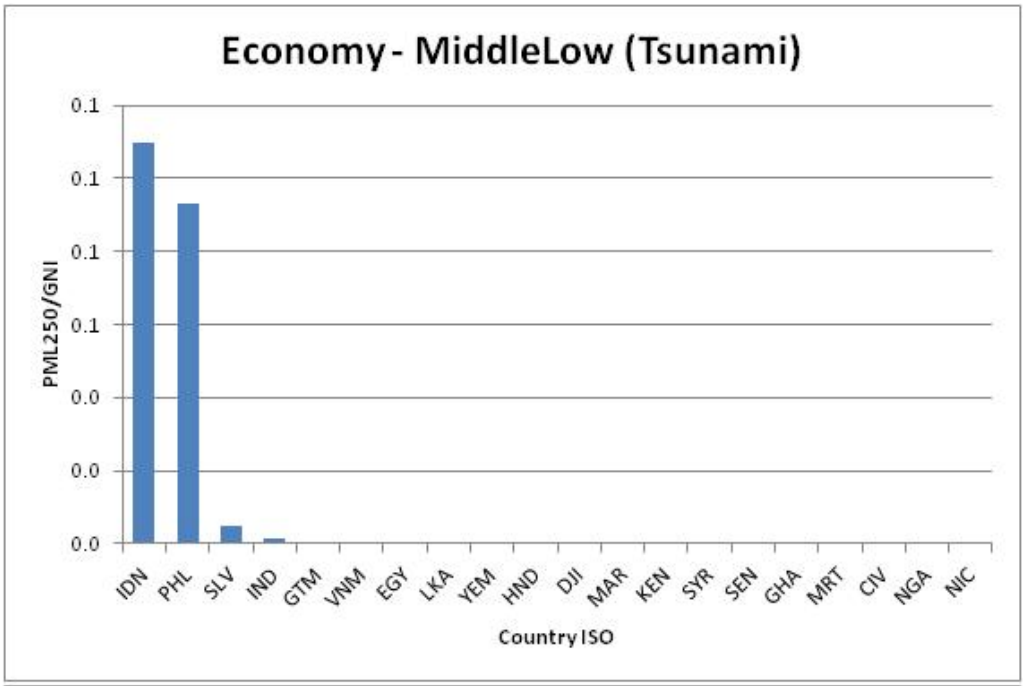

Economy - MiddleLow (Tsunami)
AAL/GFCF
0.6
0.5
0.4
0.3
0.2
0.1
0.0
PHL
EGY
IDN
LKA
IND
SLV
VNM
SYR
MAR
PAK
GTM
NIC
SEN
HND
CMR
KEN
COG
GHA
MRT
CIV
Country ISO

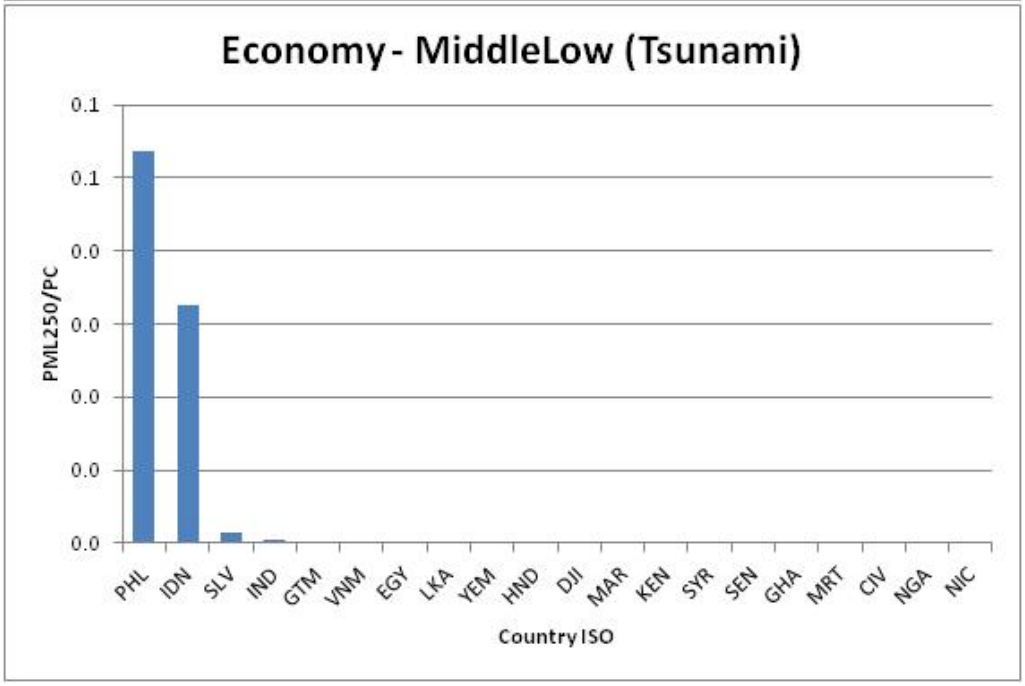

Economy - MiddleLow (Tsunami)
AAL/GGC
1.2
1.0
0.8
0.6
0.4
0.2
0.0
PHL
IDN
EGY
LKA
IND
VNM
SYR
SLV
NIC
MAR
GTM
PAK
SEN
HND
GHA
COG
KEN
DJI
CMR
NGA
Country ISO

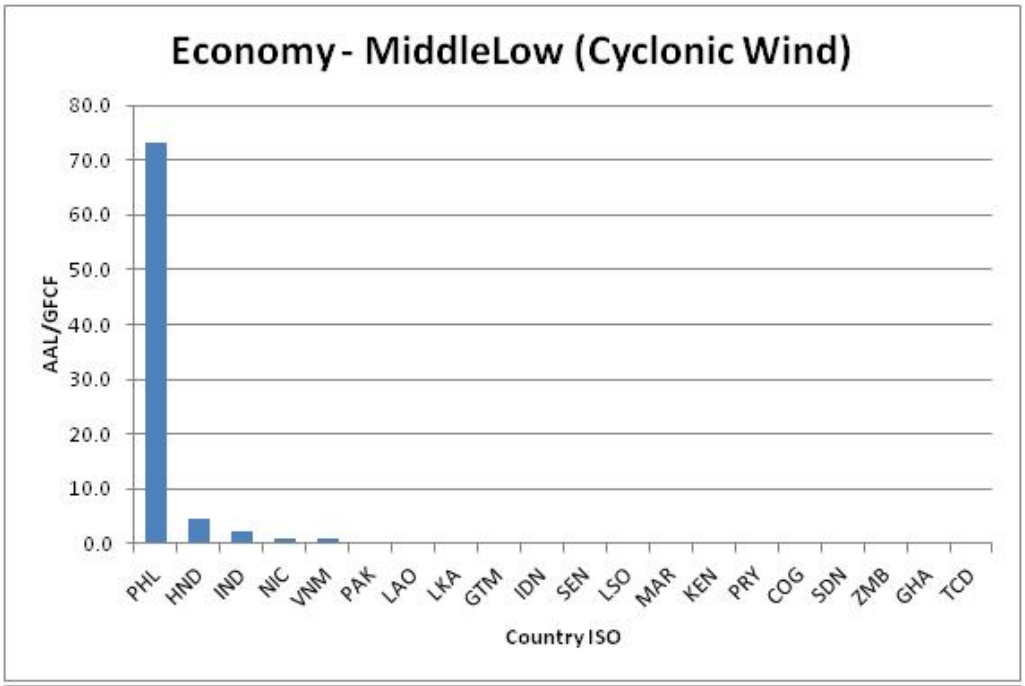

Economy - MiddleLow (Tsunami)
AAL/GNE
0.1
0.1
0.1
0.1
0.0
0.0
0.0
PHL
IDN
EGY
LKA
IND
VNM
SYR
SLV
MAR
NIC
PAK
GTM
SEN
HND
KEN
CMR
CIV
COG
NGA
DJI
Country ISO

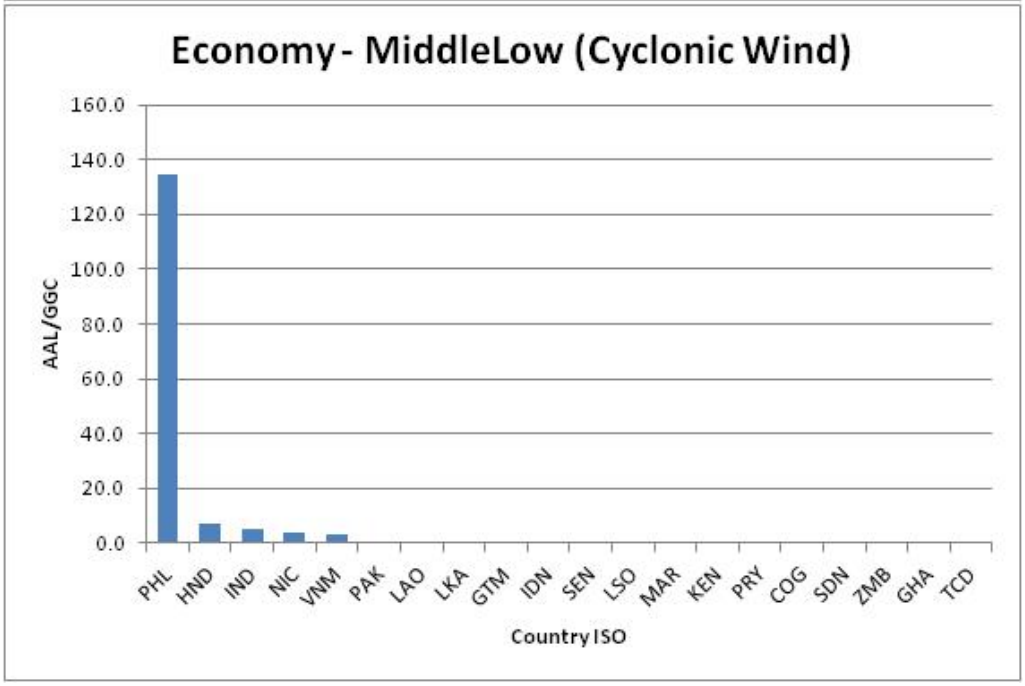

Economy - MiddleLow (Tsunami)
AAL/PC
0.1
0.1
0.0
0.0
0.0
0.0
0.0
PHL
IDN
EGY
LKA
IND
VNM
SLV
SYR
MAR
PAK
SEN
NIC
GTM
HND
GHA
YEM
CIV
NGA
DJI
MRT
Country ISO

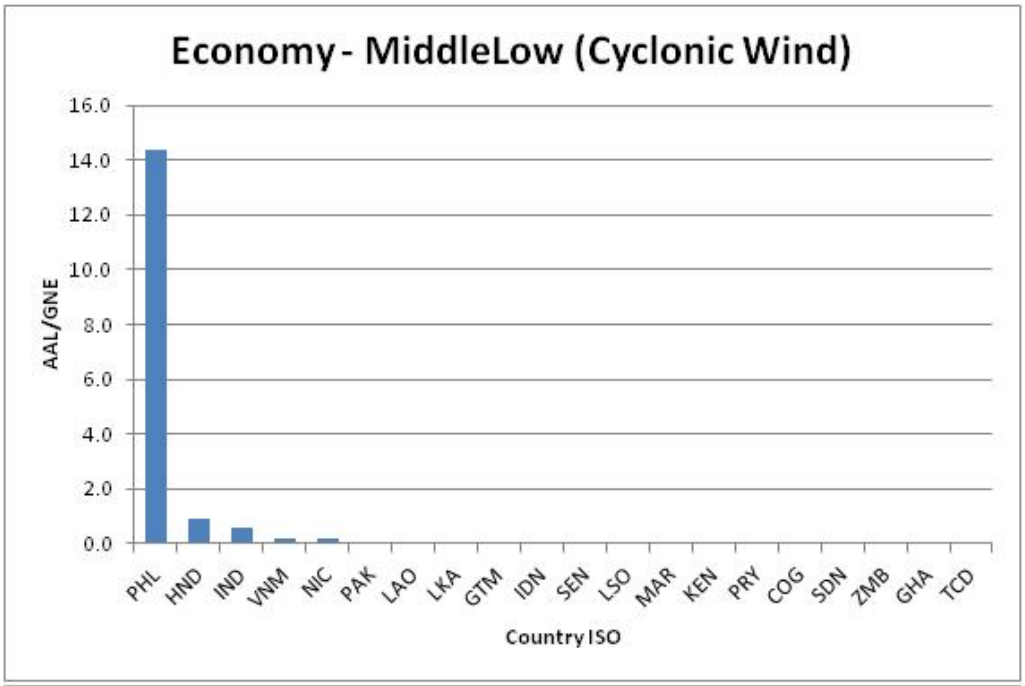

Economy - MiddleLow (Tsunami)
PML250/GDP
0.1
0.1
0.1
0.1
0.0
0.0
0.0
PHL
IDN
SLV
IND
GTM
VNM
EGY
LKA
YEM
HND
DJI
MAR
KEN
SYR
SEN
GHA
MRT
CIV
NGA
NIC
Country ISO

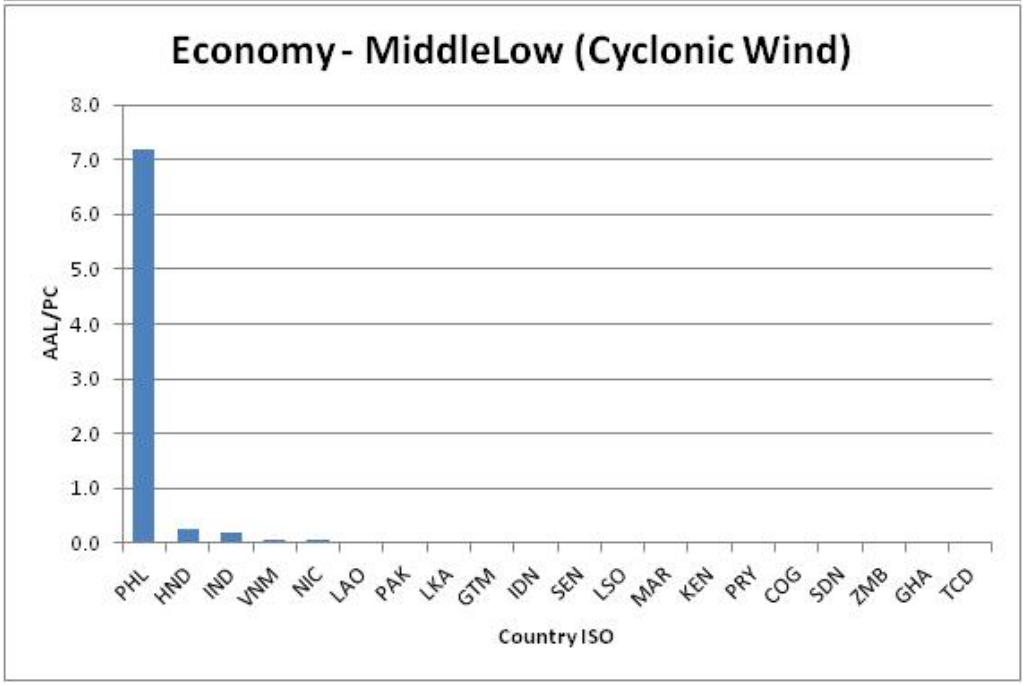

Economy - MiddleLow (Tsunami)
PML250/GNI
0.1
0.1
0.1
0.1
0.0
0.0
IDN
PHL
SLV
IND
GTM
VNM
EGY
LKA
YEM
HND
DJI
MAR
KEN
SYR
SEN
GHA
MRT
CIV
NGA
NIC
Country ISO

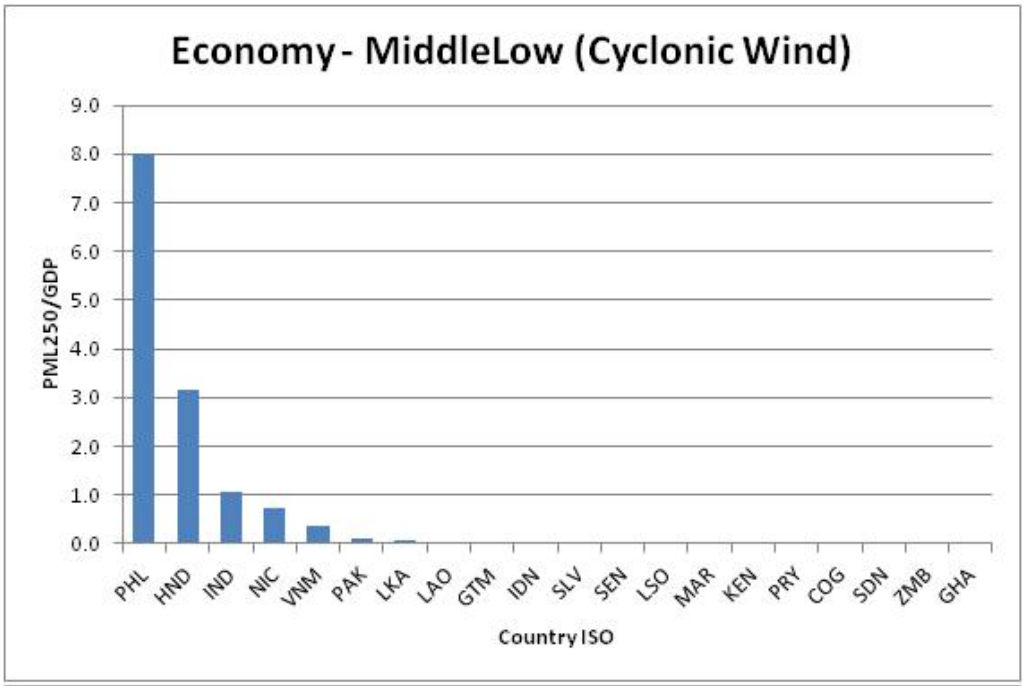

Economy - MiddleLow (Tsunami)
PML250/PC
0.1
0.1
0.0
0.0
0.0
0.0
PHL
IDN
SLV
IND
GTM
VNM
EGY
LKA
YEM
HND
DJI
MAR
KEN
SYR
SEN
GHA
MRT
CIV
NGA
NIC
Country ISO

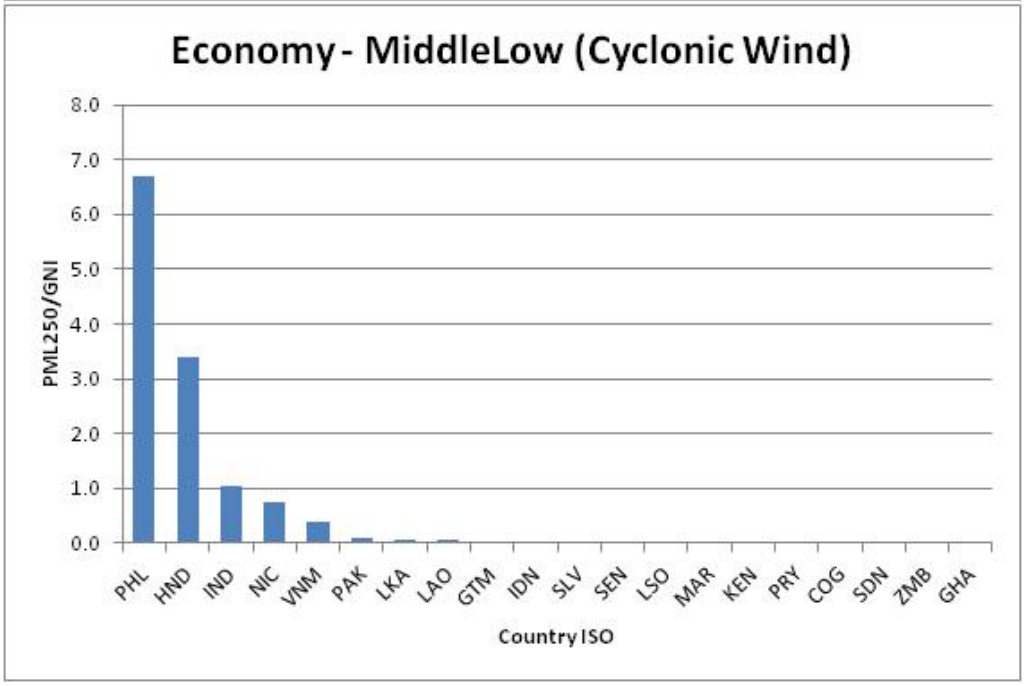

Economy - MiddleLow (Cyclonic Wind)
AAL/GFCF
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PHL
HND
IND
NIC
VNM
PAK
LAO
LKA
GTM
IDN
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
TCD
Country ISO

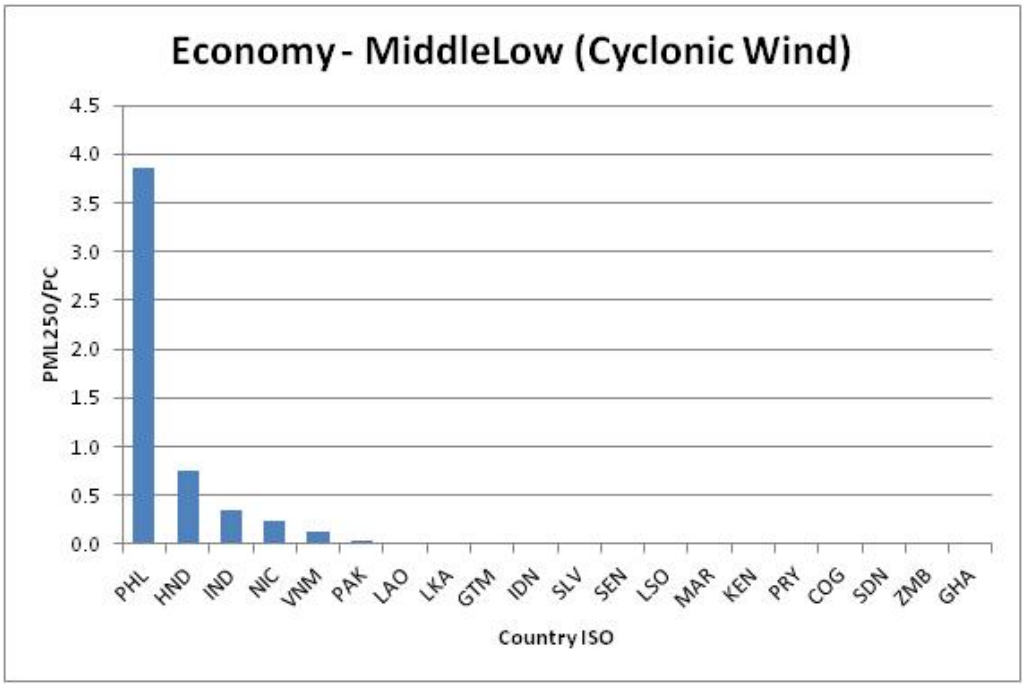

Economy - MiddleLow (Cyclonic Wind)
AAL/GGC
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
PHL
HND
IND
NIC
VNM
PAK
LAO
LKA
GTM
IDN
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
TCD
Country ISO


Economy - MiddleLow (Cyclonic Wind)
AAL/GNE
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
PHL
HND
IND
VNM
NIC
PAK
LAO
LKA
GTM
IDN
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
TCD
Country ISO

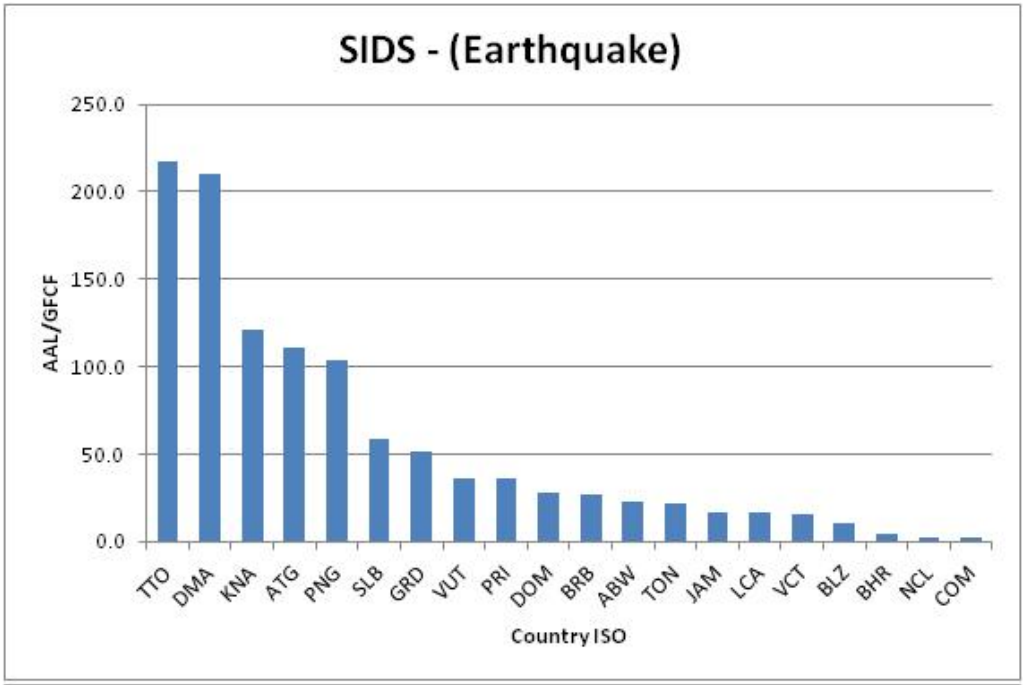

Economy - MiddleLow (Cyclonic Wind)
AAL/PC
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
HND
IND
VNM
NIC
LAO
PAK
LKA
GTM
IDN
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
TCD
Country ISO

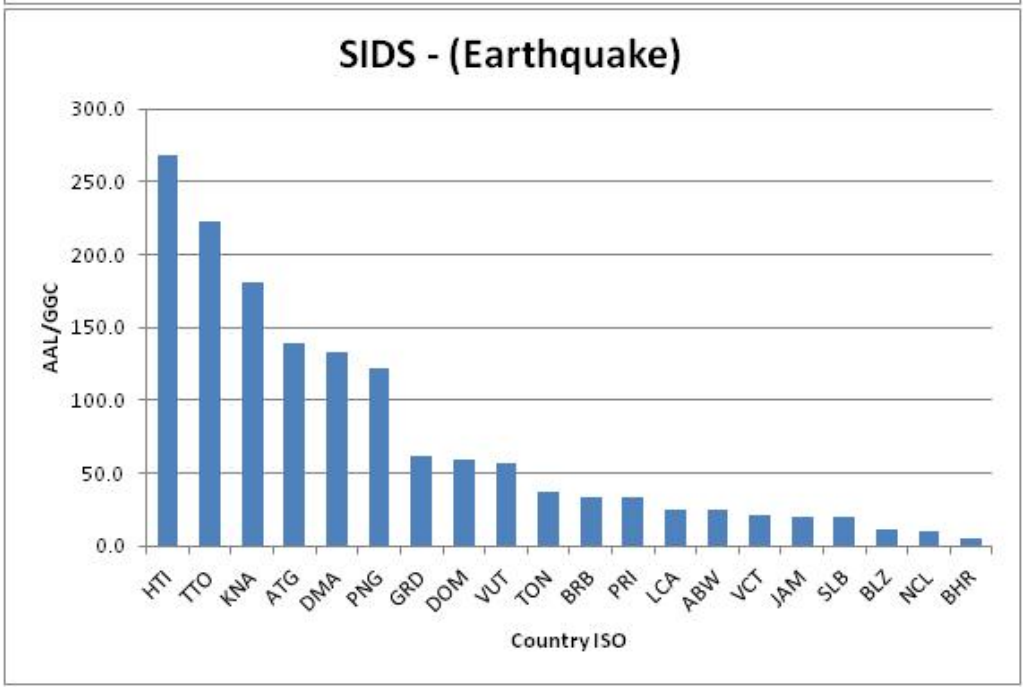

Economy - MiddleLow (Cyclonic Wind)
PML250/GDP
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
HND
IND
NIC
VNM
PAK
LKA
LAO
GTM
IDN
SLV
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
Country ISO

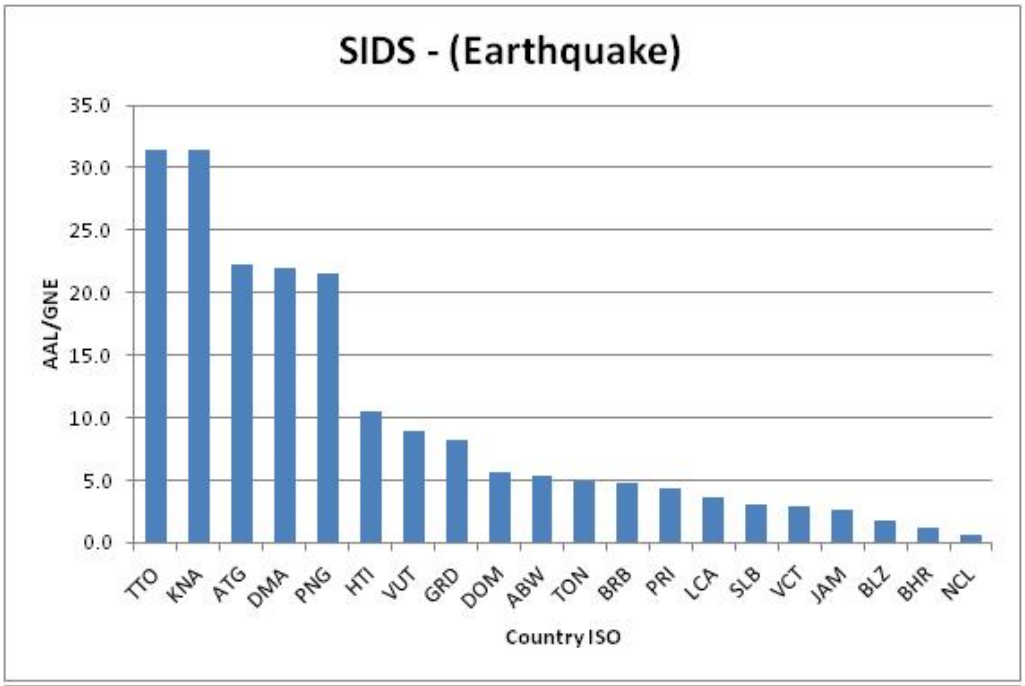

Economy - MiddleLow (Cyclonic Wind)
PML250/GNI
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
PHL
HND
IND
NIC
VNM
PAK
LKA
LAO
GTM
IDN
SLV
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
Country ISO

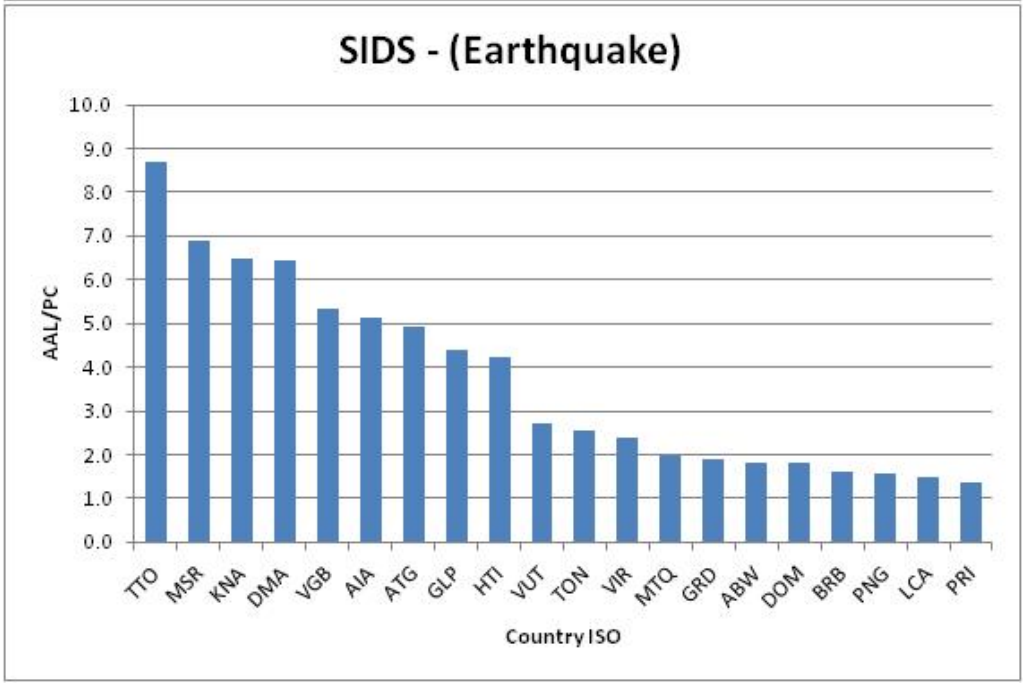

Economy - MiddleLow (Cyclonic Wind)
PML250/PC
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PHL
HND
IND
NIC
VNM
PAK
LAO
LKA
GTM
IDN
SLV
SEN
LSO
MAR
KEN
PRY
COG
SDN
ZMB
GHA
Country ISO

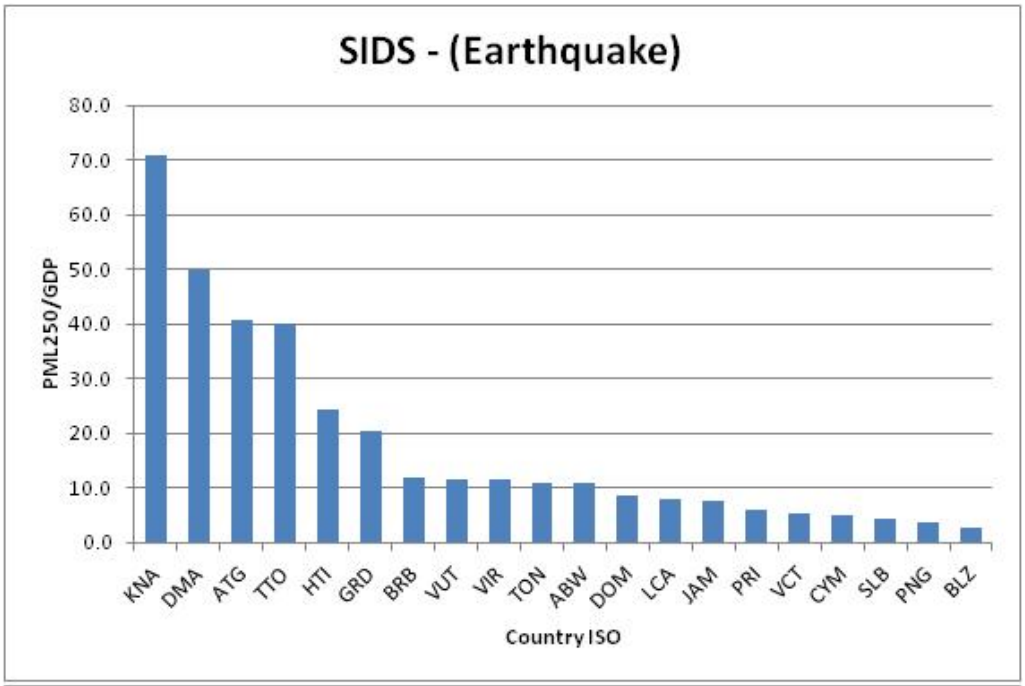
SIDS

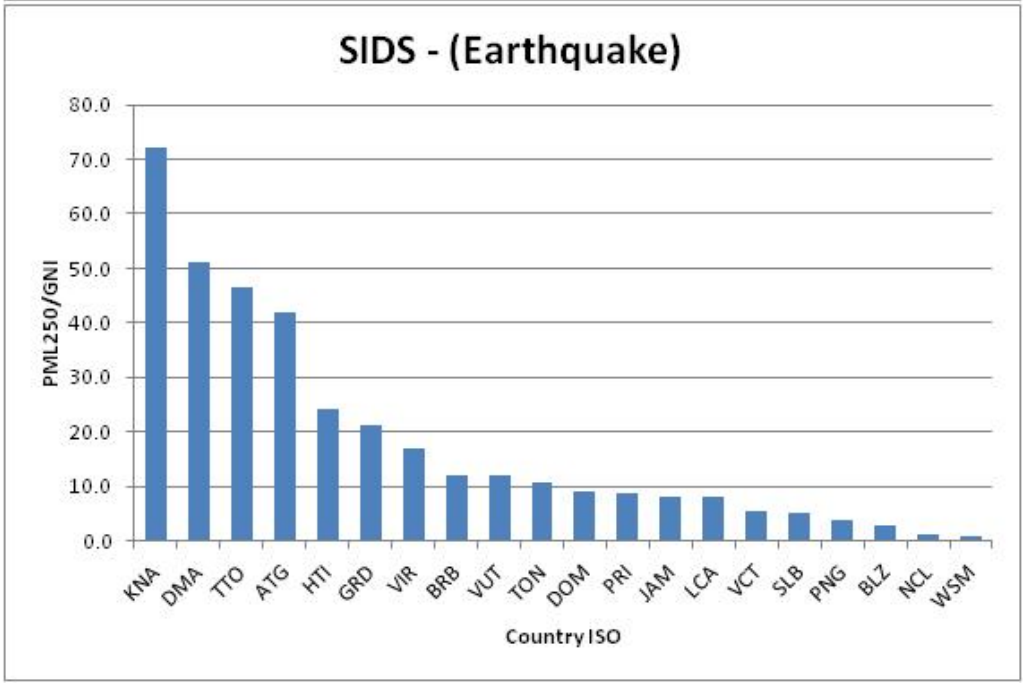

SIDS - (Earthquake)
AAL/GFCF
250.0
200.0
150.0
100.0
50.0
0.0
TTO
DMA
KNA
ATG
PNG
SLB
GRD
VUT
PRI
DOM
BRB
ABW
TON
JAM
LCA
VCT
BLZ
BHR
NCL
COM
Country ISO

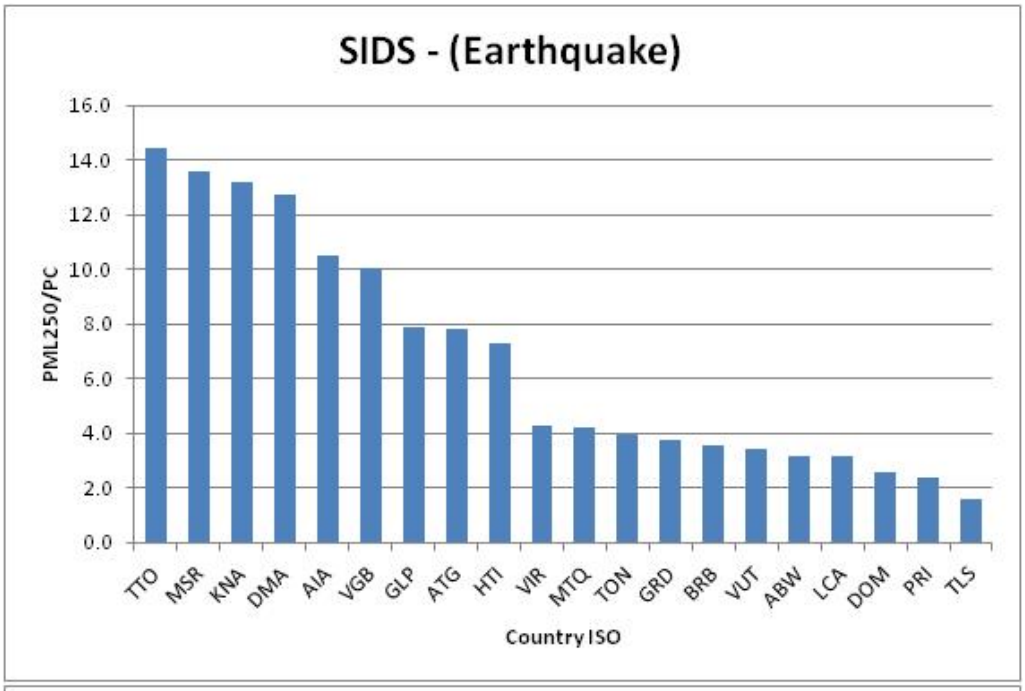

SIDS - (Earthquake)
AAL/GGC
300.0
250.0
200.0
150.0
100.0
50.0
0.0
HTI
TTO
KNA
ATG
DMA
PNG
GRD
DOM
VUT
TON
BRB
PRI
LCA
ABW
VCT
JAM
SLB
BLZ
NCL
BHR
Country ISO

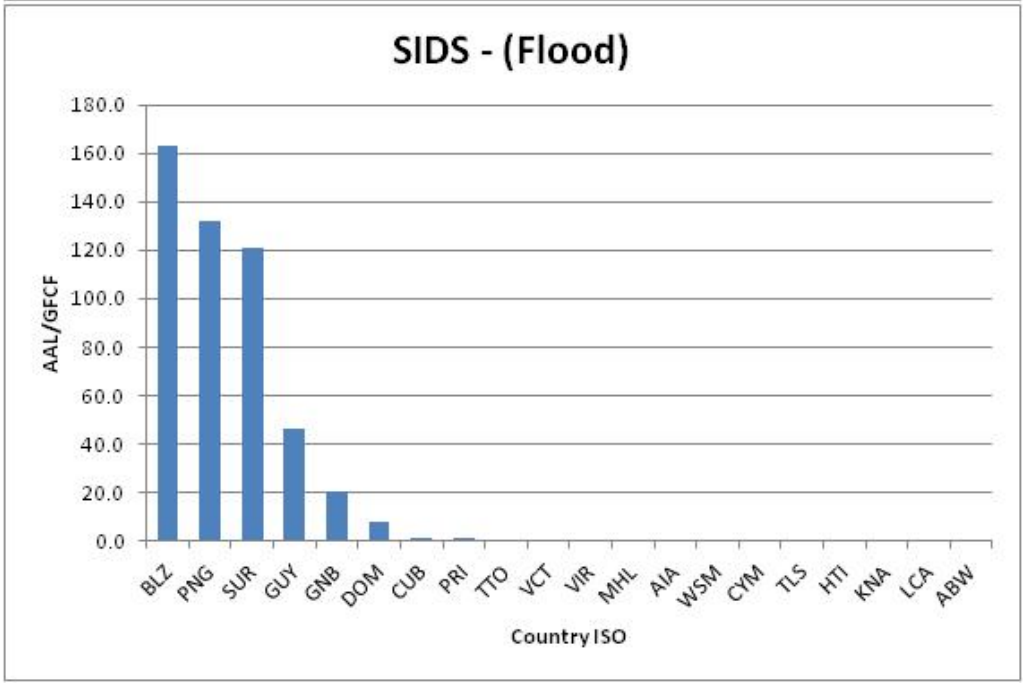

SIDS - (Earthquake)
AAL/GNE
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
TTO KNA ATG DMA PNG HTI VUT GRD DOM ABW TON BRB PRI LCA SLB VCT JAM BLZ BHR NCL
Country ISO

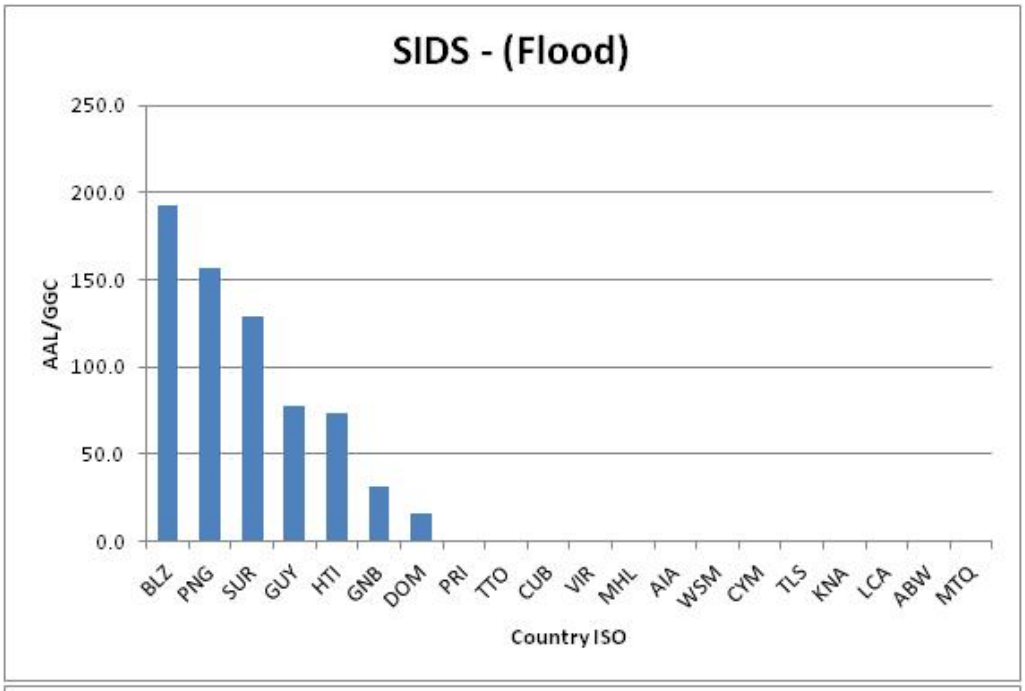

SIDS - (Earthquake)
AAL/PC
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
TTO MSR KNA DMA VGB AIA ATG GLP HTI VUT TON VIR MTQ GRD ABW DOM BRB PNG LCA PRI
Country ISO

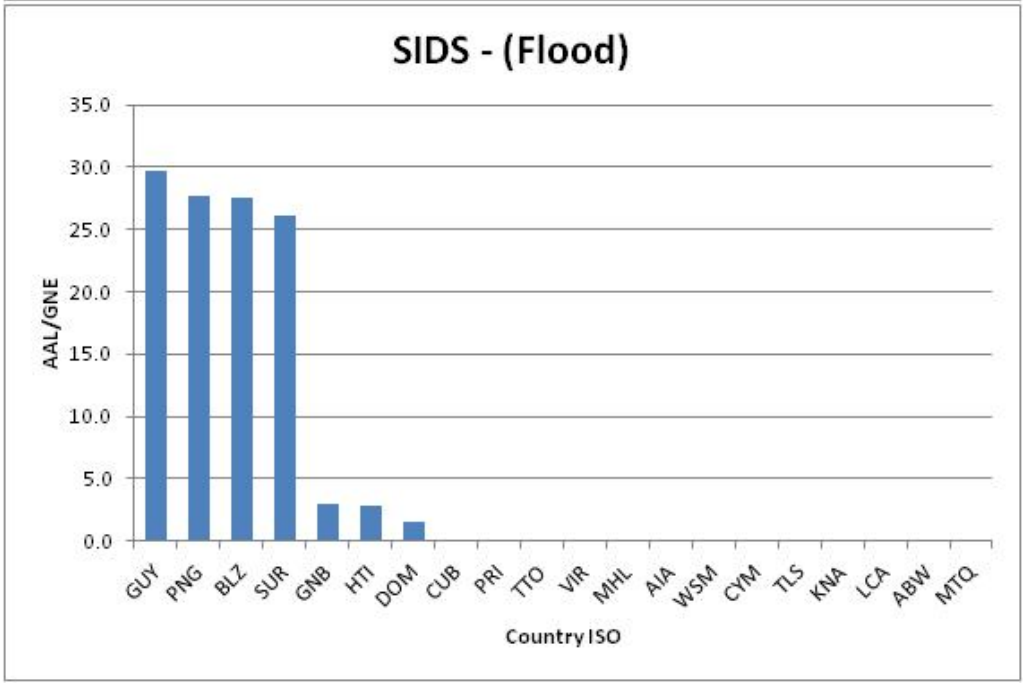

SIDS - (Earthquake)
PML250/GDP
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
KNA
DMA
ATG
TTO
HTI
GRD
BRB
VUT
VIR
TON
ABW
DOM
LCA
JAM
PRI
VCT
CYM
SLB
PNG
BLZ
Country ISO

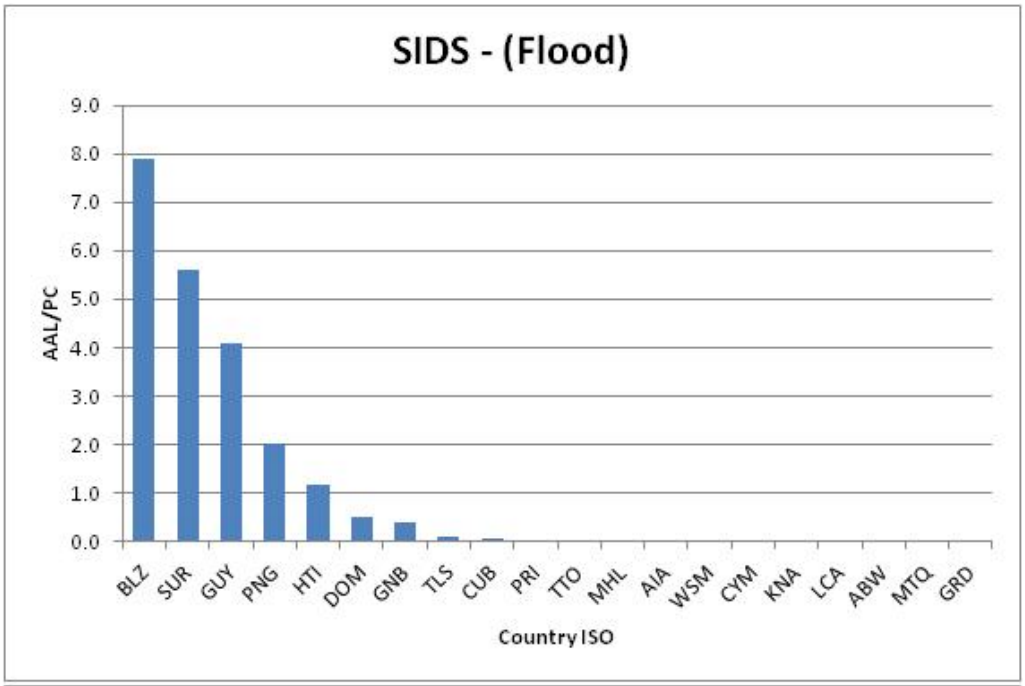

SIDS - (Earthquake)
PML250/GNI
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
KNA
DMA
TTO
ATG
HTI
GRD
VIR
BRB
VUT
TON
DOM
PRI
JAM
LCA
VCT
SLB
PNG
BLZ
NCL
WSM
Country ISO

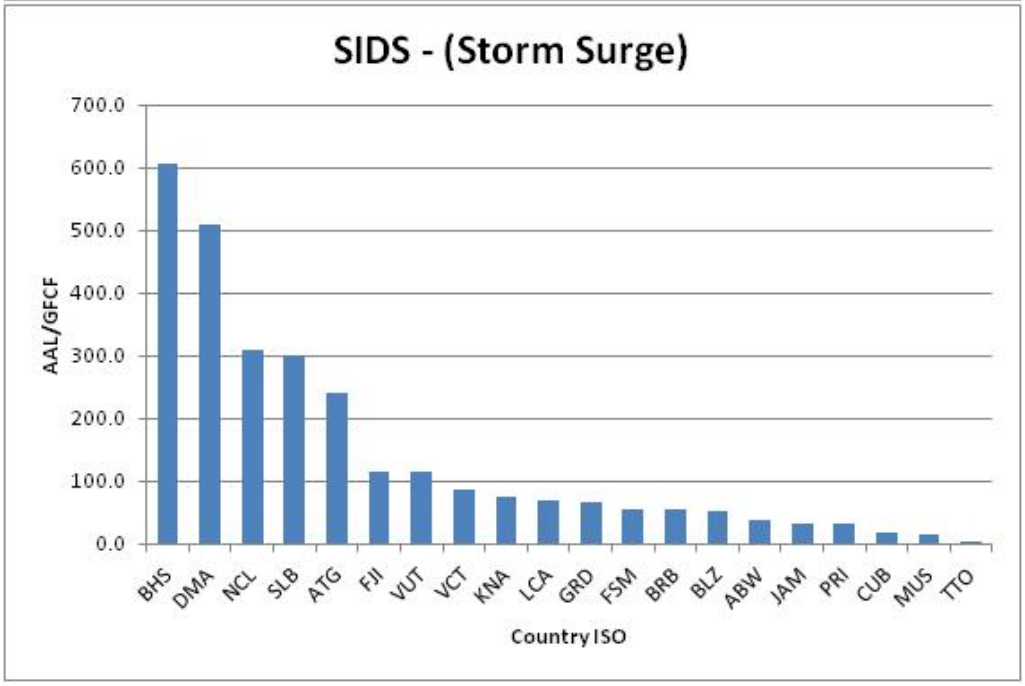

SIDS - (Earthquake)
PML250/PC
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
TTO
MSR
KNA
DMA
AIA
VGB
GLP
ATG
HTI
VIR
MTQ
TON
GRD
BRB
VUT
ABW
LCA
DOM
PRI
TLS
Country ISO

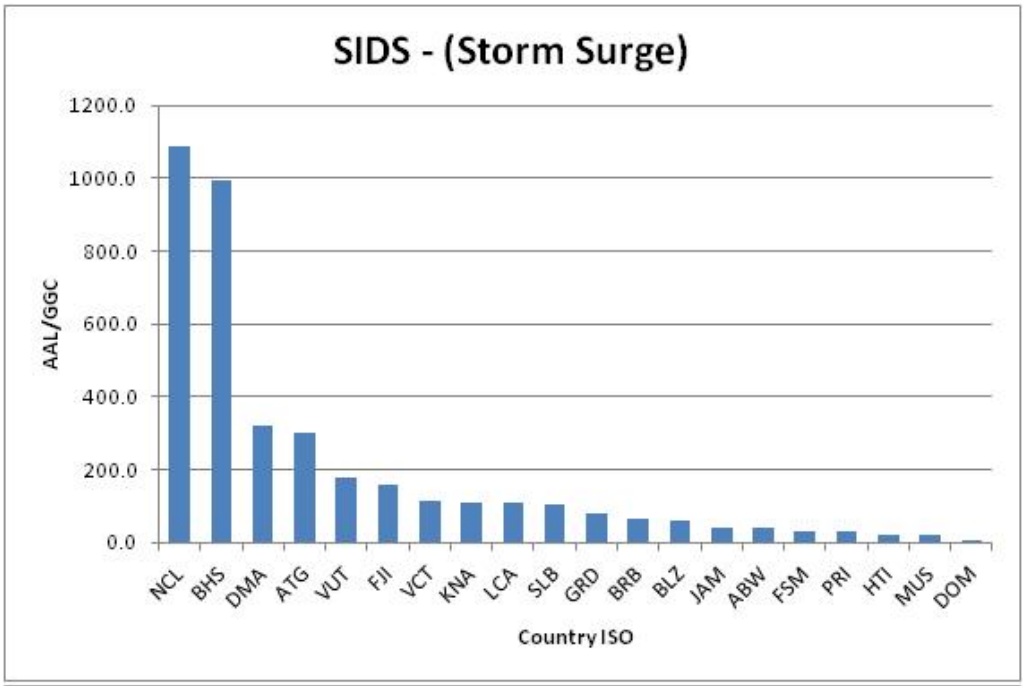

SIDS - (Flood)
AAL/GFCF
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
BLZ
PNG
SUR
GUY
GNB
DOM
CUB
PRI
TTO
VCT
VIR
MHL
AIA
WSM
CYM
TLS
HTI
KNA
LCA
ABW
Country ISO

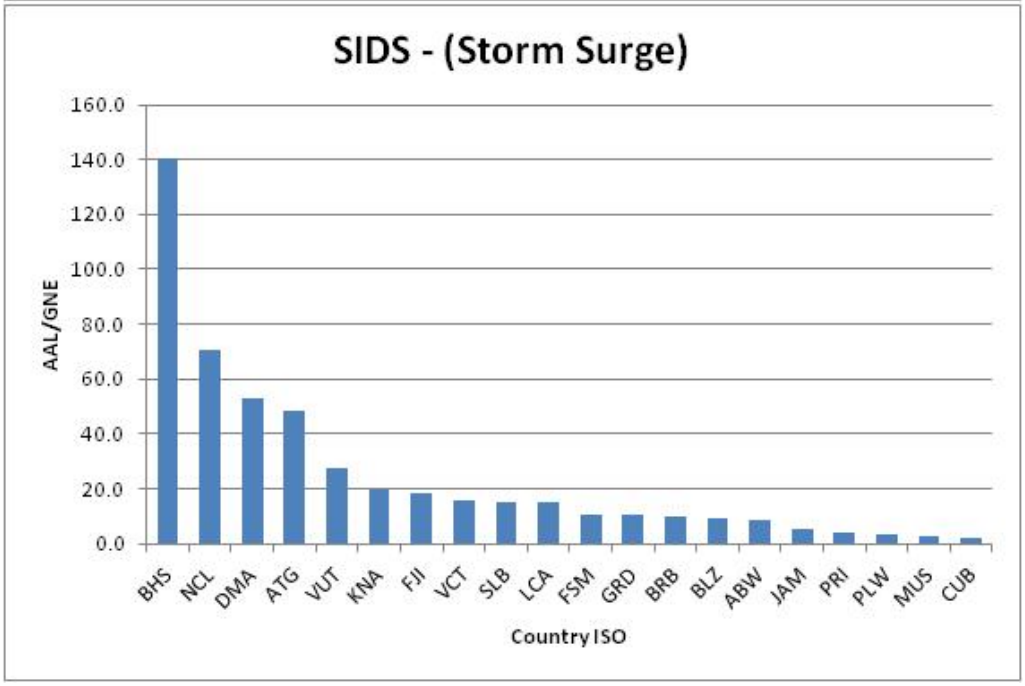

SIDS - (Flood)
AAL/GGC
250.0
200.0
150.0
100.0
50.0
0.0
BLZ
PNG
SUR
GUY
HTI
GNB
DOM
PRI
TTO
CUB
VIR
MHL
AIA
WSM
CYM
TLS
KNA
LCA
ABW
MTQ
Country ISO

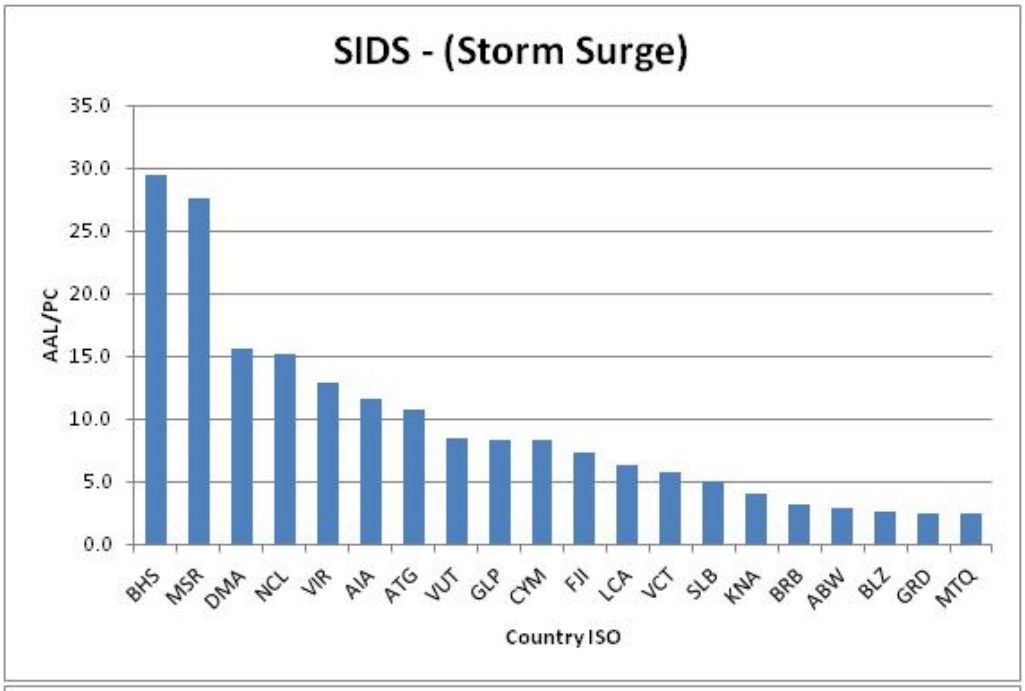

SIDS - (Flood)
AAL/GNE
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
GUY
PNG
BLZ
SUR
GNB
HTI
DOM
CUB
PRI
TTO
VIR
MHL
AIA
WSM
CYM
TLS
KNA
LCA
ABW
MTQ
Country ISO

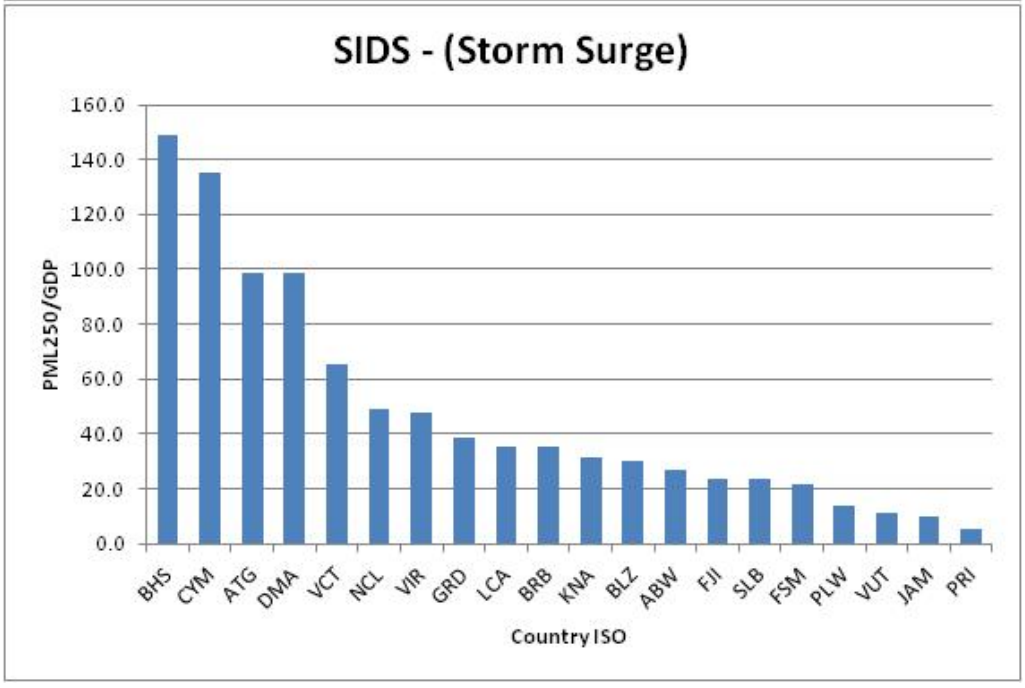

SIDS - (Flood)
AAL/PC
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
BLZ
SUR
GUY
PNG
HTI
DOM
GNB
TLS
CUB
PRI
TTO
MHL
AIA
WSM
CYM
KNA
LCA
ABW
MTQ
GRD
Country ISO

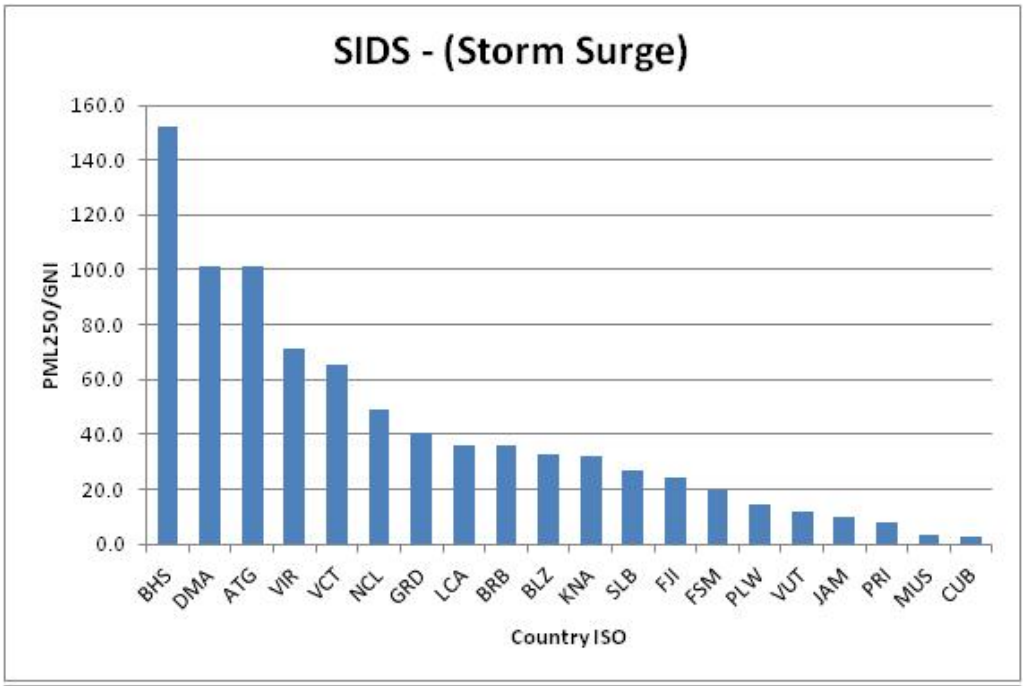

SIDS - (Storm Surge)
AAL/GFCF
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
BHS
DMA
NCL
SLB
ATG
FJI
VUT
VCT
KNA
LCA
GRD
FSM
BRB
BLZ
ABW
JAM
PRI
CUB
MUS
TTO
Country ISO

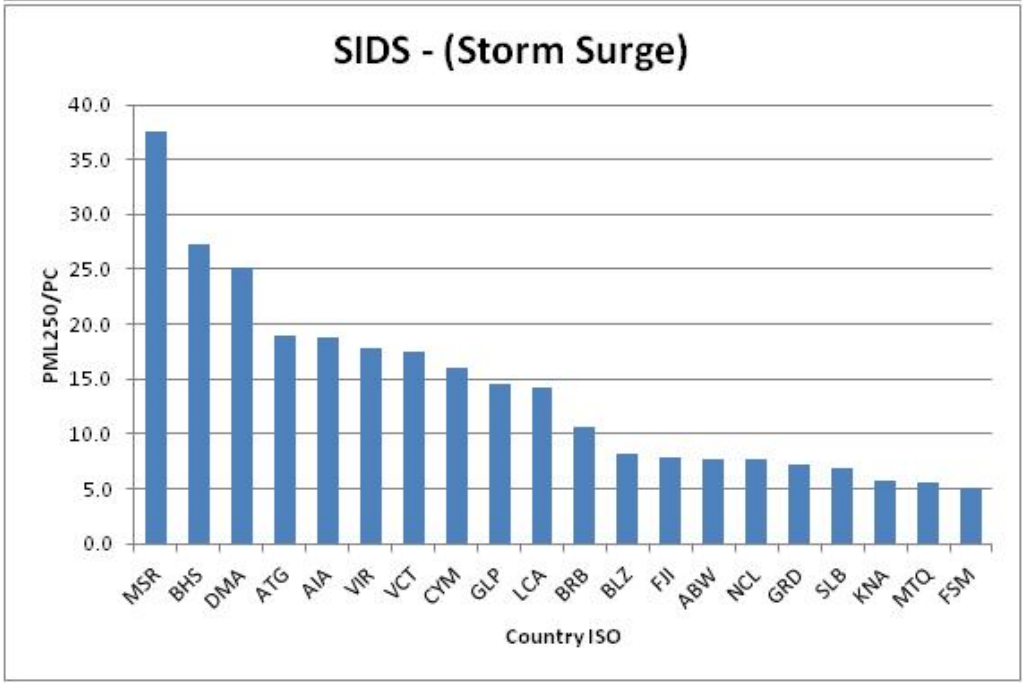

SIDS - (Storm Surge)
AAL/GGC
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
NCL
BHS
DMA
ATG
VUT
FJI
VCT
KNA
LCA
SLB
GRD
BRB
BLZ
JAM
ABW
FSM
PRI
HTI
MUS
DOM
Country ISO

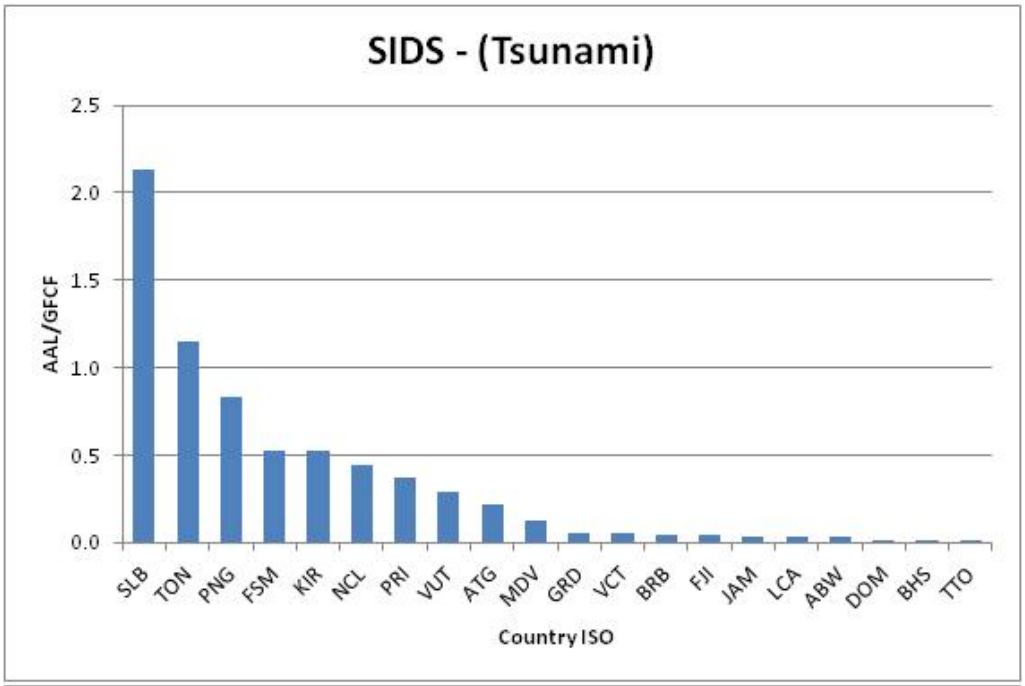

SIDS - (Storm Surge)
AAL/GNE
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
BHS
NCL
DMA
ATG
VUT
KNA
FJI
VCT
SLB
LCA
FSM
GRD
BRB
BLZ
ABW
JAM
PRI
PLW
MUS
CUB
Country ISO

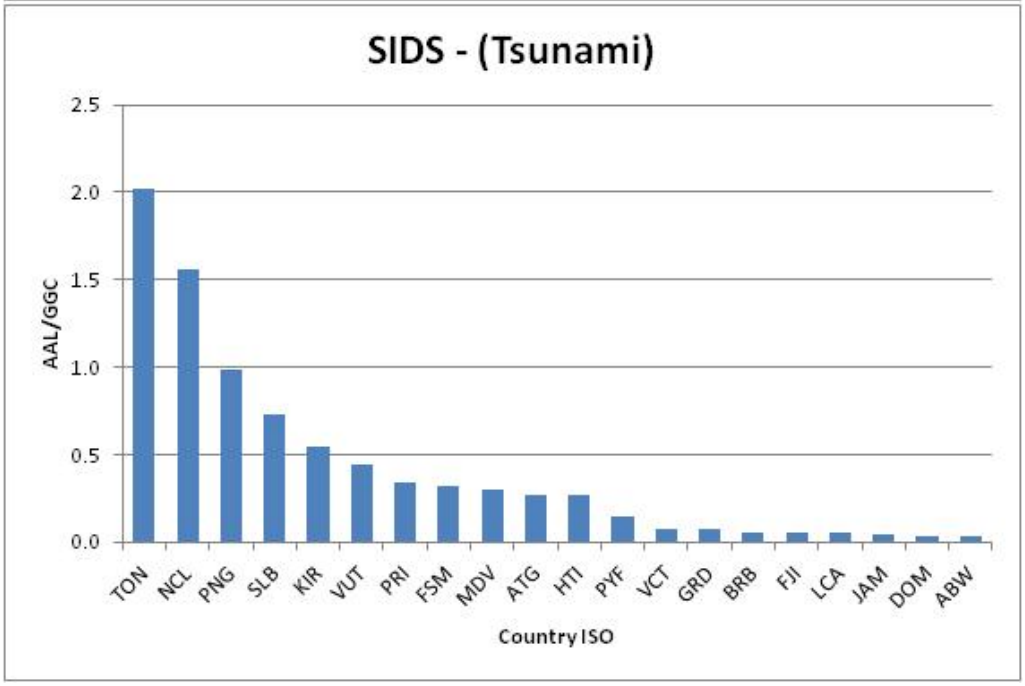

SIDS - (Storm Surge)
AAL/PC
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
BHS
MSR
DMA
NCL
VIR
AIA
ATG
VUT
GLP
CYM
FJI
LCA
VCT
SLB
KNA
BRB
ABW
BLZ
GRD
MTQ
Country ISO

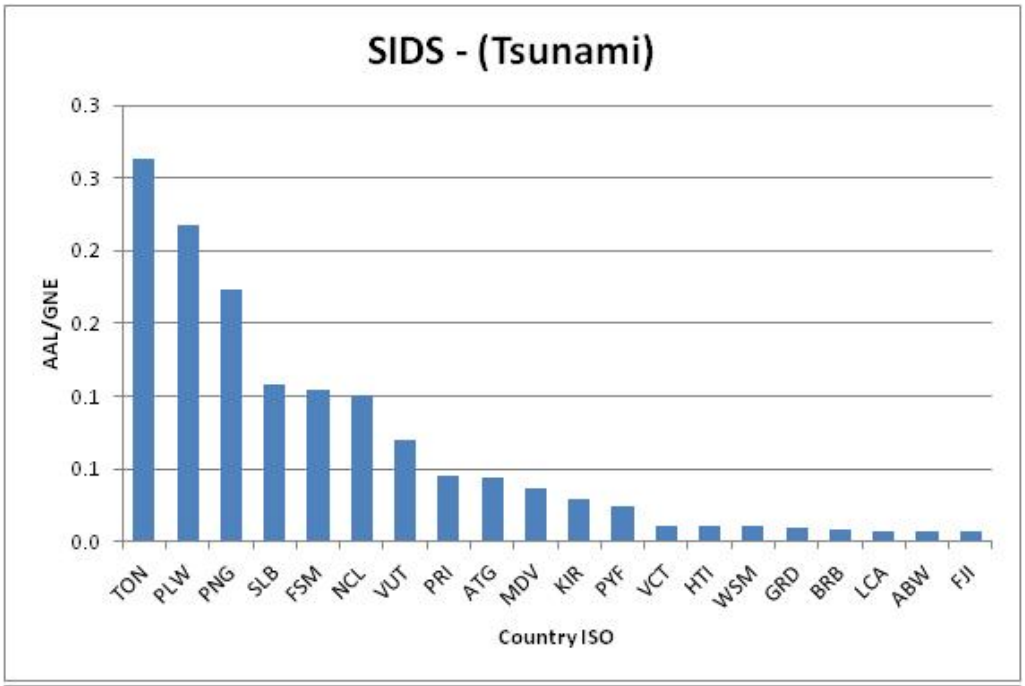

SIDS - (Storm Surge)
PML250/GDP
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
BHS
CYM
ATG
DMA
VCT
NCL
VIR
GRD
LCA
BRB
KNA
BLZ
ABW
FJI
SLB
FSM
PLW
VUT
JAM
PRI
Country ISO

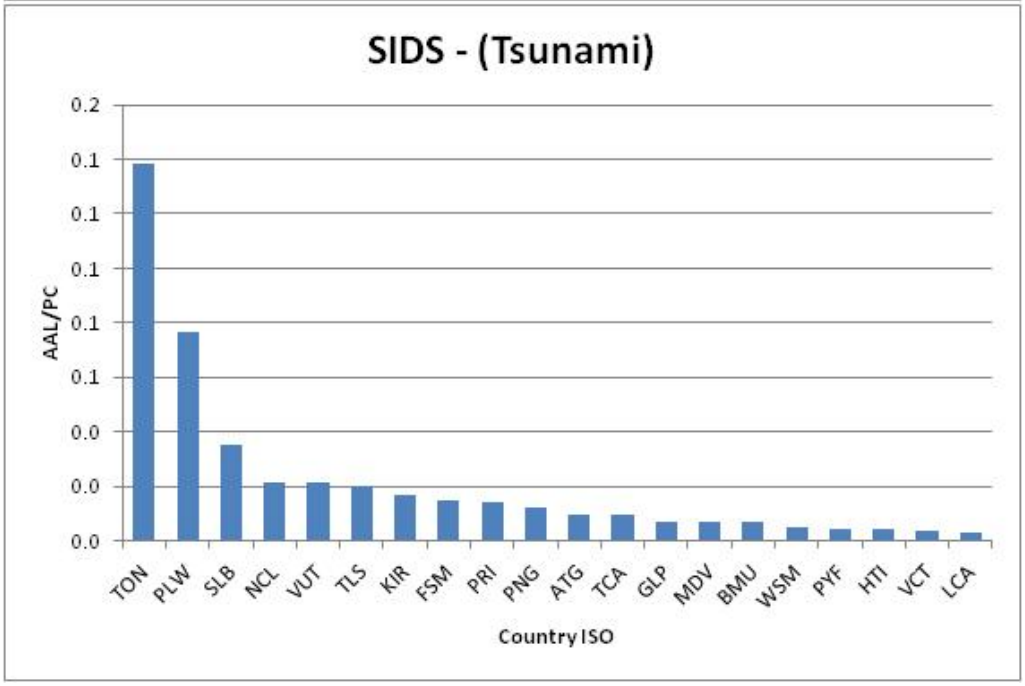

SIDS - (Storm Surge)
PML250/GNI
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
BHS
DMA
ATG
VIR
VCT
NCL
GRD
LCA
BRB
BLZ
KNA
SLB
FJI
FSM
PLW
VUT
JAM
PRI
MUS
CUB
Country ISO

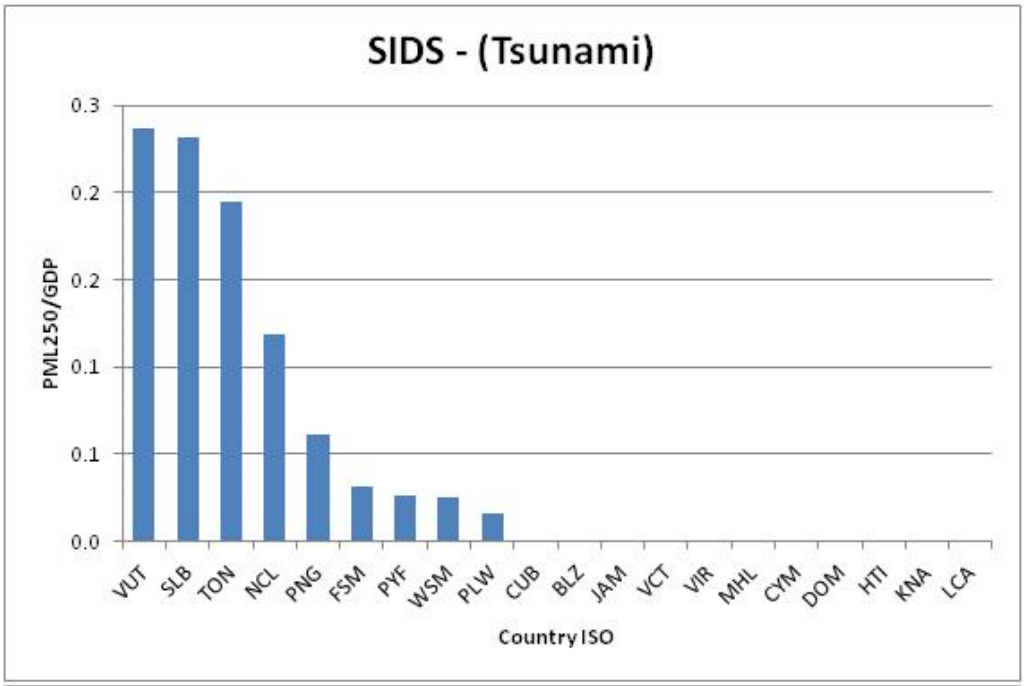

SIDS - (Storm Surge)
PML250/PC
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
MSR
BHS
DMA
ATG
AIA
VIR
VCT
CYM
GLP
LCA
BRB
BLZ
FJI
ABW
NCL
GRD
SLB
KNA
MTQ
FSM
Country ISO

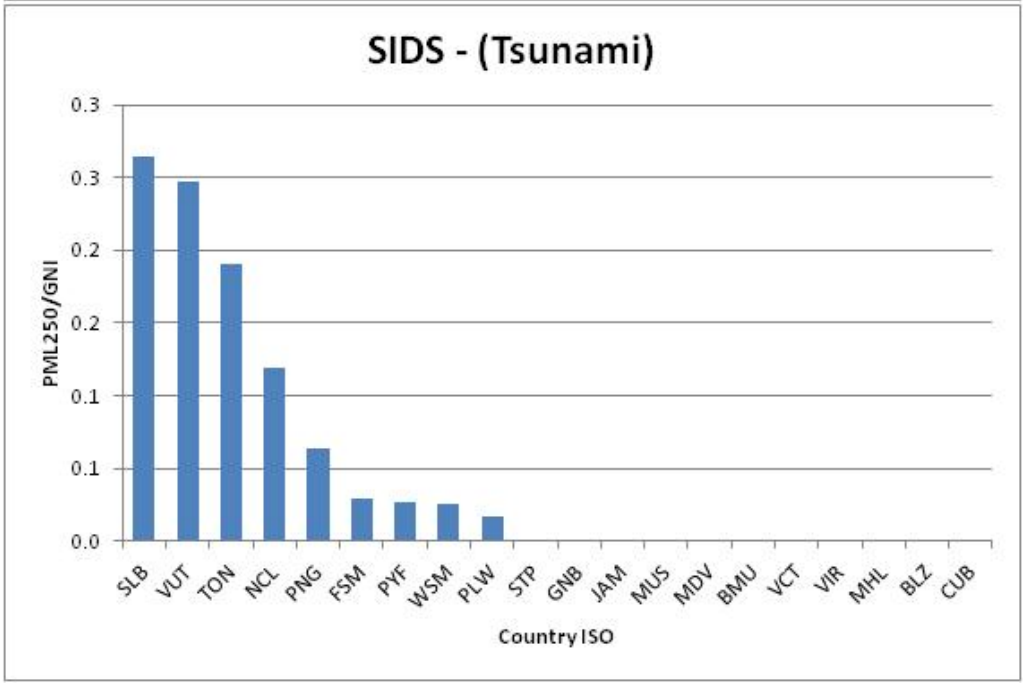

SIDS - (Tsunami)
AAL/GFCF
2.5
2.0
1.5
1.0
0.5
0.0
SLB
TON
PNG
FSM
KIR
NCL
PRI
VUT
ATG
MDV
GRD
VCT
BRB
FJI
JAM
LCA
ABW
DOM
BHS
TTO
Country ISO

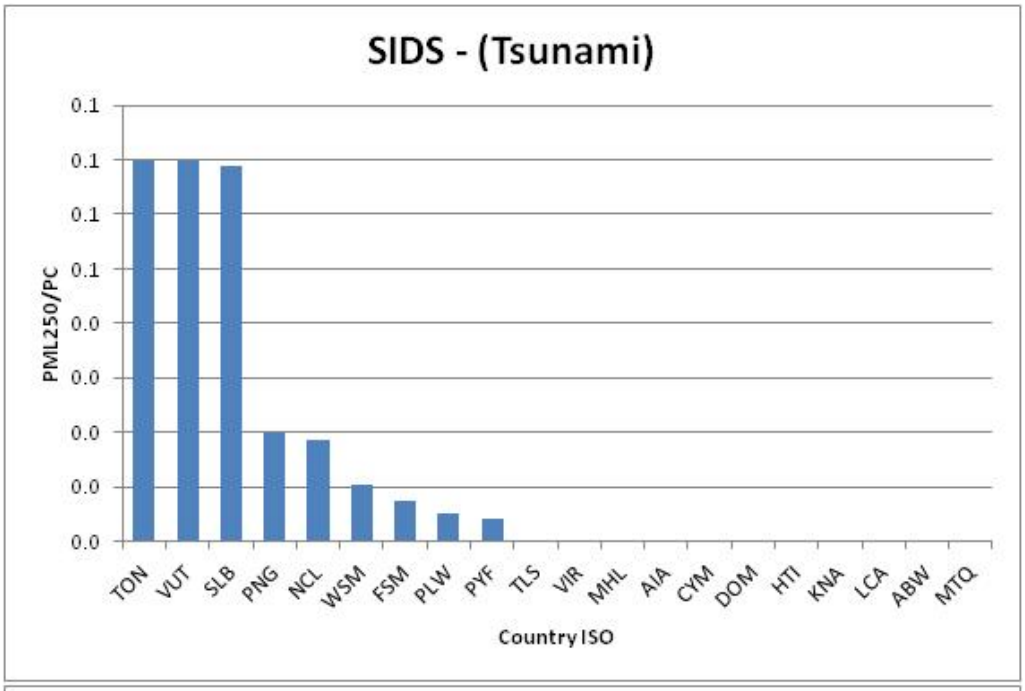

SIDS - (Tsunami)
AAL/GGC
2.5
2.0
1.5
1.0
0.5
0.0
TON
NCL
PNG
SLB
KIR
VUT
PRI
FSM
MDV
ATG
HTI
PYF
VCT
GRD
BRB
FJI
LCA
JAM
DOM
ABW
Country ISO

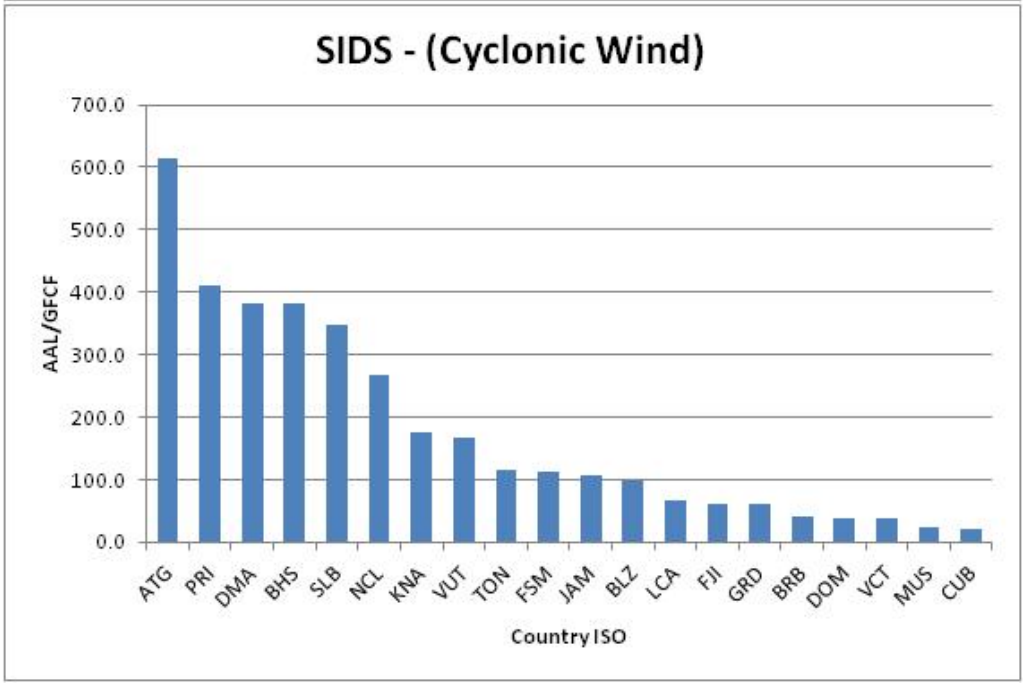

SIDS - (Tsunami)
AAL/GNE
0.3
0.3
0.2
0.2
0.1
0.1
0.0
TON
PLW
PNG
SLB
FSM
NCL
VUT
PRI
ATG
MDV
KIR
PYF
VCT
HTI
WSM
GRD
BRB
LCA
ABW
FJI
Country ISO

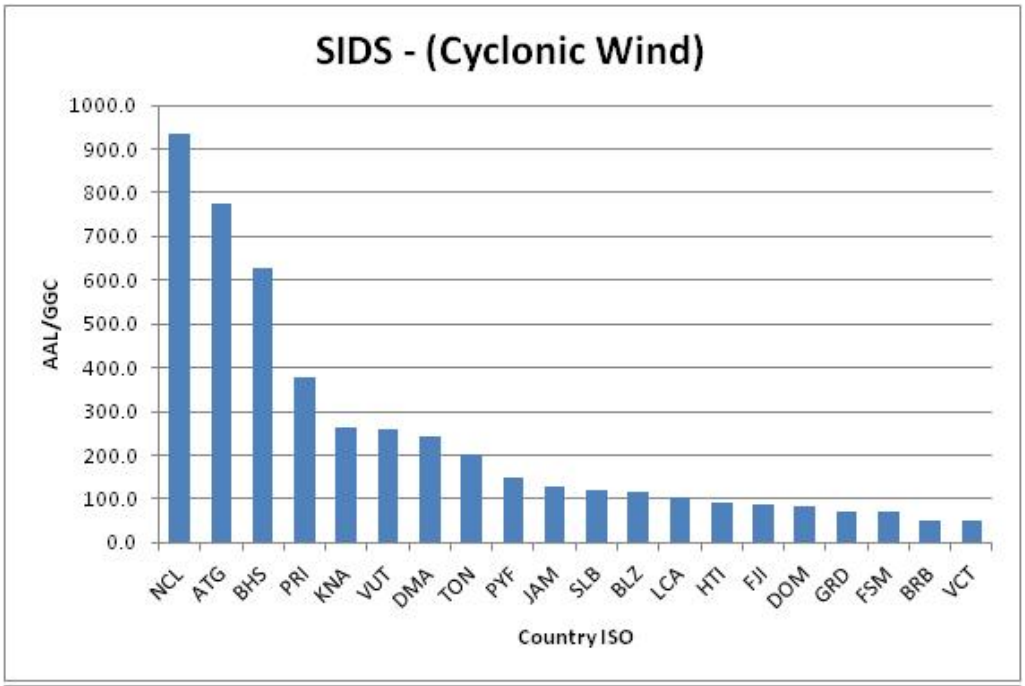

SIDS - (Tsunami)
AAL/PC
0.2
0.1
0.1
0.1
0.1
0.1
0.0
0.0
0.0
TON
PLW
SLB
NCL
VUT
TLS
KIR
FSM
PRI
PNG
ATG
TCA
GLP
MDV
BMU
WSM
PYF
HTI
VCT
LCA
Country ISO

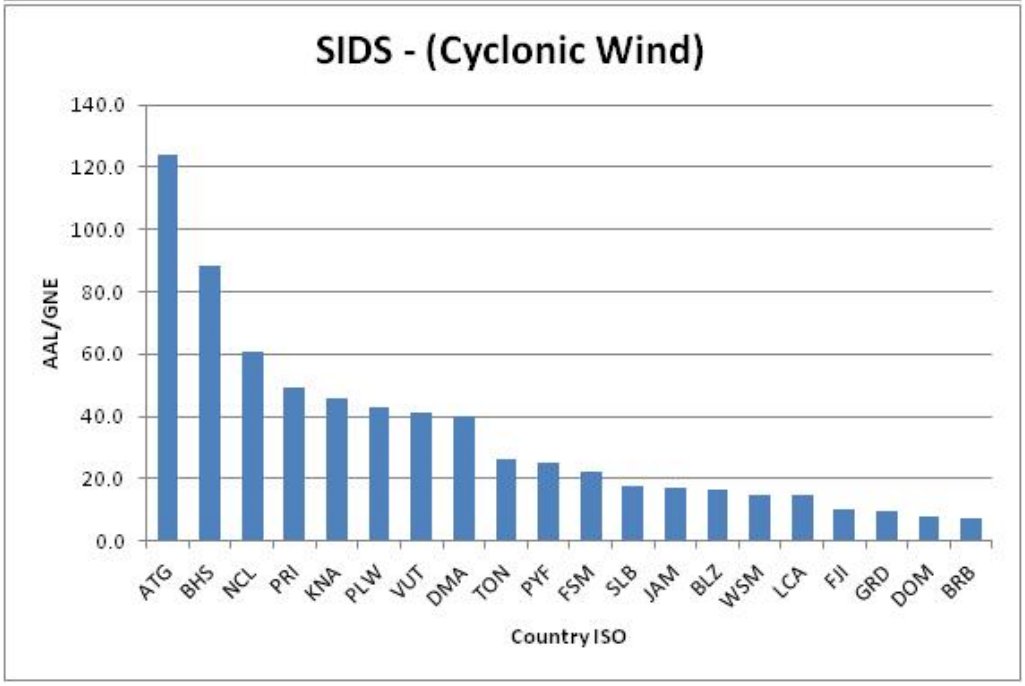

SIDS - (Tsunami)
PML250/GDP
0.3
0.2
0.2
0.1
0.1
0.0
VUT
SLB
TON
NCL
PNG
FSM
PYF
WSM
PLW
CUB
BLZ
JAM
VCT
VIR
MHL
CYM
DOM
HTI
KNA
LCA
Country ISO

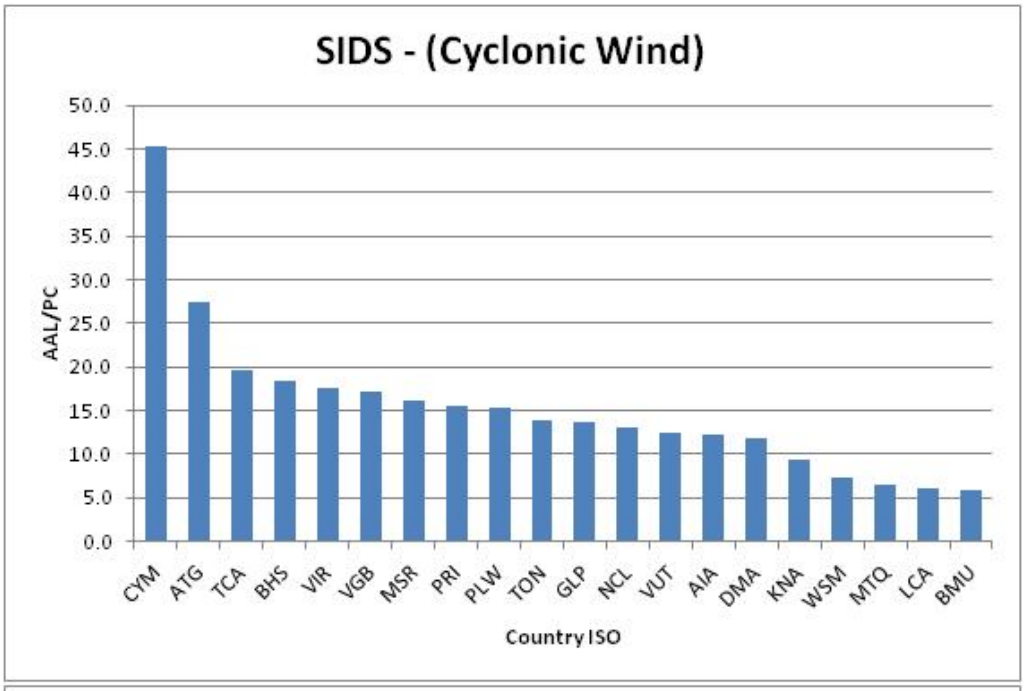

SIDS - (Tsunami)
PML250/GNI
0.3
0.3
0.2
0.2
0.1
0.1
0.0
SLB
VUT
TON
NCL
PNG
FSM
PYF
WSM
PLW
STP
GNB
JAM
MUS
MDV
BMU
VCT
VIR
MHL
BLZ
CUB
Country ISO

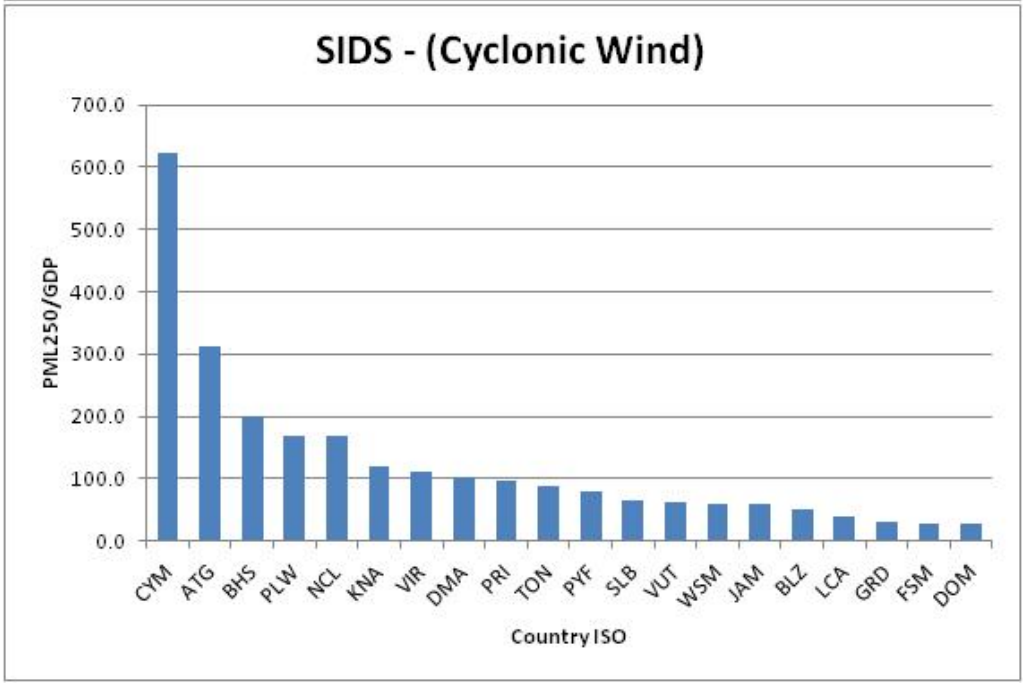

SIDS - (Tsunami)
PML250/PC
0.1
0.1
0.1
0.1
0.0
0.0
0.0
0.0
TON
VUT
SLB
PNG
NCL
WSM
FSM
PLW
PYF
TLS
VIR
MHL
AIA
CYM
DOM
HTI
KNA
LCA
ABW
MTQ
Country ISO

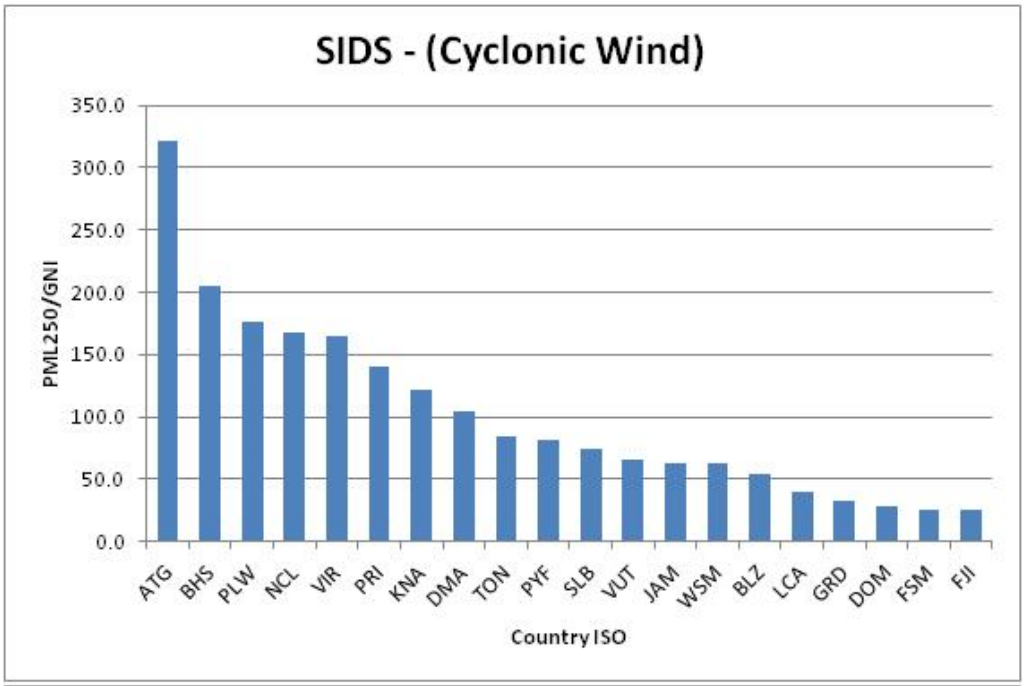

SIDS - (Cyclonic Wind)
AAL/GFCF
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
ATG
PRI
DMA
BHS
SLB
NCL
KNA
VUT
TON
FSM
JAM
BLZ
LCA
FJI
GRD
BRB
DOM
VCT
MUS
CUB
Country ISO

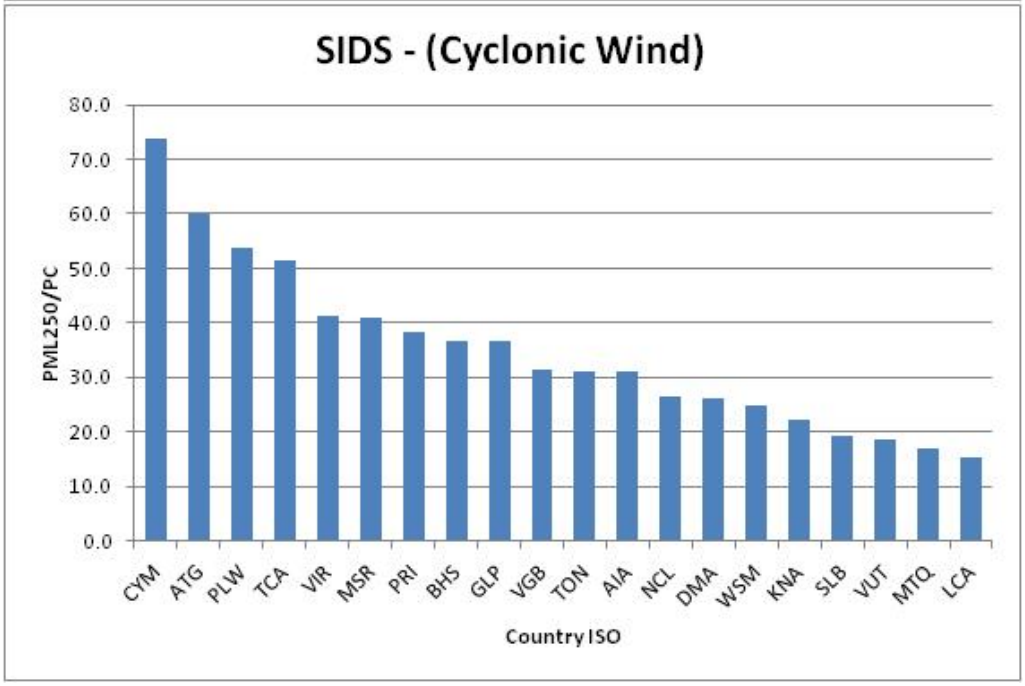

SIDS - (Cyclonic Wind)
AAL/GGC
1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
NCL
ATG
BHS
PRI
KNA
VUT
DMA
TON
PYF
JAM
SLB
BLZ
LCA
HTI
FJI
DOM
GRD
FSM
BRB
VCT
Country ISO


SIDS - (Cyclonic Wind)
AAL/GNE
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
ATG
BHS
NCL
PRI
KNA
PLW
VUT
DMA
TON
PYF
FSM
SLB
JAM
BLZ
WSM
LCA
FJI
GRD
DOM
BRB
Country ISO


SIDS - (Cyclonic Wind)
AAL/PC
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
CYM
ATG
TCA
BHS
VIR
VGB
MSR
PRI
PLW
TON
GLP
NCL
VUT
AIA
DMA
KNA
WSM
MTQ
LCA
BMU
Country ISO


SIDS - (Cyclonic Wind)
PML250/GDP
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
CYM
ATG
BHS
PLW
NCL
KNA
VIR
DMA
PRI
TON
PYF
SLB
VUT
WSM
JAM
BLZ
LCA
GRD
FSM
DOM
Country ISO


SIDS - (Cyclonic Wind)
PML250/GNI
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
ATG
BHS
PLW
NCL
VIR
PRI
KNA
DMA
TON
PYF
SLB
VUT
JAM
WSM
BLZ
LCA
GRD
DOM
FSM
FJI
Country ISO


SIDS - (Cyclonic Wind)
PML250/PC
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
CYM
ATG
PLW
TCA
VIR
MSR
PRI
BHS
GLP
VGB
TON
AIA
NCL
DMA
WSM
KNA
SLB
VUT
MTQ
LCA
Country ISO

Annex 23. Ranking of Risk Indicators for All Countries

The complete rankings for all risk indicators and all countries in the word are presented next.

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries (no SIDS)

Earthquake

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
GRC	Greece	Europe	no	1 181 283.00	5 109.11	27 154.95	188.15	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	4 539.50	148.90	2
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	7 693.87	91.20	3
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3 663.90	68.34	4
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	53 841.99	68.15	5
IRN	Iran	Asia	no	2 067 640.00	4 190.90	73 681.58	56.88	6
TJK	Tajikistan	Asia	no	20 536.86	64.44	1 199.63	53.72	7
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	26 312.88	47.46	8
GEO	Georgia	Asia	no	53 823.53	167.01	3 542.58	47.14	9
AFG	Afghanistan	Asia	no	60 187.87	146.81	3 601.40	40.76	10
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	65 444.15	36.62	11
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	92 724.40	33.86	12
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 068 884.62	29.80	13
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	2 207.36	28.36	14
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2 574.11	28.17	15
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	77 440.20	26.40	16
ITA	Italy	Europe	no	8 604 332.00	9 772.86	383 197.87	25.50	17
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	10 406.53	22.70	18
ARM	Armenia	Asia	no	22 895.19	45.24	2 183.10	20.72	19
SWZ	Swaziland	Africa	no	13 701.24	6.99	363.96	19.21	20
LSO	Lesotho	Africa	no	17 938.00	15.77	855.33	18.44	21
SYR	Syria	Asia	no	204 643.30	149.11	8 252.62	18.07	22
UZB	Uzbekistan	Asia	no	151 891.10	225.05	13 153.84	17.11	23
SVN	Slovenia	Europe	no	139 899.70	159.19	9 461.85	16.82	24
AZE	Azerbaijan	Asia	no	192 784.00	282.02	18 074.31	15.60	25
YEM	Yemen	Asia	no	79 113.56	45.87	3 126.31	14.67	26
DZA	Algeria	Africa	no	899 206.20	991.52	71 040.48	13.96	27
ALB	Albania	Europe	no	40 459.65	46.73	3 379.49	13.83	28
HRV	Croatia	Europe	no	188 113.70	152.79	11 171.45	13.68	29
ISL	Iceland	Europe	no	57 291.68	31.50	2 314.22	13.61	30
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	10 060.78	13.45	31
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	167 069.99	13.17	32
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	5 844.96	12.75	33
PHL	Philippines	Asia	no	566 948.60	703.46	55 644.78	12.64	34
MWI	Malawi	Africa	no	18 356.97	8.20	731.37	11.21	35
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	103 818.81	10.63	36
KWT	Kuwait	Asia	no	469 418.40	201.43	19 039.58	10.58	37
MKD	Macedonia	Europe	no	32 996.37	26.26	2 530.04	10.38	38
TUN	Tunisia	Africa	no	178 845.60	97.19	9 509.45	10.22	39
QAT	Qatar	Asia	no	624 817.70	152.90	15 282.42	10.00	40
MLT	Malta	Europe	no	36 990.21	13.32	1 333.61	9.99	41
LBN	Lebanon	Asia	no	207 723.70	119.65	12 363.32	9.68	42
BTN	Bhutan	Asia	no	11 083.66	7.98	842.11	9.48	43
DJI	Djibouti	Africa	no	4 744.66	2.95	317.86	9.28	44
PAK	Pakistan	Asia	no	502 344.30	272.05	30 125.80	9.03	45
ZAF	South Africa	Africa	no	1 282 854.00	601.24	67 780.45	8.87	46
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	88 386.66	8.52	47
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	49 121.75	7.88	48
BGR	Bulgaria	Europe	no	163 821.60	83.36	11 609.87	7.18	49
NPL	Nepal	Asia	no	53 996.57	29.50	4 356.14	6.77	50
ISR	Israel	Asia	no	853 829.30	381.32	56 565.68	6.74	51
CYP	Cyprus	Asia	no	71 610.53	28.55	4 260.93	6.70	52
RWA	Rwanda	Africa	no	13 197.39	12.68	1 920.52	6.60	53
BWA	Botswana	Africa	no	90 628.62	31.51	5 015.09	6.28	54
MNE	Montenegro	Europe	no	8 892.93	5.10	847.70	6.02	55
AUT	Austria	Europe	no	1 801 472.00	524.60	95 015.40	5.52	56
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	265 421.77	5.10	57
JOR	Jordan	Asia	no	121 481.20	46.25	9 168.09	5.04	58
MAR	Morroco	Africa	no	374 846.30	157.28	31 321.40	5.02	59
BDI	Burundi	Africa	no	3 616.17	3.87	780.29	4.96	60
CHE	Switzerland	Europe	no	3 421 606.00	786.78	160 510.43	4.90	61
EGY	Egypt	Africa	no	617 149.20	176.90	37 477.12	4.72	62
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	3 192.49	4.67	63
HUN	Hungary	Europe	no	562 479.60	123.20	26 595.35	4.63	64
USA	United States	Northern America	no	54 922 480.00	14 458.98	3 244 299.91	4.46	65
IRQ	Iraq	Asia	no	132 499.60	159.43	35 983.20	4.43	66
UGA	Uganda	Africa	no	43 697.09	22.14	5 121.46	4.32	67
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	274 943.80	4.06	68
SRB	Serbia	Europe	no	57 317.24	33.37	8 634.55	3.86	69
ZMB	Zambia	Africa	no	48 954.52	17.41	5 247.76	3.32	70
DEU	Germany	Europe	no	15 114 870.00	2 350.12	737 992.70	3.18	71
SVK	Slovakia	Europe	no	414 782.80	60.97	19 975.29	3.05	72
BGD	Bangladesh	Asia	no	381 431.90	126.46	42 581.72	2.97	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MOZ	Mozambique	Africa	no	36 409.45	7.91	2 723.39	2.90	74
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	52 070.81	2.88	75
SSD	South Sudan	Africa	no	19 958.30	3.90	1 399.32	2.79	76
ERI	Eritrea	Africa	no	9 081.79	0.71	260.73	2.72	77
OMN	Oman	Asia	no	202 533.60	43.37	17 256.96	2.51	78
TZA	Tanzania	Africa	no	50 142.79	26.08	10 658.54	2.45	79
BRN	Brunei	Asia	no	71 236.46	5.94	2 466.98	2.41	80
ZWE	Zimbawue	Africa	no	22 038.05	4.18	1 752.82	2.38	81
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	440 106.84	2.03	82
POL	Poland	Europe	no	1 614 716.00	188.81	98 972.34	1.91	83
CMR	Cameroon	Africa	no	81 683.73	9.88	5 736.52	1.72	84
BEL	Belgium	Europe	no	1 980 551.00	190.39	116 900.65	1.63	85
CHN	China	Asia	no	31 726 110.00	6 954.76	4 370 835.96	1.59	86
MDA	Moldova	Europe	no	33 762.68	2.83	1 821.11	1.55	87
LAO	Laos	Asia	no	21 925.62	5.03	3 279.79	1.53	88
NLD	Netherlands	Europe	no	3 410 955.00	237.82	155 739.98	1.53	89
CAF	Central African Republic	Africa	no	3 893.74	0.43	320.25	1.34	90
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 257.46	1.29	91
SOM	Somalia	Africa	no	6 408.32	0.16	136.64	1.17	92
TKM	Turkmenistan	Asia	no	36 127.02	19.25	16 597.51	1.16	93
KEN	Kenya	Africa	no	98 382.66	12.57	11 277.32	1.11	94
NAM	Namibia	Africa	no	42 062.66	3.39	3 368.79	1.01	95
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	173 661.86	0.94	96
IND	India	Asia	no	5 769 372.00	446.55	530 741.66	0.84	97
FRA	France	Europe	no	10 329 420.00	501.01	619 955.29	0.81	98
MNG	Mongolia	Asia	no	36 587.61	3.83	5 086.03	0.75	99
CAN	Canada	Northern America	no	6 291 917.00	294.11	433 369.09	0.68	100
RUS	Russia	Europe	no	6 325 795.00	296.92	450 238.87	0.66	101
NZL	New Zealand	Oceania	no	679 705.40	22.81	38 213.65	0.60	102
GIN	Guinea	Africa	no	13 665.89	0.45	919.65	0.49	103
GAB	Gabon	Africa	no	120 252.20	2.90	6 432.02	0.45	104
LBY	Libya	Africa	no	73 757.40	11.49	25 993.79	0.44	105
IRL	Ireland	Europe	no	778 821.60	12.72	35 221.45	0.36	106
MDG	Madagascar	Africa	no	23 496.42	0.58	1 666.80	0.35	107
THA	Thailand	Asia	no	1 378 999.00	32.56	103 523.57	0.31	108
ESP	Spain	Europe	no	6 233 955.00	72.48	257 993.28	0.28	109
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	9 099.23	0.28	110
NGA	Nigeria	Africa	no	592 030.40	20.64	75 511.10	0.27	111
UKR	Ukraine	Europe	no	676 833.60	8.67	32 236.10	0.27	112
GMB	The Gambia	Africa	no	2 097.61	0.05	187.47	0.27	113
AGO	Angola	Africa	no	176 182.50	4.60	18 242.56	0.25	114
LBR	Liberia	Africa	no	1 911.24	0.11	440.32	0.25	115
COG	Congo	Africa	no	69 047.72	0.99	4 329.13	0.23	116
PRT	Portugal	Europe	no	1 054 344.00	7.35	34 419.00	0.21	117
SEN	Senegal	Africa	no	35 335.24	0.79	3 706.12	0.21	118
ETH	Ethiopia	Africa	no	65 598.93	2.94	17 012.56	0.17	119
EST	Estonia	Europe	no	79 617.31	1.09	6 795.36	0.16	120
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	408 331.78	0.16	121
SLE	Sierra Leone	Africa	no	3 031.82	0.10	685.06	0.15	122
SDN	Sudan	Africa	no	70 368.78	1.89	13 307.19	0.14	123
MRT	Mauritania	Africa	no	11 985.52	0.22	1 578.96	0.14	124
AUS	Australia	Oceania	no	6 616 533.00	61.35	442 013.06	0.14	125
MYS	Malaysia	Asia	no	1 170 979.00	10.49	84 107.08	0.12	126
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	65 379.04	0.12	127
KOR	South Korea	Asia	no	5 538 605.00	45.48	386 884.93	0.12	128
LTU	Lithuania	Europe	no	135 613.80	0.85	7 517.23	0.11	129
BEN	Benin	Africa	no	21 971.91	0.23	2 182.62	0.11	130
TGO	Togo	Africa	no	12 513.67	0.07	685.82	0.10	131
VNM	Vietnam	Asia	no	487 574.40	3.95	40 823.56	0.10	132
NOR	Norway	Europe	no	1 933 679.00	10.36	116 071.15	0.09	133
MLI	Mali	Africa	no	27 719.15	0.15	1 684.06	0.09	134
LVA	Latvia	Europe	no	95 608.77	0.45	6 324.84	0.07	135
CIV	Ivory Coast	Africa	no	45 467.63	0.33	5 292.23	0.06	136
DNK	Denmark	Europe	no	1 346 393.00	3.01	61 547.69	0.05	137
TCD	Chad	Africa	no	26 745.14	0.17	3 701.42	0.05	138
SWE	Sweden	Europe	no	1 747 501.00	5.48	128 378.82	0.04	139
MAC	Macau	Asia	no	56 709.10	0.27	6 610.47	0.04	140
LKA	Sri Lanka	Asia	no	208 273.50	0.77	19 647.18	0.04	141
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	4 394.85	0.04	142
FIN	Finland	Europe	no	965 383.40	1.18	56 624.15	0.02	143
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 889.80	0.02	144
GHA	Ghana	Africa	no	74 174.05	0.09	10 912.64	0.01	145
BLR	Belarus	Europe	no	229 399.90	0.14	26 490.10	0.01	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	147
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	148
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	149
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	150
GIB	Gibraltar	Europe	no	4 042.19	2.53			151
LIE	Liechtenstein	Europe	no	18 837.10	9.80			152
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			153
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			154
ROU	Romania	Europe	no	555 697.40	255.64			155
FRO	Faroe Islands	Europe	no	9 272.37	0.00			156
SMR	San Marino	Europe	no	4 049.35	5.92			157
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			158
REU	Reunion	Africa	no	67 897.68	0.00			159
PSE	State of Palestine	Asia	no	69 454.30	26.75			160
MMR	Myanmar	Asia	no	195 390.10	35.57			161
MCO	Monaco	Europe	no	20 716.40	11.70			162
AND	Andorra	Europe	no	8 381.65	0.12			163
PRK	North Korea	Asia	no	77 982.15	10.88			164
MYT	Mayotte	Africa	no	6 949.04	1.79			165
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			166
ESH	Western Sahara	Africa	no	3 690.88	0.14			167
TUV	Tuvalu	Oceania	no	123.26	0.00			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	3 077.08	219.67	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	22 647.04	162.03	2
IRN	Iran	Asia	no	2 067 640.00	4 190.90	31 978.13	131.06	3
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	5 637.22	124.47	4
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	646.93	112.07	5
GRC	Greece	Europe	no	1 181 283.00	5 109.11	48 425.35	105.50	6
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	13 315.00	93.79	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	2 899.00	86.37	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	34 332.88	69.81	9
TJK	Tajikistan	Asia	no	20 536.86	64.44	998.87	64.51	10
GEO	Georgia	Asia	no	53 823.53	167.01	2 692.49	62.03	11
AFG	Afghanistan	Asia	no	60 187.87	146.81	2 492.12	58.91	12
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	63 198.81	49.68	13
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	1 306.25	47.92	14
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	46 486.26	43.98	15
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	3 793.90	35.68	16
AZE	Azerbaijan	Asia	no	192 784.00	282.02	8 252.01	34.18	17
ALB	Albania	Europe	no	40 459.65	46.73	1 381.39	33.83	18
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 012 070.61	31.48	19
ZMB	Zambia	Africa	no	48 954.52	17.41	568.19	30.64	20
SYR	Syria	Asia	no	204 643.30	149.11	4 971.97	29.99	21
ARM	Armenia	Asia	no	22 895.19	45.24	1 508.90	29.98	22
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	27 530.57	27.36	23
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	8 897.75	26.55	24
BTN	Bhutan	Asia	no	11 083.66	7.98	311.85	25.59	25
DZA	Algeria	Africa	no	899 206.20	991.52	39 734.87	24.95	26
ITA	Italy	Europe	no	8 604 332.00	9 772.86	417 993.98	23.38	27
PHL	Philippines	Asia	no	566 948.60	703.46	30 212.56	23.28	28
LBN	Lebanon	Asia	no	207 723.70	119.65	6 530.19	18.32	29
LSO	Lesotho	Africa	no	17 938.00	15.77	878.46	17.95	30
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	123 751.24	17.78	31
UZB	Uzbekistan	Asia	no	151 891.10	225.05	12 744.63	17.66	32
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	4 243.72	17.56	33
YEM	Yemen	Asia	no	79 113.56	45.87	2 625.09	17.47	34
BGD	Bangladesh	Asia	no	381 431.90	126.46	7 673.71	16.48	35
SVN	Slovenia	Europe	no	139 899.70	159.19	9 765.51	16.30	36
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	23 889.95	16.21	37
NPL	Nepal	Asia	no	53 996.57	29.50	1 917.21	15.39	38
MKD	Macedonia	Europe	no	32 996.37	26.26	1 787.08	14.69	39
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	79 076.93	14.11	40
DJI	Djibouti	Africa	no	4 744.66	2.95	212.95	13.85	41
HRV	Croatia	Europe	no	188 113.70	152.79	11 594.94	13.18	42
UGA	Uganda	Africa	no	43 697.09	22.14	1 787.04	12.39	43
RWA	Rwanda	Africa	no	13 197.39	12.68	1 065.41	11.90	44
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	94 570.07	11.67	45
TUN	Tunisia	Africa	no	178 845.60	97.19	8 918.25	10.90	46
BWA	Botswana	Africa	no	90 628.62	31.51	2 912.71	10.82	47
PAK	Pakistan	Asia	no	502 344.30	272.05	25 463.41	10.68	48
CHE	Switzerland	Europe	no	3 421 606.00	786.78	75 147.62	10.47	49
MWI	Malawi	Africa	no	18 356.97	8.20	818.79	10.01	50
SWZ	Swaziland	Africa	no	13 701.24	6.99	753.93	9.27	51
BGR	Bulgaria	Europe	no	163 821.60	83.36	8 993.34	9.27	52
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	149 707.18	9.05	53
ISL	Iceland	Europe	no	57 291.68	31.50	3 730.06	8.44	54
MAR	Morroco	Africa	no	374 846.30	157.28	19 696.51	7.99	55
ZAF	South Africa	Africa	no	1 282 854.00	601.24	77 967.19	7.71	56
MLT	Malta	Europe	no	36 990.21	13.32	1 879.07	7.09	57
JOR	Jordan	Asia	no	121 481.20	46.25	6 618.91	6.99	58
KWT	Kuwait	Asia	no	469 418.40	201.43	29 360.33	6.86	59
BDI	Burundi	Africa	no	3 616.17	3.87	599.64	6.45	60
CYP	Cyprus	Asia	no	71 610.53	28.55	4 557.62	6.26	61
QAT	Qatar	Asia	no	624 817.70	152.90	24 487.36	6.24	62
TKM	Turkmenistan	Asia	no	36 127.02	19.25	3 114.55	6.18	63
AUT	Austria	Europe	no	1 801 472.00	524.60	84 928.57	6.18	64
ISR	Israel	Asia	no	853 829.30	381.32	65 345.00	5.84	65
MNE	Montenegro	Europe	no	8 892.93	5.10	876.28	5.82	66
USA	United States	Northern America	no	54 922 480.00	14 458.98	2 547 499.93	5.68	67
EGY	Egypt	Africa	no	617 149.20	176.90	31 768.68	5.57	68
CHN	China	Asia	no	31 726 110.00	6 954.76	1 299 157.61	5.35	69
HUN	Hungary	Europe	no	562 479.60	123.20	26 544.35	4.64	70
SRB	Serbia	Europe	no	57 317.24	33.37	7 977.96	4.18	71
TZA	Tanzania	Africa	no	50 142.79	26.08	6 321.86	4.13	72
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	4 063.51	3.67	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	40 979.05	3.66	74
SVK	Slovakia	Europe	no	414 782.80	60.97	17 642.66	3.46	75
DEU	Germany	Europe	no	15 114 870.00	2 350.12	718 583.82	3.27	76
IRQ	Iraq	Asia	no	132 499.60	159.43	48 846.71	3.26	77
LAO	Laos	Asia	no	21 925.62	5.03	1 626.13	3.09	78
MNG	Mongolia	Asia	no	36 587.61	3.83	1 298.34	2.95	79
OMN	Oman	Asia	no	202 533.60	43.37	14 871.52	2.92	80
CMR	Cameroon	Africa	no	81 683.73	9.88	3 421.99	2.89	81
GAB	Gabon	Africa	no	120 252.20	2.90	1 026.90	2.82	82
CAF	Central African Republic	Africa	no	3 893.74	0.43	166.29	2.59	83
MOZ	Mozambique	Africa	no	36 409.45	7.91	3 190.27	2.48	84
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	1 036.62	2.44	85
IND	India	Asia	no	5 769 372.00	446.55	221 700.44	2.01	86
BRN	Brunei	Asia	no	71 236.46	5.94	2 950.69	2.01	87
POL	Poland	Europe	no	1 614 716.00	188.81	95 412.26	1.98	88
MDA	Moldova	Europe	no	33 762.68	2.83	1 618.04	1.75	89
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	542 121.89	1.64	90
KEN	Kenya	Africa	no	98 382.66	12.57	7 759.48	1.62	91
ZWE	Zimbawue	Africa	no	22 038.05	4.18	2 703.00	1.55	92
BEL	Belgium	Europe	no	1 980 551.00	190.39	128 131.48	1.49	93
SSD	South Sudan	Africa	no	19 958.30	3.90	2 720.34	1.43	94
LBY	Libya	Africa	no	73 757.40	11.49	8 664.60	1.33	95
ERI	Eritrea	Africa	no	9 081.79	0.71	549.64	1.29	96
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 391.43	1.28	97
SOM	Somalia	Africa	no	6 408.32	0.16	133.83	1.20	98
NLD	Netherlands	Europe	no	3 410 955.00	237.82	224 781.17	1.06	99
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	165 700.80	0.98	100
NAM	Namibia	Africa	no	42 062.66	3.39	3 617.67	0.94	101
GIN	Guinea	Africa	no	13 665.89	0.45	594.52	0.76	102
ETH	Ethiopia	Africa	no	65 598.93	2.94	3 941.08	0.75	103
CAN	Canada	Northern America	no	6 291 917.00	294.11	395 958.78	0.74	104
GMB	The Gambia	Africa	no	2 097.61	0.05	67.53	0.74	105
FRA	France	Europe	no	10 329 420.00	501.01	677 049.47	0.74	106
RUS	Russia	Europe	no	6 325 795.00	296.92	409 820.63	0.72	107
NZL	New Zealand	Oceania	no	679 705.40	22.81	34 691.31	0.66	108
MDG	Madagascar	Africa	no	23 496.42	0.58	915.01	0.63	109
THA	Thailand	Asia	no	1 378 999.00	32.56	53 487.73	0.61	110
COG	Congo	Africa	no	69 047.72	0.99	1 908.75	0.52	111
NGA	Nigeria	Africa	no	592 030.40	20.64	42 180.53	0.49	112
LBR	Liberia	Africa	no	1 911.24	0.11	268.18	0.41	113
SDN	Sudan	Africa	no	70 368.78	1.89	5 000.18	0.38	114
VNM	Vietnam	Asia	no	487 574.40	3.95	10 550.52	0.37	115
SEN	Senegal	Africa	no	35 335.24	0.79	2 289.33	0.35	116
IRL	Ireland	Europe	no	778 821.60	12.72	40 563.02	0.31	117
MRT	Mauritania	Africa	no	11 985.52	0.22	706.94	0.31	118
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	25 520.99	0.31	119
ESP	Spain	Europe	no	6 233 955.00	72.48	271 148.52	0.27	120
UKR	Ukraine	Europe	no	676 833.60	8.67	34 350.49	0.25	121
MYS	Malaysia	Asia	no	1 170 979.00	10.49	42 433.27	0.25	122
BEN	Benin	Africa	no	21 971.91	0.23	934.54	0.25	123
KOR	South Korea	Asia	no	5 538 605.00	45.48	194 728.35	0.23	124
SLE	Sierra Leone	Africa	no	3 031.82	0.10	428.35	0.23	125
EST	Estonia	Europe	no	79 617.31	1.09	4 754.17	0.23	126
AUS	Australia	Oceania	no	6 616 533.00	61.35	276 915.26	0.22	127
TGO	Togo	Africa	no	12 513.67	0.07	359.57	0.19	128
AGO	Angola	Africa	no	176 182.50	4.60	24 725.13	0.19	129
PRT	Portugal	Europe	no	1 054 344.00	7.35	43 081.93	0.17	130
TCD	Chad	Africa	no	26 745.14	0.17	1 026.17	0.17	131
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	493 431.00	0.13	132
MLI	Mali	Africa	no	27 719.15	0.15	1 172.08	0.13	133
CIV	Ivory Coast	Africa	no	45 467.63	0.33	2 613.28	0.13	134
LTU	Lithuania	Europe	no	135 613.80	0.85	8 076.66	0.11	135
LVA	Latvia	Europe	no	95 608.77	0.45	4 413.54	0.10	136
NOR	Norway	Europe	no	1 933 679.00	10.36	112 012.76	0.09	137
LKA	Sri Lanka	Asia	no	208 273.50	0.77	8 808.70	0.09	138
MAC	Macau	Asia	no	56 709.10	0.27	3 378.13	0.08	139
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	3 496.64	0.05	140
SWE	Sweden	Europe	no	1 747 501.00	5.48	151 944.31	0.04	141
DNK	Denmark	Europe	no	1 346 393.00	3.01	89 732.55	0.03	142
FIN	Finland	Europe	no	965 383.40	1.18	66 675.15	0.02	143
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 951.39	0.02	144
BLR	Belarus	Europe	no	229 399.90	0.14	10 166.04	0.01	145
GHA	Ghana	Africa	no	74 174.05	0.09	8 003.31	0.01	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	147
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	148
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	149
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	150
GIB	Gibraltar	Europe	no	4 042.19	2.53			151
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			152
AND	Andorra	Europe	no	8 381.65	0.12			153
ROU	Romania	Europe	no	555 697.40	255.64			154
MYT	Mayotte	Africa	no	6 949.04	1.79			155
SMR	San Marino	Europe	no	4 049.35	5.92			156
LIE	Liechtenstein	Europe	no	18 837.10	9.80			157
FRO	Faroe Islands	Europe	no	9 272.37	0.00			158
REU	Reunion	Africa	no	67 897.68	0.00			159
TUV	Tuvalu	Oceania	no	123.26	0.00			160
PRK	North Korea	Asia	no	77 982.15	10.88			161
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			162
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			163
MCO	Monaco	Europe	no	20 716.40	11.70			164
ESH	Western Sahara	Africa	no	3 690.88	0.14			165
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			166
PSE	State of Palestine	Asia	no	69 454.30	26.75			167
MMR	Myanmar	Asia	no	195 390.10	35.57			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	22 559.82	29.96	1
GRC	Greece	Europe	no	1 181 283.00	5 109.11	249 410.75	20.48	2
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	204 179.29	17.97	3
IRN	Iran	Asia	no	2 067 640.00	4 190.90	255 619.28	16.40	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	96 787.63	12.90	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	59 883.48	11.72	6
GEO	Georgia	Asia	no	53 823.53	167.01	18 230.53	9.16	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	28 969.70	8.64	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	278 153.13	8.62	9
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	387 419.05	8.10	10
JPN	Japan	Asia	no	39 255 200.00	31 857.11	5 059 261.76	6.30	11
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	10 749.10	5.82	12
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	12 562.44	5.77	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	373 895.14	5.47	14
TJK	Tajikistan	Asia	no	20 536.86	64.44	12 690.19	5.08	15
AFG	Afghanistan	Asia	no	60 187.87	146.81	29 010.12	5.06	16
AZE	Azerbaijan	Asia	no	192 784.00	282.02	57 484.51	4.91	17
DZA	Algeria	Africa	no	899 206.20	991.52	204 165.74	4.86	18
ITA	Italy	Europe	no	8 604 332.00	9 772.86	2 100 502.86	4.65	19
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	51 412.23	4.60	20
LSO	Lesotho	Africa	no	17 938.00	15.77	3 740.58	4.22	21
UZB	Uzbekistan	Asia	no	151 891.10	225.05	59 039.46	3.81	22
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	36 126.55	3.75	23
SYR	Syria	Asia	no	204 643.30	149.11	40 077.56	3.72	24
BTN	Bhutan	Asia	no	11 083.66	7.98	2 173.58	3.67	25
ARM	Armenia	Asia	no	22 895.19	45.24	12 628.86	3.58	26
SVN	Slovenia	Europe	no	139 899.70	159.19	45 103.27	3.53	27
ALB	Albania	Europe	no	40 459.65	46.73	15 227.71	3.07	28
DJI	Djibouti	Africa	no	4 744.66	2.95	1 018.02	2.90	29
HRV	Croatia	Europe	no	188 113.70	152.79	57 600.31	2.65	30
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	28 469.09	2.62	31
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	876 064.28	2.51	32
PHL	Philippines	Asia	no	566 948.60	703.46	283 131.84	2.48	33
YEM	Yemen	Asia	no	79 113.56	45.87	18 997.54	2.41	34
LBN	Lebanon	Asia	no	207 723.70	119.65	50 384.63	2.37	35
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	318 951.13	2.36	36
ISL	Iceland	Europe	no	57 291.68	31.50	14 052.90	2.24	37
MKD	Macedonia	Europe	no	32 996.37	26.26	12 119.46	2.17	38
KWT	Kuwait	Asia	no	469 418.40	201.43	96 682.69	2.08	39
BWA	Botswana	Africa	no	90 628.62	31.51	15 490.96	2.03	40
TUN	Tunisia	Africa	no	178 845.60	97.19	51 302.58	1.89	41
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	205 086.26	1.89	42
MWI	Malawi	Africa	no	18 356.97	8.20	4 366.74	1.88	43
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	611 844.88	1.80	44
SWZ	Swaziland	Africa	no	13 701.24	6.99	3 944.56	1.77	45
ZAF	South Africa	Africa	no	1 282 854.00	601.24	360 489.06	1.67	46
QAT	Qatar	Asia	no	624 817.70	152.90	91 904.94	1.66	47
BGR	Bulgaria	Europe	no	163 821.60	83.36	54 795.79	1.52	48
MLT	Malta	Europe	no	36 990.21	13.32	8 864.05	1.50	49
RWA	Rwanda	Africa	no	13 197.39	12.68	8 767.59	1.45	50
MAR	Morroco	Africa	no	374 846.30	157.28	117 556.24	1.34	51
ISR	Israel	Asia	no	853 829.30	381.32	286 558.36	1.33	52
CHE	Switzerland	Europe	no	3 421 606.00	786.78	602 400.29	1.31	53
AUT	Austria	Europe	no	1 801 472.00	524.60	413 112.76	1.27	54
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	885 677.23	1.26	55
NPL	Nepal	Asia	no	53 996.57	29.50	24 466.26	1.21	56
CYP	Cyprus	Asia	no	71 610.53	28.55	24 622.91	1.16	57
BDI	Burundi	Africa	no	3 616.17	3.87	3 443.34	1.12	58
PAK	Pakistan	Asia	no	502 344.30	272.05	247 867.95	1.10	59
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	1 269 259.96	1.07	60
JOR	Jordan	Asia	no	121 481.20	46.25	43 390.10	1.07	61
HUN	Hungary	Europe	no	562 479.60	123.20	123 292.26	1.00	62
MNE	Montenegro	Europe	no	8 892.93	5.10	5 312.54	0.96	63
UGA	Uganda	Africa	no	43 697.09	22.14	23 933.64	0.93	64
USA	United States	Northern America	no	54 922 480.00	14 458.98	17 276 300.43	0.84	65
BGD	Bangladesh	Asia	no	381 431.90	126.46	160 820.74	0.79	66
CHN	China	Asia	no	31 726 110.00	6 954.76	9 003 382.87	0.77	67
TKM	Turkmenistan	Asia	no	36 127.02	19.25	25 014.09	0.77	68
OMN	Oman	Asia	no	202 533.60	43.37	56 792.46	0.76	69
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	196 764.65	0.76	70
IRQ	Iraq	Asia	no	132 499.60	159.43	226 497.10	0.70	71
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	21 616.92	0.69	72
DEU	Germany	Europe	no	15 114 870.00	2 350.12	3 513 506.86	0.67	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
TZA	Tanzania	Africa	no	50 142.79	26.08	39 205.30	0.67	74
ZMB	Zambia	Africa	no	48 954.52	17.41	26 244.17	0.66	75
SRB	Serbia	Europe	no	57 317.24	33.37	50 611.94	0.66	76
BRN	Brunei	Asia	no	71 236.46	5.94	9 075.14	0.65	77
SVK	Slovakia	Europe	no	414 782.80	60.97	93 274.32	0.65	78
EGY	Egypt	Africa	no	617 149.20	176.90	291 083.68	0.61	79
MOZ	Mozambique	Africa	no	36 409.45	7.91	17 220.44	0.46	80
LAO	Laos	Asia	no	21 925.62	5.03	12 246.45	0.41	81
BEL	Belgium	Europe	no	1 980 551.00	190.39	517 763.60	0.37	82
POL	Poland	Europe	no	1 614 716.00	188.81	515 943.50	0.37	83
LUX	Luxembourg	Europe	no	201 130.60	13.27	38 962.95	0.34	84
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	2 728 637.76	0.33	85
NLD	Netherlands	Europe	no	3 410 955.00	237.82	765 364.08	0.31	86
CMR	Cameroon	Africa	no	81 683.73	9.88	32 007.42	0.31	87
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	590 125.33	0.28	88
MNG	Mongolia	Asia	no	36 587.61	3.83	14 036.94	0.27	89
SSD	South Sudan	Africa	no	19 958.30	3.90	14 712.88	0.27	90
MDA	Moldova	Europe	no	33 762.68	2.83	10 971.97	0.26	91
ERI	Eritrea	Africa	no	9 081.79	0.71	2 836.63	0.25	92
ZWE	Zimbawue	Africa	no	22 038.05	4.18	17 196.10	0.24	93
IND	India	Asia	no	5 769 372.00	446.55	1 944 284.82	0.23	94
NAM	Namibia	Africa	no	42 062.66	3.39	15 480.83	0.22	95
LBY	Libya	Africa	no	73 757.40	11.49	55 976.41	0.21	96
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	12 451.63	0.20	97
KEN	Kenya	Africa	no	98 382.66	12.57	63 770.87	0.20	98
GAB	Gabon	Africa	no	120 252.20	2.90	14 724.33	0.20	99
CAF	Central African Republic	Africa	no	3 893.74	0.43	2 389.56	0.18	100
FRA	France	Europe	no	10 329 420.00	501.01	2 848 015.52	0.18	101
CAN	Canada	Northern America	no	6 291 917.00	294.11	1 857 561.03	0.16	102
RUS	Russia	Europe	no	6 325 795.00	296.92	1 973 571.68	0.15	103
SOM	Somalia	Africa	no	6 408.32	0.16	1 173.40	0.14	104
NZL	New Zealand	Oceania	no	679 705.40	22.81	182 403.61	0.13	105
THA	Thailand	Asia	no	1 378 999.00	32.56	374 528.18	0.09	106
COG	Congo	Africa	no	69 047.72	0.99	12 612.41	0.08	107
IRL	Ireland	Europe	no	778 821.60	12.72	183 798.12	0.07	108
GIN	Guinea	Africa	no	13 665.89	0.45	7 750.84	0.06	109
ESP	Spain	Europe	no	6 233 955.00	72.48	1 345 564.18	0.05	110
ETH	Ethiopia	Africa	no	65 598.93	2.94	55 403.13	0.05	111
MRT	Mauritania	Africa	no	11 985.52	0.22	4 169.52	0.05	112
GMB	The Gambia	Africa	no	2 097.61	0.05	1 029.01	0.05	113
MDG	Madagascar	Africa	no	23 496.42	0.58	11 984.82	0.05	114
UKR	Ukraine	Europe	no	676 833.60	8.67	192 523.67	0.05	115
EST	Estonia	Europe	no	79 617.31	1.09	24 664.81	0.04	116
SEN	Senegal	Africa	no	35 335.24	0.79	17 930.59	0.04	117
AGO	Angola	Africa	no	176 182.50	4.60	105 476.81	0.04	118
NGA	Nigeria	Africa	no	592 030.40	20.64	495 416.77	0.04	119
LBR	Liberia	Africa	no	1 911.24	0.11	2 724.73	0.04	120
AUS	Australia	Oceania	no	6 616 533.00	61.35	1 579 571.61	0.04	121
MYS	Malaysia	Asia	no	1 170 979.00	10.49	284 108.03	0.04	122
KOR	South Korea	Asia	no	5 538 605.00	45.48	1 238 504.83	0.04	123
PRT	Portugal	Europe	no	1 054 344.00	7.35	225 098.65	0.03	124
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	271 683.76	0.03	125
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	2 301 443.96	0.03	126
SDN	Sudan	Africa	no	70 368.78	1.89	70 927.03	0.03	127
VNM	Vietnam	Asia	no	487 574.40	3.95	164 388.68	0.02	128
BEN	Benin	Africa	no	21 971.91	0.23	9 572.30	0.02	129
SLE	Sierra Leone	Africa	no	3 031.82	0.10	4 191.60	0.02	130
NOR	Norway	Europe	no	1 933 679.00	10.36	457 625.37	0.02	131
LTU	Lithuania	Europe	no	135 613.80	0.85	43 719.88	0.02	132
TGO	Togo	Africa	no	12 513.67	0.07	4 390.62	0.02	133
LVA	Latvia	Europe	no	95 608.77	0.45	29 570.85	0.02	134
MLI	Mali	Africa	no	27 719.15	0.15	11 011.34	0.01	135
MAC	Macau	Asia	no	56 709.10	0.27	20 216.60	0.01	136
TCD	Chad	Africa	no	26 745.14	0.17	14 228.09	0.01	137
CIV	Ivory Coast	Africa	no	45 467.63	0.33	31 142.79	0.01	138
LKA	Sri Lanka	Asia	no	208 273.50	0.77	73 583.10	0.01	139
SWE	Sweden	Europe	no	1 747 501.00	5.48	551 152.52	0.01	140
DNK	Denmark	Europe	no	1 346 393.00	3.01	316 596.75	0.01	141
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	27 647.87	0.01	142
FIN	Finland	Europe	no	965 383.40	1.18	269 912.39	0.00	143
BFA	Burkina Faso	Africa	no	24 689.43	0.03	11 452.71	0.00	144
BLR	Belarus	Europe	no	229 399.90	0.14	73 747.80	0.00	145
GHA	Ghana	Africa	no	74 174.05	0.09	50 578.29	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	147
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	148
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	149
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	150
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			151
FRO	Faroe Islands	Europe	no	9 272.37	0.00			152
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			153
PRK	North Korea	Asia	no	77 982.15	10.88			154
TUV	Tuvalu	Oceania	no	123.26	0.00			155
SMR	San Marino	Europe	no	4 049.35	5.92			156
ROU	Romania	Europe	no	555 697.40	255.64			157
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			158
LIE	Liechtenstein	Europe	no	18 837.10	9.80			159
ESH	Western Sahara	Africa	no	3 690.88	0.14			160
MCO	Monaco	Europe	no	20 716.40	11.70			161
GIB	Gibraltar	Europe	no	4 042.19	2.53			162
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			163
PSE	State of Palestine	Asia	no	69 454.30	26.75			164
MMR	Myanmar	Asia	no	195 390.10	35.57			165
REU	Reunion	Africa	no	67 897.68	0.00			166
AND	Andorra	Europe	no	8 381.65	0.12			167
MYT	Mayotte	Africa	no	6 949.04	1.79			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	8.67	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	5.30	2
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	4.42	3
GRC	Greece	Europe	no	1 181 283.00	5 109.11	4.33	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	4.06	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3.50	6
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	3.39	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	3.32	8
TJK	Tajikistan	Asia	no	20 536.86	64.44	3.14	9
GEO	Georgia	Asia	no	53 823.53	167.01	3.10	10
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	3.06	11
AFG	Afghanistan	Asia	no	60 187.87	146.81	2.44	12
IRN	Iran	Asia	no	2 067 640.00	4 190.90	2.03	13
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2.02	14
ARM	Armenia	Asia	no	22 895.19	45.24	1.98	15
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	1.77	16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	1.68	17
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02	1.61	18
UZB	Uzbekistan	Asia	no	151 891.10	225.05	1.48	19
AZE	Azerbaijan	Asia	no	192 784.00	282.02	1.46	20
SMR	San Marino	Europe	no	4 049.35	5.92	1.46	21
PHL	Philippines	Asia	no	566 948.60	703.46	1.24	22
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	1.23	23
IRQ	Iraq	Asia	no	132 499.60	159.43	1.20	24
ALB	Albania	Europe	no	40 459.65	46.73	1.15	25
SVN	Slovenia	Europe	no	139 899.70	159.19	1.14	26
ITA	Italy	Europe	no	8 604 332.00	9 772.86	1.14	27
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	1.13	28
DZA	Algeria	Africa	no	899 206.20	991.52	1.10	29
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	1.09	30
BDI	Burundi	Africa	no	3 616.17	3.87	1.07	31
RWA	Rwanda	Africa	no	13 197.39	12.68	0.96	32
LSO	Lesotho	Africa	no	17 938.00	15.77	0.88	33
HRV	Croatia	Europe	no	188 113.70	152.79	0.81	34
JPN	Japan	Asia	no	39 255 200.00	31 857.11	0.81	35
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	0.80	36
MKD	Macedonia	Europe	no	32 996.37	26.26	0.80	37
SYR	Syria	Asia	no	204 643.30	149.11	0.73	38
BTN	Bhutan	Asia	no	11 083.66	7.98	0.72	39
GIB	Gibraltar	Europe	no	4 042.19	2.53	0.63	40
DJI	Djibouti	Africa	no	4 744.66	2.95	0.62	41
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	0.59	42
SRB	Serbia	Europe	no	57 317.24	33.37	0.58	43
YEM	Yemen	Asia	no	79 113.56	45.87	0.58	44
LBN	Lebanon	Asia	no	207 723.70	119.65	0.58	45
MNE	Montenegro	Europe	no	8 892.93	5.10	0.57	46
MCO	Monaco	Europe	no	20 716.40	11.70	0.56	47
ISL	Iceland	Europe	no	57 291.68	31.50	0.55	48
NPL	Nepal	Asia	no	53 996.57	29.50	0.55	49
TUN	Tunisia	Africa	no	178 845.60	97.19	0.54	50
PAK	Pakistan	Asia	no	502 344.30	272.05	0.54	51
TKM	Turkmenistan	Asia	no	36 127.02	19.25	0.53	52
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	0.53	53
LIE	Liechtenstein	Europe	no	18 837.10	9.80	0.52	54
TZA	Tanzania	Africa	no	50 142.79	26.08	0.52	55
SWZ	Swaziland	Africa	no	13 701.24	6.99	0.51	56
BGR	Bulgaria	Europe	no	163 821.60	83.36	0.51	57
UGA	Uganda	Africa	no	43 697.09	22.14	0.51	58
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	0.49	59
ZAF	South Africa	Africa	no	1 282 854.00	601.24	0.47	60
ROU	Romania	Europe	no	555 697.40	255.64	0.46	61
MWI	Malawi	Africa	no	18 356.97	8.20	0.45	62
ISR	Israel	Asia	no	853 829.30	381.32	0.45	63
KWT	Kuwait	Asia	no	469 418.40	201.43	0.43	64
MAR	Morroco	Africa	no	374 846.30	157.28	0.42	65
CYP	Cyprus	Asia	no	71 610.53	28.55	0.40	66
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	0.39	67
PSE	State of Palestine	Asia	no	69 454.30	26.75	0.39	68
JOR	Jordan	Asia	no	121 481.20	46.25	0.38	69
MLT	Malta	Europe	no	36 990.21	13.32	0.36	70
ZMB	Zambia	Africa	no	48 954.52	17.41	0.36	71
BWA	Botswana	Africa	no	90 628.62	31.51	0.35	72
BGD	Bangladesh	Asia	no	381 431.90	126.46	0.33	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	0.30	74
AUT	Austria	Europe	no	1 801 472.00	524.60	0.29	75
EGY	Egypt	Africa	no	617 149.20	176.90	0.29	76
USA	United States	Northern America	no	54 922 480.00	14 458.98	0.26	77
MYT	Mayotte	Africa	no	6 949.04	1.79	0.26	78
QAT	Qatar	Asia	no	624 817.70	152.90	0.24	79
CHE	Switzerland	Europe	no	3 421 606.00	786.78	0.23	80
LAO	Laos	Asia	no	21 925.62	5.03	0.23	81
CHN	China	Asia	no	31 726 110.00	6 954.76	0.22	82
HUN	Hungary	Europe	no	562 479.60	123.20	0.22	83
MOZ	Mozambique	Africa	no	36 409.45	7.91	0.22	84
OMN	Oman	Asia	no	202 533.60	43.37	0.21	85
SSD	South Sudan	Africa	no	19 958.30	3.90	0.20	86
ZWE	Zimbawue	Africa	no	22 038.05	4.18	0.19	87
MMR	Myanmar	Asia	no	195 390.10	35.57	0.18	88
LBY	Libya	Africa	no	73 757.40	11.49	0.16	89
DEU	Germany	Europe	no	15 114 870.00	2 350.12	0.16	90
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18	0.15	91
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	0.15	92
SVK	Slovakia	Europe	no	414 782.80	60.97	0.15	93
PRK	North Korea	Asia	no	77 982.15	10.88	0.14	94
KEN	Kenya	Africa	no	98 382.66	12.57	0.13	95
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	0.13	96
CMR	Cameroon	Africa	no	81 683.73	9.88	0.12	97
POL	Poland	Europe	no	1 614 716.00	188.81	0.12	98
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	0.11	99
CAF	Central African Republic	Africa	no	3 893.74	0.43	0.11	100
MNG	Mongolia	Asia	no	36 587.61	3.83	0.10	101
BEL	Belgium	Europe	no	1 980 551.00	190.39	0.10	102
MDA	Moldova	Europe	no	33 762.68	2.83	0.08	103
BRN	Brunei	Asia	no	71 236.46	5.94	0.08	104
NAM	Namibia	Africa	no	42 062.66	3.39	0.08	105
ERI	Eritrea	Africa	no	9 081.79	0.71	0.08	106
IND	India	Asia	no	5 769 372.00	446.55	0.08	107
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	0.08	108
NLD	Netherlands	Europe	no	3 410 955.00	237.82	0.07	109
LUX	Luxembourg	Europe	no	201 130.60	13.27	0.07	110
LBR	Liberia	Africa	no	1 911.24	0.11	0.06	111
FRA	France	Europe	no	10 329 420.00	501.01	0.05	112
RUS	Russia	Europe	no	6 325 795.00	296.92	0.05	113
CAN	Canada	Northern America	no	6 291 917.00	294.11	0.05	114
ETH	Ethiopia	Africa	no	65 598.93	2.94	0.04	115
ESH	Western Sahara	Africa	no	3 690.88	0.14	0.04	116
NGA	Nigeria	Africa	no	592 030.40	20.64	0.03	117
NZL	New Zealand	Oceania	no	679 705.40	22.81	0.03	118
SLE	Sierra Leone	Africa	no	3 031.82	0.10	0.03	119
GIN	Guinea	Africa	no	13 665.89	0.45	0.03	120
SDN	Sudan	Africa	no	70 368.78	1.89	0.03	121
AGO	Angola	Africa	no	176 182.50	4.60	0.03	122
SOM	Somalia	Africa	no	6 408.32	0.16	0.02	123
MDG	Madagascar	Africa	no	23 496.42	0.58	0.02	124
GAB	Gabon	Africa	no	120 252.20	2.90	0.02	125
GMB	The Gambia	Africa	no	2 097.61	0.05	0.02	126
THA	Thailand	Asia	no	1 378 999.00	32.56	0.02	127
SEN	Senegal	Africa	no	35 335.24	0.79	0.02	128
MRT	Mauritania	Africa	no	11 985.52	0.22	0.02	129
IRL	Ireland	Europe	no	778 821.60	12.72	0.02	130
COG	Congo	Africa	no	69 047.72	0.99	0.01	131
AND	Andorra	Europe	no	8 381.65	0.12	0.01	132
EST	Estonia	Europe	no	79 617.31	1.09	0.01	133
UKR	Ukraine	Europe	no	676 833.60	8.67	0.01	134
ESP	Spain	Europe	no	6 233 955.00	72.48	0.01	135
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18	0.01	136
BEN	Benin	Africa	no	21 971.91	0.23	0.01	137
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	0.01	138
AUS	Australia	Oceania	no	6 616 533.00	61.35	0.01	139
MYS	Malaysia	Asia	no	1 170 979.00	10.49	0.01	140
KOR	South Korea	Asia	no	5 538 605.00	45.48	0.01	141
VNM	Vietnam	Asia	no	487 574.40	3.95	0.01	142
CIV	Ivory Coast	Africa	no	45 467.63	0.33	0.01	143
PRT	Portugal	Europe	no	1 054 344.00	7.35	0.01	144
TCD	Chad	Africa	no	26 745.14	0.17	0.01	145
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	0.01	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
LTU	Lithuania	Europe	no	135 613.80	0.85	0.01	147
TGO	Togo	Africa	no	12 513.67	0.07	0.01	148
MLI	Mali	Africa	no	27 719.15	0.15	0.01	149
NOR	Norway	Europe	no	1 933 679.00	10.36	0.01	150
MAC	Macau	Asia	no	56 709.10	0.27	0.00	151
LVA	Latvia	Europe	no	95 608.77	0.45	0.00	152
LKA	Sri Lanka	Asia	no	208 273.50	0.77	0.00	153
SWE	Sweden	Europe	no	1 747 501.00	5.48	0.00	154
DNK	Denmark	Europe	no	1 346 393.00	3.01	0.00	155
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	0.00	156
FIN	Finland	Europe	no	965 383.40	1.18	0.00	157
BFA	Burkina Faso	Africa	no	24 689.43	0.03	0.00	158
GHA	Ghana	Africa	no	74 174.05	0.09	0.00	159
BLR	Belarus	Europe	no	229 399.90	0.14	0.00	160
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	161
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	162
NER	Niger	Africa	no	12 723.49	0.00	0.00	163
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	164
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	165
FRO	Faroe Islands	Europe	no	9 272.37	0.00	0.00	166
REU	Reunion	Africa	no	67 897.68	0.00	0.00	167
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	4 872.83	26.27	1
GRC	Greece	Europe	no	1 181 283.00	242 230.33	42 370.12	17.49	2
GEO	Georgia	Asia	no	53 823.53	16 140.05	2 068.79	12.82	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	11 412.80	12.08	4
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	22 235.81	10.99	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	2 283.57	9.41	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	34 146.74	9.02	7
BTN	Bhutan	Asia	no	11 083.66	1 781.26	148.27	8.32	8
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30	581.64	8.05	9
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	4 239.25	7.88	10
LSO	Lesotho	Africa	no	17 938.00	2 334.99	177.78	7.61	11
TJK	Tajikistan	Asia	no	20 536.86	8 508.10	542.87	6.38	12
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	307 551.60	6.25	13
IRN	Iran	Asia	no	2 067 640.00	368 904.34	22 842.17	6.19	14
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	16 700.24	6.02	15
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	614.50	5.46	16
SYR	Syria	Asia	no	204 643.30	40 405.00	2 122.14	5.25	17
AFG	Afghanistan	Asia	no	60 187.87	20 309.67	1 037.97	5.11	18
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	2 498.80	5.04	19
ARM	Armenia	Asia	no	22 895.19	10 432.17	515.39	4.94	20
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	20 878.94	4.76	21
SVN	Slovenia	Europe	no	139 899.70	47 987.30	2 273.95	4.74	22
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	96 882.93	4.51	23
SMR	San Marino	Europe	no	4 049.35	1 899.81	81.57	4.29	24
DZA	Algeria	Africa	no	899 206.20	210 183.41	8 893.15	4.23	25
LBN	Lebanon	Asia	no	207 723.70	44 352.42	1 723.55	3.89	26
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48	2 763.64	3.76	27
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66	2 102.92	3.70	28
DJI	Djibouti	Africa	no	4 744.66	1 456.34	52.99	3.64	29
MWI	Malawi	Africa	no	18 356.97	3 705.39	128.66	3.47	30
ISL	Iceland	Europe	no	57 291.68	15 330.06	497.40	3.24	31
TUN	Tunisia	Africa	no	178 845.60	46 993.60	1 503.01	3.20	32
ALB	Albania	Europe	no	40 459.65	12 923.24	413.11	3.20	33
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	1 354.94	3.18	34
NPL	Nepal	Asia	no	53 996.57	19 294.35	586.14	3.04	35
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16	912.25	2.98	36
HRV	Croatia	Europe	no	188 113.70	57 868.67	1 716.00	2.97	37
PHL	Philippines	Asia	no	566 948.60	272 066.56	7 614.45	2.80	38
MKD	Macedonia	Europe	no	32 996.37	10 195.40	264.54	2.59	39
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	7 858.85	2.24	40
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28	5 064.06	2.18	41
MAR	Morroco	Africa	no	374 846.30	103 835.71	2 168.47	2.09	42
RWA	Rwanda	Africa	no	13 197.39	7 521.26	153.12	2.04	43
BWA	Botswana	Africa	no	90 628.62	14 784.71	299.30	2.02	44
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	15 897.64	1.93	45
CYP	Cyprus	Asia	no	71 610.53	21 911.45	409.25	1.87	46
BDI	Burundi	Africa	no	3 616.17	2 714.51	49.09	1.81	47
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17	85.68	1.78	48
BGR	Bulgaria	Europe	no	163 821.60	54 479.87	960.68	1.76	49
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	10 602.51	1.74	50
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	2 593.90	1.73	51
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	6 907.72	1.72	52
PAK	Pakistan	Asia	no	502 344.30	232 286.78	3 925.04	1.69	53
SWZ	Swaziland	Africa	no	13 701.24	3 791.30	62.11	1.64	54
JOR	Jordan	Asia	no	121 481.20	33 678.50	532.27	1.58	55
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	13 637.63	1.57	56
ISR	Israel	Asia	no	853 829.30	290 550.61	4 479.75	1.54	57
AUT	Austria	Europe	no	1 801 472.00	428 321.90	6 545.42	1.53	58
MCO	Monaco	Europe	no	20 716.40	6 074.51	88.07	1.45	59
UGA	Uganda	Africa	no	43 697.09	21 493.61	295.21	1.37	60
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21	9 049.37	1.32	61
YEM	Yemen	Asia	no	79 113.56	35 954.50	468.21	1.30	62
MLT	Malta	Europe	no	36 990.21	9 642.33	122.14	1.27	63
TZA	Tanzania	Africa	no	50 142.79	33 225.04	362.98	1.09	64
MNE	Montenegro	Europe	no	8 892.93	4 416.08	47.64	1.08	65
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	36 237.72	0.97	66
HUN	Hungary	Europe	no	562 479.60	133 423.90	1 247.39	0.93	67
ZMB	Zambia	Africa	no	48 954.52	26 820.87	247.05	0.92	68
SRB	Serbia	Europe	no	57 317.24	45 519.65	418.44	0.92	69
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33	152.19	0.85	70
LAO	Laos	Asia	no	21 925.62	11 242.53	76.70	0.68	71
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	8 506.37	0.67	72
IRQ	Iraq	Asia	no	132 499.60	229 327.29	1 536.84	0.67	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	17 405.72	0.65	74
EGY	Egypt	Africa	no	617 149.20	271 972.83	1 711.53	0.63	75
KWT	Kuwait	Asia	no	469 418.40	175 830.50	1 063.19	0.60	76
SSD	South Sudan	Africa	no	19 958.30	11 804.41	67.69	0.57	77
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88	237.13	0.57	78
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02	1 164.94	0.56	79
BEL	Belgium	Europe	no	1 980 551.00	524 805.54	2 861.98	0.55	80
SVK	Slovakia	Europe	no	414 782.80	97 707.33	522.66	0.53	81
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	83.61	0.53	82
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	4 270.60	0.50	83
CMR	Cameroon	Africa	no	81 683.73	29 567.50	139.47	0.47	84
POL	Poland	Europe	no	1 614 716.00	525 865.98	2 429.79	0.46	85
MDA	Moldova	Europe	no	33 762.68	7 969.62	35.68	0.45	86
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	53.91	0.40	87
MNG	Mongolia	Asia	no	36 587.61	11 516.41	44.63	0.39	88
CAF	Central African Republic	Africa	no	3 893.74	1 538.18	5.91	0.38	89
NAM	Namibia	Africa	no	42 062.66	13 113.07	48.56	0.37	90
OMN	Oman	Asia	no	202 533.60	79 655.92	273.56	0.34	91
QAT	Qatar	Asia	no	624 817.70	203 235.16	655.30	0.32	92
BRN	Brunei	Asia	no	71 236.46	16 111.14	48.75	0.30	93
FRA	France	Europe	no	10 329 420.00	2 806 427.94	6 665.54	0.24	94
GAB	Gabon	Africa	no	120 252.20	19 343.51	45.66	0.24	95
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	4 121.51	0.23	96
LUX	Luxembourg	Europe	no	201 130.60	60 130.85	126.81	0.21	97
KEN	Kenya	Africa	no	98 382.66	55 243.06	116.19	0.21	98
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	365.46	0.20	99
SOM	Somalia	Africa	no	6 408.32	917.04	1.79	0.20	100
ERI	Eritrea	Africa	no	9 081.79	3 444.10	6.68	0.19	101
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	29.83	0.19	102
LBY	Libya	Africa	no	73 757.40	74 199.53	136.26	0.18	103
IND	India	Asia	no	5 769 372.00	1 876 797.16	2 773.38	0.15	104
THA	Thailand	Asia	no	1 378 999.00	387 252.16	545.84	0.14	105
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	106
IRL	Ireland	Europe	no	778 821.60	232 077.43	304.01	0.13	107
COG	Congo	Africa	no	69 047.72	14 085.85	18.12	0.13	108
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	2 624.86	0.13	109
GIN	Guinea	Africa	no	13 665.89	6 144.13	7.32	0.12	110
MRT	Mauritania	Africa	no	11 985.52	4 158.18	4.25	0.10	111
GMB	The Gambia	Africa	no	2 097.61	903.50	0.89	0.10	112
CHN	China	Asia	no	31 726 110.00	9 240 270.86	8 625.80	0.09	113
SEN	Senegal	Africa	no	35 335.24	14 791.70	13.78	0.09	114
ETH	Ethiopia	Africa	no	65 598.93	47 525.19	42.45	0.09	115
UKR	Ukraine	Europe	no	676 833.60	177 430.61	123.46	0.07	116
NGA	Nigeria	Africa	no	592 030.40	521 803.30	333.43	0.06	117
MDG	Madagascar	Africa	no	23 496.42	10 613.49	6.15	0.06	118
AGO	Angola	Africa	no	176 182.50	124 178.24	67.98	0.05	119
LBR	Liberia	Africa	no	1 911.24	1 950.96	1.01	0.05	120
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	134.26	0.05	121
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	682.02	0.05	122
EST	Estonia	Europe	no	79 617.31	24 880.27	12.00	0.05	123
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	1 059.24	0.05	124
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	1.72	0.04	125
BEN	Benin	Africa	no	21 971.91	8 307.22	3.42	0.04	126
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	126.51	0.04	127
LTU	Lithuania	Europe	no	135 613.80	45 931.97	17.92	0.04	128
LVA	Latvia	Europe	no	95 608.77	30 956.69	11.76	0.04	129
NOR	Norway	Europe	no	1 933 679.00	512 580.42	163.36	0.03	130
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	460.80	0.03	131
MLI	Mali	Africa	no	27 719.15	10 942.73	3.17	0.03	132
TCD	Chad	Africa	no	26 745.14	13 513.55	3.87	0.03	133
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	57.20	0.03	134
SDN	Sudan	Africa	no	70 368.78	66 565.89	15.99	0.02	135
AND	Andorra	Europe	no	8 381.65	2 849.17	0.64	0.02	136
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	289.14	0.02	137
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	6.71	0.02	138
VNM	Vietnam	Asia	no	487 574.40	171 390.01	29.82	0.02	139
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	48.91	0.01	140
SWE	Sweden	Europe	no	1 747 501.00	579 680.01	63.12	0.01	141
MAC	Macau	Asia	no	56 709.10	51 753.10	5.15	0.01	142
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	1 056.66	0.01	143
BLR	Belarus	Europe	no	229 399.90	71 709.52	2.95	0.00	144
FIN	Finland	Europe	no	965 383.40	267 328.62	10.63	0.00	145
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56	0.33	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41	0.75	0.00	147
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.05	0.00	148
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.95	0.00	149
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.43	0.00	150
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.03	0.00	151
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	152
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	153
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	154
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	155
NER	Niger	Africa	no	12 723.49	7 407.42	0.00	0.00	156
PRK	North Korea	Asia	no	77 982.15				157
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				158
TWN	Taiwan	Asia	no	1 680 401.00				159
MYT	Mayotte	Africa	no	6 949.04				160
ROU	Romania	Europe	no	555 697.40				161
GIB	Gibraltar	Europe	no	4 042.19				162
ESH	Western Sahara	Africa	no	3 690.88				163
COD	Democratic Republic of the Congo	Africa	no	27 401.97				164
MMR	Myanmar	Asia	no	195 390.10				165
PSE	State of Palestine	Asia	no	69 454.30				166
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				167
REU	Reunion	Africa	no	67 897.68				168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	4 872.83	28.27	1
GRC	Greece	Europe	no	1 181 283.00	242 155.98	42 370.12	17.50	2
GEO	Georgia	Asia	no	53 823.53	15 835.00	2 068.79	13.06	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	11 412.80	12.27	4
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	22 235.81	11.60	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	2 283.57	9.75	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	34 146.74	9.38	7
BTN	Bhutan	Asia	no	11 083.66	1 665.34	148.27	8.90	8
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86	581.64	8.39	9
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	4 239.25	8.07	10
DJI	Djibouti	Africa	no	4 744.66	775.82	52.99	6.83	11
TJK	Tajikistan	Asia	no	20 536.86	8 457.87	542.87	6.42	12
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	16 700.24	6.28	13
LSO	Lesotho	Africa	no	17 938.00	2 861.49	177.78	6.21	14
IRN	Iran	Asia	no	2 067 640.00	369 271.87	22 842.17	6.19	15
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	307 551.60	6.03	16
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	614.50	5.62	17
SYR	Syria	Asia	no	204 643.30	39 715.80	2 122.14	5.34	18
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	2 498.80	5.15	19
AFG	Afghanistan	Asia	no	60 187.87	20 450.66	1 037.97	5.08	20
SMR	San Marino	Europe	no	4 049.35	1 681.06	81.57	4.85	21
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	20 878.94	4.84	22
SVN	Slovenia	Europe	no	139 899.70	47 633.96	2 273.95	4.77	23
ARM	Armenia	Asia	no	22 895.19	10 972.97	515.39	4.70	24
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	96 882.93	4.51	25
DZA	Algeria	Africa	no	899 206.20	206 267.88	8 893.15	4.31	26
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41	2 763.64	3.98	27
LBN	Lebanon	Asia	no	207 723.70	44 926.34	1 723.55	3.84	28
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38	2 102.92	3.62	29
MWI	Malawi	Africa	no	18 356.97	3 574.19	128.66	3.60	30
TUN	Tunisia	Africa	no	178 845.60	44 799.78	1 503.01	3.35	31
ISL	Iceland	Europe	no	57 291.68	15 047.05	497.40	3.31	32
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	1 354.94	3.20	33
ALB	Albania	Europe	no	40 459.65	12 951.12	413.11	3.19	34
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34	912.25	3.18	35
HRV	Croatia	Europe	no	188 113.70	56 412.38	1 716.00	3.04	36
NPL	Nepal	Asia	no	53 996.57	19 443.42	586.14	3.01	37
MKD	Macedonia	Europe	no	32 996.37	10 110.99	264.54	2.62	38
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82	5 064.06	2.45	39
PHL	Philippines	Asia	no	566 948.60	326 316.43	7 614.45	2.33	40
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	7 858.85	2.29	41
MAR	Morroco	Africa	no	374 846.30	100 965.44	2 168.47	2.15	42
RWA	Rwanda	Africa	no	13 197.39	7 406.89	153.12	2.07	43
BWA	Botswana	Africa	no	90 628.62	14 678.53	299.30	2.04	44
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	15 897.64	1.96	45
CYP	Cyprus	Asia	no	71 610.53	21 453.80	409.25	1.91	46
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	6 907.72	1.85	47
BGR	Bulgaria	Europe	no	163 821.60	52 675.80	960.68	1.82	48
BDI	Burundi	Africa	no	3 616.17	2 713.09	49.09	1.81	49
SWZ	Swaziland	Africa	no	13 701.24	3 434.79	62.11	1.81	50
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82	85.68	1.78	51
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	10 602.51	1.77	52
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	13 637.63	1.62	53
PAK	Pakistan	Asia	no	502 344.30	244 280.84	3 925.04	1.61	54
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	2 593.90	1.60	55
JOR	Jordan	Asia	no	121 481.20	33 339.06	532.27	1.60	56
ISR	Israel	Asia	no	853 829.30	284 226.45	4 479.75	1.58	57
AUT	Austria	Europe	no	1 801 472.00	427 916.46	6 545.42	1.53	58
MLT	Malta	Europe	no	36 990.21	8 946.39	122.14	1.37	59
YEM	Yemen	Asia	no	79 113.56	34 721.48	468.21	1.35	60
UGA	Uganda	Africa	no	43 697.09	22 316.73	295.21	1.32	61
MCO	Monaco	Europe	no	20 716.40	6 919.24	88.07	1.27	62
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49	9 049.37	1.26	63
TZA	Tanzania	Africa	no	50 142.79	33 033.24	362.98	1.10	64
MNE	Montenegro	Europe	no	8 892.93	4 503.08	47.64	1.06	65
HUN	Hungary	Europe	no	562 479.60	129 554.20	1 247.39	0.96	66
SRB	Serbia	Europe	no	57 317.24	43 641.10	418.44	0.96	67
ZMB	Zambia	Africa	no	48 954.52	26 049.97	247.05	0.95	68
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	36 237.72	0.95	69
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73	152.19	0.84	70
LAO	Laos	Asia	no	21 925.62	10 602.76	76.70	0.72	71
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	8 506.37	0.69	72
IRQ	Iraq	Asia	no	132 499.60	229 027.28	1 536.84	0.67	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	17 405.72	0.65	74
EGY	Egypt	Africa	no	617 149.20	264 562.52	1 711.53	0.65	75
KWT	Kuwait	Asia	no	469 418.40	165 127.08	1 063.19	0.64	76
SSD	South Sudan	Africa	no	19 958.30	10 791.19	67.69	0.63	77
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54	237.13	0.61	78
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47	1 164.94	0.60	79
BEL	Belgium	Europe	no	1 980 551.00	519 519.14	2 861.98	0.55	80
SVK	Slovakia	Europe	no	414 782.80	95 768.45	522.66	0.55	81
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	83.61	0.54	82
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	4 270.60	0.50	83
CMR	Cameroon	Africa	no	81 683.73	28 948.12	139.47	0.48	84
POL	Poland	Europe	no	1 614 716.00	506 714.23	2 429.79	0.48	85
BRN	Brunei	Asia	no	71 236.46	10 784.47	48.75	0.45	86
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	53.91	0.43	87
MNG	Mongolia	Asia	no	36 587.61	10 751.45	44.63	0.42	88
MDA	Moldova	Europe	no	33 762.68	8 846.50	35.68	0.40	89
CAF	Central African Republic	Africa	no	3 893.74	1 537.09	5.91	0.38	90
NAM	Namibia	Africa	no	42 062.66	12 989.72	48.56	0.37	91
QAT	Qatar	Asia	no	624 817.70	190 319.79	655.30	0.34	92
LUX	Luxembourg	Europe	no	201 130.60	38 189.94	126.81	0.33	93
OMN	Oman	Asia	no	202 533.60	90 220.81	273.56	0.30	94
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	29.83	0.28	95
GAB	Gabon	Africa	no	120 252.20	17 298.19	45.66	0.26	96
FRA	France	Europe	no	10 329 420.00	2 855 136.13	6 665.54	0.23	97
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	4 121.51	0.23	98
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	365.46	0.22	99
LBY	Libya	Africa	no	73 757.40	61 985.45	136.26	0.22	100
SOM	Somalia	Africa	no	6 408.32	834.95	1.79	0.21	101
KEN	Kenya	Africa	no	98 382.66	54 934.72	116.19	0.21	102
ERI	Eritrea	Africa	no	9 081.79	3 412.88	6.68	0.20	103
COG	Congo	Africa	no	69 047.72	11 049.89	18.12	0.16	104
IRL	Ireland	Europe	no	778 821.60	197 446.98	304.01	0.15	105
THA	Thailand	Asia	no	1 378 999.00	361 245.34	545.84	0.15	106
IND	India	Asia	no	5 769 372.00	1 855 591.42	2 773.38	0.15	107
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	108
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	2 624.86	0.13	109
GIN	Guinea	Africa	no	13 665.89	5 696.70	7.32	0.13	110
MRT	Mauritania	Africa	no	11 985.52	3 892.41	4.25	0.11	111
GMB	The Gambia	Africa	no	2 097.61	875.76	0.89	0.10	112
SEN	Senegal	Africa	no	35 335.24	14 606.22	13.78	0.09	113
CHN	China	Asia	no	31 726 110.00	9 196 167.76	8 625.80	0.09	114
ETH	Ethiopia	Africa	no	65 598.93	47 418.40	42.45	0.09	115
UKR	Ukraine	Europe	no	676 833.60	180 979.14	123.46	0.07	116
NGA	Nigeria	Africa	no	592 030.40	499 041.44	333.43	0.07	117
AGO	Angola	Africa	no	176 182.50	112 289.11	67.98	0.06	118
MDG	Madagascar	Africa	no	23 496.42	10 279.21	6.15	0.06	119
LBR	Liberia	Africa	no	1 911.24	1 751.03	1.01	0.06	120
EST	Estonia	Europe	no	79 617.31	24 010.33	12.00	0.05	121
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	682.02	0.05	122
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	1 059.24	0.05	123
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	134.26	0.05	124
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	126.51	0.04	125
BEN	Benin	Africa	no	21 971.91	8 247.34	3.42	0.04	126
LTU	Lithuania	Europe	no	135 613.80	44 274.32	17.92	0.04	127
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	1.72	0.04	128
LVA	Latvia	Europe	no	95 608.77	30 883.23	11.76	0.04	129
NOR	Norway	Europe	no	1 933 679.00	520 892.58	163.36	0.03	130
MLI	Mali	Africa	no	27 719.15	10 272.74	3.17	0.03	131
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	460.80	0.03	132
TCD	Chad	Africa	no	26 745.14	12 987.28	3.87	0.03	133
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	57.20	0.03	134
AND	Andorra	Europe	no	8 381.65	2 539.76	0.64	0.03	135
SDN	Sudan	Africa	no	70 368.78	63 769.45	15.99	0.03	136
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	6.71	0.02	137
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	289.14	0.02	138
VNM	Vietnam	Asia	no	487 574.40	164 181.67	29.82	0.02	139
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	48.91	0.01	140
MAC	Macau	Asia	no	56 709.10	37 762.88	5.15	0.01	141
SWE	Sweden	Europe	no	1 747 501.00	599 333.40	63.12	0.01	142
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	1 056.66	0.01	143
BLR	Belarus	Europe	no	229 399.90	69 000.62	2.95	0.00	144
FIN	Finland	Europe	no	965 383.40	268 134.55	10.63	0.00	145
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53	0.33	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36	0.75	0.00	147
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.05	0.00	148
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.95	0.00	149
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.43	0.00	150
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.03	0.00	151
NER	Niger	Africa	no	12 723.49	7 223.22	0.00	0.00	152
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	153
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	154
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	155
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	156
COD	Democratic Republic of the Congo	Africa	no	27 401.97				157
GIB	Gibraltar	Europe	no	4 042.19				158
REU	Reunion	Africa	no	67 897.68				159
MMR	Myanmar	Asia	no	195 390.10				160
TWN	Taiwan	Asia	no	1 680 401.00				161
PRK	North Korea	Asia	no	77 982.15				162
MYT	Mayotte	Africa	no	6 949.04				163
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				164
ESH	Western Sahara	Africa	no	3 690.88				165
PSE	State of Palestine	Asia	no	69 454.30				166
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				167
ROU	Romania	Europe	no	555 697.40				168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
HND	Honduras	Latin America and the Caribbean	no	77 974.77	4 872.83	6.25	1
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	11 412.80	4.04	2
GEO	Georgia	Asia	no	53 823.53	2 068.79	3.84	3
COL	Colombia	Latin America and the Caribbean	no	944 576.90	34 146.74	3.62	4
GRC	Greece	Europe	no	1 181 283.00	42 370.12	3.59	5
PER	Peru	Latin America and the Caribbean	no	692 344.50	22 235.81	3.21	6
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	2 283.57	3.19	7
KGZ	Kyrgizstan	Asia	no	18 466.60	581.64	3.15	8
TJK	Tajikistan	Asia	no	20 536.86	542.87	2.64	9
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	4 239.25	2.45	10
ARM	Armenia	Asia	no	22 895.19	515.39	2.25	11
CHL	Chile	Latin America and the Caribbean	no	784 154.10	16 700.24	2.13	12
SMR	San Marino	Europe	no	4 049.35	81.57	2.01	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	20 878.94	1.81	14
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	2 498.80	1.78	15
AFG	Afghanistan	Asia	no	60 187.87	1 037.97	1.72	16
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	614.50	1.71	17
SVN	Slovenia	Europe	no	139 899.70	2 273.95	1.63	18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	912.25	1.51	19
TWN	Taiwan	Asia	no	1 680 401.00	24 722.79	1.47	20
AZE	Azerbaijan	Asia	no	192 784.00	2 763.64	1.43	21
UZB	Uzbekistan	Asia	no	151 891.10	2 102.92	1.38	22
BDI	Burundi	Africa	no	3 616.17	49.09	1.36	23
PHL	Philippines	Asia	no	566 948.60	7 614.45	1.34	24
BTN	Bhutan	Asia	no	11 083.66	148.27	1.34	25
RWA	Rwanda	Africa	no	13 197.39	153.12	1.16	26
IRQ	Iraq	Asia	no	132 499.60	1 536.84	1.16	27
ITA	Italy	Europe	no	8 604 332.00	96 882.93	1.13	28
DJI	Djibouti	Africa	no	4 744.66	52.99	1.12	29
IRN	Iran	Asia	no	2 067 640.00	22 842.17	1.10	30
PAN	Panama	Latin America and the Caribbean	no	124 686.60	1 354.94	1.09	31
NPL	Nepal	Asia	no	53 996.57	586.14	1.09	32
SYR	Syria	Asia	no	204 643.30	2 122.14	1.04	33
ALB	Albania	Europe	no	40 459.65	413.11	1.02	34
LSO	Lesotho	Africa	no	17 938.00	177.78	0.99	35
DZA	Algeria	Africa	no	899 206.20	8 893.15	0.99	36
HRV	Croatia	Europe	no	188 113.70	1 716.00	0.91	37
ISL	Iceland	Europe	no	57 291.68	497.40	0.87	38
TUN	Tunisia	Africa	no	178 845.60	1 503.01	0.84	39
LBN	Lebanon	Asia	no	207 723.70	1 723.55	0.83	40
TUR	Turkey	Asia	no	1 947 249.00	15 897.64	0.82	41
MKD	Macedonia	Europe	no	32 996.37	264.54	0.80	42
JPN	Japan	Asia	no	39 255 200.00	307 551.60	0.78	43
PAK	Pakistan	Asia	no	502 344.30	3 925.04	0.78	44
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	10 602.51	0.77	45
SRB	Serbia	Europe	no	57 317.24	418.44	0.73	46
TZA	Tanzania	Africa	no	50 142.79	362.98	0.72	47
MWI	Malawi	Africa	no	18 356.97	128.66	0.70	48
KAZ	Kazakhstan	Asia	no	734 309.90	5 064.06	0.69	49
BGD	Bangladesh	Asia	no	381 431.90	2 593.90	0.68	50
UGA	Uganda	Africa	no	43 697.09	295.21	0.68	51
TKM	Turkmenistan	Asia	no	36 127.02	237.13	0.66	52
ROU	Romania	Europe	no	555 697.40	3 551.71	0.64	53
ZAF	South Africa	Africa	no	1 282 854.00	7 858.85	0.61	54
YEM	Yemen	Asia	no	79 113.56	468.21	0.59	55
BGR	Bulgaria	Europe	no	163 821.60	960.68	0.59	56
MAR	Morroco	Africa	no	374 846.30	2 168.47	0.58	57
CYP	Cyprus	Asia	no	71 610.53	409.25	0.57	58
GIB	Gibraltar	Europe	no	4 042.19	22.62	0.56	59
ARE	United Arab Emirates	Asia	no	1 282 119.00	6 907.72	0.54	60
MNE	Montenegro	Europe	no	8 892.93	47.64	0.54	61
ISR	Israel	Asia	no	853 829.30	4 479.75	0.52	62
ZMB	Zambia	Africa	no	48 954.52	247.05	0.50	63
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	152.19	0.50	64
IDN	Indonesia	Asia	no	2 827 835.00	13 637.63	0.48	65
LIE	Liechtenstein	Europe	no	18 837.10	85.68	0.45	66
SWZ	Swaziland	Africa	no	13 701.24	62.11	0.45	67
JOR	Jordan	Asia	no	121 481.20	532.27	0.44	68
MCO	Monaco	Europe	no	20 716.40	88.07	0.43	69
PSE	State of Palestine	Asia	no	69 454.30	265.67	0.38	70
AUT	Austria	Europe	no	1 801 472.00	6 545.42	0.36	71
LAO	Laos	Asia	no	21 925.62	76.70	0.35	72
SSD	South Sudan	Africa	no	19 958.30	67.69	0.34	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
BWA	Botswana	Africa	no	90 628.62	299.30	0.33	74
MLT	Malta	Europe	no	36 990.21	122.14	0.33	75
MMR	Myanmar	Asia	no	195 390.10	595.51	0.30	76
EGY	Egypt	Africa	no	617 149.20	1 711.53	0.28	77
CHE	Switzerland	Europe	no	3 421 606.00	9 049.37	0.26	78
ZWE	Zimbawue	Africa	no	22 038.05	53.91	0.24	79
DEU	Germany	Europe	no	15 114 870.00	36 237.72	0.24	80
MOZ	Mozambique	Africa	no	36 409.45	83.61	0.23	81
KWT	Kuwait	Asia	no	469 418.40	1 063.19	0.23	82
GBR	United Kingdom	Europe	no	7 806 797.00	17 405.72	0.22	83
HUN	Hungary	Europe	no	562 479.60	1 247.39	0.22	84
COD	Democratic Republic of the Congo	Africa	no	27 401.97	59.85	0.22	85
PRK	North Korea	Asia	no	77 982.15	159.46	0.20	86
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	8 506.37	0.19	87
LBY	Libya	Africa	no	73 757.40	136.26	0.18	88
CMR	Cameroon	Africa	no	81 683.73	139.47	0.17	89
CAF	Central African Republic	Africa	no	3 893.74	5.91	0.15	90
POL	Poland	Europe	no	1 614 716.00	2 429.79	0.15	91
GNQ	Equatorial Guinea	Africa	no	20 061.44	29.83	0.15	92
BEL	Belgium	Europe	no	1 980 551.00	2 861.98	0.14	93
OMN	Oman	Asia	no	202 533.60	273.56	0.14	94
SVK	Slovakia	Europe	no	414 782.80	522.66	0.13	95
NLD	Netherlands	Europe	no	3 410 955.00	4 270.60	0.13	96
MNG	Mongolia	Asia	no	36 587.61	44.63	0.12	97
KEN	Kenya	Africa	no	98 382.66	116.19	0.12	98
CZE	Czech Republic	Europe	no	1 007 263.00	1 164.94	0.12	99
NAM	Namibia	Africa	no	42 062.66	48.56	0.12	100
MYT	Mayotte	Africa	no	6 949.04	8.01	0.12	101
MDA	Moldova	Europe	no	33 762.68	35.68	0.11	102
QAT	Qatar	Asia	no	624 817.70	655.30	0.10	103
ERI	Eritrea	Africa	no	9 081.79	6.68	0.07	104
BRN	Brunei	Asia	no	71 236.46	48.75	0.07	105
ESH	Western Sahara	Africa	no	3 690.88	2.48	0.07	106
CAN	Canada	Northern America	no	6 291 917.00	4 121.51	0.07	107
ETH	Ethiopia	Africa	no	65 598.93	42.45	0.06	108
FRA	France	Europe	no	10 329 420.00	6 665.54	0.06	109
LUX	Luxembourg	Europe	no	201 130.60	126.81	0.06	110
SLE	Sierra Leone	Africa	no	3 031.82	1.72	0.06	111
NGA	Nigeria	Africa	no	592 030.40	333.43	0.06	112
NZL	New Zealand	Oceania	no	679 705.40	365.46	0.05	113
GIN	Guinea	Africa	no	13 665.89	7.32	0.05	114
LBR	Liberia	Africa	no	1 911.24	1.01	0.05	115
IND	India	Asia	no	5 769 372.00	2 773.38	0.05	116
SAU	Saudi Arabia	Asia	no	2 141 419.00	1 020.87	0.05	117
GMB	The Gambia	Africa	no	2 097.61	0.89	0.04	118
RUS	Russia	Europe	no	6 325 795.00	2 624.86	0.04	119
THA	Thailand	Asia	no	1 378 999.00	545.84	0.04	120
IRL	Ireland	Europe	no	778 821.60	304.01	0.04	121
SEN	Senegal	Africa	no	35 335.24	13.78	0.04	122
AGO	Angola	Africa	no	176 182.50	67.98	0.04	123
GAB	Gabon	Africa	no	120 252.20	45.66	0.04	124
MRT	Mauritania	Africa	no	11 985.52	4.25	0.04	125
SOM	Somalia	Africa	no	6 408.32	1.79	0.03	126
CHN	China	Asia	no	31 726 110.00	8 625.80	0.03	127
COG	Congo	Africa	no	69 047.72	18.12	0.03	128
MDG	Madagascar	Africa	no	23 496.42	6.15	0.03	129
SDN	Sudan	Africa	no	70 368.78	15.99	0.02	130
UKR	Ukraine	Europe	no	676 833.60	123.46	0.02	131
BEN	Benin	Africa	no	21 971.91	3.42	0.02	132
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	1 059.24	0.02	133
EST	Estonia	Europe	no	79 617.31	12.00	0.02	134
CIV	Ivory Coast	Africa	no	45 467.63	6.71	0.01	135
TCD	Chad	Africa	no	26 745.14	3.87	0.01	136
LTU	Lithuania	Europe	no	135 613.80	17.92	0.01	137
LVA	Latvia	Europe	no	95 608.77	11.76	0.01	138
MLI	Mali	Africa	no	27 719.15	3.17	0.01	139
ESP	Spain	Europe	no	6 233 955.00	682.02	0.01	140
MYS	Malaysia	Asia	no	1 170 979.00	126.51	0.01	141
HKG	Hong Kong	Asia	no	1 250 063.00	134.26	0.01	142
MAC	Macau	Asia	no	56 709.10	5.15	0.01	143
NOR	Norway	Europe	no	1 933 679.00	163.36	0.01	144
AND	Andorra	Europe	no	8 381.65	0.64	0.01	145
AUS	Australia	Oceania	no	6 616 533.00	460.80	0.01	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
VNM	Vietnam	Asia	no	487 574.40	29.82	0.01	147
PRT	Portugal	Europe	no	1 054 344.00	57.20	0.01	148
KOR	South Korea	Asia	no	5 538 605.00	289.14	0.01	149
DNK	Denmark	Europe	no	1 346 393.00	48.91	0.00	150
SWE	Sweden	Europe	no	1 747 501.00	63.12	0.00	151
USA	United States	Northern America	no	54 922 480.00	1 056.66	0.00	152
BFA	Burkina Faso	Africa	no	24 689.43	0.33	0.00	153
BLR	Belarus	Europe	no	229 399.90	2.95	0.00	154
GHA	Ghana	Africa	no	74 174.05	0.95	0.00	155
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.21	0.00	156
FIN	Finland	Europe	no	965 383.40	10.63	0.00	157
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.75	0.00	158
FRO	Faroe Islands	Europe	no	9 272.37	0.05	0.00	159
LKA	Sri Lanka	Asia	no	208 273.50	0.43	0.00	160
KHM	Cambodia	Asia	no	27 390.49	0.03	0.00	161
TGO	Togo	Africa	no	12 513.67	0.00	0.00	162
NER	Niger	Africa	no	12 723.49	0.00	0.00	163
REU	Reunion	Africa	no	67 897.68	0.00	0.00	164
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	165
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	166
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	167
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	168

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries (no SIDS)

Tropical Cyclone Wind

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	1 666.80	116.74	1
PHL	Philippines	Asia	no	566 948.60	4 071.51	55 644.78	73.17	2
MOZ	Mozambique	Africa	no	36 409.45	38.72	2 723.39	14.22	3
BGD	Bangladesh	Asia	no	381 431.90	465.85	42 581.72	10.94	4
USA	United States	Northern America	no	54 922 480.00	19 778.35	3 244 299.91	6.10	5
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	4 539.50	4.62	6
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 068 884.62	4.24	7
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	265 421.77	2.31	8
IND	India	Asia	no	5 769 372.00	1 160.44	530 741.66	2.19	9
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	65 379.04	1.74	10
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	2 574.11	0.98	11
VNM	Vietnam	Asia	no	487 574.40	35.14	40 823.56	0.86	12
OMN	Oman	Asia	no	202 533.60	8.97	17 256.96	0.52	13
MAC	Macau	Asia	no	56 709.10	2.18	6 610.47	0.33	14
AUS	Australia	Oceania	no	6 616 533.00	129.23	442 013.06	0.29	15
CHN	China	Asia	no	31 726 110.00	1 271.05	4 370 835.96	0.29	16
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	77 440.20	0.28	17
PAK	Pakistan	Asia	no	502 344.30	7.50	30 125.80	0.25	18
CAN	Canada	Northern America	no	6 291 917.00	97.47	433 369.09	0.22	19
KOR	South Korea	Asia	no	5 538 605.00	64.15	386 884.93	0.17	20
LAO	Laos	Asia	no	21 925.62	0.35	3 279.79	0.11	21
LKA	Sri Lanka	Asia	no	208 273.50	1.70	19 647.18	0.09	22
IRL	Ireland	Europe	no	778 821.60	2.84	35 221.45	0.08	23
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	10 406.53	0.08	24
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	7 693.87	0.06	25
ZWE	Zimbawue	Africa	no	22 038.05	0.06	1 752.82	0.03	26
NZL	New Zealand	Oceania	no	679 705.40	1.05	38 213.65	0.03	27
MWI	Malawi	Africa	no	18 356.97	0.01	731.37	0.01	28
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	92 724.40	0.01	29
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	10 060.78	0.01	30
PRT	Portugal	Europe	no	1 054 344.00	0.23	34 419.00	0.01	31
RUS	Russia	Europe	no	6 325 795.00	2.01	450 238.87	0.00	32
KHM	Cambodia	Asia	no	27 390.49	0.01	2 753.57	0.00	33
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	440 106.84	0.00	34
IDN	Indonesia	Asia	no	2 827 835.00	0.49	274 943.80	0.00	35
FRA	France	Europe	no	10 329 420.00	0.80	619 955.29	0.00	36
THA	Thailand	Asia	no	1 378 999.00	0.02	103 523.57	0.00	37
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	49 121.75	0.00	38
ISR	Israel	Asia	no	853 829.30	0.00	56 565.68	0.00	39
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 257.46	0.00	40
UKR	Ukraine	Europe	no	676 833.60	0.00	32 236.10	0.00	41
ESP	Spain	Europe	no	6 233 955.00	0.00	257 993.28	0.00	42
ITA	Italy	Europe	no	8 604 332.00	0.00	383 197.87	0.00	43
LTU	Lithuania	Europe	no	135 613.80	0.00	7 517.23	0.00	44
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	45
CHE	Switzerland	Europe	no	3 421 606.00	0.00	160 510.43	0.00	46
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	47
TUR	Turkey	Asia	no	1 947 249.00	0.00	167 069.99	0.00	48
HUN	Hungary	Europe	no	562 479.60	0.00	26 595.35	0.00	49
AUT	Austria	Europe	no	1 801 472.00	0.00	95 015.40	0.00	50
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	51
SRB	Serbia	Europe	no	57 317.24	0.00	8 634.55	0.00	52
LBY	Libya	Africa	no	73 757.40	0.00	25 993.79	0.00	53
CYP	Cyprus	Asia	no	71 610.53	0.00	4 260.93	0.00	54
ARM	Armenia	Asia	no	22 895.19	0.00	2 183.10	0.00	55
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	56
AZE	Azerbaijan	Asia	no	192 784.00	0.00	18 074.31	0.00	57
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	52 070.81	0.00	58
GRC	Greece	Europe	no	1 181 283.00	0.00	27 154.95	0.00	59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	408 331.78	0.00	60
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	53 841.99	0.00	61
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	62
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	65 444.15	0.00	63
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	64
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	88 386.66	0.00	65
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	66
KWT	Kuwait	Asia	no	469 418.40	0.00	19 039.58	0.00	67
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	26 312.88	0.00	68
SYR	Syria	Asia	no	204 643.30	0.00	8 252.62	0.00	69
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	70
LBN	Lebanon	Asia	no	207 723.70	0.00	12 363.32	0.00	71
SSD	South Sudan	Africa	no	19 958.30	0.00	1 399.32	0.00	72
SWZ	Swaziland	Africa	no	13 701.24	0.00	363.96	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MYS	Malaysia	Asia	no	1 170 979.00	0.00	84 107.08	0.00	74
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	75
BGR	Bulgaria	Europe	no	163 821.60	0.00	11 609.87	0.00	76
EST	Estonia	Europe	no	79 617.31	0.00	6 795.36	0.00	77
FIN	Finland	Europe	no	965 383.40	0.00	56 624.15	0.00	78
GEO	Georgia	Asia	no	53 823.53	0.00	3 542.58	0.00	79
ISL	Iceland	Europe	no	57 291.68	0.00	2 314.22	0.00	80
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	2 207.36	0.00	81
LVA	Latvia	Europe	no	95 608.77	0.00	6 324.84	0.00	82
MKD	Macedonia	Europe	no	32 996.37	0.00	2 530.04	0.00	83
BLR	Belarus	Europe	no	229 399.90	0.00	26 490.10	0.00	84
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	85
SVK	Slovakia	Europe	no	414 782.80	0.00	19 975.29	0.00	86
SWE	Sweden	Europe	no	1 747 501.00	0.00	128 378.82	0.00	87
ZAF	South Africa	Africa	no	1 282 854.00	0.00	67 780.45	0.00	88
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	103 818.81	0.00	89
ALB	Albania	Europe	no	40 459.65	0.00	3 379.49	0.00	90
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	91
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	92
MAR	Morroco	Africa	no	374 846.30	0.00	31 321.40	0.00	93
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	94
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	95
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	96
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	97
TUN	Tunisia	Africa	no	178 845.60	0.00	9 509.45	0.00	98
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	99
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	100
BWA	Botswana	Africa	no	90 628.62	0.00	5 015.09	0.00	101
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	102
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	103
MLI	Mali	Africa	no	27 719.15	0.00	1 684.06	0.00	104
BDI	Burundi	Africa	no	3 616.17	0.00	780.29	0.00	105
NAM	Namibia	Africa	no	42 062.66	0.00	3 368.79	0.00	106
SDN	Sudan	Africa	no	70 368.78	0.00	13 307.19	0.00	107
ZMB	Zambia	Africa	no	48 954.52	0.00	5 247.76	0.00	108
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	109
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	110
RWA	Rwanda	Africa	no	13 197.39	0.00	1 920.52	0.00	111
SEN	Senegal	Africa	no	35 335.24	0.00	3 706.12	0.00	112
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	113
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	114
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	115
TCD	Chad	Africa	no	26 745.14	0.00	3 701.42	0.00	116
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	117
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	118
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 889.80	0.00	119
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	120
AFG	Afghanistan	Asia	no	60 187.87	0.00	3 601.40	0.00	121
NPL	Nepal	Asia	no	53 996.57	0.00	4 356.14	0.00	122
MNG	Mongolia	Asia	no	36 587.61	0.00	5 086.03	0.00	123
IRN	Iran	Asia	no	2 067 640.00	0.00	73 681.58	0.00	124
TJK	Tajikistan	Asia	no	20 536.86	0.00	1 199.63	0.00	125
BTN	Bhutan	Asia	no	11 083.66	0.00	842.11	0.00	126
UZB	Uzbekistan	Asia	no	151 891.10	0.00	13 153.84	0.00	127
TKM	Turkmenistan	Asia	no	36 127.02	0.00	16 597.51	0.00	128
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	3 663.90	0.00	129
DZA	Algeria	Africa	no	899 206.20	0.00	71 040.48	0.00	130
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	131
QAT	Qatar	Asia	no	624 817.70	0.00	15 282.42	0.00	132
EGY	Egypt	Africa	no	617 149.20	0.00	37 477.12	0.00	133
LSO	Lesotho	Africa	no	17 938.00	0.00	855.33	0.00	134
IRQ	Iraq	Asia	no	132 499.60	0.00	35 983.20	0.00	135
CAF	Central African Republic	Africa	no	3 893.74	0.00	320.25	0.00	136
ETH	Ethiopia	Africa	no	65 598.93	0.00	17 012.56	0.00	137
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	138
MLT	Malta	Europe	no	36 990.21	0.00	1 333.61	0.00	139
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	140
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	141
UGA	Uganda	Africa	no	43 697.09	0.00	5 121.46	0.00	142
MDA	Moldova	Europe	no	33 762.68	0.00	1 821.11	0.00	143
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	144
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	145
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	4 394.85	0.00	147
POL	Poland	Europe	no	1 614 716.00	0.00	98 972.34	0.00	148
BRN	Brunei	Asia	no	71 236.46	0.00	2 466.98	0.00	149
PRK	North Korea	Asia	no	77 982.15	0.11			150
MMR	Myanmar	Asia	no	195 390.10	41.76			151
TUV	Tuvalu	Oceania	no	123.26	0.00			152
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			153
SMR	San Marino	Europe	no	4 049.35	0.00			154
AND	Andorra	Europe	no	8 381.65	0.00			155
MCO	Monaco	Europe	no	20 716.40	0.00			156
MYT	Mayotte	Africa	no	6 949.04	36.31			157
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			158
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		159
FRO	Faroe Islands	Europe	no	9 272.37	1.13			160
ROU	Romania	Europe	no	555 697.40	0.00			161
GIB	Gibraltar	Europe	no	4 042.19	0.00			162
REU	Reunion	Africa	no	67 897.68	114.65			163
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			164
PSE	State of Palestine	Asia	no	69 454.30	0.00			165
ESH	Western Sahara	Africa	no	3 690.88	0.00			166
LIE	Liechtenstein	Europe	no	18 837.10	0.00			167
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	915.01	212.65	1
PHL	Philippines	Asia	no	566 948.60	4 071.51	30 212.56	134.76	2
BGD	Bangladesh	Asia	no	381 431.90	465.85	7 673.71	60.71	3
MOZ	Mozambique	Africa	no	36 409.45	38.72	3 190.27	12.14	4
USA	United States	Northern America	no	54 922 480.00	19 778.35	2 547 499.93	7.76	5
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	3 077.08	6.82	6
IND	India	Asia	no	5 769 372.00	1 160.44	221 700.44	5.23	7
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 012 070.61	4.48	8
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	25 520.99	4.44	9
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	149 707.18	4.09	10
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	646.93	3.90	11
VNM	Vietnam	Asia	no	487 574.40	35.14	10 550.52	3.33	12
CHN	China	Asia	no	31 726 110.00	1 271.05	1 299 157.61	0.98	13
MAC	Macau	Asia	no	56 709.10	2.18	3 378.13	0.65	14
OMN	Oman	Asia	no	202 533.60	8.97	14 871.52	0.60	15
AUS	Australia	Oceania	no	6 616 533.00	129.23	276 915.26	0.47	16
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	46 486.26	0.46	17
KOR	South Korea	Asia	no	5 538 605.00	64.15	194 728.35	0.33	18
PAK	Pakistan	Asia	no	502 344.30	7.50	25 463.41	0.29	19
CAN	Canada	Northern America	no	6 291 917.00	97.47	395 958.78	0.25	20
LAO	Laos	Asia	no	21 925.62	0.35	1 626.13	0.22	21
LKA	Sri Lanka	Asia	no	208 273.50	1.70	8 808.70	0.19	22
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	8 897.75	0.09	23
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	5 637.22	0.08	24
IRL	Ireland	Europe	no	778 821.60	2.84	40 563.02	0.07	25
NZL	New Zealand	Oceania	no	679 705.40	1.05	34 691.31	0.03	26
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	3 793.90	0.02	27
ZWE	Zimbawue	Africa	no	22 038.05	0.06	2 703.00	0.02	28
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	63 198.81	0.02	29
KHM	Cambodia	Asia	no	27 390.49	0.01	795.24	0.01	30
MWI	Malawi	Africa	no	18 356.97	0.01	818.79	0.01	31
IDN	Indonesia	Asia	no	2 827 835.00	0.49	79 076.93	0.01	32
PRT	Portugal	Europe	no	1 054 344.00	0.23	43 081.93	0.01	33
RUS	Russia	Europe	no	6 325 795.00	2.01	409 820.63	0.00	34
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	542 121.89	0.00	35
FRA	France	Europe	no	10 329 420.00	0.80	677 049.47	0.00	36
THA	Thailand	Asia	no	1 378 999.00	0.02	53 487.73	0.00	37
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	23 889.95	0.00	38
ISR	Israel	Asia	no	853 829.30	0.00	65 345.00	0.00	39
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 391.43	0.00	40
UKR	Ukraine	Europe	no	676 833.60	0.00	34 350.49	0.00	41
ESP	Spain	Europe	no	6 233 955.00	0.00	271 148.52	0.00	42
ITA	Italy	Europe	no	8 604 332.00	0.00	417 993.98	0.00	43
LTU	Lithuania	Europe	no	135 613.80	0.00	8 076.66	0.00	44
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	45
CHE	Switzerland	Europe	no	3 421 606.00	0.00	75 147.62	0.00	46
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	47
TUR	Turkey	Asia	no	1 947 249.00	0.00	123 751.24	0.00	48
HUN	Hungary	Europe	no	562 479.60	0.00	26 544.35	0.00	49
AUT	Austria	Europe	no	1 801 472.00	0.00	84 928.57	0.00	50
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	51
SRB	Serbia	Europe	no	57 317.24	0.00	7 977.96	0.00	52
LBY	Libya	Africa	no	73 757.40	0.00	8 664.60	0.00	53
CYP	Cyprus	Asia	no	71 610.53	0.00	4 557.62	0.00	54
ARM	Armenia	Asia	no	22 895.19	0.00	1 508.90	0.00	55
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	56
AZE	Azerbaijan	Asia	no	192 784.00	0.00	8 252.01	0.00	57
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	40 979.05	0.00	58
GRC	Greece	Europe	no	1 181 283.00	0.00	48 425.35	0.00	59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	493 431.00	0.00	60
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	22 647.04	0.00	61
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	62
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	34 332.88	0.00	63
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	64
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	27 530.57	0.00	65
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	66
KWT	Kuwait	Asia	no	469 418.40	0.00	29 360.33	0.00	67
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	13 315.00	0.00	68
SYR	Syria	Asia	no	204 643.30	0.00	4 971.97	0.00	69
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	70
LBN	Lebanon	Asia	no	207 723.70	0.00	6 530.19	0.00	71
SSD	South Sudan	Africa	no	19 958.30	0.00	2 720.34	0.00	72
SWZ	Swaziland	Africa	no	13 701.24	0.00	753.93	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MYS	Malaysia	Asia	no	1 170 979.00	0.00	42 433.27	0.00	74
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	75
BGR	Bulgaria	Europe	no	163 821.60	0.00	8 993.34	0.00	76
EST	Estonia	Europe	no	79 617.31	0.00	4 754.17	0.00	77
FIN	Finland	Europe	no	965 383.40	0.00	66 675.15	0.00	78
GEO	Georgia	Asia	no	53 823.53	0.00	2 692.49	0.00	79
ISL	Iceland	Europe	no	57 291.68	0.00	3 730.06	0.00	80
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	1 306.25	0.00	81
LVA	Latvia	Europe	no	95 608.77	0.00	4 413.54	0.00	82
MKD	Macedonia	Europe	no	32 996.37	0.00	1 787.08	0.00	83
BLR	Belarus	Europe	no	229 399.90	0.00	10 166.04	0.00	84
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	85
SVK	Slovakia	Europe	no	414 782.80	0.00	17 642.66	0.00	86
SWE	Sweden	Europe	no	1 747 501.00	0.00	151 944.31	0.00	87
ZAF	South Africa	Africa	no	1 282 854.00	0.00	77 967.19	0.00	88
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	94 570.07	0.00	89
ALB	Albania	Europe	no	40 459.65	0.00	1 381.39	0.00	90
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	91
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	92
MAR	Morroco	Africa	no	374 846.30	0.00	19 696.51	0.00	93
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	94
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	95
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	96
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	97
TUN	Tunisia	Africa	no	178 845.60	0.00	8 918.25	0.00	98
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	99
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	100
BWA	Botswana	Africa	no	90 628.62	0.00	2 912.71	0.00	101
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	102
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	103
MLI	Mali	Africa	no	27 719.15	0.00	1 172.08	0.00	104
BDI	Burundi	Africa	no	3 616.17	0.00	599.64	0.00	105
NAM	Namibia	Africa	no	42 062.66	0.00	3 617.67	0.00	106
SDN	Sudan	Africa	no	70 368.78	0.00	5 000.18	0.00	107
ZMB	Zambia	Africa	no	48 954.52	0.00	568.19	0.00	108
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	109
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	110
RWA	Rwanda	Africa	no	13 197.39	0.00	1 065.41	0.00	111
SEN	Senegal	Africa	no	35 335.24	0.00	2 289.33	0.00	112
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	113
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	114
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	115
TCD	Chad	Africa	no	26 745.14	0.00	1 026.17	0.00	116
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	117
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	118
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 951.39	0.00	119
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	120
AFG	Afghanistan	Asia	no	60 187.87	0.00	2 492.12	0.00	121
NPL	Nepal	Asia	no	53 996.57	0.00	1 917.21	0.00	122
MNG	Mongolia	Asia	no	36 587.61	0.00	1 298.34	0.00	123
IRN	Iran	Asia	no	2 067 640.00	0.00	31 978.13	0.00	124
TJK	Tajikistan	Asia	no	20 536.86	0.00	998.87	0.00	125
BTN	Bhutan	Asia	no	11 083.66	0.00	311.85	0.00	126
UZB	Uzbekistan	Asia	no	151 891.10	0.00	12 744.63	0.00	127
TKM	Turkmenistan	Asia	no	36 127.02	0.00	3 114.55	0.00	128
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	2 899.00	0.00	129
DZA	Algeria	Africa	no	899 206.20	0.00	39 734.87	0.00	130
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	131
QAT	Qatar	Asia	no	624 817.70	0.00	24 487.36	0.00	132
EGY	Egypt	Africa	no	617 149.20	0.00	31 768.68	0.00	133
LSO	Lesotho	Africa	no	17 938.00	0.00	878.46	0.00	134
IRQ	Iraq	Asia	no	132 499.60	0.00	48 846.71	0.00	135
CAF	Central African Republic	Africa	no	3 893.74	0.00	166.29	0.00	136
ETH	Ethiopia	Africa	no	65 598.93	0.00	3 941.08	0.00	137
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	138
MLT	Malta	Europe	no	36 990.21	0.00	1 879.07	0.00	139
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	140
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	141
UGA	Uganda	Africa	no	43 697.09	0.00	1 787.04	0.00	142
MDA	Moldova	Europe	no	33 762.68	0.00	1 618.04	0.00	143
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	144
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	145
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	3 496.64	0.00	147
POL	Poland	Europe	no	1 614 716.00	0.00	95 412.26	0.00	148
BRN	Brunei	Asia	no	71 236.46	0.00	2 950.69	0.00	149
PRK	North Korea	Asia	no	77 982.15	0.11			150
MMR	Myanmar	Asia	no	195 390.10	41.76			151
TUV	Tuvalu	Oceania	no	123.26	0.00			152
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			153
SMR	San Marino	Europe	no	4 049.35	0.00			154
AND	Andorra	Europe	no	8 381.65	0.00			155
MCO	Monaco	Europe	no	20 716.40	0.00			156
MYT	Mayotte	Africa	no	6 949.04	36.31			157
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			158
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		159
FRO	Faroe Islands	Europe	no	9 272.37	1.13			160
ROU	Romania	Europe	no	555 697.40	0.00			161
GIB	Gibraltar	Europe	no	4 042.19	0.00			162
REU	Reunion	Africa	no	67 897.68	114.65			163
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			164
PSE	State of Palestine	Asia	no	69 454.30	0.00			165
ESH	Western Sahara	Africa	no	3 690.88	0.00			166
LIE	Liechtenstein	Europe	no	18 837.10	0.00			167
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	11 984.82	16.24	1
PHL	Philippines	Asia	no	566 948.60	4 071.51	283 131.84	14.38	2
BGD	Bangladesh	Asia	no	381 431.90	465.85	160 820.74	2.90	3
MOZ	Mozambique	Africa	no	36 409.45	38.72	17 220.44	2.25	4
USA	United States	Northern America	no	54 922 480.00	19 778.35	17 276 300.43	1.14	5
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	22 559.82	0.93	6
JPN	Japan	Asia	no	39 255 200.00	4 533.35	5 059 261.76	0.90	7
IND	India	Asia	no	5 769 372.00	1 160.44	1 944 284.82	0.60	8
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	1 269 259.96	0.48	9
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	271 683.76	0.42	10
VNM	Vietnam	Asia	no	487 574.40	35.14	164 388.68	0.21	11
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	12 562.44	0.20	12
OMN	Oman	Asia	no	202 533.60	8.97	56 792.46	0.16	13
CHN	China	Asia	no	31 726 110.00	1 271.05	9 003 382.87	0.14	14
MAC	Macau	Asia	no	56 709.10	2.18	20 216.60	0.11	15
AUS	Australia	Oceania	no	6 616 533.00	129.23	1 579 571.61	0.08	16
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	373 895.14	0.06	17
CAN	Canada	Northern America	no	6 291 917.00	97.47	1 857 561.03	0.05	18
KOR	South Korea	Asia	no	5 538 605.00	64.15	1 238 504.83	0.05	19
PAK	Pakistan	Asia	no	502 344.30	7.50	247 867.95	0.03	20
LAO	Laos	Asia	no	21 925.62	0.35	12 246.45	0.03	21
LKA	Sri Lanka	Asia	no	208 273.50	1.70	73 583.10	0.02	22
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	51 412.23	0.02	23
IRL	Ireland	Europe	no	778 821.60	2.84	183 798.12	0.02	24
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	59 883.48	0.01	25
NZL	New Zealand	Oceania	no	679 705.40	1.05	182 403.61	0.01	26
ZWE	Zimbawue	Africa	no	22 038.05	0.06	17 196.10	0.00	27
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	36 126.55	0.00	28
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	387 419.05	0.00	29
MWI	Malawi	Africa	no	18 356.97	0.01	4 366.74	0.00	30
PRT	Portugal	Europe	no	1 054 344.00	0.23	225 098.65	0.00	31
RUS	Russia	Europe	no	6 325 795.00	2.01	1 973 571.68	0.00	32
KHM	Cambodia	Asia	no	27 390.49	0.01	16 467.91	0.00	33
IDN	Indonesia	Asia	no	2 827 835.00	0.49	885 677.23	0.00	34
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	2 728 637.76	0.00	35
FRA	France	Europe	no	10 329 420.00	0.80	2 848 015.52	0.00	36
THA	Thailand	Asia	no	1 378 999.00	0.02	374 528.18	0.00	37
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	205 086.26	0.00	38
ISR	Israel	Asia	no	853 829.30	0.00	286 558.36	0.00	39
LUX	Luxembourg	Europe	no	201 130.60	0.00	38 962.95	0.00	40
UKR	Ukraine	Europe	no	676 833.60	0.00	192 523.67	0.00	41
ESP	Spain	Europe	no	6 233 955.00	0.00	1 345 564.18	0.00	42
ITA	Italy	Europe	no	8 604 332.00	0.00	2 100 502.86	0.00	43
LTU	Lithuania	Europe	no	135 613.80	0.00	43 719.88	0.00	44
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	45
CHE	Switzerland	Europe	no	3 421 606.00	0.00	602 400.29	0.00	46
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	47
TUR	Turkey	Asia	no	1 947 249.00	0.00	876 064.28	0.00	48
HUN	Hungary	Europe	no	562 479.60	0.00	123 292.26	0.00	49
AUT	Austria	Europe	no	1 801 472.00	0.00	413 112.76	0.00	50
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	51
SRB	Serbia	Europe	no	57 317.24	0.00	50 611.94	0.00	52
LBY	Libya	Africa	no	73 757.40	0.00	55 976.41	0.00	53
CYP	Cyprus	Asia	no	71 610.53	0.00	24 622.91	0.00	54
ARM	Armenia	Asia	no	22 895.19	0.00	12 628.86	0.00	55
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	56
AZE	Azerbaijan	Asia	no	192 784.00	0.00	57 484.51	0.00	57
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	196 764.65	0.00	58
GRC	Greece	Europe	no	1 181 283.00	0.00	249 410.75	0.00	59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	2 301 443.96	0.00	60
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	204 179.29	0.00	61
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	62
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	278 153.13	0.00	63
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	64
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	318 951.13	0.00	65
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	66
KWT	Kuwait	Asia	no	469 418.40	0.00	96 682.69	0.00	67
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	96 787.63	0.00	68
SYR	Syria	Asia	no	204 643.30	0.00	40 077.56	0.00	69
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	70
LBN	Lebanon	Asia	no	207 723.70	0.00	50 384.63	0.00	71
SSD	South Sudan	Africa	no	19 958.30	0.00	14 712.88	0.00	72
SWZ	Swaziland	Africa	no	13 701.24	0.00	3 944.56	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MYS	Malaysia	Asia	no	1 170 979.00	0.00	284 108.03	0.00	74
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	75
BGR	Bulgaria	Europe	no	163 821.60	0.00	54 795.79	0.00	76
EST	Estonia	Europe	no	79 617.31	0.00	24 664.81	0.00	77
FIN	Finland	Europe	no	965 383.40	0.00	269 912.39	0.00	78
GEO	Georgia	Asia	no	53 823.53	0.00	18 230.53	0.00	79
ISL	Iceland	Europe	no	57 291.68	0.00	14 052.90	0.00	80
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	10 749.10	0.00	81
LVA	Latvia	Europe	no	95 608.77	0.00	29 570.85	0.00	82
MKD	Macedonia	Europe	no	32 996.37	0.00	12 119.46	0.00	83
BLR	Belarus	Europe	no	229 399.90	0.00	73 747.80	0.00	84
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	85
SVK	Slovakia	Europe	no	414 782.80	0.00	93 274.32	0.00	86
SWE	Sweden	Europe	no	1 747 501.00	0.00	551 152.52	0.00	87
ZAF	South Africa	Africa	no	1 282 854.00	0.00	360 489.06	0.00	88
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	611 844.88	0.00	89
ALB	Albania	Europe	no	40 459.65	0.00	15 227.71	0.00	90
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	91
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	92
MAR	Morroco	Africa	no	374 846.30	0.00	117 556.24	0.00	93
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	94
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	95
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	96
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	97
TUN	Tunisia	Africa	no	178 845.60	0.00	51 302.58	0.00	98
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	99
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	100
BWA	Botswana	Africa	no	90 628.62	0.00	15 490.96	0.00	101
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	102
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	103
MLI	Mali	Africa	no	27 719.15	0.00	11 011.34	0.00	104
BDI	Burundi	Africa	no	3 616.17	0.00	3 443.34	0.00	105
NAM	Namibia	Africa	no	42 062.66	0.00	15 480.83	0.00	106
SDN	Sudan	Africa	no	70 368.78	0.00	70 927.03	0.00	107
ZMB	Zambia	Africa	no	48 954.52	0.00	26 244.17	0.00	108
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	109
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	110
RWA	Rwanda	Africa	no	13 197.39	0.00	8 767.59	0.00	111
SEN	Senegal	Africa	no	35 335.24	0.00	17 930.59	0.00	112
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	113
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	114
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	115
TCD	Chad	Africa	no	26 745.14	0.00	14 228.09	0.00	116
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	117
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	118
BFA	Burkina Faso	Africa	no	24 689.43	0.00	11 452.71	0.00	119
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	120
AFG	Afghanistan	Asia	no	60 187.87	0.00	29 010.12	0.00	121
NPL	Nepal	Asia	no	53 996.57	0.00	24 466.26	0.00	122
MNG	Mongolia	Asia	no	36 587.61	0.00	14 036.94	0.00	123
IRN	Iran	Asia	no	2 067 640.00	0.00	255 619.28	0.00	124
TJK	Tajikistan	Asia	no	20 536.86	0.00	12 690.19	0.00	125
BTN	Bhutan	Asia	no	11 083.66	0.00	2 173.58	0.00	126
UZB	Uzbekistan	Asia	no	151 891.10	0.00	59 039.46	0.00	127
TKM	Turkmenistan	Asia	no	36 127.02	0.00	25 014.09	0.00	128
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	28 969.70	0.00	129
DZA	Algeria	Africa	no	899 206.20	0.00	204 165.74	0.00	130
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	131
QAT	Qatar	Asia	no	624 817.70	0.00	91 904.94	0.00	132
EGY	Egypt	Africa	no	617 149.20	0.00	291 083.68	0.00	133
LSO	Lesotho	Africa	no	17 938.00	0.00	3 740.58	0.00	134
IRQ	Iraq	Asia	no	132 499.60	0.00	226 497.10	0.00	135
CAF	Central African Republic	Africa	no	3 893.74	0.00	2 389.56	0.00	136
ETH	Ethiopia	Africa	no	65 598.93	0.00	55 403.13	0.00	137
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	138
MLT	Malta	Europe	no	36 990.21	0.00	8 864.05	0.00	139
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	140
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	141
UGA	Uganda	Africa	no	43 697.09	0.00	23 933.64	0.00	142
MDA	Moldova	Europe	no	33 762.68	0.00	10 971.97	0.00	143
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	144
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	145
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	146

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	27 647.87	0.00	147
POL	Poland	Europe	no	1 614 716.00	0.00	515 943.50	0.00	148
BRN	Brunei	Asia	no	71 236.46	0.00	9 075.14	0.00	149
PRK	North Korea	Asia	no	77 982.15	0.11			150
MMR	Myanmar	Asia	no	195 390.10	41.76			151
TUV	Tuvalu	Oceania	no	123.26	0.00			152
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			153
SMR	San Marino	Europe	no	4 049.35	0.00			154
AND	Andorra	Europe	no	8 381.65	0.00			155
MCO	Monaco	Europe	no	20 716.40	0.00			156
MYT	Mayotte	Africa	no	6 949.04	36.31			157
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			158
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		159
FRO	Faroe Islands	Europe	no	9 272.37	1.13			160
ROU	Romania	Europe	no	555 697.40	0.00			161
GIB	Gibraltar	Europe	no	4 042.19	0.00			162
REU	Reunion	Africa	no	67 897.68	114.65			163
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			164
PSE	State of Palestine	Asia	no	69 454.30	0.00			165
ESH	Western Sahara	Africa	no	3 690.88	0.00			166
LIE	Liechtenstein	Europe	no	18 837.10	0.00			167
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	8.28	1
PHL	Philippines	Asia	no	566 948.60	4 071.51	7.18	2
MYT	Mayotte	Africa	no	6 949.04	36.31	5.23	3
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48	1.73	4
REU	Reunion	Africa	no	67 897.68	114.65	1.69	5
BGD	Bangladesh	Asia	no	381 431.90	465.85	1.22	6
MOZ	Mozambique	Africa	no	36 409.45	38.72	1.06	7
USA	United States	Northern America	no	54 922 480.00	19 778.35	0.36	8
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	0.27	9
MMR	Myanmar	Asia	no	195 390.10	41.76	0.21	10
IND	India	Asia	no	5 769 372.00	1 160.44	0.20	11
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	0.14	12
FRO	Faroe Islands	Europe	no	9 272.37	1.13	0.12	13
JPN	Japan	Asia	no	39 255 200.00	4 533.35	0.12	14
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	0.09	15
VNM	Vietnam	Asia	no	487 574.40	35.14	0.07	16
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	0.07	17
OMN	Oman	Asia	no	202 533.60	8.97	0.04	18
CHN	China	Asia	no	31 726 110.00	1 271.05	0.04	19
MAC	Macau	Asia	no	56 709.10	2.18	0.04	20
AUS	Australia	Oceania	no	6 616 533.00	129.23	0.02	21
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	0.02	22
LAO	Laos	Asia	no	21 925.62	0.35	0.02	23
CAN	Canada	Northern America	no	6 291 917.00	97.47	0.02	24
PAK	Pakistan	Asia	no	502 344.30	7.50	0.01	25
KOR	South Korea	Asia	no	5 538 605.00	64.15	0.01	26
LKA	Sri Lanka	Asia	no	208 273.50	1.70	0.01	27
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	0.01	28
IRL	Ireland	Europe	no	778 821.60	2.84	0.00	29
ZWE	Zimbawue	Africa	no	22 038.05	0.06	0.00	30
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	0.00	31
NZL	New Zealand	Oceania	no	679 705.40	1.05	0.00	32
PRK	North Korea	Asia	no	77 982.15	0.11	0.00	33
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	0.00	34
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	0.00	35
MWI	Malawi	Africa	no	18 356.97	0.01	0.00	36
KHM	Cambodia	Asia	no	27 390.49	0.01	0.00	37
RUS	Russia	Europe	no	6 325 795.00	2.01	0.00	38
PRT	Portugal	Europe	no	1 054 344.00	0.23	0.00	39
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	0.00	40
IDN	Indonesia	Asia	no	2 827 835.00	0.49	0.00	41
FRA	France	Europe	no	10 329 420.00	0.80	0.00	42
THA	Thailand	Asia	no	1 378 999.00	0.02	0.00	43
ITA	Italy	Europe	no	8 604 332.00	0.00	0.00	44
LTU	Lithuania	Europe	no	135 613.80	0.00	0.00	45
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	46
CHE	Switzerland	Europe	no	3 421 606.00	0.00	0.00	47
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	48
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	49
HUN	Hungary	Europe	no	562 479.60	0.00	0.00	50
AUT	Austria	Europe	no	1 801 472.00	0.00	0.00	51
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	52
SRB	Serbia	Europe	no	57 317.24	0.00	0.00	53
LBY	Libya	Africa	no	73 757.40	0.00	0.00	54
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	55
ARM	Armenia	Asia	no	22 895.19	0.00	0.00	56
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	57
AZE	Azerbaijan	Asia	no	192 784.00	0.00	0.00	58
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	0.00	59
GRC	Greece	Europe	no	1 181 283.00	0.00	0.00	60
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	61
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	0.00	62
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	63
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	0.00	64
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	65
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	66
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	67
KWT	Kuwait	Asia	no	469 418.40	0.00	0.00	68
AND	Andorra	Europe	no	8 381.65	0.00	0.00	69
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	0.00	70
SYR	Syria	Asia	no	204 643.30	0.00	0.00	71
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	72
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	74
SSD	South Sudan	Africa	no	19 958.30	0.00	0.00	75
SWZ	Swaziland	Africa	no	13 701.24	0.00	0.00	76
MYS	Malaysia	Asia	no	1 170 979.00	0.00	0.00	77
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	78
BGR	Bulgaria	Europe	no	163 821.60	0.00	0.00	79
EST	Estonia	Europe	no	79 617.31	0.00	0.00	80
FIN	Finland	Europe	no	965 383.40	0.00	0.00	81
GEO	Georgia	Asia	no	53 823.53	0.00	0.00	82
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	83
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	0.00	84
LIE	Liechtenstein	Europe	no	18 837.10	0.00	0.00	85
LVA	Latvia	Europe	no	95 608.77	0.00	0.00	86
MKD	Macedonia	Europe	no	32 996.37	0.00	0.00	87
BLR	Belarus	Europe	no	229 399.90	0.00	0.00	88
ROU	Romania	Europe	no	555 697.40	0.00	0.00	89
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	90
SVK	Slovakia	Europe	no	414 782.80	0.00	0.00	91
SWE	Sweden	Europe	no	1 747 501.00	0.00	0.00	92
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	93
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	94
ALB	Albania	Europe	no	40 459.65	0.00	0.00	95
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	96
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	97
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	98
POL	Poland	Europe	no	1 614 716.00	0.00	0.00	99
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	100
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	101
BRN	Brunei	Asia	no	71 236.46	0.00	0.00	102
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	0.00	103
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	104
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	105
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	106
QAT	Qatar	Asia	no	624 817.70	0.00	0.00	107
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	108
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	109
LSO	Lesotho	Africa	no	17 938.00	0.00	0.00	110
IRQ	Iraq	Asia	no	132 499.60	0.00	0.00	111
CAF	Central African Republic	Africa	no	3 893.74	0.00	0.00	112
ETH	Ethiopia	Africa	no	65 598.93	0.00	0.00	113
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	114
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	115
MLT	Malta	Europe	no	36 990.21	0.00	0.00	116
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	117
NER	Niger	Africa	no	12 723.49	0.00	0.00	118
UGA	Uganda	Africa	no	43 697.09	0.00	0.00	119
MDA	Moldova	Europe	no	33 762.68	0.00	0.00	120
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	121
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	122
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	123
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	0.00	124
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	125
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	126
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	127
BEN	Benin	Africa	no	21 971.91	0.00	0.00	128
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	129
COG	Congo	Africa	no	69 047.72	0.00	0.00	130
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	131
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	132
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	133
BWA	Botswana	Africa	no	90 628.62	0.00	0.00	134
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	135
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	136
MLI	Mali	Africa	no	27 719.15	0.00	0.00	137
BDI	Burundi	Africa	no	3 616.17	0.00	0.00	138
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	139
SDN	Sudan	Africa	no	70 368.78	0.00	0.00	140
ZMB	Zambia	Africa	no	48 954.52	0.00	0.00	141
AGO	Angola	Africa	no	176 182.50	0.00	0.00	142
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	143
RWA	Rwanda	Africa	no	13 197.39	0.00	0.00	144
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	145
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	147
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	148
TCD	Chad	Africa	no	26 745.14	0.00	0.00	149
TGO	Togo	Africa	no	12 513.67	0.00	0.00	150
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	151
BFA	Burkina Faso	Africa	no	24 689.43	0.00	0.00	152
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	153
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	154
AFG	Afghanistan	Asia	no	60 187.87	0.00	0.00	155
NPL	Nepal	Asia	no	53 996.57	0.00	0.00	156
MNG	Mongolia	Asia	no	36 587.61	0.00	0.00	157
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	158
TJK	Tajikistan	Asia	no	20 536.86	0.00	0.00	159
BTN	Bhutan	Asia	no	11 083.66	0.00	0.00	160
UZB	Uzbekistan	Asia	no	151 891.10	0.00	0.00	161
TKM	Turkmenistan	Asia	no	36 127.02	0.00	0.00	162
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	0.00	163
ISR	Israel	Asia	no	853 829.30	0.00	0.00	164
LUX	Luxembourg	Europe	no	201 130.60	0.00	0.00	165
UKR	Ukraine	Europe	no	676 833.60	0.00	0.00	166
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	167
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	1 021.64	9.63	1
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	13 259.33	8.84	2
PHL	Philippines	Asia	no	566 948.60	272 066.56	21 838.96	8.03	3
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	496.79	3.18	4
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	583.44	3.15	5
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	210 585.74	1.26	6
IND	India	Asia	no	5 769 372.00	1 876 797.16	19 632.54	1.05	7
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	12 953.98	1.03	8
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	83.20	0.74	9
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	34 023.36	0.69	10
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	1 372.35	0.50	11
VNM	Vietnam	Asia	no	487 574.40	171 390.01	613.38	0.36	12
OMN	Oman	Asia	no	202 533.60	79 655.92	210.30	0.26	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	935.00	0.21	14
CHN	China	Asia	no	31 726 110.00	9 240 270.86	13 469.76	0.15	15
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	2 046.55	0.13	16
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	2 199.73	0.12	17
TUV	Tuvalu	Oceania	no	123.26	38.32	0.04	0.10	18
PAK	Pakistan	Asia	no	502 344.30	232 286.78	216.40	0.09	19
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	1 111.95	0.09	20
MAC	Macau	Asia	no	56 709.10	51 753.10	35.89	0.07	21
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	44.80	0.07	22
LAO	Laos	Asia	no	21 925.62	11 242.53	5.14	0.05	23
IRL	Ireland	Europe	no	778 821.60	232 077.43	98.21	0.04	24
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	16.30	0.03	25
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.64	0.03	26
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	44.03	0.02	27
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	2.32	0.02	28
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	6.13	0.01	29
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	4.76	0.01	30
MWI	Malawi	Africa	no	18 356.97	3 705.39	0.30	0.01	31
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	30.63	0.01	32
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.06	0.00	33
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	7.55	0.00	34
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	19.70	0.00	35
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	49.84	0.00	36
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	34.63	0.00	37
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.24	0.00	38
FRA	France	Europe	no	10 329 420.00	2 806 427.94	29.46	0.00	39
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	0.17	0.00	40
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	41
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	42
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	43
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	44
ISL	Iceland	Europe	no	57 291.68	15 330.06	0.00	0.00	45
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			46
SVN	Slovenia	Europe	no	139 899.70	47 987.30			47
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			48
HUN	Hungary	Europe	no	562 479.60	133 423.90			49
AUT	Austria	Europe	no	1 801 472.00	428 321.90			50
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			51
SRB	Serbia	Europe	no	57 317.24	45 519.65			52
LBY	Libya	Africa	no	73 757.40	74 199.53			53
CYP	Cyprus	Asia	no	71 610.53	21 911.45			54
ARM	Armenia	Asia	no	22 895.19	10 432.17			55
CMR	Cameroon	Africa	no	81 683.73	29 567.50			56
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			57
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			58
GRC	Greece	Europe	no	1 181 283.00	242 230.33			59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			60
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			61
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			62
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			63
MYT	Mayotte	Africa	no	6 949.04				64
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			65
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12			66
NGA	Nigeria	Africa	no	592 030.40	521 803.30			67
KWT	Kuwait	Asia	no	469 418.40	175 830.50			68
AND	Andorra	Europe	no	8 381.65	2 849.17			69
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			70
SYR	Syria	Asia	no	204 643.30	40 405.00			71
PSE	State of Palestine	Asia	no	69 454.30				72
JOR	Jordan	Asia	no	121 481.20	33 678.50			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
LBN	Lebanon	Asia	no	207 723.70	44 352.42			74
SSD	South Sudan	Africa	no	19 958.30	11 804.41			75
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			76
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09			77
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			78
TWN	Taiwan	Asia	no	1 680 401.00				79
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			80
EST	Estonia	Europe	no	79 617.31	24 880.27			81
FIN	Finland	Europe	no	965 383.40	267 328.62			82
GEO	Georgia	Asia	no	53 823.53	16 140.05			83
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			84
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			85
LVA	Latvia	Europe	no	95 608.77	30 956.69			86
MKD	Macedonia	Europe	no	32 996.37	10 195.40			87
BLR	Belarus	Europe	no	229 399.90	71 709.52			88
ROU	Romania	Europe	no	555 697.40				89
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			90
SVK	Slovakia	Europe	no	414 782.80	97 707.33			91
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			92
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			93
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			94
ALB	Albania	Europe	no	40 459.65	12 923.24			95
MCO	Monaco	Europe	no	20 716.40	6 074.51			96
MNE	Montenegro	Europe	no	8 892.93	4 416.08			97
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				98
PRK	North Korea	Asia	no	77 982.15				99
POL	Poland	Europe	no	1 614 716.00	525 865.98			100
SMR	San Marino	Europe	no	4 049.35	1 899.81			101
BRN	Brunei	Asia	no	71 236.46	16 111.14			102
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				103
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			104
DZA	Algeria	Africa	no	899 206.20	210 183.41			105
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			106
QAT	Qatar	Asia	no	624 817.70	203 235.16			107
EGY	Egypt	Africa	no	617 149.20	271 972.83			108
ESH	Western Sahara	Africa	no	3 690.88				109
LSO	Lesotho	Africa	no	17 938.00	2 334.99			110
IRQ	Iraq	Asia	no	132 499.60	229 327.29			111
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			112
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			113
GIB	Gibraltar	Europe	no	4 042.19				114
MLT	Malta	Europe	no	36 990.21	9 642.33			115
YEM	Yemen	Asia	no	79 113.56	35 954.50			116
NER	Niger	Africa	no	12 723.49	7 407.42			117
REU	Reunion	Africa	no	67 897.68				118
UGA	Uganda	Africa	no	43 697.09	21 493.61			119
MDA	Moldova	Europe	no	33 762.68	7 969.62			120
TZA	Tanzania	Africa	no	50 142.79	33 225.04			121
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			122
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			123
DJI	Djibouti	Africa	no	4 744.66	1 456.34			124
MAR	Morroco	Africa	no	374 846.30	103 835.71			125
KEN	Kenya	Africa	no	98 382.66	55 243.06			126
BEN	Benin	Africa	no	21 971.91	8 307.22			127
GIN	Guinea	Africa	no	13 665.89	6 144.13			128
COG	Congo	Africa	no	69 047.72	14 085.85			129
TUN	Tunisia	Africa	no	178 845.60	46 993.60			130
LBR	Liberia	Africa	no	1 911.24	1 950.96			131
BWA	Botswana	Africa	no	90 628.62	14 784.71			132
ERI	Eritrea	Africa	no	9 081.79	3 444.10			133
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			134
MLI	Mali	Africa	no	27 719.15	10 942.73			135
BDI	Burundi	Africa	no	3 616.17	2 714.51			136
NAM	Namibia	Africa	no	42 062.66	13 113.07			137
SDN	Sudan	Africa	no	70 368.78	66 565.89			138
ZMB	Zambia	Africa	no	48 954.52	26 820.87			139
AGO	Angola	Africa	no	176 182.50	124 178.24			140
GAB	Gabon	Africa	no	120 252.20	19 343.51			141
RWA	Rwanda	Africa	no	13 197.39	7 521.26			142
SEN	Senegal	Africa	no	35 335.24	14 791.70			143
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			144
GMB	The Gambia	Africa	no	2 097.61	903.50			145
GHA	Ghana	Africa	no	74 174.05	48 137.03			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
TCD	Chad	Africa	no	26 745.14	13 513.55			147
TGO	Togo	Africa	no	12 513.67	4 338.58			148
MRT	Mauritania	Africa	no	11 985.52	4 158.18			149
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			150
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			151
COD	Democratic Republic of the Congo	Africa	no	27 401.97				152
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			153
NPL	Nepal	Asia	no	53 996.57	19 294.35			154
MNG	Mongolia	Asia	no	36 587.61	11 516.41			155
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			156
BTN	Bhutan	Asia	no	11 083.66	1 781.26			157
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			158
MMR	Myanmar	Asia	no	195 390.10				159
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			160
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			161
ISR	Israel	Asia	no	853 829.30	290 550.61			162
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			163
UKR	Ukraine	Europe	no	676 833.60	177 430.61			164
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			165
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			166
LTU	Lithuania	Europe	no	135 613.80	45 931.97			167
HRV	Croatia	Europe	no	188 113.70	57 868.67			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	1 021.64	9.94	1
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	13 259.33	8.18	2
PHL	Philippines	Asia	no	566 948.60	326 316.43	21 838.96	6.69	3
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	583.44	3.38	4
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	496.79	3.19	5
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	210 585.74	1.24	6
IND	India	Asia	no	5 769 372.00	1 855 591.42	19 632.54	1.06	7
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	12 953.98	1.05	8
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	83.20	0.76	9
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	34 023.36	0.67	10
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	1 372.35	0.49	11
VNM	Vietnam	Asia	no	487 574.40	164 181.67	613.38	0.37	12
OMN	Oman	Asia	no	202 533.60	90 220.81	210.30	0.23	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	935.00	0.22	14
CHN	China	Asia	no	31 726 110.00	9 196 167.76	13 469.76	0.15	15
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	2 046.55	0.13	16
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	2 199.73	0.12	17
MAC	Macau	Asia	no	56 709.10	37 762.88	35.89	0.10	18
PAK	Pakistan	Asia	no	502 344.30	244 280.84	216.40	0.09	19
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	1 111.95	0.08	20
TUV	Tuvalu	Oceania	no	123.26	55.31	0.04	0.07	21
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	44.80	0.07	22
IRL	Ireland	Europe	no	778 821.60	197 446.98	98.21	0.05	23
LAO	Laos	Asia	no	21 925.62	10 602.76	5.14	0.05	24
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	16.30	0.03	25
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	44.03	0.03	26
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.64	0.03	27
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	2.32	0.02	28
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	6.13	0.01	29
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	4.76	0.01	30
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	30.63	0.01	31
MWI	Malawi	Africa	no	18 356.97	3 574.19	0.30	0.01	32
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.06	0.00	33
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	7.55	0.00	34
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	19.70	0.00	35
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	49.84	0.00	36
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	34.63	0.00	37
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.24	0.00	38
FRA	France	Europe	no	10 329 420.00	2 855 136.13	29.46	0.00	39
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	0.17	0.00	40
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	41
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	42
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	43
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	44
ISL	Iceland	Europe	no	57 291.68	15 047.05	0.00	0.00	45
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			46
SVN	Slovenia	Europe	no	139 899.70	47 633.96			47
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			48
HUN	Hungary	Europe	no	562 479.60	129 554.20			49
AUT	Austria	Europe	no	1 801 472.00	427 916.46			50
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			51
SRB	Serbia	Europe	no	57 317.24	43 641.10			52
LBY	Libya	Africa	no	73 757.40	61 985.45			53
CYP	Cyprus	Asia	no	71 610.53	21 453.80			54
ARM	Armenia	Asia	no	22 895.19	10 972.97			55
CMR	Cameroon	Africa	no	81 683.73	28 948.12			56
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			57
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			58
GRC	Greece	Europe	no	1 181 283.00	242 155.98			59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			60
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			61
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			62
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			63
MYT	Mayotte	Africa	no	6 949.04				64
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			65
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97			66
NGA	Nigeria	Africa	no	592 030.40	499 041.44			67
KWT	Kuwait	Asia	no	469 418.40	165 127.08			68
AND	Andorra	Europe	no	8 381.65	2 539.76			69
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			70
SYR	Syria	Asia	no	204 643.30	39 715.80			71
PSE	State of Palestine	Asia	no	69 454.30				72
JOR	Jordan	Asia	no	121 481.20	33 339.06			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
LBN	Lebanon	Asia	no	207 723.70	44 926.34			74
SSD	South Sudan	Africa	no	19 958.30	10 791.19			75
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			76
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55			77
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			78
TWN	Taiwan	Asia	no	1 680 401.00				79
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			80
EST	Estonia	Europe	no	79 617.31	24 010.33			81
FIN	Finland	Europe	no	965 383.40	268 134.55			82
GEO	Georgia	Asia	no	53 823.53	15 835.00			83
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			84
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			85
LVA	Latvia	Europe	no	95 608.77	30 883.23			86
MKD	Macedonia	Europe	no	32 996.37	10 110.99			87
BLR	Belarus	Europe	no	229 399.90	69 000.62			88
ROU	Romania	Europe	no	555 697.40				89
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			90
SVK	Slovakia	Europe	no	414 782.80	95 768.45			91
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			92
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			93
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			94
ALB	Albania	Europe	no	40 459.65	12 951.12			95
MCO	Monaco	Europe	no	20 716.40	6 919.24			96
MNE	Montenegro	Europe	no	8 892.93	4 503.08			97
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				98
PRK	North Korea	Asia	no	77 982.15				99
POL	Poland	Europe	no	1 614 716.00	506 714.23			100
SMR	San Marino	Europe	no	4 049.35	1 681.06			101
BRN	Brunei	Asia	no	71 236.46	10 784.47			102
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				103
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			104
DZA	Algeria	Africa	no	899 206.20	206 267.88			105
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			106
QAT	Qatar	Asia	no	624 817.70	190 319.79			107
EGY	Egypt	Africa	no	617 149.20	264 562.52			108
ESH	Western Sahara	Africa	no	3 690.88				109
LSO	Lesotho	Africa	no	17 938.00	2 861.49			110
IRQ	Iraq	Asia	no	132 499.60	229 027.28			111
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			112
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			113
GIB	Gibraltar	Europe	no	4 042.19				114
MLT	Malta	Europe	no	36 990.21	8 946.39			115
YEM	Yemen	Asia	no	79 113.56	34 721.48			116
NER	Niger	Africa	no	12 723.49	7 223.22			117
REU	Reunion	Africa	no	67 897.68				118
UGA	Uganda	Africa	no	43 697.09	22 316.73			119
MDA	Moldova	Europe	no	33 762.68	8 846.50			120
TZA	Tanzania	Africa	no	50 142.79	33 033.24			121
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			122
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			123
DJI	Djibouti	Africa	no	4 744.66	775.82			124
MAR	Morroco	Africa	no	374 846.30	100 965.44			125
KEN	Kenya	Africa	no	98 382.66	54 934.72			126
BEN	Benin	Africa	no	21 971.91	8 247.34			127
GIN	Guinea	Africa	no	13 665.89	5 696.70			128
COG	Congo	Africa	no	69 047.72	11 049.89			129
TUN	Tunisia	Africa	no	178 845.60	44 799.78			130
LBR	Liberia	Africa	no	1 911.24	1 751.03			131
BWA	Botswana	Africa	no	90 628.62	14 678.53			132
ERI	Eritrea	Africa	no	9 081.79	3 412.88			133
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			134
MLI	Mali	Africa	no	27 719.15	10 272.74			135
BDI	Burundi	Africa	no	3 616.17	2 713.09			136
NAM	Namibia	Africa	no	42 062.66	12 989.72			137
SDN	Sudan	Africa	no	70 368.78	63 769.45			138
ZMB	Zambia	Africa	no	48 954.52	26 049.97			139
AGO	Angola	Africa	no	176 182.50	112 289.11			140
GAB	Gabon	Africa	no	120 252.20	17 298.19			141
RWA	Rwanda	Africa	no	13 197.39	7 406.89			142
SEN	Senegal	Africa	no	35 335.24	14 606.22			143
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			144
GMB	The Gambia	Africa	no	2 097.61	875.76			145
GHA	Ghana	Africa	no	74 174.05	47 004.17			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
TCD	Chad	Africa	no	26 745.14	12 987.28			147
TGO	Togo	Africa	no	12 513.67	3 696.32			148
MRT	Mauritania	Africa	no	11 985.52	3 892.41			149
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			150
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			151
COD	Democratic Republic of the Congo	Africa	no	27 401.97				152
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			153
NPL	Nepal	Asia	no	53 996.57	19 443.42			154
MNG	Mongolia	Asia	no	36 587.61	10 751.45			155
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			156
BTN	Bhutan	Asia	no	11 083.66	1 665.34			157
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			158
MMR	Myanmar	Asia	no	195 390.10				159
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			160
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			161
ISR	Israel	Asia	no	853 829.30	284 226.45			162
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			163
UKR	Ukraine	Europe	no	676 833.60	180 979.14			164
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			165
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			166
LTU	Lithuania	Europe	no	135 613.80	44 274.32			167
HRV	Croatia	Europe	no	188 113.70	56 412.38			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
MYT	Mayotte	Africa	no	6 949.04	805.91	11.60	1
REU	Reunion	Africa	no	67 897.68	4 004.22	5.90	2
MDG	Madagascar	Africa	no	23 496.42	1 021.64	4.35	3
PHL	Philippines	Asia	no	566 948.60	21 838.96	3.85	4
BGD	Bangladesh	Asia	no	381 431.90	13 259.33	3.48	5
MOZ	Mozambique	Africa	no	36 409.45	496.79	1.36	6
TWN	Taiwan	Asia	no	1 680 401.00	17 312.23	1.03	7
HND	Honduras	Latin America and the Caribbean	no	77 974.77	583.44	0.75	8
USA	United States	Northern America	no	54 922 480.00	210 585.74	0.38	9
IND	India	Asia	no	5 769 372.00	19 632.54	0.34	10
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	12 953.98	0.29	11
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	83.20	0.23	12
MMR	Myanmar	Asia	no	195 390.10	405.48	0.21	13
VNM	Vietnam	Asia	no	487 574.40	613.38	0.13	14
HKG	Hong Kong	Asia	no	1 250 063.00	1 372.35	0.11	15
OMN	Oman	Asia	no	202 533.60	210.30	0.10	16
JPN	Japan	Asia	no	39 255 200.00	34 023.36	0.09	17
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	935.00	0.08	18
MAC	Macau	Asia	no	56 709.10	35.89	0.06	19
PAK	Pakistan	Asia	no	502 344.30	216.40	0.04	20
CHN	China	Asia	no	31 726 110.00	13 469.76	0.04	21
CAN	Canada	Northern America	no	6 291 917.00	2 199.73	0.03	22
TUV	Tuvalu	Oceania	no	123.26	0.04	0.03	23
AUS	Australia	Oceania	no	6 616 533.00	2 046.55	0.03	24
LAO	Laos	Asia	no	21 925.62	5.14	0.02	25
LKA	Sri Lanka	Asia	no	208 273.50	44.80	0.02	26
KOR	South Korea	Asia	no	5 538 605.00	1 111.95	0.02	27
IRL	Ireland	Europe	no	778 821.60	98.21	0.01	28
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	16.30	0.01	29
ZWE	Zimbawue	Africa	no	22 038.05	2.32	0.01	30
FRO	Faroe Islands	Europe	no	9 272.37	0.64	0.01	31
NZL	New Zealand	Oceania	no	679 705.40	44.03	0.01	32
PAN	Panama	Latin America and the Caribbean	no	124 686.60	4.76	0.00	33
PRK	North Korea	Asia	no	77 982.15	2.86	0.00	34
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	6.13	0.00	35
COL	Colombia	Latin America and the Caribbean	no	944 576.90	30.63	0.00	36
MWI	Malawi	Africa	no	18 356.97	0.30	0.00	37
SYC	Seychelles	Africa	no	6 234.98	0.06	0.00	38
KHM	Cambodia	Asia	no	27 390.49	0.24	0.00	39
PRT	Portugal	Europe	no	1 054 344.00	7.55	0.00	40
IDN	Indonesia	Asia	no	2 827 835.00	19.70	0.00	41
GBR	United Kingdom	Europe	no	7 806 797.00	49.84	0.00	42
RUS	Russia	Europe	no	6 325 795.00	34.63	0.00	43
FRA	France	Europe	no	10 329 420.00	29.46	0.00	44
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.17	0.00	45
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	46
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	47
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	48
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	49
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	50
SRB	Serbia	Europe	no	57 317.24			51
LBY	Libya	Africa	no	73 757.40			52
CYP	Cyprus	Asia	no	71 610.53			53
ARM	Armenia	Asia	no	22 895.19			54
CMR	Cameroon	Africa	no	81 683.73			55
AZE	Azerbaijan	Asia	no	192 784.00			56
CZE	Czech Republic	Europe	no	1 007 263.00			57
GRC	Greece	Europe	no	1 181 283.00			58
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			59
PER	Peru	Latin America and the Caribbean	no	692 344.50			60
BEL	Belgium	Europe	no	1 980 551.00			61
CHL	Chile	Latin America and the Caribbean	no	784 154.10			62
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			63
ARE	United Arab Emirates	Asia	no	1 282 119.00			64
NGA	Nigeria	Africa	no	592 030.40			65
KWT	Kuwait	Asia	no	469 418.40			66
AND	Andorra	Europe	no	8 381.65			67
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			68
SYR	Syria	Asia	no	204 643.30			69
PSE	State of Palestine	Asia	no	69 454.30			70
JOR	Jordan	Asia	no	121 481.20			71
LBN	Lebanon	Asia	no	207 723.70			72
SSD	South Sudan	Africa	no	19 958.30			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
SWZ	Swaziland	Africa	no	13 701.24			74
MYS	Malaysia	Asia	no	1 170 979.00			75
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			76
BGR	Bulgaria	Europe	no	163 821.60			77
EST	Estonia	Europe	no	79 617.31			78
FIN	Finland	Europe	no	965 383.40			79
GEO	Georgia	Asia	no	53 823.53			80
KGZ	Kyrgizstan	Asia	no	18 466.60			81
LIE	Liechtenstein	Europe	no	18 837.10			82
LVA	Latvia	Europe	no	95 608.77			83
MKD	Macedonia	Europe	no	32 996.37			84
BLR	Belarus	Europe	no	229 399.90			85
ROU	Romania	Europe	no	555 697.40			86
DEU	Germany	Europe	no	15 114 870.00			87
SVK	Slovakia	Europe	no	414 782.80			88
SWE	Sweden	Europe	no	1 747 501.00			89
ZAF	South Africa	Africa	no	1 282 854.00			90
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			91
ALB	Albania	Europe	no	40 459.65			92
MCO	Monaco	Europe	no	20 716.40			93
MNE	Montenegro	Europe	no	8 892.93			94
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			95
POL	Poland	Europe	no	1 614 716.00			96
SMR	San Marino	Europe	no	4 049.35			97
BRN	Brunei	Asia	no	71 236.46			98
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			99
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			100
DZA	Algeria	Africa	no	899 206.20			101
SAU	Saudi Arabia	Asia	no	2 141 419.00			102
QAT	Qatar	Asia	no	624 817.70			103
EGY	Egypt	Africa	no	617 149.20			104
ESH	Western Sahara	Africa	no	3 690.88			105
LSO	Lesotho	Africa	no	17 938.00			106
IRQ	Iraq	Asia	no	132 499.60			107
CAF	Central African Republic	Africa	no	3 893.74			108
ETH	Ethiopia	Africa	no	65 598.93			109
GIB	Gibraltar	Europe	no	4 042.19			110
MLT	Malta	Europe	no	36 990.21			111
YEM	Yemen	Asia	no	79 113.56			112
NER	Niger	Africa	no	12 723.49			113
UGA	Uganda	Africa	no	43 697.09			114
MDA	Moldova	Europe	no	33 762.68			115
TZA	Tanzania	Africa	no	50 142.79			116
NLD	Netherlands	Europe	no	3 410 955.00			117
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			118
DJI	Djibouti	Africa	no	4 744.66			119
MAR	Morroco	Africa	no	374 846.30			120
KEN	Kenya	Africa	no	98 382.66			121
BEN	Benin	Africa	no	21 971.91			122
GIN	Guinea	Africa	no	13 665.89			123
COG	Congo	Africa	no	69 047.72			124
TUN	Tunisia	Africa	no	178 845.60			125
LBR	Liberia	Africa	no	1 911.24			126
BWA	Botswana	Africa	no	90 628.62			127
ERI	Eritrea	Africa	no	9 081.79			128
SLE	Sierra Leone	Africa	no	3 031.82			129
MLI	Mali	Africa	no	27 719.15			130
BDI	Burundi	Africa	no	3 616.17			131
NAM	Namibia	Africa	no	42 062.66			132
SDN	Sudan	Africa	no	70 368.78			133
ZMB	Zambia	Africa	no	48 954.52			134
AGO	Angola	Africa	no	176 182.50			135
GAB	Gabon	Africa	no	120 252.20			136
RWA	Rwanda	Africa	no	13 197.39			137
SEN	Senegal	Africa	no	35 335.24			138
GNQ	Equatorial Guinea	Africa	no	20 061.44			139
GMB	The Gambia	Africa	no	2 097.61			140
GHA	Ghana	Africa	no	74 174.05			141
TCD	Chad	Africa	no	26 745.14			142
TGO	Togo	Africa	no	12 513.67			143
MRT	Mauritania	Africa	no	11 985.52			144
BFA	Burkina Faso	Africa	no	24 689.43			145
CIV	Ivory Coast	Africa	no	45 467.63			146

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
COD	Democratic Republic of the Congo	Africa	no	27 401.97			147
AFG	Afghanistan	Asia	no	60 187.87			148
NPL	Nepal	Asia	no	53 996.57			149
MNG	Mongolia	Asia	no	36 587.61			150
TJK	Tajikistan	Asia	no	20 536.86			151
BTN	Bhutan	Asia	no	11 083.66			152
UZB	Uzbekistan	Asia	no	151 891.10			153
TKM	Turkmenistan	Asia	no	36 127.02			154
KAZ	Kazakhstan	Asia	no	734 309.90			155
ISR	Israel	Asia	no	853 829.30			156
LUX	Luxembourg	Europe	no	201 130.60			157
UKR	Ukraine	Europe	no	676 833.60			158
ESP	Spain	Europe	no	6 233 955.00			159
ITA	Italy	Europe	no	8 604 332.00			160
LTU	Lithuania	Europe	no	135 613.80			161
HRV	Croatia	Europe	no	188 113.70			162
CHE	Switzerland	Europe	no	3 421 606.00			163
SVN	Slovenia	Europe	no	139 899.70			164
TUR	Turkey	Asia	no	1 947 249.00			165
HUN	Hungary	Europe	no	562 479.60			166
AUT	Austria	Europe	no	1 801 472.00			167
DNK	Denmark	Europe	no	1 346 393.00			168

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries (no SIDS)

Tropical Cyclone Storm Surge

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
PHL	Philippines	Asia	no	566 948.60	2 541.62	55 644.78	45.68	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	386 884.93	19.87	2
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 068 884.62	16.66	3
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	65 379.04	13.74	4
NZL	New Zealand	Oceania	no	679 705.40	323.42	38 213.65	8.46	5
MDG	Madagascar	Africa	no	23 496.42	11.68	1 666.80	7.01	6
USA	United States	Northern America	no	54 922 480.00	8 774.38	3 244 299.91	2.70	7
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	442 013.06	2.43	8
MOZ	Mozambique	Africa	no	36 409.45	6.36	2 723.39	2.34	9
IND	India	Asia	no	5 769 372.00	726.92	530 741.66	1.37	10
CHN	China	Asia	no	31 726 110.00	4 834.00	4 370 835.96	1.11	11
VNM	Vietnam	Asia	no	487 574.40	40.93	40 823.56	1.00	12
LKA	Sri Lanka	Asia	no	208 273.50	18.57	19 647.18	0.95	13
OMN	Oman	Asia	no	202 533.60	15.92	17 256.96	0.92	14
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	4 539.50	0.74	15
PAK	Pakistan	Asia	no	502 344.30	18.10	30 125.80	0.60	16
BGD	Bangladesh	Asia	no	381 431.90	23.35	42 581.72	0.55	17
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	2 574.11	0.52	18
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	265 421.77	0.39	19
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	77 440.20	0.20	20
IDN	Indonesia	Asia	no	2 827 835.00	37.86	274 943.80	0.14	21
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	7 693.87	0.05	22
RUS	Russia	Europe	no	6 325 795.00	12.40	450 238.87	0.03	23
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	3 663.90	0.02	24
BRN	Brunei	Asia	no	71 236.46	0.02	2 466.98	0.01	25
MYS	Malaysia	Asia	no	1 170 979.00	0.52	84 107.08	0.01	26
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	92 724.40	0.00	27
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	88 386.66	0.00	28
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	10 060.78	0.00	29
IRN	Iran	Asia	no	2 067 640.00	0.09	73 681.58	0.00	30
THA	Thailand	Asia	no	1 378 999.00	0.10	103 523.57	0.00	31
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	32
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	33
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	34
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	35
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		36
BTN	Bhutan	Asia	no	11 083.66		842.11		37
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		38
MMR	Myanmar	Asia	no	195 390.10	40.61			39
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		40
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		41
ISR	Israel	Asia	no	853 829.30		56 565.68		42
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		43
CAN	Canada	Northern America	no	6 291 917.00		433 369.09		44
UKR	Ukraine	Europe	no	676 833.60		32 236.10		45
ESP	Spain	Europe	no	6 233 955.00		257 993.28		46
ITA	Italy	Europe	no	8 604 332.00		383 197.87		47
LTU	Lithuania	Europe	no	135 613.80		7 517.23		48
HRV	Croatia	Europe	no	188 113.70		11 171.45		49
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		50
SVN	Slovenia	Europe	no	139 899.70		9 461.85		51
TUR	Turkey	Asia	no	1 947 249.00		167 069.99		52
HUN	Hungary	Europe	no	562 479.60		26 595.35		53
AUT	Austria	Europe	no	1 801 472.00		95 015.40		54
DNK	Denmark	Europe	no	1 346 393.00		61 547.69		55
SRB	Serbia	Europe	no	57 317.24		8 634.55		56
LBY	Libya	Africa	no	73 757.40		25 993.79		57
CYP	Cyprus	Asia	no	71 610.53		4 260.93		58
ARM	Armenia	Asia	no	22 895.19		2 183.10		59
CMR	Cameroon	Africa	no	81 683.73		5 736.52		60
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		61
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		62
GRC	Greece	Europe	no	1 181 283.00		27 154.95		63
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		10 406.53		64
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		408 331.78		65
PER	Peru	Latin America and the Caribbean	no	692 344.50		53 841.99		66
BEL	Belgium	Europe	no	1 980 551.00		116 900.65		67
CHL	Chile	Latin America and the Caribbean	no	784 154.10		65 444.15		68
MYT	Mayotte	Africa	no	6 949.04	6.12			69
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		12 763.68		70
NGA	Nigeria	Africa	no	592 030.40		75 511.10		71
KWT	Kuwait	Asia	no	469 418.40		19 039.58		72
AND	Andorra	Europe	no	8 381.65				73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		26 312.88		74
SYR	Syria	Asia	no	204 643.30		8 252.62		75
PSE	State of Palestine	Asia	no	69 454.30				76
JOR	Jordan	Asia	no	121 481.20		9 168.09		77
LBN	Lebanon	Asia	no	207 723.70		12 363.32		78
SSD	South Sudan	Africa	no	19 958.30		1 399.32		79
SWZ	Swaziland	Africa	no	13 701.24		363.96		80
FRA	France	Europe	no	10 329 420.00		619 955.29		81
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		3 192.49		82
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			83
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		84
EST	Estonia	Europe	no	79 617.31		6 795.36		85
FIN	Finland	Europe	no	965 383.40		56 624.15		86
GEO	Georgia	Asia	no	53 823.53		3 542.58		87
ISL	Iceland	Europe	no	57 291.68		2 314.22		88
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		89
LIE	Liechtenstein	Europe	no	18 837.10				90
LVA	Latvia	Europe	no	95 608.77		6 324.84		91
MKD	Macedonia	Europe	no	32 996.37		2 530.04		92
BLR	Belarus	Europe	no	229 399.90		26 490.10		93
ROU	Romania	Europe	no	555 697.40				94
DEU	Germany	Europe	no	15 114 870.00		737 992.70		95
SVK	Slovakia	Europe	no	414 782.80		19 975.29		96
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		97
ZAF	South Africa	Africa	no	1 282 854.00		67 780.45		98
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		103 818.81		99
ALB	Albania	Europe	no	40 459.65		3 379.49		100
FRO	Faroe Islands	Europe	no	9 272.37				101
GBR	United Kingdom	Europe	no	7 806 797.00		440 106.84		102
IRL	Ireland	Europe	no	778 821.60		35 221.45		103
MCO	Monaco	Europe	no	20 716.40				104
MNE	Montenegro	Europe	no	8 892.93		847.70		105
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				106
PRK	North Korea	Asia	no	77 982.15	1.95			107
POL	Poland	Europe	no	1 614 716.00		98 972.34		108
TUV	Tuvalu	Oceania	no	123.26				109
SMR	San Marino	Europe	no	4 049.35				110
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				111
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		112
DZA	Algeria	Africa	no	899 206.20		71 040.48		113
SAU	Saudi Arabia	Asia	no	2 141 419.00		173 661.86		114
QAT	Qatar	Asia	no	624 817.70		15 282.42		115
EGY	Egypt	Africa	no	617 149.20		37 477.12		116
ESH	Western Sahara	Africa	no	3 690.88				117
LSO	Lesotho	Africa	no	17 938.00		855.33		118
IRQ	Iraq	Asia	no	132 499.60		35 983.20		119
CAF	Central African Republic	Africa	no	3 893.74		320.25		120
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		121
GIB	Gibraltar	Europe	no	4 042.19				122
NOR	Norway	Europe	no	1 933 679.00		116 071.15		123
LAO	Laos	Asia	no	21 925.62		3 279.79		124
MLT	Malta	Europe	no	36 990.21		1 333.61		125
YEM	Yemen	Asia	no	79 113.56		3 126.31		126
NER	Niger	Africa	no	12 723.49		2 551.37		127
REU	Reunion	Africa	no	67 897.68	24.99			128
UGA	Uganda	Africa	no	43 697.09		5 121.46		129
MDA	Moldova	Europe	no	33 762.68		1 821.11		130
NLD	Netherlands	Europe	no	3 410 955.00		155 739.98		131
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		132
PRT	Portugal	Europe	no	1 054 344.00		34 419.00		133
DJI	Djibouti	Africa	no	4 744.66		317.86		134
MAR	Morroco	Africa	no	374 846.30		31 321.40		135
KEN	Kenya	Africa	no	98 382.66		11 277.32		136
MAC	Macau	Asia	no	56 709.10		6 610.47		137
BEN	Benin	Africa	no	21 971.91		2 182.62		138
GIN	Guinea	Africa	no	13 665.89		919.65		139
MWI	Malawi	Africa	no	18 356.97		731.37		140
COG	Congo	Africa	no	69 047.72		4 329.13		141
TUN	Tunisia	Africa	no	178 845.60		9 509.45		142
LBR	Liberia	Africa	no	1 911.24		440.32		143
BWA	Botswana	Africa	no	90 628.62		5 015.09		144
ERI	Eritrea	Africa	no	9 081.79		260.73		145
SLE	Sierra Leone	Africa	no	3 031.82		685.06		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MLI	Mali	Africa	no	27 719.15		1 684.06		147
BDI	Burundi	Africa	no	3 616.17		780.29		148
NAM	Namibia	Africa	no	42 062.66		3 368.79		149
SDN	Sudan	Africa	no	70 368.78		13 307.19		150
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		151
ZMB	Zambia	Africa	no	48 954.52		5 247.76		152
AGO	Angola	Africa	no	176 182.50		18 242.56		153
GAB	Gabon	Africa	no	120 252.20		6 432.02		154
RWA	Rwanda	Africa	no	13 197.39		1 920.52		155
SEN	Senegal	Africa	no	35 335.24		3 706.12		156
GNQ	Equatorial Guinea	Africa	no	20 061.44		9 099.23		157
GMB	The Gambia	Africa	no	2 097.61		187.47		158
GHA	Ghana	Africa	no	74 174.05		10 912.64		159
TCD	Chad	Africa	no	26 745.14		3 701.42		160
TGO	Togo	Africa	no	12 513.67		685.82		161
MRT	Mauritania	Africa	no	11 985.52		1 578.96		162
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		163
CIV	Ivory Coast	Africa	no	45 467.63		5 292.23		164
COD	Democratic Republic of the Congo	Africa	no	27 401.97				165
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		166
NPL	Nepal	Asia	no	53 996.57		4 356.14		167
MNG	Mongolia	Asia	no	36 587.61		5 086.03		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
PHL	Philippines	Asia	no	566 948.60	2 541.62	30 212.56	84.12	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	194 728.35	39.49	2
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	25 520.99	35.20	3
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 012 070.61	17.60	4
MDG	Madagascar	Africa	no	23 496.42	11.68	915.01	12.76	5
NZL	New Zealand	Oceania	no	679 705.40	323.42	34 691.31	9.32	6
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	276 915.26	3.89	7
VNM	Vietnam	Asia	no	487 574.40	40.93	10 550.52	3.88	8
CHN	China	Asia	no	31 726 110.00	4 834.00	1 299 157.61	3.72	9
USA	United States	Northern America	no	54 922 480.00	8 774.38	2 547 499.93	3.44	10
IND	India	Asia	no	5 769 372.00	726.92	221 700.44	3.28	11
BGD	Bangladesh	Asia	no	381 431.90	23.35	7 673.71	3.04	12
LKA	Sri Lanka	Asia	no	208 273.50	18.57	8 808.70	2.11	13
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	646.93	2.06	14
MOZ	Mozambique	Africa	no	36 409.45	6.36	3 190.27	1.99	15
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	3 077.08	1.09	16
OMN	Oman	Asia	no	202 533.60	15.92	14 871.52	1.07	17
PAK	Pakistan	Asia	no	502 344.30	18.10	25 463.41	0.71	18
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	149 707.18	0.69	19
IDN	Indonesia	Asia	no	2 827 835.00	37.86	79 076.93	0.48	20
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	46 486.26	0.33	21
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	5 637.22	0.06	22
RUS	Russia	Europe	no	6 325 795.00	12.40	409 820.63	0.03	23
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	2 899.00	0.03	24
MYS	Malaysia	Asia	no	1 170 979.00	0.52	42 433.27	0.01	25
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	27 530.57	0.01	26
BRN	Brunei	Asia	no	71 236.46	0.02	2 950.69	0.01	27
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	63 198.81	0.01	28
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	3 793.90	0.01	29
IRN	Iran	Asia	no	2 067 640.00	0.09	31 978.13	0.00	30
THA	Thailand	Asia	no	1 378 999.00	0.10	53 487.73	0.00	31
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	32
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	33
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	34
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	35
TJK	Tajikistan	Asia	no	20 536.86		998.87		36
BTN	Bhutan	Asia	no	11 083.66		311.85		37
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		38
MMR	Myanmar	Asia	no	195 390.10	40.61			39
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		40
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		41
ISR	Israel	Asia	no	853 829.30		65 345.00		42
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		43
CAN	Canada	Northern America	no	6 291 917.00		395 958.78		44
UKR	Ukraine	Europe	no	676 833.60		34 350.49		45
ESP	Spain	Europe	no	6 233 955.00		271 148.52		46
ITA	Italy	Europe	no	8 604 332.00		417 993.98		47
LTU	Lithuania	Europe	no	135 613.80		8 076.66		48
HRV	Croatia	Europe	no	188 113.70		11 594.94		49
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		50
SVN	Slovenia	Europe	no	139 899.70		9 765.51		51
TUR	Turkey	Asia	no	1 947 249.00		123 751.24		52
HUN	Hungary	Europe	no	562 479.60		26 544.35		53
AUT	Austria	Europe	no	1 801 472.00		84 928.57		54
DNK	Denmark	Europe	no	1 346 393.00		89 732.55		55
SRB	Serbia	Europe	no	57 317.24		7 977.96		56
LBY	Libya	Africa	no	73 757.40		8 664.60		57
CYP	Cyprus	Asia	no	71 610.53		4 557.62		58
ARM	Armenia	Asia	no	22 895.19		1 508.90		59
CMR	Cameroon	Africa	no	81 683.73		3 421.99		60
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		61
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		62
GRC	Greece	Europe	no	1 181 283.00		48 425.35		63
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		8 897.75		64
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		493 431.00		65
PER	Peru	Latin America and the Caribbean	no	692 344.50		22 647.04		66
BEL	Belgium	Europe	no	1 980 551.00		128 131.48		67
CHL	Chile	Latin America and the Caribbean	no	784 154.10		34 332.88		68
MYT	Mayotte	Africa	no	6 949.04	6.12			69
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		7 713.60		70
NGA	Nigeria	Africa	no	592 030.40		42 180.53		71
KWT	Kuwait	Asia	no	469 418.40		29 360.33		72
AND	Andorra	Europe	no	8 381.65				73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		13 315.00		74
SYR	Syria	Asia	no	204 643.30		4 971.97		75
PSE	State of Palestine	Asia	no	69 454.30				76
JOR	Jordan	Asia	no	121 481.20		6 618.91		77
LBN	Lebanon	Asia	no	207 723.70		6 530.19		78
SSD	South Sudan	Africa	no	19 958.30		2 720.34		79
SWZ	Swaziland	Africa	no	13 701.24		753.93		80
FRA	France	Europe	no	10 329 420.00		677 049.47		81
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		4 063.51		82
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			83
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		84
EST	Estonia	Europe	no	79 617.31		4 754.17		85
FIN	Finland	Europe	no	965 383.40		66 675.15		86
GEO	Georgia	Asia	no	53 823.53		2 692.49		87
ISL	Iceland	Europe	no	57 291.68		3 730.06		88
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		89
LIE	Liechtenstein	Europe	no	18 837.10				90
LVA	Latvia	Europe	no	95 608.77		4 413.54		91
MKD	Macedonia	Europe	no	32 996.37		1 787.08		92
BLR	Belarus	Europe	no	229 399.90		10 166.04		93
ROU	Romania	Europe	no	555 697.40				94
DEU	Germany	Europe	no	15 114 870.00		718 583.82		95
SVK	Slovakia	Europe	no	414 782.80		17 642.66		96
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		97
ZAF	South Africa	Africa	no	1 282 854.00		77 967.19		98
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		94 570.07		99
ALB	Albania	Europe	no	40 459.65		1 381.39		100
FRO	Faroe Islands	Europe	no	9 272.37				101
GBR	United Kingdom	Europe	no	7 806 797.00		542 121.89		102
IRL	Ireland	Europe	no	778 821.60		40 563.02		103
MCO	Monaco	Europe	no	20 716.40				104
MNE	Montenegro	Europe	no	8 892.93		876.28		105
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				106
PRK	North Korea	Asia	no	77 982.15	1.95			107
POL	Poland	Europe	no	1 614 716.00		95 412.26		108
TUV	Tuvalu	Oceania	no	123.26				109
SMR	San Marino	Europe	no	4 049.35				110
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				111
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		112
DZA	Algeria	Africa	no	899 206.20		39 734.87		113
SAU	Saudi Arabia	Asia	no	2 141 419.00		165 700.80		114
QAT	Qatar	Asia	no	624 817.70		24 487.36		115
EGY	Egypt	Africa	no	617 149.20		31 768.68		116
ESH	Western Sahara	Africa	no	3 690.88				117
LSO	Lesotho	Africa	no	17 938.00		878.46		118
IRQ	Iraq	Asia	no	132 499.60		48 846.71		119
CAF	Central African Republic	Africa	no	3 893.74		166.29		120
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		121
GIB	Gibraltar	Europe	no	4 042.19				122
NOR	Norway	Europe	no	1 933 679.00		112 012.76		123
LAO	Laos	Asia	no	21 925.62		1 626.13		124
MLT	Malta	Europe	no	36 990.21		1 879.07		125
YEM	Yemen	Asia	no	79 113.56		2 625.09		126
NER	Niger	Africa	no	12 723.49		1 083.62		127
REU	Reunion	Africa	no	67 897.68	24.99			128
UGA	Uganda	Africa	no	43 697.09		1 787.04		129
MDA	Moldova	Europe	no	33 762.68		1 618.04		130
NLD	Netherlands	Europe	no	3 410 955.00		224 781.17		131
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		132
PRT	Portugal	Europe	no	1 054 344.00		43 081.93		133
DJI	Djibouti	Africa	no	4 744.66		212.95		134
MAR	Morroco	Africa	no	374 846.30		19 696.51		135
KEN	Kenya	Africa	no	98 382.66		7 759.48		136
MAC	Macau	Asia	no	56 709.10		3 378.13		137
BEN	Benin	Africa	no	21 971.91		934.54		138
GIN	Guinea	Africa	no	13 665.89		594.52		139
MWI	Malawi	Africa	no	18 356.97		818.79		140
COG	Congo	Africa	no	69 047.72		1 908.75		141
TUN	Tunisia	Africa	no	178 845.60		8 918.25		142
LBR	Liberia	Africa	no	1 911.24		268.18		143
BWA	Botswana	Africa	no	90 628.62		2 912.71		144
ERI	Eritrea	Africa	no	9 081.79		549.64		145
SLE	Sierra Leone	Africa	no	3 031.82		428.35		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MLI	Mali	Africa	no	27 719.15		1 172.08		147
BDI	Burundi	Africa	no	3 616.17		599.64		148
NAM	Namibia	Africa	no	42 062.66		3 617.67		149
SDN	Sudan	Africa	no	70 368.78		5 000.18		150
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		151
ZMB	Zambia	Africa	no	48 954.52		568.19		152
AGO	Angola	Africa	no	176 182.50		24 725.13		153
GAB	Gabon	Africa	no	120 252.20		1 026.90		154
RWA	Rwanda	Africa	no	13 197.39		1 065.41		155
SEN	Senegal	Africa	no	35 335.24		2 289.33		156
GNQ	Equatorial Guinea	Africa	no	20 061.44		1 036.62		157
GMB	The Gambia	Africa	no	2 097.61		67.53		158
GHA	Ghana	Africa	no	74 174.05		8 003.31		159
TCD	Chad	Africa	no	26 745.14		1 026.17		160
TGO	Togo	Africa	no	12 513.67		359.57		161
MRT	Mauritania	Africa	no	11 985.52		706.94		162
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		163
CIV	Ivory Coast	Africa	no	45 467.63		2 613.28		164
COD	Democratic Republic of the Congo	Africa	no	27 401.97				165
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		166
NPL	Nepal	Asia	no	53 996.57		1 917.21		167
MNG	Mongolia	Asia	no	36 587.61		1 298.34		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
PHL	Philippines	Asia	no	566 948.60	2 541.62	283 131.84	8.98	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1 238 504.83	6.21	2
JPN	Japan	Asia	no	39 255 200.00	17 812.27	5 059 261.76	3.52	3
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	271 683.76	3.31	4
NZL	New Zealand	Oceania	no	679 705.40	323.42	182 403.61	1.77	5
MDG	Madagascar	Africa	no	23 496.42	11.68	11 984.82	0.97	6
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	1 579 571.61	0.68	7
CHN	China	Asia	no	31 726 110.00	4 834.00	9 003 382.87	0.54	8
USA	United States	Northern America	no	54 922 480.00	8 774.38	17 276 300.43	0.51	9
IND	India	Asia	no	5 769 372.00	726.92	1 944 284.82	0.37	10
MOZ	Mozambique	Africa	no	36 409.45	6.36	17 220.44	0.37	11
OMN	Oman	Asia	no	202 533.60	15.92	56 792.46	0.28	12
LKA	Sri Lanka	Asia	no	208 273.50	18.57	73 583.10	0.25	13
VNM	Vietnam	Asia	no	487 574.40	40.93	164 388.68	0.25	14
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	22 559.82	0.15	15
BGD	Bangladesh	Asia	no	381 431.90	23.35	160 820.74	0.15	16
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	12 562.44	0.11	17
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	1 269 259.96	0.08	18
PAK	Pakistan	Asia	no	502 344.30	18.10	247 867.95	0.07	19
IDN	Indonesia	Asia	no	2 827 835.00	37.86	885 677.23	0.04	20
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	373 895.14	0.04	21
RUS	Russia	Europe	no	6 325 795.00	12.40	1 973 571.68	0.01	22
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	59 883.48	0.01	23
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	28 969.70	0.00	24
BRN	Brunei	Asia	no	71 236.46	0.02	9 075.14	0.00	25
MYS	Malaysia	Asia	no	1 170 979.00	0.52	284 108.03	0.00	26
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	318 951.13	0.00	27
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	387 419.05	0.00	28
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	36 126.55	0.00	29
IRN	Iran	Asia	no	2 067 640.00	0.09	255 619.28	0.00	30
THA	Thailand	Asia	no	1 378 999.00	0.10	374 528.18	0.00	31
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	32
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	33
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	34
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	35
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		36
BTN	Bhutan	Asia	no	11 083.66		2 173.58		37
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		38
MMR	Myanmar	Asia	no	195 390.10	40.61			39
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		40
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		41
ISR	Israel	Asia	no	853 829.30		286 558.36		42
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		43
CAN	Canada	Northern America	no	6 291 917.00		1 857 561.03		44
UKR	Ukraine	Europe	no	676 833.60		192 523.67		45
ESP	Spain	Europe	no	6 233 955.00		1 345 564.18		46
ITA	Italy	Europe	no	8 604 332.00		2 100 502.86		47
LTU	Lithuania	Europe	no	135 613.80		43 719.88		48
HRV	Croatia	Europe	no	188 113.70		57 600.31		49
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		50
SVN	Slovenia	Europe	no	139 899.70		45 103.27		51
TUR	Turkey	Asia	no	1 947 249.00		876 064.28		52
HUN	Hungary	Europe	no	562 479.60		123 292.26		53
AUT	Austria	Europe	no	1 801 472.00		413 112.76		54
DNK	Denmark	Europe	no	1 346 393.00		316 596.75		55
SRB	Serbia	Europe	no	57 317.24		50 611.94		56
LBY	Libya	Africa	no	73 757.40		55 976.41		57
CYP	Cyprus	Asia	no	71 610.53		24 622.91		58
ARM	Armenia	Asia	no	22 895.19		12 628.86		59
CMR	Cameroon	Africa	no	81 683.73		32 007.42		60
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		61
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		62
GRC	Greece	Europe	no	1 181 283.00		249 410.75		63
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		51 412.23		64
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		2 301 443.96		65
PER	Peru	Latin America and the Caribbean	no	692 344.50		204 179.29		66
BEL	Belgium	Europe	no	1 980 551.00		517 763.60		67
CHL	Chile	Latin America and the Caribbean	no	784 154.10		278 153.13		68
MYT	Mayotte	Africa	no	6 949.04	6.12			69
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		57 529.86		70
NGA	Nigeria	Africa	no	592 030.40		495 416.77		71
KWT	Kuwait	Asia	no	469 418.40		96 682.69		72
AND	Andorra	Europe	no	8 381.65				73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		96 787.63		74
SYR	Syria	Asia	no	204 643.30		40 077.56		75
PSE	State of Palestine	Asia	no	69 454.30				76
JOR	Jordan	Asia	no	121 481.20		43 390.10		77
LBN	Lebanon	Asia	no	207 723.70		50 384.63		78
SSD	South Sudan	Africa	no	19 958.30		14 712.88		79
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		80
FRA	France	Europe	no	10 329 420.00		2 848 015.52		81
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		21 616.92		82
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			83
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		84
EST	Estonia	Europe	no	79 617.31		24 664.81		85
FIN	Finland	Europe	no	965 383.40		269 912.39		86
GEO	Georgia	Asia	no	53 823.53		18 230.53		87
ISL	Iceland	Europe	no	57 291.68		14 052.90		88
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		89
LIE	Liechtenstein	Europe	no	18 837.10				90
LVA	Latvia	Europe	no	95 608.77		29 570.85		91
MKD	Macedonia	Europe	no	32 996.37		12 119.46		92
BLR	Belarus	Europe	no	229 399.90		73 747.80		93
ROU	Romania	Europe	no	555 697.40				94
DEU	Germany	Europe	no	15 114 870.00		3 513 506.86		95
SVK	Slovakia	Europe	no	414 782.80		93 274.32		96
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		97
ZAF	South Africa	Africa	no	1 282 854.00		360 489.06		98
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		611 844.88		99
ALB	Albania	Europe	no	40 459.65		15 227.71		100
FRO	Faroe Islands	Europe	no	9 272.37				101
GBR	United Kingdom	Europe	no	7 806 797.00		2 728 637.76		102
IRL	Ireland	Europe	no	778 821.60		183 798.12		103
MCO	Monaco	Europe	no	20 716.40				104
MNE	Montenegro	Europe	no	8 892.93		5 312.54		105
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				106
PRK	North Korea	Asia	no	77 982.15	1.95			107
POL	Poland	Europe	no	1 614 716.00		515 943.50		108
TUV	Tuvalu	Oceania	no	123.26				109
SMR	San Marino	Europe	no	4 049.35				110
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				111
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		112
DZA	Algeria	Africa	no	899 206.20		204 165.74		113
SAU	Saudi Arabia	Asia	no	2 141 419.00		590 125.33		114
QAT	Qatar	Asia	no	624 817.70		91 904.94		115
EGY	Egypt	Africa	no	617 149.20		291 083.68		116
ESH	Western Sahara	Africa	no	3 690.88				117
LSO	Lesotho	Africa	no	17 938.00		3 740.58		118
IRQ	Iraq	Asia	no	132 499.60		226 497.10		119
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		120
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		121
GIB	Gibraltar	Europe	no	4 042.19				122
NOR	Norway	Europe	no	1 933 679.00		457 625.37		123
LAO	Laos	Asia	no	21 925.62		12 246.45		124
MLT	Malta	Europe	no	36 990.21		8 864.05		125
YEM	Yemen	Asia	no	79 113.56		18 997.54		126
NER	Niger	Africa	no	12 723.49		8 745.32		127
REU	Reunion	Africa	no	67 897.68	24.99			128
UGA	Uganda	Africa	no	43 697.09		23 933.64		129
MDA	Moldova	Europe	no	33 762.68		10 971.97		130
NLD	Netherlands	Europe	no	3 410 955.00		765 364.08		131
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		132
PRT	Portugal	Europe	no	1 054 344.00		225 098.65		133
DJI	Djibouti	Africa	no	4 744.66		1 018.02		134
MAR	Morroco	Africa	no	374 846.30		117 556.24		135
KEN	Kenya	Africa	no	98 382.66		63 770.87		136
MAC	Macau	Asia	no	56 709.10		20 216.60		137
BEN	Benin	Africa	no	21 971.91		9 572.30		138
GIN	Guinea	Africa	no	13 665.89		7 750.84		139
MWI	Malawi	Africa	no	18 356.97		4 366.74		140
COG	Congo	Africa	no	69 047.72		12 612.41		141
TUN	Tunisia	Africa	no	178 845.60		51 302.58		142
LBR	Liberia	Africa	no	1 911.24		2 724.73		143
BWA	Botswana	Africa	no	90 628.62		15 490.96		144
ERI	Eritrea	Africa	no	9 081.79		2 836.63		145
SLE	Sierra Leone	Africa	no	3 031.82		4 191.60		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MLI	Mali	Africa	no	27 719.15		11 011.34		147
BDI	Burundi	Africa	no	3 616.17		3 443.34		148
NAM	Namibia	Africa	no	42 062.66		15 480.83		149
SDN	Sudan	Africa	no	70 368.78		70 927.03		150
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		151
ZMB	Zambia	Africa	no	48 954.52		26 244.17		152
AGO	Angola	Africa	no	176 182.50		105 476.81		153
GAB	Gabon	Africa	no	120 252.20		14 724.33		154
RWA	Rwanda	Africa	no	13 197.39		8 767.59		155
SEN	Senegal	Africa	no	35 335.24		17 930.59		156
GNQ	Equatorial Guinea	Africa	no	20 061.44		12 451.63		157
GMB	The Gambia	Africa	no	2 097.61		1 029.01		158
GHA	Ghana	Africa	no	74 174.05		50 578.29		159
TCD	Chad	Africa	no	26 745.14		14 228.09		160
TGO	Togo	Africa	no	12 513.67		4 390.62		161
MRT	Mauritania	Africa	no	11 985.52		4 169.52		162
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		163
CIV	Ivory Coast	Africa	no	45 467.63		31 142.79		164
COD	Democratic Republic of the Congo	Africa	no	27 401.97				165
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		166
NPL	Nepal	Asia	no	53 996.57		24 466.26		167
MNG	Mongolia	Asia	no	36 587.61		14 036.94		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
PHL	Philippines	Asia	no	566 948.60	2 541.62	4.48	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1.39	2
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08	0.89	3
MYT	Mayotte	Africa	no	6 949.04	6.12	0.88	4
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	0.72	5
MDG	Madagascar	Africa	no	23 496.42	11.68	0.50	6
NZL	New Zealand	Oceania	no	679 705.40	323.42	0.48	7
JPN	Japan	Asia	no	39 255 200.00	17 812.27	0.45	8
REU	Reunion	Africa	no	67 897.68	24.99	0.37	9
MMR	Myanmar	Asia	no	195 390.10	40.61	0.21	10
MOZ	Mozambique	Africa	no	36 409.45	6.36	0.17	11
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	0.16	12
USA	United States	Northern America	no	54 922 480.00	8 774.38	0.16	13
CHN	China	Asia	no	31 726 110.00	4 834.00	0.15	14
IND	India	Asia	no	5 769 372.00	726.92	0.13	15
LKA	Sri Lanka	Asia	no	208 273.50	18.57	0.09	16
VNM	Vietnam	Asia	no	487 574.40	40.93	0.08	17
OMN	Oman	Asia	no	202 533.60	15.92	0.08	18
BGD	Bangladesh	Asia	no	381 431.90	23.35	0.06	19
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	0.04	20
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	0.04	21
PAK	Pakistan	Asia	no	502 344.30	18.10	0.04	22
PRK	North Korea	Asia	no	77 982.15	1.95	0.03	23
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	0.02	24
IDN	Indonesia	Asia	no	2 827 835.00	37.86	0.01	25
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	0.01	26
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	0.00	27
RUS	Russia	Europe	no	6 325 795.00	12.40	0.00	28
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	0.00	29
MYS	Malaysia	Asia	no	1 170 979.00	0.52	0.00	30
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	0.00	31
BRN	Brunei	Asia	no	71 236.46	0.02	0.00	32
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	0.00	33
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	0.00	34
THA	Thailand	Asia	no	1 378 999.00	0.10	0.00	35
IRN	Iran	Asia	no	2 067 640.00	0.09	0.00	36
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	37
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	38
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	39
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	40
ISR	Israel	Asia	no	853 829.30			41
LUX	Luxembourg	Europe	no	201 130.60			42
CAN	Canada	Northern America	no	6 291 917.00			43
UKR	Ukraine	Europe	no	676 833.60			44
ESP	Spain	Europe	no	6 233 955.00			45
ITA	Italy	Europe	no	8 604 332.00			46
LTU	Lithuania	Europe	no	135 613.80			47
HRV	Croatia	Europe	no	188 113.70			48
CHE	Switzerland	Europe	no	3 421 606.00			49
SVN	Slovenia	Europe	no	139 899.70			50
TUR	Turkey	Asia	no	1 947 249.00			51
HUN	Hungary	Europe	no	562 479.60			52
AUT	Austria	Europe	no	1 801 472.00			53
DNK	Denmark	Europe	no	1 346 393.00			54
SRB	Serbia	Europe	no	57 317.24			55
LBY	Libya	Africa	no	73 757.40			56
CYP	Cyprus	Asia	no	71 610.53			57
ARM	Armenia	Asia	no	22 895.19			58
CMR	Cameroon	Africa	no	81 683.73			59
AZE	Azerbaijan	Asia	no	192 784.00			60
CZE	Czech Republic	Europe	no	1 007 263.00			61
GRC	Greece	Europe	no	1 181 283.00			62
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			63
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			64
PER	Peru	Latin America and the Caribbean	no	692 344.50			65
BEL	Belgium	Europe	no	1 980 551.00			66
CHL	Chile	Latin America and the Caribbean	no	784 154.10			67
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			68
NGA	Nigeria	Africa	no	592 030.40			69
KWT	Kuwait	Asia	no	469 418.40			70
AND	Andorra	Europe	no	8 381.65			71
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			72
SYR	Syria	Asia	no	204 643.30			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
PSE	State of Palestine	Asia	no	69 454.30			74
JOR	Jordan	Asia	no	121 481.20			75
LBN	Lebanon	Asia	no	207 723.70			76
SSD	South Sudan	Africa	no	19 958.30			77
SWZ	Swaziland	Africa	no	13 701.24			78
FRA	France	Europe	no	10 329 420.00			79
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			80
BGR	Bulgaria	Europe	no	163 821.60			81
EST	Estonia	Europe	no	79 617.31			82
FIN	Finland	Europe	no	965 383.40			83
GEO	Georgia	Asia	no	53 823.53			84
ISL	Iceland	Europe	no	57 291.68			85
KGZ	Kyrgizstan	Asia	no	18 466.60			86
LIE	Liechtenstein	Europe	no	18 837.10			87
LVA	Latvia	Europe	no	95 608.77			88
MKD	Macedonia	Europe	no	32 996.37			89
BLR	Belarus	Europe	no	229 399.90			90
ROU	Romania	Europe	no	555 697.40			91
DEU	Germany	Europe	no	15 114 870.00			92
SVK	Slovakia	Europe	no	414 782.80			93
SWE	Sweden	Europe	no	1 747 501.00			94
ZAF	South Africa	Africa	no	1 282 854.00			95
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			96
ALB	Albania	Europe	no	40 459.65			97
FRO	Faroe Islands	Europe	no	9 272.37			98
GBR	United Kingdom	Europe	no	7 806 797.00			99
IRL	Ireland	Europe	no	778 821.60			100
MCO	Monaco	Europe	no	20 716.40			101
MNE	Montenegro	Europe	no	8 892.93			102
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			103
POL	Poland	Europe	no	1 614 716.00			104
TUV	Tuvalu	Oceania	no	123.26			105
SMR	San Marino	Europe	no	4 049.35			106
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			107
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			108
DZA	Algeria	Africa	no	899 206.20			109
SAU	Saudi Arabia	Asia	no	2 141 419.00			110
QAT	Qatar	Asia	no	624 817.70			111
EGY	Egypt	Africa	no	617 149.20			112
ESH	Western Sahara	Africa	no	3 690.88			113
LSO	Lesotho	Africa	no	17 938.00			114
IRQ	Iraq	Asia	no	132 499.60			115
CAF	Central African Republic	Africa	no	3 893.74			116
ETH	Ethiopia	Africa	no	65 598.93			117
GIB	Gibraltar	Europe	no	4 042.19			118
NOR	Norway	Europe	no	1 933 679.00			119
LAO	Laos	Asia	no	21 925.62			120
MLT	Malta	Europe	no	36 990.21			121
YEM	Yemen	Asia	no	79 113.56			122
NER	Niger	Africa	no	12 723.49			123
UGA	Uganda	Africa	no	43 697.09			124
MDA	Moldova	Europe	no	33 762.68			125
NLD	Netherlands	Europe	no	3 410 955.00			126
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			127
PRT	Portugal	Europe	no	1 054 344.00			128
DJI	Djibouti	Africa	no	4 744.66			129
MAR	Morroco	Africa	no	374 846.30			130
KEN	Kenya	Africa	no	98 382.66			131
MAC	Macau	Asia	no	56 709.10			132
BEN	Benin	Africa	no	21 971.91			133
GIN	Guinea	Africa	no	13 665.89			134
MWI	Malawi	Africa	no	18 356.97			135
COG	Congo	Africa	no	69 047.72			136
TUN	Tunisia	Africa	no	178 845.60			137
LBR	Liberia	Africa	no	1 911.24			138
BWA	Botswana	Africa	no	90 628.62			139
ERI	Eritrea	Africa	no	9 081.79			140
SLE	Sierra Leone	Africa	no	3 031.82			141
MLI	Mali	Africa	no	27 719.15			142
BDI	Burundi	Africa	no	3 616.17			143
NAM	Namibia	Africa	no	42 062.66			144
SDN	Sudan	Africa	no	70 368.78			145
ZWE	Zimbawue	Africa	no	22 038.05			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
ZMB	Zambia	Africa	no	48 954.52			147
AGO	Angola	Africa	no	176 182.50			148
GAB	Gabon	Africa	no	120 252.20			149
RWA	Rwanda	Africa	no	13 197.39			150
SEN	Senegal	Africa	no	35 335.24			151
GNQ	Equatorial Guinea	Africa	no	20 061.44			152
GMB	The Gambia	Africa	no	2 097.61			153
GHA	Ghana	Africa	no	74 174.05			154
TCD	Chad	Africa	no	26 745.14			155
TGO	Togo	Africa	no	12 513.67			156
MRT	Mauritania	Africa	no	11 985.52			157
BFA	Burkina Faso	Africa	no	24 689.43			158
CIV	Ivory Coast	Africa	no	45 467.63			159
COD	Democratic Republic of the Congo	Africa	no	27 401.97			160
AFG	Afghanistan	Asia	no	60 187.87			161
NPL	Nepal	Asia	no	53 996.57			162
MNG	Mongolia	Asia	no	36 587.61			163
TJK	Tajikistan	Asia	no	20 536.86			164
BTN	Bhutan	Asia	no	11 083.66			165
UZB	Uzbekistan	Asia	no	151 891.10			166
TKM	Turkmenistan	Asia	no	36 127.02			167
KAZ	Kazakhstan	Asia	no	734 309.90			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	50 115.44	3.84	1
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	9 688.13	3.54	2
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	3 830.06	2.06	3
PHL	Philippines	Asia	no	566 948.60	272 066.56	3 827.86	1.41	4
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	45 243.59	0.92	5
MDG	Madagascar	Africa	no	23 496.42	10 613.49	82.85	0.78	6
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	89.63	0.57	7
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	385.00	0.57	8
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	87 253.88	0.52	9
OMN	Oman	Asia	no	202 533.60	79 655.92	405.68	0.51	10
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	53.72	0.48	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	66.33	0.36	12
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	4 610.10	0.30	13
IND	India	Asia	no	5 769 372.00	1 876 797.16	4 526.74	0.24	14
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	305.42	0.20	15
PAK	Pakistan	Asia	no	502 344.30	232 286.78	294.43	0.13	16
CHN	China	Asia	no	31 726 110.00	9 240 270.86	11 492.35	0.12	17
VNM	Vietnam	Asia	no	487 574.40	171 390.01	212.61	0.12	18
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	1 486.01	0.12	19
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	425.43	0.10	20
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	481.01	0.06	21
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	8.44	0.02	22
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	217.02	0.01	23
BRN	Brunei	Asia	no	71 236.46	16 111.14	1.18	0.01	24
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	19.94	0.01	25
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.52	0.01	26
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	9.59	0.00	27
SOM	Somalia	Africa	no	6 408.32	917.04	0.02	0.00	28
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.61	0.00	29
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	5.63	0.00	30
THA	Thailand	Asia	no	1 378 999.00	387 252.16	2.89	0.00	31
IRN	Iran	Asia	no	2 067 640.00	368 904.34	1.90	0.00	32
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.02	0.00	33
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	34
MNG	Mongolia	Asia	no	36 587.61	11 516.41			35
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			36
BTN	Bhutan	Asia	no	11 083.66	1 781.26			37
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			38
MMR	Myanmar	Asia	no	195 390.10				39
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			40
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			41
ISR	Israel	Asia	no	853 829.30	290 550.61			42
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			43
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55			44
UKR	Ukraine	Europe	no	676 833.60	177 430.61			45
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			46
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			47
LTU	Lithuania	Europe	no	135 613.80	45 931.97			48
HRV	Croatia	Europe	no	188 113.70	57 868.67			49
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			50
SVN	Slovenia	Europe	no	139 899.70	47 987.30			51
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			52
HUN	Hungary	Europe	no	562 479.60	133 423.90			53
AUT	Austria	Europe	no	1 801 472.00	428 321.90			54
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			55
SRB	Serbia	Europe	no	57 317.24	45 519.65			56
LBY	Libya	Africa	no	73 757.40	74 199.53			57
CYP	Cyprus	Asia	no	71 610.53	21 911.45			58
ARM	Armenia	Asia	no	22 895.19	10 432.17			59
CMR	Cameroon	Africa	no	81 683.73	29 567.50			60
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			61
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			62
GRC	Greece	Europe	no	1 181 283.00	242 230.33			63
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09			64
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			65
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			66
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			67
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			68
MYT	Mayotte	Africa	no	6 949.04				69
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			70
NGA	Nigeria	Africa	no	592 030.40	521 803.30			71
KWT	Kuwait	Asia	no	469 418.40	175 830.50			72
AND	Andorra	Europe	no	8 381.65	2 849.17			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			74
SYR	Syria	Asia	no	204 643.30	40 405.00			75
PSE	State of Palestine	Asia	no	69 454.30				76
JOR	Jordan	Asia	no	121 481.20	33 678.50			77
LBN	Lebanon	Asia	no	207 723.70	44 352.42			78
SSD	South Sudan	Africa	no	19 958.30	11 804.41			79
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			80
FRA	France	Europe	no	10 329 420.00	2 806 427.94			81
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			82
TWN	Taiwan	Asia	no	1 680 401.00				83
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			84
EST	Estonia	Europe	no	79 617.31	24 880.27			85
FIN	Finland	Europe	no	965 383.40	267 328.62			86
GEO	Georgia	Asia	no	53 823.53	16 140.05			87
ISL	Iceland	Europe	no	57 291.68	15 330.06			88
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			89
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			90
LVA	Latvia	Europe	no	95 608.77	30 956.69			91
MKD	Macedonia	Europe	no	32 996.37	10 195.40			92
BLR	Belarus	Europe	no	229 399.90	71 709.52			93
ROU	Romania	Europe	no	555 697.40				94
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			95
SVK	Slovakia	Europe	no	414 782.80	97 707.33			96
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			97
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			98
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			99
ALB	Albania	Europe	no	40 459.65	12 923.24			100
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			101
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01			102
IRL	Ireland	Europe	no	778 821.60	232 077.43			103
MCO	Monaco	Europe	no	20 716.40	6 074.51			104
MNE	Montenegro	Europe	no	8 892.93	4 416.08			105
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				106
PRK	North Korea	Asia	no	77 982.15				107
POL	Poland	Europe	no	1 614 716.00	525 865.98			108
TUV	Tuvalu	Oceania	no	123.26	38.32			109
SMR	San Marino	Europe	no	4 049.35	1 899.81			110
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				111
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			112
DZA	Algeria	Africa	no	899 206.20	210 183.41			113
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			114
QAT	Qatar	Asia	no	624 817.70	203 235.16			115
EGY	Egypt	Africa	no	617 149.20	271 972.83			116
ESH	Western Sahara	Africa	no	3 690.88				117
LSO	Lesotho	Africa	no	17 938.00	2 334.99			118
IRQ	Iraq	Asia	no	132 499.60	229 327.29			119
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			120
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			121
GIB	Gibraltar	Europe	no	4 042.19				122
NOR	Norway	Europe	no	1 933 679.00	512 580.42			123
LAO	Laos	Asia	no	21 925.62	11 242.53			124
MLT	Malta	Europe	no	36 990.21	9 642.33			125
YEM	Yemen	Asia	no	79 113.56	35 954.50			126
NER	Niger	Africa	no	12 723.49	7 407.42			127
REU	Reunion	Africa	no	67 897.68				128
UGA	Uganda	Africa	no	43 697.09	21 493.61			129
MDA	Moldova	Europe	no	33 762.68	7 969.62			130
SYC	Seychelles	Africa	no	6 234.98	1 443.35			131
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			132
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			133
PRT	Portugal	Europe	no	1 054 344.00	227 323.72			134
DJI	Djibouti	Africa	no	4 744.66	1 456.34			135
MAR	Morroco	Africa	no	374 846.30	103 835.71			136
KEN	Kenya	Africa	no	98 382.66	55 243.06			137
MAC	Macau	Asia	no	56 709.10	51 753.10			138
BEN	Benin	Africa	no	21 971.91	8 307.22			139
GIN	Guinea	Africa	no	13 665.89	6 144.13			140
MWI	Malawi	Africa	no	18 356.97	3 705.39			141
COG	Congo	Africa	no	69 047.72	14 085.85			142
TUN	Tunisia	Africa	no	178 845.60	46 993.60			143
LBR	Liberia	Africa	no	1 911.24	1 950.96			144
BWA	Botswana	Africa	no	90 628.62	14 784.71			145
ERI	Eritrea	Africa	no	9 081.79	3 444.10			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			147
MLI	Mali	Africa	no	27 719.15	10 942.73			148
BDI	Burundi	Africa	no	3 616.17	2 714.51			149
NAM	Namibia	Africa	no	42 062.66	13 113.07			150
SDN	Sudan	Africa	no	70 368.78	66 565.89			151
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			152
ZMB	Zambia	Africa	no	48 954.52	26 820.87			153
AGO	Angola	Africa	no	176 182.50	124 178.24			154
GAB	Gabon	Africa	no	120 252.20	19 343.51			155
RWA	Rwanda	Africa	no	13 197.39	7 521.26			156
SEN	Senegal	Africa	no	35 335.24	14 791.70			157
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			158
GMB	The Gambia	Africa	no	2 097.61	903.50			159
GHA	Ghana	Africa	no	74 174.05	48 137.03			160
TCD	Chad	Africa	no	26 745.14	13 513.55			161
TGO	Togo	Africa	no	12 513.67	4 338.58			162
MRT	Mauritania	Africa	no	11 985.52	4 158.18			163
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			164
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			165
COD	Democratic Republic of the Congo	Africa	no	27 401.97				166
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			167
NPL	Nepal	Asia	no	53 996.57	19 294.35			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	50 115.44	3.81	1
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	9 688.13	3.47	2
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	3 830.06	2.34	3
PHL	Philippines	Asia	no	566 948.60	326 316.43	3 827.86	1.17	4
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	45 243.59	0.89	5
MDG	Madagascar	Africa	no	23 496.42	10 279.21	82.85	0.81	6
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	385.00	0.59	7
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	89.63	0.58	8
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	87 253.88	0.51	9
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	53.72	0.49	10
OMN	Oman	Asia	no	202 533.60	90 220.81	405.68	0.45	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	66.33	0.38	12
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	4 610.10	0.30	13
IND	India	Asia	no	5 769 372.00	1 855 591.42	4 526.74	0.24	14
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	305.42	0.19	15
VNM	Vietnam	Asia	no	487 574.40	164 181.67	212.61	0.13	16
CHN	China	Asia	no	31 726 110.00	9 196 167.76	11 492.35	0.12	17
PAK	Pakistan	Asia	no	502 344.30	244 280.84	294.43	0.12	18
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	1 486.01	0.12	19
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	425.43	0.10	20
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	481.01	0.06	21
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	8.44	0.02	22
BRN	Brunei	Asia	no	71 236.46	10 784.47	1.18	0.01	23
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	217.02	0.01	24
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	19.94	0.01	25
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.52	0.01	26
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	9.59	0.00	27
SOM	Somalia	Africa	no	6 408.32	834.95	0.02	0.00	28
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	5.63	0.00	29
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.61	0.00	30
THA	Thailand	Asia	no	1 378 999.00	361 245.34	2.89	0.00	31
IRN	Iran	Asia	no	2 067 640.00	369 271.87	1.90	0.00	32
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.02	0.00	33
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	34
MNG	Mongolia	Asia	no	36 587.61	10 751.45			35
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			36
BTN	Bhutan	Asia	no	11 083.66	1 665.34			37
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			38
MMR	Myanmar	Asia	no	195 390.10				39
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			40
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			41
ISR	Israel	Asia	no	853 829.30	284 226.45			42
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			43
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67			44
UKR	Ukraine	Europe	no	676 833.60	180 979.14			45
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			46
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			47
LTU	Lithuania	Europe	no	135 613.80	44 274.32			48
HRV	Croatia	Europe	no	188 113.70	56 412.38			49
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			50
SVN	Slovenia	Europe	no	139 899.70	47 633.96			51
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			52
HUN	Hungary	Europe	no	562 479.60	129 554.20			53
AUT	Austria	Europe	no	1 801 472.00	427 916.46			54
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			55
SRB	Serbia	Europe	no	57 317.24	43 641.10			56
LBY	Libya	Africa	no	73 757.40	61 985.45			57
CYP	Cyprus	Asia	no	71 610.53	21 453.80			58
ARM	Armenia	Asia	no	22 895.19	10 972.97			59
CMR	Cameroon	Africa	no	81 683.73	28 948.12			60
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			61
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			62
GRC	Greece	Europe	no	1 181 283.00	242 155.98			63
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75			64
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			65
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			66
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			67
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			68
MYT	Mayotte	Africa	no	6 949.04				69
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			70
NGA	Nigeria	Africa	no	592 030.40	499 041.44			71
KWT	Kuwait	Asia	no	469 418.40	165 127.08			72
AND	Andorra	Europe	no	8 381.65	2 539.76			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			74
SYR	Syria	Asia	no	204 643.30	39 715.80			75
PSE	State of Palestine	Asia	no	69 454.30				76
JOR	Jordan	Asia	no	121 481.20	33 339.06			77
LBN	Lebanon	Asia	no	207 723.70	44 926.34			78
SSD	South Sudan	Africa	no	19 958.30	10 791.19			79
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			80
FRA	France	Europe	no	10 329 420.00	2 855 136.13			81
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			82
TWN	Taiwan	Asia	no	1 680 401.00				83
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			84
EST	Estonia	Europe	no	79 617.31	24 010.33			85
FIN	Finland	Europe	no	965 383.40	268 134.55			86
GEO	Georgia	Asia	no	53 823.53	15 835.00			87
ISL	Iceland	Europe	no	57 291.68	15 047.05			88
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			89
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			90
LVA	Latvia	Europe	no	95 608.77	30 883.23			91
MKD	Macedonia	Europe	no	32 996.37	10 110.99			92
BLR	Belarus	Europe	no	229 399.90	69 000.62			93
ROU	Romania	Europe	no	555 697.40				94
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			95
SVK	Slovakia	Europe	no	414 782.80	95 768.45			96
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			97
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			98
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			99
ALB	Albania	Europe	no	40 459.65	12 951.12			100
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			101
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20			102
IRL	Ireland	Europe	no	778 821.60	197 446.98			103
MCO	Monaco	Europe	no	20 716.40	6 919.24			104
MNE	Montenegro	Europe	no	8 892.93	4 503.08			105
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				106
PRK	North Korea	Asia	no	77 982.15				107
POL	Poland	Europe	no	1 614 716.00	506 714.23			108
TUV	Tuvalu	Oceania	no	123.26	55.31			109
SMR	San Marino	Europe	no	4 049.35	1 681.06			110
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				111
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			112
DZA	Algeria	Africa	no	899 206.20	206 267.88			113
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			114
QAT	Qatar	Asia	no	624 817.70	190 319.79			115
EGY	Egypt	Africa	no	617 149.20	264 562.52			116
ESH	Western Sahara	Africa	no	3 690.88				117
LSO	Lesotho	Africa	no	17 938.00	2 861.49			118
IRQ	Iraq	Asia	no	132 499.60	229 027.28			119
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			120
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			121
GIB	Gibraltar	Europe	no	4 042.19				122
NOR	Norway	Europe	no	1 933 679.00	520 892.58			123
LAO	Laos	Asia	no	21 925.62	10 602.76			124
MLT	Malta	Europe	no	36 990.21	8 946.39			125
YEM	Yemen	Asia	no	79 113.56	34 721.48			126
NER	Niger	Africa	no	12 723.49	7 223.22			127
REU	Reunion	Africa	no	67 897.68				128
UGA	Uganda	Africa	no	43 697.09	22 316.73			129
MDA	Moldova	Europe	no	33 762.68	8 846.50			130
SYC	Seychelles	Africa	no	6 234.98	1 392.89			131
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			132
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			133
PRT	Portugal	Europe	no	1 054 344.00	222 332.29			134
DJI	Djibouti	Africa	no	4 744.66	775.82			135
MAR	Morroco	Africa	no	374 846.30	100 965.44			136
KEN	Kenya	Africa	no	98 382.66	54 934.72			137
MAC	Macau	Asia	no	56 709.10	37 762.88			138
BEN	Benin	Africa	no	21 971.91	8 247.34			139
GIN	Guinea	Africa	no	13 665.89	5 696.70			140
MWI	Malawi	Africa	no	18 356.97	3 574.19			141
COG	Congo	Africa	no	69 047.72	11 049.89			142
TUN	Tunisia	Africa	no	178 845.60	44 799.78			143
LBR	Liberia	Africa	no	1 911.24	1 751.03			144
BWA	Botswana	Africa	no	90 628.62	14 678.53			145
ERI	Eritrea	Africa	no	9 081.79	3 412.88			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			147
MLI	Mali	Africa	no	27 719.15	10 272.74			148
BDI	Burundi	Africa	no	3 616.17	2 713.09			149
NAM	Namibia	Africa	no	42 062.66	12 989.72			150
SDN	Sudan	Africa	no	70 368.78	63 769.45			151
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			152
ZMB	Zambia	Africa	no	48 954.52	26 049.97			153
AGO	Angola	Africa	no	176 182.50	112 289.11			154
GAB	Gabon	Africa	no	120 252.20	17 298.19			155
RWA	Rwanda	Africa	no	13 197.39	7 406.89			156
SEN	Senegal	Africa	no	35 335.24	14 606.22			157
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			158
GMB	The Gambia	Africa	no	2 097.61	875.76			159
GHA	Ghana	Africa	no	74 174.05	47 004.17			160
TCD	Chad	Africa	no	26 745.14	12 987.28			161
TGO	Togo	Africa	no	12 513.67	3 696.32			162
MRT	Mauritania	Africa	no	11 985.52	3 892.41			163
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			164
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			165
COD	Democratic Republic of the Congo	Africa	no	27 401.97				166
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			167
NPL	Nepal	Asia	no	53 996.57	19 443.42			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
MYT	Mayotte	Africa	no	6 949.04	196.12	2.82	1
REU	Reunion	Africa	no	67 897.68	686.71	1.01	2
KOR	South Korea	Asia	no	5 538 605.00	50 115.44	0.90	3
HKG	Hong Kong	Asia	no	1 250 063.00	9 688.13	0.78	4
PHL	Philippines	Asia	no	566 948.60	3 827.86	0.68	5
NZL	New Zealand	Oceania	no	679 705.40	3 830.06	0.56	6
MDG	Madagascar	Africa	no	23 496.42	82.85	0.35	7
MMR	Myanmar	Asia	no	195 390.10	570.46	0.29	8
MOZ	Mozambique	Africa	no	36 409.45	89.63	0.25	9
TWN	Taiwan	Asia	no	1 680 401.00	3 603.04	0.21	10
OMN	Oman	Asia	no	202 533.60	405.68	0.20	11
LKA	Sri Lanka	Asia	no	208 273.50	385.00	0.18	12
USA	United States	Northern America	no	54 922 480.00	87 253.88	0.16	13
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	53.72	0.15	14
JPN	Japan	Asia	no	39 255 200.00	45 243.59	0.12	15
HND	Honduras	Latin America and the Caribbean	no	77 974.77	66.33	0.09	16
BGD	Bangladesh	Asia	no	381 431.90	305.42	0.08	17
IND	India	Asia	no	5 769 372.00	4 526.74	0.08	18
AUS	Australia	Oceania	no	6 616 533.00	4 610.10	0.07	19
PAK	Pakistan	Asia	no	502 344.30	294.43	0.06	20
VNM	Vietnam	Asia	no	487 574.40	212.61	0.04	21
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	425.43	0.04	22
CHN	China	Asia	no	31 726 110.00	11 492.35	0.04	23
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 486.01	0.03	24
PRK	North Korea	Asia	no	77 982.15	21.00	0.03	25
IDN	Indonesia	Asia	no	2 827 835.00	481.01	0.02	26
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	8.44	0.00	27
RUS	Russia	Europe	no	6 325 795.00	217.02	0.00	28
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.52	0.00	29
MYS	Malaysia	Asia	no	1 170 979.00	19.94	0.00	30
BRN	Brunei	Asia	no	71 236.46	1.18	0.00	31
COL	Colombia	Latin America and the Caribbean	no	944 576.90	9.59	0.00	32
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.61	0.00	33
ARE	United Arab Emirates	Asia	no	1 282 119.00	5.63	0.00	34
SOM	Somalia	Africa	no	6 408.32	0.02	0.00	35
THA	Thailand	Asia	no	1 378 999.00	2.89	0.00	36
IRN	Iran	Asia	no	2 067 640.00	1.90	0.00	37
KHM	Cambodia	Asia	no	27 390.49	0.02	0.00	38
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	39
KAZ	Kazakhstan	Asia	no	734 309.90			40
ISR	Israel	Asia	no	853 829.30			41
LUX	Luxembourg	Europe	no	201 130.60			42
CAN	Canada	Northern America	no	6 291 917.00			43
UKR	Ukraine	Europe	no	676 833.60			44
ESP	Spain	Europe	no	6 233 955.00			45
ITA	Italy	Europe	no	8 604 332.00			46
LTU	Lithuania	Europe	no	135 613.80			47
HRV	Croatia	Europe	no	188 113.70			48
CHE	Switzerland	Europe	no	3 421 606.00			49
SVN	Slovenia	Europe	no	139 899.70			50
TUR	Turkey	Asia	no	1 947 249.00			51
HUN	Hungary	Europe	no	562 479.60			52
AUT	Austria	Europe	no	1 801 472.00			53
DNK	Denmark	Europe	no	1 346 393.00			54
SRB	Serbia	Europe	no	57 317.24			55
LBY	Libya	Africa	no	73 757.40			56
CYP	Cyprus	Asia	no	71 610.53			57
ARM	Armenia	Asia	no	22 895.19			58
CMR	Cameroon	Africa	no	81 683.73			59
AZE	Azerbaijan	Asia	no	192 784.00			60
CZE	Czech Republic	Europe	no	1 007 263.00			61
GRC	Greece	Europe	no	1 181 283.00			62
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			63
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			64
PER	Peru	Latin America and the Caribbean	no	692 344.50			65
BEL	Belgium	Europe	no	1 980 551.00			66
CHL	Chile	Latin America and the Caribbean	no	784 154.10			67
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			68
NGA	Nigeria	Africa	no	592 030.40			69
KWT	Kuwait	Asia	no	469 418.40			70
AND	Andorra	Europe	no	8 381.65			71
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			72
SYR	Syria	Asia	no	204 643.30			73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
PSE	State of Palestine	Asia	no	69 454.30			74
JOR	Jordan	Asia	no	121 481.20			75
LBN	Lebanon	Asia	no	207 723.70			76
SSD	South Sudan	Africa	no	19 958.30			77
SWZ	Swaziland	Africa	no	13 701.24			78
FRA	France	Europe	no	10 329 420.00			79
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			80
BGR	Bulgaria	Europe	no	163 821.60			81
EST	Estonia	Europe	no	79 617.31			82
FIN	Finland	Europe	no	965 383.40			83
GEO	Georgia	Asia	no	53 823.53			84
ISL	Iceland	Europe	no	57 291.68			85
KGZ	Kyrgizstan	Asia	no	18 466.60			86
LIE	Liechtenstein	Europe	no	18 837.10			87
LVA	Latvia	Europe	no	95 608.77			88
MKD	Macedonia	Europe	no	32 996.37			89
BLR	Belarus	Europe	no	229 399.90			90
ROU	Romania	Europe	no	555 697.40			91
DEU	Germany	Europe	no	15 114 870.00			92
SVK	Slovakia	Europe	no	414 782.80			93
SWE	Sweden	Europe	no	1 747 501.00			94
ZAF	South Africa	Africa	no	1 282 854.00			95
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			96
ALB	Albania	Europe	no	40 459.65			97
FRO	Faroe Islands	Europe	no	9 272.37			98
GBR	United Kingdom	Europe	no	7 806 797.00			99
IRL	Ireland	Europe	no	778 821.60			100
MCO	Monaco	Europe	no	20 716.40			101
MNE	Montenegro	Europe	no	8 892.93			102
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			103
POL	Poland	Europe	no	1 614 716.00			104
TUV	Tuvalu	Oceania	no	123.26			105
SMR	San Marino	Europe	no	4 049.35			106
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			107
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			108
DZA	Algeria	Africa	no	899 206.20			109
SAU	Saudi Arabia	Asia	no	2 141 419.00			110
QAT	Qatar	Asia	no	624 817.70			111
EGY	Egypt	Africa	no	617 149.20			112
ESH	Western Sahara	Africa	no	3 690.88			113
LSO	Lesotho	Africa	no	17 938.00			114
IRQ	Iraq	Asia	no	132 499.60			115
CAF	Central African Republic	Africa	no	3 893.74			116
ETH	Ethiopia	Africa	no	65 598.93			117
GIB	Gibraltar	Europe	no	4 042.19			118
NOR	Norway	Europe	no	1 933 679.00			119
LAO	Laos	Asia	no	21 925.62			120
MLT	Malta	Europe	no	36 990.21			121
YEM	Yemen	Asia	no	79 113.56			122
NER	Niger	Africa	no	12 723.49			123
UGA	Uganda	Africa	no	43 697.09			124
MDA	Moldova	Europe	no	33 762.68			125
SYC	Seychelles	Africa	no	6 234.98			126
NLD	Netherlands	Europe	no	3 410 955.00			127
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			128
PRT	Portugal	Europe	no	1 054 344.00			129
DJI	Djibouti	Africa	no	4 744.66			130
MAR	Morroco	Africa	no	374 846.30			131
KEN	Kenya	Africa	no	98 382.66			132
MAC	Macau	Asia	no	56 709.10			133
BEN	Benin	Africa	no	21 971.91			134
GIN	Guinea	Africa	no	13 665.89			135
MWI	Malawi	Africa	no	18 356.97			136
COG	Congo	Africa	no	69 047.72			137
TUN	Tunisia	Africa	no	178 845.60			138
LBR	Liberia	Africa	no	1 911.24			139
BWA	Botswana	Africa	no	90 628.62			140
ERI	Eritrea	Africa	no	9 081.79			141
SLE	Sierra Leone	Africa	no	3 031.82			142
MLI	Mali	Africa	no	27 719.15			143
BDI	Burundi	Africa	no	3 616.17			144
NAM	Namibia	Africa	no	42 062.66			145
SDN	Sudan	Africa	no	70 368.78			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
ZWE	Zimbawue	Africa	no	22 038.05			147
ZMB	Zambia	Africa	no	48 954.52			148
AGO	Angola	Africa	no	176 182.50			149
GAB	Gabon	Africa	no	120 252.20			150
RWA	Rwanda	Africa	no	13 197.39			151
SEN	Senegal	Africa	no	35 335.24			152
GNQ	Equatorial Guinea	Africa	no	20 061.44			153
GMB	The Gambia	Africa	no	2 097.61			154
GHA	Ghana	Africa	no	74 174.05			155
TCD	Chad	Africa	no	26 745.14			156
TGO	Togo	Africa	no	12 513.67			157
MRT	Mauritania	Africa	no	11 985.52			158
BFA	Burkina Faso	Africa	no	24 689.43			159
CIV	Ivory Coast	Africa	no	45 467.63			160
COD	Democratic Republic of the Congo	Africa	no	27 401.97			161
AFG	Afghanistan	Asia	no	60 187.87			162
NPL	Nepal	Asia	no	53 996.57			163
MNG	Mongolia	Asia	no	36 587.61			164
TJK	Tajikistan	Asia	no	20 536.86			165
BTN	Bhutan	Asia	no	11 083.66			166
UZB	Uzbekistan	Asia	no	151 891.10			167
TKM	Turkmenistan	Asia	no	36 127.02			168

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries (no SIDS)

Flood

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	136.64	207.63	1
KHM	Cambodia	Asia	no	27 390.49	251.19	2 753.57	91.22	2
SWZ	Swaziland	Africa	no	13 701.24	28.92	363.96	79.46	3
LAO	Laos	Asia	no	21 925.62	219.52	3 279.79	66.93	4
BTN	Bhutan	Asia	no	11 083.66	54.65	842.11	64.90	5
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 595.35	58.81	6
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	42 581.72	57.85	7
VNM	Vietnam	Asia	no	487 574.40	2 295.39	40 823.56	56.23	8
MDA	Moldova	Europe	no	33 762.68	101.07	1 821.11	55.50	9
ERI	Eritrea	Africa	no	9 081.79	12.50	260.73	47.94	10
TJK	Tajikistan	Asia	no	20 536.86	48.23	1 199.63	40.20	11
UKR	Ukraine	Europe	no	676 833.60	1 153.80	32 236.10	35.79	12
LSO	Lesotho	Africa	no	17 938.00	29.51	855.33	34.50	13
PAK	Pakistan	Asia	no	502 344.30	1 029.80	30 125.80	34.18	14
MWI	Malawi	Africa	no	18 356.97	24.11	731.37	32.97	15
NPL	Nepal	Asia	no	53 996.57	143.34	4 356.14	32.91	16
GAB	Gabon	Africa	no	120 252.20	200.15	6 432.02	31.12	17
COG	Congo	Africa	no	69 047.72	126.48	4 329.13	29.22	18
LVA	Latvia	Europe	no	95 608.77	172.80	6 324.84	27.32	19
SVK	Slovakia	Europe	no	414 782.80	532.30	19 975.29	26.65	20
MLI	Mali	Africa	no	27 719.15	44.76	1 684.06	26.58	21
AFG	Afghanistan	Asia	no	60 187.87	92.17	3 601.40	25.59	22
THA	Thailand	Asia	no	1 378 999.00	2 586.19	103 523.57	24.98	23
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	4 539.50	24.66	24
MDG	Madagascar	Africa	no	23 496.42	36.07	1 666.80	21.64	25
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	4 394.85	21.01	26
GIN	Guinea	Africa	no	13 665.89	17.64	919.65	19.18	27
NAM	Namibia	Africa	no	42 062.66	64.55	3 368.79	19.16	28
SRB	Serbia	Europe	no	57 317.24	163.25	8 634.55	18.91	29
YEM	Yemen	Asia	no	79 113.56	57.50	3 126.31	18.39	30
LTU	Lithuania	Europe	no	135 613.80	134.90	7 517.23	17.95	31
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	3 192.49	17.14	32
BLR	Belarus	Europe	no	229 399.90	449.46	26 490.10	16.97	33
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	2 207.36	16.22	34
TGO	Togo	Africa	no	12 513.67	10.94	685.82	15.95	35
CAF	Central African Republic	Africa	no	3 893.74	4.92	320.25	15.36	36
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	84 107.08	15.11	37
MOZ	Mozambique	Africa	no	36 409.45	39.00	2 723.39	14.32	38
IND	India	Asia	no	5 769 372.00	7 471.82	530 741.66	14.08	39
SYR	Syria	Asia	no	204 643.30	114.65	8 252.62	13.89	40
ZAF	South Africa	Africa	no	1 282 854.00	910.25	67 780.45	13.43	41
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	2 574.11	13.39	42
HRV	Croatia	Europe	no	188 113.70	147.78	11 171.45	13.23	43
CMR	Cameroon	Africa	no	81 683.73	74.86	5 736.52	13.05	44
GEO	Georgia	Asia	no	53 823.53	45.09	3 542.58	12.73	45
BRN	Brunei	Asia	no	71 236.46	30.95	2 466.98	12.55	46
SSD	South Sudan	Africa	no	19 958.30	17.42	1 399.32	12.45	47
MRT	Mauritania	Africa	no	11 985.52	18.88	1 578.96	11.96	48
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	5 844.96	11.83	49
RUS	Russia	Europe	no	6 325 795.00	4 987.01	450 238.87	11.08	50
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	408 331.78	10.88	51
TCD	Chad	Africa	no	26 745.14	38.75	3 701.42	10.47	52
NZL	New Zealand	Oceania	no	679 705.40	399.98	38 213.65	10.47	53
PHL	Philippines	Asia	no	566 948.60	545.43	55 644.78	9.80	54
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	49 121.75	9.73	55
ARM	Armenia	Asia	no	22 895.19	21.18	2 183.10	9.70	56
IRQ	Iraq	Asia	no	132 499.60	344.33	35 983.20	9.57	57
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	442 013.06	9.51	58
RWA	Rwanda	Africa	no	13 197.39	17.68	1 920.52	9.21	59
AGO	Angola	Africa	no	176 182.50	165.69	18 242.56	9.08	60
IRN	Iran	Asia	no	2 067 640.00	668.26	73 681.58	9.07	61
EST	Estonia	Europe	no	79 617.31	61.56	6 795.36	9.06	62
ALB	Albania	Europe	no	40 459.65	30.59	3 379.49	9.05	63
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	7 693.87	8.93	64
BEN	Benin	Africa	no	21 971.91	19.22	2 182.62	8.81	65
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 889.80	8.77	66
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	274 943.80	8.63	67
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	103 818.81	8.52	68
CIV	Ivory Coast	Africa	no	45 467.63	44.43	5 292.23	8.40	69
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	26 312.88	8.09	70
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	52 070.81	8.06	71
KEN	Kenya	Africa	no	98 382.66	90.33	11 277.32	8.01	72
ETH	Ethiopia	Africa	no	65 598.93	135.52	17 012.56	7.97	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
AUT	Austria	Europe	no	1 801 472.00	749.13	95 015.40	7.88	74
MNG	Mongolia	Asia	no	36 587.61	39.40	5 086.03	7.75	75
BWA	Botswana	Africa	no	90 628.62	38.66	5 015.09	7.71	76
NER	Niger	Africa	no	12 723.49	19.29	2 551.37	7.56	77
SLE	Sierra Leone	Africa	no	3 031.82	5.09	685.06	7.43	78
LKA	Sri Lanka	Asia	no	208 273.50	143.75	19 647.18	7.32	79
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	88 386.66	7.23	80
NGA	Nigeria	Africa	no	592 030.40	543.42	75 511.10	7.20	81
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	92 724.40	7.06	82
LBR	Liberia	Africa	no	1 911.24	3.06	440.32	6.95	83
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	53 841.99	6.72	84
GMB	The Gambia	Africa	no	2 097.61	1.24	187.47	6.61	85
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	65 444.15	6.57	86
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	433 369.09	6.50	87
NLD	Netherlands	Europe	no	3 410 955.00	984.03	155 739.98	6.32	88
POL	Poland	Europe	no	1 614 716.00	621.52	98 972.34	6.28	89
UZB	Uzbekistan	Asia	no	151 891.10	78.64	13 153.84	5.98	90
ZWE	Zimbawue	Africa	no	22 038.05	9.92	1 752.82	5.66	91
IRL	Ireland	Europe	no	778 821.60	199.25	35 221.45	5.66	92
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	386 884.93	5.65	93
SDN	Sudan	Africa	no	70 368.78	71.67	13 307.19	5.39	94
CHE	Switzerland	Europe	no	3 421 606.00	845.26	160 510.43	5.27	95
BGR	Bulgaria	Europe	no	163 821.60	58.23	11 609.87	5.02	96
FRA	France	Europe	no	10 329 420.00	3 091.69	619 955.29	4.99	97
ZMB	Zambia	Africa	no	48 954.52	25.96	5 247.76	4.95	98
MNE	Montenegro	Europe	no	8 892.93	3.99	847.70	4.71	99
TKM	Turkmenistan	Asia	no	36 127.02	77.11	16 597.51	4.65	100
EGY	Egypt	Africa	no	617 149.20	161.27	37 477.12	4.30	101
ESP	Spain	Europe	no	6 233 955.00	1 109.18	257 993.28	4.30	102
CHN	China	Asia	no	31 726 110.00	18 765.75	4 370 835.96	4.29	103
TUN	Tunisia	Africa	no	178 845.60	40.60	9 509.45	4.27	104
MAR	Morroco	Africa	no	374 846.30	132.04	31 321.40	4.22	105
GHA	Ghana	Africa	no	74 174.05	45.95	10 912.64	4.21	106
SVN	Slovenia	Europe	no	139 899.70	39.17	9 461.85	4.14	107
PRT	Portugal	Europe	no	1 054 344.00	141.38	34 419.00	4.11	108
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	10 406.53	4.10	109
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 068 884.62	4.05	110
UGA	Uganda	Africa	no	43 697.09	20.60	5 121.46	4.02	111
BDI	Burundi	Africa	no	3 616.17	3.05	780.29	3.91	112
DEU	Germany	Europe	no	15 114 870.00	2 697.57	737 992.70	3.66	113
TZA	Tanzania	Africa	no	50 142.79	37.79	10 658.54	3.55	114
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	3 663.90	3.42	115
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	265 421.77	3.28	116
SEN	Senegal	Africa	no	35 335.24	11.38	3 706.12	3.07	117
USA	United States	Northern America	no	54 922 480.00	9 408.88	3 244 299.91	2.90	118
MKD	Macedonia	Europe	no	32 996.37	7.23	2 530.04	2.86	119
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	77 440.20	2.77	120
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	12 763.68	2.76	121
DZA	Algeria	Africa	no	899 206.20	178.37	71 040.48	2.51	122
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	10 060.78	2.48	123
AZE	Azerbaijan	Asia	no	192 784.00	44.02	18 074.31	2.44	124
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	9 099.23	2.17	125
GRC	Greece	Europe	no	1 181 283.00	55.33	27 154.95	2.04	126
ITA	Italy	Europe	no	8 604 332.00	777.37	383 197.87	2.03	127
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	440 106.84	1.98	128
TUR	Turkey	Asia	no	1 947 249.00	296.12	167 069.99	1.77	129
OMN	Oman	Asia	no	202 533.60	26.27	17 256.96	1.52	130
BEL	Belgium	Europe	no	1 980 551.00	167.25	116 900.65	1.43	131
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	173 661.86	1.28	132
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 257.46	1.13	133
SWE	Sweden	Europe	no	1 747 501.00	110.38	128 378.82	0.86	134
LBN	Lebanon	Asia	no	207 723.70	8.08	12 363.32	0.65	135
DJI	Djibouti	Africa	no	4 744.66	0.19	317.86	0.60	136
LBY	Libya	Africa	no	73 757.40	12.82	25 993.79	0.49	137
QAT	Qatar	Asia	no	624 817.70	7.04	15 282.42	0.46	138
DNK	Denmark	Europe	no	1 346 393.00	27.85	61 547.69	0.45	139
JOR	Jordan	Asia	no	121 481.20	3.01	9 168.09	0.33	140
ISR	Israel	Asia	no	853 829.30	9.52	56 565.68	0.17	141
KWT	Kuwait	Asia	no	469 418.40	2.91	19 039.58	0.15	142
CYP	Cyprus	Asia	no	71 610.53	0.46	4 260.93	0.11	143
ESH	Western Sahara	Africa	no	3 690.88	0.02			144
ROU	Romania	Europe	no	555 697.40	519.75			145
LIE	Liechtenstein	Europe	no	18 837.10				146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ISL	Iceland	Europe	no	57 291.68		2 314.22		147
FIN	Finland	Europe	no	965 383.40		56 624.15		148
TWN	Taiwan	Asia	no	1 680 401.00	79.41			149
GIB	Gibraltar	Europe	no	4 042.19				150
NOR	Norway	Europe	no	1 933 679.00		116 071.15		151
PSE	State of Palestine	Asia	no	69 454.30	0.29			152
MLT	Malta	Europe	no	36 990.21		1 333.61		153
AND	Andorra	Europe	no	8 381.65				154
MYT	Mayotte	Africa	no	6 949.04				155
REU	Reunion	Africa	no	67 897.68				156
SYC	Seychelles	Africa	no	6 234.98		484.95		157
MMR	Myanmar	Asia	no	195 390.10	1 956.65			158
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			159
MAC	Macau	Asia	no	56 709.10		6 610.47		160
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				161
HKG	Hong Kong	Asia	no	1 250 063.00		65 379.04		162
SMR	San Marino	Europe	no	4 049.35				163
TUV	Tuvalu	Oceania	no	123.26				164
PRK	North Korea	Asia	no	77 982.15	157.21			165
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			166
MCO	Monaco	Europe	no	20 716.40				167
FRO	Faroe Islands	Europe	no	9 272.37				168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	7 673.71	320.99	1
KHM	Cambodia	Asia	no	27 390.49	251.19	795.24	315.87	2
VNM	Vietnam	Asia	no	487 574.40	2 295.39	10 550.52	217.56	3
SOM	Somalia	Africa	no	6 408.32	28.37	133.83	211.99	4
GAB	Gabon	Africa	no	120 252.20	200.15	1 026.90	194.91	5
BTN	Bhutan	Asia	no	11 083.66	54.65	311.85	175.24	6
LAO	Laos	Asia	no	21 925.62	219.52	1 626.13	135.00	7
NPL	Nepal	Asia	no	53 996.57	143.34	1 917.21	74.76	8
COG	Congo	Africa	no	69 047.72	126.48	1 908.75	66.26	9
MDA	Moldova	Europe	no	33 762.68	101.07	1 618.04	62.46	10
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 544.35	58.92	11
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	646.93	53.28	12
THA	Thailand	Asia	no	1 378 999.00	2 586.19	53 487.73	48.35	13
TJK	Tajikistan	Asia	no	20 536.86	48.23	998.87	48.28	14
ZMB	Zambia	Africa	no	48 954.52	25.96	568.19	45.69	15
BLR	Belarus	Europe	no	229 399.90	449.46	10 166.04	44.21	16
PAK	Pakistan	Asia	no	502 344.30	1 029.80	25 463.41	40.44	17
MDG	Madagascar	Africa	no	23 496.42	36.07	915.01	39.42	18
LVA	Latvia	Europe	no	95 608.77	172.80	4 413.54	39.15	19
SWZ	Swaziland	Africa	no	13 701.24	28.92	753.93	38.36	20
MLI	Mali	Africa	no	27 719.15	44.76	1 172.08	38.19	21
TCD	Chad	Africa	no	26 745.14	38.75	1 026.17	37.76	22
AFG	Afghanistan	Asia	no	60 187.87	92.17	2 492.12	36.98	23
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	3 077.08	36.38	24
ETH	Ethiopia	Africa	no	65 598.93	135.52	3 941.08	34.39	25
IND	India	Asia	no	5 769 372.00	7 471.82	221 700.44	33.70	26
LSO	Lesotho	Africa	no	17 938.00	29.51	878.46	33.59	27
UKR	Ukraine	Europe	no	676 833.60	1 153.80	34 350.49	33.59	28
TGO	Togo	Africa	no	12 513.67	10.94	359.57	30.43	29
MNG	Mongolia	Asia	no	36 587.61	39.40	1 298.34	30.35	30
SVK	Slovakia	Europe	no	414 782.80	532.30	17 642.66	30.17	31
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	79 076.93	30.00	32
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	42 433.27	29.96	33
GIN	Guinea	Africa	no	13 665.89	17.64	594.52	29.67	34
CAF	Central African Republic	Africa	no	3 893.74	4.92	166.29	29.59	35
MWI	Malawi	Africa	no	18 356.97	24.11	818.79	29.45	36
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	1 306.25	27.41	37
MRT	Mauritania	Africa	no	11 985.52	18.88	706.94	26.71	38
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	3 496.64	26.41	39
TKM	Turkmenistan	Asia	no	36 127.02	77.11	3 114.55	24.76	40
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	27 530.57	23.21	41
SYR	Syria	Asia	no	204 643.30	114.65	4 971.97	23.06	42
ERI	Eritrea	Africa	no	9 081.79	12.50	549.64	22.74	43
ALB	Albania	Europe	no	40 459.65	30.59	1 381.39	22.14	44
YEM	Yemen	Asia	no	79 113.56	57.50	2 625.09	21.90	45
CMR	Cameroon	Africa	no	81 683.73	74.86	3 421.99	21.88	46
IRN	Iran	Asia	no	2 067 640.00	668.26	31 978.13	20.90	47
BEN	Benin	Africa	no	21 971.91	19.22	934.54	20.57	48
SRB	Serbia	Europe	no	57 317.24	163.25	7 977.96	20.46	49
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	23 889.95	20.00	50
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	1 036.62	19.09	51
GMB	The Gambia	Africa	no	2 097.61	1.24	67.53	18.36	52
PHL	Philippines	Asia	no	566 948.60	545.43	30 212.56	18.05	53
NAM	Namibia	Africa	no	42 062.66	64.55	3 617.67	17.84	54
NER	Niger	Africa	no	12 723.49	19.29	1 083.62	17.80	55
CIV	Ivory Coast	Africa	no	45 467.63	44.43	2 613.28	17.00	56
GEO	Georgia	Asia	no	53 823.53	45.09	2 692.49	16.75	57
LTU	Lithuania	Europe	no	135 613.80	134.90	8 076.66	16.70	58
RWA	Rwanda	Africa	no	13 197.39	17.68	1 065.41	16.59	59
LKA	Sri Lanka	Asia	no	208 273.50	143.75	8 808.70	16.32	60
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	4 243.72	16.30	61
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	13 315.00	15.99	62
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	22 647.04	15.98	63
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	276 915.26	15.18	64
CHN	China	Asia	no	31 726 110.00	18 765.75	1 299 157.61	14.44	65
SDN	Sudan	Africa	no	70 368.78	71.67	5 000.18	14.33	66
ARM	Armenia	Asia	no	22 895.19	21.18	1 508.90	14.04	67
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	4 063.51	13.46	68
BWA	Botswana	Africa	no	90 628.62	38.66	2 912.71	13.27	69
EST	Estonia	Europe	no	79 617.31	61.56	4 754.17	12.95	70
NGA	Nigeria	Africa	no	592 030.40	543.42	42 180.53	12.88	71
HRV	Croatia	Europe	no	188 113.70	147.78	11 594.94	12.75	72
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	34 332.88	12.52	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MOZ	Mozambique	Africa	no	36 409.45	39.00	3 190.27	12.22	74
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	5 637.22	12.19	75
RUS	Russia	Europe	no	6 325 795.00	4 987.01	409 820.63	12.17	76
SLE	Sierra Leone	Africa	no	3 031.82	5.09	428.35	11.88	77
ZAF	South Africa	Africa	no	1 282 854.00	910.25	77 967.19	11.67	78
KEN	Kenya	Africa	no	98 382.66	90.33	7 759.48	11.64	79
NZL	New Zealand	Oceania	no	679 705.40	399.98	34 691.31	11.53	80
UGA	Uganda	Africa	no	43 697.09	20.60	1 787.04	11.53	81
LBR	Liberia	Africa	no	1 911.24	3.06	268.18	11.41	82
CHE	Switzerland	Europe	no	3 421 606.00	845.26	75 147.62	11.25	83
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	194 728.35	11.22	84
BRN	Brunei	Asia	no	71 236.46	30.95	2 950.69	10.49	85
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	63 198.81	10.36	86
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	40 979.05	10.24	87
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	94 570.07	9.36	88
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	493 431.00	9.00	89
AUT	Austria	Europe	no	1 801 472.00	749.13	84 928.57	8.82	90
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 951.39	8.50	91
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	395 958.78	7.12	92
IRQ	Iraq	Asia	no	132 499.60	344.33	48 846.71	7.05	93
MAR	Morroco	Africa	no	374 846.30	132.04	19 696.51	6.70	94
AGO	Angola	Africa	no	176 182.50	165.69	24 725.13	6.70	95
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	3 793.90	6.58	96
POL	Poland	Europe	no	1 614 716.00	621.52	95 412.26	6.51	97
BGR	Bulgaria	Europe	no	163 821.60	58.23	8 993.34	6.47	98
SSD	South Sudan	Africa	no	19 958.30	17.42	2 720.34	6.40	99
UZB	Uzbekistan	Asia	no	151 891.10	78.64	12 744.63	6.17	100
TZA	Tanzania	Africa	no	50 142.79	37.79	6 321.86	5.98	101
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	149 707.18	5.81	102
GHA	Ghana	Africa	no	74 174.05	45.95	8 003.31	5.74	103
AZE	Azerbaijan	Asia	no	192 784.00	44.02	8 252.01	5.33	104
BDI	Burundi	Africa	no	3 616.17	3.05	599.64	5.09	105
EGY	Egypt	Africa	no	617 149.20	161.27	31 768.68	5.08	106
SEN	Senegal	Africa	no	35 335.24	11.38	2 289.33	4.97	107
IRL	Ireland	Europe	no	778 821.60	199.25	40 563.02	4.91	108
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	8 897.75	4.79	109
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	46 486.26	4.62	110
FRA	France	Europe	no	10 329 420.00	3 091.69	677 049.47	4.57	111
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	7 713.60	4.56	112
MNE	Montenegro	Europe	no	8 892.93	3.99	876.28	4.55	113
TUN	Tunisia	Africa	no	178 845.60	40.60	8 918.25	4.55	114
DZA	Algeria	Africa	no	899 206.20	178.37	39 734.87	4.49	115
NLD	Netherlands	Europe	no	3 410 955.00	984.03	224 781.17	4.38	116
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	2 899.00	4.33	117
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 012 070.61	4.28	118
ESP	Spain	Europe	no	6 233 955.00	1 109.18	271 148.52	4.09	119
MKD	Macedonia	Europe	no	32 996.37	7.23	1 787.08	4.05	120
SVN	Slovenia	Europe	no	139 899.70	39.17	9 765.51	4.01	121
DEU	Germany	Europe	no	15 114 870.00	2 697.57	718 583.82	3.75	122
USA	United States	Northern America	no	54 922 480.00	9 408.88	2 547 499.93	3.69	123
ZWE	Zimbawue	Africa	no	22 038.05	9.92	2 703.00	3.67	124
PRT	Portugal	Europe	no	1 054 344.00	141.38	43 081.93	3.28	125
TUR	Turkey	Asia	no	1 947 249.00	296.12	123 751.24	2.39	126
ITA	Italy	Europe	no	8 604 332.00	777.37	417 993.98	1.86	127
OMN	Oman	Asia	no	202 533.60	26.27	14 871.52	1.77	128
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	542 121.89	1.60	129
LBY	Libya	Africa	no	73 757.40	12.82	8 664.60	1.48	130
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	165 700.80	1.34	131
BEL	Belgium	Europe	no	1 980 551.00	167.25	128 131.48	1.31	132
LBN	Lebanon	Asia	no	207 723.70	8.08	6 530.19	1.24	133
GRC	Greece	Europe	no	1 181 283.00	55.33	48 425.35	1.14	134
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 391.43	1.12	135
DJI	Djibouti	Africa	no	4 744.66	0.19	212.95	0.89	136
SWE	Sweden	Europe	no	1 747 501.00	110.38	151 944.31	0.73	137
JOR	Jordan	Asia	no	121 481.20	3.01	6 618.91	0.45	138
DNK	Denmark	Europe	no	1 346 393.00	27.85	89 732.55	0.31	139
QAT	Qatar	Asia	no	624 817.70	7.04	24 487.36	0.29	140
ISR	Israel	Asia	no	853 829.30	9.52	65 345.00	0.15	141
CYP	Cyprus	Asia	no	71 610.53	0.46	4 557.62	0.10	142
KWT	Kuwait	Asia	no	469 418.40	2.91	29 360.33	0.10	143
ESH	Western Sahara	Africa	no	3 690.88	0.02			144
ROU	Romania	Europe	no	555 697.40	519.75			145
LIE	Liechtenstein	Europe	no	18 837.10				146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
ISL	Iceland	Europe	no	57 291.68		3 730.06		147
FIN	Finland	Europe	no	965 383.40		66 675.15		148
GIB	Gibraltar	Europe	no	4 042.19				149
NOR	Norway	Europe	no	1 933 679.00		112 012.76		150
TWN	Taiwan	Asia	no	1 680 401.00	79.41			151
MLT	Malta	Europe	no	36 990.21		1 879.07		152
PSE	State of Palestine	Asia	no	69 454.30	0.29			153
AND	Andorra	Europe	no	8 381.65				154
REU	Reunion	Africa	no	67 897.68				155
MYT	Mayotte	Africa	no	6 949.04				156
SYC	Seychelles	Africa	no	6 234.98		369.27		157
MMR	Myanmar	Asia	no	195 390.10	1 956.65			158
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			159
MAC	Macau	Asia	no	56 709.10		3 378.13		160
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				161
HKG	Hong Kong	Asia	no	1 250 063.00		25 520.99		162
SMR	San Marino	Europe	no	4 049.35				163
TUV	Tuvalu	Oceania	no	123.26				164
PRK	North Korea	Asia	no	77 982.15	157.21			165
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			166
MCO	Monaco	Europe	no	20 716.40				167
FRO	Faroe Islands	Europe	no	9 272.37				168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
BTN	Bhutan	Asia	no	11 083.66	54.65	2 173.58	25.14	1
SOM	Somalia	Africa	no	6 408.32	28.37	1 173.40	24.18	2
LAO	Laos	Asia	no	21 925.62	219.52	12 246.45	17.93	3
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	160 820.74	15.32	4
KHM	Cambodia	Asia	no	27 390.49	251.19	16 467.91	15.25	5
VNM	Vietnam	Asia	no	487 574.40	2 295.39	164 388.68	13.96	6
GAB	Gabon	Africa	no	120 252.20	200.15	14 724.33	13.59	7
HUN	Hungary	Europe	no	562 479.60	1 564.07	123 292.26	12.69	8
COG	Congo	Africa	no	69 047.72	126.48	12 612.41	10.03	9
MDA	Moldova	Europe	no	33 762.68	101.07	10 971.97	9.21	10
LSO	Lesotho	Africa	no	17 938.00	29.51	3 740.58	7.89	11
SWZ	Swaziland	Africa	no	13 701.24	28.92	3 944.56	7.33	12
THA	Thailand	Asia	no	1 378 999.00	2 586.19	374 528.18	6.91	13
BLR	Belarus	Europe	no	229 399.90	449.46	73 747.80	6.09	14
UKR	Ukraine	Europe	no	676 833.60	1 153.80	192 523.67	5.99	15
NPL	Nepal	Asia	no	53 996.57	143.34	24 466.26	5.86	16
LVA	Latvia	Europe	no	95 608.77	172.80	29 570.85	5.84	17
SVK	Slovakia	Europe	no	414 782.80	532.30	93 274.32	5.71	18
MWI	Malawi	Africa	no	18 356.97	24.11	4 366.74	5.52	19
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	22 559.82	4.96	20
MRT	Mauritania	Africa	no	11 985.52	18.88	4 169.52	4.53	21
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	284 108.03	4.47	22
ERI	Eritrea	Africa	no	9 081.79	12.50	2 836.63	4.41	23
NAM	Namibia	Africa	no	42 062.66	64.55	15 480.83	4.17	24
PAK	Pakistan	Asia	no	502 344.30	1 029.80	247 867.95	4.15	25
MLI	Mali	Africa	no	27 719.15	44.76	11 011.34	4.06	26
IND	India	Asia	no	5 769 372.00	7 471.82	1 944 284.82	3.84	27
TJK	Tajikistan	Asia	no	20 536.86	48.23	12 690.19	3.80	28
BRN	Brunei	Asia	no	71 236.46	30.95	9 075.14	3.41	29
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	27 647.87	3.34	30
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	10 749.10	3.33	31
SRB	Serbia	Europe	no	57 317.24	163.25	50 611.94	3.23	32
AFG	Afghanistan	Asia	no	60 187.87	92.17	29 010.12	3.18	33
LTU	Lithuania	Europe	no	135 613.80	134.90	43 719.88	3.09	34
TKM	Turkmenistan	Asia	no	36 127.02	77.11	25 014.09	3.08	35
YEM	Yemen	Asia	no	79 113.56	57.50	18 997.54	3.03	36
MDG	Madagascar	Africa	no	23 496.42	36.07	11 984.82	3.01	37
SYR	Syria	Asia	no	204 643.30	114.65	40 077.56	2.86	38
MNG	Mongolia	Asia	no	36 587.61	39.40	14 036.94	2.81	39
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	12 562.44	2.74	40
TCD	Chad	Africa	no	26 745.14	38.75	14 228.09	2.72	41
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	885 677.23	2.68	42
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	1 579 571.61	2.66	43
IRN	Iran	Asia	no	2 067 640.00	668.26	255 619.28	2.61	44
HRV	Croatia	Europe	no	188 113.70	147.78	57 600.31	2.57	45
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	21 616.92	2.53	46
RUS	Russia	Europe	no	6 325 795.00	4 987.01	1 973 571.68	2.53	47
ZAF	South Africa	Africa	no	1 282 854.00	910.25	360 489.06	2.53	48
EST	Estonia	Europe	no	79 617.31	61.56	24 664.81	2.50	49
BWA	Botswana	Africa	no	90 628.62	38.66	15 490.96	2.50	50
TGO	Togo	Africa	no	12 513.67	10.94	4 390.62	2.49	51
GEO	Georgia	Asia	no	53 823.53	45.09	18 230.53	2.47	52
ETH	Ethiopia	Africa	no	65 598.93	135.52	55 403.13	2.45	53
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	28 469.09	2.43	54
CMR	Cameroon	Africa	no	81 683.73	74.86	32 007.42	2.34	55
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	205 086.26	2.33	56
GIN	Guinea	Africa	no	13 665.89	17.64	7 750.84	2.28	57
MOZ	Mozambique	Africa	no	36 409.45	39.00	17 220.44	2.26	58
NER	Niger	Africa	no	12 723.49	19.29	8 745.32	2.21	59
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	96 787.63	2.20	60
NZL	New Zealand	Oceania	no	679 705.40	399.98	182 403.61	2.19	61
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	196 764.65	2.13	62
CHN	China	Asia	no	31 726 110.00	18 765.75	9 003 382.87	2.08	63
CAF	Central African Republic	Africa	no	3 893.74	4.92	2 389.56	2.06	64
RWA	Rwanda	Africa	no	13 197.39	17.68	8 767.59	2.02	65
ALB	Albania	Europe	no	40 459.65	30.59	15 227.71	2.01	66
BEN	Benin	Africa	no	21 971.91	19.22	9 572.30	2.01	67
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	318 951.13	2.00	68
LKA	Sri Lanka	Asia	no	208 273.50	143.75	73 583.10	1.95	69
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	2 301 443.96	1.93	70
PHL	Philippines	Asia	no	566 948.60	545.43	283 131.84	1.93	71
AUT	Austria	Europe	no	1 801 472.00	749.13	413 112.76	1.81	72
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	204 179.29	1.77	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	1 238 504.83	1.76	74
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	387 419.05	1.69	75
ARM	Armenia	Asia	no	22 895.19	21.18	12 628.86	1.68	76
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	12 451.63	1.59	77
AGO	Angola	Africa	no	176 182.50	165.69	105 476.81	1.57	78
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	278 153.13	1.55	79
IRQ	Iraq	Asia	no	132 499.60	344.33	226 497.10	1.52	80
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	1 857 561.03	1.52	81
BFA	Burkina Faso	Africa	no	24 689.43	16.58	11 452.71	1.45	82
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	611 844.88	1.45	83
CIV	Ivory Coast	Africa	no	45 467.63	44.43	31 142.79	1.43	84
KEN	Kenya	Africa	no	98 382.66	90.33	63 770.87	1.42	85
CHE	Switzerland	Europe	no	3 421 606.00	845.26	602 400.29	1.40	86
UZB	Uzbekistan	Asia	no	151 891.10	78.64	59 039.46	1.33	87
NLD	Netherlands	Europe	no	3 410 955.00	984.03	765 364.08	1.29	88
SLE	Sierra Leone	Africa	no	3 031.82	5.09	4 191.60	1.21	89
GMB	The Gambia	Africa	no	2 097.61	1.24	1 029.01	1.21	90
POL	Poland	Europe	no	1 614 716.00	621.52	515 943.50	1.20	91
SSD	South Sudan	Africa	no	19 958.30	17.42	14 712.88	1.18	92
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	59 883.48	1.15	93
MAR	Morroco	Africa	no	374 846.30	132.04	117 556.24	1.12	94
LBR	Liberia	Africa	no	1 911.24	3.06	2 724.73	1.12	95
NGA	Nigeria	Africa	no	592 030.40	543.42	495 416.77	1.10	96
FRA	France	Europe	no	10 329 420.00	3 091.69	2 848 015.52	1.09	97
IRL	Ireland	Europe	no	778 821.60	199.25	183 798.12	1.08	98
BGR	Bulgaria	Europe	no	163 821.60	58.23	54 795.79	1.06	99
SDN	Sudan	Africa	no	70 368.78	71.67	70 927.03	1.01	100
ZMB	Zambia	Africa	no	48 954.52	25.96	26 244.17	0.99	101
TZA	Tanzania	Africa	no	50 142.79	37.79	39 205.30	0.96	102
GHA	Ghana	Africa	no	74 174.05	45.95	50 578.29	0.91	103
BDI	Burundi	Africa	no	3 616.17	3.05	3 443.34	0.89	104
DZA	Algeria	Africa	no	899 206.20	178.37	204 165.74	0.87	105
SVN	Slovenia	Europe	no	139 899.70	39.17	45 103.27	0.87	106
UGA	Uganda	Africa	no	43 697.09	20.60	23 933.64	0.86	107
JPN	Japan	Asia	no	39 255 200.00	4 328.15	5 059 261.76	0.86	108
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	51 412.23	0.83	109
ESP	Spain	Europe	no	6 233 955.00	1 109.18	1 345 564.18	0.82	110
TUN	Tunisia	Africa	no	178 845.60	40.60	51 302.58	0.79	111
DEU	Germany	Europe	no	15 114 870.00	2 697.57	3 513 506.86	0.77	112
AZE	Azerbaijan	Asia	no	192 784.00	44.02	57 484.51	0.77	113
MNE	Montenegro	Europe	no	8 892.93	3.99	5 312.54	0.75	114
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	36 126.55	0.69	115
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	1 269 259.96	0.69	116
SEN	Senegal	Africa	no	35 335.24	11.38	17 930.59	0.63	117
PRT	Portugal	Europe	no	1 054 344.00	141.38	225 098.65	0.63	118
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	57 529.86	0.61	119
MKD	Macedonia	Europe	no	32 996.37	7.23	12 119.46	0.60	120
ZWE	Zimbawue	Africa	no	22 038.05	9.92	17 196.10	0.58	121
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	373 895.14	0.57	122
EGY	Egypt	Africa	no	617 149.20	161.27	291 083.68	0.55	123
USA	United States	Northern America	no	54 922 480.00	9 408.88	17 276 300.43	0.54	124
OMN	Oman	Asia	no	202 533.60	26.27	56 792.46	0.46	125
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	28 969.70	0.43	126
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	590 125.33	0.38	127
ITA	Italy	Europe	no	8 604 332.00	777.37	2 100 502.86	0.37	128
TUR	Turkey	Asia	no	1 947 249.00	296.12	876 064.28	0.34	129
BEL	Belgium	Europe	no	1 980 551.00	167.25	517 763.60	0.32	130
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	2 728 637.76	0.32	131
LUX	Luxembourg	Europe	no	201 130.60	11.61	38 962.95	0.30	132
LBY	Libya	Africa	no	73 757.40	12.82	55 976.41	0.23	133
GRC	Greece	Europe	no	1 181 283.00	55.33	249 410.75	0.22	134
SWE	Sweden	Europe	no	1 747 501.00	110.38	551 152.52	0.20	135
DJI	Djibouti	Africa	no	4 744.66	0.19	1 018.02	0.19	136
LBN	Lebanon	Asia	no	207 723.70	8.08	50 384.63	0.16	137
DNK	Denmark	Europe	no	1 346 393.00	27.85	316 596.75	0.09	138
QAT	Qatar	Asia	no	624 817.70	7.04	91 904.94	0.08	139
JOR	Jordan	Asia	no	121 481.20	3.01	43 390.10	0.07	140
ISR	Israel	Asia	no	853 829.30	9.52	286 558.36	0.03	141
KWT	Kuwait	Asia	no	469 418.40	2.91	96 682.69	0.03	142
CYP	Cyprus	Asia	no	71 610.53	0.46	24 622.91	0.02	143
ESH	Western Sahara	Africa	no	3 690.88	0.02			144
ROU	Romania	Europe	no	555 697.40	519.75			145
LIE	Liechtenstein	Europe	no	18 837.10				146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
ISL	Iceland	Europe	no	57 291.68		14 052.90		147
FIN	Finland	Europe	no	965 383.40		269 912.39		148
TWN	Taiwan	Asia	no	1 680 401.00	79.41			149
GIB	Gibraltar	Europe	no	4 042.19				150
NOR	Norway	Europe	no	1 933 679.00		457 625.37		151
MLT	Malta	Europe	no	36 990.21		8 864.05		152
PSE	State of Palestine	Asia	no	69 454.30	0.29			153
AND	Andorra	Europe	no	8 381.65				154
REU	Reunion	Africa	no	67 897.68				155
MYT	Mayotte	Africa	no	6 949.04				156
SYC	Seychelles	Africa	no	6 234.98		1 607.64		157
MMR	Myanmar	Asia	no	195 390.10	1 956.65			158
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			159
MAC	Macau	Asia	no	56 709.10		20 216.60		160
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				161
HKG	Hong Kong	Asia	no	1 250 063.00		271 683.76		162
SMR	San Marino	Europe	no	4 049.35				163
TUV	Tuvalu	Oceania	no	123.26				164
PRK	North Korea	Asia	no	77 982.15	157.21			165
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			166
MCO	Monaco	Europe	no	20 716.40				167
FRO	Faroe Islands	Europe	no	9 272.37				168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
MMR	Myanmar	Asia	no	195 390.10	1 956.65	10.01	1
LAO	Laos	Asia	no	21 925.62	219.52	10.01	2
KHM	Cambodia	Asia	no	27 390.49	251.19	9.17	3
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81	8.80	4
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	6.46	5
BTN	Bhutan	Asia	no	11 083.66	54.65	4.93	6
VNM	Vietnam	Asia	no	487 574.40	2 295.39	4.71	7
SOM	Somalia	Africa	no	6 408.32	28.37	4.43	8
MDA	Moldova	Europe	no	33 762.68	101.07	2.99	9
SRB	Serbia	Europe	no	57 317.24	163.25	2.85	10
HUN	Hungary	Europe	no	562 479.60	1 564.07	2.78	11
NPL	Nepal	Asia	no	53 996.57	143.34	2.65	12
IRQ	Iraq	Asia	no	132 499.60	344.33	2.60	13
TJK	Tajikistan	Asia	no	20 536.86	48.23	2.35	14
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12	2.34	15
TKM	Turkmenistan	Asia	no	36 127.02	77.11	2.13	16
SWZ	Swaziland	Africa	no	13 701.24	28.92	2.11	17
ETH	Ethiopia	Africa	no	65 598.93	135.52	2.07	18
PAK	Pakistan	Asia	no	502 344.30	1 029.80	2.05	19
PRK	North Korea	Asia	no	77 982.15	157.21	2.02	20
BLR	Belarus	Europe	no	229 399.90	449.46	1.96	21
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	1.94	22
THA	Thailand	Asia	no	1 378 999.00	2 586.19	1.88	23
COG	Congo	Africa	no	69 047.72	126.48	1.83	24
LVA	Latvia	Europe	no	95 608.77	172.80	1.81	25
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	1.78	26
UKR	Ukraine	Europe	no	676 833.60	1 153.80	1.70	27
SLE	Sierra Leone	Africa	no	3 031.82	5.09	1.68	28
GAB	Gabon	Africa	no	120 252.20	200.15	1.66	29
LSO	Lesotho	Africa	no	17 938.00	29.51	1.65	30
MLI	Mali	Africa	no	27 719.15	44.76	1.61	31
LBR	Liberia	Africa	no	1 911.24	3.06	1.60	32
MRT	Mauritania	Africa	no	11 985.52	18.88	1.58	33
MDG	Madagascar	Africa	no	23 496.42	36.07	1.54	34
NAM	Namibia	Africa	no	42 062.66	64.55	1.53	35
AFG	Afghanistan	Asia	no	60 187.87	92.17	1.53	36
NER	Niger	Africa	no	12 723.49	19.29	1.52	37
TCD	Chad	Africa	no	26 745.14	38.75	1.45	38
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	1.44	39
ERI	Eritrea	Africa	no	9 081.79	12.50	1.38	40
RWA	Rwanda	Africa	no	13 197.39	17.68	1.34	41
MWI	Malawi	Africa	no	18 356.97	24.11	1.31	42
IND	India	Asia	no	5 769 372.00	7 471.82	1.30	43
GIN	Guinea	Africa	no	13 665.89	17.64	1.29	44
SVK	Slovakia	Europe	no	414 782.80	532.30	1.28	45
CAF	Central African Republic	Africa	no	3 893.74	4.92	1.26	46
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	1.14	47
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	1.09	48
MNG	Mongolia	Asia	no	36 587.61	39.40	1.08	49
MOZ	Mozambique	Africa	no	36 409.45	39.00	1.07	50
SDN	Sudan	Africa	no	70 368.78	71.67	1.02	51
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	1.00	52
LTU	Lithuania	Europe	no	135 613.80	134.90	0.99	53
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	0.99	54
CIV	Ivory Coast	Africa	no	45 467.63	44.43	0.98	55
PHL	Philippines	Asia	no	566 948.60	545.43	0.96	56
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	0.96	57
AGO	Angola	Africa	no	176 182.50	165.69	0.94	58
ROU	Romania	Europe	no	555 697.40	519.75	0.94	59
ARM	Armenia	Asia	no	22 895.19	21.18	0.93	60
KEN	Kenya	Africa	no	98 382.66	90.33	0.92	61
NGA	Nigeria	Africa	no	592 030.40	543.42	0.92	62
CMR	Cameroon	Africa	no	81 683.73	74.86	0.92	63
BEN	Benin	Africa	no	21 971.91	19.22	0.87	64
TGO	Togo	Africa	no	12 513.67	10.94	0.87	65
SSD	South Sudan	Africa	no	19 958.30	17.42	0.87	66
BDI	Burundi	Africa	no	3 616.17	3.05	0.84	67
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	0.84	68
GEO	Georgia	Asia	no	53 823.53	45.09	0.84	69
RUS	Russia	Europe	no	6 325 795.00	4 987.01	0.79	70
HRV	Croatia	Europe	no	188 113.70	147.78	0.79	71
EST	Estonia	Europe	no	79 617.31	61.56	0.77	72
ALB	Albania	Europe	no	40 459.65	30.59	0.76	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
TZA	Tanzania	Africa	no	50 142.79	37.79	0.75	74
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	0.75	75
YEM	Yemen	Asia	no	79 113.56	57.50	0.73	76
ZAF	South Africa	Africa	no	1 282 854.00	910.25	0.71	77
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	0.69	78
LKA	Sri Lanka	Asia	no	208 273.50	143.75	0.69	79
BFA	Burkina Faso	Africa	no	24 689.43	16.58	0.67	80
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	0.65	81
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	0.65	82
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	0.64	83
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	0.64	84
GHA	Ghana	Africa	no	74 174.05	45.95	0.62	85
CHN	China	Asia	no	31 726 110.00	18 765.75	0.59	86
GMB	The Gambia	Africa	no	2 097.61	1.24	0.59	87
NZL	New Zealand	Oceania	no	679 705.40	399.98	0.59	88
SYR	Syria	Asia	no	204 643.30	114.65	0.56	89
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	0.55	90
ZMB	Zambia	Africa	no	48 954.52	25.96	0.53	91
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	0.52	92
UZB	Uzbekistan	Asia	no	151 891.10	78.64	0.52	93
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	0.50	94
UGA	Uganda	Africa	no	43 697.09	20.60	0.47	95
ZWE	Zimbawue	Africa	no	22 038.05	9.92	0.45	96
MNE	Montenegro	Europe	no	8 892.93	3.99	0.45	97
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	0.45	98
BRN	Brunei	Asia	no	71 236.46	30.95	0.43	99
BWA	Botswana	Africa	no	90 628.62	38.66	0.43	100
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	0.42	101
AUT	Austria	Europe	no	1 801 472.00	749.13	0.42	102
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	0.40	103
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	0.39	104
POL	Poland	Europe	no	1 614 716.00	621.52	0.38	105
BGR	Bulgaria	Europe	no	163 821.60	58.23	0.36	106
MAR	Morroco	Africa	no	374 846.30	132.04	0.35	107
IRN	Iran	Asia	no	2 067 640.00	668.26	0.32	108
SEN	Senegal	Africa	no	35 335.24	11.38	0.32	109
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	0.30	110
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	0.30	111
FRA	France	Europe	no	10 329 420.00	3 091.69	0.30	112
NLD	Netherlands	Europe	no	3 410 955.00	984.03	0.29	113
SVN	Slovenia	Europe	no	139 899.70	39.17	0.28	114
EGY	Egypt	Africa	no	617 149.20	161.27	0.26	115
IRL	Ireland	Europe	no	778 821.60	199.25	0.26	116
CHE	Switzerland	Europe	no	3 421 606.00	845.26	0.25	117
AZE	Azerbaijan	Asia	no	192 784.00	44.02	0.23	118
TUN	Tunisia	Africa	no	178 845.60	40.60	0.23	119
MKD	Macedonia	Europe	no	32 996.37	7.23	0.22	120
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	0.20	121
DZA	Algeria	Africa	no	899 206.20	178.37	0.20	122
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	0.19	123
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	0.19	124
DEU	Germany	Europe	no	15 114 870.00	2 697.57	0.18	125
ESP	Spain	Europe	no	6 233 955.00	1 109.18	0.18	126
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	0.18	127
LBY	Libya	Africa	no	73 757.40	12.82	0.17	128
USA	United States	Northern America	no	54 922 480.00	9 408.88	0.17	129
TUR	Turkey	Asia	no	1 947 249.00	296.12	0.15	130
PRT	Portugal	Europe	no	1 054 344.00	141.38	0.13	131
OMN	Oman	Asia	no	202 533.60	26.27	0.13	132
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	0.11	133
JPN	Japan	Asia	no	39 255 200.00	4 328.15	0.11	134
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	0.10	135
ITA	Italy	Europe	no	8 604 332.00	777.37	0.09	136
BEL	Belgium	Europe	no	1 980 551.00	167.25	0.08	137
SWE	Sweden	Europe	no	1 747 501.00	110.38	0.06	138
LUX	Luxembourg	Europe	no	201 130.60	11.61	0.06	139
TWN	Taiwan	Asia	no	1 680 401.00	79.41	0.05	140
GRC	Greece	Europe	no	1 181 283.00	55.33	0.05	141
DJI	Djibouti	Africa	no	4 744.66	0.19	0.04	142
LBN	Lebanon	Asia	no	207 723.70	8.08	0.04	143
JOR	Jordan	Asia	no	121 481.20	3.01	0.02	144
DNK	Denmark	Europe	no	1 346 393.00	27.85	0.02	145
QAT	Qatar	Asia	no	624 817.70	7.04	0.01	146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
ISR	Israel	Asia	no	853 829.30	9.52	0.01	147
CYP	Cyprus	Asia	no	71 610.53	0.46	0.01	148
KWT	Kuwait	Asia	no	469 418.40	2.91	0.01	149
ESH	Western Sahara	Africa	no	3 690.88	0.02	0.01	150
PSE	State of Palestine	Asia	no	69 454.30	0.29	0.00	151
NOR	Norway	Europe	no	1 933 679.00			152
ISL	Iceland	Europe	no	57 291.68			153
FIN	Finland	Europe	no	965 383.40			154
MLT	Malta	Europe	no	36 990.21			155
SMR	San Marino	Europe	no	4 049.35			156
REU	Reunion	Africa	no	67 897.68			157
AND	Andorra	Europe	no	8 381.65			158
SYC	Seychelles	Africa	no	6 234.98			159
MYT	Mayotte	Africa	no	6 949.04			160
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			161
MAC	Macau	Asia	no	56 709.10			162
TUV	Tuvalu	Oceania	no	123.26			163
HKG	Hong Kong	Asia	no	1 250 063.00			164
MCO	Monaco	Europe	no	20 716.40			165
FRO	Faroe Islands	Europe	no	9 272.37			166
LIE	Liechtenstein	Europe	no	18 837.10			167
GIB	Gibraltar	Europe	no	4 042.19			168

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries (no SIDS)

Tsunami

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 068 884.62	2.80	1
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	65 379.04	1.82	2
MAC	Macau	Asia	no	56 709.10	9.30	6 610.47	1.41	3
NZL	New Zealand	Oceania	no	679 705.40	21.89	38 213.65	0.57	4
PHL	Philippines	Asia	no	566 948.60	30.63	55 644.78	0.55	5
EGY	Egypt	Africa	no	617 149.20	8.52	37 477.12	0.23	6
LBN	Lebanon	Asia	no	207 723.70	2.73	12 363.32	0.22	7
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	65 444.15	0.18	8
IDN	Indonesia	Asia	no	2 827 835.00	48.15	274 943.80	0.18	9
BRN	Brunei	Asia	no	71 236.46	0.40	2 466.98	0.16	10
GRC	Greece	Europe	no	1 181 283.00	3.98	27 154.95	0.15	11
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	92 724.40	0.14	12
BGD	Bangladesh	Asia	no	381 431.90	5.50	42 581.72	0.13	13
CYP	Cyprus	Asia	no	71 610.53	0.55	4 260.93	0.13	14
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	53 841.99	0.13	15
AUS	Australia	Oceania	no	6 616 533.00	51.13	442 013.06	0.12	16
MLT	Malta	Europe	no	36 990.21	0.14	1 333.61	0.10	17
LKA	Sri Lanka	Asia	no	208 273.50	1.75	19 647.18	0.09	18
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	26 312.88	0.09	19
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	10 060.78	0.07	20
MYS	Malaysia	Asia	no	1 170 979.00	5.52	84 107.08	0.07	21
USA	United States	Northern America	no	54 922 480.00	205.15	3 244 299.91	0.06	22
ISR	Israel	Asia	no	853 829.30	3.52	56 565.68	0.06	23
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	10 406.53	0.05	24
IND	India	Asia	no	5 769 372.00	19.14	530 741.66	0.04	25
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	77 440.20	0.03	26
CHN	China	Asia	no	31 726 110.00	115.18	4 370 835.96	0.03	27
TUN	Tunisia	Africa	no	178 845.60	0.23	9 509.45	0.02	28
OMN	Oman	Asia	no	202 533.60	0.36	17 256.96	0.02	29
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	3 663.90	0.02	30
VNM	Vietnam	Asia	no	487 574.40	0.66	40 823.56	0.02	31
SYR	Syria	Asia	no	204 643.30	0.13	8 252.62	0.02	32
TUR	Turkey	Asia	no	1 947 249.00	2.50	167 069.99	0.01	33
LBY	Libya	Africa	no	73 757.40	0.31	25 993.79	0.01	34
ALB	Albania	Europe	no	40 459.65	0.04	3 379.49	0.01	35
MAR	Morroco	Africa	no	374 846.30	0.23	31 321.40	0.01	36
MDG	Madagascar	Africa	no	23 496.42	0.01	1 666.80	0.01	37
PAK	Pakistan	Asia	no	502 344.30	0.17	30 125.80	0.01	38
RUS	Russia	Europe	no	6 325 795.00	2.54	450 238.87	0.01	39
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	265 421.77	0.01	40
CAN	Canada	Northern America	no	6 291 917.00	2.35	433 369.09	0.01	41
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	7 693.87	0.01	42
THA	Thailand	Asia	no	1 378 999.00	0.53	103 523.57	0.01	43
ESP	Spain	Europe	no	6 233 955.00	1.29	257 993.28	0.01	44
PRT	Portugal	Europe	no	1 054 344.00	0.16	34 419.00	0.00	45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	2 574.11	0.00	46
ITA	Italy	Europe	no	8 604 332.00	1.47	383 197.87	0.00	47
KOR	South Korea	Asia	no	5 538 605.00	1.24	386 884.93	0.00	48
NAM	Namibia	Africa	no	42 062.66	0.01	3 368.79	0.00	49
ZAF	South Africa	Africa	no	1 282 854.00	0.19	67 780.45	0.00	50
SEN	Senegal	Africa	no	35 335.24	0.01	3 706.12	0.00	51
DZA	Algeria	Africa	no	899 206.20	0.17	71 040.48	0.00	52
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	4 539.50	0.00	53
IRN	Iran	Asia	no	2 067 640.00	0.13	73 681.58	0.00	54
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	88 386.66	0.00	55
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	408 331.78	0.00	56
IRL	Ireland	Europe	no	778 821.60	0.03	35 221.45	0.00	57
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	103 818.81	0.00	58
FRA	France	Europe	no	10 329 420.00	0.07	619 955.29	0.00	59
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	440 106.84	0.00	60
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	61
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	62
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	63
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	64
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	65
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	66
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	67
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	68
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	69
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	70
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	71
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	72
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	74
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	75
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	76
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	77
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	78
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	79
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	80
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	81
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	82
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	83
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	84
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	85
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	86
MOZ	Mozambique	Africa	no	36 409.45	0.00	2 723.39	0.00	87
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	88
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	89
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	90
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	91
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	92
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	93
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	94
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	95
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	96
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		97
LTU	Lithuania	Europe	no	135 613.80		7 517.23		98
BDI	Burundi	Africa	no	3 616.17		780.29		99
NER	Niger	Africa	no	12 723.49		2 551.37		100
TWN	Taiwan	Asia	no	1 680 401.00	15.05			101
REU	Reunion	Africa	no	67 897.68	0.00			102
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		103
EST	Estonia	Europe	no	79 617.31		6 795.36		104
UKR	Ukraine	Europe	no	676 833.60		32 236.10		105
FIN	Finland	Europe	no	965 383.40		56 624.15		106
GEO	Georgia	Asia	no	53 823.53		3 542.58		107
ISL	Iceland	Europe	no	57 291.68		2 314.22		108
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		109
LIE	Liechtenstein	Europe	no	18 837.10				110
LVA	Latvia	Europe	no	95 608.77		6 324.84		111
MKD	Macedonia	Europe	no	32 996.37		2 530.04		112
BLR	Belarus	Europe	no	229 399.90		26 490.10		113
ROU	Romania	Europe	no	555 697.40				114
UGA	Uganda	Africa	no	43 697.09		5 121.46		115
SVK	Slovakia	Europe	no	414 782.80		19 975.29		116
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		117
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		118
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		119
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		120
FRO	Faroe Islands	Europe	no	9 272.37				121
MMR	Myanmar	Asia	no	195 390.10	3.27			122
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		123
BTN	Bhutan	Asia	no	11 083.66		842.11		124
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		125
MCO	Monaco	Europe	no	20 716.40	0.00			126
MDA	Moldova	Europe	no	33 762.68		1 821.11		127
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			128
PRK	North Korea	Asia	no	77 982.15	0.00			129
POL	Poland	Europe	no	1 614 716.00		98 972.34		130
TUV	Tuvalu	Oceania	no	123.26	0.00			131
MNG	Mongolia	Asia	no	36 587.61		5 086.03		132
SMR	San Marino	Europe	no	4 049.35	0.00			133
NPL	Nepal	Asia	no	53 996.57		4 356.14		134
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		135
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			136
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			137
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		138
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		139
TCD	Chad	Africa	no	26 745.14		3 701.42		140
RWA	Rwanda	Africa	no	13 197.39		1 920.52		141
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		142
QAT	Qatar	Asia	no	624 817.70		15 282.42		143
LSO	Lesotho	Africa	no	17 938.00		855.33		144
ESH	Western Sahara	Africa	no	3 690.88	0.00			145
ZMB	Zambia	Africa	no	48 954.52		5 247.76		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
BWA	Botswana	Africa	no	90 628.62		5 015.09		147
IRQ	Iraq	Asia	no	132 499.60		35 983.20		148
CAF	Central African Republic	Africa	no	3 893.74		320.25		149
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		150
GIB	Gibraltar	Europe	no	4 042.19	0.00			151
MWI	Malawi	Africa	no	18 356.97		731.37		152
LAO	Laos	Asia	no	21 925.62		3 279.79		153
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		154
SDN	Sudan	Africa	no	70 368.78		13 307.19		155
MYT	Mayotte	Africa	no	6 949.04	0.00			156
KWT	Kuwait	Asia	no	469 418.40		19 039.58		157
AND	Andorra	Europe	no	8 381.65				158
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		159
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		160
PSE	State of Palestine	Asia	no	69 454.30	0.06			161
MLI	Mali	Africa	no	27 719.15		1 684.06		162
ARM	Armenia	Asia	no	22 895.19		2 183.10		163
SSD	South Sudan	Africa	no	19 958.30		1 399.32		164
SWZ	Swaziland	Africa	no	13 701.24		363.96		165
SRB	Serbia	Europe	no	57 317.24		8 634.55		166
AUT	Austria	Europe	no	1 801 472.00		95 015.40		167
HUN	Hungary	Europe	no	562 479.60		26 595.35		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	25 520.99	4.67	1
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 012 070.61	2.96	2
MAC	Macau	Asia	no	56 709.10	9.30	3 378.13	2.75	3
PHL	Philippines	Asia	no	566 948.60	30.63	30 212.56	1.01	4
BGD	Bangladesh	Asia	no	381 431.90	5.50	7 673.71	0.72	5
NZL	New Zealand	Oceania	no	679 705.40	21.89	34 691.31	0.63	6
IDN	Indonesia	Asia	no	2 827 835.00	48.15	79 076.93	0.61	7
LBN	Lebanon	Asia	no	207 723.70	2.73	6 530.19	0.42	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	34 332.88	0.34	9
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	22 647.04	0.31	10
EGY	Egypt	Africa	no	617 149.20	8.52	31 768.68	0.27	11
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	63 198.81	0.21	12
LKA	Sri Lanka	Asia	no	208 273.50	1.75	8 808.70	0.20	13
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	3 793.90	0.20	14
AUS	Australia	Oceania	no	6 616 533.00	51.13	276 915.26	0.18	15
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	13 315.00	0.17	16
BRN	Brunei	Asia	no	71 236.46	0.40	2 950.69	0.14	17
MYS	Malaysia	Asia	no	1 170 979.00	5.52	42 433.27	0.13	18
CYP	Cyprus	Asia	no	71 610.53	0.55	4 557.62	0.12	19
CHN	China	Asia	no	31 726 110.00	115.18	1 299 157.61	0.09	20
IND	India	Asia	no	5 769 372.00	19.14	221 700.44	0.09	21
GRC	Greece	Europe	no	1 181 283.00	3.98	48 425.35	0.08	22
USA	United States	Northern America	no	54 922 480.00	205.15	2 547 499.93	0.08	23
MLT	Malta	Europe	no	36 990.21	0.14	1 879.07	0.07	24
VNM	Vietnam	Asia	no	487 574.40	0.66	10 550.52	0.06	25
ISR	Israel	Asia	no	853 829.30	3.52	65 345.00	0.05	26
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	8 897.75	0.05	27
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	46 486.26	0.05	28
LBY	Libya	Africa	no	73 757.40	0.31	8 664.60	0.04	29
ALB	Albania	Europe	no	40 459.65	0.04	1 381.39	0.03	30
SYR	Syria	Asia	no	204 643.30	0.13	4 971.97	0.03	31
TUN	Tunisia	Africa	no	178 845.60	0.23	8 918.25	0.03	32
OMN	Oman	Asia	no	202 533.60	0.36	14 871.52	0.02	33
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	2 899.00	0.02	34
TUR	Turkey	Asia	no	1 947 249.00	2.50	123 751.24	0.02	35
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	646.93	0.02	36
MAR	Morroco	Africa	no	374 846.30	0.23	19 696.51	0.01	37
MDG	Madagascar	Africa	no	23 496.42	0.01	915.01	0.01	38
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	149 707.18	0.01	39
THA	Thailand	Asia	no	1 378 999.00	0.53	53 487.73	0.01	40
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	5 637.22	0.01	41
PAK	Pakistan	Asia	no	502 344.30	0.17	25 463.41	0.01	42
KOR	South Korea	Asia	no	5 538 605.00	1.24	194 728.35	0.01	43
RUS	Russia	Europe	no	6 325 795.00	2.54	409 820.63	0.01	44
CAN	Canada	Northern America	no	6 291 917.00	2.35	395 958.78	0.01	45
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	27 530.57	0.01	46
ESP	Spain	Europe	no	6 233 955.00	1.29	271 148.52	0.00	47
SEN	Senegal	Africa	no	35 335.24	0.01	2 289.33	0.00	48
DZA	Algeria	Africa	no	899 206.20	0.17	39 734.87	0.00	49
IRN	Iran	Asia	no	2 067 640.00	0.13	31 978.13	0.00	50
PRT	Portugal	Europe	no	1 054 344.00	0.16	43 081.93	0.00	51
ITA	Italy	Europe	no	8 604 332.00	1.47	417 993.98	0.00	52
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	3 077.08	0.00	53
NAM	Namibia	Africa	no	42 062.66	0.01	3 617.67	0.00	54
ZAF	South Africa	Africa	no	1 282 854.00	0.19	77 967.19	0.00	55
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	493 431.00	0.00	56
IRL	Ireland	Europe	no	778 821.60	0.03	40 563.02	0.00	57
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	94 570.07	0.00	58
FRA	France	Europe	no	10 329 420.00	0.07	677 049.47	0.00	59
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	542 121.89	0.00	60
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	61
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	62
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	63
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	64
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	65
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	66
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	67
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	68
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	69
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	70
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	71
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	72
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	74
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	75
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	76
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	77
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	78
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	79
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	80
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	81
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	82
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	83
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	84
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	85
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	86
MOZ	Mozambique	Africa	no	36 409.45	0.00	3 190.27	0.00	87
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	88
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	89
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	90
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	91
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	92
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	93
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	94
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	95
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	96
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		97
LTU	Lithuania	Europe	no	135 613.80		8 076.66		98
BDI	Burundi	Africa	no	3 616.17		599.64		99
NER	Niger	Africa	no	12 723.49		1 083.62		100
TWN	Taiwan	Asia	no	1 680 401.00	15.05			101
REU	Reunion	Africa	no	67 897.68	0.00			102
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		103
EST	Estonia	Europe	no	79 617.31		4 754.17		104
UKR	Ukraine	Europe	no	676 833.60		34 350.49		105
FIN	Finland	Europe	no	965 383.40		66 675.15		106
GEO	Georgia	Asia	no	53 823.53		2 692.49		107
ISL	Iceland	Europe	no	57 291.68		3 730.06		108
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		109
LIE	Liechtenstein	Europe	no	18 837.10				110
LVA	Latvia	Europe	no	95 608.77		4 413.54		111
MKD	Macedonia	Europe	no	32 996.37		1 787.08		112
BLR	Belarus	Europe	no	229 399.90		10 166.04		113
ROU	Romania	Europe	no	555 697.40				114
UGA	Uganda	Africa	no	43 697.09		1 787.04		115
SVK	Slovakia	Europe	no	414 782.80		17 642.66		116
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		117
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		118
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		119
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		120
FRO	Faroe Islands	Europe	no	9 272.37				121
MMR	Myanmar	Asia	no	195 390.10	3.27			122
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		123
BTN	Bhutan	Asia	no	11 083.66		311.85		124
TJK	Tajikistan	Asia	no	20 536.86		998.87		125
MCO	Monaco	Europe	no	20 716.40	0.00			126
MDA	Moldova	Europe	no	33 762.68		1 618.04		127
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			128
PRK	North Korea	Asia	no	77 982.15	0.00			129
POL	Poland	Europe	no	1 614 716.00		95 412.26		130
TUV	Tuvalu	Oceania	no	123.26	0.00			131
MNG	Mongolia	Asia	no	36 587.61		1 298.34		132
SMR	San Marino	Europe	no	4 049.35	0.00			133
NPL	Nepal	Asia	no	53 996.57		1 917.21		134
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		135
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			136
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			137
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		138
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		139
TCD	Chad	Africa	no	26 745.14		1 026.17		140
RWA	Rwanda	Africa	no	13 197.39		1 065.41		141
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		142
QAT	Qatar	Asia	no	624 817.70		24 487.36		143
LSO	Lesotho	Africa	no	17 938.00		878.46		144
ESH	Western Sahara	Africa	no	3 690.88	0.00			145
ZMB	Zambia	Africa	no	48 954.52		568.19		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BWA	Botswana	Africa	no	90 628.62		2 912.71		147
IRQ	Iraq	Asia	no	132 499.60		48 846.71		148
CAF	Central African Republic	Africa	no	3 893.74		166.29		149
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		150
GIB	Gibraltar	Europe	no	4 042.19	0.00			151
MWI	Malawi	Africa	no	18 356.97		818.79		152
LAO	Laos	Asia	no	21 925.62		1 626.13		153
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		154
SDN	Sudan	Africa	no	70 368.78		5 000.18		155
MYT	Mayotte	Africa	no	6 949.04	0.00			156
KWT	Kuwait	Asia	no	469 418.40		29 360.33		157
AND	Andorra	Europe	no	8 381.65				158
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		159
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		160
PSE	State of Palestine	Asia	no	69 454.30	0.06			161
MLI	Mali	Africa	no	27 719.15		1 172.08		162
ARM	Armenia	Asia	no	22 895.19		1 508.90		163
SSD	South Sudan	Africa	no	19 958.30		2 720.34		164
SWZ	Swaziland	Africa	no	13 701.24		753.93		165
SRB	Serbia	Europe	no	57 317.24		7 977.96		166
AUT	Austria	Europe	no	1 801 472.00		84 928.57		167
HUN	Hungary	Europe	no	562 479.60		26 544.35		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
JPN	Japan	Asia	no	39 255 200.00	2 997.17	5 059 261.76	0.59	1
MAC	Macau	Asia	no	56 709.10	9.30	20 216.60	0.46	2
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	271 683.76	0.44	3
NZL	New Zealand	Oceania	no	679 705.40	21.89	182 403.61	0.12	4
PHL	Philippines	Asia	no	566 948.60	30.63	283 131.84	0.11	5
IDN	Indonesia	Asia	no	2 827 835.00	48.15	885 677.23	0.05	6
LBN	Lebanon	Asia	no	207 723.70	2.73	50 384.63	0.05	7
BRN	Brunei	Asia	no	71 236.46	0.40	9 075.14	0.04	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	278 153.13	0.04	9
BGD	Bangladesh	Asia	no	381 431.90	5.50	160 820.74	0.03	10
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	387 419.05	0.03	11
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	204 179.29	0.03	12
AUS	Australia	Oceania	no	6 616 533.00	51.13	1 579 571.61	0.03	13
EGY	Egypt	Africa	no	617 149.20	8.52	291 083.68	0.03	14
LKA	Sri Lanka	Asia	no	208 273.50	1.75	73 583.10	0.02	15
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	96 787.63	0.02	16
CYP	Cyprus	Asia	no	71 610.53	0.55	24 622.91	0.02	17
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	36 126.55	0.02	18
MYS	Malaysia	Asia	no	1 170 979.00	5.52	284 108.03	0.02	19
GRC	Greece	Europe	no	1 181 283.00	3.98	249 410.75	0.02	20
MLT	Malta	Europe	no	36 990.21	0.14	8 864.05	0.02	21
CHN	China	Asia	no	31 726 110.00	115.18	9 003 382.87	0.01	22
ISR	Israel	Asia	no	853 829.30	3.52	286 558.36	0.01	23
USA	United States	Northern America	no	54 922 480.00	205.15	17 276 300.43	0.01	24
IND	India	Asia	no	5 769 372.00	19.14	1 944 284.82	0.01	25
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	51 412.23	0.01	26
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	373 895.14	0.01	27
OMN	Oman	Asia	no	202 533.60	0.36	56 792.46	0.01	28
LBY	Libya	Africa	no	73 757.40	0.31	55 976.41	0.01	29
TUN	Tunisia	Africa	no	178 845.60	0.23	51 302.58	0.00	30
VNM	Vietnam	Asia	no	487 574.40	0.66	164 388.68	0.00	31
SYR	Syria	Asia	no	204 643.30	0.13	40 077.56	0.00	32
TUR	Turkey	Asia	no	1 947 249.00	2.50	876 064.28	0.00	33
ALB	Albania	Europe	no	40 459.65	0.04	15 227.71	0.00	34
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	28 969.70	0.00	35
MAR	Morroco	Africa	no	374 846.30	0.23	117 556.24	0.00	36
THA	Thailand	Asia	no	1 378 999.00	0.53	374 528.18	0.00	37
RUS	Russia	Europe	no	6 325 795.00	2.54	1 973 571.68	0.00	38
CAN	Canada	Northern America	no	6 291 917.00	2.35	1 857 561.03	0.00	39
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	1 269 259.96	0.00	40
KOR	South Korea	Asia	no	5 538 605.00	1.24	1 238 504.83	0.00	41
ESP	Spain	Europe	no	6 233 955.00	1.29	1 345 564.18	0.00	42
MDG	Madagascar	Africa	no	23 496.42	0.01	11 984.82	0.00	43
DZA	Algeria	Africa	no	899 206.20	0.17	204 165.74	0.00	44
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	12 562.44	0.00	45
PRT	Portugal	Europe	no	1 054 344.00	0.16	225 098.65	0.00	46
ITA	Italy	Europe	no	8 604 332.00	1.47	2 100 502.86	0.00	47
PAK	Pakistan	Asia	no	502 344.30	0.17	247 867.95	0.00	48
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	59 883.48	0.00	49
NAM	Namibia	Africa	no	42 062.66	0.01	15 480.83	0.00	50
SEN	Senegal	Africa	no	35 335.24	0.01	17 930.59	0.00	51
ZAF	South Africa	Africa	no	1 282 854.00	0.19	360 489.06	0.00	52
IRN	Iran	Asia	no	2 067 640.00	0.13	255 619.28	0.00	53
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	318 951.13	0.00	54
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	22 559.82	0.00	55
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	2 301 443.96	0.00	56
IRL	Ireland	Europe	no	778 821.60	0.03	183 798.12	0.00	57
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	611 844.88	0.00	58
FRA	France	Europe	no	10 329 420.00	0.07	2 848 015.52	0.00	59
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	2 728 637.76	0.00	60
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	61
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	62
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	63
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	64
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	65
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	66
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	67
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	68
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	69
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	70
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	71
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	72
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	74
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	75
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	76
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	77
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	78
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	79
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	80
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	81
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	82
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	83
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	84
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	85
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	86
MOZ	Mozambique	Africa	no	36 409.45	0.00	17 220.44	0.00	87
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	88
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	89
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	90
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	91
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	92
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	93
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	94
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	95
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	96
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		97
LTU	Lithuania	Europe	no	135 613.80		43 719.88		98
BDI	Burundi	Africa	no	3 616.17		3 443.34		99
NER	Niger	Africa	no	12 723.49		8 745.32		100
TWN	Taiwan	Asia	no	1 680 401.00	15.05			101
REU	Reunion	Africa	no	67 897.68	0.00			102
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		103
EST	Estonia	Europe	no	79 617.31		24 664.81		104
UKR	Ukraine	Europe	no	676 833.60		192 523.67		105
FIN	Finland	Europe	no	965 383.40		269 912.39		106
GEO	Georgia	Asia	no	53 823.53		18 230.53		107
ISL	Iceland	Europe	no	57 291.68		14 052.90		108
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		109
LIE	Liechtenstein	Europe	no	18 837.10				110
LVA	Latvia	Europe	no	95 608.77		29 570.85		111
MKD	Macedonia	Europe	no	32 996.37		12 119.46		112
BLR	Belarus	Europe	no	229 399.90		73 747.80		113
ROU	Romania	Europe	no	555 697.40				114
UGA	Uganda	Africa	no	43 697.09		23 933.64		115
SVK	Slovakia	Europe	no	414 782.80		93 274.32		116
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		117
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		118
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		119
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		120
FRO	Faroe Islands	Europe	no	9 272.37				121
MMR	Myanmar	Asia	no	195 390.10	3.27			122
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		123
BTN	Bhutan	Asia	no	11 083.66		2 173.58		124
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		125
MCO	Monaco	Europe	no	20 716.40	0.00			126
MDA	Moldova	Europe	no	33 762.68		10 971.97		127
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			128
PRK	North Korea	Asia	no	77 982.15	0.00			129
POL	Poland	Europe	no	1 614 716.00		515 943.50		130
TUV	Tuvalu	Oceania	no	123.26	0.00			131
MNG	Mongolia	Asia	no	36 587.61		14 036.94		132
SMR	San Marino	Europe	no	4 049.35	0.00			133
NPL	Nepal	Asia	no	53 996.57		24 466.26		134
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		135
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			136
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			137
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		138
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		139
TCD	Chad	Africa	no	26 745.14		14 228.09		140
RWA	Rwanda	Africa	no	13 197.39		8 767.59		141
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		142
QAT	Qatar	Asia	no	624 817.70		91 904.94		143
LSO	Lesotho	Africa	no	17 938.00		3 740.58		144
ESH	Western Sahara	Africa	no	3 690.88	0.00			145
ZMB	Zambia	Africa	no	48 954.52		26 244.17		146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
BWA	Botswana	Africa	no	90 628.62		15 490.96		147
IRQ	Iraq	Asia	no	132 499.60		226 497.10		148
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		149
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		150
GIB	Gibraltar	Europe	no	4 042.19	0.00			151
MWI	Malawi	Africa	no	18 356.97		4 366.74		152
LAO	Laos	Asia	no	21 925.62		12 246.45		153
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		154
SDN	Sudan	Africa	no	70 368.78		70 927.03		155
MYT	Mayotte	Africa	no	6 949.04	0.00			156
KWT	Kuwait	Asia	no	469 418.40		96 682.69		157
AND	Andorra	Europe	no	8 381.65				158
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		159
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		160
PSE	State of Palestine	Asia	no	69 454.30	0.06			161
MLI	Mali	Africa	no	27 719.15		11 011.34		162
ARM	Armenia	Asia	no	22 895.19		12 628.86		163
SSD	South Sudan	Africa	no	19 958.30		14 712.88		164
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		165
SRB	Serbia	Europe	no	57 317.24		50 611.94		166
AUT	Austria	Europe	no	1 801 472.00		413 112.76		167
HUN	Hungary	Europe	no	562 479.60		123 292.26		168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
MAC	Macau	Asia	no	56 709.10	9.30	0.16	1
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	0.10	2
JPN	Japan	Asia	no	39 255 200.00	2 997.17	0.08	3
PHL	Philippines	Asia	no	566 948.60	30.63	0.05	4
NZL	New Zealand	Oceania	no	679 705.40	21.89	0.03	5
IDN	Indonesia	Asia	no	2 827 835.00	48.15	0.02	6
MMR	Myanmar	Asia	no	195 390.10	3.27	0.02	7
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	0.02	8
BGD	Bangladesh	Asia	no	381 431.90	5.50	0.01	9
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	0.01	10
EGY	Egypt	Africa	no	617 149.20	8.52	0.01	11
LBN	Lebanon	Asia	no	207 723.70	2.73	0.01	12
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	0.01	13
TWN	Taiwan	Asia	no	1 680 401.00	15.05	0.01	14
LKA	Sri Lanka	Asia	no	208 273.50	1.75	0.01	15
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	0.01	16
AUS	Australia	Oceania	no	6 616 533.00	51.13	0.01	17
CYP	Cyprus	Asia	no	71 610.53	0.55	0.01	18
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	0.01	19
BRN	Brunei	Asia	no	71 236.46	0.40	0.01	20
MYS	Malaysia	Asia	no	1 170 979.00	5.52	0.00	21
LBY	Libya	Africa	no	73 757.40	0.31	0.00	22
ISR	Israel	Asia	no	853 829.30	3.52	0.00	23
MLT	Malta	Europe	no	36 990.21	0.14	0.00	24
USA	United States	Northern America	no	54 922 480.00	205.15	0.00	25
CHN	China	Asia	no	31 726 110.00	115.18	0.00	26
GRC	Greece	Europe	no	1 181 283.00	3.98	0.00	27
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	0.00	28
IND	India	Asia	no	5 769 372.00	19.14	0.00	29
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	0.00	30
OMN	Oman	Asia	no	202 533.60	0.36	0.00	31
VNM	Vietnam	Asia	no	487 574.40	0.66	0.00	32
TUN	Tunisia	Africa	no	178 845.60	0.23	0.00	33
TUR	Turkey	Asia	no	1 947 249.00	2.50	0.00	34
ALB	Albania	Europe	no	40 459.65	0.04	0.00	35
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	0.00	36
PSE	State of Palestine	Asia	no	69 454.30	0.06	0.00	37
SYR	Syria	Asia	no	204 643.30	0.13	0.00	38
MAR	Morroco	Africa	no	374 846.30	0.23	0.00	39
MDG	Madagascar	Africa	no	23 496.42	0.01	0.00	40
RUS	Russia	Europe	no	6 325 795.00	2.54	0.00	41
THA	Thailand	Asia	no	1 378 999.00	0.53	0.00	42
CAN	Canada	Northern America	no	6 291 917.00	2.35	0.00	43
PAK	Pakistan	Asia	no	502 344.30	0.17	0.00	44
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	0.00	45
SEN	Senegal	Africa	no	35 335.24	0.01	0.00	46
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	0.00	47
NAM	Namibia	Africa	no	42 062.66	0.01	0.00	48
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	0.00	49
KOR	South Korea	Asia	no	5 538 605.00	1.24	0.00	50
ESP	Spain	Europe	no	6 233 955.00	1.29	0.00	51
DZA	Algeria	Africa	no	899 206.20	0.17	0.00	52
ITA	Italy	Europe	no	8 604 332.00	1.47	0.00	53
PRT	Portugal	Europe	no	1 054 344.00	0.16	0.00	54
ZAF	South Africa	Africa	no	1 282 854.00	0.19	0.00	55
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	0.00	56
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	0.00	57
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	0.00	58
IRN	Iran	Asia	no	2 067 640.00	0.13	0.00	59
IRL	Ireland	Europe	no	778 821.60	0.03	0.00	60
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	0.00	61
FRA	France	Europe	no	10 329 420.00	0.07	0.00	62
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	0.00	63
AGO	Angola	Africa	no	176 182.50	0.00	0.00	64
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	65
BEN	Benin	Africa	no	21 971.91	0.00	0.00	66
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	67
COG	Congo	Africa	no	69 047.72	0.00	0.00	68
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	69
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	70
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	71
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	72
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	74
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	75
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	76
TGO	Togo	Africa	no	12 513.67	0.00	0.00	77
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	78
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	79
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	80
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	81
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	82
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	83
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	84
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	85
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	86
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	87
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	88
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	89
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	90
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	91
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	92
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	93
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	94
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	95
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	96
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	97
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	98
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	99
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	100
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	101
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	102
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	103
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	104
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	105
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	106
REU	Reunion	Africa	no	67 897.68	0.00	0.00	107
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	108
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	109
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	110
LVA	Latvia	Europe	no	95 608.77			111
MKD	Macedonia	Europe	no	32 996.37			112
BLR	Belarus	Europe	no	229 399.90			113
ROU	Romania	Europe	no	555 697.40			114
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			115
SVK	Slovakia	Europe	no	414 782.80			116
SWE	Sweden	Europe	no	1 747 501.00			117
LTU	Lithuania	Europe	no	135 613.80			118
UKR	Ukraine	Europe	no	676 833.60			119
LUX	Luxembourg	Europe	no	201 130.60			120
FRO	Faroe Islands	Europe	no	9 272.37			121
KAZ	Kazakhstan	Asia	no	734 309.90			122
TKM	Turkmenistan	Asia	no	36 127.02			123
UZB	Uzbekistan	Asia	no	151 891.10			124
BTN	Bhutan	Asia	no	11 083.66			125
BWA	Botswana	Africa	no	90 628.62			126
LAO	Laos	Asia	no	21 925.62			127
ZWE	Zimbawue	Africa	no	22 038.05			128
SDN	Sudan	Africa	no	70 368.78			129
POL	Poland	Europe	no	1 614 716.00			130
MWI	Malawi	Africa	no	18 356.97			131
TJK	Tajikistan	Asia	no	20 536.86			132
BDI	Burundi	Africa	no	3 616.17			133
MNG	Mongolia	Asia	no	36 587.61			134
NPL	Nepal	Asia	no	53 996.57			135
AFG	Afghanistan	Asia	no	60 187.87			136
NER	Niger	Africa	no	12 723.49			137
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			138
BFA	Burkina Faso	Africa	no	24 689.43			139
TCD	Chad	Africa	no	26 745.14			140
RWA	Rwanda	Africa	no	13 197.39			141
MLI	Mali	Africa	no	27 719.15			142
QAT	Qatar	Asia	no	624 817.70			143
LSO	Lesotho	Africa	no	17 938.00			144
UGA	Uganda	Africa	no	43 697.09			145
ZMB	Zambia	Africa	no	48 954.52			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
AND	Andorra	Europe	no	8 381.65			147
MDA	Moldova	Europe	no	33 762.68			148
KWT	Kuwait	Asia	no	469 418.40			149
SSD	South Sudan	Africa	no	19 958.30			150
SWZ	Swaziland	Africa	no	13 701.24			151
CZE	Czech Republic	Europe	no	1 007 263.00			152
AZE	Azerbaijan	Asia	no	192 784.00			153
ARM	Armenia	Asia	no	22 895.19			154
SRB	Serbia	Europe	no	57 317.24			155
AUT	Austria	Europe	no	1 801 472.00			156
IRQ	Iraq	Asia	no	132 499.60			157
CAF	Central African Republic	Africa	no	3 893.74			158
HUN	Hungary	Europe	no	562 479.60			159
ETH	Ethiopia	Africa	no	65 598.93			160
BGR	Bulgaria	Europe	no	163 821.60			161
EST	Estonia	Europe	no	79 617.31			162
CHE	Switzerland	Europe	no	3 421 606.00			163
FIN	Finland	Europe	no	965 383.40			164
GEO	Georgia	Asia	no	53 823.53			165
ISL	Iceland	Europe	no	57 291.68			166
KGZ	Kyrgizstan	Asia	no	18 466.60			167
LIE	Liechtenstein	Europe	no	18 837.10			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	60 744.37	1.23	1
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	353.59	0.19	2
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	444.42	0.16	3
PHL	Philippines	Asia	no	566 948.60	272 066.56	304.05	0.11	4
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	923.97	0.11	5
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	851.79	0.05	6
MAC	Macau	Asia	no	56 709.10	51 753.10	23.28	0.04	7
BRN	Brunei	Asia	no	71 236.46	16 111.14	4.09	0.03	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	65.07	0.02	9
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	63.84	0.02	10
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	2 036.40	0.01	11
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	10.78	0.01	12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	4.42	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.10	0.00	14
GRC	Greece	Europe	no	1 181 283.00	242 230.33	8.12	0.00	15
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	1.58	0.00	16
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	28.49	0.00	17
IND	India	Asia	no	5 769 372.00	1 876 797.16	22.79	0.00	18
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.51	0.00	19
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	24.90	0.00	20
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	3.68	0.00	21
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	15.16	0.00	22
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	0.26	0.00	23
VNM	Vietnam	Asia	no	487 574.40	171 390.01	0.16	0.00	24
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	1.48	0.00	25
PAK	Pakistan	Asia	no	502 344.30	232 286.78	0.00	0.00	26
MAR	Morroco	Africa	no	374 846.30	103 835.71	0.00	0.00	27
KEN	Kenya	Africa	no	98 382.66	55 243.06	0.00	0.00	28
BEN	Benin	Africa	no	21 971.91	8 307.22	0.00	0.00	29
GIN	Guinea	Africa	no	13 665.89	6 144.13	0.00	0.00	30
TUN	Tunisia	Africa	no	178 845.60	46 993.60	0.00	0.00	31
LBR	Liberia	Africa	no	1 911.24	1 950.96	0.00	0.00	32
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	33
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	0.00	0.00	34
NAM	Namibia	Africa	no	42 062.66	13 113.07	0.00	0.00	35
AGO	Angola	Africa	no	176 182.50	124 178.24	0.00	0.00	36
GAB	Gabon	Africa	no	120 252.20	19 343.51	0.00	0.00	37
SEN	Senegal	Africa	no	35 335.24	14 791.70	0.00	0.00	38
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	0.00	0.00	39
GMB	The Gambia	Africa	no	2 097.61	903.50	0.00	0.00	40
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.00	0.00	41
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	42
MRT	Mauritania	Africa	no	11 985.52	4 158.18	0.00	0.00	43
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	0.00	0.00	44
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	45
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	46
CHN	China	Asia	no	31 726 110.00	9 240 270.86	0.00	0.00	47
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	0.00	0.00	48
ISR	Israel	Asia	no	853 829.30	290 550.61	0.00	0.00	49
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	0.00	0.00	50
HRV	Croatia	Europe	no	188 113.70	57 868.67	0.00	0.00	51
SVN	Slovenia	Europe	no	139 899.70	47 987.30	0.00	0.00	52
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	0.00	0.00	53
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	0.00	0.00	54
LBY	Libya	Africa	no	73 757.40	74 199.53	0.00	0.00	55
CYP	Cyprus	Asia	no	71 610.53	21 911.45	0.00	0.00	56
CMR	Cameroon	Africa	no	81 683.73	29 567.50	0.00	0.00	57
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	0.00	0.00	58
MDG	Madagascar	Africa	no	23 496.42	10 613.49	0.00	0.00	59
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	60
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	0.00	0.00	61
NGA	Nigeria	Africa	no	592 030.40	521 803.30	0.00	0.00	62
OMN	Oman	Asia	no	202 533.60	79 655.92	0.00	0.00	63
SYR	Syria	Asia	no	204 643.30	40 405.00	0.00	0.00	64
LBN	Lebanon	Asia	no	207 723.70	44 352.42	0.00	0.00	65
FRA	France	Europe	no	10 329 420.00	2 806 427.94	0.00	0.00	66
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	0.00	0.00	67
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	0.00	0.00	68
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	0.00	0.00	69
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	0.00	0.00	70
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	0.00	0.00	71
ALB	Albania	Europe	no	40 459.65	12 923.24	0.00	0.00	72
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	0.00	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
IRL	Ireland	Europe	no	778 821.60	232 077.43	0.00	0.00	74
MNE	Montenegro	Europe	no	8 892.93	4 416.08	0.00	0.00	75
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	76
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	0.00	0.00	77
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	0.00	0.00	78
DZA	Algeria	Africa	no	899 206.20	210 183.41	0.00	0.00	79
EGY	Egypt	Africa	no	617 149.20	271 972.83	0.00	0.00	80
DJI	Djibouti	Africa	no	4 744.66	1 456.34	0.00	0.00	81
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	82
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	0.00	0.00	83
MLT	Malta	Europe	no	36 990.21	9 642.33	0.00	0.00	84
YEM	Yemen	Asia	no	79 113.56	35 954.50	0.00	0.00	85
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.00	0.00	86
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	87
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	88
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	0.00	0.00	89
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	0.00	0.00	90
QAT	Qatar	Asia	no	624 817.70	203 235.16			91
SSD	South Sudan	Africa	no	19 958.30	11 804.41			92
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			93
COD	Democratic Republic of the Congo	Africa	no	27 401.97				94
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			95
TCD	Chad	Africa	no	26 745.14	13 513.55			96
NER	Niger	Africa	no	12 723.49	7 407.42			97
RWA	Rwanda	Africa	no	13 197.39	7 521.26			98
KHM	Cambodia	Asia	no	27 390.49	15 238.69			99
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			100
TWN	Taiwan	Asia	no	1 680 401.00				101
ESH	Western Sahara	Africa	no	3 690.88				102
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			103
EST	Estonia	Europe	no	79 617.31	24 880.27			104
BWA	Botswana	Africa	no	90 628.62	14 784.71			105
FIN	Finland	Europe	no	965 383.40	267 328.62			106
GEO	Georgia	Asia	no	53 823.53	16 140.05			107
ISL	Iceland	Europe	no	57 291.68	15 330.06			108
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			109
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			110
LVA	Latvia	Europe	no	95 608.77	30 956.69			111
MKD	Macedonia	Europe	no	32 996.37	10 195.40			112
BLR	Belarus	Europe	no	229 399.90	71 709.52			113
ROU	Romania	Europe	no	555 697.40				114
REU	Reunion	Africa	no	67 897.68				115
SVK	Slovakia	Europe	no	414 782.80	97 707.33			116
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			117
IRQ	Iraq	Asia	no	132 499.60	229 327.29			118
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			119
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			120
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			121
GIB	Gibraltar	Europe	no	4 042.19				122
ZMB	Zambia	Africa	no	48 954.52	26 820.87			123
UGA	Uganda	Africa	no	43 697.09	21 493.61			124
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			125
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			126
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			127
MCO	Monaco	Europe	no	20 716.40	6 074.51			128
LAO	Laos	Asia	no	21 925.62	11 242.53			129
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			130
MMR	Myanmar	Asia	no	195 390.10				131
UKR	Ukraine	Europe	no	676 833.60	177 430.61			132
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				133
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			134
LTU	Lithuania	Europe	no	135 613.80	45 931.97			135
PRK	North Korea	Asia	no	77 982.15				136
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			137
POL	Poland	Europe	no	1 614 716.00	525 865.98			138
MDA	Moldova	Europe	no	33 762.68	7 969.62			139
HUN	Hungary	Europe	no	562 479.60	133 423.90			140
AUT	Austria	Europe	no	1 801 472.00	428 321.90			141
SDN	Sudan	Africa	no	70 368.78	66 565.89			142
SRB	Serbia	Europe	no	57 317.24	45 519.65			143
SMR	San Marino	Europe	no	4 049.35	1 899.81			144
BDI	Burundi	Africa	no	3 616.17	2 714.51			145
ARM	Armenia	Asia	no	22 895.19	10 432.17			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
COG	Congo	Africa	no	69 047.72	14 085.85			147
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			148
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			149
LSO	Lesotho	Africa	no	17 938.00	2 334.99			150
BTN	Bhutan	Asia	no	11 083.66	1 781.26			151
MLI	Mali	Africa	no	27 719.15	10 942.73			152
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				153
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			154
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			155
MNG	Mongolia	Asia	no	36 587.61	11 516.41			156
NPL	Nepal	Asia	no	53 996.57	19 294.35			157
MYT	Mayotte	Africa	no	6 949.04				158
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			159
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			160
ERI	Eritrea	Africa	no	9 081.79	3 444.10			161
MWI	Malawi	Africa	no	18 356.97	3 705.39			162
KWT	Kuwait	Asia	no	469 418.40	175 830.50			163
AND	Andorra	Europe	no	8 381.65	2 849.17			164
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			165
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			166
PSE	State of Palestine	Asia	no	69 454.30				167
JOR	Jordan	Asia	no	121 481.20	33 678.50			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	60 744.37	1.19	1
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	353.59	0.22	2
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	444.42	0.16	3
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	923.97	0.11	4
PHL	Philippines	Asia	no	566 948.60	326 316.43	304.05	0.09	5
MAC	Macau	Asia	no	56 709.10	37 762.88	23.28	0.06	6
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	851.79	0.06	7
BRN	Brunei	Asia	no	71 236.46	10 784.47	4.09	0.04	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	65.07	0.02	9
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	63.84	0.02	10
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	2 036.40	0.01	11
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	10.78	0.01	12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	4.42	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.10	0.00	14
GRC	Greece	Europe	no	1 181 283.00	242 155.98	8.12	0.00	15
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	1.58	0.00	16
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	28.49	0.00	17
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	24.90	0.00	18
IND	India	Asia	no	5 769 372.00	1 855 591.42	22.79	0.00	19
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	3.68	0.00	20
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.51	0.00	21
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	15.16	0.00	22
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	0.26	0.00	23
VNM	Vietnam	Asia	no	487 574.40	164 181.67	0.16	0.00	24
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	1.48	0.00	25
PAK	Pakistan	Asia	no	502 344.30	244 280.84	0.00	0.00	26
MAR	Morroco	Africa	no	374 846.30	100 965.44	0.00	0.00	27
KEN	Kenya	Africa	no	98 382.66	54 934.72	0.00	0.00	28
BEN	Benin	Africa	no	21 971.91	8 247.34	0.00	0.00	29
GIN	Guinea	Africa	no	13 665.89	5 696.70	0.00	0.00	30
TUN	Tunisia	Africa	no	178 845.60	44 799.78	0.00	0.00	31
LBR	Liberia	Africa	no	1 911.24	1 751.03	0.00	0.00	32
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	33
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	0.00	0.00	34
NAM	Namibia	Africa	no	42 062.66	12 989.72	0.00	0.00	35
AGO	Angola	Africa	no	176 182.50	112 289.11	0.00	0.00	36
GAB	Gabon	Africa	no	120 252.20	17 298.19	0.00	0.00	37
SEN	Senegal	Africa	no	35 335.24	14 606.22	0.00	0.00	38
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	0.00	0.00	39
GMB	The Gambia	Africa	no	2 097.61	875.76	0.00	0.00	40
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.00	0.00	41
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	42
MRT	Mauritania	Africa	no	11 985.52	3 892.41	0.00	0.00	43
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	0.00	0.00	44
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	45
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	46
CHN	China	Asia	no	31 726 110.00	9 196 167.76	0.00	0.00	47
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	0.00	0.00	48
ISR	Israel	Asia	no	853 829.30	284 226.45	0.00	0.00	49
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	0.00	0.00	50
HRV	Croatia	Europe	no	188 113.70	56 412.38	0.00	0.00	51
SVN	Slovenia	Europe	no	139 899.70	47 633.96	0.00	0.00	52
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	0.00	0.00	53
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	0.00	0.00	54
LBY	Libya	Africa	no	73 757.40	61 985.45	0.00	0.00	55
CYP	Cyprus	Asia	no	71 610.53	21 453.80	0.00	0.00	56
CMR	Cameroon	Africa	no	81 683.73	28 948.12	0.00	0.00	57
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	0.00	0.00	58
MDG	Madagascar	Africa	no	23 496.42	10 279.21	0.00	0.00	59
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	60
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	0.00	0.00	61
NGA	Nigeria	Africa	no	592 030.40	499 041.44	0.00	0.00	62
OMN	Oman	Asia	no	202 533.60	90 220.81	0.00	0.00	63
SYR	Syria	Asia	no	204 643.30	39 715.80	0.00	0.00	64
LBN	Lebanon	Asia	no	207 723.70	44 926.34	0.00	0.00	65
FRA	France	Europe	no	10 329 420.00	2 855 136.13	0.00	0.00	66
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	0.00	0.00	67
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	0.00	0.00	68
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	0.00	0.00	69
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	0.00	0.00	70
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	0.00	0.00	71
ALB	Albania	Europe	no	40 459.65	12 951.12	0.00	0.00	72
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	0.00	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
IRL	Ireland	Europe	no	778 821.60	197 446.98	0.00	0.00	74
MNE	Montenegro	Europe	no	8 892.93	4 503.08	0.00	0.00	75
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	76
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	0.00	0.00	77
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	0.00	0.00	78
DZA	Algeria	Africa	no	899 206.20	206 267.88	0.00	0.00	79
EGY	Egypt	Africa	no	617 149.20	264 562.52	0.00	0.00	80
DJI	Djibouti	Africa	no	4 744.66	775.82	0.00	0.00	81
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	82
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	0.00	0.00	83
MLT	Malta	Europe	no	36 990.21	8 946.39	0.00	0.00	84
YEM	Yemen	Asia	no	79 113.56	34 721.48	0.00	0.00	85
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.00	0.00	86
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	87
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	88
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	0.00	0.00	89
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	0.00	0.00	90
QAT	Qatar	Asia	no	624 817.70	190 319.79			91
SSD	South Sudan	Africa	no	19 958.30	10 791.19			92
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			93
COD	Democratic Republic of the Congo	Africa	no	27 401.97				94
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			95
TCD	Chad	Africa	no	26 745.14	12 987.28			96
NER	Niger	Africa	no	12 723.49	7 223.22			97
RWA	Rwanda	Africa	no	13 197.39	7 406.89			98
KHM	Cambodia	Asia	no	27 390.49	14 486.36			99
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			100
TWN	Taiwan	Asia	no	1 680 401.00				101
ESH	Western Sahara	Africa	no	3 690.88				102
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			103
EST	Estonia	Europe	no	79 617.31	24 010.33			104
BWA	Botswana	Africa	no	90 628.62	14 678.53			105
FIN	Finland	Europe	no	965 383.40	268 134.55			106
GEO	Georgia	Asia	no	53 823.53	15 835.00			107
ISL	Iceland	Europe	no	57 291.68	15 047.05			108
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			109
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			110
LVA	Latvia	Europe	no	95 608.77	30 883.23			111
MKD	Macedonia	Europe	no	32 996.37	10 110.99			112
BLR	Belarus	Europe	no	229 399.90	69 000.62			113
ROU	Romania	Europe	no	555 697.40				114
REU	Reunion	Africa	no	67 897.68				115
SVK	Slovakia	Europe	no	414 782.80	95 768.45			116
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			117
IRQ	Iraq	Asia	no	132 499.60	229 027.28			118
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			119
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			120
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			121
GIB	Gibraltar	Europe	no	4 042.19				122
ZMB	Zambia	Africa	no	48 954.52	26 049.97			123
UGA	Uganda	Africa	no	43 697.09	22 316.73			124
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			125
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			126
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			127
MCO	Monaco	Europe	no	20 716.40	6 919.24			128
LAO	Laos	Asia	no	21 925.62	10 602.76			129
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			130
MMR	Myanmar	Asia	no	195 390.10				131
UKR	Ukraine	Europe	no	676 833.60	180 979.14			132
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				133
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			134
LTU	Lithuania	Europe	no	135 613.80	44 274.32			135
PRK	North Korea	Asia	no	77 982.15				136
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			137
POL	Poland	Europe	no	1 614 716.00	506 714.23			138
MDA	Moldova	Europe	no	33 762.68	8 846.50			139
HUN	Hungary	Europe	no	562 479.60	129 554.20			140
AUT	Austria	Europe	no	1 801 472.00	427 916.46			141
SDN	Sudan	Africa	no	70 368.78	63 769.45			142
SRB	Serbia	Europe	no	57 317.24	43 641.10			143
SMR	San Marino	Europe	no	4 049.35	1 681.06			144
BDI	Burundi	Africa	no	3 616.17	2 713.09			145
ARM	Armenia	Asia	no	22 895.19	10 972.97			146

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
COG	Congo	Africa	no	69 047.72	11 049.89			147
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			148
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			149
LSO	Lesotho	Africa	no	17 938.00	2 861.49			150
BTN	Bhutan	Asia	no	11 083.66	1 665.34			151
MLI	Mali	Africa	no	27 719.15	10 272.74			152
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				153
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			154
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			155
MNG	Mongolia	Asia	no	36 587.61	10 751.45			156
NPL	Nepal	Asia	no	53 996.57	19 443.42			157
MYT	Mayotte	Africa	no	6 949.04				158
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			159
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			160
ERI	Eritrea	Africa	no	9 081.79	3 412.88			161
MWI	Malawi	Africa	no	18 356.97	3 574.19			162
KWT	Kuwait	Asia	no	469 418.40	165 127.08			163
AND	Andorra	Europe	no	8 381.65	2 539.76			164
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			165
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			166
PSE	State of Palestine	Asia	no	69 454.30				167
JOR	Jordan	Asia	no	121 481.20	33 339.06			168

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
JPN	Japan	Asia	no	39 255 200.00	60 744.37	0.15	1
PHL	Philippines	Asia	no	566 948.60	304.05	0.05	2
NZL	New Zealand	Oceania	no	679 705.40	353.59	0.05	3
MAC	Macau	Asia	no	56 709.10	23.28	0.04	4
HKG	Hong Kong	Asia	no	1 250 063.00	444.42	0.04	5
IDN	Indonesia	Asia	no	2 827 835.00	923.97	0.03	6
AUS	Australia	Oceania	no	6 616 533.00	851.79	0.01	7
CHL	Chile	Latin America and the Caribbean	no	784 154.10	65.07	0.01	8
COL	Colombia	Latin America and the Caribbean	no	944 576.90	63.84	0.01	9
BRN	Brunei	Asia	no	71 236.46	4.09	0.01	10
USA	United States	Northern America	no	54 922 480.00	2 036.40	0.00	11
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	4.42	0.00	12
PER	Peru	Latin America and the Caribbean	no	692 344.50	10.78	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.10	0.00	14
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	1.58	0.00	15
GRC	Greece	Europe	no	1 181 283.00	8.12	0.00	16
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	28.49	0.00	17
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.51	0.00	18
IND	India	Asia	no	5 769 372.00	22.79	0.00	19
RUS	Russia	Europe	no	6 325 795.00	24.90	0.00	20
MYS	Malaysia	Asia	no	1 170 979.00	3.68	0.00	21
TWN	Taiwan	Asia	no	1 680 401.00	4.53	0.00	22
CAN	Canada	Northern America	no	6 291 917.00	15.16	0.00	23
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.26	0.00	24
VNM	Vietnam	Asia	no	487 574.40	0.16	0.00	25
ITA	Italy	Europe	no	8 604 332.00	1.48	0.00	26
PAK	Pakistan	Asia	no	502 344.30	0.00	0.00	27
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	28
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	29
BEN	Benin	Africa	no	21 971.91	0.00	0.00	30
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	31
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	32
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	33
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	34
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	35
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	36
AGO	Angola	Africa	no	176 182.50	0.00	0.00	37
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	38
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	39
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	40
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	41
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	42
TGO	Togo	Africa	no	12 513.67	0.00	0.00	43
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	44
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	45
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	46
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	47
CHN	China	Asia	no	31 726 110.00	0.00	0.00	48
MMR	Myanmar	Asia	no	195 390.10	0.00	0.00	49
BGD	Bangladesh	Asia	no	381 431.90	0.00	0.00	50
ISR	Israel	Asia	no	853 829.30	0.00	0.00	51
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	52
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	53
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	54
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	55
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	56
LBY	Libya	Africa	no	73 757.40	0.00	0.00	57
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	58
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	59
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	60
MDG	Madagascar	Africa	no	23 496.42	0.00	0.00	61
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	62
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	63
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	64
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	65
OMN	Oman	Asia	no	202 533.60	0.00	0.00	66
SYR	Syria	Asia	no	204 643.30	0.00	0.00	67
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	68
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	69
FRA	France	Europe	no	10 329 420.00	0.00	0.00	70
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	71
KOR	South Korea	Asia	no	5 538 605.00	0.00	0.00	72
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	73

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	74
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	75
ALB	Albania	Europe	no	40 459.65	0.00	0.00	76
GBR	United Kingdom	Europe	no	7 806 797.00	0.00	0.00	77
IRL	Ireland	Europe	no	778 821.60	0.00	0.00	78
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	79
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	80
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	81
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	82
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.00	0.00	83
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	84
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	0.00	0.00	85
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	86
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	87
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	88
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	89
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	90
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	91
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.00	0.00	92
MLT	Malta	Europe	no	36 990.21	0.00	0.00	93
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	94
LKA	Sri Lanka	Asia	no	208 273.50	0.00	0.00	95
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	96
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	97
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	98
PRT	Portugal	Europe	no	1 054 344.00	0.00	0.00	99
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			100
RWA	Rwanda	Africa	no	13 197.39			101
ERI	Eritrea	Africa	no	9 081.79			102
BGR	Bulgaria	Europe	no	163 821.60			103
EST	Estonia	Europe	no	79 617.31			104
COG	Congo	Africa	no	69 047.72			105
FIN	Finland	Europe	no	965 383.40			106
GEO	Georgia	Asia	no	53 823.53			107
ISL	Iceland	Europe	no	57 291.68			108
KGZ	Kyrgizstan	Asia	no	18 466.60			109
LIE	Liechtenstein	Europe	no	18 837.10			110
LVA	Latvia	Europe	no	95 608.77			111
MKD	Macedonia	Europe	no	32 996.37			112
BLR	Belarus	Europe	no	229 399.90			113
ROU	Romania	Europe	no	555 697.40			114
SAU	Saudi Arabia	Asia	no	2 141 419.00			115
SVK	Slovakia	Europe	no	414 782.80			116
SWE	Sweden	Europe	no	1 747 501.00			117
QAT	Qatar	Asia	no	624 817.70			118
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			119
MWI	Malawi	Africa	no	18 356.97			120
LUX	Luxembourg	Europe	no	201 130.60			121
KAZ	Kazakhstan	Asia	no	734 309.90			122
UKR	Ukraine	Europe	no	676 833.60			123
FRO	Faroe Islands	Europe	no	9 272.37			124
TKM	Turkmenistan	Asia	no	36 127.02			125
LTU	Lithuania	Europe	no	135 613.80			126
BWA	Botswana	Africa	no	90 628.62			127
CHE	Switzerland	Europe	no	3 421 606.00			128
ZMB	Zambia	Africa	no	48 954.52			129
NER	Niger	Africa	no	12 723.49			130
HUN	Hungary	Europe	no	562 479.60			131
AUT	Austria	Europe	no	1 801 472.00			132
ZWE	Zimbawue	Africa	no	22 038.05			133
SRB	Serbia	Europe	no	57 317.24			134
MCO	Monaco	Europe	no	20 716.40			135
IRQ	Iraq	Asia	no	132 499.60			136
ARM	Armenia	Asia	no	22 895.19			137
CAF	Central African Republic	Africa	no	3 893.74			138
AZE	Azerbaijan	Asia	no	192 784.00			139
CZE	Czech Republic	Europe	no	1 007 263.00			140
UZB	Uzbekistan	Asia	no	151 891.10			141
LSO	Lesotho	Africa	no	17 938.00			142
ETH	Ethiopia	Africa	no	65 598.93			143
POL	Poland	Europe	no	1 614 716.00			144
BTN	Bhutan	Asia	no	11 083.66			145
BEL	Belgium	Europe	no	1 980 551.00			146

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
TJK	Tajikistan	Asia	no	20 536.86			147
MNG	Mongolia	Asia	no	36 587.61			148
REU	Reunion	Africa	no	67 897.68			149
SDN	Sudan	Africa	no	70 368.78			150
SMR	San Marino	Europe	no	4 049.35			151
BDI	Burundi	Africa	no	3 616.17			152
UGA	Uganda	Africa	no	43 697.09			153
KWT	Kuwait	Asia	no	469 418.40			154
AND	Andorra	Europe	no	8 381.65			155
NPL	Nepal	Asia	no	53 996.57			156
MLI	Mali	Africa	no	27 719.15			157
LAO	Laos	Asia	no	21 925.62			158
JOR	Jordan	Asia	no	121 481.20			159
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			160
SSD	South Sudan	Africa	no	19 958.30			161
SWZ	Swaziland	Africa	no	13 701.24			162
AFG	Afghanistan	Asia	no	60 187.87			163
COD	Democratic Republic of the Congo	Africa	no	27 401.97			164
BFA	Burkina Faso	Africa	no	24 689.43			165
MDA	Moldova	Europe	no	33 762.68			166
TCD	Chad	Africa	no	26 745.14			167
KHM	Cambodia	Asia	no	27 390.49			168

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Region

Earthquake

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SWZ	Swaziland	Africa	no	13 701.24	6.99	363.96	19.21	1
LSO	Lesotho	Africa	no	17 938.00	15.77	855.33	18.44	2
DZA	Algeria	Africa	no	899 206.20	991.52	71 040.48	13.96	3
MWI	Malawi	Africa	no	18 356.97	8.20	731.37	11.21	4
TUN	Tunisia	Africa	no	178 845.60	97.19	9 509.45	10.22	5
DJI	Djibouti	Africa	no	4 744.66	2.95	317.86	9.28	6
ZAF	South Africa	Africa	no	1 282 854.00	601.24	67 780.45	8.87	7
RWA	Rwanda	Africa	no	13 197.39	12.68	1 920.52	6.60	8
BWA	Botswana	Africa	no	90 628.62	31.51	5 015.09	6.28	9
MAR	Morroco	Africa	no	374 846.30	157.28	31 321.40	5.02	10
BDI	Burundi	Africa	no	3 616.17	3.87	780.29	4.96	11
EGY	Egypt	Africa	no	617 149.20	176.90	37 477.12	4.72	12
UGA	Uganda	Africa	no	43 697.09	22.14	5 121.46	4.32	13
ZMB	Zambia	Africa	no	48 954.52	17.41	5 247.76	3.32	14
MOZ	Mozambique	Africa	no	36 409.45	7.91	2 723.39	2.90	15
SSD	South Sudan	Africa	no	19 958.30	3.90	1 399.32	2.79	16
ERI	Eritrea	Africa	no	9 081.79	0.71	260.73	2.72	17
TZA	Tanzania	Africa	no	50 142.79	26.08	10 658.54	2.45	18
ZWE	Zimbawue	Africa	no	22 038.05	4.18	1 752.82	2.38	19
CMR	Cameroon	Africa	no	81 683.73	9.88	5 736.52	1.72	20
CAF	Central African Republic	Africa	no	3 893.74	0.43	320.25	1.34	21
SOM	Somalia	Africa	no	6 408.32	0.16	136.64	1.17	22
KEN	Kenya	Africa	no	98 382.66	12.57	11 277.32	1.11	23
NAM	Namibia	Africa	no	42 062.66	3.39	3 368.79	1.01	24
GIN	Guinea	Africa	no	13 665.89	0.45	919.65	0.49	25
GAB	Gabon	Africa	no	120 252.20	2.90	6 432.02	0.45	26
LBY	Libya	Africa	no	73 757.40	11.49	25 993.79	0.44	27
MDG	Madagascar	Africa	no	23 496.42	0.58	1 666.80	0.35	28
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	9 099.23	0.28	29
NGA	Nigeria	Africa	no	592 030.40	20.64	75 511.10	0.27	30
GMB	The Gambia	Africa	no	2 097.61	0.05	187.47	0.27	31
AGO	Angola	Africa	no	176 182.50	4.60	18 242.56	0.25	32
LBR	Liberia	Africa	no	1 911.24	0.11	440.32	0.25	33
COG	Congo	Africa	no	69 047.72	0.99	4 329.13	0.23	34
SEN	Senegal	Africa	no	35 335.24	0.79	3 706.12	0.21	35
ETH	Ethiopia	Africa	no	65 598.93	2.94	17 012.56	0.17	36
SLE	Sierra Leone	Africa	no	3 031.82	0.10	685.06	0.15	37
SDN	Sudan	Africa	no	70 368.78	1.89	13 307.19	0.14	38
MRT	Mauritania	Africa	no	11 985.52	0.22	1 578.96	0.14	39
BEN	Benin	Africa	no	21 971.91	0.23	2 182.62	0.11	40
TGO	Togo	Africa	no	12 513.67	0.07	685.82	0.10	41
MLI	Mali	Africa	no	27 719.15	0.15	1 684.06	0.09	42
CIV	Ivory Coast	Africa	no	45 467.63	0.33	5 292.23	0.06	43
TCD	Chad	Africa	no	26 745.14	0.17	3 701.42	0.05	44
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 889.80	0.02	45
GHA	Ghana	Africa	no	74 174.05	0.09	10 912.64	0.01	46
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	47
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	48
REU	Reunion	Africa	no	67 897.68	0.00			49
ESH	Western Sahara	Africa	no	3 690.88	0.14			50
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			51
MYT	Mayotte	Africa	no	6 949.04	1.79			52
IRN	Iran	Asia	no	2 067 640.00	4 190.90	73 681.58	56.88	1
TJK	Tajikistan	Asia	no	20 536.86	64.44	1 199.63	53.72	2
GEO	Georgia	Asia	no	53 823.53	167.01	3 542.58	47.14	3
AFG	Afghanistan	Asia	no	60 187.87	146.81	3 601.40	40.76	4
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 068 884.62	29.80	5
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	2 207.36	28.36	6
ARM	Armenia	Asia	no	22 895.19	45.24	2 183.10	20.72	7
SYR	Syria	Asia	no	204 643.30	149.11	8 252.62	18.07	8
UZB	Uzbekistan	Asia	no	151 891.10	225.05	13 153.84	17.11	9
AZE	Azerbaijan	Asia	no	192 784.00	282.02	18 074.31	15.60	10
YEM	Yemen	Asia	no	79 113.56	45.87	3 126.31	14.67	11
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	167 069.99	13.17	12
PHL	Philippines	Asia	no	566 948.60	703.46	55 644.78	12.64	13
KWT	Kuwait	Asia	no	469 418.40	201.43	19 039.58	10.58	14
QAT	Qatar	Asia	no	624 817.70	152.90	15 282.42	10.00	15
LBN	Lebanon	Asia	no	207 723.70	119.65	12 363.32	9.68	16
BTN	Bhutan	Asia	no	11 083.66	7.98	842.11	9.48	17
PAK	Pakistan	Asia	no	502 344.30	272.05	30 125.80	9.03	18
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	88 386.66	8.52	19
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	49 121.75	7.88	20
NPL	Nepal	Asia	no	53 996.57	29.50	4 356.14	6.77	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ISR	Israel	Asia	no	853 829.30	381.32	56 565.68	6.74	22
CYP	Cyprus	Asia	no	71 610.53	28.55	4 260.93	6.70	23
JOR	Jordan	Asia	no	121 481.20	46.25	9 168.09	5.04	24
IRQ	Iraq	Asia	no	132 499.60	159.43	35 983.20	4.43	25
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	274 943.80	4.06	26
BGD	Bangladesh	Asia	no	381 431.90	126.46	42 581.72	2.97	27
OMN	Oman	Asia	no	202 533.60	43.37	17 256.96	2.51	28
BRN	Brunei	Asia	no	71 236.46	5.94	2 466.98	2.41	29
CHN	China	Asia	no	31 726 110.00	6 954.76	4 370 835.96	1.59	30
LAO	Laos	Asia	no	21 925.62	5.03	3 279.79	1.53	31
TKM	Turkmenistan	Asia	no	36 127.02	19.25	16 597.51	1.16	32
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	173 661.86	0.94	33
IND	India	Asia	no	5 769 372.00	446.55	530 741.66	0.84	34
MNG	Mongolia	Asia	no	36 587.61	3.83	5 086.03	0.75	35
THA	Thailand	Asia	no	1 378 999.00	32.56	103 523.57	0.31	36
MYS	Malaysia	Asia	no	1 170 979.00	10.49	84 107.08	0.12	37
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	65 379.04	0.12	38
KOR	South Korea	Asia	no	5 538 605.00	45.48	386 884.93	0.12	39
VNM	Vietnam	Asia	no	487 574.40	3.95	40 823.56	0.10	40
MAC	Macau	Asia	no	56 709.10	0.27	6 610.47	0.04	41
LKA	Sri Lanka	Asia	no	208 273.50	0.77	19 647.18	0.04	42
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	43
PSE	State of Palestine	Asia	no	69 454.30	26.75			44
MMR	Myanmar	Asia	no	195 390.10	35.57			45
PRK	North Korea	Asia	no	77 982.15	10.88			46
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			47
GRC	Greece	Europe	no	1 181 283.00	5 109.11	27 154.95	188.15	1
ITA	Italy	Europe	no	8 604 332.00	9 772.86	383 197.87	25.50	2
SVN	Slovenia	Europe	no	139 899.70	159.19	9 461.85	16.82	3
ALB	Albania	Europe	no	40 459.65	46.73	3 379.49	13.83	4
HRV	Croatia	Europe	no	188 113.70	152.79	11 171.45	13.68	5
ISL	Iceland	Europe	no	57 291.68	31.50	2 314.22	13.61	6
MKD	Macedonia	Europe	no	32 996.37	26.26	2 530.04	10.38	7
MLT	Malta	Europe	no	36 990.21	13.32	1 333.61	9.99	8
BGR	Bulgaria	Europe	no	163 821.60	83.36	11 609.87	7.18	9
MNE	Montenegro	Europe	no	8 892.93	5.10	847.70	6.02	10
AUT	Austria	Europe	no	1 801 472.00	524.60	95 015.40	5.52	11
CHE	Switzerland	Europe	no	3 421 606.00	786.78	160 510.43	4.90	12
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	3 192.49	4.67	13
HUN	Hungary	Europe	no	562 479.60	123.20	26 595.35	4.63	14
SRB	Serbia	Europe	no	57 317.24	33.37	8 634.55	3.86	15
DEU	Germany	Europe	no	15 114 870.00	2 350.12	737 992.70	3.18	16
SVK	Slovakia	Europe	no	414 782.80	60.97	19 975.29	3.05	17
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	52 070.81	2.88	18
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	440 106.84	2.03	19
POL	Poland	Europe	no	1 614 716.00	188.81	98 972.34	1.91	20
BEL	Belgium	Europe	no	1 980 551.00	190.39	116 900.65	1.63	21
MDA	Moldova	Europe	no	33 762.68	2.83	1 821.11	1.55	22
NLD	Netherlands	Europe	no	3 410 955.00	237.82	155 739.98	1.53	23
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 257.46	1.29	24
FRA	France	Europe	no	10 329 420.00	501.01	619 955.29	0.81	25
RUS	Russia	Europe	no	6 325 795.00	296.92	450 238.87	0.66	26
IRL	Ireland	Europe	no	778 821.60	12.72	35 221.45	0.36	27
ESP	Spain	Europe	no	6 233 955.00	72.48	257 993.28	0.28	28
UKR	Ukraine	Europe	no	676 833.60	8.67	32 236.10	0.27	29
PRT	Portugal	Europe	no	1 054 344.00	7.35	34 419.00	0.21	30
EST	Estonia	Europe	no	79 617.31	1.09	6 795.36	0.16	31
LTU	Lithuania	Europe	no	135 613.80	0.85	7 517.23	0.11	32
NOR	Norway	Europe	no	1 933 679.00	10.36	116 071.15	0.09	33
LVA	Latvia	Europe	no	95 608.77	0.45	6 324.84	0.07	34
DNK	Denmark	Europe	no	1 346 393.00	3.01	61 547.69	0.05	35
SWE	Sweden	Europe	no	1 747 501.00	5.48	128 378.82	0.04	36
FIN	Finland	Europe	no	965 383.40	1.18	56 624.15	0.02	37
BLR	Belarus	Europe	no	229 399.90	0.14	26 490.10	0.01	38
LIE	Liechtenstein	Europe	no	18 837.10	9.80			39
AND	Andorra	Europe	no	8 381.65	0.12			40
SMR	San Marino	Europe	no	4 049.35	5.92			41
MCO	Monaco	Europe	no	20 716.40	11.70			42
FRO	Faroe Islands	Europe	no	9 272.37	0.00			43
ROU	Romania	Europe	no	555 697.40	255.64			44
GIB	Gibraltar	Europe	no	4 042.19	2.53			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	4 539.50	148.90	1
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	7 693.87	91.20	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3 663.90	68.34	3
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	53 841.99	68.15	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	26 312.88	47.46	5
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	65 444.15	36.62	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	92 724.40	33.86	7
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2 574.11	28.17	8
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	77 440.20	26.40	9
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	10 406.53	22.70	10
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	10 060.78	13.45	11
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	5 844.96	12.75	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	103 818.81	10.63	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	265 421.77	5.10	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	408 331.78	0.16	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	4 394.85	0.04	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			19
USA	United States	Northern America	no	54 922 480.00	14 458.98	3 244 299.91	4.46	1
CAN	Canada	Northern America	no	6 291 917.00	294.11	433 369.09	0.68	2
NZL	New Zealand	Oceania	no	679 705.40	22.81	38 213.65	0.60	1
AUS	Australia	Oceania	no	6 616 533.00	61.35	442 013.06	0.14	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
ZMB	Zambia	Africa	no	48 954.52	17.41	568.19	30.64	1
DZA	Algeria	Africa	no	899 206.20	991.52	39 734.87	24.95	2
LSO	Lesotho	Africa	no	17 938.00	15.77	878.46	17.95	3
DJI	Djibouti	Africa	no	4 744.66	2.95	212.95	13.85	4
UGA	Uganda	Africa	no	43 697.09	22.14	1 787.04	12.39	5
RWA	Rwanda	Africa	no	13 197.39	12.68	1 065.41	11.90	6
TUN	Tunisia	Africa	no	178 845.60	97.19	8 918.25	10.90	7
BWA	Botswana	Africa	no	90 628.62	31.51	2 912.71	10.82	8
MWI	Malawi	Africa	no	18 356.97	8.20	818.79	10.01	9
SWZ	Swaziland	Africa	no	13 701.24	6.99	753.93	9.27	10
MAR	Morroco	Africa	no	374 846.30	157.28	19 696.51	7.99	11
ZAF	South Africa	Africa	no	1 282 854.00	601.24	77 967.19	7.71	12
BDI	Burundi	Africa	no	3 616.17	3.87	599.64	6.45	13
EGY	Egypt	Africa	no	617 149.20	176.90	31 768.68	5.57	14
TZA	Tanzania	Africa	no	50 142.79	26.08	6 321.86	4.13	15
CMR	Cameroon	Africa	no	81 683.73	9.88	3 421.99	2.89	16
GAB	Gabon	Africa	no	120 252.20	2.90	1 026.90	2.82	17
CAF	Central African Republic	Africa	no	3 893.74	0.43	166.29	2.59	18
MOZ	Mozambique	Africa	no	36 409.45	7.91	3 190.27	2.48	19
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	1 036.62	2.44	20
KEN	Kenya	Africa	no	98 382.66	12.57	7 759.48	1.62	21
ZWE	Zimbawue	Africa	no	22 038.05	4.18	2 703.00	1.55	22
SSD	South Sudan	Africa	no	19 958.30	3.90	2 720.34	1.43	23
LBY	Libya	Africa	no	73 757.40	11.49	8 664.60	1.33	24
ERI	Eritrea	Africa	no	9 081.79	0.71	549.64	1.29	25
SOM	Somalia	Africa	no	6 408.32	0.16	133.83	1.20	26
NAM	Namibia	Africa	no	42 062.66	3.39	3 617.67	0.94	27
GIN	Guinea	Africa	no	13 665.89	0.45	594.52	0.76	28
ETH	Ethiopia	Africa	no	65 598.93	2.94	3 941.08	0.75	29
GMB	The Gambia	Africa	no	2 097.61	0.05	67.53	0.74	30
MDG	Madagascar	Africa	no	23 496.42	0.58	915.01	0.63	31
COG	Congo	Africa	no	69 047.72	0.99	1 908.75	0.52	32
NGA	Nigeria	Africa	no	592 030.40	20.64	42 180.53	0.49	33
LBR	Liberia	Africa	no	1 911.24	0.11	268.18	0.41	34
SDN	Sudan	Africa	no	70 368.78	1.89	5 000.18	0.38	35
SEN	Senegal	Africa	no	35 335.24	0.79	2 289.33	0.35	36
MRT	Mauritania	Africa	no	11 985.52	0.22	706.94	0.31	37
BEN	Benin	Africa	no	21 971.91	0.23	934.54	0.25	38
SLE	Sierra Leone	Africa	no	3 031.82	0.10	428.35	0.23	39
TGO	Togo	Africa	no	12 513.67	0.07	359.57	0.19	40
AGO	Angola	Africa	no	176 182.50	4.60	24 725.13	0.19	41
TCD	Chad	Africa	no	26 745.14	0.17	1 026.17	0.17	42
MLI	Mali	Africa	no	27 719.15	0.15	1 172.08	0.13	43
CIV	Ivory Coast	Africa	no	45 467.63	0.33	2 613.28	0.13	44
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 951.39	0.02	45
GHA	Ghana	Africa	no	74 174.05	0.09	8 003.31	0.01	46
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	47
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	48
REU	Reunion	Africa	no	67 897.68	0.00			49
ESH	Western Sahara	Africa	no	3 690.88	0.14			50
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			51
MYT	Mayotte	Africa	no	6 949.04	1.79			52
IRN	Iran	Asia	no	2 067 640.00	4 190.90	31 978.13	131.06	1
TJK	Tajikistan	Asia	no	20 536.86	64.44	998.87	64.51	2
GEO	Georgia	Asia	no	53 823.53	167.01	2 692.49	62.03	3
AFG	Afghanistan	Asia	no	60 187.87	146.81	2 492.12	58.91	4
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	1 306.25	47.92	5
AZE	Azerbaijan	Asia	no	192 784.00	282.02	8 252.01	34.18	6
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 012 070.61	31.48	7
SYR	Syria	Asia	no	204 643.30	149.11	4 971.97	29.99	8
ARM	Armenia	Asia	no	22 895.19	45.24	1 508.90	29.98	9
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	27 530.57	27.36	10
BTN	Bhutan	Asia	no	11 083.66	7.98	311.85	25.59	11
PHL	Philippines	Asia	no	566 948.60	703.46	30 212.56	23.28	12
LBN	Lebanon	Asia	no	207 723.70	119.65	6 530.19	18.32	13
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	123 751.24	17.78	14
UZB	Uzbekistan	Asia	no	151 891.10	225.05	12 744.63	17.66	15
YEM	Yemen	Asia	no	79 113.56	45.87	2 625.09	17.47	16
BGD	Bangladesh	Asia	no	381 431.90	126.46	7 673.71	16.48	17
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	23 889.95	16.21	18
NPL	Nepal	Asia	no	53 996.57	29.50	1 917.21	15.39	19
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	79 076.93	14.11	20
PAK	Pakistan	Asia	no	502 344.30	272.05	25 463.41	10.68	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
JOR	Jordan	Asia	no	121 481.20	46.25	6 618.91	6.99	22
KWT	Kuwait	Asia	no	469 418.40	201.43	29 360.33	6.86	23
CYP	Cyprus	Asia	no	71 610.53	28.55	4 557.62	6.26	24
QAT	Qatar	Asia	no	624 817.70	152.90	24 487.36	6.24	25
TKM	Turkmenistan	Asia	no	36 127.02	19.25	3 114.55	6.18	26
ISR	Israel	Asia	no	853 829.30	381.32	65 345.00	5.84	27
CHN	China	Asia	no	31 726 110.00	6 954.76	1 299 157.61	5.35	28
IRQ	Iraq	Asia	no	132 499.60	159.43	48 846.71	3.26	29
LAO	Laos	Asia	no	21 925.62	5.03	1 626.13	3.09	30
MNG	Mongolia	Asia	no	36 587.61	3.83	1 298.34	2.95	31
OMN	Oman	Asia	no	202 533.60	43.37	14 871.52	2.92	32
IND	India	Asia	no	5 769 372.00	446.55	221 700.44	2.01	33
BRN	Brunei	Asia	no	71 236.46	5.94	2 950.69	2.01	34
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	165 700.80	0.98	35
THA	Thailand	Asia	no	1 378 999.00	32.56	53 487.73	0.61	36
VNM	Vietnam	Asia	no	487 574.40	3.95	10 550.52	0.37	37
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	25 520.99	0.31	38
MYS	Malaysia	Asia	no	1 170 979.00	10.49	42 433.27	0.25	39
KOR	South Korea	Asia	no	5 538 605.00	45.48	194 728.35	0.23	40
LKA	Sri Lanka	Asia	no	208 273.50	0.77	8 808.70	0.09	41
MAC	Macau	Asia	no	56 709.10	0.27	3 378.13	0.08	42
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	43
PSE	State of Palestine	Asia	no	69 454.30	26.75			44
MMR	Myanmar	Asia	no	195 390.10	35.57			45
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			46
PRK	North Korea	Asia	no	77 982.15	10.88			47
GRC	Greece	Europe	no	1 181 283.00	5 109.11	48 425.35	105.50	1
ALB	Albania	Europe	no	40 459.65	46.73	1 381.39	33.83	2
ITA	Italy	Europe	no	8 604 332.00	9 772.86	417 993.98	23.38	3
SVN	Slovenia	Europe	no	139 899.70	159.19	9 765.51	16.30	4
MKD	Macedonia	Europe	no	32 996.37	26.26	1 787.08	14.69	5
HRV	Croatia	Europe	no	188 113.70	152.79	11 594.94	13.18	6
CHE	Switzerland	Europe	no	3 421 606.00	786.78	75 147.62	10.47	7
BGR	Bulgaria	Europe	no	163 821.60	83.36	8 993.34	9.27	8
ISL	Iceland	Europe	no	57 291.68	31.50	3 730.06	8.44	9
MLT	Malta	Europe	no	36 990.21	13.32	1 879.07	7.09	10
AUT	Austria	Europe	no	1 801 472.00	524.60	84 928.57	6.18	11
MNE	Montenegro	Europe	no	8 892.93	5.10	876.28	5.82	12
HUN	Hungary	Europe	no	562 479.60	123.20	26 544.35	4.64	13
SRB	Serbia	Europe	no	57 317.24	33.37	7 977.96	4.18	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	4 063.51	3.67	15
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	40 979.05	3.66	16
SVK	Slovakia	Europe	no	414 782.80	60.97	17 642.66	3.46	17
DEU	Germany	Europe	no	15 114 870.00	2 350.12	718 583.82	3.27	18
POL	Poland	Europe	no	1 614 716.00	188.81	95 412.26	1.98	19
MDA	Moldova	Europe	no	33 762.68	2.83	1 618.04	1.75	20
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	542 121.89	1.64	21
BEL	Belgium	Europe	no	1 980 551.00	190.39	128 131.48	1.49	22
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 391.43	1.28	23
NLD	Netherlands	Europe	no	3 410 955.00	237.82	224 781.17	1.06	24
FRA	France	Europe	no	10 329 420.00	501.01	677 049.47	0.74	25
RUS	Russia	Europe	no	6 325 795.00	296.92	409 820.63	0.72	26
IRL	Ireland	Europe	no	778 821.60	12.72	40 563.02	0.31	27
ESP	Spain	Europe	no	6 233 955.00	72.48	271 148.52	0.27	28
UKR	Ukraine	Europe	no	676 833.60	8.67	34 350.49	0.25	29
EST	Estonia	Europe	no	79 617.31	1.09	4 754.17	0.23	30
PRT	Portugal	Europe	no	1 054 344.00	7.35	43 081.93	0.17	31
LTU	Lithuania	Europe	no	135 613.80	0.85	8 076.66	0.11	32
LVA	Latvia	Europe	no	95 608.77	0.45	4 413.54	0.10	33
NOR	Norway	Europe	no	1 933 679.00	10.36	112 012.76	0.09	34
SWE	Sweden	Europe	no	1 747 501.00	5.48	151 944.31	0.04	35
DNK	Denmark	Europe	no	1 346 393.00	3.01	89 732.55	0.03	36
FIN	Finland	Europe	no	965 383.40	1.18	66 675.15	0.02	37
BLR	Belarus	Europe	no	229 399.90	0.14	10 166.04	0.01	38
ROU	Romania	Europe	no	555 697.40	255.64			39
LIE	Liechtenstein	Europe	no	18 837.10	9.80			40
MCO	Monaco	Europe	no	20 716.40	11.70			41
FRO	Faroe Islands	Europe	no	9 272.37	0.00			42
GIB	Gibraltar	Europe	no	4 042.19	2.53			43
AND	Andorra	Europe	no	8 381.65	0.12			44
SMR	San Marino	Europe	no	4 049.35	5.92			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	3 077.08	219.67	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	22 647.04	162.03	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	5 637.22	124.47	3
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	646.93	112.07	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	13 315.00	93.79	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	2 899.00	86.37	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	34 332.88	69.81	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	63 198.81	49.68	8
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	46 486.26	43.98	9
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	3 793.90	35.68	10
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	8 897.75	26.55	11
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	4 243.72	17.56	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	94 570.07	11.67	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	149 707.18	9.05	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	493 431.00	0.13	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	3 496.64	0.05	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			19
USA	United States	Northern America	no	54 922 480.00	14 458.98	2 547 499.93	5.68	1
CAN	Canada	Northern America	no	6 291 917.00	294.11	395 958.78	0.74	2
NZL	New Zealand	Oceania	no	679 705.40	22.81	34 691.31	0.66	1
AUS	Australia	Oceania	no	6 616 533.00	61.35	276 915.26	0.22	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
DZA	Algeria	Africa	no	899 206.20	991.52	204 165.74	4.86	1
LSO	Lesotho	Africa	no	17 938.00	15.77	3 740.58	4.22	2
DJI	Djibouti	Africa	no	4 744.66	2.95	1 018.02	2.90	3
BWA	Botswana	Africa	no	90 628.62	31.51	15 490.96	2.03	4
TUN	Tunisia	Africa	no	178 845.60	97.19	51 302.58	1.89	5
MWI	Malawi	Africa	no	18 356.97	8.20	4 366.74	1.88	6
SWZ	Swaziland	Africa	no	13 701.24	6.99	3 944.56	1.77	7
ZAF	South Africa	Africa	no	1 282 854.00	601.24	360 489.06	1.67	8
RWA	Rwanda	Africa	no	13 197.39	12.68	8 767.59	1.45	9
MAR	Morroco	Africa	no	374 846.30	157.28	117 556.24	1.34	10
BDI	Burundi	Africa	no	3 616.17	3.87	3 443.34	1.12	11
UGA	Uganda	Africa	no	43 697.09	22.14	23 933.64	0.93	12
TZA	Tanzania	Africa	no	50 142.79	26.08	39 205.30	0.67	13
ZMB	Zambia	Africa	no	48 954.52	17.41	26 244.17	0.66	14
EGY	Egypt	Africa	no	617 149.20	176.90	291 083.68	0.61	15
MOZ	Mozambique	Africa	no	36 409.45	7.91	17 220.44	0.46	16
CMR	Cameroon	Africa	no	81 683.73	9.88	32 007.42	0.31	17
SSD	South Sudan	Africa	no	19 958.30	3.90	14 712.88	0.27	18
ERI	Eritrea	Africa	no	9 081.79	0.71	2 836.63	0.25	19
ZWE	Zimbawue	Africa	no	22 038.05	4.18	17 196.10	0.24	20
NAM	Namibia	Africa	no	42 062.66	3.39	15 480.83	0.22	21
LBY	Libya	Africa	no	73 757.40	11.49	55 976.41	0.21	22
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	12 451.63	0.20	23
KEN	Kenya	Africa	no	98 382.66	12.57	63 770.87	0.20	24
GAB	Gabon	Africa	no	120 252.20	2.90	14 724.33	0.20	25
CAF	Central African Republic	Africa	no	3 893.74	0.43	2 389.56	0.18	26
SOM	Somalia	Africa	no	6 408.32	0.16	1 173.40	0.14	27
COG	Congo	Africa	no	69 047.72	0.99	12 612.41	0.08	28
GIN	Guinea	Africa	no	13 665.89	0.45	7 750.84	0.06	29
ETH	Ethiopia	Africa	no	65 598.93	2.94	55 403.13	0.05	30
MRT	Mauritania	Africa	no	11 985.52	0.22	4 169.52	0.05	31
GMB	The Gambia	Africa	no	2 097.61	0.05	1 029.01	0.05	32
MDG	Madagascar	Africa	no	23 496.42	0.58	11 984.82	0.05	33
SEN	Senegal	Africa	no	35 335.24	0.79	17 930.59	0.04	34
AGO	Angola	Africa	no	176 182.50	4.60	105 476.81	0.04	35
NGA	Nigeria	Africa	no	592 030.40	20.64	495 416.77	0.04	36
LBR	Liberia	Africa	no	1 911.24	0.11	2 724.73	0.04	37
SDN	Sudan	Africa	no	70 368.78	1.89	70 927.03	0.03	38
BEN	Benin	Africa	no	21 971.91	0.23	9 572.30	0.02	39
SLE	Sierra Leone	Africa	no	3 031.82	0.10	4 191.60	0.02	40
TGO	Togo	Africa	no	12 513.67	0.07	4 390.62	0.02	41
MLI	Mali	Africa	no	27 719.15	0.15	11 011.34	0.01	42
TCD	Chad	Africa	no	26 745.14	0.17	14 228.09	0.01	43
CIV	Ivory Coast	Africa	no	45 467.63	0.33	31 142.79	0.01	44
BFA	Burkina Faso	Africa	no	24 689.43	0.03	11 452.71	0.00	45
GHA	Ghana	Africa	no	74 174.05	0.09	50 578.29	0.00	46
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	47
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			49
MYT	Mayotte	Africa	no	6 949.04	1.79			50
ESH	Western Sahara	Africa	no	3 690.88	0.14			51
REU	Reunion	Africa	no	67 897.68	0.00			52
IRN	Iran	Asia	no	2 067 640.00	4 190.90	255 619.28	16.40	1
GEO	Georgia	Asia	no	53 823.53	167.01	18 230.53	9.16	2
JPN	Japan	Asia	no	39 255 200.00	31 857.11	5 059 261.76	6.30	3
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	10 749.10	5.82	4
TJK	Tajikistan	Asia	no	20 536.86	64.44	12 690.19	5.08	5
AFG	Afghanistan	Asia	no	60 187.87	146.81	29 010.12	5.06	6
AZE	Azerbaijan	Asia	no	192 784.00	282.02	57 484.51	4.91	7
UZB	Uzbekistan	Asia	no	151 891.10	225.05	59 039.46	3.81	8
SYR	Syria	Asia	no	204 643.30	149.11	40 077.56	3.72	9
BTN	Bhutan	Asia	no	11 083.66	7.98	2 173.58	3.67	10
ARM	Armenia	Asia	no	22 895.19	45.24	12 628.86	3.58	11
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	876 064.28	2.51	12
PHL	Philippines	Asia	no	566 948.60	703.46	283 131.84	2.48	13
YEM	Yemen	Asia	no	79 113.56	45.87	18 997.54	2.41	14
LBN	Lebanon	Asia	no	207 723.70	119.65	50 384.63	2.37	15
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	318 951.13	2.36	16
KWT	Kuwait	Asia	no	469 418.40	201.43	96 682.69	2.08	17
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	205 086.26	1.89	18
QAT	Qatar	Asia	no	624 817.70	152.90	91 904.94	1.66	19
ISR	Israel	Asia	no	853 829.30	381.32	286 558.36	1.33	20
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	885 677.23	1.26	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
NPL	Nepal	Asia	no	53 996.57	29.50	24 466.26	1.21	22
CYP	Cyprus	Asia	no	71 610.53	28.55	24 622.91	1.16	23
PAK	Pakistan	Asia	no	502 344.30	272.05	247 867.95	1.10	24
JOR	Jordan	Asia	no	121 481.20	46.25	43 390.10	1.07	25
BGD	Bangladesh	Asia	no	381 431.90	126.46	160 820.74	0.79	26
CHN	China	Asia	no	31 726 110.00	6 954.76	9 003 382.87	0.77	27
TKM	Turkmenistan	Asia	no	36 127.02	19.25	25 014.09	0.77	28
OMN	Oman	Asia	no	202 533.60	43.37	56 792.46	0.76	29
IRQ	Iraq	Asia	no	132 499.60	159.43	226 497.10	0.70	30
BRN	Brunei	Asia	no	71 236.46	5.94	9 075.14	0.65	31
LAO	Laos	Asia	no	21 925.62	5.03	12 246.45	0.41	32
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	590 125.33	0.28	33
MNG	Mongolia	Asia	no	36 587.61	3.83	14 036.94	0.27	34
IND	India	Asia	no	5 769 372.00	446.55	1 944 284.82	0.23	35
THA	Thailand	Asia	no	1 378 999.00	32.56	374 528.18	0.09	36
MYS	Malaysia	Asia	no	1 170 979.00	10.49	284 108.03	0.04	37
KOR	South Korea	Asia	no	5 538 605.00	45.48	1 238 504.83	0.04	38
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	271 683.76	0.03	39
VNM	Vietnam	Asia	no	487 574.40	3.95	164 388.68	0.02	40
MAC	Macau	Asia	no	56 709.10	0.27	20 216.60	0.01	41
LKA	Sri Lanka	Asia	no	208 273.50	0.77	73 583.10	0.01	42
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	43
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			44
PSE	State of Palestine	Asia	no	69 454.30	26.75			45
PRK	North Korea	Asia	no	77 982.15	10.88			46
MMR	Myanmar	Asia	no	195 390.10	35.57			47
GRC	Greece	Europe	no	1 181 283.00	5 109.11	249 410.75	20.48	1
ITA	Italy	Europe	no	8 604 332.00	9 772.86	2 100 502.86	4.65	2
SVN	Slovenia	Europe	no	139 899.70	159.19	45 103.27	3.53	3
ALB	Albania	Europe	no	40 459.65	46.73	15 227.71	3.07	4
HRV	Croatia	Europe	no	188 113.70	152.79	57 600.31	2.65	5
ISL	Iceland	Europe	no	57 291.68	31.50	14 052.90	2.24	6
MKD	Macedonia	Europe	no	32 996.37	26.26	12 119.46	2.17	7
BGR	Bulgaria	Europe	no	163 821.60	83.36	54 795.79	1.52	8
MLT	Malta	Europe	no	36 990.21	13.32	8 864.05	1.50	9
CHE	Switzerland	Europe	no	3 421 606.00	786.78	602 400.29	1.31	10
AUT	Austria	Europe	no	1 801 472.00	524.60	413 112.76	1.27	11
HUN	Hungary	Europe	no	562 479.60	123.20	123 292.26	1.00	12
MNE	Montenegro	Europe	no	8 892.93	5.10	5 312.54	0.96	13
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	196 764.65	0.76	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	21 616.92	0.69	15
DEU	Germany	Europe	no	15 114 870.00	2 350.12	3 513 506.86	0.67	16
SRB	Serbia	Europe	no	57 317.24	33.37	50 611.94	0.66	17
SVK	Slovakia	Europe	no	414 782.80	60.97	93 274.32	0.65	18
BEL	Belgium	Europe	no	1 980 551.00	190.39	517 763.60	0.37	19
POL	Poland	Europe	no	1 614 716.00	188.81	515 943.50	0.37	20
LUX	Luxembourg	Europe	no	201 130.60	13.27	38 962.95	0.34	21
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	2 728 637.76	0.33	22
NLD	Netherlands	Europe	no	3 410 955.00	237.82	765 364.08	0.31	23
MDA	Moldova	Europe	no	33 762.68	2.83	10 971.97	0.26	24
FRA	France	Europe	no	10 329 420.00	501.01	2 848 015.52	0.18	25
RUS	Russia	Europe	no	6 325 795.00	296.92	1 973 571.68	0.15	26
IRL	Ireland	Europe	no	778 821.60	12.72	183 798.12	0.07	27
ESP	Spain	Europe	no	6 233 955.00	72.48	1 345 564.18	0.05	28
UKR	Ukraine	Europe	no	676 833.60	8.67	192 523.67	0.05	29
EST	Estonia	Europe	no	79 617.31	1.09	24 664.81	0.04	30
PRT	Portugal	Europe	no	1 054 344.00	7.35	225 098.65	0.03	31
NOR	Norway	Europe	no	1 933 679.00	10.36	457 625.37	0.02	32
LTU	Lithuania	Europe	no	135 613.80	0.85	43 719.88	0.02	33
LVA	Latvia	Europe	no	95 608.77	0.45	29 570.85	0.02	34
SWE	Sweden	Europe	no	1 747 501.00	5.48	551 152.52	0.01	35
DNK	Denmark	Europe	no	1 346 393.00	3.01	316 596.75	0.01	36
FIN	Finland	Europe	no	965 383.40	1.18	269 912.39	0.00	37
BLR	Belarus	Europe	no	229 399.90	0.14	73 747.80	0.00	38
SMR	San Marino	Europe	no	4 049.35	5.92			39
AND	Andorra	Europe	no	8 381.65	0.12			40
LIE	Liechtenstein	Europe	no	18 837.10	9.80			41
GIB	Gibraltar	Europe	no	4 042.19	2.53			42
MCO	Monaco	Europe	no	20 716.40	11.70			43
FRO	Faroe Islands	Europe	no	9 272.37	0.00			44
ROU	Romania	Europe	no	555 697.40	255.64			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	22 559.82	29.96	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	204 179.29	17.97	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	96 787.63	12.90	3
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	59 883.48	11.72	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	28 969.70	8.64	5
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	278 153.13	8.62	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	387 419.05	8.10	7
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	12 562.44	5.77	8
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	373 895.14	5.47	9
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	51 412.23	4.60	10
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	36 126.55	3.75	11
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	28 469.09	2.62	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	611 844.88	1.80	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	1 269 259.96	1.07	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	2 301 443.96	0.03	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	27 647.87	0.01	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			19
USA	United States	Northern America	no	54 922 480.00	14 458.98	17 276 300.43	0.84	1
CAN	Canada	Northern America	no	6 291 917.00	294.11	1 857 561.03	0.16	2
NZL	New Zealand	Oceania	no	679 705.40	22.81	182 403.61	0.13	1
AUS	Australia	Oceania	no	6 616 533.00	61.35	1 579 571.61	0.04	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
DZA	Algeria	Africa	no	899 206.20	991.52	1.10	1
BDI	Burundi	Africa	no	3 616.17	3.87	1.07	2
RWA	Rwanda	Africa	no	13 197.39	12.68	0.96	3
LSO	Lesotho	Africa	no	17 938.00	15.77	0.88	4
DJI	Djibouti	Africa	no	4 744.66	2.95	0.62	5
TUN	Tunisia	Africa	no	178 845.60	97.19	0.54	6
TZA	Tanzania	Africa	no	50 142.79	26.08	0.52	7
SWZ	Swaziland	Africa	no	13 701.24	6.99	0.51	8
UGA	Uganda	Africa	no	43 697.09	22.14	0.51	9
ZAF	South Africa	Africa	no	1 282 854.00	601.24	0.47	10
MWI	Malawi	Africa	no	18 356.97	8.20	0.45	11
MAR	Morroco	Africa	no	374 846.30	157.28	0.42	12
ZMB	Zambia	Africa	no	48 954.52	17.41	0.36	13
BWA	Botswana	Africa	no	90 628.62	31.51	0.35	14
EGY	Egypt	Africa	no	617 149.20	176.90	0.29	15
MYT	Mayotte	Africa	no	6 949.04	1.79	0.26	16
MOZ	Mozambique	Africa	no	36 409.45	7.91	0.22	17
SSD	South Sudan	Africa	no	19 958.30	3.90	0.20	18
ZWE	Zimbawue	Africa	no	22 038.05	4.18	0.19	19
LBY	Libya	Africa	no	73 757.40	11.49	0.16	20
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18	0.15	21
KEN	Kenya	Africa	no	98 382.66	12.57	0.13	22
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	0.13	23
CMR	Cameroon	Africa	no	81 683.73	9.88	0.12	24
CAF	Central African Republic	Africa	no	3 893.74	0.43	0.11	25
NAM	Namibia	Africa	no	42 062.66	3.39	0.08	26
ERI	Eritrea	Africa	no	9 081.79	0.71	0.08	27
LBR	Liberia	Africa	no	1 911.24	0.11	0.06	28
ETH	Ethiopia	Africa	no	65 598.93	2.94	0.04	29
ESH	Western Sahara	Africa	no	3 690.88	0.14	0.04	30
NGA	Nigeria	Africa	no	592 030.40	20.64	0.03	31
SLE	Sierra Leone	Africa	no	3 031.82	0.10	0.03	32
GIN	Guinea	Africa	no	13 665.89	0.45	0.03	33
SDN	Sudan	Africa	no	70 368.78	1.89	0.03	34
AGO	Angola	Africa	no	176 182.50	4.60	0.03	35
SOM	Somalia	Africa	no	6 408.32	0.16	0.02	36
MDG	Madagascar	Africa	no	23 496.42	0.58	0.02	37
GAB	Gabon	Africa	no	120 252.20	2.90	0.02	38
GMB	The Gambia	Africa	no	2 097.61	0.05	0.02	39
SEN	Senegal	Africa	no	35 335.24	0.79	0.02	40
MRT	Mauritania	Africa	no	11 985.52	0.22	0.02	41
COG	Congo	Africa	no	69 047.72	0.99	0.01	42
BEN	Benin	Africa	no	21 971.91	0.23	0.01	43
CIV	Ivory Coast	Africa	no	45 467.63	0.33	0.01	44
TCD	Chad	Africa	no	26 745.14	0.17	0.01	45
TGO	Togo	Africa	no	12 513.67	0.07	0.01	46
MLI	Mali	Africa	no	27 719.15	0.15	0.01	47
BFA	Burkina Faso	Africa	no	24 689.43	0.03	0.00	48
GHA	Ghana	Africa	no	74 174.05	0.09	0.00	49
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	50
REU	Reunion	Africa	no	67 897.68	0.00	0.00	51
NER	Niger	Africa	no	12 723.49	0.00	0.00	52
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	3.39	1
TJK	Tajikistan	Asia	no	20 536.86	64.44	3.14	2
GEO	Georgia	Asia	no	53 823.53	167.01	3.10	3
AFG	Afghanistan	Asia	no	60 187.87	146.81	2.44	4
IRN	Iran	Asia	no	2 067 640.00	4 190.90	2.03	5
ARM	Armenia	Asia	no	22 895.19	45.24	1.98	6
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02	1.61	7
UZB	Uzbekistan	Asia	no	151 891.10	225.05	1.48	8
AZE	Azerbaijan	Asia	no	192 784.00	282.02	1.46	9
PHL	Philippines	Asia	no	566 948.60	703.46	1.24	10
IRQ	Iraq	Asia	no	132 499.60	159.43	1.20	11
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	1.13	12
JPN	Japan	Asia	no	39 255 200.00	31 857.11	0.81	13
SYR	Syria	Asia	no	204 643.30	149.11	0.73	14
BTN	Bhutan	Asia	no	11 083.66	7.98	0.72	15
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	0.59	16
YEM	Yemen	Asia	no	79 113.56	45.87	0.58	17
LBN	Lebanon	Asia	no	207 723.70	119.65	0.58	18
NPL	Nepal	Asia	no	53 996.57	29.50	0.55	19
PAK	Pakistan	Asia	no	502 344.30	272.05	0.54	20
TKM	Turkmenistan	Asia	no	36 127.02	19.25	0.53	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	0.53	22
ISR	Israel	Asia	no	853 829.30	381.32	0.45	23
KWT	Kuwait	Asia	no	469 418.40	201.43	0.43	24
CYP	Cyprus	Asia	no	71 610.53	28.55	0.40	25
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	0.39	26
PSE	State of Palestine	Asia	no	69 454.30	26.75	0.39	27
JOR	Jordan	Asia	no	121 481.20	46.25	0.38	28
BGD	Bangladesh	Asia	no	381 431.90	126.46	0.33	29
QAT	Qatar	Asia	no	624 817.70	152.90	0.24	30
LAO	Laos	Asia	no	21 925.62	5.03	0.23	31
CHN	China	Asia	no	31 726 110.00	6 954.76	0.22	32
OMN	Oman	Asia	no	202 533.60	43.37	0.21	33
MMR	Myanmar	Asia	no	195 390.10	35.57	0.18	34
PRK	North Korea	Asia	no	77 982.15	10.88	0.14	35
MNG	Mongolia	Asia	no	36 587.61	3.83	0.10	36
BRN	Brunei	Asia	no	71 236.46	5.94	0.08	37
IND	India	Asia	no	5 769 372.00	446.55	0.08	38
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	0.08	39
THA	Thailand	Asia	no	1 378 999.00	32.56	0.02	40
MYS	Malaysia	Asia	no	1 170 979.00	10.49	0.01	41
KOR	South Korea	Asia	no	5 538 605.00	45.48	0.01	42
VNM	Vietnam	Asia	no	487 574.40	3.95	0.01	43
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	0.01	44
MAC	Macau	Asia	no	56 709.10	0.27	0.00	45
LKA	Sri Lanka	Asia	no	208 273.50	0.77	0.00	46
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	47
GRC	Greece	Europe	no	1 181 283.00	5 109.11	4.33	1
SMR	San Marino	Europe	no	4 049.35	5.92	1.46	2
ALB	Albania	Europe	no	40 459.65	46.73	1.15	3
SVN	Slovenia	Europe	no	139 899.70	159.19	1.14	4
ITA	Italy	Europe	no	8 604 332.00	9 772.86	1.14	5
HRV	Croatia	Europe	no	188 113.70	152.79	0.81	6
MKD	Macedonia	Europe	no	32 996.37	26.26	0.80	7
GIB	Gibraltar	Europe	no	4 042.19	2.53	0.63	8
SRB	Serbia	Europe	no	57 317.24	33.37	0.58	9
MNE	Montenegro	Europe	no	8 892.93	5.10	0.57	10
MCO	Monaco	Europe	no	20 716.40	11.70	0.56	11
ISL	Iceland	Europe	no	57 291.68	31.50	0.55	12
LIE	Liechtenstein	Europe	no	18 837.10	9.80	0.52	13
BGR	Bulgaria	Europe	no	163 821.60	83.36	0.51	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	0.49	15
ROU	Romania	Europe	no	555 697.40	255.64	0.46	16
MLT	Malta	Europe	no	36 990.21	13.32	0.36	17
AUT	Austria	Europe	no	1 801 472.00	524.60	0.29	18
CHE	Switzerland	Europe	no	3 421 606.00	786.78	0.23	19
HUN	Hungary	Europe	no	562 479.60	123.20	0.22	20
DEU	Germany	Europe	no	15 114 870.00	2 350.12	0.16	21
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	0.15	22
SVK	Slovakia	Europe	no	414 782.80	60.97	0.15	23
POL	Poland	Europe	no	1 614 716.00	188.81	0.12	24
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	0.11	25
BEL	Belgium	Europe	no	1 980 551.00	190.39	0.10	26
MDA	Moldova	Europe	no	33 762.68	2.83	0.08	27
NLD	Netherlands	Europe	no	3 410 955.00	237.82	0.07	28
LUX	Luxembourg	Europe	no	201 130.60	13.27	0.07	29
FRA	France	Europe	no	10 329 420.00	501.01	0.05	30
RUS	Russia	Europe	no	6 325 795.00	296.92	0.05	31
IRL	Ireland	Europe	no	778 821.60	12.72	0.02	32
AND	Andorra	Europe	no	8 381.65	0.12	0.01	33
EST	Estonia	Europe	no	79 617.31	1.09	0.01	34
UKR	Ukraine	Europe	no	676 833.60	8.67	0.01	35
ESP	Spain	Europe	no	6 233 955.00	72.48	0.01	36
PRT	Portugal	Europe	no	1 054 344.00	7.35	0.01	37
LTU	Lithuania	Europe	no	135 613.80	0.85	0.01	38
NOR	Norway	Europe	no	1 933 679.00	10.36	0.01	39
LVA	Latvia	Europe	no	95 608.77	0.45	0.00	40
SWE	Sweden	Europe	no	1 747 501.00	5.48	0.00	41
DNK	Denmark	Europe	no	1 346 393.00	3.01	0.00	42
FIN	Finland	Europe	no	965 383.40	1.18	0.00	43
BLR	Belarus	Europe	no	229 399.90	0.14	0.00	44
FRO	Faroe Islands	Europe	no	9 272.37	0.00	0.00	45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	8.67	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	5.30	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	4.42	3
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	4.06	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3.50	5
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	3.32	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	3.06	7
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2.02	8
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	1.77	9
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	1.68	10
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	1.23	11
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	1.09	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	0.80	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	0.30	14
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18	0.01	15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	0.01	16
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	0.00	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	18
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	19
USA	United States	Northern America	no	54 922 480.00	14 458.98	0.26	1
CAN	Canada	Northern America	no	6 291 917.00	294.11	0.05	2
NZL	New Zealand	Oceania	no	679 705.40	22.81	0.03	1
AUS	Australia	Oceania	no	6 616 533.00	61.35	0.01	2
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
LSO	Lesotho	Africa	no	17 938.00	2 334.99	177.78	7.61	1
DZA	Algeria	Africa	no	899 206.20	210 183.41	8 893.15	4.23	2
DJI	Djibouti	Africa	no	4 744.66	1 456.34	52.99	3.64	3
MWI	Malawi	Africa	no	18 356.97	3 705.39	128.66	3.47	4
TUN	Tunisia	Africa	no	178 845.60	46 993.60	1 503.01	3.20	5
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	7 858.85	2.24	6
MAR	Morroco	Africa	no	374 846.30	103 835.71	2 168.47	2.09	7
RWA	Rwanda	Africa	no	13 197.39	7 521.26	153.12	2.04	8
BWA	Botswana	Africa	no	90 628.62	14 784.71	299.30	2.02	9
BDI	Burundi	Africa	no	3 616.17	2 714.51	49.09	1.81	10
SWZ	Swaziland	Africa	no	13 701.24	3 791.30	62.11	1.64	11
UGA	Uganda	Africa	no	43 697.09	21 493.61	295.21	1.37	12
TZA	Tanzania	Africa	no	50 142.79	33 225.04	362.98	1.09	13
ZMB	Zambia	Africa	no	48 954.52	26 820.87	247.05	0.92	14
EGY	Egypt	Africa	no	617 149.20	271 972.83	1 711.53	0.63	15
SSD	South Sudan	Africa	no	19 958.30	11 804.41	67.69	0.57	16
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	83.61	0.53	17
CMR	Cameroon	Africa	no	81 683.73	29 567.50	139.47	0.47	18
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	53.91	0.40	19
CAF	Central African Republic	Africa	no	3 893.74	1 538.18	5.91	0.38	20
NAM	Namibia	Africa	no	42 062.66	13 113.07	48.56	0.37	21
GAB	Gabon	Africa	no	120 252.20	19 343.51	45.66	0.24	22
KEN	Kenya	Africa	no	98 382.66	55 243.06	116.19	0.21	23
SOM	Somalia	Africa	no	6 408.32	917.04	1.79	0.20	24
ERI	Eritrea	Africa	no	9 081.79	3 444.10	6.68	0.19	25
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	29.83	0.19	26
LBY	Libya	Africa	no	73 757.40	74 199.53	136.26	0.18	27
COG	Congo	Africa	no	69 047.72	14 085.85	18.12	0.13	28
GIN	Guinea	Africa	no	13 665.89	6 144.13	7.32	0.12	29
MRT	Mauritania	Africa	no	11 985.52	4 158.18	4.25	0.10	30
GMB	The Gambia	Africa	no	2 097.61	903.50	0.89	0.10	31
SEN	Senegal	Africa	no	35 335.24	14 791.70	13.78	0.09	32
ETH	Ethiopia	Africa	no	65 598.93	47 525.19	42.45	0.09	33
NGA	Nigeria	Africa	no	592 030.40	521 803.30	333.43	0.06	34
MDG	Madagascar	Africa	no	23 496.42	10 613.49	6.15	0.06	35
AGO	Angola	Africa	no	176 182.50	124 178.24	67.98	0.05	36
LBR	Liberia	Africa	no	1 911.24	1 950.96	1.01	0.05	37
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	1.72	0.04	38
BEN	Benin	Africa	no	21 971.91	8 307.22	3.42	0.04	39
MLI	Mali	Africa	no	27 719.15	10 942.73	3.17	0.03	40
TCD	Chad	Africa	no	26 745.14	13 513.55	3.87	0.03	41
SDN	Sudan	Africa	no	70 368.78	66 565.89	15.99	0.02	42
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	6.71	0.02	43
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56	0.33	0.00	44
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.95	0.00	45
NER	Niger	Africa	no	12 723.49	7 407.42	0.00	0.00	46
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	47
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97				49
MYT	Mayotte	Africa	no	6 949.04				50
REU	Reunion	Africa	no	67 897.68				51
ESH	Western Sahara	Africa	no	3 690.88				52
GEO	Georgia	Asia	no	53 823.53	16 140.05	2 068.79	12.82	1
BTN	Bhutan	Asia	no	11 083.66	1 781.26	148.27	8.32	2
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30	581.64	8.05	3
TJK	Tajikistan	Asia	no	20 536.86	8 508.10	542.87	6.38	4
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	307 551.60	6.25	5
IRN	Iran	Asia	no	2 067 640.00	368 904.34	22 842.17	6.19	6
SYR	Syria	Asia	no	204 643.30	40 405.00	2 122.14	5.25	7
AFG	Afghanistan	Asia	no	60 187.87	20 309.67	1 037.97	5.11	8
ARM	Armenia	Asia	no	22 895.19	10 432.17	515.39	4.94	9
LBN	Lebanon	Asia	no	207 723.70	44 352.42	1 723.55	3.89	10
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48	2 763.64	3.76	11
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66	2 102.92	3.70	12
NPL	Nepal	Asia	no	53 996.57	19 294.35	586.14	3.04	13
PHL	Philippines	Asia	no	566 948.60	272 066.56	7 614.45	2.80	14
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28	5 064.06	2.18	15
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	15 897.64	1.93	16
CYP	Cyprus	Asia	no	71 610.53	21 911.45	409.25	1.87	17
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	2 593.90	1.73	18
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	6 907.72	1.72	19
PAK	Pakistan	Asia	no	502 344.30	232 286.78	3 925.04	1.69	20
JOR	Jordan	Asia	no	121 481.20	33 678.50	532.27	1.58	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	13 637.63	1.57	22
ISR	Israel	Asia	no	853 829.30	290 550.61	4 479.75	1.54	23
YEM	Yemen	Asia	no	79 113.56	35 954.50	468.21	1.30	24
LAO	Laos	Asia	no	21 925.62	11 242.53	76.70	0.68	25
IRQ	Iraq	Asia	no	132 499.60	229 327.29	1 536.84	0.67	26
KWT	Kuwait	Asia	no	469 418.40	175 830.50	1 063.19	0.60	27
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88	237.13	0.57	28
MNG	Mongolia	Asia	no	36 587.61	11 516.41	44.63	0.39	29
OMN	Oman	Asia	no	202 533.60	79 655.92	273.56	0.34	30
QAT	Qatar	Asia	no	624 817.70	203 235.16	655.30	0.32	31
BRN	Brunei	Asia	no	71 236.46	16 111.14	48.75	0.30	32
IND	India	Asia	no	5 769 372.00	1 876 797.16	2 773.38	0.15	33
THA	Thailand	Asia	no	1 378 999.00	387 252.16	545.84	0.14	34
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	35
CHN	China	Asia	no	31 726 110.00	9 240 270.86	8 625.80	0.09	36
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	134.26	0.05	37
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	126.51	0.04	38
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	289.14	0.02	39
VNM	Vietnam	Asia	no	487 574.40	171 390.01	29.82	0.02	40
MAC	Macau	Asia	no	56 709.10	51 753.10	5.15	0.01	41
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.43	0.00	42
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.03	0.00	43
PRK	North Korea	Asia	no	77 982.15				44
PSE	State of Palestine	Asia	no	69 454.30				45
MMR	Myanmar	Asia	no	195 390.10				46
TWN	Taiwan	Asia	no	1 680 401.00				47
GRC	Greece	Europe	no	1 181 283.00	242 230.33	42 370.12	17.49	1
SVN	Slovenia	Europe	no	139 899.70	47 987.30	2 273.95	4.74	2
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	96 882.93	4.51	3
SMR	San Marino	Europe	no	4 049.35	1 899.81	81.57	4.29	4
ISL	Iceland	Europe	no	57 291.68	15 330.06	497.40	3.24	5
ALB	Albania	Europe	no	40 459.65	12 923.24	413.11	3.20	6
HRV	Croatia	Europe	no	188 113.70	57 868.67	1 716.00	2.97	7
MKD	Macedonia	Europe	no	32 996.37	10 195.40	264.54	2.59	8
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17	85.68	1.78	9
BGR	Bulgaria	Europe	no	163 821.60	54 479.87	960.68	1.76	10
AUT	Austria	Europe	no	1 801 472.00	428 321.90	6 545.42	1.53	11
MCO	Monaco	Europe	no	20 716.40	6 074.51	88.07	1.45	12
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21	9 049.37	1.32	13
MLT	Malta	Europe	no	36 990.21	9 642.33	122.14	1.27	14
MNE	Montenegro	Europe	no	8 892.93	4 416.08	47.64	1.08	15
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	36 237.72	0.97	16
HUN	Hungary	Europe	no	562 479.60	133 423.90	1 247.39	0.93	17
SRB	Serbia	Europe	no	57 317.24	45 519.65	418.44	0.92	18
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33	152.19	0.85	19
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	17 405.72	0.65	20
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02	1 164.94	0.56	21
BEL	Belgium	Europe	no	1 980 551.00	524 805.54	2 861.98	0.55	22
SVK	Slovakia	Europe	no	414 782.80	97 707.33	522.66	0.53	23
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	4 270.60	0.50	24
POL	Poland	Europe	no	1 614 716.00	525 865.98	2 429.79	0.46	25
MDA	Moldova	Europe	no	33 762.68	7 969.62	35.68	0.45	26
FRA	France	Europe	no	10 329 420.00	2 806 427.94	6 665.54	0.24	27
LUX	Luxembourg	Europe	no	201 130.60	60 130.85	126.81	0.21	28
IRL	Ireland	Europe	no	778 821.60	232 077.43	304.01	0.13	29
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	2 624.86	0.13	30
UKR	Ukraine	Europe	no	676 833.60	177 430.61	123.46	0.07	31
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	682.02	0.05	32
EST	Estonia	Europe	no	79 617.31	24 880.27	12.00	0.05	33
LTU	Lithuania	Europe	no	135 613.80	45 931.97	17.92	0.04	34
LVA	Latvia	Europe	no	95 608.77	30 956.69	11.76	0.04	35
NOR	Norway	Europe	no	1 933 679.00	512 580.42	163.36	0.03	36
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	57.20	0.03	37
AND	Andorra	Europe	no	8 381.65	2 849.17	0.64	0.02	38
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	48.91	0.01	39
SWE	Sweden	Europe	no	1 747 501.00	579 680.01	63.12	0.01	40
BLR	Belarus	Europe	no	229 399.90	71 709.52	2.95	0.00	41
FIN	Finland	Europe	no	965 383.40	267 328.62	10.63	0.00	42
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.05	0.00	43
ROU	Romania	Europe	no	555 697.40				44
GIB	Gibraltar	Europe	no	4 042.19				45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	4 872.83	26.27	1
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	11 412.80	12.08	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	22 235.81	10.99	3
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	2 283.57	9.41	4
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	34 146.74	9.02	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	4 239.25	7.88	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	16 700.24	6.02	7
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	614.50	5.46	8
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	2 498.80	5.04	9
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	20 878.94	4.76	10
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	1 354.94	3.18	11
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16	912.25	2.98	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	10 602.51	1.74	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	8 506.37	0.67	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	1 059.24	0.05	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41	0.75	0.00	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				19
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	4 121.51	0.23	1
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	1 056.66	0.01	2
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	365.46	0.20	1
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	460.80	0.03	2
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
DJI	Djibouti	Africa	no	4 744.66	775.82	52.99	6.83	1
LSO	Lesotho	Africa	no	17 938.00	2 861.49	177.78	6.21	2
DZA	Algeria	Africa	no	899 206.20	206 267.88	8 893.15	4.31	3
MWI	Malawi	Africa	no	18 356.97	3 574.19	128.66	3.60	4
TUN	Tunisia	Africa	no	178 845.60	44 799.78	1 503.01	3.35	5
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	7 858.85	2.29	6
MAR	Morroco	Africa	no	374 846.30	100 965.44	2 168.47	2.15	7
RWA	Rwanda	Africa	no	13 197.39	7 406.89	153.12	2.07	8
BWA	Botswana	Africa	no	90 628.62	14 678.53	299.30	2.04	9
BDI	Burundi	Africa	no	3 616.17	2 713.09	49.09	1.81	10
SWZ	Swaziland	Africa	no	13 701.24	3 434.79	62.11	1.81	11
UGA	Uganda	Africa	no	43 697.09	22 316.73	295.21	1.32	12
TZA	Tanzania	Africa	no	50 142.79	33 033.24	362.98	1.10	13
ZMB	Zambia	Africa	no	48 954.52	26 049.97	247.05	0.95	14
EGY	Egypt	Africa	no	617 149.20	264 562.52	1 711.53	0.65	15
SSD	South Sudan	Africa	no	19 958.30	10 791.19	67.69	0.63	16
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	83.61	0.54	17
CMR	Cameroon	Africa	no	81 683.73	28 948.12	139.47	0.48	18
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	53.91	0.43	19
CAF	Central African Republic	Africa	no	3 893.74	1 537.09	5.91	0.38	20
NAM	Namibia	Africa	no	42 062.66	12 989.72	48.56	0.37	21
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	29.83	0.28	22
GAB	Gabon	Africa	no	120 252.20	17 298.19	45.66	0.26	23
LBY	Libya	Africa	no	73 757.40	61 985.45	136.26	0.22	24
SOM	Somalia	Africa	no	6 408.32	834.95	1.79	0.21	25
KEN	Kenya	Africa	no	98 382.66	54 934.72	116.19	0.21	26
ERI	Eritrea	Africa	no	9 081.79	3 412.88	6.68	0.20	27
COG	Congo	Africa	no	69 047.72	11 049.89	18.12	0.16	28
GIN	Guinea	Africa	no	13 665.89	5 696.70	7.32	0.13	29
MRT	Mauritania	Africa	no	11 985.52	3 892.41	4.25	0.11	30
GMB	The Gambia	Africa	no	2 097.61	875.76	0.89	0.10	31
SEN	Senegal	Africa	no	35 335.24	14 606.22	13.78	0.09	32
ETH	Ethiopia	Africa	no	65 598.93	47 418.40	42.45	0.09	33
NGA	Nigeria	Africa	no	592 030.40	499 041.44	333.43	0.07	34
AGO	Angola	Africa	no	176 182.50	112 289.11	67.98	0.06	35
MDG	Madagascar	Africa	no	23 496.42	10 279.21	6.15	0.06	36
LBR	Liberia	Africa	no	1 911.24	1 751.03	1.01	0.06	37
BEN	Benin	Africa	no	21 971.91	8 247.34	3.42	0.04	38
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	1.72	0.04	39
MLI	Mali	Africa	no	27 719.15	10 272.74	3.17	0.03	40
TCD	Chad	Africa	no	26 745.14	12 987.28	3.87	0.03	41
SDN	Sudan	Africa	no	70 368.78	63 769.45	15.99	0.03	42
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	6.71	0.02	43
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53	0.33	0.00	44
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.95	0.00	45
NER	Niger	Africa	no	12 723.49	7 223.22	0.00	0.00	46
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	47
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97				49
MYT	Mayotte	Africa	no	6 949.04				50
REU	Reunion	Africa	no	67 897.68				51
ESH	Western Sahara	Africa	no	3 690.88				52
GEO	Georgia	Asia	no	53 823.53	15 835.00	2 068.79	13.06	1
BTN	Bhutan	Asia	no	11 083.66	1 665.34	148.27	8.90	2
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86	581.64	8.39	3
TJK	Tajikistan	Asia	no	20 536.86	8 457.87	542.87	6.42	4
IRN	Iran	Asia	no	2 067 640.00	369 271.87	22 842.17	6.19	5
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	307 551.60	6.03	6
SYR	Syria	Asia	no	204 643.30	39 715.80	2 122.14	5.34	7
AFG	Afghanistan	Asia	no	60 187.87	20 450.66	1 037.97	5.08	8
ARM	Armenia	Asia	no	22 895.19	10 972.97	515.39	4.70	9
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41	2 763.64	3.98	10
LBN	Lebanon	Asia	no	207 723.70	44 926.34	1 723.55	3.84	11
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38	2 102.92	3.62	12
NPL	Nepal	Asia	no	53 996.57	19 443.42	586.14	3.01	13
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82	5 064.06	2.45	14
PHL	Philippines	Asia	no	566 948.60	326 316.43	7 614.45	2.33	15
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	15 897.64	1.96	16
CYP	Cyprus	Asia	no	71 610.53	21 453.80	409.25	1.91	17
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	6 907.72	1.85	18
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	13 637.63	1.62	19
PAK	Pakistan	Asia	no	502 344.30	244 280.84	3 925.04	1.61	20
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	2 593.90	1.60	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
JOR	Jordan	Asia	no	121 481.20	33 339.06	532.27	1.60	22
ISR	Israel	Asia	no	853 829.30	284 226.45	4 479.75	1.58	23
YEM	Yemen	Asia	no	79 113.56	34 721.48	468.21	1.35	24
LAO	Laos	Asia	no	21 925.62	10 602.76	76.70	0.72	25
IRQ	Iraq	Asia	no	132 499.60	229 027.28	1 536.84	0.67	26
KWT	Kuwait	Asia	no	469 418.40	165 127.08	1 063.19	0.64	27
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54	237.13	0.61	28
BRN	Brunei	Asia	no	71 236.46	10 784.47	48.75	0.45	29
MNG	Mongolia	Asia	no	36 587.61	10 751.45	44.63	0.42	30
QAT	Qatar	Asia	no	624 817.70	190 319.79	655.30	0.34	31
OMN	Oman	Asia	no	202 533.60	90 220.81	273.56	0.30	32
THA	Thailand	Asia	no	1 378 999.00	361 245.34	545.84	0.15	33
IND	India	Asia	no	5 769 372.00	1 855 591.42	2 773.38	0.15	34
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	35
CHN	China	Asia	no	31 726 110.00	9 196 167.76	8 625.80	0.09	36
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	134.26	0.05	37
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	126.51	0.04	38
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	289.14	0.02	39
VNM	Vietnam	Asia	no	487 574.40	164 181.67	29.82	0.02	40
MAC	Macau	Asia	no	56 709.10	37 762.88	5.15	0.01	41
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.43	0.00	42
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.03	0.00	43
MMR	Myanmar	Asia	no	195 390.10				44
PSE	State of Palestine	Asia	no	69 454.30				45
PRK	North Korea	Asia	no	77 982.15				46
TWN	Taiwan	Asia	no	1 680 401.00				47
GRC	Greece	Europe	no	1 181 283.00	242 155.98	42 370.12	17.50	1
SMR	San Marino	Europe	no	4 049.35	1 681.06	81.57	4.85	2
SVN	Slovenia	Europe	no	139 899.70	47 633.96	2 273.95	4.77	3
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	96 882.93	4.51	4
ISL	Iceland	Europe	no	57 291.68	15 047.05	497.40	3.31	5
ALB	Albania	Europe	no	40 459.65	12 951.12	413.11	3.19	6
HRV	Croatia	Europe	no	188 113.70	56 412.38	1 716.00	3.04	7
MKD	Macedonia	Europe	no	32 996.37	10 110.99	264.54	2.62	8
BGR	Bulgaria	Europe	no	163 821.60	52 675.80	960.68	1.82	9
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82	85.68	1.78	10
AUT	Austria	Europe	no	1 801 472.00	427 916.46	6 545.42	1.53	11
MLT	Malta	Europe	no	36 990.21	8 946.39	122.14	1.37	12
MCO	Monaco	Europe	no	20 716.40	6 919.24	88.07	1.27	13
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49	9 049.37	1.26	14
MNE	Montenegro	Europe	no	8 892.93	4 503.08	47.64	1.06	15
HUN	Hungary	Europe	no	562 479.60	129 554.20	1 247.39	0.96	16
SRB	Serbia	Europe	no	57 317.24	43 641.10	418.44	0.96	17
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	36 237.72	0.95	18
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73	152.19	0.84	19
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	17 405.72	0.65	20
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47	1 164.94	0.60	21
BEL	Belgium	Europe	no	1 980 551.00	519 519.14	2 861.98	0.55	22
SVK	Slovakia	Europe	no	414 782.80	95 768.45	522.66	0.55	23
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	4 270.60	0.50	24
POL	Poland	Europe	no	1 614 716.00	506 714.23	2 429.79	0.48	25
MDA	Moldova	Europe	no	33 762.68	8 846.50	35.68	0.40	26
LUX	Luxembourg	Europe	no	201 130.60	38 189.94	126.81	0.33	27
FRA	France	Europe	no	10 329 420.00	2 855 136.13	6 665.54	0.23	28
IRL	Ireland	Europe	no	778 821.60	197 446.98	304.01	0.15	29
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	2 624.86	0.13	30
UKR	Ukraine	Europe	no	676 833.60	180 979.14	123.46	0.07	31
EST	Estonia	Europe	no	79 617.31	24 010.33	12.00	0.05	32
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	682.02	0.05	33
LTU	Lithuania	Europe	no	135 613.80	44 274.32	17.92	0.04	34
LVA	Latvia	Europe	no	95 608.77	30 883.23	11.76	0.04	35
NOR	Norway	Europe	no	1 933 679.00	520 892.58	163.36	0.03	36
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	57.20	0.03	37
AND	Andorra	Europe	no	8 381.65	2 539.76	0.64	0.03	38
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	48.91	0.01	39
SWE	Sweden	Europe	no	1 747 501.00	599 333.40	63.12	0.01	40
BLR	Belarus	Europe	no	229 399.90	69 000.62	2.95	0.00	41
FIN	Finland	Europe	no	965 383.40	268 134.55	10.63	0.00	42
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.05	0.00	43
GIB	Gibraltar	Europe	no	4 042.19				44
ROU	Romania	Europe	no	555 697.40				45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	4 872.83	28.27	1
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	11 412.80	12.27	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	22 235.81	11.60	3
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	2 283.57	9.75	4
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	34 146.74	9.38	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	4 239.25	8.07	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	16 700.24	6.28	7
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	614.50	5.62	8
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	2 498.80	5.15	9
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	20 878.94	4.84	10
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	1 354.94	3.20	11
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34	912.25	3.18	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	10 602.51	1.77	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	8 506.37	0.69	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	1 059.24	0.05	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36	0.75	0.00	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	4 121.51	0.23	1
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	1 056.66	0.01	2
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	365.46	0.22	1
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	460.80	0.03	2
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
BDI	Burundi	Africa	no	3 616.17	49.09	1.36	1
RWA	Rwanda	Africa	no	13 197.39	153.12	1.16	2
DJI	Djibouti	Africa	no	4 744.66	52.99	1.12	3
LSO	Lesotho	Africa	no	17 938.00	177.78	0.99	4
DZA	Algeria	Africa	no	899 206.20	8 893.15	0.99	5
TUN	Tunisia	Africa	no	178 845.60	1 503.01	0.84	6
TZA	Tanzania	Africa	no	50 142.79	362.98	0.72	7
MWI	Malawi	Africa	no	18 356.97	128.66	0.70	8
UGA	Uganda	Africa	no	43 697.09	295.21	0.68	9
ZAF	South Africa	Africa	no	1 282 854.00	7 858.85	0.61	10
MAR	Morroco	Africa	no	374 846.30	2 168.47	0.58	11
ZMB	Zambia	Africa	no	48 954.52	247.05	0.50	12
SWZ	Swaziland	Africa	no	13 701.24	62.11	0.45	13
SSD	South Sudan	Africa	no	19 958.30	67.69	0.34	14
BWA	Botswana	Africa	no	90 628.62	299.30	0.33	15
EGY	Egypt	Africa	no	617 149.20	1 711.53	0.28	16
ZWE	Zimbawue	Africa	no	22 038.05	53.91	0.24	17
MOZ	Mozambique	Africa	no	36 409.45	83.61	0.23	18
COD	Democratic Republic of the Congo	Africa	no	27 401.97	59.85	0.22	19
LBY	Libya	Africa	no	73 757.40	136.26	0.18	20
CMR	Cameroon	Africa	no	81 683.73	139.47	0.17	21
CAF	Central African Republic	Africa	no	3 893.74	5.91	0.15	22
GNQ	Equatorial Guinea	Africa	no	20 061.44	29.83	0.15	23
KEN	Kenya	Africa	no	98 382.66	116.19	0.12	24
NAM	Namibia	Africa	no	42 062.66	48.56	0.12	25
MYT	Mayotte	Africa	no	6 949.04	8.01	0.12	26
ERI	Eritrea	Africa	no	9 081.79	6.68	0.07	27
ESH	Western Sahara	Africa	no	3 690.88	2.48	0.07	28
ETH	Ethiopia	Africa	no	65 598.93	42.45	0.06	29
SLE	Sierra Leone	Africa	no	3 031.82	1.72	0.06	30
NGA	Nigeria	Africa	no	592 030.40	333.43	0.06	31
GIN	Guinea	Africa	no	13 665.89	7.32	0.05	32
LBR	Liberia	Africa	no	1 911.24	1.01	0.05	33
GMB	The Gambia	Africa	no	2 097.61	0.89	0.04	34
SEN	Senegal	Africa	no	35 335.24	13.78	0.04	35
AGO	Angola	Africa	no	176 182.50	67.98	0.04	36
GAB	Gabon	Africa	no	120 252.20	45.66	0.04	37
MRT	Mauritania	Africa	no	11 985.52	4.25	0.04	38
SOM	Somalia	Africa	no	6 408.32	1.79	0.03	39
COG	Congo	Africa	no	69 047.72	18.12	0.03	40
MDG	Madagascar	Africa	no	23 496.42	6.15	0.03	41
SDN	Sudan	Africa	no	70 368.78	15.99	0.02	42
BEN	Benin	Africa	no	21 971.91	3.42	0.02	43
CIV	Ivory Coast	Africa	no	45 467.63	6.71	0.01	44
TCD	Chad	Africa	no	26 745.14	3.87	0.01	45
MLI	Mali	Africa	no	27 719.15	3.17	0.01	46
BFA	Burkina Faso	Africa	no	24 689.43	0.33	0.00	47
GHA	Ghana	Africa	no	74 174.05	0.95	0.00	48
REU	Reunion	Africa	no	67 897.68	0.00	0.00	49
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	50
TGO	Togo	Africa	no	12 513.67	0.00	0.00	51
NER	Niger	Africa	no	12 723.49	0.00	0.00	52
GEO	Georgia	Asia	no	53 823.53	2 068.79	3.84	1
KGZ	Kyrgizstan	Asia	no	18 466.60	581.64	3.15	2
TJK	Tajikistan	Asia	no	20 536.86	542.87	2.64	3
ARM	Armenia	Asia	no	22 895.19	515.39	2.25	4
AFG	Afghanistan	Asia	no	60 187.87	1 037.97	1.72	5
TWN	Taiwan	Asia	no	1 680 401.00	24 722.79	1.47	6
AZE	Azerbaijan	Asia	no	192 784.00	2 763.64	1.43	7
UZB	Uzbekistan	Asia	no	151 891.10	2 102.92	1.38	8
PHL	Philippines	Asia	no	566 948.60	7 614.45	1.34	9
BTN	Bhutan	Asia	no	11 083.66	148.27	1.34	10
IRQ	Iraq	Asia	no	132 499.60	1 536.84	1.16	11
IRN	Iran	Asia	no	2 067 640.00	22 842.17	1.10	12
NPL	Nepal	Asia	no	53 996.57	586.14	1.09	13
SYR	Syria	Asia	no	204 643.30	2 122.14	1.04	14
LBN	Lebanon	Asia	no	207 723.70	1 723.55	0.83	15
TUR	Turkey	Asia	no	1 947 249.00	15 897.64	0.82	16
JPN	Japan	Asia	no	39 255 200.00	307 551.60	0.78	17
PAK	Pakistan	Asia	no	502 344.30	3 925.04	0.78	18
KAZ	Kazakhstan	Asia	no	734 309.90	5 064.06	0.69	19
BGD	Bangladesh	Asia	no	381 431.90	2 593.90	0.68	20
TKM	Turkmenistan	Asia	no	36 127.02	237.13	0.66	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
YEM	Yemen	Asia	no	79 113.56	468.21	0.59	22
CYP	Cyprus	Asia	no	71 610.53	409.25	0.57	23
ARE	United Arab Emirates	Asia	no	1 282 119.00	6 907.72	0.54	24
ISR	Israel	Asia	no	853 829.30	4 479.75	0.52	25
IDN	Indonesia	Asia	no	2 827 835.00	13 637.63	0.48	26
JOR	Jordan	Asia	no	121 481.20	532.27	0.44	27
PSE	State of Palestine	Asia	no	69 454.30	265.67	0.38	28
LAO	Laos	Asia	no	21 925.62	76.70	0.35	29
MMR	Myanmar	Asia	no	195 390.10	595.51	0.30	30
KWT	Kuwait	Asia	no	469 418.40	1 063.19	0.23	31
PRK	North Korea	Asia	no	77 982.15	159.46	0.20	32
OMN	Oman	Asia	no	202 533.60	273.56	0.14	33
MNG	Mongolia	Asia	no	36 587.61	44.63	0.12	34
QAT	Qatar	Asia	no	624 817.70	655.30	0.10	35
BRN	Brunei	Asia	no	71 236.46	48.75	0.07	36
IND	India	Asia	no	5 769 372.00	2 773.38	0.05	37
SAU	Saudi Arabia	Asia	no	2 141 419.00	1 020.87	0.05	38
THA	Thailand	Asia	no	1 378 999.00	545.84	0.04	39
CHN	China	Asia	no	31 726 110.00	8 625.80	0.03	40
MYS	Malaysia	Asia	no	1 170 979.00	126.51	0.01	41
HKG	Hong Kong	Asia	no	1 250 063.00	134.26	0.01	42
MAC	Macau	Asia	no	56 709.10	5.15	0.01	43
VNM	Vietnam	Asia	no	487 574.40	29.82	0.01	44
KOR	South Korea	Asia	no	5 538 605.00	289.14	0.01	45
LKA	Sri Lanka	Asia	no	208 273.50	0.43	0.00	46
KHM	Cambodia	Asia	no	27 390.49	0.03	0.00	47
GRC	Greece	Europe	no	1 181 283.00	42 370.12	3.59	1
SMR	San Marino	Europe	no	4 049.35	81.57	2.01	2
SVN	Slovenia	Europe	no	139 899.70	2 273.95	1.63	3
ITA	Italy	Europe	no	8 604 332.00	96 882.93	1.13	4
ALB	Albania	Europe	no	40 459.65	413.11	1.02	5
HRV	Croatia	Europe	no	188 113.70	1 716.00	0.91	6
ISL	Iceland	Europe	no	57 291.68	497.40	0.87	7
MKD	Macedonia	Europe	no	32 996.37	264.54	0.80	8
SRB	Serbia	Europe	no	57 317.24	418.44	0.73	9
ROU	Romania	Europe	no	555 697.40	3 551.71	0.64	10
BGR	Bulgaria	Europe	no	163 821.60	960.68	0.59	11
GIB	Gibraltar	Europe	no	4 042.19	22.62	0.56	12
MNE	Montenegro	Europe	no	8 892.93	47.64	0.54	13
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	152.19	0.50	14
LIE	Liechtenstein	Europe	no	18 837.10	85.68	0.45	15
MCO	Monaco	Europe	no	20 716.40	88.07	0.43	16
AUT	Austria	Europe	no	1 801 472.00	6 545.42	0.36	17
MLT	Malta	Europe	no	36 990.21	122.14	0.33	18
CHE	Switzerland	Europe	no	3 421 606.00	9 049.37	0.26	19
DEU	Germany	Europe	no	15 114 870.00	36 237.72	0.24	20
GBR	United Kingdom	Europe	no	7 806 797.00	17 405.72	0.22	21
HUN	Hungary	Europe	no	562 479.60	1 247.39	0.22	22
POL	Poland	Europe	no	1 614 716.00	2 429.79	0.15	23
BEL	Belgium	Europe	no	1 980 551.00	2 861.98	0.14	24
SVK	Slovakia	Europe	no	414 782.80	522.66	0.13	25
NLD	Netherlands	Europe	no	3 410 955.00	4 270.60	0.13	26
CZE	Czech Republic	Europe	no	1 007 263.00	1 164.94	0.12	27
MDA	Moldova	Europe	no	33 762.68	35.68	0.11	28
FRA	France	Europe	no	10 329 420.00	6 665.54	0.06	29
LUX	Luxembourg	Europe	no	201 130.60	126.81	0.06	30
RUS	Russia	Europe	no	6 325 795.00	2 624.86	0.04	31
IRL	Ireland	Europe	no	778 821.60	304.01	0.04	32
UKR	Ukraine	Europe	no	676 833.60	123.46	0.02	33
EST	Estonia	Europe	no	79 617.31	12.00	0.02	34
LTU	Lithuania	Europe	no	135 613.80	17.92	0.01	35
LVA	Latvia	Europe	no	95 608.77	11.76	0.01	36
ESP	Spain	Europe	no	6 233 955.00	682.02	0.01	37
NOR	Norway	Europe	no	1 933 679.00	163.36	0.01	38
AND	Andorra	Europe	no	8 381.65	0.64	0.01	39
PRT	Portugal	Europe	no	1 054 344.00	57.20	0.01	40
DNK	Denmark	Europe	no	1 346 393.00	48.91	0.00	41
SWE	Sweden	Europe	no	1 747 501.00	63.12	0.00	42
BLR	Belarus	Europe	no	229 399.90	2.95	0.00	43
FIN	Finland	Europe	no	965 383.40	10.63	0.00	44
FRO	Faroe Islands	Europe	no	9 272.37	0.05	0.00	45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	4 872.83	6.25	1
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	11 412.80	4.04	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
COL	Colombia	Latin America and the Caribbean	no	944 576.90	34 146.74	3.62	3
PER	Peru	Latin America and the Caribbean	no	692 344.50	22 235.81	3.21	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	2 283.57	3.19	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	4 239.25	2.45	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	16 700.24	2.13	7
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	20 878.94	1.81	8
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	2 498.80	1.78	9
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	614.50	1.71	10
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	912.25	1.51	11
PAN	Panama	Latin America and the Caribbean	no	124 686.60	1 354.94	1.09	12
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	10 602.51	0.77	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	8 506.37	0.19	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	1 059.24	0.02	15
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.21	0.00	16
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.75	0.00	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	18
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	19
CAN	Canada	Northern America	no	6 291 917.00	4 121.51	0.07	1
USA	United States	Northern America	no	54 922 480.00	1 056.66	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	365.46	0.05	1
AUS	Australia	Oceania	no	6 616 533.00	460.80	0.01	2
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	3

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Region

Tropical Cyclone Wind

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	1 666.80	116.74	1
MOZ	Mozambique	Africa	no	36 409.45	38.72	2 723.39	14.22	2
ZWE	Zimbawue	Africa	no	22 038.05	0.06	1 752.82	0.03	3
MWI	Malawi	Africa	no	18 356.97	0.01	731.37	0.01	4
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	5
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	6
RWA	Rwanda	Africa	no	13 197.39	0.00	1 920.52	0.00	7
SEN	Senegal	Africa	no	35 335.24	0.00	3 706.12	0.00	8
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	9
ZAF	South Africa	Africa	no	1 282 854.00	0.00	67 780.45	0.00	10
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	11
LSO	Lesotho	Africa	no	17 938.00	0.00	855.33	0.00	12
ZMB	Zambia	Africa	no	48 954.52	0.00	5 247.76	0.00	13
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	14
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	15
EGY	Egypt	Africa	no	617 149.20	0.00	37 477.12	0.00	16
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	17
TCD	Chad	Africa	no	26 745.14	0.00	3 701.42	0.00	18
DZA	Algeria	Africa	no	899 206.20	0.00	71 040.48	0.00	19
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	20
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	21
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 889.80	0.00	22
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	23
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	24
MAR	Morroco	Africa	no	374 846.30	0.00	31 321.40	0.00	25
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	26
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	27
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	28
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	29
TUN	Tunisia	Africa	no	178 845.60	0.00	9 509.45	0.00	30
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	31
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	32
BWA	Botswana	Africa	no	90 628.62	0.00	5 015.09	0.00	33
LBY	Libya	Africa	no	73 757.40	0.00	25 993.79	0.00	34
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	35
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	36
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	37
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	38
UGA	Uganda	Africa	no	43 697.09	0.00	5 121.46	0.00	39
MLI	Mali	Africa	no	27 719.15	0.00	1 684.06	0.00	40
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	41
ETH	Ethiopia	Africa	no	65 598.93	0.00	17 012.56	0.00	42
SSD	South Sudan	Africa	no	19 958.30	0.00	1 399.32	0.00	43
SWZ	Swaziland	Africa	no	13 701.24	0.00	363.96	0.00	44
CAF	Central African Republic	Africa	no	3 893.74	0.00	320.25	0.00	45
BDI	Burundi	Africa	no	3 616.17	0.00	780.29	0.00	46
NAM	Namibia	Africa	no	42 062.66	0.00	3 368.79	0.00	47
SDN	Sudan	Africa	no	70 368.78	0.00	13 307.19	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			49
MYT	Mayotte	Africa	no	6 949.04	36.31			50
REU	Reunion	Africa	no	67 897.68	114.65			51
ESH	Western Sahara	Africa	no	3 690.88	0.00			52
PHL	Philippines	Asia	no	566 948.60	4 071.51	55 644.78	73.17	1
BGD	Bangladesh	Asia	no	381 431.90	465.85	42 581.72	10.94	2
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 068 884.62	4.24	3
IND	India	Asia	no	5 769 372.00	1 160.44	530 741.66	2.19	4
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	65 379.04	1.74	5
VNM	Vietnam	Asia	no	487 574.40	35.14	40 823.56	0.86	6
OMN	Oman	Asia	no	202 533.60	8.97	17 256.96	0.52	7
MAC	Macau	Asia	no	56 709.10	2.18	6 610.47	0.33	8
CHN	China	Asia	no	31 726 110.00	1 271.05	4 370 835.96	0.29	9
PAK	Pakistan	Asia	no	502 344.30	7.50	30 125.80	0.25	10
KOR	South Korea	Asia	no	5 538 605.00	64.15	386 884.93	0.17	11
LAO	Laos	Asia	no	21 925.62	0.35	3 279.79	0.11	12
LKA	Sri Lanka	Asia	no	208 273.50	1.70	19 647.18	0.09	13
KHM	Cambodia	Asia	no	27 390.49	0.01	2 753.57	0.00	14
IDN	Indonesia	Asia	no	2 827 835.00	0.49	274 943.80	0.00	15
THA	Thailand	Asia	no	1 378 999.00	0.02	103 523.57	0.00	16
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	49 121.75	0.00	17
ISR	Israel	Asia	no	853 829.30	0.00	56 565.68	0.00	18
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	19
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	88 386.66	0.00	20
IRQ	Iraq	Asia	no	132 499.60	0.00	35 983.20	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40	0.00	19 039.58	0.00	22
TUR	Turkey	Asia	no	1 947 249.00	0.00	167 069.99	0.00	23
SYR	Syria	Asia	no	204 643.30	0.00	8 252.62	0.00	24
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	25
CYP	Cyprus	Asia	no	71 610.53	0.00	4 260.93	0.00	26
ARM	Armenia	Asia	no	22 895.19	0.00	2 183.10	0.00	27
LBN	Lebanon	Asia	no	207 723.70	0.00	12 363.32	0.00	28
AZE	Azerbaijan	Asia	no	192 784.00	0.00	18 074.31	0.00	29
GEO	Georgia	Asia	no	53 823.53	0.00	3 542.58	0.00	30
QAT	Qatar	Asia	no	624 817.70	0.00	15 282.42	0.00	31
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	32
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	2 207.36	0.00	33
BRN	Brunei	Asia	no	71 236.46	0.00	2 466.98	0.00	34
MYS	Malaysia	Asia	no	1 170 979.00	0.00	84 107.08	0.00	35
AFG	Afghanistan	Asia	no	60 187.87	0.00	3 601.40	0.00	36
NPL	Nepal	Asia	no	53 996.57	0.00	4 356.14	0.00	37
MNG	Mongolia	Asia	no	36 587.61	0.00	5 086.03	0.00	38
IRN	Iran	Asia	no	2 067 640.00	0.00	73 681.58	0.00	39
TJK	Tajikistan	Asia	no	20 536.86	0.00	1 199.63	0.00	40
BTN	Bhutan	Asia	no	11 083.66	0.00	842.11	0.00	41
UZB	Uzbekistan	Asia	no	151 891.10	0.00	13 153.84	0.00	42
TKM	Turkmenistan	Asia	no	36 127.02	0.00	16 597.51	0.00	43
MMR	Myanmar	Asia	no	195 390.10	41.76			44
PSE	State of Palestine	Asia	no	69 454.30	0.00			45
PRK	North Korea	Asia	no	77 982.15	0.11			46
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			47
IRL	Ireland	Europe	no	778 821.60	2.84	35 221.45	0.08	1
PRT	Portugal	Europe	no	1 054 344.00	0.23	34 419.00	0.01	2
RUS	Russia	Europe	no	6 325 795.00	2.01	450 238.87	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	440 106.84	0.00	4
FRA	France	Europe	no	10 329 420.00	0.80	619 955.29	0.00	5
FIN	Finland	Europe	no	965 383.40	0.00	56 624.15	0.00	6
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 257.46	0.00	7
UKR	Ukraine	Europe	no	676 833.60	0.00	32 236.10	0.00	8
ESP	Spain	Europe	no	6 233 955.00	0.00	257 993.28	0.00	9
ITA	Italy	Europe	no	8 604 332.00	0.00	383 197.87	0.00	10
LTU	Lithuania	Europe	no	135 613.80	0.00	7 517.23	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	12
CHE	Switzerland	Europe	no	3 421 606.00	0.00	160 510.43	0.00	13
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	14
HUN	Hungary	Europe	no	562 479.60	0.00	26 595.35	0.00	15
AUT	Austria	Europe	no	1 801 472.00	0.00	95 015.40	0.00	16
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	17
SRB	Serbia	Europe	no	57 317.24	0.00	8 634.55	0.00	18
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	52 070.81	0.00	19
GRC	Greece	Europe	no	1 181 283.00	0.00	27 154.95	0.00	20
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	21
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	22
BGR	Bulgaria	Europe	no	163 821.60	0.00	11 609.87	0.00	23
EST	Estonia	Europe	no	79 617.31	0.00	6 795.36	0.00	24
ISL	Iceland	Europe	no	57 291.68	0.00	2 314.22	0.00	25
LVA	Latvia	Europe	no	95 608.77	0.00	6 324.84	0.00	26
MKD	Macedonia	Europe	no	32 996.37	0.00	2 530.04	0.00	27
BLR	Belarus	Europe	no	229 399.90	0.00	26 490.10	0.00	28
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	29
SVK	Slovakia	Europe	no	414 782.80	0.00	19 975.29	0.00	30
SWE	Sweden	Europe	no	1 747 501.00	0.00	128 378.82	0.00	31
ALB	Albania	Europe	no	40 459.65	0.00	3 379.49	0.00	32
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	33
POL	Poland	Europe	no	1 614 716.00	0.00	98 972.34	0.00	34
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	35
MLT	Malta	Europe	no	36 990.21	0.00	1 333.61	0.00	36
MDA	Moldova	Europe	no	33 762.68	0.00	1 821.11	0.00	37
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	38
LIE	Liechtenstein	Europe	no	18 837.10	0.00			39
FRO	Faroe Islands	Europe	no	9 272.37	1.13			40
ROU	Romania	Europe	no	555 697.40	0.00			41
AND	Andorra	Europe	no	8 381.65	0.00			42
GIB	Gibraltar	Europe	no	4 042.19	0.00			43
MCO	Monaco	Europe	no	20 716.40	0.00			44
SMR	San Marino	Europe	no	4 049.35	0.00			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	4 539.50	4.62	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	265 421.77	2.31	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	2 574.11	0.98	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	77 440.20	0.28	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	10 406.53	0.08	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	7 693.87	0.06	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	92 724.40	0.01	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	10 060.78	0.01	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	65 444.15	0.00	9
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	53 841.99	0.00	10
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	103 818.81	0.00	11
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	408 331.78	0.00	12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	26 312.88	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	3 663.90	0.00	14
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	4 394.85	0.00	15
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		19
USA	United States	Northern America	no	54 922 480.00	19 778.35	3 244 299.91	6.10	1
CAN	Canada	Northern America	no	6 291 917.00	97.47	433 369.09	0.22	2
AUS	Australia	Oceania	no	6 616 533.00	129.23	442 013.06	0.29	1
NZL	New Zealand	Oceania	no	679 705.40	1.05	38 213.65	0.03	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	915.01	212.65	1
MOZ	Mozambique	Africa	no	36 409.45	38.72	3 190.27	12.14	2
ZWE	Zimbawue	Africa	no	22 038.05	0.06	2 703.00	0.02	3
MWI	Malawi	Africa	no	18 356.97	0.01	818.79	0.01	4
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	5
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	6
RWA	Rwanda	Africa	no	13 197.39	0.00	1 065.41	0.00	7
SEN	Senegal	Africa	no	35 335.24	0.00	2 289.33	0.00	8
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	9
ZAF	South Africa	Africa	no	1 282 854.00	0.00	77 967.19	0.00	10
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	11
LSO	Lesotho	Africa	no	17 938.00	0.00	878.46	0.00	12
ZMB	Zambia	Africa	no	48 954.52	0.00	568.19	0.00	13
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	14
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	15
EGY	Egypt	Africa	no	617 149.20	0.00	31 768.68	0.00	16
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	17
TCD	Chad	Africa	no	26 745.14	0.00	1 026.17	0.00	18
DZA	Algeria	Africa	no	899 206.20	0.00	39 734.87	0.00	19
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	20
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	21
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 951.39	0.00	22
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	23
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	24
MAR	Morroco	Africa	no	374 846.30	0.00	19 696.51	0.00	25
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	26
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	27
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	28
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	29
TUN	Tunisia	Africa	no	178 845.60	0.00	8 918.25	0.00	30
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	31
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	32
BWA	Botswana	Africa	no	90 628.62	0.00	2 912.71	0.00	33
LBY	Libya	Africa	no	73 757.40	0.00	8 664.60	0.00	34
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	35
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	36
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	37
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	38
UGA	Uganda	Africa	no	43 697.09	0.00	1 787.04	0.00	39
MLI	Mali	Africa	no	27 719.15	0.00	1 172.08	0.00	40
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	41
ETH	Ethiopia	Africa	no	65 598.93	0.00	3 941.08	0.00	42
SSD	South Sudan	Africa	no	19 958.30	0.00	2 720.34	0.00	43
SWZ	Swaziland	Africa	no	13 701.24	0.00	753.93	0.00	44
CAF	Central African Republic	Africa	no	3 893.74	0.00	166.29	0.00	45
BDI	Burundi	Africa	no	3 616.17	0.00	599.64	0.00	46
NAM	Namibia	Africa	no	42 062.66	0.00	3 617.67	0.00	47
SDN	Sudan	Africa	no	70 368.78	0.00	5 000.18	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			49
MYT	Mayotte	Africa	no	6 949.04	36.31			50
REU	Reunion	Africa	no	67 897.68	114.65			51
ESH	Western Sahara	Africa	no	3 690.88	0.00			52
PHL	Philippines	Asia	no	566 948.60	4 071.51	30 212.56	134.76	1
BGD	Bangladesh	Asia	no	381 431.90	465.85	7 673.71	60.71	2
IND	India	Asia	no	5 769 372.00	1 160.44	221 700.44	5.23	3
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 012 070.61	4.48	4
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	25 520.99	4.44	5
VNM	Vietnam	Asia	no	487 574.40	35.14	10 550.52	3.33	6
CHN	China	Asia	no	31 726 110.00	1 271.05	1 299 157.61	0.98	7
MAC	Macau	Asia	no	56 709.10	2.18	3 378.13	0.65	8
OMN	Oman	Asia	no	202 533.60	8.97	14 871.52	0.60	9
KOR	South Korea	Asia	no	5 538 605.00	64.15	194 728.35	0.33	10
PAK	Pakistan	Asia	no	502 344.30	7.50	25 463.41	0.29	11
LAO	Laos	Asia	no	21 925.62	0.35	1 626.13	0.22	12
LKA	Sri Lanka	Asia	no	208 273.50	1.70	8 808.70	0.19	13
KHM	Cambodia	Asia	no	27 390.49	0.01	795.24	0.01	14
IDN	Indonesia	Asia	no	2 827 835.00	0.49	79 076.93	0.01	15
THA	Thailand	Asia	no	1 378 999.00	0.02	53 487.73	0.00	16
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	23 889.95	0.00	17
ISR	Israel	Asia	no	853 829.30	0.00	65 345.00	0.00	18
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	19
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	27 530.57	0.00	20
IRQ	Iraq	Asia	no	132 499.60	0.00	48 846.71	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40	0.00	29 360.33	0.00	22
TUR	Turkey	Asia	no	1 947 249.00	0.00	123 751.24	0.00	23
SYR	Syria	Asia	no	204 643.30	0.00	4 971.97	0.00	24
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	25
CYP	Cyprus	Asia	no	71 610.53	0.00	4 557.62	0.00	26
ARM	Armenia	Asia	no	22 895.19	0.00	1 508.90	0.00	27
LBN	Lebanon	Asia	no	207 723.70	0.00	6 530.19	0.00	28
AZE	Azerbaijan	Asia	no	192 784.00	0.00	8 252.01	0.00	29
GEO	Georgia	Asia	no	53 823.53	0.00	2 692.49	0.00	30
QAT	Qatar	Asia	no	624 817.70	0.00	24 487.36	0.00	31
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	32
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	1 306.25	0.00	33
BRN	Brunei	Asia	no	71 236.46	0.00	2 950.69	0.00	34
MYS	Malaysia	Asia	no	1 170 979.00	0.00	42 433.27	0.00	35
AFG	Afghanistan	Asia	no	60 187.87	0.00	2 492.12	0.00	36
NPL	Nepal	Asia	no	53 996.57	0.00	1 917.21	0.00	37
MNG	Mongolia	Asia	no	36 587.61	0.00	1 298.34	0.00	38
IRN	Iran	Asia	no	2 067 640.00	0.00	31 978.13	0.00	39
TJK	Tajikistan	Asia	no	20 536.86	0.00	998.87	0.00	40
BTN	Bhutan	Asia	no	11 083.66	0.00	311.85	0.00	41
UZB	Uzbekistan	Asia	no	151 891.10	0.00	12 744.63	0.00	42
TKM	Turkmenistan	Asia	no	36 127.02	0.00	3 114.55	0.00	43
MMR	Myanmar	Asia	no	195 390.10	41.76			44
PSE	State of Palestine	Asia	no	69 454.30	0.00			45
PRK	North Korea	Asia	no	77 982.15	0.11			46
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			47
IRL	Ireland	Europe	no	778 821.60	2.84	40 563.02	0.07	1
PRT	Portugal	Europe	no	1 054 344.00	0.23	43 081.93	0.01	2
RUS	Russia	Europe	no	6 325 795.00	2.01	409 820.63	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	542 121.89	0.00	4
FRA	France	Europe	no	10 329 420.00	0.80	677 049.47	0.00	5
FIN	Finland	Europe	no	965 383.40	0.00	66 675.15	0.00	6
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 391.43	0.00	7
UKR	Ukraine	Europe	no	676 833.60	0.00	34 350.49	0.00	8
ESP	Spain	Europe	no	6 233 955.00	0.00	271 148.52	0.00	9
ITA	Italy	Europe	no	8 604 332.00	0.00	417 993.98	0.00	10
LTU	Lithuania	Europe	no	135 613.80	0.00	8 076.66	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	12
CHE	Switzerland	Europe	no	3 421 606.00	0.00	75 147.62	0.00	13
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	14
HUN	Hungary	Europe	no	562 479.60	0.00	26 544.35	0.00	15
AUT	Austria	Europe	no	1 801 472.00	0.00	84 928.57	0.00	16
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	17
SRB	Serbia	Europe	no	57 317.24	0.00	7 977.96	0.00	18
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	40 979.05	0.00	19
GRC	Greece	Europe	no	1 181 283.00	0.00	48 425.35	0.00	20
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	21
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	22
BGR	Bulgaria	Europe	no	163 821.60	0.00	8 993.34	0.00	23
EST	Estonia	Europe	no	79 617.31	0.00	4 754.17	0.00	24
ISL	Iceland	Europe	no	57 291.68	0.00	3 730.06	0.00	25
LVA	Latvia	Europe	no	95 608.77	0.00	4 413.54	0.00	26
MKD	Macedonia	Europe	no	32 996.37	0.00	1 787.08	0.00	27
BLR	Belarus	Europe	no	229 399.90	0.00	10 166.04	0.00	28
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	29
SVK	Slovakia	Europe	no	414 782.80	0.00	17 642.66	0.00	30
SWE	Sweden	Europe	no	1 747 501.00	0.00	151 944.31	0.00	31
ALB	Albania	Europe	no	40 459.65	0.00	1 381.39	0.00	32
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	33
POL	Poland	Europe	no	1 614 716.00	0.00	95 412.26	0.00	34
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	35
MLT	Malta	Europe	no	36 990.21	0.00	1 879.07	0.00	36
MDA	Moldova	Europe	no	33 762.68	0.00	1 618.04	0.00	37
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	38
LIE	Liechtenstein	Europe	no	18 837.10	0.00			39
FRO	Faroe Islands	Europe	no	9 272.37	1.13			40
ROU	Romania	Europe	no	555 697.40	0.00			41
AND	Andorra	Europe	no	8 381.65	0.00			42
GIB	Gibraltar	Europe	no	4 042.19	0.00			43
MCO	Monaco	Europe	no	20 716.40	0.00			44
SMR	San Marino	Europe	no	4 049.35	0.00			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	3 077.08	6.82	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	149 707.18	4.09	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	646.93	3.90	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	46 486.26	0.46	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	8 897.75	0.09	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	5 637.22	0.08	6
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	3 793.90	0.02	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	63 198.81	0.02	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	34 332.88	0.00	9
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	22 647.04	0.00	10
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	94 570.07	0.00	11
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	493 431.00	0.00	12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	13 315.00	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	2 899.00	0.00	14
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	3 496.64	0.00	15
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		19
USA	United States	Northern America	no	54 922 480.00	19 778.35	2 547 499.93	7.76	1
CAN	Canada	Northern America	no	6 291 917.00	97.47	395 958.78	0.25	2
AUS	Australia	Oceania	no	6 616 533.00	129.23	276 915.26	0.47	1
NZL	New Zealand	Oceania	no	679 705.40	1.05	34 691.31	0.03	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	11 984.82	16.24	1
MOZ	Mozambique	Africa	no	36 409.45	38.72	17 220.44	2.25	2
ZWE	Zimbawue	Africa	no	22 038.05	0.06	17 196.10	0.00	3
MWI	Malawi	Africa	no	18 356.97	0.01	4 366.74	0.00	4
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	5
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	6
RWA	Rwanda	Africa	no	13 197.39	0.00	8 767.59	0.00	7
SEN	Senegal	Africa	no	35 335.24	0.00	17 930.59	0.00	8
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	9
ZAF	South Africa	Africa	no	1 282 854.00	0.00	360 489.06	0.00	10
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	11
LSO	Lesotho	Africa	no	17 938.00	0.00	3 740.58	0.00	12
ZMB	Zambia	Africa	no	48 954.52	0.00	26 244.17	0.00	13
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	14
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	15
EGY	Egypt	Africa	no	617 149.20	0.00	291 083.68	0.00	16
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	17
TCD	Chad	Africa	no	26 745.14	0.00	14 228.09	0.00	18
DZA	Algeria	Africa	no	899 206.20	0.00	204 165.74	0.00	19
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	20
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	21
BFA	Burkina Faso	Africa	no	24 689.43	0.00	11 452.71	0.00	22
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	23
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	24
MAR	Morroco	Africa	no	374 846.30	0.00	117 556.24	0.00	25
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	26
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	27
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	28
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	29
TUN	Tunisia	Africa	no	178 845.60	0.00	51 302.58	0.00	30
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	31
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	32
BWA	Botswana	Africa	no	90 628.62	0.00	15 490.96	0.00	33
LBY	Libya	Africa	no	73 757.40	0.00	55 976.41	0.00	34
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	35
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	36
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	37
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	38
UGA	Uganda	Africa	no	43 697.09	0.00	23 933.64	0.00	39
MLI	Mali	Africa	no	27 719.15	0.00	11 011.34	0.00	40
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	41
ETH	Ethiopia	Africa	no	65 598.93	0.00	55 403.13	0.00	42
SSD	South Sudan	Africa	no	19 958.30	0.00	14 712.88	0.00	43
SWZ	Swaziland	Africa	no	13 701.24	0.00	3 944.56	0.00	44
CAF	Central African Republic	Africa	no	3 893.74	0.00	2 389.56	0.00	45
BDI	Burundi	Africa	no	3 616.17	0.00	3 443.34	0.00	46
NAM	Namibia	Africa	no	42 062.66	0.00	15 480.83	0.00	47
SDN	Sudan	Africa	no	70 368.78	0.00	70 927.03	0.00	48
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			49
MYT	Mayotte	Africa	no	6 949.04	36.31			50
REU	Reunion	Africa	no	67 897.68	114.65			51
ESH	Western Sahara	Africa	no	3 690.88	0.00			52
PHL	Philippines	Asia	no	566 948.60	4 071.51	283 131.84	14.38	1
BGD	Bangladesh	Asia	no	381 431.90	465.85	160 820.74	2.90	2
JPN	Japan	Asia	no	39 255 200.00	4 533.35	5 059 261.76	0.90	3
IND	India	Asia	no	5 769 372.00	1 160.44	1 944 284.82	0.60	4
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	271 683.76	0.42	5
VNM	Vietnam	Asia	no	487 574.40	35.14	164 388.68	0.21	6
OMN	Oman	Asia	no	202 533.60	8.97	56 792.46	0.16	7
CHN	China	Asia	no	31 726 110.00	1 271.05	9 003 382.87	0.14	8
MAC	Macau	Asia	no	56 709.10	2.18	20 216.60	0.11	9
KOR	South Korea	Asia	no	5 538 605.00	64.15	1 238 504.83	0.05	10
PAK	Pakistan	Asia	no	502 344.30	7.50	247 867.95	0.03	11
LAO	Laos	Asia	no	21 925.62	0.35	12 246.45	0.03	12
LKA	Sri Lanka	Asia	no	208 273.50	1.70	73 583.10	0.02	13
KHM	Cambodia	Asia	no	27 390.49	0.01	16 467.91	0.00	14
IDN	Indonesia	Asia	no	2 827 835.00	0.49	885 677.23	0.00	15
THA	Thailand	Asia	no	1 378 999.00	0.02	374 528.18	0.00	16
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	205 086.26	0.00	17
ISR	Israel	Asia	no	853 829.30	0.00	286 558.36	0.00	18
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	19
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	318 951.13	0.00	20
IRQ	Iraq	Asia	no	132 499.60	0.00	226 497.10	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40	0.00	96 682.69	0.00	22
TUR	Turkey	Asia	no	1 947 249.00	0.00	876 064.28	0.00	23
SYR	Syria	Asia	no	204 643.30	0.00	40 077.56	0.00	24
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	25
CYP	Cyprus	Asia	no	71 610.53	0.00	24 622.91	0.00	26
ARM	Armenia	Asia	no	22 895.19	0.00	12 628.86	0.00	27
LBN	Lebanon	Asia	no	207 723.70	0.00	50 384.63	0.00	28
AZE	Azerbaijan	Asia	no	192 784.00	0.00	57 484.51	0.00	29
GEO	Georgia	Asia	no	53 823.53	0.00	18 230.53	0.00	30
QAT	Qatar	Asia	no	624 817.70	0.00	91 904.94	0.00	31
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	32
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	10 749.10	0.00	33
BRN	Brunei	Asia	no	71 236.46	0.00	9 075.14	0.00	34
MYS	Malaysia	Asia	no	1 170 979.00	0.00	284 108.03	0.00	35
AFG	Afghanistan	Asia	no	60 187.87	0.00	29 010.12	0.00	36
NPL	Nepal	Asia	no	53 996.57	0.00	24 466.26	0.00	37
MNG	Mongolia	Asia	no	36 587.61	0.00	14 036.94	0.00	38
IRN	Iran	Asia	no	2 067 640.00	0.00	255 619.28	0.00	39
TJK	Tajikistan	Asia	no	20 536.86	0.00	12 690.19	0.00	40
BTN	Bhutan	Asia	no	11 083.66	0.00	2 173.58	0.00	41
UZB	Uzbekistan	Asia	no	151 891.10	0.00	59 039.46	0.00	42
TKM	Turkmenistan	Asia	no	36 127.02	0.00	25 014.09	0.00	43
MMR	Myanmar	Asia	no	195 390.10	41.76			44
PSE	State of Palestine	Asia	no	69 454.30	0.00			45
PRK	North Korea	Asia	no	77 982.15	0.11			46
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			47
IRL	Ireland	Europe	no	778 821.60	2.84	183 798.12	0.02	1
PRT	Portugal	Europe	no	1 054 344.00	0.23	225 098.65	0.00	2
RUS	Russia	Europe	no	6 325 795.00	2.01	1 973 571.68	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	2 728 637.76	0.00	4
FRA	France	Europe	no	10 329 420.00	0.80	2 848 015.52	0.00	5
FIN	Finland	Europe	no	965 383.40	0.00	269 912.39	0.00	6
LUX	Luxembourg	Europe	no	201 130.60	0.00	38 962.95	0.00	7
UKR	Ukraine	Europe	no	676 833.60	0.00	192 523.67	0.00	8
ESP	Spain	Europe	no	6 233 955.00	0.00	1 345 564.18	0.00	9
ITA	Italy	Europe	no	8 604 332.00	0.00	2 100 502.86	0.00	10
LTU	Lithuania	Europe	no	135 613.80	0.00	43 719.88	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	12
CHE	Switzerland	Europe	no	3 421 606.00	0.00	602 400.29	0.00	13
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	14
HUN	Hungary	Europe	no	562 479.60	0.00	123 292.26	0.00	15
AUT	Austria	Europe	no	1 801 472.00	0.00	413 112.76	0.00	16
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	17
SRB	Serbia	Europe	no	57 317.24	0.00	50 611.94	0.00	18
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	196 764.65	0.00	19
GRC	Greece	Europe	no	1 181 283.00	0.00	249 410.75	0.00	20
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	21
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	22
BGR	Bulgaria	Europe	no	163 821.60	0.00	54 795.79	0.00	23
EST	Estonia	Europe	no	79 617.31	0.00	24 664.81	0.00	24
ISL	Iceland	Europe	no	57 291.68	0.00	14 052.90	0.00	25
LVA	Latvia	Europe	no	95 608.77	0.00	29 570.85	0.00	26
MKD	Macedonia	Europe	no	32 996.37	0.00	12 119.46	0.00	27
BLR	Belarus	Europe	no	229 399.90	0.00	73 747.80	0.00	28
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	29
SVK	Slovakia	Europe	no	414 782.80	0.00	93 274.32	0.00	30
SWE	Sweden	Europe	no	1 747 501.00	0.00	551 152.52	0.00	31
ALB	Albania	Europe	no	40 459.65	0.00	15 227.71	0.00	32
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	33
POL	Poland	Europe	no	1 614 716.00	0.00	515 943.50	0.00	34
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	35
MLT	Malta	Europe	no	36 990.21	0.00	8 864.05	0.00	36
MDA	Moldova	Europe	no	33 762.68	0.00	10 971.97	0.00	37
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	38
LIE	Liechtenstein	Europe	no	18 837.10	0.00			39
FRO	Faroe Islands	Europe	no	9 272.37	1.13			40
ROU	Romania	Europe	no	555 697.40	0.00			41
AND	Andorra	Europe	no	8 381.65	0.00			42
GIB	Gibraltar	Europe	no	4 042.19	0.00			43
MCO	Monaco	Europe	no	20 716.40	0.00			44
SMR	San Marino	Europe	no	4 049.35	0.00			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	22 559.82	0.93	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	1 269 259.96	0.48	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	12 562.44	0.20	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	373 895.14	0.06	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	51 412.23	0.02	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	59 883.48	0.01	6
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	36 126.55	0.00	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	387 419.05	0.00	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	278 153.13	0.00	9
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	204 179.29	0.00	10
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	611 844.88	0.00	11
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	2 301 443.96	0.00	12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	96 787.63	0.00	13
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	28 969.70	0.00	14
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	27 647.87	0.00	15
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		19
USA	United States	Northern America	no	54 922 480.00	19 778.35	17 276 300.43	1.14	1
CAN	Canada	Northern America	no	6 291 917.00	97.47	1 857 561.03	0.05	2
AUS	Australia	Oceania	no	6 616 533.00	129.23	1 579 571.61	0.08	1
NZL	New Zealand	Oceania	no	679 705.40	1.05	182 403.61	0.01	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	8.28	1
MYT	Mayotte	Africa	no	6 949.04	36.31	5.23	2
REU	Reunion	Africa	no	67 897.68	114.65	1.69	3
MOZ	Mozambique	Africa	no	36 409.45	38.72	1.06	4
ZWE	Zimbawue	Africa	no	22 038.05	0.06	0.00	5
MWI	Malawi	Africa	no	18 356.97	0.01	0.00	6
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	7
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	8
TCD	Chad	Africa	no	26 745.14	0.00	0.00	9
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	10
CAF	Central African Republic	Africa	no	3 893.74	0.00	0.00	11
TGO	Togo	Africa	no	12 513.67	0.00	0.00	12
ZMB	Zambia	Africa	no	48 954.52	0.00	0.00	13
AGO	Angola	Africa	no	176 182.50	0.00	0.00	14
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	15
RWA	Rwanda	Africa	no	13 197.39	0.00	0.00	16
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	17
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	18
LSO	Lesotho	Africa	no	17 938.00	0.00	0.00	19
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	20
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	21
BFA	Burkina Faso	Africa	no	24 689.43	0.00	0.00	22
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	23
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	24
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	25
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	26
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	27
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	28
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	29
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	30
BEN	Benin	Africa	no	21 971.91	0.00	0.00	31
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	32
COG	Congo	Africa	no	69 047.72	0.00	0.00	33
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	34
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	35
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	36
BWA	Botswana	Africa	no	90 628.62	0.00	0.00	37
LBY	Libya	Africa	no	73 757.40	0.00	0.00	38
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	39
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	40
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	41
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	42
UGA	Uganda	Africa	no	43 697.09	0.00	0.00	43
MLI	Mali	Africa	no	27 719.15	0.00	0.00	44
NER	Niger	Africa	no	12 723.49	0.00	0.00	45
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	46
BDI	Burundi	Africa	no	3 616.17	0.00	0.00	47
SSD	South Sudan	Africa	no	19 958.30	0.00	0.00	48
SWZ	Swaziland	Africa	no	13 701.24	0.00	0.00	49
ETH	Ethiopia	Africa	no	65 598.93	0.00	0.00	50
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	51
SDN	Sudan	Africa	no	70 368.78	0.00	0.00	52
PHL	Philippines	Asia	no	566 948.60	4 071.51	7.18	1
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48	1.73	2
BGD	Bangladesh	Asia	no	381 431.90	465.85	1.22	3
MMR	Myanmar	Asia	no	195 390.10	41.76	0.21	4
IND	India	Asia	no	5 769 372.00	1 160.44	0.20	5
JPN	Japan	Asia	no	39 255 200.00	4 533.35	0.12	6
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	0.09	7
VNM	Vietnam	Asia	no	487 574.40	35.14	0.07	8
OMN	Oman	Asia	no	202 533.60	8.97	0.04	9
CHN	China	Asia	no	31 726 110.00	1 271.05	0.04	10
MAC	Macau	Asia	no	56 709.10	2.18	0.04	11
LAO	Laos	Asia	no	21 925.62	0.35	0.02	12
PAK	Pakistan	Asia	no	502 344.30	7.50	0.01	13
KOR	South Korea	Asia	no	5 538 605.00	64.15	0.01	14
LKA	Sri Lanka	Asia	no	208 273.50	1.70	0.01	15
PRK	North Korea	Asia	no	77 982.15	0.11	0.00	16
KHM	Cambodia	Asia	no	27 390.49	0.01	0.00	17
IDN	Indonesia	Asia	no	2 827 835.00	0.49	0.00	18
THA	Thailand	Asia	no	1 378 999.00	0.02	0.00	19
NPL	Nepal	Asia	no	53 996.57	0.00	0.00	20
MNG	Mongolia	Asia	no	36 587.61	0.00	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	22
TJK	Tajikistan	Asia	no	20 536.86	0.00	0.00	23
BTN	Bhutan	Asia	no	11 083.66	0.00	0.00	24
QAT	Qatar	Asia	no	624 817.70	0.00	0.00	25
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	26
KWT	Kuwait	Asia	no	469 418.40	0.00	0.00	27
GEO	Georgia	Asia	no	53 823.53	0.00	0.00	28
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	29
SYR	Syria	Asia	no	204 643.30	0.00	0.00	30
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	31
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	32
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	33
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	34
ARM	Armenia	Asia	no	22 895.19	0.00	0.00	35
AZE	Azerbaijan	Asia	no	192 784.00	0.00	0.00	36
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	0.00	37
IRQ	Iraq	Asia	no	132 499.60	0.00	0.00	38
MYS	Malaysia	Asia	no	1 170 979.00	0.00	0.00	39
BRN	Brunei	Asia	no	71 236.46	0.00	0.00	40
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	41
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	42
AFG	Afghanistan	Asia	no	60 187.87	0.00	0.00	43
UZB	Uzbekistan	Asia	no	151 891.10	0.00	0.00	44
TKM	Turkmenistan	Asia	no	36 127.02	0.00	0.00	45
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	0.00	46
ISR	Israel	Asia	no	853 829.30	0.00	0.00	47
FRO	Faroe Islands	Europe	no	9 272.37	1.13	0.12	1
IRL	Ireland	Europe	no	778 821.60	2.84	0.00	2
RUS	Russia	Europe	no	6 325 795.00	2.01	0.00	3
PRT	Portugal	Europe	no	1 054 344.00	0.23	0.00	4
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	0.00	5
FRA	France	Europe	no	10 329 420.00	0.80	0.00	6
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	7
LUX	Luxembourg	Europe	no	201 130.60	0.00	0.00	8
UKR	Ukraine	Europe	no	676 833.60	0.00	0.00	9
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	10
ITA	Italy	Europe	no	8 604 332.00	0.00	0.00	11
LTU	Lithuania	Europe	no	135 613.80	0.00	0.00	12
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	13
CHE	Switzerland	Europe	no	3 421 606.00	0.00	0.00	14
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	15
HUN	Hungary	Europe	no	562 479.60	0.00	0.00	16
AUT	Austria	Europe	no	1 801 472.00	0.00	0.00	17
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	18
SRB	Serbia	Europe	no	57 317.24	0.00	0.00	19
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	0.00	20
GRC	Greece	Europe	no	1 181 283.00	0.00	0.00	21
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	22
AND	Andorra	Europe	no	8 381.65	0.00	0.00	23
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	24
BGR	Bulgaria	Europe	no	163 821.60	0.00	0.00	25
EST	Estonia	Europe	no	79 617.31	0.00	0.00	26
FIN	Finland	Europe	no	965 383.40	0.00	0.00	27
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	28
LIE	Liechtenstein	Europe	no	18 837.10	0.00	0.00	29
LVA	Latvia	Europe	no	95 608.77	0.00	0.00	30
MKD	Macedonia	Europe	no	32 996.37	0.00	0.00	31
BLR	Belarus	Europe	no	229 399.90	0.00	0.00	32
ROU	Romania	Europe	no	555 697.40	0.00	0.00	33
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	34
SVK	Slovakia	Europe	no	414 782.80	0.00	0.00	35
SWE	Sweden	Europe	no	1 747 501.00	0.00	0.00	36
ALB	Albania	Europe	no	40 459.65	0.00	0.00	37
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	38
POL	Poland	Europe	no	1 614 716.00	0.00	0.00	39
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	40
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	41
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	42
MLT	Malta	Europe	no	36 990.21	0.00	0.00	43
MDA	Moldova	Europe	no	33 762.68	0.00	0.00	44
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	0.27	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	0.14	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	0.07	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	0.02	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	0.01	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	0.00	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	0.00	8
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	0.00	9
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	0.00	10
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	11
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	0.00	12
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	0.00	13
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	0.00	14
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	15
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	16
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			19
USA	United States	Northern America	no	54 922 480.00	19 778.35	0.36	1
CAN	Canada	Northern America	no	6 291 917.00	97.47	0.02	2
AUS	Australia	Oceania	no	6 616 533.00	129.23	0.02	1
NZL	New Zealand	Oceania	no	679 705.40	1.05	0.00	2
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	1 021.64	9.63	1
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	496.79	3.18	2
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	2.32	0.02	3
MWI	Malawi	Africa	no	18 356.97	3 705.39	0.30	0.01	4
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.06	0.00	5
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	6
NER	Niger	Africa	no	12 723.49	7 407.42			7
MYT	Mayotte	Africa	no	6 949.04				8
NAM	Namibia	Africa	no	42 062.66	13 113.07			9
GAB	Gabon	Africa	no	120 252.20	19 343.51			10
NGA	Nigeria	Africa	no	592 030.40	521 803.30			11
MRT	Mauritania	Africa	no	11 985.52	4 158.18			12
AGO	Angola	Africa	no	176 182.50	124 178.24			13
DJI	Djibouti	Africa	no	4 744.66	1 456.34			14
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			15
RWA	Rwanda	Africa	no	13 197.39	7 521.26			16
SSD	South Sudan	Africa	no	19 958.30	11 804.41			17
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			18
BDI	Burundi	Africa	no	3 616.17	2 714.51			19
ERI	Eritrea	Africa	no	9 081.79	3 444.10			20
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			21
UGA	Uganda	Africa	no	43 697.09	21 493.61			22
REU	Reunion	Africa	no	67 897.68				23
MLI	Mali	Africa	no	27 719.15	10 942.73			24
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			25
ZMB	Zambia	Africa	no	48 954.52	26 820.87			26
SDN	Sudan	Africa	no	70 368.78	66 565.89			27
TZA	Tanzania	Africa	no	50 142.79	33 225.04			28
MAR	Morroco	Africa	no	374 846.30	103 835.71			29
KEN	Kenya	Africa	no	98 382.66	55 243.06			30
BEN	Benin	Africa	no	21 971.91	8 307.22			31
GIN	Guinea	Africa	no	13 665.89	6 144.13			32
COG	Congo	Africa	no	69 047.72	14 085.85			33
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			34
TUN	Tunisia	Africa	no	178 845.60	46 993.60			35
LBR	Liberia	Africa	no	1 911.24	1 950.96			36
BWA	Botswana	Africa	no	90 628.62	14 784.71			37
LBY	Libya	Africa	no	73 757.40	74 199.53			38
LSO	Lesotho	Africa	no	17 938.00	2 334.99			39
TGO	Togo	Africa	no	12 513.67	4 338.58			40
CMR	Cameroon	Africa	no	81 683.73	29 567.50			41
ESH	Western Sahara	Africa	no	3 690.88				42
EGY	Egypt	Africa	no	617 149.20	271 972.83			43
SEN	Senegal	Africa	no	35 335.24	14 791.70			44
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			45
DZA	Algeria	Africa	no	899 206.20	210 183.41			46
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			47
COD	Democratic Republic of the Congo	Africa	no	27 401.97				48
GMB	The Gambia	Africa	no	2 097.61	903.50			49
GHA	Ghana	Africa	no	74 174.05	48 137.03			50
TCD	Chad	Africa	no	26 745.14	13 513.55			51
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			52
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	13 259.33	8.84	1
PHL	Philippines	Asia	no	566 948.60	272 066.56	21 838.96	8.03	2
IND	India	Asia	no	5 769 372.00	1 876 797.16	19 632.54	1.05	3
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	34 023.36	0.69	4
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	1 372.35	0.50	5
VNM	Vietnam	Asia	no	487 574.40	171 390.01	613.38	0.36	6
OMN	Oman	Asia	no	202 533.60	79 655.92	210.30	0.26	7
CHN	China	Asia	no	31 726 110.00	9 240 270.86	13 469.76	0.15	8
PAK	Pakistan	Asia	no	502 344.30	232 286.78	216.40	0.09	9
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	1 111.95	0.09	10
MAC	Macau	Asia	no	56 709.10	51 753.10	35.89	0.07	11
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	44.80	0.07	12
LAO	Laos	Asia	no	21 925.62	11 242.53	5.14	0.05	13
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	19.70	0.00	14
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.24	0.00	15
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	16
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	17
YEM	Yemen	Asia	no	79 113.56	35 954.50			18
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			19
IRQ	Iraq	Asia	no	132 499.60	229 327.29			20
PRK	North Korea	Asia	no	77 982.15				21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
BRN	Brunei	Asia	no	71 236.46	16 111.14			22
QAT	Qatar	Asia	no	624 817.70	203 235.16			23
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			24
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			25
NPL	Nepal	Asia	no	53 996.57	19 294.35			26
MNG	Mongolia	Asia	no	36 587.61	11 516.41			27
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			28
BTN	Bhutan	Asia	no	11 083.66	1 781.26			29
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			30
MMR	Myanmar	Asia	no	195 390.10				31
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			32
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			33
ISR	Israel	Asia	no	853 829.30	290 550.61			34
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			35
CYP	Cyprus	Asia	no	71 610.53	21 911.45			36
ARM	Armenia	Asia	no	22 895.19	10 432.17			37
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			38
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12			39
KWT	Kuwait	Asia	no	469 418.40	175 830.50			40
SYR	Syria	Asia	no	204 643.30	40 405.00			41
PSE	State of Palestine	Asia	no	69 454.30				42
JOR	Jordan	Asia	no	121 481.20	33 678.50			43
LBN	Lebanon	Asia	no	207 723.70	44 352.42			44
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09			45
TWN	Taiwan	Asia	no	1 680 401.00				46
GEO	Georgia	Asia	no	53 823.53	16 140.05			47
IRL	Ireland	Europe	no	778 821.60	232 077.43	98.21	0.04	1
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.64	0.03	2
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	7.55	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	49.84	0.00	4
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	34.63	0.00	5
FRA	France	Europe	no	10 329 420.00	2 806 427.94	29.46	0.00	6
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	7
ISL	Iceland	Europe	no	57 291.68	15 330.06	0.00	0.00	8
MCO	Monaco	Europe	no	20 716.40	6 074.51			9
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			10
UKR	Ukraine	Europe	no	676 833.60	177 430.61			11
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			12
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			13
LTU	Lithuania	Europe	no	135 613.80	45 931.97			14
HRV	Croatia	Europe	no	188 113.70	57 868.67			15
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			16
SVN	Slovenia	Europe	no	139 899.70	47 987.30			17
HUN	Hungary	Europe	no	562 479.60	133 423.90			18
AUT	Austria	Europe	no	1 801 472.00	428 321.90			19
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			20
SRB	Serbia	Europe	no	57 317.24	45 519.65			21
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			22
GRC	Greece	Europe	no	1 181 283.00	242 230.33			23
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			24
AND	Andorra	Europe	no	8 381.65	2 849.17			25
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			26
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			27
EST	Estonia	Europe	no	79 617.31	24 880.27			28
FIN	Finland	Europe	no	965 383.40	267 328.62			29
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			30
LVA	Latvia	Europe	no	95 608.77	30 956.69			31
MKD	Macedonia	Europe	no	32 996.37	10 195.40			32
BLR	Belarus	Europe	no	229 399.90	71 709.52			33
ROU	Romania	Europe	no	555 697.40				34
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			35
SVK	Slovakia	Europe	no	414 782.80	97 707.33			36
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			37
ALB	Albania	Europe	no	40 459.65	12 923.24			38
MNE	Montenegro	Europe	no	8 892.93	4 416.08			39
POL	Poland	Europe	no	1 614 716.00	525 865.98			40
SMR	San Marino	Europe	no	4 049.35	1 899.81			41
GIB	Gibraltar	Europe	no	4 042.19				42
MLT	Malta	Europe	no	36 990.21	9 642.33			43
MDA	Moldova	Europe	no	33 762.68	7 969.62			44
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	583.44	3.15	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	12 953.98	1.03	2

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	83.20	0.74	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	935.00	0.21	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	16.30	0.03	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	6.13	0.01	6
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	4.76	0.01	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	30.63	0.01	8
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	0.17	0.00	9
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			10
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			11
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			14
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				17
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			18
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			19
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	210 585.74	1.26	1
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	2 199.73	0.12	2
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	2 046.55	0.13	1
TUV	Tuvalu	Oceania	no	123.26	38.32	0.04	0.10	2
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	44.03	0.02	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	1 021.64	9.94	1
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	496.79	3.19	2
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	2.32	0.02	3
MWI	Malawi	Africa	no	18 356.97	3 574.19	0.30	0.01	4
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.06	0.00	5
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	6
NER	Niger	Africa	no	12 723.49	7 223.22			7
MYT	Mayotte	Africa	no	6 949.04				8
NAM	Namibia	Africa	no	42 062.66	12 989.72			9
GAB	Gabon	Africa	no	120 252.20	17 298.19			10
NGA	Nigeria	Africa	no	592 030.40	499 041.44			11
MRT	Mauritania	Africa	no	11 985.52	3 892.41			12
AGO	Angola	Africa	no	176 182.50	112 289.11			13
DJI	Djibouti	Africa	no	4 744.66	775.82			14
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			15
RWA	Rwanda	Africa	no	13 197.39	7 406.89			16
SSD	South Sudan	Africa	no	19 958.30	10 791.19			17
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			18
BDI	Burundi	Africa	no	3 616.17	2 713.09			19
ERI	Eritrea	Africa	no	9 081.79	3 412.88			20
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			21
UGA	Uganda	Africa	no	43 697.09	22 316.73			22
REU	Reunion	Africa	no	67 897.68				23
MLI	Mali	Africa	no	27 719.15	10 272.74			24
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			25
ZMB	Zambia	Africa	no	48 954.52	26 049.97			26
SDN	Sudan	Africa	no	70 368.78	63 769.45			27
TZA	Tanzania	Africa	no	50 142.79	33 033.24			28
MAR	Morroco	Africa	no	374 846.30	100 965.44			29
KEN	Kenya	Africa	no	98 382.66	54 934.72			30
BEN	Benin	Africa	no	21 971.91	8 247.34			31
GIN	Guinea	Africa	no	13 665.89	5 696.70			32
COG	Congo	Africa	no	69 047.72	11 049.89			33
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			34
TUN	Tunisia	Africa	no	178 845.60	44 799.78			35
LBR	Liberia	Africa	no	1 911.24	1 751.03			36
BWA	Botswana	Africa	no	90 628.62	14 678.53			37
LBY	Libya	Africa	no	73 757.40	61 985.45			38
LSO	Lesotho	Africa	no	17 938.00	2 861.49			39
TGO	Togo	Africa	no	12 513.67	3 696.32			40
CMR	Cameroon	Africa	no	81 683.73	28 948.12			41
ESH	Western Sahara	Africa	no	3 690.88				42
EGY	Egypt	Africa	no	617 149.20	264 562.52			43
SEN	Senegal	Africa	no	35 335.24	14 606.22			44
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			45
DZA	Algeria	Africa	no	899 206.20	206 267.88			46
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			47
COD	Democratic Republic of the Congo	Africa	no	27 401.97				48
GMB	The Gambia	Africa	no	2 097.61	875.76			49
GHA	Ghana	Africa	no	74 174.05	47 004.17			50
TCD	Chad	Africa	no	26 745.14	12 987.28			51
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			52
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	13 259.33	8.18	1
PHL	Philippines	Asia	no	566 948.60	326 316.43	21 838.96	6.69	2
IND	India	Asia	no	5 769 372.00	1 855 591.42	19 632.54	1.06	3
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	34 023.36	0.67	4
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	1 372.35	0.49	5
VNM	Vietnam	Asia	no	487 574.40	164 181.67	613.38	0.37	6
OMN	Oman	Asia	no	202 533.60	90 220.81	210.30	0.23	7
CHN	China	Asia	no	31 726 110.00	9 196 167.76	13 469.76	0.15	8
MAC	Macau	Asia	no	56 709.10	37 762.88	35.89	0.10	9
PAK	Pakistan	Asia	no	502 344.30	244 280.84	216.40	0.09	10
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	1 111.95	0.08	11
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	44.80	0.07	12
LAO	Laos	Asia	no	21 925.62	10 602.76	5.14	0.05	13
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	19.70	0.00	14
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.24	0.00	15
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	16
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	17
YEM	Yemen	Asia	no	79 113.56	34 721.48			18
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			19
IRQ	Iraq	Asia	no	132 499.60	229 027.28			20
PRK	North Korea	Asia	no	77 982.15				21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
BRN	Brunei	Asia	no	71 236.46	10 784.47			22
QAT	Qatar	Asia	no	624 817.70	190 319.79			23
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			24
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			25
NPL	Nepal	Asia	no	53 996.57	19 443.42			26
MNG	Mongolia	Asia	no	36 587.61	10 751.45			27
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			28
BTN	Bhutan	Asia	no	11 083.66	1 665.34			29
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			30
MMR	Myanmar	Asia	no	195 390.10				31
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			32
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			33
ISR	Israel	Asia	no	853 829.30	284 226.45			34
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			35
CYP	Cyprus	Asia	no	71 610.53	21 453.80			36
ARM	Armenia	Asia	no	22 895.19	10 972.97			37
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			38
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97			39
KWT	Kuwait	Asia	no	469 418.40	165 127.08			40
SYR	Syria	Asia	no	204 643.30	39 715.80			41
PSE	State of Palestine	Asia	no	69 454.30				42
JOR	Jordan	Asia	no	121 481.20	33 339.06			43
LBN	Lebanon	Asia	no	207 723.70	44 926.34			44
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55			45
TWN	Taiwan	Asia	no	1 680 401.00				46
GEO	Georgia	Asia	no	53 823.53	15 835.00			47
IRL	Ireland	Europe	no	778 821.60	197 446.98	98.21	0.05	1
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.64	0.03	2
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	7.55	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	49.84	0.00	4
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	34.63	0.00	5
FRA	France	Europe	no	10 329 420.00	2 855 136.13	29.46	0.00	6
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	7
ISL	Iceland	Europe	no	57 291.68	15 047.05	0.00	0.00	8
MCO	Monaco	Europe	no	20 716.40	6 919.24			9
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			10
UKR	Ukraine	Europe	no	676 833.60	180 979.14			11
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			12
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			13
LTU	Lithuania	Europe	no	135 613.80	44 274.32			14
HRV	Croatia	Europe	no	188 113.70	56 412.38			15
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			16
SVN	Slovenia	Europe	no	139 899.70	47 633.96			17
HUN	Hungary	Europe	no	562 479.60	129 554.20			18
AUT	Austria	Europe	no	1 801 472.00	427 916.46			19
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			20
SRB	Serbia	Europe	no	57 317.24	43 641.10			21
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			22
GRC	Greece	Europe	no	1 181 283.00	242 155.98			23
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			24
AND	Andorra	Europe	no	8 381.65	2 539.76			25
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			26
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			27
EST	Estonia	Europe	no	79 617.31	24 010.33			28
FIN	Finland	Europe	no	965 383.40	268 134.55			29
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			30
LVA	Latvia	Europe	no	95 608.77	30 883.23			31
MKD	Macedonia	Europe	no	32 996.37	10 110.99			32
BLR	Belarus	Europe	no	229 399.90	69 000.62			33
ROU	Romania	Europe	no	555 697.40				34
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			35
SVK	Slovakia	Europe	no	414 782.80	95 768.45			36
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			37
ALB	Albania	Europe	no	40 459.65	12 951.12			38
MNE	Montenegro	Europe	no	8 892.93	4 503.08			39
POL	Poland	Europe	no	1 614 716.00	506 714.23			40
SMR	San Marino	Europe	no	4 049.35	1 681.06			41
GIB	Gibraltar	Europe	no	4 042.19				42
MLT	Malta	Europe	no	36 990.21	8 946.39			43
MDA	Moldova	Europe	no	33 762.68	8 846.50			44
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	583.44	3.38	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	12 953.98	1.05	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	83.20	0.76	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	935.00	0.22	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	16.30	0.03	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	6.13	0.01	6
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	4.76	0.01	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	30.63	0.01	8
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	0.17	0.00	9
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			10
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			11
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			14
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				17
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			18
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			19
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	210 585.74	1.24	1
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	2 199.73	0.12	2
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	2 046.55	0.13	1
TUV	Tuvalu	Oceania	no	123.26	55.31	0.04	0.07	2
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	44.03	0.03	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
MYT	Mayotte	Africa	no	6 949.04	805.91	11.60	1
REU	Reunion	Africa	no	67 897.68	4 004.22	5.90	2
MDG	Madagascar	Africa	no	23 496.42	1 021.64	4.35	3
MOZ	Mozambique	Africa	no	36 409.45	496.79	1.36	4
ZWE	Zimbawue	Africa	no	22 038.05	2.32	0.01	5
MWI	Malawi	Africa	no	18 356.97	0.30	0.00	6
SYC	Seychelles	Africa	no	6 234.98	0.06	0.00	7
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	8
TGO	Togo	Africa	no	12 513.67			9
UGA	Uganda	Africa	no	43 697.09			10
MLI	Mali	Africa	no	27 719.15			11
NER	Niger	Africa	no	12 723.49			12
NGA	Nigeria	Africa	no	592 030.40			13
AGO	Angola	Africa	no	176 182.50			14
BDI	Burundi	Africa	no	3 616.17			15
TCD	Chad	Africa	no	26 745.14			16
ZAF	South Africa	Africa	no	1 282 854.00			17
ETH	Ethiopia	Africa	no	65 598.93			18
ZMB	Zambia	Africa	no	48 954.52			19
TZA	Tanzania	Africa	no	50 142.79			20
MAR	Morroco	Africa	no	374 846.30			21
KEN	Kenya	Africa	no	98 382.66			22
BEN	Benin	Africa	no	21 971.91			23
GIN	Guinea	Africa	no	13 665.89			24
COG	Congo	Africa	no	69 047.72			25
TUN	Tunisia	Africa	no	178 845.60			26
LBR	Liberia	Africa	no	1 911.24			27
BWA	Botswana	Africa	no	90 628.62			28
LBY	Libya	Africa	no	73 757.40			29
SDN	Sudan	Africa	no	70 368.78			30
CAF	Central African Republic	Africa	no	3 893.74			31
CMR	Cameroon	Africa	no	81 683.73			32
LSO	Lesotho	Africa	no	17 938.00			33
ERI	Eritrea	Africa	no	9 081.79			34
SLE	Sierra Leone	Africa	no	3 031.82			35
MRT	Mauritania	Africa	no	11 985.52			36
DJI	Djibouti	Africa	no	4 744.66			37
SSD	South Sudan	Africa	no	19 958.30			38
SWZ	Swaziland	Africa	no	13 701.24			39
NAM	Namibia	Africa	no	42 062.66			40
BFA	Burkina Faso	Africa	no	24 689.43			41
GAB	Gabon	Africa	no	120 252.20			42
ESH	Western Sahara	Africa	no	3 690.88			43
EGY	Egypt	Africa	no	617 149.20			44
RWA	Rwanda	Africa	no	13 197.39			45
SEN	Senegal	Africa	no	35 335.24			46
DZA	Algeria	Africa	no	899 206.20			47
CIV	Ivory Coast	Africa	no	45 467.63			48
COD	Democratic Republic of the Congo	Africa	no	27 401.97			49
GNQ	Equatorial Guinea	Africa	no	20 061.44			50
GMB	The Gambia	Africa	no	2 097.61			51
GHA	Ghana	Africa	no	74 174.05			52
PHL	Philippines	Asia	no	566 948.60	21 838.96	3.85	1
BGD	Bangladesh	Asia	no	381 431.90	13 259.33	3.48	2
TWN	Taiwan	Asia	no	1 680 401.00	17 312.23	1.03	3
IND	India	Asia	no	5 769 372.00	19 632.54	0.34	4
MMR	Myanmar	Asia	no	195 390.10	405.48	0.21	5
VNM	Vietnam	Asia	no	487 574.40	613.38	0.13	6
HKG	Hong Kong	Asia	no	1 250 063.00	1 372.35	0.11	7
OMN	Oman	Asia	no	202 533.60	210.30	0.10	8
JPN	Japan	Asia	no	39 255 200.00	34 023.36	0.09	9
MAC	Macau	Asia	no	56 709.10	35.89	0.06	10
PAK	Pakistan	Asia	no	502 344.30	216.40	0.04	11
CHN	China	Asia	no	31 726 110.00	13 469.76	0.04	12
LAO	Laos	Asia	no	21 925.62	5.14	0.02	13
LKA	Sri Lanka	Asia	no	208 273.50	44.80	0.02	14
KOR	South Korea	Asia	no	5 538 605.00	1 111.95	0.02	15
PRK	North Korea	Asia	no	77 982.15	2.86	0.00	16
KHM	Cambodia	Asia	no	27 390.49	0.24	0.00	17
IDN	Indonesia	Asia	no	2 827 835.00	19.70	0.00	18
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	19
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	20
YEM	Yemen	Asia	no	79 113.56			21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
KGZ	Kyrgizstan	Asia	no	18 466.60			22
IRQ	Iraq	Asia	no	132 499.60			23
BRN	Brunei	Asia	no	71 236.46			24
QAT	Qatar	Asia	no	624 817.70			25
SAU	Saudi Arabia	Asia	no	2 141 419.00			26
AFG	Afghanistan	Asia	no	60 187.87			27
NPL	Nepal	Asia	no	53 996.57			28
MNG	Mongolia	Asia	no	36 587.61			29
TJK	Tajikistan	Asia	no	20 536.86			30
BTN	Bhutan	Asia	no	11 083.66			31
UZB	Uzbekistan	Asia	no	151 891.10			32
TKM	Turkmenistan	Asia	no	36 127.02			33
KAZ	Kazakhstan	Asia	no	734 309.90			34
ISR	Israel	Asia	no	853 829.30			35
TUR	Turkey	Asia	no	1 947 249.00			36
CYP	Cyprus	Asia	no	71 610.53			37
ARM	Armenia	Asia	no	22 895.19			38
AZE	Azerbaijan	Asia	no	192 784.00			39
ARE	United Arab Emirates	Asia	no	1 282 119.00			40
KWT	Kuwait	Asia	no	469 418.40			41
SYR	Syria	Asia	no	204 643.30			42
PSE	State of Palestine	Asia	no	69 454.30			43
JOR	Jordan	Asia	no	121 481.20			44
LBN	Lebanon	Asia	no	207 723.70			45
MYS	Malaysia	Asia	no	1 170 979.00			46
GEO	Georgia	Asia	no	53 823.53			47
IRL	Ireland	Europe	no	778 821.60	98.21	0.01	1
FRO	Faroe Islands	Europe	no	9 272.37	0.64	0.01	2
PRT	Portugal	Europe	no	1 054 344.00	7.55	0.00	3
GBR	United Kingdom	Europe	no	7 806 797.00	49.84	0.00	4
RUS	Russia	Europe	no	6 325 795.00	34.63	0.00	5
FRA	France	Europe	no	10 329 420.00	29.46	0.00	6
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	7
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	8
MCO	Monaco	Europe	no	20 716.40			9
LUX	Luxembourg	Europe	no	201 130.60			10
UKR	Ukraine	Europe	no	676 833.60			11
ESP	Spain	Europe	no	6 233 955.00			12
ITA	Italy	Europe	no	8 604 332.00			13
LTU	Lithuania	Europe	no	135 613.80			14
HRV	Croatia	Europe	no	188 113.70			15
CHE	Switzerland	Europe	no	3 421 606.00			16
SVN	Slovenia	Europe	no	139 899.70			17
HUN	Hungary	Europe	no	562 479.60			18
AUT	Austria	Europe	no	1 801 472.00			19
DNK	Denmark	Europe	no	1 346 393.00			20
SRB	Serbia	Europe	no	57 317.24			21
CZE	Czech Republic	Europe	no	1 007 263.00			22
GRC	Greece	Europe	no	1 181 283.00			23
BEL	Belgium	Europe	no	1 980 551.00			24
AND	Andorra	Europe	no	8 381.65			25
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			26
BGR	Bulgaria	Europe	no	163 821.60			27
EST	Estonia	Europe	no	79 617.31			28
FIN	Finland	Europe	no	965 383.40			29
LIE	Liechtenstein	Europe	no	18 837.10			30
LVA	Latvia	Europe	no	95 608.77			31
MKD	Macedonia	Europe	no	32 996.37			32
BLR	Belarus	Europe	no	229 399.90			33
ROU	Romania	Europe	no	555 697.40			34
DEU	Germany	Europe	no	15 114 870.00			35
SVK	Slovakia	Europe	no	414 782.80			36
SWE	Sweden	Europe	no	1 747 501.00			37
ALB	Albania	Europe	no	40 459.65			38
MNE	Montenegro	Europe	no	8 892.93			39
POL	Poland	Europe	no	1 614 716.00			40
SMR	San Marino	Europe	no	4 049.35			41
GIB	Gibraltar	Europe	no	4 042.19			42
MLT	Malta	Europe	no	36 990.21			43
MDA	Moldova	Europe	no	33 762.68			44
NLD	Netherlands	Europe	no	3 410 955.00			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	583.44	0.75	1
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	12 953.98	0.29	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	83.20	0.23	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	935.00	0.08	4
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	16.30	0.01	5
PAN	Panama	Latin America and the Caribbean	no	124 686.60	4.76	0.00	6
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	6.13	0.00	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	30.63	0.00	8
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.17	0.00	9
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			10
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			11
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			14
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			17
CHL	Chile	Latin America and the Caribbean	no	784 154.10			18
PER	Peru	Latin America and the Caribbean	no	692 344.50			19
USA	United States	Northern America	no	54 922 480.00	210 585.74	0.38	1
CAN	Canada	Northern America	no	6 291 917.00	2 199.73	0.03	2
TUV	Tuvalu	Oceania	no	123.26	0.04	0.03	1
AUS	Australia	Oceania	no	6 616 533.00	2 046.55	0.03	2
NZL	New Zealand	Oceania	no	679 705.40	44.03	0.01	3

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Region

Tropical Cyclone Storm Surge

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	1 666.80	7.01	1
MOZ	Mozambique	Africa	no	36 409.45	6.36	2 723.39	2.34	2
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	3
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	4
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	5
RWA	Rwanda	Africa	no	13 197.39		1 920.52		6
SEN	Senegal	Africa	no	35 335.24		3 706.12		7
GNQ	Equatorial Guinea	Africa	no	20 061.44		9 099.23		8
GMB	The Gambia	Africa	no	2 097.61		187.47		9
GHA	Ghana	Africa	no	74 174.05		10 912.64		10
TCD	Chad	Africa	no	26 745.14		3 701.42		11
TGO	Togo	Africa	no	12 513.67		685.82		12
ZAF	South Africa	Africa	no	1 282 854.00		67 780.45		13
DJI	Djibouti	Africa	no	4 744.66		317.86		14
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		15
ZMB	Zambia	Africa	no	48 954.52		5 247.76		16
AGO	Angola	Africa	no	176 182.50		18 242.56		17
GAB	Gabon	Africa	no	120 252.20		6 432.02		18
MRT	Mauritania	Africa	no	11 985.52		1 578.96		19
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		20
CIV	Ivory Coast	Africa	no	45 467.63		5 292.23		21
COD	Democratic Republic of the Congo	Africa	no	27 401.97				22
LSO	Lesotho	Africa	no	17 938.00		855.33		23
ESH	Western Sahara	Africa	no	3 690.88				24
EGY	Egypt	Africa	no	617 149.20		37 477.12		25
DZA	Algeria	Africa	no	899 206.20		71 040.48		26
MAR	Morroco	Africa	no	374 846.30		31 321.40		27
KEN	Kenya	Africa	no	98 382.66		11 277.32		28
BEN	Benin	Africa	no	21 971.91		2 182.62		29
GIN	Guinea	Africa	no	13 665.89		919.65		30
MWI	Malawi	Africa	no	18 356.97		731.37		31
COG	Congo	Africa	no	69 047.72		4 329.13		32
TUN	Tunisia	Africa	no	178 845.60		9 509.45		33
LBR	Liberia	Africa	no	1 911.24		440.32		34
BWA	Botswana	Africa	no	90 628.62		5 015.09		35
LBY	Libya	Africa	no	73 757.40		25 993.79		36
CMR	Cameroon	Africa	no	81 683.73		5 736.52		37
ERI	Eritrea	Africa	no	9 081.79		260.73		38
SLE	Sierra Leone	Africa	no	3 031.82		685.06		39
UGA	Uganda	Africa	no	43 697.09		5 121.46		40
REU	Reunion	Africa	no	67 897.68	24.99			41
NER	Niger	Africa	no	12 723.49		2 551.37		42
MLI	Mali	Africa	no	27 719.15		1 684.06		43
MYT	Mayotte	Africa	no	6 949.04	6.12			44
NGA	Nigeria	Africa	no	592 030.40		75 511.10		45
BDI	Burundi	Africa	no	3 616.17		780.29		46
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		47
SSD	South Sudan	Africa	no	19 958.30		1 399.32		48
SWZ	Swaziland	Africa	no	13 701.24		363.96		49
CAF	Central African Republic	Africa	no	3 893.74		320.25		50
NAM	Namibia	Africa	no	42 062.66		3 368.79		51
SDN	Sudan	Africa	no	70 368.78		13 307.19		52
PHL	Philippines	Asia	no	566 948.60	2 541.62	55 644.78	45.68	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	386 884.93	19.87	2
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 068 884.62	16.66	3
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	65 379.04	13.74	4
IND	India	Asia	no	5 769 372.00	726.92	530 741.66	1.37	5
CHN	China	Asia	no	31 726 110.00	4 834.00	4 370 835.96	1.11	6
VNM	Vietnam	Asia	no	487 574.40	40.93	40 823.56	1.00	7
LKA	Sri Lanka	Asia	no	208 273.50	18.57	19 647.18	0.95	8
OMN	Oman	Asia	no	202 533.60	15.92	17 256.96	0.92	9
PAK	Pakistan	Asia	no	502 344.30	18.10	30 125.80	0.60	10
BGD	Bangladesh	Asia	no	381 431.90	23.35	42 581.72	0.55	11
IDN	Indonesia	Asia	no	2 827 835.00	37.86	274 943.80	0.14	12
BRN	Brunei	Asia	no	71 236.46	0.02	2 466.98	0.01	13
MYS	Malaysia	Asia	no	1 170 979.00	0.52	84 107.08	0.01	14
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	88 386.66	0.00	15
IRN	Iran	Asia	no	2 067 640.00	0.09	73 681.58	0.00	16
THA	Thailand	Asia	no	1 378 999.00	0.10	103 523.57	0.00	17
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	18
QAT	Qatar	Asia	no	624 817.70		15 282.42		19
SAU	Saudi Arabia	Asia	no	2 141 419.00		173 661.86		20
PSE	State of Palestine	Asia	no	69 454.30				21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MNG	Mongolia	Asia	no	36 587.61		5 086.03		22
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		23
BTN	Bhutan	Asia	no	11 083.66		842.11		24
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		25
MMR	Myanmar	Asia	no	195 390.10	40.61			26
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		27
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		28
ISR	Israel	Asia	no	853 829.30		56 565.68		29
SYR	Syria	Asia	no	204 643.30		8 252.62		30
JOR	Jordan	Asia	no	121 481.20		9 168.09		31
MAC	Macau	Asia	no	56 709.10		6 610.47		32
LBN	Lebanon	Asia	no	207 723.70		12 363.32		33
YEM	Yemen	Asia	no	79 113.56		3 126.31		34
TUR	Turkey	Asia	no	1 947 249.00		167 069.99		35
LAO	Laos	Asia	no	21 925.62		3 279.79		36
GEO	Georgia	Asia	no	53 823.53		3 542.58		37
IRQ	Iraq	Asia	no	132 499.60		35 983.20		38
CYP	Cyprus	Asia	no	71 610.53		4 260.93		39
ARM	Armenia	Asia	no	22 895.19		2 183.10		40
KWT	Kuwait	Asia	no	469 418.40		19 039.58		41
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		42
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			43
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		44
PRK	North Korea	Asia	no	77 982.15	1.95			45
NPL	Nepal	Asia	no	53 996.57		4 356.14		46
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		47
RUS	Russia	Europe	no	6 325 795.00	12.40	450 238.87	0.03	1
MCO	Monaco	Europe	no	20 716.40				2
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		3
UKR	Ukraine	Europe	no	676 833.60		32 236.10		4
ESP	Spain	Europe	no	6 233 955.00		257 993.28		5
ITA	Italy	Europe	no	8 604 332.00		383 197.87		6
LTU	Lithuania	Europe	no	135 613.80		7 517.23		7
HRV	Croatia	Europe	no	188 113.70		11 171.45		8
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		9
SVN	Slovenia	Europe	no	139 899.70		9 461.85		10
HUN	Hungary	Europe	no	562 479.60		26 595.35		11
AUT	Austria	Europe	no	1 801 472.00		95 015.40		12
DNK	Denmark	Europe	no	1 346 393.00		61 547.69		13
SRB	Serbia	Europe	no	57 317.24		8 634.55		14
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		15
GRC	Greece	Europe	no	1 181 283.00		27 154.95		16
BEL	Belgium	Europe	no	1 980 551.00		116 900.65		17
AND	Andorra	Europe	no	8 381.65				18
FRA	France	Europe	no	10 329 420.00		619 955.29		19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		3 192.49		20
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		21
EST	Estonia	Europe	no	79 617.31		6 795.36		22
FIN	Finland	Europe	no	965 383.40		56 624.15		23
ISL	Iceland	Europe	no	57 291.68		2 314.22		24
LIE	Liechtenstein	Europe	no	18 837.10				25
LVA	Latvia	Europe	no	95 608.77		6 324.84		26
MKD	Macedonia	Europe	no	32 996.37		2 530.04		27
BLR	Belarus	Europe	no	229 399.90		26 490.10		28
ROU	Romania	Europe	no	555 697.40				29
DEU	Germany	Europe	no	15 114 870.00		737 992.70		30
SVK	Slovakia	Europe	no	414 782.80		19 975.29		31
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		32
ALB	Albania	Europe	no	40 459.65		3 379.49		33
FRO	Faroe Islands	Europe	no	9 272.37				34
GBR	United Kingdom	Europe	no	7 806 797.00		440 106.84		35
IRL	Ireland	Europe	no	778 821.60		35 221.45		36
MNE	Montenegro	Europe	no	8 892.93		847.70		37
POL	Poland	Europe	no	1 614 716.00		98 972.34		38
SMR	San Marino	Europe	no	4 049.35				39
GIB	Gibraltar	Europe	no	4 042.19				40
NOR	Norway	Europe	no	1 933 679.00		116 071.15		41
MLT	Malta	Europe	no	36 990.21		1 333.61		42
MDA	Moldova	Europe	no	33 762.68		1 821.11		43
NLD	Netherlands	Europe	no	3 410 955.00		155 739.98		44
PRT	Portugal	Europe	no	1 054 344.00		34 419.00		45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	4 539.50	0.74	1
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	2 574.11	0.52	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	265 421.77	0.39	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	77 440.20	0.20	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	7 693.87	0.05	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	3 663.90	0.02	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	92 724.40	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	10 060.78	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		9
CHL	Chile	Latin America and the Caribbean	no	784 154.10		65 444.15		10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		103 818.81		12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		26 312.88		13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		12 763.68		14
PER	Peru	Latin America and the Caribbean	no	692 344.50		53 841.99		15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		408 331.78		16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		10 406.53		17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
USA	United States	Northern America	no	54 922 480.00	8 774.38	3 244 299.91	2.70	1
CAN	Canada	Northern America	no	6 291 917.00		433 369.09		2
NZL	New Zealand	Oceania	no	679 705.40	323.42	38 213.65	8.46	1
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	442 013.06	2.43	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	915.01	12.76	1
MOZ	Mozambique	Africa	no	36 409.45	6.36	3 190.27	1.99	2
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	3
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	4
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	5
RWA	Rwanda	Africa	no	13 197.39		1 065.41		6
SEN	Senegal	Africa	no	35 335.24		2 289.33		7
GNQ	Equatorial Guinea	Africa	no	20 061.44		1 036.62		8
GMB	The Gambia	Africa	no	2 097.61		67.53		9
GHA	Ghana	Africa	no	74 174.05		8 003.31		10
TCD	Chad	Africa	no	26 745.14		1 026.17		11
TGO	Togo	Africa	no	12 513.67		359.57		12
ZAF	South Africa	Africa	no	1 282 854.00		77 967.19		13
DJI	Djibouti	Africa	no	4 744.66		212.95		14
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		15
ZMB	Zambia	Africa	no	48 954.52		568.19		16
AGO	Angola	Africa	no	176 182.50		24 725.13		17
GAB	Gabon	Africa	no	120 252.20		1 026.90		18
MRT	Mauritania	Africa	no	11 985.52		706.94		19
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		20
CIV	Ivory Coast	Africa	no	45 467.63		2 613.28		21
COD	Democratic Republic of the Congo	Africa	no	27 401.97				22
LSO	Lesotho	Africa	no	17 938.00		878.46		23
ESH	Western Sahara	Africa	no	3 690.88				24
EGY	Egypt	Africa	no	617 149.20		31 768.68		25
DZA	Algeria	Africa	no	899 206.20		39 734.87		26
MAR	Morroco	Africa	no	374 846.30		19 696.51		27
KEN	Kenya	Africa	no	98 382.66		7 759.48		28
BEN	Benin	Africa	no	21 971.91		934.54		29
GIN	Guinea	Africa	no	13 665.89		594.52		30
MWI	Malawi	Africa	no	18 356.97		818.79		31
COG	Congo	Africa	no	69 047.72		1 908.75		32
TUN	Tunisia	Africa	no	178 845.60		8 918.25		33
LBR	Liberia	Africa	no	1 911.24		268.18		34
BWA	Botswana	Africa	no	90 628.62		2 912.71		35
LBY	Libya	Africa	no	73 757.40		8 664.60		36
CMR	Cameroon	Africa	no	81 683.73		3 421.99		37
ERI	Eritrea	Africa	no	9 081.79		549.64		38
SLE	Sierra Leone	Africa	no	3 031.82		428.35		39
UGA	Uganda	Africa	no	43 697.09		1 787.04		40
REU	Reunion	Africa	no	67 897.68	24.99			41
NER	Niger	Africa	no	12 723.49		1 083.62		42
MLI	Mali	Africa	no	27 719.15		1 172.08		43
MYT	Mayotte	Africa	no	6 949.04	6.12			44
NGA	Nigeria	Africa	no	592 030.40		42 180.53		45
BDI	Burundi	Africa	no	3 616.17		599.64		46
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		47
SSD	South Sudan	Africa	no	19 958.30		2 720.34		48
SWZ	Swaziland	Africa	no	13 701.24		753.93		49
CAF	Central African Republic	Africa	no	3 893.74		166.29		50
NAM	Namibia	Africa	no	42 062.66		3 617.67		51
SDN	Sudan	Africa	no	70 368.78		5 000.18		52
PHL	Philippines	Asia	no	566 948.60	2 541.62	30 212.56	84.12	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	194 728.35	39.49	2
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	25 520.99	35.20	3
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 012 070.61	17.60	4
VNM	Vietnam	Asia	no	487 574.40	40.93	10 550.52	3.88	5
CHN	China	Asia	no	31 726 110.00	4 834.00	1 299 157.61	3.72	6
IND	India	Asia	no	5 769 372.00	726.92	221 700.44	3.28	7
BGD	Bangladesh	Asia	no	381 431.90	23.35	7 673.71	3.04	8
LKA	Sri Lanka	Asia	no	208 273.50	18.57	8 808.70	2.11	9
OMN	Oman	Asia	no	202 533.60	15.92	14 871.52	1.07	10
PAK	Pakistan	Asia	no	502 344.30	18.10	25 463.41	0.71	11
IDN	Indonesia	Asia	no	2 827 835.00	37.86	79 076.93	0.48	12
MYS	Malaysia	Asia	no	1 170 979.00	0.52	42 433.27	0.01	13
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	27 530.57	0.01	14
BRN	Brunei	Asia	no	71 236.46	0.02	2 950.69	0.01	15
IRN	Iran	Asia	no	2 067 640.00	0.09	31 978.13	0.00	16
THA	Thailand	Asia	no	1 378 999.00	0.10	53 487.73	0.00	17
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	18
QAT	Qatar	Asia	no	624 817.70		24 487.36		19
SAU	Saudi Arabia	Asia	no	2 141 419.00		165 700.80		20
PSE	State of Palestine	Asia	no	69 454.30				21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MNG	Mongolia	Asia	no	36 587.61		1 298.34		22
TJK	Tajikistan	Asia	no	20 536.86		998.87		23
BTN	Bhutan	Asia	no	11 083.66		311.85		24
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		25
MMR	Myanmar	Asia	no	195 390.10	40.61			26
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		27
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		28
ISR	Israel	Asia	no	853 829.30		65 345.00		29
SYR	Syria	Asia	no	204 643.30		4 971.97		30
JOR	Jordan	Asia	no	121 481.20		6 618.91		31
MAC	Macau	Asia	no	56 709.10		3 378.13		32
LBN	Lebanon	Asia	no	207 723.70		6 530.19		33
YEM	Yemen	Asia	no	79 113.56		2 625.09		34
TUR	Turkey	Asia	no	1 947 249.00		123 751.24		35
LAO	Laos	Asia	no	21 925.62		1 626.13		36
GEO	Georgia	Asia	no	53 823.53		2 692.49		37
IRQ	Iraq	Asia	no	132 499.60		48 846.71		38
CYP	Cyprus	Asia	no	71 610.53		4 557.62		39
ARM	Armenia	Asia	no	22 895.19		1 508.90		40
KWT	Kuwait	Asia	no	469 418.40		29 360.33		41
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		42
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			43
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		44
PRK	North Korea	Asia	no	77 982.15	1.95			45
NPL	Nepal	Asia	no	53 996.57		1 917.21		46
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		47
RUS	Russia	Europe	no	6 325 795.00	12.40	409 820.63	0.03	1
MCO	Monaco	Europe	no	20 716.40				2
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		3
UKR	Ukraine	Europe	no	676 833.60		34 350.49		4
ESP	Spain	Europe	no	6 233 955.00		271 148.52		5
ITA	Italy	Europe	no	8 604 332.00		417 993.98		6
LTU	Lithuania	Europe	no	135 613.80		8 076.66		7
HRV	Croatia	Europe	no	188 113.70		11 594.94		8
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		9
SVN	Slovenia	Europe	no	139 899.70		9 765.51		10
HUN	Hungary	Europe	no	562 479.60		26 544.35		11
AUT	Austria	Europe	no	1 801 472.00		84 928.57		12
DNK	Denmark	Europe	no	1 346 393.00		89 732.55		13
SRB	Serbia	Europe	no	57 317.24		7 977.96		14
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		15
GRC	Greece	Europe	no	1 181 283.00		48 425.35		16
BEL	Belgium	Europe	no	1 980 551.00		128 131.48		17
AND	Andorra	Europe	no	8 381.65				18
FRA	France	Europe	no	10 329 420.00		677 049.47		19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		4 063.51		20
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		21
EST	Estonia	Europe	no	79 617.31		4 754.17		22
FIN	Finland	Europe	no	965 383.40		66 675.15		23
ISL	Iceland	Europe	no	57 291.68		3 730.06		24
LIE	Liechtenstein	Europe	no	18 837.10				25
LVA	Latvia	Europe	no	95 608.77		4 413.54		26
MKD	Macedonia	Europe	no	32 996.37		1 787.08		27
BLR	Belarus	Europe	no	229 399.90		10 166.04		28
ROU	Romania	Europe	no	555 697.40				29
DEU	Germany	Europe	no	15 114 870.00		718 583.82		30
SVK	Slovakia	Europe	no	414 782.80		17 642.66		31
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		32
ALB	Albania	Europe	no	40 459.65		1 381.39		33
FRO	Faroe Islands	Europe	no	9 272.37				34
GBR	United Kingdom	Europe	no	7 806 797.00		542 121.89		35
IRL	Ireland	Europe	no	778 821.60		40 563.02		36
MNE	Montenegro	Europe	no	8 892.93		876.28		37
POL	Poland	Europe	no	1 614 716.00		95 412.26		38
SMR	San Marino	Europe	no	4 049.35				39
GIB	Gibraltar	Europe	no	4 042.19				40
NOR	Norway	Europe	no	1 933 679.00		112 012.76		41
MLT	Malta	Europe	no	36 990.21		1 879.07		42
MDA	Moldova	Europe	no	33 762.68		1 618.04		43
NLD	Netherlands	Europe	no	3 410 955.00		224 781.17		44
PRT	Portugal	Europe	no	1 054 344.00		43 081.93		45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	646.93	2.06	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	3 077.08	1.09	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	149 707.18	0.69	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	46 486.26	0.33	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	5 637.22	0.06	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	2 899.00	0.03	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	63 198.81	0.01	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	3 793.90	0.01	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		9
CHL	Chile	Latin America and the Caribbean	no	784 154.10		34 332.88		10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		94 570.07		12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		13 315.00		13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		7 713.60		14
PER	Peru	Latin America and the Caribbean	no	692 344.50		22 647.04		15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		493 431.00		16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		8 897.75		17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
USA	United States	Northern America	no	54 922 480.00	8 774.38	2 547 499.93	3.44	1
CAN	Canada	Northern America	no	6 291 917.00		395 958.78		2
NZL	New Zealand	Oceania	no	679 705.40	323.42	34 691.31	9.32	1
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	276 915.26	3.89	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	11 984.82	0.97	1
MOZ	Mozambique	Africa	no	36 409.45	6.36	17 220.44	0.37	2
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	3
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	4
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	5
RWA	Rwanda	Africa	no	13 197.39		8 767.59		6
SEN	Senegal	Africa	no	35 335.24		17 930.59		7
GNQ	Equatorial Guinea	Africa	no	20 061.44		12 451.63		8
GMB	The Gambia	Africa	no	2 097.61		1 029.01		9
GHA	Ghana	Africa	no	74 174.05		50 578.29		10
TCD	Chad	Africa	no	26 745.14		14 228.09		11
TGO	Togo	Africa	no	12 513.67		4 390.62		12
ZAF	South Africa	Africa	no	1 282 854.00		360 489.06		13
DJI	Djibouti	Africa	no	4 744.66		1 018.02		14
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		15
ZMB	Zambia	Africa	no	48 954.52		26 244.17		16
AGO	Angola	Africa	no	176 182.50		105 476.81		17
GAB	Gabon	Africa	no	120 252.20		14 724.33		18
MRT	Mauritania	Africa	no	11 985.52		4 169.52		19
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		20
CIV	Ivory Coast	Africa	no	45 467.63		31 142.79		21
COD	Democratic Republic of the Congo	Africa	no	27 401.97				22
LSO	Lesotho	Africa	no	17 938.00		3 740.58		23
ESH	Western Sahara	Africa	no	3 690.88				24
EGY	Egypt	Africa	no	617 149.20		291 083.68		25
DZA	Algeria	Africa	no	899 206.20		204 165.74		26
MAR	Morroco	Africa	no	374 846.30		117 556.24		27
KEN	Kenya	Africa	no	98 382.66		63 770.87		28
BEN	Benin	Africa	no	21 971.91		9 572.30		29
GIN	Guinea	Africa	no	13 665.89		7 750.84		30
MWI	Malawi	Africa	no	18 356.97		4 366.74		31
COG	Congo	Africa	no	69 047.72		12 612.41		32
TUN	Tunisia	Africa	no	178 845.60		51 302.58		33
LBR	Liberia	Africa	no	1 911.24		2 724.73		34
BWA	Botswana	Africa	no	90 628.62		15 490.96		35
LBY	Libya	Africa	no	73 757.40		55 976.41		36
CMR	Cameroon	Africa	no	81 683.73		32 007.42		37
ERI	Eritrea	Africa	no	9 081.79		2 836.63		38
SLE	Sierra Leone	Africa	no	3 031.82		4 191.60		39
UGA	Uganda	Africa	no	43 697.09		23 933.64		40
REU	Reunion	Africa	no	67 897.68	24.99			41
NER	Niger	Africa	no	12 723.49		8 745.32		42
MLI	Mali	Africa	no	27 719.15		11 011.34		43
MYT	Mayotte	Africa	no	6 949.04	6.12			44
NGA	Nigeria	Africa	no	592 030.40		495 416.77		45
BDI	Burundi	Africa	no	3 616.17		3 443.34		46
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		47
SSD	South Sudan	Africa	no	19 958.30		14 712.88		48
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		49
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		50
NAM	Namibia	Africa	no	42 062.66		15 480.83		51
SDN	Sudan	Africa	no	70 368.78		70 927.03		52
PHL	Philippines	Asia	no	566 948.60	2 541.62	283 131.84	8.98	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1 238 504.83	6.21	2
JPN	Japan	Asia	no	39 255 200.00	17 812.27	5 059 261.76	3.52	3
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	271 683.76	3.31	4
CHN	China	Asia	no	31 726 110.00	4 834.00	9 003 382.87	0.54	5
IND	India	Asia	no	5 769 372.00	726.92	1 944 284.82	0.37	6
OMN	Oman	Asia	no	202 533.60	15.92	56 792.46	0.28	7
LKA	Sri Lanka	Asia	no	208 273.50	18.57	73 583.10	0.25	8
VNM	Vietnam	Asia	no	487 574.40	40.93	164 388.68	0.25	9
BGD	Bangladesh	Asia	no	381 431.90	23.35	160 820.74	0.15	10
PAK	Pakistan	Asia	no	502 344.30	18.10	247 867.95	0.07	11
IDN	Indonesia	Asia	no	2 827 835.00	37.86	885 677.23	0.04	12
BRN	Brunei	Asia	no	71 236.46	0.02	9 075.14	0.00	13
MYS	Malaysia	Asia	no	1 170 979.00	0.52	284 108.03	0.00	14
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	318 951.13	0.00	15
IRN	Iran	Asia	no	2 067 640.00	0.09	255 619.28	0.00	16
THA	Thailand	Asia	no	1 378 999.00	0.10	374 528.18	0.00	17
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	18
QAT	Qatar	Asia	no	624 817.70		91 904.94		19
SAU	Saudi Arabia	Asia	no	2 141 419.00		590 125.33		20
PSE	State of Palestine	Asia	no	69 454.30				21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MNG	Mongolia	Asia	no	36 587.61		14 036.94		22
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		23
BTN	Bhutan	Asia	no	11 083.66		2 173.58		24
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		25
MMR	Myanmar	Asia	no	195 390.10	40.61			26
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		27
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		28
ISR	Israel	Asia	no	853 829.30		286 558.36		29
SYR	Syria	Asia	no	204 643.30		40 077.56		30
JOR	Jordan	Asia	no	121 481.20		43 390.10		31
MAC	Macau	Asia	no	56 709.10		20 216.60		32
LBN	Lebanon	Asia	no	207 723.70		50 384.63		33
YEM	Yemen	Asia	no	79 113.56		18 997.54		34
TUR	Turkey	Asia	no	1 947 249.00		876 064.28		35
LAO	Laos	Asia	no	21 925.62		12 246.45		36
GEO	Georgia	Asia	no	53 823.53		18 230.53		37
IRQ	Iraq	Asia	no	132 499.60		226 497.10		38
CYP	Cyprus	Asia	no	71 610.53		24 622.91		39
ARM	Armenia	Asia	no	22 895.19		12 628.86		40
KWT	Kuwait	Asia	no	469 418.40		96 682.69		41
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		42
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			43
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		44
PRK	North Korea	Asia	no	77 982.15	1.95			45
NPL	Nepal	Asia	no	53 996.57		24 466.26		46
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		47
RUS	Russia	Europe	no	6 325 795.00	12.40	1 973 571.68	0.01	1
MCO	Monaco	Europe	no	20 716.40				2
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		3
UKR	Ukraine	Europe	no	676 833.60		192 523.67		4
ESP	Spain	Europe	no	6 233 955.00		1 345 564.18		5
ITA	Italy	Europe	no	8 604 332.00		2 100 502.86		6
LTU	Lithuania	Europe	no	135 613.80		43 719.88		7
HRV	Croatia	Europe	no	188 113.70		57 600.31		8
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		9
SVN	Slovenia	Europe	no	139 899.70		45 103.27		10
HUN	Hungary	Europe	no	562 479.60		123 292.26		11
AUT	Austria	Europe	no	1 801 472.00		413 112.76		12
DNK	Denmark	Europe	no	1 346 393.00		316 596.75		13
SRB	Serbia	Europe	no	57 317.24		50 611.94		14
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		15
GRC	Greece	Europe	no	1 181 283.00		249 410.75		16
BEL	Belgium	Europe	no	1 980 551.00		517 763.60		17
AND	Andorra	Europe	no	8 381.65				18
FRA	France	Europe	no	10 329 420.00		2 848 015.52		19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		21 616.92		20
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		21
EST	Estonia	Europe	no	79 617.31		24 664.81		22
FIN	Finland	Europe	no	965 383.40		269 912.39		23
ISL	Iceland	Europe	no	57 291.68		14 052.90		24
LIE	Liechtenstein	Europe	no	18 837.10				25
LVA	Latvia	Europe	no	95 608.77		29 570.85		26
MKD	Macedonia	Europe	no	32 996.37		12 119.46		27
BLR	Belarus	Europe	no	229 399.90		73 747.80		28
ROU	Romania	Europe	no	555 697.40				29
DEU	Germany	Europe	no	15 114 870.00		3 513 506.86		30
SVK	Slovakia	Europe	no	414 782.80		93 274.32		31
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		32
ALB	Albania	Europe	no	40 459.65		15 227.71		33
FRO	Faroe Islands	Europe	no	9 272.37				34
GBR	United Kingdom	Europe	no	7 806 797.00		2 728 637.76		35
IRL	Ireland	Europe	no	778 821.60		183 798.12		36
MNE	Montenegro	Europe	no	8 892.93		5 312.54		37
POL	Poland	Europe	no	1 614 716.00		515 943.50		38
SMR	San Marino	Europe	no	4 049.35				39
GIB	Gibraltar	Europe	no	4 042.19				40
NOR	Norway	Europe	no	1 933 679.00		457 625.37		41
MLT	Malta	Europe	no	36 990.21		8 864.05		42
MDA	Moldova	Europe	no	33 762.68		10 971.97		43
NLD	Netherlands	Europe	no	3 410 955.00		765 364.08		44
PRT	Portugal	Europe	no	1 054 344.00		225 098.65		45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	22 559.82	0.15	1
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	12 562.44	0.11	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	1 269 259.96	0.08	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	373 895.14	0.04	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	59 883.48	0.01	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	28 969.70	0.00	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	387 419.05	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	36 126.55	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		9
CHL	Chile	Latin America and the Caribbean	no	784 154.10		278 153.13		10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		611 844.88		12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		96 787.63		13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		57 529.86		14
PER	Peru	Latin America and the Caribbean	no	692 344.50		204 179.29		15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		2 301 443.96		16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		51 412.23		17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
USA	United States	Northern America	no	54 922 480.00	8 774.38	17 276 300.43	0.51	1
CAN	Canada	Northern America	no	6 291 917.00		1 857 561.03		2
NZL	New Zealand	Oceania	no	679 705.40	323.42	182 403.61	1.77	1
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	1 579 571.61	0.68	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
MYT	Mayotte	Africa	no	6 949.04	6.12	0.88	1
MDG	Madagascar	Africa	no	23 496.42	11.68	0.50	2
REU	Reunion	Africa	no	67 897.68	24.99	0.37	3
MOZ	Mozambique	Africa	no	36 409.45	6.36	0.17	4
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	5
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	6
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	7
GNQ	Equatorial Guinea	Africa	no	20 061.44			8
GMB	The Gambia	Africa	no	2 097.61			9
GHA	Ghana	Africa	no	74 174.05			10
TCD	Chad	Africa	no	26 745.14			11
TGO	Togo	Africa	no	12 513.67			12
ZAF	South Africa	Africa	no	1 282 854.00			13
MRT	Mauritania	Africa	no	11 985.52			14
BFA	Burkina Faso	Africa	no	24 689.43			15
CIV	Ivory Coast	Africa	no	45 467.63			16
COD	Democratic Republic of the Congo	Africa	no	27 401.97			17
DJI	Djibouti	Africa	no	4 744.66			18
ZWE	Zimbawue	Africa	no	22 038.05			19
ZMB	Zambia	Africa	no	48 954.52			20
AGO	Angola	Africa	no	176 182.50			21
GAB	Gabon	Africa	no	120 252.20			22
RWA	Rwanda	Africa	no	13 197.39			23
SEN	Senegal	Africa	no	35 335.24			24
LSO	Lesotho	Africa	no	17 938.00			25
ESH	Western Sahara	Africa	no	3 690.88			26
EGY	Egypt	Africa	no	617 149.20			27
DZA	Algeria	Africa	no	899 206.20			28
MAR	Morroco	Africa	no	374 846.30			29
KEN	Kenya	Africa	no	98 382.66			30
BEN	Benin	Africa	no	21 971.91			31
GIN	Guinea	Africa	no	13 665.89			32
MWI	Malawi	Africa	no	18 356.97			33
COG	Congo	Africa	no	69 047.72			34
TUN	Tunisia	Africa	no	178 845.60			35
LBR	Liberia	Africa	no	1 911.24			36
BWA	Botswana	Africa	no	90 628.62			37
LBY	Libya	Africa	no	73 757.40			38
CMR	Cameroon	Africa	no	81 683.73			39
ERI	Eritrea	Africa	no	9 081.79			40
SLE	Sierra Leone	Africa	no	3 031.82			41
UGA	Uganda	Africa	no	43 697.09			42
NER	Niger	Africa	no	12 723.49			43
MLI	Mali	Africa	no	27 719.15			44
NGA	Nigeria	Africa	no	592 030.40			45
BDI	Burundi	Africa	no	3 616.17			46
ETH	Ethiopia	Africa	no	65 598.93			47
SSD	South Sudan	Africa	no	19 958.30			48
SWZ	Swaziland	Africa	no	13 701.24			49
CAF	Central African Republic	Africa	no	3 893.74			50
NAM	Namibia	Africa	no	42 062.66			51
SDN	Sudan	Africa	no	70 368.78			52
PHL	Philippines	Asia	no	566 948.60	2 541.62	4.48	1
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1.39	2
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08	0.89	3
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	0.72	4
JPN	Japan	Asia	no	39 255 200.00	17 812.27	0.45	5
MMR	Myanmar	Asia	no	195 390.10	40.61	0.21	6
CHN	China	Asia	no	31 726 110.00	4 834.00	0.15	7
IND	India	Asia	no	5 769 372.00	726.92	0.13	8
LKA	Sri Lanka	Asia	no	208 273.50	18.57	0.09	9
VNM	Vietnam	Asia	no	487 574.40	40.93	0.08	10
OMN	Oman	Asia	no	202 533.60	15.92	0.08	11
BGD	Bangladesh	Asia	no	381 431.90	23.35	0.06	12
PAK	Pakistan	Asia	no	502 344.30	18.10	0.04	13
PRK	North Korea	Asia	no	77 982.15	1.95	0.03	14
IDN	Indonesia	Asia	no	2 827 835.00	37.86	0.01	15
MYS	Malaysia	Asia	no	1 170 979.00	0.52	0.00	16
BRN	Brunei	Asia	no	71 236.46	0.02	0.00	17
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	0.00	18
THA	Thailand	Asia	no	1 378 999.00	0.10	0.00	19
IRN	Iran	Asia	no	2 067 640.00	0.09	0.00	20
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
BTN	Bhutan	Asia	no	11 083.66			22
UZB	Uzbekistan	Asia	no	151 891.10			23
TKM	Turkmenistan	Asia	no	36 127.02			24
KAZ	Kazakhstan	Asia	no	734 309.90			25
ISR	Israel	Asia	no	853 829.30			26
GEO	Georgia	Asia	no	53 823.53			27
MAC	Macau	Asia	no	56 709.10			28
YEM	Yemen	Asia	no	79 113.56			29
LAO	Laos	Asia	no	21 925.62			30
TUR	Turkey	Asia	no	1 947 249.00			31
KWT	Kuwait	Asia	no	469 418.40			32
CYP	Cyprus	Asia	no	71 610.53			33
ARM	Armenia	Asia	no	22 895.19			34
AZE	Azerbaijan	Asia	no	192 784.00			35
SYR	Syria	Asia	no	204 643.30			36
PSE	State of Palestine	Asia	no	69 454.30			37
JOR	Jordan	Asia	no	121 481.20			38
AFG	Afghanistan	Asia	no	60 187.87			39
KGZ	Kyrgizstan	Asia	no	18 466.60			40
NPL	Nepal	Asia	no	53 996.57			41
IRQ	Iraq	Asia	no	132 499.60			42
QAT	Qatar	Asia	no	624 817.70			43
SAU	Saudi Arabia	Asia	no	2 141 419.00			44
LBN	Lebanon	Asia	no	207 723.70			45
MNG	Mongolia	Asia	no	36 587.61			46
TJK	Tajikistan	Asia	no	20 536.86			47
RUS	Russia	Europe	no	6 325 795.00	12.40	0.00	1
MCO	Monaco	Europe	no	20 716.40			2
LUX	Luxembourg	Europe	no	201 130.60			3
UKR	Ukraine	Europe	no	676 833.60			4
ESP	Spain	Europe	no	6 233 955.00			5
ITA	Italy	Europe	no	8 604 332.00			6
LTU	Lithuania	Europe	no	135 613.80			7
HRV	Croatia	Europe	no	188 113.70			8
CHE	Switzerland	Europe	no	3 421 606.00			9
SVN	Slovenia	Europe	no	139 899.70			10
HUN	Hungary	Europe	no	562 479.60			11
AUT	Austria	Europe	no	1 801 472.00			12
DNK	Denmark	Europe	no	1 346 393.00			13
SRB	Serbia	Europe	no	57 317.24			14
CZE	Czech Republic	Europe	no	1 007 263.00			15
GRC	Greece	Europe	no	1 181 283.00			16
BEL	Belgium	Europe	no	1 980 551.00			17
AND	Andorra	Europe	no	8 381.65			18
FRA	France	Europe	no	10 329 420.00			19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			20
BGR	Bulgaria	Europe	no	163 821.60			21
EST	Estonia	Europe	no	79 617.31			22
FIN	Finland	Europe	no	965 383.40			23
ISL	Iceland	Europe	no	57 291.68			24
LIE	Liechtenstein	Europe	no	18 837.10			25
LVA	Latvia	Europe	no	95 608.77			26
MKD	Macedonia	Europe	no	32 996.37			27
BLR	Belarus	Europe	no	229 399.90			28
ROU	Romania	Europe	no	555 697.40			29
DEU	Germany	Europe	no	15 114 870.00			30
SVK	Slovakia	Europe	no	414 782.80			31
SWE	Sweden	Europe	no	1 747 501.00			32
ALB	Albania	Europe	no	40 459.65			33
FRO	Faroe Islands	Europe	no	9 272.37			34
GBR	United Kingdom	Europe	no	7 806 797.00			35
IRL	Ireland	Europe	no	778 821.60			36
MNE	Montenegro	Europe	no	8 892.93			37
POL	Poland	Europe	no	1 614 716.00			38
SMR	San Marino	Europe	no	4 049.35			39
GIB	Gibraltar	Europe	no	4 042.19			40
NOR	Norway	Europe	no	1 933 679.00			41
MLT	Malta	Europe	no	36 990.21			42
MDA	Moldova	Europe	no	33 762.68			43
NLD	Netherlands	Europe	no	3 410 955.00			44
PRT	Portugal	Europe	no	1 054 344.00			45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	0.04	1
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	0.04	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	0.02	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	0.01	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	0.00	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	0.00	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			9
CHL	Chile	Latin America and the Caribbean	no	784 154.10			10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			14
PER	Peru	Latin America and the Caribbean	no	692 344.50			15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			19
USA	United States	Northern America	no	54 922 480.00	8 774.38	0.16	1
CAN	Canada	Northern America	no	6 291 917.00			2
NZL	New Zealand	Oceania	no	679 705.40	323.42	0.48	1
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	0.16	2
TUV	Tuvalu	Oceania	no	123.26			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	82.85	0.78	1
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	89.63	0.57	2
SOM	Somalia	Africa	no	6 408.32	917.04	0.02	0.00	3
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	4
GAB	Gabon	Africa	no	120 252.20	19 343.51			5
RWA	Rwanda	Africa	no	13 197.39	7 521.26			6
SEN	Senegal	Africa	no	35 335.24	14 791.70			7
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			8
GMB	The Gambia	Africa	no	2 097.61	903.50			9
GHA	Ghana	Africa	no	74 174.05	48 137.03			10
TCD	Chad	Africa	no	26 745.14	13 513.55			11
DJI	Djibouti	Africa	no	4 744.66	1 456.34			12
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			13
ZMB	Zambia	Africa	no	48 954.52	26 820.87			14
AGO	Angola	Africa	no	176 182.50	124 178.24			15
TGO	Togo	Africa	no	12 513.67	4 338.58			16
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			17
MRT	Mauritania	Africa	no	11 985.52	4 158.18			18
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			19
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			20
COD	Democratic Republic of the Congo	Africa	no	27 401.97				21
LSO	Lesotho	Africa	no	17 938.00	2 334.99			22
ESH	Western Sahara	Africa	no	3 690.88				23
EGY	Egypt	Africa	no	617 149.20	271 972.83			24
DZA	Algeria	Africa	no	899 206.20	210 183.41			25
SYC	Seychelles	Africa	no	6 234.98	1 443.35			26
MAR	Morroco	Africa	no	374 846.30	103 835.71			27
KEN	Kenya	Africa	no	98 382.66	55 243.06			28
BEN	Benin	Africa	no	21 971.91	8 307.22			29
GIN	Guinea	Africa	no	13 665.89	6 144.13			30
MWI	Malawi	Africa	no	18 356.97	3 705.39			31
COG	Congo	Africa	no	69 047.72	14 085.85			32
TUN	Tunisia	Africa	no	178 845.60	46 993.60			33
LBR	Liberia	Africa	no	1 911.24	1 950.96			34
BWA	Botswana	Africa	no	90 628.62	14 784.71			35
LBY	Libya	Africa	no	73 757.40	74 199.53			36
CMR	Cameroon	Africa	no	81 683.73	29 567.50			37
ERI	Eritrea	Africa	no	9 081.79	3 444.10			38
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			39
UGA	Uganda	Africa	no	43 697.09	21 493.61			40
REU	Reunion	Africa	no	67 897.68				41
NER	Niger	Africa	no	12 723.49	7 407.42			42
MLI	Mali	Africa	no	27 719.15	10 942.73			43
MYT	Mayotte	Africa	no	6 949.04				44
NGA	Nigeria	Africa	no	592 030.40	521 803.30			45
BDI	Burundi	Africa	no	3 616.17	2 714.51			46
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			47
SSD	South Sudan	Africa	no	19 958.30	11 804.41			48
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			49
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			50
NAM	Namibia	Africa	no	42 062.66	13 113.07			51
SDN	Sudan	Africa	no	70 368.78	66 565.89			52
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	50 115.44	3.84	1
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	9 688.13	3.54	2
PHL	Philippines	Asia	no	566 948.60	272 066.56	3 827.86	1.41	3
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	45 243.59	0.92	4
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	385.00	0.57	5
OMN	Oman	Asia	no	202 533.60	79 655.92	405.68	0.51	6
IND	India	Asia	no	5 769 372.00	1 876 797.16	4 526.74	0.24	7
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	305.42	0.20	8
PAK	Pakistan	Asia	no	502 344.30	232 286.78	294.43	0.13	9
CHN	China	Asia	no	31 726 110.00	9 240 270.86	11 492.35	0.12	10
VNM	Vietnam	Asia	no	487 574.40	171 390.01	212.61	0.12	11
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	481.01	0.06	12
BRN	Brunei	Asia	no	71 236.46	16 111.14	1.18	0.01	13
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	19.94	0.01	14
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	5.63	0.00	15
THA	Thailand	Asia	no	1 378 999.00	387 252.16	2.89	0.00	16
IRN	Iran	Asia	no	2 067 640.00	368 904.34	1.90	0.00	17
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.02	0.00	18
CYP	Cyprus	Asia	no	71 610.53	21 911.45			19
KWT	Kuwait	Asia	no	469 418.40	175 830.50			20
TWN	Taiwan	Asia	no	1 680 401.00				21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			22
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			23
IRQ	Iraq	Asia	no	132 499.60	229 327.29			24
PRK	North Korea	Asia	no	77 982.15				25
GEO	Georgia	Asia	no	53 823.53	16 140.05			26
JOR	Jordan	Asia	no	121 481.20	33 678.50			27
ARM	Armenia	Asia	no	22 895.19	10 432.17			28
NPL	Nepal	Asia	no	53 996.57	19 294.35			29
LAO	Laos	Asia	no	21 925.62	11 242.53			30
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			31
QAT	Qatar	Asia	no	624 817.70	203 235.16			32
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			33
SYR	Syria	Asia	no	204 643.30	40 405.00			34
MNG	Mongolia	Asia	no	36 587.61	11 516.41			35
PSE	State of Palestine	Asia	no	69 454.30				36
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			37
BTN	Bhutan	Asia	no	11 083.66	1 781.26			38
YEM	Yemen	Asia	no	79 113.56	35 954.50			39
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			40
LBN	Lebanon	Asia	no	207 723.70	44 352.42			41
MMR	Myanmar	Asia	no	195 390.10				42
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			43
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			44
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			45
MAC	Macau	Asia	no	56 709.10	51 753.10			46
ISR	Israel	Asia	no	853 829.30	290 550.61			47
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	217.02	0.01	1
MCO	Monaco	Europe	no	20 716.40	6 074.51			2
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			3
UKR	Ukraine	Europe	no	676 833.60	177 430.61			4
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			5
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			6
LTU	Lithuania	Europe	no	135 613.80	45 931.97			7
HRV	Croatia	Europe	no	188 113.70	57 868.67			8
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			9
SVN	Slovenia	Europe	no	139 899.70	47 987.30			10
HUN	Hungary	Europe	no	562 479.60	133 423.90			11
AUT	Austria	Europe	no	1 801 472.00	428 321.90			12
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			13
SRB	Serbia	Europe	no	57 317.24	45 519.65			14
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			15
GRC	Greece	Europe	no	1 181 283.00	242 230.33			16
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			17
AND	Andorra	Europe	no	8 381.65	2 849.17			18
FRA	France	Europe	no	10 329 420.00	2 806 427.94			19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			20
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			21
EST	Estonia	Europe	no	79 617.31	24 880.27			22
FIN	Finland	Europe	no	965 383.40	267 328.62			23
ISL	Iceland	Europe	no	57 291.68	15 330.06			24
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			25
LVA	Latvia	Europe	no	95 608.77	30 956.69			26
MKD	Macedonia	Europe	no	32 996.37	10 195.40			27
BLR	Belarus	Europe	no	229 399.90	71 709.52			28
ROU	Romania	Europe	no	555 697.40				29
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			30
SVK	Slovakia	Europe	no	414 782.80	97 707.33			31
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			32
ALB	Albania	Europe	no	40 459.65	12 923.24			33
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			34
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01			35
IRL	Ireland	Europe	no	778 821.60	232 077.43			36
MNE	Montenegro	Europe	no	8 892.93	4 416.08			37
POL	Poland	Europe	no	1 614 716.00	525 865.98			38
SMR	San Marino	Europe	no	4 049.35	1 899.81			39
GIB	Gibraltar	Europe	no	4 042.19				40
NOR	Norway	Europe	no	1 933 679.00	512 580.42			41
MLT	Malta	Europe	no	36 990.21	9 642.33			42
MDA	Moldova	Europe	no	33 762.68	7 969.62			43
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			44
PRT	Portugal	Europe	no	1 054 344.00	227 323.72			45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	53.72	0.48	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	66.33	0.36	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	1 486.01	0.12	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	425.43	0.10	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	8.44	0.02	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.52	0.01	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	9.59	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.61	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			9
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			14
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09			17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	87 253.88	0.52	1
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55			2
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	3 830.06	2.06	1
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	4 610.10	0.30	2
TUV	Tuvalu	Oceania	no	123.26	38.32			3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	82.85	0.81	1
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	89.63	0.58	2
SOM	Somalia	Africa	no	6 408.32	834.95	0.02	0.00	3
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	4
GAB	Gabon	Africa	no	120 252.20	17 298.19			5
RWA	Rwanda	Africa	no	13 197.39	7 406.89			6
SEN	Senegal	Africa	no	35 335.24	14 606.22			7
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			8
GMB	The Gambia	Africa	no	2 097.61	875.76			9
GHA	Ghana	Africa	no	74 174.05	47 004.17			10
TCD	Chad	Africa	no	26 745.14	12 987.28			11
DJI	Djibouti	Africa	no	4 744.66	775.82			12
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			13
ZMB	Zambia	Africa	no	48 954.52	26 049.97			14
AGO	Angola	Africa	no	176 182.50	112 289.11			15
TGO	Togo	Africa	no	12 513.67	3 696.32			16
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			17
MRT	Mauritania	Africa	no	11 985.52	3 892.41			18
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			19
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			20
COD	Democratic Republic of the Congo	Africa	no	27 401.97				21
LSO	Lesotho	Africa	no	17 938.00	2 861.49			22
ESH	Western Sahara	Africa	no	3 690.88				23
EGY	Egypt	Africa	no	617 149.20	264 562.52			24
DZA	Algeria	Africa	no	899 206.20	206 267.88			25
SYC	Seychelles	Africa	no	6 234.98	1 392.89			26
MAR	Morroco	Africa	no	374 846.30	100 965.44			27
KEN	Kenya	Africa	no	98 382.66	54 934.72			28
BEN	Benin	Africa	no	21 971.91	8 247.34			29
GIN	Guinea	Africa	no	13 665.89	5 696.70			30
MWI	Malawi	Africa	no	18 356.97	3 574.19			31
COG	Congo	Africa	no	69 047.72	11 049.89			32
TUN	Tunisia	Africa	no	178 845.60	44 799.78			33
LBR	Liberia	Africa	no	1 911.24	1 751.03			34
BWA	Botswana	Africa	no	90 628.62	14 678.53			35
LBY	Libya	Africa	no	73 757.40	61 985.45			36
CMR	Cameroon	Africa	no	81 683.73	28 948.12			37
ERI	Eritrea	Africa	no	9 081.79	3 412.88			38
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			39
UGA	Uganda	Africa	no	43 697.09	22 316.73			40
REU	Reunion	Africa	no	67 897.68				41
NER	Niger	Africa	no	12 723.49	7 223.22			42
MLI	Mali	Africa	no	27 719.15	10 272.74			43
MYT	Mayotte	Africa	no	6 949.04				44
NGA	Nigeria	Africa	no	592 030.40	499 041.44			45
BDI	Burundi	Africa	no	3 616.17	2 713.09			46
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			47
SSD	South Sudan	Africa	no	19 958.30	10 791.19			48
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			49
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			50
NAM	Namibia	Africa	no	42 062.66	12 989.72			51
SDN	Sudan	Africa	no	70 368.78	63 769.45			52
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	50 115.44	3.81	1
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	9 688.13	3.47	2
PHL	Philippines	Asia	no	566 948.60	326 316.43	3 827.86	1.17	3
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	45 243.59	0.89	4
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	385.00	0.59	5
OMN	Oman	Asia	no	202 533.60	90 220.81	405.68	0.45	6
IND	India	Asia	no	5 769 372.00	1 855 591.42	4 526.74	0.24	7
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	305.42	0.19	8
VNM	Vietnam	Asia	no	487 574.40	164 181.67	212.61	0.13	9
CHN	China	Asia	no	31 726 110.00	9 196 167.76	11 492.35	0.12	10
PAK	Pakistan	Asia	no	502 344.30	244 280.84	294.43	0.12	11
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	481.01	0.06	12
BRN	Brunei	Asia	no	71 236.46	10 784.47	1.18	0.01	13
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	19.94	0.01	14
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	5.63	0.00	15
THA	Thailand	Asia	no	1 378 999.00	361 245.34	2.89	0.00	16
IRN	Iran	Asia	no	2 067 640.00	369 271.87	1.90	0.00	17
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.02	0.00	18
CYP	Cyprus	Asia	no	71 610.53	21 453.80			19
KWT	Kuwait	Asia	no	469 418.40	165 127.08			20
TWN	Taiwan	Asia	no	1 680 401.00				21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			22
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			23
IRQ	Iraq	Asia	no	132 499.60	229 027.28			24
PRK	North Korea	Asia	no	77 982.15				25
GEO	Georgia	Asia	no	53 823.53	15 835.00			26
JOR	Jordan	Asia	no	121 481.20	33 339.06			27
ARM	Armenia	Asia	no	22 895.19	10 972.97			28
NPL	Nepal	Asia	no	53 996.57	19 443.42			29
LAO	Laos	Asia	no	21 925.62	10 602.76			30
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			31
QAT	Qatar	Asia	no	624 817.70	190 319.79			32
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			33
SYR	Syria	Asia	no	204 643.30	39 715.80			34
MNG	Mongolia	Asia	no	36 587.61	10 751.45			35
PSE	State of Palestine	Asia	no	69 454.30				36
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			37
BTN	Bhutan	Asia	no	11 083.66	1 665.34			38
YEM	Yemen	Asia	no	79 113.56	34 721.48			39
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			40
LBN	Lebanon	Asia	no	207 723.70	44 926.34			41
MMR	Myanmar	Asia	no	195 390.10				42
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			43
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			44
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			45
MAC	Macau	Asia	no	56 709.10	37 762.88			46
ISR	Israel	Asia	no	853 829.30	284 226.45			47
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	217.02	0.01	1
MCO	Monaco	Europe	no	20 716.40	6 919.24			2
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			3
UKR	Ukraine	Europe	no	676 833.60	180 979.14			4
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			5
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			6
LTU	Lithuania	Europe	no	135 613.80	44 274.32			7
HRV	Croatia	Europe	no	188 113.70	56 412.38			8
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			9
SVN	Slovenia	Europe	no	139 899.70	47 633.96			10
HUN	Hungary	Europe	no	562 479.60	129 554.20			11
AUT	Austria	Europe	no	1 801 472.00	427 916.46			12
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			13
SRB	Serbia	Europe	no	57 317.24	43 641.10			14
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			15
GRC	Greece	Europe	no	1 181 283.00	242 155.98			16
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			17
AND	Andorra	Europe	no	8 381.65	2 539.76			18
FRA	France	Europe	no	10 329 420.00	2 855 136.13			19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			20
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			21
EST	Estonia	Europe	no	79 617.31	24 010.33			22
FIN	Finland	Europe	no	965 383.40	268 134.55			23
ISL	Iceland	Europe	no	57 291.68	15 047.05			24
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			25
LVA	Latvia	Europe	no	95 608.77	30 883.23			26
MKD	Macedonia	Europe	no	32 996.37	10 110.99			27
BLR	Belarus	Europe	no	229 399.90	69 000.62			28
ROU	Romania	Europe	no	555 697.40				29
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			30
SVK	Slovakia	Europe	no	414 782.80	95 768.45			31
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			32
ALB	Albania	Europe	no	40 459.65	12 951.12			33
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			34
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20			35
IRL	Ireland	Europe	no	778 821.60	197 446.98			36
MNE	Montenegro	Europe	no	8 892.93	4 503.08			37
POL	Poland	Europe	no	1 614 716.00	506 714.23			38
SMR	San Marino	Europe	no	4 049.35	1 681.06			39
GIB	Gibraltar	Europe	no	4 042.19				40
NOR	Norway	Europe	no	1 933 679.00	520 892.58			41
MLT	Malta	Europe	no	36 990.21	8 946.39			42
MDA	Moldova	Europe	no	33 762.68	8 846.50			43
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			44
PRT	Portugal	Europe	no	1 054 344.00	222 332.29			45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	53.72	0.49	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	66.33	0.38	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	1 486.01	0.12	3
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	425.43	0.10	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	8.44	0.02	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.52	0.01	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	9.59	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.61	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			9
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			14
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75			17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	87 253.88	0.51	1
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67			2
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	3 830.06	2.34	1
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	4 610.10	0.30	2
TUV	Tuvalu	Oceania	no	123.26	55.31			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
MYT	Mayotte	Africa	no	6 949.04	196.12	2.82	1
REU	Reunion	Africa	no	67 897.68	686.71	1.01	2
MDG	Madagascar	Africa	no	23 496.42	82.85	0.35	3
MOZ	Mozambique	Africa	no	36 409.45	89.63	0.25	4
SOM	Somalia	Africa	no	6 408.32	0.02	0.00	5
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	6
SEN	Senegal	Africa	no	35 335.24			7
GNQ	Equatorial Guinea	Africa	no	20 061.44			8
GMB	The Gambia	Africa	no	2 097.61			9
GHA	Ghana	Africa	no	74 174.05			10
TCD	Chad	Africa	no	26 745.14			11
TGO	Togo	Africa	no	12 513.67			12
ZAF	South Africa	Africa	no	1 282 854.00			13
MRT	Mauritania	Africa	no	11 985.52			14
BFA	Burkina Faso	Africa	no	24 689.43			15
CIV	Ivory Coast	Africa	no	45 467.63			16
DJI	Djibouti	Africa	no	4 744.66			17
ZWE	Zimbawue	Africa	no	22 038.05			18
ZMB	Zambia	Africa	no	48 954.52			19
AGO	Angola	Africa	no	176 182.50			20
GAB	Gabon	Africa	no	120 252.20			21
RWA	Rwanda	Africa	no	13 197.39			22
COD	Democratic Republic of the Congo	Africa	no	27 401.97			23
LSO	Lesotho	Africa	no	17 938.00			24
ESH	Western Sahara	Africa	no	3 690.88			25
EGY	Egypt	Africa	no	617 149.20			26
DZA	Algeria	Africa	no	899 206.20			27
SYC	Seychelles	Africa	no	6 234.98			28
MAR	Morroco	Africa	no	374 846.30			29
KEN	Kenya	Africa	no	98 382.66			30
BEN	Benin	Africa	no	21 971.91			31
GIN	Guinea	Africa	no	13 665.89			32
MWI	Malawi	Africa	no	18 356.97			33
COG	Congo	Africa	no	69 047.72			34
TUN	Tunisia	Africa	no	178 845.60			35
LBR	Liberia	Africa	no	1 911.24			36
BWA	Botswana	Africa	no	90 628.62			37
LBY	Libya	Africa	no	73 757.40			38
CMR	Cameroon	Africa	no	81 683.73			39
ERI	Eritrea	Africa	no	9 081.79			40
SLE	Sierra Leone	Africa	no	3 031.82			41
UGA	Uganda	Africa	no	43 697.09			42
NER	Niger	Africa	no	12 723.49			43
MLI	Mali	Africa	no	27 719.15			44
NGA	Nigeria	Africa	no	592 030.40			45
BDI	Burundi	Africa	no	3 616.17			46
ETH	Ethiopia	Africa	no	65 598.93			47
SSD	South Sudan	Africa	no	19 958.30			48
SWZ	Swaziland	Africa	no	13 701.24			49
CAF	Central African Republic	Africa	no	3 893.74			50
NAM	Namibia	Africa	no	42 062.66			51
SDN	Sudan	Africa	no	70 368.78			52
KOR	South Korea	Asia	no	5 538 605.00	50 115.44	0.90	1
HKG	Hong Kong	Asia	no	1 250 063.00	9 688.13	0.78	2
PHL	Philippines	Asia	no	566 948.60	3 827.86	0.68	3
MMR	Myanmar	Asia	no	195 390.10	570.46	0.29	4
TWN	Taiwan	Asia	no	1 680 401.00	3 603.04	0.21	5
OMN	Oman	Asia	no	202 533.60	405.68	0.20	6
LKA	Sri Lanka	Asia	no	208 273.50	385.00	0.18	7
JPN	Japan	Asia	no	39 255 200.00	45 243.59	0.12	8
BGD	Bangladesh	Asia	no	381 431.90	305.42	0.08	9
IND	India	Asia	no	5 769 372.00	4 526.74	0.08	10
PAK	Pakistan	Asia	no	502 344.30	294.43	0.06	11
VNM	Vietnam	Asia	no	487 574.40	212.61	0.04	12
CHN	China	Asia	no	31 726 110.00	11 492.35	0.04	13
PRK	North Korea	Asia	no	77 982.15	21.00	0.03	14
IDN	Indonesia	Asia	no	2 827 835.00	481.01	0.02	15
MYS	Malaysia	Asia	no	1 170 979.00	19.94	0.00	16
BRN	Brunei	Asia	no	71 236.46	1.18	0.00	17
ARE	United Arab Emirates	Asia	no	1 282 119.00	5.63	0.00	18
THA	Thailand	Asia	no	1 378 999.00	2.89	0.00	19
IRN	Iran	Asia	no	2 067 640.00	1.90	0.00	20
KHM	Cambodia	Asia	no	27 390.49	0.02	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
LBN	Lebanon	Asia	no	207 723.70			22
JOR	Jordan	Asia	no	121 481.20			23
TUR	Turkey	Asia	no	1 947 249.00			24
NPL	Nepal	Asia	no	53 996.57			25
KGZ	Kyrgizstan	Asia	no	18 466.60			26
CYP	Cyprus	Asia	no	71 610.53			27
SAU	Saudi Arabia	Asia	no	2 141 419.00			28
GEO	Georgia	Asia	no	53 823.53			29
MNG	Mongolia	Asia	no	36 587.61			30
TJK	Tajikistan	Asia	no	20 536.86			31
BTN	Bhutan	Asia	no	11 083.66			32
UZB	Uzbekistan	Asia	no	151 891.10			33
LAO	Laos	Asia	no	21 925.62			34
YEM	Yemen	Asia	no	79 113.56			35
TKM	Turkmenistan	Asia	no	36 127.02			36
KAZ	Kazakhstan	Asia	no	734 309.90			37
IRQ	Iraq	Asia	no	132 499.60			38
MAC	Macau	Asia	no	56 709.10			39
ISR	Israel	Asia	no	853 829.30			40
QAT	Qatar	Asia	no	624 817.70			41
ARM	Armenia	Asia	no	22 895.19			42
AZE	Azerbaijan	Asia	no	192 784.00			43
KWT	Kuwait	Asia	no	469 418.40			44
SYR	Syria	Asia	no	204 643.30			45
PSE	State of Palestine	Asia	no	69 454.30			46
AFG	Afghanistan	Asia	no	60 187.87			47
RUS	Russia	Europe	no	6 325 795.00	217.02	0.00	1
MCO	Monaco	Europe	no	20 716.40			2
LUX	Luxembourg	Europe	no	201 130.60			3
UKR	Ukraine	Europe	no	676 833.60			4
ESP	Spain	Europe	no	6 233 955.00			5
ITA	Italy	Europe	no	8 604 332.00			6
LTU	Lithuania	Europe	no	135 613.80			7
HRV	Croatia	Europe	no	188 113.70			8
CHE	Switzerland	Europe	no	3 421 606.00			9
SVN	Slovenia	Europe	no	139 899.70			10
HUN	Hungary	Europe	no	562 479.60			11
AUT	Austria	Europe	no	1 801 472.00			12
DNK	Denmark	Europe	no	1 346 393.00			13
SRB	Serbia	Europe	no	57 317.24			14
CZE	Czech Republic	Europe	no	1 007 263.00			15
GRC	Greece	Europe	no	1 181 283.00			16
BEL	Belgium	Europe	no	1 980 551.00			17
AND	Andorra	Europe	no	8 381.65			18
FRA	France	Europe	no	10 329 420.00			19
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			20
BGR	Bulgaria	Europe	no	163 821.60			21
EST	Estonia	Europe	no	79 617.31			22
FIN	Finland	Europe	no	965 383.40			23
ISL	Iceland	Europe	no	57 291.68			24
LIE	Liechtenstein	Europe	no	18 837.10			25
LVA	Latvia	Europe	no	95 608.77			26
MKD	Macedonia	Europe	no	32 996.37			27
BLR	Belarus	Europe	no	229 399.90			28
ROU	Romania	Europe	no	555 697.40			29
DEU	Germany	Europe	no	15 114 870.00			30
SVK	Slovakia	Europe	no	414 782.80			31
SWE	Sweden	Europe	no	1 747 501.00			32
ALB	Albania	Europe	no	40 459.65			33
FRO	Faroe Islands	Europe	no	9 272.37			34
GBR	United Kingdom	Europe	no	7 806 797.00			35
IRL	Ireland	Europe	no	778 821.60			36
MNE	Montenegro	Europe	no	8 892.93			37
POL	Poland	Europe	no	1 614 716.00			38
SMR	San Marino	Europe	no	4 049.35			39
GIB	Gibraltar	Europe	no	4 042.19			40
NOR	Norway	Europe	no	1 933 679.00			41
MLT	Malta	Europe	no	36 990.21			42
MDA	Moldova	Europe	no	33 762.68			43
NLD	Netherlands	Europe	no	3 410 955.00			44
PRT	Portugal	Europe	no	1 054 344.00			45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	53.72	0.15	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	66.33	0.09	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	425.43	0.04	3
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 486.01	0.03	4
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	8.44	0.00	5
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.52	0.00	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	9.59	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.61	0.00	8
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			9
CHL	Chile	Latin America and the Caribbean	no	784 154.10			10
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			11
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			12
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			14
PER	Peru	Latin America and the Caribbean	no	692 344.50			15
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			16
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			19
USA	United States	Northern America	no	54 922 480.00	87 253.88	0.16	1
CAN	Canada	Northern America	no	6 291 917.00			2
NZL	New Zealand	Oceania	no	679 705.40	3 830.06	0.56	1
AUS	Australia	Oceania	no	6 616 533.00	4 610.10	0.07	2
TUV	Tuvalu	Oceania	no	123.26			3

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Region

Flood

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	136.64	207.63	1
SWZ	Swaziland	Africa	no	13 701.24	28.92	363.96	79.46	2
ERI	Eritrea	Africa	no	9 081.79	12.50	260.73	47.94	3
LSO	Lesotho	Africa	no	17 938.00	29.51	855.33	34.50	4
MWI	Malawi	Africa	no	18 356.97	24.11	731.37	32.97	5
GAB	Gabon	Africa	no	120 252.20	200.15	6 432.02	31.12	6
COG	Congo	Africa	no	69 047.72	126.48	4 329.13	29.22	7
MLI	Mali	Africa	no	27 719.15	44.76	1 684.06	26.58	8
MDG	Madagascar	Africa	no	23 496.42	36.07	1 666.80	21.64	9
GIN	Guinea	Africa	no	13 665.89	17.64	919.65	19.18	10
NAM	Namibia	Africa	no	42 062.66	64.55	3 368.79	19.16	11
TGO	Togo	Africa	no	12 513.67	10.94	685.82	15.95	12
CAF	Central African Republic	Africa	no	3 893.74	4.92	320.25	15.36	13
MOZ	Mozambique	Africa	no	36 409.45	39.00	2 723.39	14.32	14
ZAF	South Africa	Africa	no	1 282 854.00	910.25	67 780.45	13.43	15
CMR	Cameroon	Africa	no	81 683.73	74.86	5 736.52	13.05	16
SSD	South Sudan	Africa	no	19 958.30	17.42	1 399.32	12.45	17
MRT	Mauritania	Africa	no	11 985.52	18.88	1 578.96	11.96	18
TCD	Chad	Africa	no	26 745.14	38.75	3 701.42	10.47	19
RWA	Rwanda	Africa	no	13 197.39	17.68	1 920.52	9.21	20
AGO	Angola	Africa	no	176 182.50	165.69	18 242.56	9.08	21
BEN	Benin	Africa	no	21 971.91	19.22	2 182.62	8.81	22
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 889.80	8.77	23
CIV	Ivory Coast	Africa	no	45 467.63	44.43	5 292.23	8.40	24
KEN	Kenya	Africa	no	98 382.66	90.33	11 277.32	8.01	25
ETH	Ethiopia	Africa	no	65 598.93	135.52	17 012.56	7.97	26
BWA	Botswana	Africa	no	90 628.62	38.66	5 015.09	7.71	27
NER	Niger	Africa	no	12 723.49	19.29	2 551.37	7.56	28
SLE	Sierra Leone	Africa	no	3 031.82	5.09	685.06	7.43	29
NGA	Nigeria	Africa	no	592 030.40	543.42	75 511.10	7.20	30
LBR	Liberia	Africa	no	1 911.24	3.06	440.32	6.95	31
GMB	The Gambia	Africa	no	2 097.61	1.24	187.47	6.61	32
ZWE	Zimbawue	Africa	no	22 038.05	9.92	1 752.82	5.66	33
SDN	Sudan	Africa	no	70 368.78	71.67	13 307.19	5.39	34
ZMB	Zambia	Africa	no	48 954.52	25.96	5 247.76	4.95	35
EGY	Egypt	Africa	no	617 149.20	161.27	37 477.12	4.30	36
TUN	Tunisia	Africa	no	178 845.60	40.60	9 509.45	4.27	37
MAR	Morroco	Africa	no	374 846.30	132.04	31 321.40	4.22	38
GHA	Ghana	Africa	no	74 174.05	45.95	10 912.64	4.21	39
UGA	Uganda	Africa	no	43 697.09	20.60	5 121.46	4.02	40
BDI	Burundi	Africa	no	3 616.17	3.05	780.29	3.91	41
TZA	Tanzania	Africa	no	50 142.79	37.79	10 658.54	3.55	42
SEN	Senegal	Africa	no	35 335.24	11.38	3 706.12	3.07	43
DZA	Algeria	Africa	no	899 206.20	178.37	71 040.48	2.51	44
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	9 099.23	2.17	45
DJI	Djibouti	Africa	no	4 744.66	0.19	317.86	0.60	46
LBY	Libya	Africa	no	73 757.40	12.82	25 993.79	0.49	47
REU	Reunion	Africa	no	67 897.68				48
MYT	Mayotte	Africa	no	6 949.04				49
SYC	Seychelles	Africa	no	6 234.98		484.95		50
ESH	Western Sahara	Africa	no	3 690.88	0.02			51
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			52
KHM	Cambodia	Asia	no	27 390.49	251.19	2 753.57	91.22	1
LAO	Laos	Asia	no	21 925.62	219.52	3 279.79	66.93	2
BTN	Bhutan	Asia	no	11 083.66	54.65	842.11	64.90	3
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	42 581.72	57.85	4
VNM	Vietnam	Asia	no	487 574.40	2 295.39	40 823.56	56.23	5
TJK	Tajikistan	Asia	no	20 536.86	48.23	1 199.63	40.20	6
PAK	Pakistan	Asia	no	502 344.30	1 029.80	30 125.80	34.18	7
NPL	Nepal	Asia	no	53 996.57	143.34	4 356.14	32.91	8
AFG	Afghanistan	Asia	no	60 187.87	92.17	3 601.40	25.59	9
THA	Thailand	Asia	no	1 378 999.00	2 586.19	103 523.57	24.98	10
YEM	Yemen	Asia	no	79 113.56	57.50	3 126.31	18.39	11
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	2 207.36	16.22	12
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	84 107.08	15.11	13
IND	India	Asia	no	5 769 372.00	7 471.82	530 741.66	14.08	14
SYR	Syria	Asia	no	204 643.30	114.65	8 252.62	13.89	15
GEO	Georgia	Asia	no	53 823.53	45.09	3 542.58	12.73	16
BRN	Brunei	Asia	no	71 236.46	30.95	2 466.98	12.55	17
PHL	Philippines	Asia	no	566 948.60	545.43	55 644.78	9.80	18
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	49 121.75	9.73	19
ARM	Armenia	Asia	no	22 895.19	21.18	2 183.10	9.70	20
IRQ	Iraq	Asia	no	132 499.60	344.33	35 983.20	9.57	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
IRN	Iran	Asia	no	2 067 640.00	668.26	73 681.58	9.07	22
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	274 943.80	8.63	23
MNG	Mongolia	Asia	no	36 587.61	39.40	5 086.03	7.75	24
LKA	Sri Lanka	Asia	no	208 273.50	143.75	19 647.18	7.32	25
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	88 386.66	7.23	26
UZB	Uzbekistan	Asia	no	151 891.10	78.64	13 153.84	5.98	27
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	386 884.93	5.65	28
TKM	Turkmenistan	Asia	no	36 127.02	77.11	16 597.51	4.65	29
CHN	China	Asia	no	31 726 110.00	18 765.75	4 370 835.96	4.29	30
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 068 884.62	4.05	31
AZE	Azerbaijan	Asia	no	192 784.00	44.02	18 074.31	2.44	32
TUR	Turkey	Asia	no	1 947 249.00	296.12	167 069.99	1.77	33
OMN	Oman	Asia	no	202 533.60	26.27	17 256.96	1.52	34
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	173 661.86	1.28	35
LBN	Lebanon	Asia	no	207 723.70	8.08	12 363.32	0.65	36
QAT	Qatar	Asia	no	624 817.70	7.04	15 282.42	0.46	37
JOR	Jordan	Asia	no	121 481.20	3.01	9 168.09	0.33	38
ISR	Israel	Asia	no	853 829.30	9.52	56 565.68	0.17	39
KWT	Kuwait	Asia	no	469 418.40	2.91	19 039.58	0.15	40
CYP	Cyprus	Asia	no	71 610.53	0.46	4 260.93	0.11	41
PSE	State of Palestine	Asia	no	69 454.30	0.29			42
PRK	North Korea	Asia	no	77 982.15	157.21			43
TWN	Taiwan	Asia	no	1 680 401.00	79.41			44
MMR	Myanmar	Asia	no	195 390.10	1 956.65			45
MAC	Macau	Asia	no	56 709.10		6 610.47		46
HKG	Hong Kong	Asia	no	1 250 063.00		65 379.04		47
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 595.35	58.81	1
MDA	Moldova	Europe	no	33 762.68	101.07	1 821.11	55.50	2
UKR	Ukraine	Europe	no	676 833.60	1 153.80	32 236.10	35.79	3
LVA	Latvia	Europe	no	95 608.77	172.80	6 324.84	27.32	4
SVK	Slovakia	Europe	no	414 782.80	532.30	19 975.29	26.65	5
SRB	Serbia	Europe	no	57 317.24	163.25	8 634.55	18.91	6
LTU	Lithuania	Europe	no	135 613.80	134.90	7 517.23	17.95	7
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	3 192.49	17.14	8
BLR	Belarus	Europe	no	229 399.90	449.46	26 490.10	16.97	9
HRV	Croatia	Europe	no	188 113.70	147.78	11 171.45	13.23	10
RUS	Russia	Europe	no	6 325 795.00	4 987.01	450 238.87	11.08	11
EST	Estonia	Europe	no	79 617.31	61.56	6 795.36	9.06	12
ALB	Albania	Europe	no	40 459.65	30.59	3 379.49	9.05	13
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	52 070.81	8.06	14
AUT	Austria	Europe	no	1 801 472.00	749.13	95 015.40	7.88	15
NLD	Netherlands	Europe	no	3 410 955.00	984.03	155 739.98	6.32	16
POL	Poland	Europe	no	1 614 716.00	621.52	98 972.34	6.28	17
IRL	Ireland	Europe	no	778 821.60	199.25	35 221.45	5.66	18
CHE	Switzerland	Europe	no	3 421 606.00	845.26	160 510.43	5.27	19
BGR	Bulgaria	Europe	no	163 821.60	58.23	11 609.87	5.02	20
FRA	France	Europe	no	10 329 420.00	3 091.69	619 955.29	4.99	21
MNE	Montenegro	Europe	no	8 892.93	3.99	847.70	4.71	22
ESP	Spain	Europe	no	6 233 955.00	1 109.18	257 993.28	4.30	23
SVN	Slovenia	Europe	no	139 899.70	39.17	9 461.85	4.14	24
PRT	Portugal	Europe	no	1 054 344.00	141.38	34 419.00	4.11	25
DEU	Germany	Europe	no	15 114 870.00	2 697.57	737 992.70	3.66	26
MKD	Macedonia	Europe	no	32 996.37	7.23	2 530.04	2.86	27
GRC	Greece	Europe	no	1 181 283.00	55.33	27 154.95	2.04	28
ITA	Italy	Europe	no	8 604 332.00	777.37	383 197.87	2.03	29
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	440 106.84	1.98	30
BEL	Belgium	Europe	no	1 980 551.00	167.25	116 900.65	1.43	31
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 257.46	1.13	32
SWE	Sweden	Europe	no	1 747 501.00	110.38	128 378.82	0.86	33
DNK	Denmark	Europe	no	1 346 393.00	27.85	61 547.69	0.45	34
SMR	San Marino	Europe	no	4 049.35				35
MCO	Monaco	Europe	no	20 716.40				36
FRO	Faroe Islands	Europe	no	9 272.37				37
ROU	Romania	Europe	no	555 697.40	519.75			38
LIE	Liechtenstein	Europe	no	18 837.10				39
ISL	Iceland	Europe	no	57 291.68		2 314.22		40
FIN	Finland	Europe	no	965 383.40		56 624.15		41
GIB	Gibraltar	Europe	no	4 042.19				42
NOR	Norway	Europe	no	1 933 679.00		116 071.15		43
MLT	Malta	Europe	no	36 990.21		1 333.61		44
AND	Andorra	Europe	no	8 381.65				45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	4 539.50	24.66	1
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	4 394.85	21.01	2

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	2 574.11	13.39	3
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	5 844.96	11.83	4
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	408 331.78	10.88	5
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	7 693.87	8.93	6
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	103 818.81	8.52	7
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	26 312.88	8.09	8
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	92 724.40	7.06	9
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	53 841.99	6.72	10
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	65 444.15	6.57	11
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	10 406.53	4.10	12
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	3 663.90	3.42	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	265 421.77	3.28	14
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	77 440.20	2.77	15
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	12 763.68	2.76	16
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	10 060.78	2.48	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			19
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	433 369.09	6.50	1
USA	United States	Northern America	no	54 922 480.00	9 408.88	3 244 299.91	2.90	2
NZL	New Zealand	Oceania	no	679 705.40	399.98	38 213.65	10.47	1
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	442 013.06	9.51	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	133.83	211.99	1
GAB	Gabon	Africa	no	120 252.20	200.15	1 026.90	194.91	2
COG	Congo	Africa	no	69 047.72	126.48	1 908.75	66.26	3
ZMB	Zambia	Africa	no	48 954.52	25.96	568.19	45.69	4
MDG	Madagascar	Africa	no	23 496.42	36.07	915.01	39.42	5
SWZ	Swaziland	Africa	no	13 701.24	28.92	753.93	38.36	6
MLI	Mali	Africa	no	27 719.15	44.76	1 172.08	38.19	7
TCD	Chad	Africa	no	26 745.14	38.75	1 026.17	37.76	8
ETH	Ethiopia	Africa	no	65 598.93	135.52	3 941.08	34.39	9
LSO	Lesotho	Africa	no	17 938.00	29.51	878.46	33.59	10
TGO	Togo	Africa	no	12 513.67	10.94	359.57	30.43	11
GIN	Guinea	Africa	no	13 665.89	17.64	594.52	29.67	12
CAF	Central African Republic	Africa	no	3 893.74	4.92	166.29	29.59	13
MWI	Malawi	Africa	no	18 356.97	24.11	818.79	29.45	14
MRT	Mauritania	Africa	no	11 985.52	18.88	706.94	26.71	15
ERI	Eritrea	Africa	no	9 081.79	12.50	549.64	22.74	16
CMR	Cameroon	Africa	no	81 683.73	74.86	3 421.99	21.88	17
BEN	Benin	Africa	no	21 971.91	19.22	934.54	20.57	18
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	1 036.62	19.09	19
GMB	The Gambia	Africa	no	2 097.61	1.24	67.53	18.36	20
NAM	Namibia	Africa	no	42 062.66	64.55	3 617.67	17.84	21
NER	Niger	Africa	no	12 723.49	19.29	1 083.62	17.80	22
CIV	Ivory Coast	Africa	no	45 467.63	44.43	2 613.28	17.00	23
RWA	Rwanda	Africa	no	13 197.39	17.68	1 065.41	16.59	24
SDN	Sudan	Africa	no	70 368.78	71.67	5 000.18	14.33	25
BWA	Botswana	Africa	no	90 628.62	38.66	2 912.71	13.27	26
NGA	Nigeria	Africa	no	592 030.40	543.42	42 180.53	12.88	27
MOZ	Mozambique	Africa	no	36 409.45	39.00	3 190.27	12.22	28
SLE	Sierra Leone	Africa	no	3 031.82	5.09	428.35	11.88	29
ZAF	South Africa	Africa	no	1 282 854.00	910.25	77 967.19	11.67	30
KEN	Kenya	Africa	no	98 382.66	90.33	7 759.48	11.64	31
UGA	Uganda	Africa	no	43 697.09	20.60	1 787.04	11.53	32
LBR	Liberia	Africa	no	1 911.24	3.06	268.18	11.41	33
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 951.39	8.50	34
MAR	Morroco	Africa	no	374 846.30	132.04	19 696.51	6.70	35
AGO	Angola	Africa	no	176 182.50	165.69	24 725.13	6.70	36
SSD	South Sudan	Africa	no	19 958.30	17.42	2 720.34	6.40	37
TZA	Tanzania	Africa	no	50 142.79	37.79	6 321.86	5.98	38
GHA	Ghana	Africa	no	74 174.05	45.95	8 003.31	5.74	39
BDI	Burundi	Africa	no	3 616.17	3.05	599.64	5.09	40
EGY	Egypt	Africa	no	617 149.20	161.27	31 768.68	5.08	41
SEN	Senegal	Africa	no	35 335.24	11.38	2 289.33	4.97	42
TUN	Tunisia	Africa	no	178 845.60	40.60	8 918.25	4.55	43
DZA	Algeria	Africa	no	899 206.20	178.37	39 734.87	4.49	44
ZWE	Zimbawue	Africa	no	22 038.05	9.92	2 703.00	3.67	45
LBY	Libya	Africa	no	73 757.40	12.82	8 664.60	1.48	46
DJI	Djibouti	Africa	no	4 744.66	0.19	212.95	0.89	47
MYT	Mayotte	Africa	no	6 949.04				48
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			49
ESH	Western Sahara	Africa	no	3 690.88	0.02			50
REU	Reunion	Africa	no	67 897.68				51
SYC	Seychelles	Africa	no	6 234.98		369.27		52
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	7 673.71	320.99	1
KHM	Cambodia	Asia	no	27 390.49	251.19	795.24	315.87	2
VNM	Vietnam	Asia	no	487 574.40	2 295.39	10 550.52	217.56	3
BTN	Bhutan	Asia	no	11 083.66	54.65	311.85	175.24	4
LAO	Laos	Asia	no	21 925.62	219.52	1 626.13	135.00	5
NPL	Nepal	Asia	no	53 996.57	143.34	1 917.21	74.76	6
THA	Thailand	Asia	no	1 378 999.00	2 586.19	53 487.73	48.35	7
TJK	Tajikistan	Asia	no	20 536.86	48.23	998.87	48.28	8
PAK	Pakistan	Asia	no	502 344.30	1 029.80	25 463.41	40.44	9
AFG	Afghanistan	Asia	no	60 187.87	92.17	2 492.12	36.98	10
IND	India	Asia	no	5 769 372.00	7 471.82	221 700.44	33.70	11
MNG	Mongolia	Asia	no	36 587.61	39.40	1 298.34	30.35	12
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	79 076.93	30.00	13
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	42 433.27	29.96	14
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	1 306.25	27.41	15
TKM	Turkmenistan	Asia	no	36 127.02	77.11	3 114.55	24.76	16
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	27 530.57	23.21	17
SYR	Syria	Asia	no	204 643.30	114.65	4 971.97	23.06	18
YEM	Yemen	Asia	no	79 113.56	57.50	2 625.09	21.90	19
IRN	Iran	Asia	no	2 067 640.00	668.26	31 978.13	20.90	20
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	23 889.95	20.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
PHL	Philippines	Asia	no	566 948.60	545.43	30 212.56	18.05	22
GEO	Georgia	Asia	no	53 823.53	45.09	2 692.49	16.75	23
LKA	Sri Lanka	Asia	no	208 273.50	143.75	8 808.70	16.32	24
CHN	China	Asia	no	31 726 110.00	18 765.75	1 299 157.61	14.44	25
ARM	Armenia	Asia	no	22 895.19	21.18	1 508.90	14.04	26
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	194 728.35	11.22	27
BRN	Brunei	Asia	no	71 236.46	30.95	2 950.69	10.49	28
IRQ	Iraq	Asia	no	132 499.60	344.33	48 846.71	7.05	29
UZB	Uzbekistan	Asia	no	151 891.10	78.64	12 744.63	6.17	30
AZE	Azerbaijan	Asia	no	192 784.00	44.02	8 252.01	5.33	31
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 012 070.61	4.28	32
TUR	Turkey	Asia	no	1 947 249.00	296.12	123 751.24	2.39	33
OMN	Oman	Asia	no	202 533.60	26.27	14 871.52	1.77	34
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	165 700.80	1.34	35
LBN	Lebanon	Asia	no	207 723.70	8.08	6 530.19	1.24	36
JOR	Jordan	Asia	no	121 481.20	3.01	6 618.91	0.45	37
QAT	Qatar	Asia	no	624 817.70	7.04	24 487.36	0.29	38
ISR	Israel	Asia	no	853 829.30	9.52	65 345.00	0.15	39
CYP	Cyprus	Asia	no	71 610.53	0.46	4 557.62	0.10	40
KWT	Kuwait	Asia	no	469 418.40	2.91	29 360.33	0.10	41
MAC	Macau	Asia	no	56 709.10		3 378.13		42
MMR	Myanmar	Asia	no	195 390.10	1 956.65			43
PSE	State of Palestine	Asia	no	69 454.30	0.29			44
PRK	North Korea	Asia	no	77 982.15	157.21			45
HKG	Hong Kong	Asia	no	1 250 063.00		25 520.99		46
TWN	Taiwan	Asia	no	1 680 401.00	79.41			47
MDA	Moldova	Europe	no	33 762.68	101.07	1 618.04	62.46	1
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 544.35	58.92	2
BLR	Belarus	Europe	no	229 399.90	449.46	10 166.04	44.21	3
LVA	Latvia	Europe	no	95 608.77	172.80	4 413.54	39.15	4
UKR	Ukraine	Europe	no	676 833.60	1 153.80	34 350.49	33.59	5
SVK	Slovakia	Europe	no	414 782.80	532.30	17 642.66	30.17	6
ALB	Albania	Europe	no	40 459.65	30.59	1 381.39	22.14	7
SRB	Serbia	Europe	no	57 317.24	163.25	7 977.96	20.46	8
LTU	Lithuania	Europe	no	135 613.80	134.90	8 076.66	16.70	9
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	4 063.51	13.46	10
EST	Estonia	Europe	no	79 617.31	61.56	4 754.17	12.95	11
HRV	Croatia	Europe	no	188 113.70	147.78	11 594.94	12.75	12
RUS	Russia	Europe	no	6 325 795.00	4 987.01	409 820.63	12.17	13
CHE	Switzerland	Europe	no	3 421 606.00	845.26	75 147.62	11.25	14
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	40 979.05	10.24	15
AUT	Austria	Europe	no	1 801 472.00	749.13	84 928.57	8.82	16
POL	Poland	Europe	no	1 614 716.00	621.52	95 412.26	6.51	17
BGR	Bulgaria	Europe	no	163 821.60	58.23	8 993.34	6.47	18
IRL	Ireland	Europe	no	778 821.60	199.25	40 563.02	4.91	19
FRA	France	Europe	no	10 329 420.00	3 091.69	677 049.47	4.57	20
MNE	Montenegro	Europe	no	8 892.93	3.99	876.28	4.55	21
NLD	Netherlands	Europe	no	3 410 955.00	984.03	224 781.17	4.38	22
ESP	Spain	Europe	no	6 233 955.00	1 109.18	271 148.52	4.09	23
MKD	Macedonia	Europe	no	32 996.37	7.23	1 787.08	4.05	24
SVN	Slovenia	Europe	no	139 899.70	39.17	9 765.51	4.01	25
DEU	Germany	Europe	no	15 114 870.00	2 697.57	718 583.82	3.75	26
PRT	Portugal	Europe	no	1 054 344.00	141.38	43 081.93	3.28	27
ITA	Italy	Europe	no	8 604 332.00	777.37	417 993.98	1.86	28
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	542 121.89	1.60	29
BEL	Belgium	Europe	no	1 980 551.00	167.25	128 131.48	1.31	30
GRC	Greece	Europe	no	1 181 283.00	55.33	48 425.35	1.14	31
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 391.43	1.12	32
SWE	Sweden	Europe	no	1 747 501.00	110.38	151 944.31	0.73	33
DNK	Denmark	Europe	no	1 346 393.00	27.85	89 732.55	0.31	34
SMR	San Marino	Europe	no	4 049.35				35
MCO	Monaco	Europe	no	20 716.40				36
FRO	Faroe Islands	Europe	no	9 272.37				37
ROU	Romania	Europe	no	555 697.40	519.75			38
LIE	Liechtenstein	Europe	no	18 837.10				39
ISL	Iceland	Europe	no	57 291.68		3 730.06		40
FIN	Finland	Europe	no	965 383.40		66 675.15		41
GIB	Gibraltar	Europe	no	4 042.19				42
NOR	Norway	Europe	no	1 933 679.00		112 012.76		43
MLT	Malta	Europe	no	36 990.21		1 879.07		44
AND	Andorra	Europe	no	8 381.65				45
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	646.93	53.28	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	3 077.08	36.38	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	3 496.64	26.41	3
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	4 243.72	16.30	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	13 315.00	15.99	5
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	22 647.04	15.98	6
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	34 332.88	12.52	7
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	5 637.22	12.19	8
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	63 198.81	10.36	9
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	94 570.07	9.36	10
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	493 431.00	9.00	11
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	3 793.90	6.58	12
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	149 707.18	5.81	13
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	8 897.75	4.79	14
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	46 486.26	4.62	15
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	7 713.60	4.56	16
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	2 899.00	4.33	17
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			19
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	395 958.78	7.12	1
USA	United States	Northern America	no	54 922 480.00	9 408.88	2 547 499.93	3.69	2
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	276 915.26	15.18	1
NZL	New Zealand	Oceania	no	679 705.40	399.98	34 691.31	11.53	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	1 173.40	24.18	1
GAB	Gabon	Africa	no	120 252.20	200.15	14 724.33	13.59	2
COG	Congo	Africa	no	69 047.72	126.48	12 612.41	10.03	3
LSO	Lesotho	Africa	no	17 938.00	29.51	3 740.58	7.89	4
SWZ	Swaziland	Africa	no	13 701.24	28.92	3 944.56	7.33	5
MWI	Malawi	Africa	no	18 356.97	24.11	4 366.74	5.52	6
MRT	Mauritania	Africa	no	11 985.52	18.88	4 169.52	4.53	7
ERI	Eritrea	Africa	no	9 081.79	12.50	2 836.63	4.41	8
NAM	Namibia	Africa	no	42 062.66	64.55	15 480.83	4.17	9
MLI	Mali	Africa	no	27 719.15	44.76	11 011.34	4.06	10
MDG	Madagascar	Africa	no	23 496.42	36.07	11 984.82	3.01	11
TCD	Chad	Africa	no	26 745.14	38.75	14 228.09	2.72	12
ZAF	South Africa	Africa	no	1 282 854.00	910.25	360 489.06	2.53	13
BWA	Botswana	Africa	no	90 628.62	38.66	15 490.96	2.50	14
TGO	Togo	Africa	no	12 513.67	10.94	4 390.62	2.49	15
ETH	Ethiopia	Africa	no	65 598.93	135.52	55 403.13	2.45	16
CMR	Cameroon	Africa	no	81 683.73	74.86	32 007.42	2.34	17
GIN	Guinea	Africa	no	13 665.89	17.64	7 750.84	2.28	18
MOZ	Mozambique	Africa	no	36 409.45	39.00	17 220.44	2.26	19
NER	Niger	Africa	no	12 723.49	19.29	8 745.32	2.21	20
CAF	Central African Republic	Africa	no	3 893.74	4.92	2 389.56	2.06	21
RWA	Rwanda	Africa	no	13 197.39	17.68	8 767.59	2.02	22
BEN	Benin	Africa	no	21 971.91	19.22	9 572.30	2.01	23
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	12 451.63	1.59	24
AGO	Angola	Africa	no	176 182.50	165.69	105 476.81	1.57	25
BFA	Burkina Faso	Africa	no	24 689.43	16.58	11 452.71	1.45	26
CIV	Ivory Coast	Africa	no	45 467.63	44.43	31 142.79	1.43	27
KEN	Kenya	Africa	no	98 382.66	90.33	63 770.87	1.42	28
SLE	Sierra Leone	Africa	no	3 031.82	5.09	4 191.60	1.21	29
GMB	The Gambia	Africa	no	2 097.61	1.24	1 029.01	1.21	30
SSD	South Sudan	Africa	no	19 958.30	17.42	14 712.88	1.18	31
MAR	Morroco	Africa	no	374 846.30	132.04	117 556.24	1.12	32
LBR	Liberia	Africa	no	1 911.24	3.06	2 724.73	1.12	33
NGA	Nigeria	Africa	no	592 030.40	543.42	495 416.77	1.10	34
SDN	Sudan	Africa	no	70 368.78	71.67	70 927.03	1.01	35
ZMB	Zambia	Africa	no	48 954.52	25.96	26 244.17	0.99	36
TZA	Tanzania	Africa	no	50 142.79	37.79	39 205.30	0.96	37
GHA	Ghana	Africa	no	74 174.05	45.95	50 578.29	0.91	38
BDI	Burundi	Africa	no	3 616.17	3.05	3 443.34	0.89	39
DZA	Algeria	Africa	no	899 206.20	178.37	204 165.74	0.87	40
UGA	Uganda	Africa	no	43 697.09	20.60	23 933.64	0.86	41
TUN	Tunisia	Africa	no	178 845.60	40.60	51 302.58	0.79	42
SEN	Senegal	Africa	no	35 335.24	11.38	17 930.59	0.63	43
ZWE	Zimbawue	Africa	no	22 038.05	9.92	17 196.10	0.58	44
EGY	Egypt	Africa	no	617 149.20	161.27	291 083.68	0.55	45
LBY	Libya	Africa	no	73 757.40	12.82	55 976.41	0.23	46
DJI	Djibouti	Africa	no	4 744.66	0.19	1 018.02	0.19	47
SYC	Seychelles	Africa	no	6 234.98		1 607.64		48
MYT	Mayotte	Africa	no	6 949.04				49
ESH	Western Sahara	Africa	no	3 690.88	0.02			50
REU	Reunion	Africa	no	67 897.68				51
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			52
BTN	Bhutan	Asia	no	11 083.66	54.65	2 173.58	25.14	1
LAO	Laos	Asia	no	21 925.62	219.52	12 246.45	17.93	2
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	160 820.74	15.32	3
KHM	Cambodia	Asia	no	27 390.49	251.19	16 467.91	15.25	4
VNM	Vietnam	Asia	no	487 574.40	2 295.39	164 388.68	13.96	5
THA	Thailand	Asia	no	1 378 999.00	2 586.19	374 528.18	6.91	6
NPL	Nepal	Asia	no	53 996.57	143.34	24 466.26	5.86	7
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	284 108.03	4.47	8
PAK	Pakistan	Asia	no	502 344.30	1 029.80	247 867.95	4.15	9
IND	India	Asia	no	5 769 372.00	7 471.82	1 944 284.82	3.84	10
TJK	Tajikistan	Asia	no	20 536.86	48.23	12 690.19	3.80	11
BRN	Brunei	Asia	no	71 236.46	30.95	9 075.14	3.41	12
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	10 749.10	3.33	13
AFG	Afghanistan	Asia	no	60 187.87	92.17	29 010.12	3.18	14
TKM	Turkmenistan	Asia	no	36 127.02	77.11	25 014.09	3.08	15
YEM	Yemen	Asia	no	79 113.56	57.50	18 997.54	3.03	16
SYR	Syria	Asia	no	204 643.30	114.65	40 077.56	2.86	17
MNG	Mongolia	Asia	no	36 587.61	39.40	14 036.94	2.81	18
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	885 677.23	2.68	19
IRN	Iran	Asia	no	2 067 640.00	668.26	255 619.28	2.61	20
GEO	Georgia	Asia	no	53 823.53	45.09	18 230.53	2.47	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	205 086.26	2.33	22
CHN	China	Asia	no	31 726 110.00	18 765.75	9 003 382.87	2.08	23
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	318 951.13	2.00	24
LKA	Sri Lanka	Asia	no	208 273.50	143.75	73 583.10	1.95	25
PHL	Philippines	Asia	no	566 948.60	545.43	283 131.84	1.93	26
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	1 238 504.83	1.76	27
ARM	Armenia	Asia	no	22 895.19	21.18	12 628.86	1.68	28
IRQ	Iraq	Asia	no	132 499.60	344.33	226 497.10	1.52	29
UZB	Uzbekistan	Asia	no	151 891.10	78.64	59 039.46	1.33	30
JPN	Japan	Asia	no	39 255 200.00	4 328.15	5 059 261.76	0.86	31
AZE	Azerbaijan	Asia	no	192 784.00	44.02	57 484.51	0.77	32
OMN	Oman	Asia	no	202 533.60	26.27	56 792.46	0.46	33
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	590 125.33	0.38	34
TUR	Turkey	Asia	no	1 947 249.00	296.12	876 064.28	0.34	35
LBN	Lebanon	Asia	no	207 723.70	8.08	50 384.63	0.16	36
QAT	Qatar	Asia	no	624 817.70	7.04	91 904.94	0.08	37
JOR	Jordan	Asia	no	121 481.20	3.01	43 390.10	0.07	38
ISR	Israel	Asia	no	853 829.30	9.52	286 558.36	0.03	39
KWT	Kuwait	Asia	no	469 418.40	2.91	96 682.69	0.03	40
CYP	Cyprus	Asia	no	71 610.53	0.46	24 622.91	0.02	41
MAC	Macau	Asia	no	56 709.10		20 216.60		42
MMR	Myanmar	Asia	no	195 390.10	1 956.65			43
PRK	North Korea	Asia	no	77 982.15	157.21			44
HKG	Hong Kong	Asia	no	1 250 063.00		271 683.76		45
TWN	Taiwan	Asia	no	1 680 401.00	79.41			46
PSE	State of Palestine	Asia	no	69 454.30	0.29			47
HUN	Hungary	Europe	no	562 479.60	1 564.07	123 292.26	12.69	1
MDA	Moldova	Europe	no	33 762.68	101.07	10 971.97	9.21	2
BLR	Belarus	Europe	no	229 399.90	449.46	73 747.80	6.09	3
UKR	Ukraine	Europe	no	676 833.60	1 153.80	192 523.67	5.99	4
LVA	Latvia	Europe	no	95 608.77	172.80	29 570.85	5.84	5
SVK	Slovakia	Europe	no	414 782.80	532.30	93 274.32	5.71	6
SRB	Serbia	Europe	no	57 317.24	163.25	50 611.94	3.23	7
LTU	Lithuania	Europe	no	135 613.80	134.90	43 719.88	3.09	8
HRV	Croatia	Europe	no	188 113.70	147.78	57 600.31	2.57	9
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	21 616.92	2.53	10
RUS	Russia	Europe	no	6 325 795.00	4 987.01	1 973 571.68	2.53	11
EST	Estonia	Europe	no	79 617.31	61.56	24 664.81	2.50	12
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	196 764.65	2.13	13
ALB	Albania	Europe	no	40 459.65	30.59	15 227.71	2.01	14
AUT	Austria	Europe	no	1 801 472.00	749.13	413 112.76	1.81	15
CHE	Switzerland	Europe	no	3 421 606.00	845.26	602 400.29	1.40	16
NLD	Netherlands	Europe	no	3 410 955.00	984.03	765 364.08	1.29	17
POL	Poland	Europe	no	1 614 716.00	621.52	515 943.50	1.20	18
FRA	France	Europe	no	10 329 420.00	3 091.69	2 848 015.52	1.09	19
IRL	Ireland	Europe	no	778 821.60	199.25	183 798.12	1.08	20
BGR	Bulgaria	Europe	no	163 821.60	58.23	54 795.79	1.06	21
SVN	Slovenia	Europe	no	139 899.70	39.17	45 103.27	0.87	22
ESP	Spain	Europe	no	6 233 955.00	1 109.18	1 345 564.18	0.82	23
DEU	Germany	Europe	no	15 114 870.00	2 697.57	3 513 506.86	0.77	24
MNE	Montenegro	Europe	no	8 892.93	3.99	5 312.54	0.75	25
PRT	Portugal	Europe	no	1 054 344.00	141.38	225 098.65	0.63	26
MKD	Macedonia	Europe	no	32 996.37	7.23	12 119.46	0.60	27
ITA	Italy	Europe	no	8 604 332.00	777.37	2 100 502.86	0.37	28
BEL	Belgium	Europe	no	1 980 551.00	167.25	517 763.60	0.32	29
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	2 728 637.76	0.32	30
LUX	Luxembourg	Europe	no	201 130.60	11.61	38 962.95	0.30	31
GRC	Greece	Europe	no	1 181 283.00	55.33	249 410.75	0.22	32
SWE	Sweden	Europe	no	1 747 501.00	110.38	551 152.52	0.20	33
DNK	Denmark	Europe	no	1 346 393.00	27.85	316 596.75	0.09	34
SMR	San Marino	Europe	no	4 049.35				35
MCO	Monaco	Europe	no	20 716.40				36
FRO	Faroe Islands	Europe	no	9 272.37				37
ROU	Romania	Europe	no	555 697.40	519.75			38
LIE	Liechtenstein	Europe	no	18 837.10				39
ISL	Iceland	Europe	no	57 291.68		14 052.90		40
FIN	Finland	Europe	no	965 383.40		269 912.39		41
GIB	Gibraltar	Europe	no	4 042.19				42
NOR	Norway	Europe	no	1 933 679.00		457 625.37		43
MLT	Malta	Europe	no	36 990.21		8 864.05		44
AND	Andorra	Europe	no	8 381.65				45
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	22 559.82	4.96	1
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	27 647.87	3.34	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	12 562.44	2.74	3
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	28 469.09	2.43	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	96 787.63	2.20	5
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	2 301 443.96	1.93	6
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	204 179.29	1.77	7
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	387 419.05	1.69	8
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	278 153.13	1.55	9
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	611 844.88	1.45	10
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	59 883.48	1.15	11
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	51 412.23	0.83	12
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	36 126.55	0.69	13
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	1 269 259.96	0.69	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	57 529.86	0.61	15
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	373 895.14	0.57	16
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	28 969.70	0.43	17
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				19
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	1 857 561.03	1.52	1
USA	United States	Northern America	no	54 922 480.00	9 408.88	17 276 300.43	0.54	2
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	1 579 571.61	2.66	1
NZL	New Zealand	Oceania	no	679 705.40	399.98	182 403.61	2.19	2
TUV	Tuvalu	Oceania	no	123.26				3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	4.43	1
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12	2.34	2
SWZ	Swaziland	Africa	no	13 701.24	28.92	2.11	3
ETH	Ethiopia	Africa	no	65 598.93	135.52	2.07	4
COG	Congo	Africa	no	69 047.72	126.48	1.83	5
SLE	Sierra Leone	Africa	no	3 031.82	5.09	1.68	6
GAB	Gabon	Africa	no	120 252.20	200.15	1.66	7
LSO	Lesotho	Africa	no	17 938.00	29.51	1.65	8
MLI	Mali	Africa	no	27 719.15	44.76	1.61	9
LBR	Liberia	Africa	no	1 911.24	3.06	1.60	10
MRT	Mauritania	Africa	no	11 985.52	18.88	1.58	11
MDG	Madagascar	Africa	no	23 496.42	36.07	1.54	12
NAM	Namibia	Africa	no	42 062.66	64.55	1.53	13
NER	Niger	Africa	no	12 723.49	19.29	1.52	14
TCD	Chad	Africa	no	26 745.14	38.75	1.45	15
ERI	Eritrea	Africa	no	9 081.79	12.50	1.38	16
RWA	Rwanda	Africa	no	13 197.39	17.68	1.34	17
MWI	Malawi	Africa	no	18 356.97	24.11	1.31	18
GIN	Guinea	Africa	no	13 665.89	17.64	1.29	19
CAF	Central African Republic	Africa	no	3 893.74	4.92	1.26	20
MOZ	Mozambique	Africa	no	36 409.45	39.00	1.07	21
SDN	Sudan	Africa	no	70 368.78	71.67	1.02	22
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	0.99	23
CIV	Ivory Coast	Africa	no	45 467.63	44.43	0.98	24
AGO	Angola	Africa	no	176 182.50	165.69	0.94	25
KEN	Kenya	Africa	no	98 382.66	90.33	0.92	26
NGA	Nigeria	Africa	no	592 030.40	543.42	0.92	27
CMR	Cameroon	Africa	no	81 683.73	74.86	0.92	28
BEN	Benin	Africa	no	21 971.91	19.22	0.87	29
TGO	Togo	Africa	no	12 513.67	10.94	0.87	30
SSD	South Sudan	Africa	no	19 958.30	17.42	0.87	31
BDI	Burundi	Africa	no	3 616.17	3.05	0.84	32
TZA	Tanzania	Africa	no	50 142.79	37.79	0.75	33
ZAF	South Africa	Africa	no	1 282 854.00	910.25	0.71	34
BFA	Burkina Faso	Africa	no	24 689.43	16.58	0.67	35
GHA	Ghana	Africa	no	74 174.05	45.95	0.62	36
GMB	The Gambia	Africa	no	2 097.61	1.24	0.59	37
ZMB	Zambia	Africa	no	48 954.52	25.96	0.53	38
UGA	Uganda	Africa	no	43 697.09	20.60	0.47	39
ZWE	Zimbawue	Africa	no	22 038.05	9.92	0.45	40
BWA	Botswana	Africa	no	90 628.62	38.66	0.43	41
MAR	Morroco	Africa	no	374 846.30	132.04	0.35	42
SEN	Senegal	Africa	no	35 335.24	11.38	0.32	43
EGY	Egypt	Africa	no	617 149.20	161.27	0.26	44
TUN	Tunisia	Africa	no	178 845.60	40.60	0.23	45
DZA	Algeria	Africa	no	899 206.20	178.37	0.20	46
LBY	Libya	Africa	no	73 757.40	12.82	0.17	47
DJI	Djibouti	Africa	no	4 744.66	0.19	0.04	48
ESH	Western Sahara	Africa	no	3 690.88	0.02	0.01	49
MYT	Mayotte	Africa	no	6 949.04			50
REU	Reunion	Africa	no	67 897.68			51
SYC	Seychelles	Africa	no	6 234.98			52
MMR	Myanmar	Asia	no	195 390.10	1 956.65	10.01	1
LAO	Laos	Asia	no	21 925.62	219.52	10.01	2
KHM	Cambodia	Asia	no	27 390.49	251.19	9.17	3
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	6.46	4
BTN	Bhutan	Asia	no	11 083.66	54.65	4.93	5
VNM	Vietnam	Asia	no	487 574.40	2 295.39	4.71	6
NPL	Nepal	Asia	no	53 996.57	143.34	2.65	7
IRQ	Iraq	Asia	no	132 499.60	344.33	2.60	8
TJK	Tajikistan	Asia	no	20 536.86	48.23	2.35	9
TKM	Turkmenistan	Asia	no	36 127.02	77.11	2.13	10
PAK	Pakistan	Asia	no	502 344.30	1 029.80	2.05	11
PRK	North Korea	Asia	no	77 982.15	157.21	2.02	12
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	1.94	13
THA	Thailand	Asia	no	1 378 999.00	2 586.19	1.88	14
AFG	Afghanistan	Asia	no	60 187.87	92.17	1.53	15
IND	India	Asia	no	5 769 372.00	7 471.82	1.30	16
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	1.09	17
MNG	Mongolia	Asia	no	36 587.61	39.40	1.08	18
PHL	Philippines	Asia	no	566 948.60	545.43	0.96	19
ARM	Armenia	Asia	no	22 895.19	21.18	0.93	20
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	0.84	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
GEO	Georgia	Asia	no	53 823.53	45.09	0.84	22
YEM	Yemen	Asia	no	79 113.56	57.50	0.73	23
LKA	Sri Lanka	Asia	no	208 273.50	143.75	0.69	24
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	0.65	25
CHN	China	Asia	no	31 726 110.00	18 765.75	0.59	26
SYR	Syria	Asia	no	204 643.30	114.65	0.56	27
UZB	Uzbekistan	Asia	no	151 891.10	78.64	0.52	28
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	0.50	29
BRN	Brunei	Asia	no	71 236.46	30.95	0.43	30
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	0.39	31
IRN	Iran	Asia	no	2 067 640.00	668.26	0.32	32
AZE	Azerbaijan	Asia	no	192 784.00	44.02	0.23	33
TUR	Turkey	Asia	no	1 947 249.00	296.12	0.15	34
OMN	Oman	Asia	no	202 533.60	26.27	0.13	35
JPN	Japan	Asia	no	39 255 200.00	4 328.15	0.11	36
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	0.10	37
TWN	Taiwan	Asia	no	1 680 401.00	79.41	0.05	38
LBN	Lebanon	Asia	no	207 723.70	8.08	0.04	39
JOR	Jordan	Asia	no	121 481.20	3.01	0.02	40
QAT	Qatar	Asia	no	624 817.70	7.04	0.01	41
ISR	Israel	Asia	no	853 829.30	9.52	0.01	42
CYP	Cyprus	Asia	no	71 610.53	0.46	0.01	43
KWT	Kuwait	Asia	no	469 418.40	2.91	0.01	44
PSE	State of Palestine	Asia	no	69 454.30	0.29	0.00	45
HKG	Hong Kong	Asia	no	1 250 063.00			46
MAC	Macau	Asia	no	56 709.10			47
MDA	Moldova	Europe	no	33 762.68	101.07	2.99	1
SRB	Serbia	Europe	no	57 317.24	163.25	2.85	2
HUN	Hungary	Europe	no	562 479.60	1 564.07	2.78	3
BLR	Belarus	Europe	no	229 399.90	449.46	1.96	4
LVA	Latvia	Europe	no	95 608.77	172.80	1.81	5
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	1.78	6
UKR	Ukraine	Europe	no	676 833.60	1 153.80	1.70	7
SVK	Slovakia	Europe	no	414 782.80	532.30	1.28	8
LTU	Lithuania	Europe	no	135 613.80	134.90	0.99	9
ROU	Romania	Europe	no	555 697.40	519.75	0.94	10
RUS	Russia	Europe	no	6 325 795.00	4 987.01	0.79	11
HRV	Croatia	Europe	no	188 113.70	147.78	0.79	12
EST	Estonia	Europe	no	79 617.31	61.56	0.77	13
ALB	Albania	Europe	no	40 459.65	30.59	0.76	14
MNE	Montenegro	Europe	no	8 892.93	3.99	0.45	15
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	0.42	16
AUT	Austria	Europe	no	1 801 472.00	749.13	0.42	17
POL	Poland	Europe	no	1 614 716.00	621.52	0.38	18
BGR	Bulgaria	Europe	no	163 821.60	58.23	0.36	19
FRA	France	Europe	no	10 329 420.00	3 091.69	0.30	20
NLD	Netherlands	Europe	no	3 410 955.00	984.03	0.29	21
SVN	Slovenia	Europe	no	139 899.70	39.17	0.28	22
IRL	Ireland	Europe	no	778 821.60	199.25	0.26	23
CHE	Switzerland	Europe	no	3 421 606.00	845.26	0.25	24
MKD	Macedonia	Europe	no	32 996.37	7.23	0.22	25
DEU	Germany	Europe	no	15 114 870.00	2 697.57	0.18	26
ESP	Spain	Europe	no	6 233 955.00	1 109.18	0.18	27
PRT	Portugal	Europe	no	1 054 344.00	141.38	0.13	28
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	0.11	29
ITA	Italy	Europe	no	8 604 332.00	777.37	0.09	30
BEL	Belgium	Europe	no	1 980 551.00	167.25	0.08	31
SWE	Sweden	Europe	no	1 747 501.00	110.38	0.06	32
LUX	Luxembourg	Europe	no	201 130.60	11.61	0.06	33
GRC	Greece	Europe	no	1 181 283.00	55.33	0.05	34
DNK	Denmark	Europe	no	1 346 393.00	27.85	0.02	35
LIE	Liechtenstein	Europe	no	18 837.10			36
GIB	Gibraltar	Europe	no	4 042.19			37
FRO	Faroe Islands	Europe	no	9 272.37			38
FIN	Finland	Europe	no	965 383.40			39
ISL	Iceland	Europe	no	57 291.68			40
AND	Andorra	Europe	no	8 381.65			41
MLT	Malta	Europe	no	36 990.21			42
SMR	San Marino	Europe	no	4 049.35			43
NOR	Norway	Europe	no	1 933 679.00			44
MCO	Monaco	Europe	no	20 716.40			45
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81	8.80	1
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	1.44	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	1.14	3
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	1.00	4
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	0.96	5
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	0.75	6
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	0.69	7
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	0.65	8
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	0.64	9
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	0.55	10
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	0.52	11
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	0.40	12
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	0.30	13
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	0.30	14
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	0.20	15
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	0.19	16
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	0.19	17
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	0.18	18
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			19
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	0.45	1
USA	United States	Northern America	no	54 922 480.00	9 408.88	0.17	2
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	0.64	1
NZL	New Zealand	Oceania	no	679 705.40	399.98	0.59	2
TUV	Tuvalu	Oceania	no	123.26			3

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Region

Tsunami

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
EGY	Egypt	Africa	no	617 149.20	8.52	37 477.12	0.23	1
TUN	Tunisia	Africa	no	178 845.60	0.23	9 509.45	0.02	2
LBY	Libya	Africa	no	73 757.40	0.31	25 993.79	0.01	3
MAR	Morroco	Africa	no	374 846.30	0.23	31 321.40	0.01	4
MDG	Madagascar	Africa	no	23 496.42	0.01	1 666.80	0.01	5
NAM	Namibia	Africa	no	42 062.66	0.01	3 368.79	0.00	6
ZAF	South Africa	Africa	no	1 282 854.00	0.19	67 780.45	0.00	7
SEN	Senegal	Africa	no	35 335.24	0.01	3 706.12	0.00	8
DZA	Algeria	Africa	no	899 206.20	0.17	71 040.48	0.00	9
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	10
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	11
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	12
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	13
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	14
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	15
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	16
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	17
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	18
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	19
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	20
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	21
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	22
MOZ	Mozambique	Africa	no	36 409.45	0.00	2 723.39	0.00	23
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	24
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	25
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	26
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	27
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	28
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	29
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	30
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	31
TCD	Chad	Africa	no	26 745.14		3 701.42		32
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		33
REU	Reunion	Africa	no	67 897.68	0.00			34
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			35
ZMB	Zambia	Africa	no	48 954.52		5 247.76		36
CAF	Central African Republic	Africa	no	3 893.74		320.25		37
UGA	Uganda	Africa	no	43 697.09		5 121.46		38
RWA	Rwanda	Africa	no	13 197.39		1 920.52		39
MLI	Mali	Africa	no	27 719.15		1 684.06		40
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		41
SWZ	Swaziland	Africa	no	13 701.24		363.96		42
SSD	South Sudan	Africa	no	19 958.30		1 399.32		43
BWA	Botswana	Africa	no	90 628.62		5 015.09		44
ESH	Western Sahara	Africa	no	3 690.88	0.00			45
MYT	Mayotte	Africa	no	6 949.04	0.00			46
NER	Niger	Africa	no	12 723.49		2 551.37		47
LSO	Lesotho	Africa	no	17 938.00		855.33		48
MWI	Malawi	Africa	no	18 356.97		731.37		49
BDI	Burundi	Africa	no	3 616.17		780.29		50
SDN	Sudan	Africa	no	70 368.78		13 307.19		51
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		52
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 068 884.62	2.80	1
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	65 379.04	1.82	2
MAC	Macau	Asia	no	56 709.10	9.30	6 610.47	1.41	3
PHL	Philippines	Asia	no	566 948.60	30.63	55 644.78	0.55	4
LBN	Lebanon	Asia	no	207 723.70	2.73	12 363.32	0.22	5
IDN	Indonesia	Asia	no	2 827 835.00	48.15	274 943.80	0.18	6
BRN	Brunei	Asia	no	71 236.46	0.40	2 466.98	0.16	7
BGD	Bangladesh	Asia	no	381 431.90	5.50	42 581.72	0.13	8
CYP	Cyprus	Asia	no	71 610.53	0.55	4 260.93	0.13	9
LKA	Sri Lanka	Asia	no	208 273.50	1.75	19 647.18	0.09	10
MYS	Malaysia	Asia	no	1 170 979.00	5.52	84 107.08	0.07	11
ISR	Israel	Asia	no	853 829.30	3.52	56 565.68	0.06	12
IND	India	Asia	no	5 769 372.00	19.14	530 741.66	0.04	13
CHN	China	Asia	no	31 726 110.00	115.18	4 370 835.96	0.03	14
OMN	Oman	Asia	no	202 533.60	0.36	17 256.96	0.02	15
VNM	Vietnam	Asia	no	487 574.40	0.66	40 823.56	0.02	16
SYR	Syria	Asia	no	204 643.30	0.13	8 252.62	0.02	17
TUR	Turkey	Asia	no	1 947 249.00	2.50	167 069.99	0.01	18
PAK	Pakistan	Asia	no	502 344.30	0.17	30 125.80	0.01	19
THA	Thailand	Asia	no	1 378 999.00	0.53	103 523.57	0.01	20
KOR	South Korea	Asia	no	5 538 605.00	1.24	386 884.93	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
IRN	Iran	Asia	no	2 067 640.00	0.13	73 681.58	0.00	22
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	88 386.66	0.00	23
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	24
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	25
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	26
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	27
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		28
ARM	Armenia	Asia	no	22 895.19		2 183.10		29
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		30
LAO	Laos	Asia	no	21 925.62		3 279.79		31
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		32
IRQ	Iraq	Asia	no	132 499.60		35 983.20		33
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		34
MMR	Myanmar	Asia	no	195 390.10	3.27			35
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		36
KWT	Kuwait	Asia	no	469 418.40		19 039.58		37
BTN	Bhutan	Asia	no	11 083.66		842.11		38
QAT	Qatar	Asia	no	624 817.70		15 282.42		39
PSE	State of Palestine	Asia	no	69 454.30	0.06			40
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		41
MNG	Mongolia	Asia	no	36 587.61		5 086.03		42
NPL	Nepal	Asia	no	53 996.57		4 356.14		43
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		44
TWN	Taiwan	Asia	no	1 680 401.00	15.05			45
GEO	Georgia	Asia	no	53 823.53		3 542.58		46
PRK	North Korea	Asia	no	77 982.15	0.00			47
GRC	Greece	Europe	no	1 181 283.00	3.98	27 154.95	0.15	1
MLT	Malta	Europe	no	36 990.21	0.14	1 333.61	0.10	2
ALB	Albania	Europe	no	40 459.65	0.04	3 379.49	0.01	3
RUS	Russia	Europe	no	6 325 795.00	2.54	450 238.87	0.01	4
ESP	Spain	Europe	no	6 233 955.00	1.29	257 993.28	0.01	5
PRT	Portugal	Europe	no	1 054 344.00	0.16	34 419.00	0.00	6
ITA	Italy	Europe	no	8 604 332.00	1.47	383 197.87	0.00	7
IRL	Ireland	Europe	no	778 821.60	0.03	35 221.45	0.00	8
FRA	France	Europe	no	10 329 420.00	0.07	619 955.29	0.00	9
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	440 106.84	0.00	10
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	12
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	13
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	15
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	16
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	17
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	18
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	19
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		20
BLR	Belarus	Europe	no	229 399.90		26 490.10		21
FRO	Faroe Islands	Europe	no	9 272.37				22
MKD	Macedonia	Europe	no	32 996.37		2 530.04		23
LVA	Latvia	Europe	no	95 608.77		6 324.84		24
LIE	Liechtenstein	Europe	no	18 837.10				25
ROU	Romania	Europe	no	555 697.40				26
MCO	Monaco	Europe	no	20 716.40	0.00			27
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		28
SVK	Slovakia	Europe	no	414 782.80		19 975.29		29
ISL	Iceland	Europe	no	57 291.68		2 314.22		30
POL	Poland	Europe	no	1 614 716.00		98 972.34		31
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		32
AUT	Austria	Europe	no	1 801 472.00		95 015.40		33
AND	Andorra	Europe	no	8 381.65				34
SRB	Serbia	Europe	no	57 317.24		8 634.55		35
GIB	Gibraltar	Europe	no	4 042.19	0.00			36
FIN	Finland	Europe	no	965 383.40		56 624.15		37
SMR	San Marino	Europe	no	4 049.35	0.00			38
EST	Estonia	Europe	no	79 617.31		6 795.36		39
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		40
MDA	Moldova	Europe	no	33 762.68		1 821.11		41
UKR	Ukraine	Europe	no	676 833.60		32 236.10		42
LTU	Lithuania	Europe	no	135 613.80		7 517.23		43
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		44
HUN	Hungary	Europe	no	562 479.60		26 595.35		45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	65 444.15	0.18	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	92 724.40	0.14	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	53 841.99	0.13	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	26 312.88	0.09	4
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	10 060.78	0.07	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	10 406.53	0.05	6
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	77 440.20	0.03	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	3 663.90	0.02	8
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	265 421.77	0.01	9
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	7 693.87	0.01	10
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	2 574.11	0.00	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	4 539.50	0.00	12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	408 331.78	0.00	13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	103 818.81	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			19
USA	United States	Northern America	no	54 922 480.00	205.15	3 244 299.91	0.06	1
CAN	Canada	Northern America	no	6 291 917.00	2.35	433 369.09	0.01	2
NZL	New Zealand	Oceania	no	679 705.40	21.89	38 213.65	0.57	1
AUS	Australia	Oceania	no	6 616 533.00	51.13	442 013.06	0.12	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
EGY	Egypt	Africa	no	617 149.20	8.52	31 768.68	0.27	1
LBY	Libya	Africa	no	73 757.40	0.31	8 664.60	0.04	2
TUN	Tunisia	Africa	no	178 845.60	0.23	8 918.25	0.03	3
MAR	Morroco	Africa	no	374 846.30	0.23	19 696.51	0.01	4
MDG	Madagascar	Africa	no	23 496.42	0.01	915.01	0.01	5
SEN	Senegal	Africa	no	35 335.24	0.01	2 289.33	0.00	6
DZA	Algeria	Africa	no	899 206.20	0.17	39 734.87	0.00	7
NAM	Namibia	Africa	no	42 062.66	0.01	3 617.67	0.00	8
ZAF	South Africa	Africa	no	1 282 854.00	0.19	77 967.19	0.00	9
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	10
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	11
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	12
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	13
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	14
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	15
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	16
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	17
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	18
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	19
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	20
MOZ	Mozambique	Africa	no	36 409.45	0.00	3 190.27	0.00	21
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	22
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	23
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	24
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	25
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	26
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	27
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	28
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	29
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	30
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	31
LSO	Lesotho	Africa	no	17 938.00		878.46		32
MWI	Malawi	Africa	no	18 356.97		818.79		33
BWA	Botswana	Africa	no	90 628.62		2 912.71		34
MLI	Mali	Africa	no	27 719.15		1 172.08		35
BDI	Burundi	Africa	no	3 616.17		599.64		36
SDN	Sudan	Africa	no	70 368.78		5 000.18		37
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		38
ZMB	Zambia	Africa	no	48 954.52		568.19		39
RWA	Rwanda	Africa	no	13 197.39		1 065.41		40
TCD	Chad	Africa	no	26 745.14		1 026.17		41
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		42
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			43
SWZ	Swaziland	Africa	no	13 701.24		753.93		44
SSD	South Sudan	Africa	no	19 958.30		2 720.34		45
ESH	Western Sahara	Africa	no	3 690.88	0.00			46
MYT	Mayotte	Africa	no	6 949.04	0.00			47
CAF	Central African Republic	Africa	no	3 893.74		166.29		48
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		49
UGA	Uganda	Africa	no	43 697.09		1 787.04		50
REU	Reunion	Africa	no	67 897.68	0.00			51
NER	Niger	Africa	no	12 723.49		1 083.62		52
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	25 520.99	4.67	1
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 012 070.61	2.96	2
MAC	Macau	Asia	no	56 709.10	9.30	3 378.13	2.75	3
PHL	Philippines	Asia	no	566 948.60	30.63	30 212.56	1.01	4
BGD	Bangladesh	Asia	no	381 431.90	5.50	7 673.71	0.72	5
IDN	Indonesia	Asia	no	2 827 835.00	48.15	79 076.93	0.61	6
LBN	Lebanon	Asia	no	207 723.70	2.73	6 530.19	0.42	7
LKA	Sri Lanka	Asia	no	208 273.50	1.75	8 808.70	0.20	8
BRN	Brunei	Asia	no	71 236.46	0.40	2 950.69	0.14	9
MYS	Malaysia	Asia	no	1 170 979.00	5.52	42 433.27	0.13	10
CYP	Cyprus	Asia	no	71 610.53	0.55	4 557.62	0.12	11
CHN	China	Asia	no	31 726 110.00	115.18	1 299 157.61	0.09	12
IND	India	Asia	no	5 769 372.00	19.14	221 700.44	0.09	13
VNM	Vietnam	Asia	no	487 574.40	0.66	10 550.52	0.06	14
ISR	Israel	Asia	no	853 829.30	3.52	65 345.00	0.05	15
SYR	Syria	Asia	no	204 643.30	0.13	4 971.97	0.03	16
OMN	Oman	Asia	no	202 533.60	0.36	14 871.52	0.02	17
TUR	Turkey	Asia	no	1 947 249.00	2.50	123 751.24	0.02	18
THA	Thailand	Asia	no	1 378 999.00	0.53	53 487.73	0.01	19
PAK	Pakistan	Asia	no	502 344.30	0.17	25 463.41	0.01	20
KOR	South Korea	Asia	no	5 538 605.00	1.24	194 728.35	0.01	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	27 530.57	0.01	22
IRN	Iran	Asia	no	2 067 640.00	0.13	31 978.13	0.00	23
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	24
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	25
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	26
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	27
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		28
ARM	Armenia	Asia	no	22 895.19		1 508.90		29
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		30
LAO	Laos	Asia	no	21 925.62		1 626.13		31
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		32
IRQ	Iraq	Asia	no	132 499.60		48 846.71		33
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		34
MMR	Myanmar	Asia	no	195 390.10	3.27			35
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		36
KWT	Kuwait	Asia	no	469 418.40		29 360.33		37
BTN	Bhutan	Asia	no	11 083.66		311.85		38
QAT	Qatar	Asia	no	624 817.70		24 487.36		39
PSE	State of Palestine	Asia	no	69 454.30	0.06			40
TJK	Tajikistan	Asia	no	20 536.86		998.87		41
MNG	Mongolia	Asia	no	36 587.61		1 298.34		42
NPL	Nepal	Asia	no	53 996.57		1 917.21		43
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		44
TWN	Taiwan	Asia	no	1 680 401.00	15.05			45
GEO	Georgia	Asia	no	53 823.53		2 692.49		46
PRK	North Korea	Asia	no	77 982.15	0.00			47
GRC	Greece	Europe	no	1 181 283.00	3.98	48 425.35	0.08	1
MLT	Malta	Europe	no	36 990.21	0.14	1 879.07	0.07	2
ALB	Albania	Europe	no	40 459.65	0.04	1 381.39	0.03	3
RUS	Russia	Europe	no	6 325 795.00	2.54	409 820.63	0.01	4
ESP	Spain	Europe	no	6 233 955.00	1.29	271 148.52	0.00	5
PRT	Portugal	Europe	no	1 054 344.00	0.16	43 081.93	0.00	6
ITA	Italy	Europe	no	8 604 332.00	1.47	417 993.98	0.00	7
IRL	Ireland	Europe	no	778 821.60	0.03	40 563.02	0.00	8
FRA	France	Europe	no	10 329 420.00	0.07	677 049.47	0.00	9
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	542 121.89	0.00	10
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	12
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	13
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	15
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	16
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	17
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	18
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	19
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		20
BLR	Belarus	Europe	no	229 399.90		10 166.04		21
FRO	Faroe Islands	Europe	no	9 272.37				22
MKD	Macedonia	Europe	no	32 996.37		1 787.08		23
LVA	Latvia	Europe	no	95 608.77		4 413.54		24
LIE	Liechtenstein	Europe	no	18 837.10				25
ROU	Romania	Europe	no	555 697.40				26
MCO	Monaco	Europe	no	20 716.40	0.00			27
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		28
SVK	Slovakia	Europe	no	414 782.80		17 642.66		29
ISL	Iceland	Europe	no	57 291.68		3 730.06		30
POL	Poland	Europe	no	1 614 716.00		95 412.26		31
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		32
AUT	Austria	Europe	no	1 801 472.00		84 928.57		33
AND	Andorra	Europe	no	8 381.65				34
SRB	Serbia	Europe	no	57 317.24		7 977.96		35
GIB	Gibraltar	Europe	no	4 042.19	0.00			36
FIN	Finland	Europe	no	965 383.40		66 675.15		37
SMR	San Marino	Europe	no	4 049.35	0.00			38
EST	Estonia	Europe	no	79 617.31		4 754.17		39
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		40
MDA	Moldova	Europe	no	33 762.68		1 618.04		41
UKR	Ukraine	Europe	no	676 833.60		34 350.49		42
LTU	Lithuania	Europe	no	135 613.80		8 076.66		43
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		44
HUN	Hungary	Europe	no	562 479.60		26 544.35		45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	34 332.88	0.34	1
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	22 647.04	0.31	2

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	63 198.81	0.21	3
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	3 793.90	0.20	4
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	13 315.00	0.17	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	8 897.75	0.05	6
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	46 486.26	0.05	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	2 899.00	0.02	8
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	646.93	0.02	9
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	149 707.18	0.01	10
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	5 637.22	0.01	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	3 077.08	0.00	12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	493 431.00	0.00	13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	94 570.07	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			19
USA	United States	Northern America	no	54 922 480.00	205.15	2 547 499.93	0.08	1
CAN	Canada	Northern America	no	6 291 917.00	2.35	395 958.78	0.01	2
NZL	New Zealand	Oceania	no	679 705.40	21.89	34 691.31	0.63	1
AUS	Australia	Oceania	no	6 616 533.00	51.13	276 915.26	0.18	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
EGY	Egypt	Africa	no	617 149.20	8.52	291 083.68	0.03	1
LBY	Libya	Africa	no	73 757.40	0.31	55 976.41	0.01	2
TUN	Tunisia	Africa	no	178 845.60	0.23	51 302.58	0.00	3
MAR	Morroco	Africa	no	374 846.30	0.23	117 556.24	0.00	4
MDG	Madagascar	Africa	no	23 496.42	0.01	11 984.82	0.00	5
DZA	Algeria	Africa	no	899 206.20	0.17	204 165.74	0.00	6
NAM	Namibia	Africa	no	42 062.66	0.01	15 480.83	0.00	7
SEN	Senegal	Africa	no	35 335.24	0.01	17 930.59	0.00	8
ZAF	South Africa	Africa	no	1 282 854.00	0.19	360 489.06	0.00	9
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	10
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	11
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	12
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	13
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	14
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	15
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	16
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	17
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	18
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	19
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	20
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	21
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	22
MOZ	Mozambique	Africa	no	36 409.45	0.00	17 220.44	0.00	23
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	24
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	25
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	26
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	27
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	28
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	29
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	30
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	31
TCD	Chad	Africa	no	26 745.14		14 228.09		32
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		33
REU	Reunion	Africa	no	67 897.68	0.00			34
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			35
ZMB	Zambia	Africa	no	48 954.52		26 244.17		36
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		37
UGA	Uganda	Africa	no	43 697.09		23 933.64		38
RWA	Rwanda	Africa	no	13 197.39		8 767.59		39
MLI	Mali	Africa	no	27 719.15		11 011.34		40
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		41
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		42
SSD	South Sudan	Africa	no	19 958.30		14 712.88		43
BWA	Botswana	Africa	no	90 628.62		15 490.96		44
ESH	Western Sahara	Africa	no	3 690.88	0.00			45
MYT	Mayotte	Africa	no	6 949.04	0.00			46
NER	Niger	Africa	no	12 723.49		8 745.32		47
LSO	Lesotho	Africa	no	17 938.00		3 740.58		48
MWI	Malawi	Africa	no	18 356.97		4 366.74		49
BDI	Burundi	Africa	no	3 616.17		3 443.34		50
SDN	Sudan	Africa	no	70 368.78		70 927.03		51
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		52
JPN	Japan	Asia	no	39 255 200.00	2 997.17	5 059 261.76	0.59	1
MAC	Macau	Asia	no	56 709.10	9.30	20 216.60	0.46	2
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	271 683.76	0.44	3
PHL	Philippines	Asia	no	566 948.60	30.63	283 131.84	0.11	4
IDN	Indonesia	Asia	no	2 827 835.00	48.15	885 677.23	0.05	5
LBN	Lebanon	Asia	no	207 723.70	2.73	50 384.63	0.05	6
BRN	Brunei	Asia	no	71 236.46	0.40	9 075.14	0.04	7
BGD	Bangladesh	Asia	no	381 431.90	5.50	160 820.74	0.03	8
LKA	Sri Lanka	Asia	no	208 273.50	1.75	73 583.10	0.02	9
CYP	Cyprus	Asia	no	71 610.53	0.55	24 622.91	0.02	10
MYS	Malaysia	Asia	no	1 170 979.00	5.52	284 108.03	0.02	11
CHN	China	Asia	no	31 726 110.00	115.18	9 003 382.87	0.01	12
ISR	Israel	Asia	no	853 829.30	3.52	286 558.36	0.01	13
IND	India	Asia	no	5 769 372.00	19.14	1 944 284.82	0.01	14
OMN	Oman	Asia	no	202 533.60	0.36	56 792.46	0.01	15
VNM	Vietnam	Asia	no	487 574.40	0.66	164 388.68	0.00	16
SYR	Syria	Asia	no	204 643.30	0.13	40 077.56	0.00	17
TUR	Turkey	Asia	no	1 947 249.00	2.50	876 064.28	0.00	18
THA	Thailand	Asia	no	1 378 999.00	0.53	374 528.18	0.00	19
KOR	South Korea	Asia	no	5 538 605.00	1.24	1 238 504.83	0.00	20
PAK	Pakistan	Asia	no	502 344.30	0.17	247 867.95	0.00	21

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
IRN	Iran	Asia	no	2 067 640.00	0.13	255 619.28	0.00	22
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	318 951.13	0.00	23
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	24
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	25
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	26
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	27
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		28
ARM	Armenia	Asia	no	22 895.19		12 628.86		29
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		30
LAO	Laos	Asia	no	21 925.62		12 246.45		31
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		32
IRQ	Iraq	Asia	no	132 499.60		226 497.10		33
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		34
MMR	Myanmar	Asia	no	195 390.10	3.27			35
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		36
KWT	Kuwait	Asia	no	469 418.40		96 682.69		37
BTN	Bhutan	Asia	no	11 083.66		2 173.58		38
QAT	Qatar	Asia	no	624 817.70		91 904.94		39
PSE	State of Palestine	Asia	no	69 454.30	0.06			40
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		41
MNG	Mongolia	Asia	no	36 587.61		14 036.94		42
NPL	Nepal	Asia	no	53 996.57		24 466.26		43
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		44
TWN	Taiwan	Asia	no	1 680 401.00	15.05			45
GEO	Georgia	Asia	no	53 823.53		18 230.53		46
PRK	North Korea	Asia	no	77 982.15	0.00			47
GRC	Greece	Europe	no	1 181 283.00	3.98	249 410.75	0.02	1
MLT	Malta	Europe	no	36 990.21	0.14	8 864.05	0.02	2
ALB	Albania	Europe	no	40 459.65	0.04	15 227.71	0.00	3
RUS	Russia	Europe	no	6 325 795.00	2.54	1 973 571.68	0.00	4
ESP	Spain	Europe	no	6 233 955.00	1.29	1 345 564.18	0.00	5
PRT	Portugal	Europe	no	1 054 344.00	0.16	225 098.65	0.00	6
ITA	Italy	Europe	no	8 604 332.00	1.47	2 100 502.86	0.00	7
IRL	Ireland	Europe	no	778 821.60	0.03	183 798.12	0.00	8
FRA	France	Europe	no	10 329 420.00	0.07	2 848 015.52	0.00	9
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	2 728 637.76	0.00	10
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	12
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	13
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	14
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	15
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	16
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	17
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	18
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	19
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		20
BLR	Belarus	Europe	no	229 399.90		73 747.80		21
FRO	Faroe Islands	Europe	no	9 272.37				22
MKD	Macedonia	Europe	no	32 996.37		12 119.46		23
LVA	Latvia	Europe	no	95 608.77		29 570.85		24
LIE	Liechtenstein	Europe	no	18 837.10				25
ROU	Romania	Europe	no	555 697.40				26
MCO	Monaco	Europe	no	20 716.40	0.00			27
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		28
SVK	Slovakia	Europe	no	414 782.80		93 274.32		29
ISL	Iceland	Europe	no	57 291.68		14 052.90		30
POL	Poland	Europe	no	1 614 716.00		515 943.50		31
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		32
AUT	Austria	Europe	no	1 801 472.00		413 112.76		33
AND	Andorra	Europe	no	8 381.65				34
SRB	Serbia	Europe	no	57 317.24		50 611.94		35
GIB	Gibraltar	Europe	no	4 042.19	0.00			36
FIN	Finland	Europe	no	965 383.40		269 912.39		37
SMR	San Marino	Europe	no	4 049.35	0.00			38
EST	Estonia	Europe	no	79 617.31		24 664.81		39
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		40
MDA	Moldova	Europe	no	33 762.68		10 971.97		41
UKR	Ukraine	Europe	no	676 833.60		192 523.67		42
LTU	Lithuania	Europe	no	135 613.80		43 719.88		43
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		44
HUN	Hungary	Europe	no	562 479.60		123 292.26		45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	278 153.13	0.04	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	387 419.05	0.03	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	204 179.29	0.03	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	96 787.63	0.02	4
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	36 126.55	0.02	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	51 412.23	0.01	6
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	373 895.14	0.01	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	28 969.70	0.00	8
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	1 269 259.96	0.00	9
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	12 562.44	0.00	10
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	59 883.48	0.00	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	22 559.82	0.00	12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	2 301 443.96	0.00	13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	611 844.88	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	15
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			17
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			19
USA	United States	Northern America	no	54 922 480.00	205.15	17 276 300.43	0.01	1
CAN	Canada	Northern America	no	6 291 917.00	2.35	1 857 561.03	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	21.89	182 403.61	0.12	1
AUS	Australia	Oceania	no	6 616 533.00	51.13	1 579 571.61	0.03	2
TUV	Tuvalu	Oceania	no	123.26	0.00			3

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
EGY	Egypt	Africa	no	617 149.20	8.52	0.01	1
LBY	Libya	Africa	no	73 757.40	0.31	0.00	2
TUN	Tunisia	Africa	no	178 845.60	0.23	0.00	3
MAR	Morroco	Africa	no	374 846.30	0.23	0.00	4
MDG	Madagascar	Africa	no	23 496.42	0.01	0.00	5
SEN	Senegal	Africa	no	35 335.24	0.01	0.00	6
NAM	Namibia	Africa	no	42 062.66	0.01	0.00	7
DZA	Algeria	Africa	no	899 206.20	0.17	0.00	8
ZAF	South Africa	Africa	no	1 282 854.00	0.19	0.00	9
COG	Congo	Africa	no	69 047.72	0.00	0.00	10
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	11
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	12
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	13
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	14
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	15
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	16
AGO	Angola	Africa	no	176 182.50	0.00	0.00	17
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	18
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	19
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	20
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	21
TGO	Togo	Africa	no	12 513.67	0.00	0.00	22
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	23
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	24
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	25
BEN	Benin	Africa	no	21 971.91	0.00	0.00	26
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	27
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	28
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	29
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	30
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	31
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	32
REU	Reunion	Africa	no	67 897.68	0.00	0.00	33
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	34
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	35
UGA	Uganda	Africa	no	43 697.09			36
ETH	Ethiopia	Africa	no	65 598.93			37
BDI	Burundi	Africa	no	3 616.17			38
MLI	Mali	Africa	no	27 719.15			39
SDN	Sudan	Africa	no	70 368.78			40
ZWE	Zimbawue	Africa	no	22 038.05			41
ZMB	Zambia	Africa	no	48 954.52			42
RWA	Rwanda	Africa	no	13 197.39			43
BWA	Botswana	Africa	no	90 628.62			44
NER	Niger	Africa	no	12 723.49			45
TCD	Chad	Africa	no	26 745.14			46
BFA	Burkina Faso	Africa	no	24 689.43			47
CAF	Central African Republic	Africa	no	3 893.74			48
LSO	Lesotho	Africa	no	17 938.00			49
SWZ	Swaziland	Africa	no	13 701.24			50
SSD	South Sudan	Africa	no	19 958.30			51
MWI	Malawi	Africa	no	18 356.97			52
MAC	Macau	Asia	no	56 709.10	9.30	0.16	1
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	0.10	2
JPN	Japan	Asia	no	39 255 200.00	2 997.17	0.08	3
PHL	Philippines	Asia	no	566 948.60	30.63	0.05	4
IDN	Indonesia	Asia	no	2 827 835.00	48.15	0.02	5
MMR	Myanmar	Asia	no	195 390.10	3.27	0.02	6
BGD	Bangladesh	Asia	no	381 431.90	5.50	0.01	7
LBN	Lebanon	Asia	no	207 723.70	2.73	0.01	8
TWN	Taiwan	Asia	no	1 680 401.00	15.05	0.01	9
LKA	Sri Lanka	Asia	no	208 273.50	1.75	0.01	10
CYP	Cyprus	Asia	no	71 610.53	0.55	0.01	11
BRN	Brunei	Asia	no	71 236.46	0.40	0.01	12
MYS	Malaysia	Asia	no	1 170 979.00	5.52	0.00	13
ISR	Israel	Asia	no	853 829.30	3.52	0.00	14
CHN	China	Asia	no	31 726 110.00	115.18	0.00	15
IND	India	Asia	no	5 769 372.00	19.14	0.00	16
OMN	Oman	Asia	no	202 533.60	0.36	0.00	17
VNM	Vietnam	Asia	no	487 574.40	0.66	0.00	18
TUR	Turkey	Asia	no	1 947 249.00	2.50	0.00	19
PSE	State of Palestine	Asia	no	69 454.30	0.06	0.00	20
SYR	Syria	Asia	no	204 643.30	0.13	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
THA	Thailand	Asia	no	1 378 999.00	0.53	0.00	22
PAK	Pakistan	Asia	no	502 344.30	0.17	0.00	23
KOR	South Korea	Asia	no	5 538 605.00	1.24	0.00	24
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	0.00	25
IRN	Iran	Asia	no	2 067 640.00	0.13	0.00	26
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	27
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	28
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	29
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	30
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	31
KGZ	Kyrgizstan	Asia	no	18 466.60			32
ARM	Armenia	Asia	no	22 895.19			33
AZE	Azerbaijan	Asia	no	192 784.00			34
LAO	Laos	Asia	no	21 925.62			35
IRQ	Iraq	Asia	no	132 499.60			36
KAZ	Kazakhstan	Asia	no	734 309.90			37
TKM	Turkmenistan	Asia	no	36 127.02			38
UZB	Uzbekistan	Asia	no	151 891.10			39
KWT	Kuwait	Asia	no	469 418.40			40
QAT	Qatar	Asia	no	624 817.70			41
BTN	Bhutan	Asia	no	11 083.66			42
TJK	Tajikistan	Asia	no	20 536.86			43
MNG	Mongolia	Asia	no	36 587.61			44
NPL	Nepal	Asia	no	53 996.57			45
AFG	Afghanistan	Asia	no	60 187.87			46
GEO	Georgia	Asia	no	53 823.53			47
MLT	Malta	Europe	no	36 990.21	0.14	0.00	1
GRC	Greece	Europe	no	1 181 283.00	3.98	0.00	2
ALB	Albania	Europe	no	40 459.65	0.04	0.00	3
RUS	Russia	Europe	no	6 325 795.00	2.54	0.00	4
ESP	Spain	Europe	no	6 233 955.00	1.29	0.00	5
ITA	Italy	Europe	no	8 604 332.00	1.47	0.00	6
PRT	Portugal	Europe	no	1 054 344.00	0.16	0.00	7
IRL	Ireland	Europe	no	778 821.60	0.03	0.00	8
FRA	France	Europe	no	10 329 420.00	0.07	0.00	9
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	0.00	10
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	11
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	12
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	13
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	14
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	15
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	16
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	17
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	18
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	19
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	20
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	21
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	22
BLR	Belarus	Europe	no	229 399.90			23
MKD	Macedonia	Europe	no	32 996.37			24
LVA	Latvia	Europe	no	95 608.77			25
LIE	Liechtenstein	Europe	no	18 837.10			26
ISL	Iceland	Europe	no	57 291.68			27
POL	Poland	Europe	no	1 614 716.00			28
FIN	Finland	Europe	no	965 383.40			29
EST	Estonia	Europe	no	79 617.31			30
BGR	Bulgaria	Europe	no	163 821.60			31
AND	Andorra	Europe	no	8 381.65			32
CZE	Czech Republic	Europe	no	1 007 263.00			33
SRB	Serbia	Europe	no	57 317.24			34
AUT	Austria	Europe	no	1 801 472.00			35
HUN	Hungary	Europe	no	562 479.60			36
CHE	Switzerland	Europe	no	3 421 606.00			37
LTU	Lithuania	Europe	no	135 613.80			38
UKR	Ukraine	Europe	no	676 833.60			39
MDA	Moldova	Europe	no	33 762.68			40
LUX	Luxembourg	Europe	no	201 130.60			41
SWE	Sweden	Europe	no	1 747 501.00			42
SVK	Slovakia	Europe	no	414 782.80			43
ROU	Romania	Europe	no	555 697.40			44
FRO	Faroe Islands	Europe	no	9 272.37			45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	0.02	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	0.01	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	0.01	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	0.01	4
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	0.01	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	0.00	6
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	0.00	7
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	0.00	8
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	0.00	9
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	0.00	10
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	0.00	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	0.00	12
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	0.00	13
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	15
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	17
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			19
USA	United States	Northern America	no	54 922 480.00	205.15	0.00	1
CAN	Canada	Northern America	no	6 291 917.00	2.35	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	21.89	0.03	1
AUS	Australia	Oceania	no	6 616 533.00	51.13	0.01	2
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
EGY	Egypt	Africa	no	617 149.20	271 972.83	0.00	0.00	1
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	2
MRT	Mauritania	Africa	no	11 985.52	4 158.18	0.00	0.00	3
DZA	Algeria	Africa	no	899 206.20	210 183.41	0.00	0.00	4
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	0.00	0.00	5
NGA	Nigeria	Africa	no	592 030.40	521 803.30	0.00	0.00	6
MDG	Madagascar	Africa	no	23 496.42	10 613.49	0.00	0.00	7
DJI	Djibouti	Africa	no	4 744.66	1 456.34	0.00	0.00	8
CMR	Cameroon	Africa	no	81 683.73	29 567.50	0.00	0.00	9
LBY	Libya	Africa	no	73 757.40	74 199.53	0.00	0.00	10
KEN	Kenya	Africa	no	98 382.66	55 243.06	0.00	0.00	11
MAR	Morroco	Africa	no	374 846.30	103 835.71	0.00	0.00	12
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	13
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	14
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	0.00	0.00	15
BEN	Benin	Africa	no	21 971.91	8 307.22	0.00	0.00	16
GIN	Guinea	Africa	no	13 665.89	6 144.13	0.00	0.00	17
NAM	Namibia	Africa	no	42 062.66	13 113.07	0.00	0.00	18
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	0.00	0.00	19
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	0.00	0.00	20
TUN	Tunisia	Africa	no	178 845.60	46 993.60	0.00	0.00	21
AGO	Angola	Africa	no	176 182.50	124 178.24	0.00	0.00	22
GAB	Gabon	Africa	no	120 252.20	19 343.51	0.00	0.00	23
LBR	Liberia	Africa	no	1 911.24	1 950.96	0.00	0.00	24
SEN	Senegal	Africa	no	35 335.24	14 791.70	0.00	0.00	25
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	0.00	0.00	26
GMB	The Gambia	Africa	no	2 097.61	903.50	0.00	0.00	27
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.00	0.00	28
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	29
LSO	Lesotho	Africa	no	17 938.00	2 334.99			30
MWI	Malawi	Africa	no	18 356.97	3 705.39			31
COG	Congo	Africa	no	69 047.72	14 085.85			32
BWA	Botswana	Africa	no	90 628.62	14 784.71			33
ERI	Eritrea	Africa	no	9 081.79	3 444.10			34
MLI	Mali	Africa	no	27 719.15	10 942.73			35
BDI	Burundi	Africa	no	3 616.17	2 714.51			36
SDN	Sudan	Africa	no	70 368.78	66 565.89			37
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			38
ZMB	Zambia	Africa	no	48 954.52	26 820.87			39
RWA	Rwanda	Africa	no	13 197.39	7 521.26			40
TCD	Chad	Africa	no	26 745.14	13 513.55			41
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			42
COD	Democratic Republic of the Congo	Africa	no	27 401.97				43
UGA	Uganda	Africa	no	43 697.09	21 493.61			44
REU	Reunion	Africa	no	67 897.68				45
NER	Niger	Africa	no	12 723.49	7 407.42			46
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			47
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			48
ESH	Western Sahara	Africa	no	3 690.88				49
MYT	Mayotte	Africa	no	6 949.04				50
SSD	South Sudan	Africa	no	19 958.30	11 804.41			51
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			52
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	60 744.37	1.23	1
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	444.42	0.16	2
PHL	Philippines	Asia	no	566 948.60	272 066.56	304.05	0.11	3
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	923.97	0.11	4
MAC	Macau	Asia	no	56 709.10	51 753.10	23.28	0.04	5
BRN	Brunei	Asia	no	71 236.46	16 111.14	4.09	0.03	6
IND	India	Asia	no	5 769 372.00	1 876 797.16	22.79	0.00	7
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	3.68	0.00	8
VNM	Vietnam	Asia	no	487 574.40	171 390.01	0.16	0.00	9
SYR	Syria	Asia	no	204 643.30	40 405.00	0.00	0.00	10
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	0.00	0.00	11
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.00	0.00	12
LBN	Lebanon	Asia	no	207 723.70	44 352.42	0.00	0.00	13
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	0.00	0.00	14
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	0.00	0.00	15
ISR	Israel	Asia	no	853 829.30	290 550.61	0.00	0.00	16
CHN	China	Asia	no	31 726 110.00	9 240 270.86	0.00	0.00	17
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	18
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	19
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	0.00	0.00	20
PAK	Pakistan	Asia	no	502 344.30	232 286.78	0.00	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
OMN	Oman	Asia	no	202 533.60	79 655.92	0.00	0.00	22
YEM	Yemen	Asia	no	79 113.56	35 954.50	0.00	0.00	23
CYP	Cyprus	Asia	no	71 610.53	21 911.45	0.00	0.00	24
BTN	Bhutan	Asia	no	11 083.66	1 781.26			25
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			26
LAO	Laos	Asia	no	21 925.62	11 242.53			27
MNG	Mongolia	Asia	no	36 587.61	11 516.41			28
ARM	Armenia	Asia	no	22 895.19	10 432.17			29
NPL	Nepal	Asia	no	53 996.57	19 294.35			30
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			31
IRQ	Iraq	Asia	no	132 499.60	229 327.29			32
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			33
KHM	Cambodia	Asia	no	27 390.49	15 238.69			34
QAT	Qatar	Asia	no	624 817.70	203 235.16			35
PRK	North Korea	Asia	no	77 982.15				36
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			37
GEO	Georgia	Asia	no	53 823.53	16 140.05			38
KWT	Kuwait	Asia	no	469 418.40	175 830.50			39
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			40
PSE	State of Palestine	Asia	no	69 454.30				41
JOR	Jordan	Asia	no	121 481.20	33 678.50			42
TWN	Taiwan	Asia	no	1 680 401.00				43
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			44
MMR	Myanmar	Asia	no	195 390.10				45
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			46
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			47
GRC	Greece	Europe	no	1 181 283.00	242 230.33	8.12	0.00	1
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	24.90	0.00	2
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	1.48	0.00	3
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	0.00	0.00	4
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	0.00	0.00	5
HRV	Croatia	Europe	no	188 113.70	57 868.67	0.00	0.00	6
SVN	Slovenia	Europe	no	139 899.70	47 987.30	0.00	0.00	7
FRA	France	Europe	no	10 329 420.00	2 806 427.94	0.00	0.00	8
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	0.00	0.00	9
ALB	Albania	Europe	no	40 459.65	12 923.24	0.00	0.00	10
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	0.00	0.00	11
IRL	Ireland	Europe	no	778 821.60	232 077.43	0.00	0.00	12
MNE	Montenegro	Europe	no	8 892.93	4 416.08	0.00	0.00	13
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	14
MLT	Malta	Europe	no	36 990.21	9 642.33	0.00	0.00	15
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	0.00	0.00	16
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	0.00	0.00	17
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			18
EST	Estonia	Europe	no	79 617.31	24 880.27			19
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			20
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			21
MCO	Monaco	Europe	no	20 716.40	6 074.51			22
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			23
POL	Poland	Europe	no	1 614 716.00	525 865.98			24
SMR	San Marino	Europe	no	4 049.35	1 899.81			25
AND	Andorra	Europe	no	8 381.65	2 849.17			26
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			27
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			28
SRB	Serbia	Europe	no	57 317.24	45 519.65			29
GIB	Gibraltar	Europe	no	4 042.19				30
AUT	Austria	Europe	no	1 801 472.00	428 321.90			31
HUN	Hungary	Europe	no	562 479.60	133 423.90			32
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			33
LTU	Lithuania	Europe	no	135 613.80	45 931.97			34
UKR	Ukraine	Europe	no	676 833.60	177 430.61			35
ISL	Iceland	Europe	no	57 291.68	15 330.06			36
FIN	Finland	Europe	no	965 383.40	267 328.62			37
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			38
LVA	Latvia	Europe	no	95 608.77	30 956.69			39
MKD	Macedonia	Europe	no	32 996.37	10 195.40			40
BLR	Belarus	Europe	no	229 399.90	71 709.52			41
ROU	Romania	Europe	no	555 697.40				42
SVK	Slovakia	Europe	no	414 782.80	97 707.33			43
MDA	Moldova	Europe	no	33 762.68	7 969.62			44
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	65.07	0.02	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	63.84	0.02	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	10.78	0.01	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	4.42	0.00	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.10	0.00	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	1.58	0.00	6
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	28.49	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.51	0.00	8
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	0.26	0.00	9
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	0.00	0.00	10
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	0.00	0.00	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	0.00	0.00	12
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	0.00	0.00	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	0.00	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				19
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	2 036.40	0.01	1
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	15.16	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	353.59	0.19	1
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	851.79	0.05	2
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
EGY	Egypt	Africa	no	617 149.20	264 562.52	0.00	0.00	1
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	2
MRT	Mauritania	Africa	no	11 985.52	3 892.41	0.00	0.00	3
DZA	Algeria	Africa	no	899 206.20	206 267.88	0.00	0.00	4
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	0.00	0.00	5
NGA	Nigeria	Africa	no	592 030.40	499 041.44	0.00	0.00	6
MDG	Madagascar	Africa	no	23 496.42	10 279.21	0.00	0.00	7
DJI	Djibouti	Africa	no	4 744.66	775.82	0.00	0.00	8
CMR	Cameroon	Africa	no	81 683.73	28 948.12	0.00	0.00	9
LBY	Libya	Africa	no	73 757.40	61 985.45	0.00	0.00	10
KEN	Kenya	Africa	no	98 382.66	54 934.72	0.00	0.00	11
MAR	Morroco	Africa	no	374 846.30	100 965.44	0.00	0.00	12
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	13
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	14
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	0.00	0.00	15
BEN	Benin	Africa	no	21 971.91	8 247.34	0.00	0.00	16
GIN	Guinea	Africa	no	13 665.89	5 696.70	0.00	0.00	17
NAM	Namibia	Africa	no	42 062.66	12 989.72	0.00	0.00	18
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	0.00	0.00	19
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	0.00	0.00	20
TUN	Tunisia	Africa	no	178 845.60	44 799.78	0.00	0.00	21
AGO	Angola	Africa	no	176 182.50	112 289.11	0.00	0.00	22
GAB	Gabon	Africa	no	120 252.20	17 298.19	0.00	0.00	23
LBR	Liberia	Africa	no	1 911.24	1 751.03	0.00	0.00	24
SEN	Senegal	Africa	no	35 335.24	14 606.22	0.00	0.00	25
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	0.00	0.00	26
GMB	The Gambia	Africa	no	2 097.61	875.76	0.00	0.00	27
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.00	0.00	28
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	29
LSO	Lesotho	Africa	no	17 938.00	2 861.49			30
MWI	Malawi	Africa	no	18 356.97	3 574.19			31
COG	Congo	Africa	no	69 047.72	11 049.89			32
BWA	Botswana	Africa	no	90 628.62	14 678.53			33
ERI	Eritrea	Africa	no	9 081.79	3 412.88			34
MLI	Mali	Africa	no	27 719.15	10 272.74			35
BDI	Burundi	Africa	no	3 616.17	2 713.09			36
SDN	Sudan	Africa	no	70 368.78	63 769.45			37
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			38
ZMB	Zambia	Africa	no	48 954.52	26 049.97			39
RWA	Rwanda	Africa	no	13 197.39	7 406.89			40
TCD	Chad	Africa	no	26 745.14	12 987.28			41
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			42
COD	Democratic Republic of the Congo	Africa	no	27 401.97				43
UGA	Uganda	Africa	no	43 697.09	22 316.73			44
REU	Reunion	Africa	no	67 897.68				45
NER	Niger	Africa	no	12 723.49	7 223.22			46
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			47
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			48
ESH	Western Sahara	Africa	no	3 690.88				49
MYT	Mayotte	Africa	no	6 949.04				50
SSD	South Sudan	Africa	no	19 958.30	10 791.19			51
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			52
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	60 744.37	1.19	1
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	444.42	0.16	2
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	923.97	0.11	3
PHL	Philippines	Asia	no	566 948.60	326 316.43	304.05	0.09	4
MAC	Macau	Asia	no	56 709.10	37 762.88	23.28	0.06	5
BRN	Brunei	Asia	no	71 236.46	10 784.47	4.09	0.04	6
IND	India	Asia	no	5 769 372.00	1 855 591.42	22.79	0.00	7
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	3.68	0.00	8
VNM	Vietnam	Asia	no	487 574.40	164 181.67	0.16	0.00	9
SYR	Syria	Asia	no	204 643.30	39 715.80	0.00	0.00	10
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	0.00	0.00	11
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.00	0.00	12
LBN	Lebanon	Asia	no	207 723.70	44 926.34	0.00	0.00	13
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	0.00	0.00	14
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	0.00	0.00	15
ISR	Israel	Asia	no	853 829.30	284 226.45	0.00	0.00	16
CHN	China	Asia	no	31 726 110.00	9 196 167.76	0.00	0.00	17
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	18
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	19
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	0.00	0.00	20
PAK	Pakistan	Asia	no	502 344.30	244 280.84	0.00	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
OMN	Oman	Asia	no	202 533.60	90 220.81	0.00	0.00	22
YEM	Yemen	Asia	no	79 113.56	34 721.48	0.00	0.00	23
CYP	Cyprus	Asia	no	71 610.53	21 453.80	0.00	0.00	24
BTN	Bhutan	Asia	no	11 083.66	1 665.34			25
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			26
LAO	Laos	Asia	no	21 925.62	10 602.76			27
MNG	Mongolia	Asia	no	36 587.61	10 751.45			28
ARM	Armenia	Asia	no	22 895.19	10 972.97			29
NPL	Nepal	Asia	no	53 996.57	19 443.42			30
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			31
IRQ	Iraq	Asia	no	132 499.60	229 027.28			32
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			33
KHM	Cambodia	Asia	no	27 390.49	14 486.36			34
QAT	Qatar	Asia	no	624 817.70	190 319.79			35
PRK	North Korea	Asia	no	77 982.15				36
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			37
GEO	Georgia	Asia	no	53 823.53	15 835.00			38
KWT	Kuwait	Asia	no	469 418.40	165 127.08			39
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			40
PSE	State of Palestine	Asia	no	69 454.30				41
JOR	Jordan	Asia	no	121 481.20	33 339.06			42
TWN	Taiwan	Asia	no	1 680 401.00				43
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			44
MMR	Myanmar	Asia	no	195 390.10				45
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			46
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			47
GRC	Greece	Europe	no	1 181 283.00	242 155.98	8.12	0.00	1
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	24.90	0.00	2
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	1.48	0.00	3
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	0.00	0.00	4
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	0.00	0.00	5
HRV	Croatia	Europe	no	188 113.70	56 412.38	0.00	0.00	6
SVN	Slovenia	Europe	no	139 899.70	47 633.96	0.00	0.00	7
FRA	France	Europe	no	10 329 420.00	2 855 136.13	0.00	0.00	8
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	0.00	0.00	9
ALB	Albania	Europe	no	40 459.65	12 951.12	0.00	0.00	10
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	0.00	0.00	11
IRL	Ireland	Europe	no	778 821.60	197 446.98	0.00	0.00	12
MNE	Montenegro	Europe	no	8 892.93	4 503.08	0.00	0.00	13
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	14
MLT	Malta	Europe	no	36 990.21	8 946.39	0.00	0.00	15
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	0.00	0.00	16
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	0.00	0.00	17
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			18
EST	Estonia	Europe	no	79 617.31	24 010.33			19
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			20
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			21
MCO	Monaco	Europe	no	20 716.40	6 919.24			22
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			23
POL	Poland	Europe	no	1 614 716.00	506 714.23			24
SMR	San Marino	Europe	no	4 049.35	1 681.06			25
AND	Andorra	Europe	no	8 381.65	2 539.76			26
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			27
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			28
SRB	Serbia	Europe	no	57 317.24	43 641.10			29
GIB	Gibraltar	Europe	no	4 042.19				30
AUT	Austria	Europe	no	1 801 472.00	427 916.46			31
HUN	Hungary	Europe	no	562 479.60	129 554.20			32
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			33
LTU	Lithuania	Europe	no	135 613.80	44 274.32			34
UKR	Ukraine	Europe	no	676 833.60	180 979.14			35
ISL	Iceland	Europe	no	57 291.68	15 047.05			36
FIN	Finland	Europe	no	965 383.40	268 134.55			37
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			38
LVA	Latvia	Europe	no	95 608.77	30 883.23			39
MKD	Macedonia	Europe	no	32 996.37	10 110.99			40
BLR	Belarus	Europe	no	229 399.90	69 000.62			41
ROU	Romania	Europe	no	555 697.40				42
SVK	Slovakia	Europe	no	414 782.80	95 768.45			43
MDA	Moldova	Europe	no	33 762.68	8 846.50			44
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	65.07	0.02	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	63.84	0.02	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	10.78	0.01	3
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	4.42	0.00	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.10	0.00	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	1.58	0.00	6
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	28.49	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.51	0.00	8
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	0.26	0.00	9
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	0.00	0.00	10
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	0.00	0.00	11
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	0.00	0.00	12
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	0.00	0.00	13
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	0.00	0.00	14
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	15
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			16
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				17
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			18
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				19
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	2 036.40	0.01	1
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	15.16	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	353.59	0.22	1
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	851.79	0.06	2
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	3

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	1
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	2
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	3
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	4
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	5
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	6
MDG	Madagascar	Africa	no	23 496.42	0.00	0.00	7
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	8
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	9
LBY	Libya	Africa	no	73 757.40	0.00	0.00	10
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	11
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	12
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	13
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	14
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	15
BEN	Benin	Africa	no	21 971.91	0.00	0.00	16
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	17
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	18
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	19
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	20
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	21
AGO	Angola	Africa	no	176 182.50	0.00	0.00	22
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	23
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	24
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	25
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	26
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	27
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	28
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	29
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	30
TGO	Togo	Africa	no	12 513.67	0.00	0.00	31
LSO	Lesotho	Africa	no	17 938.00			32
MWI	Malawi	Africa	no	18 356.97			33
COG	Congo	Africa	no	69 047.72			34
BWA	Botswana	Africa	no	90 628.62			35
ERI	Eritrea	Africa	no	9 081.79			36
MLI	Mali	Africa	no	27 719.15			37
BDI	Burundi	Africa	no	3 616.17			38
SDN	Sudan	Africa	no	70 368.78			39
ZWE	Zimbawue	Africa	no	22 038.05			40
ZMB	Zambia	Africa	no	48 954.52			41
RWA	Rwanda	Africa	no	13 197.39			42
TCD	Chad	Africa	no	26 745.14			43
BFA	Burkina Faso	Africa	no	24 689.43			44
COD	Democratic Republic of the Congo	Africa	no	27 401.97			45
UGA	Uganda	Africa	no	43 697.09			46
REU	Reunion	Africa	no	67 897.68			47
NER	Niger	Africa	no	12 723.49			48
ETH	Ethiopia	Africa	no	65 598.93			49
CAF	Central African Republic	Africa	no	3 893.74			50
SSD	South Sudan	Africa	no	19 958.30			51
SWZ	Swaziland	Africa	no	13 701.24			52
JPN	Japan	Asia	no	39 255 200.00	60 744.37	0.15	1
PHL	Philippines	Asia	no	566 948.60	304.05	0.05	2
MAC	Macau	Asia	no	56 709.10	23.28	0.04	3
HKG	Hong Kong	Asia	no	1 250 063.00	444.42	0.04	4
IDN	Indonesia	Asia	no	2 827 835.00	923.97	0.03	5
BRN	Brunei	Asia	no	71 236.46	4.09	0.01	6
IND	India	Asia	no	5 769 372.00	22.79	0.00	7
MYS	Malaysia	Asia	no	1 170 979.00	3.68	0.00	8
TWN	Taiwan	Asia	no	1 680 401.00	4.53	0.00	9
VNM	Vietnam	Asia	no	487 574.40	0.16	0.00	10
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	11
KOR	South Korea	Asia	no	5 538 605.00	0.00	0.00	12
SYR	Syria	Asia	no	204 643.30	0.00	0.00	13
MMR	Myanmar	Asia	no	195 390.10	0.00	0.00	14
LKA	Sri Lanka	Asia	no	208 273.50	0.00	0.00	15
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	16
CHN	China	Asia	no	31 726 110.00	0.00	0.00	17
ISR	Israel	Asia	no	853 829.30	0.00	0.00	18
PAK	Pakistan	Asia	no	502 344.30	0.00	0.00	19
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	20
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	21

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	22
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	23
OMN	Oman	Asia	no	202 533.60	0.00	0.00	24
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	25
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	26
BGD	Bangladesh	Asia	no	381 431.90	0.00	0.00	27
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	28
UZB	Uzbekistan	Asia	no	151 891.10			29
BTN	Bhutan	Asia	no	11 083.66			30
LAO	Laos	Asia	no	21 925.62			31
KHM	Cambodia	Asia	no	27 390.49			32
TJK	Tajikistan	Asia	no	20 536.86			33
ARM	Armenia	Asia	no	22 895.19			34
AZE	Azerbaijan	Asia	no	192 784.00			35
IRQ	Iraq	Asia	no	132 499.60			36
MNG	Mongolia	Asia	no	36 587.61			37
NPL	Nepal	Asia	no	53 996.57			38
AFG	Afghanistan	Asia	no	60 187.87			39
QAT	Qatar	Asia	no	624 817.70			40
SAU	Saudi Arabia	Asia	no	2 141 419.00			41
GEO	Georgia	Asia	no	53 823.53			42
KWT	Kuwait	Asia	no	469 418.40			43
KGZ	Kyrgizstan	Asia	no	18 466.60			44
JOR	Jordan	Asia	no	121 481.20			45
TKM	Turkmenistan	Asia	no	36 127.02			46
KAZ	Kazakhstan	Asia	no	734 309.90			47
GRC	Greece	Europe	no	1 181 283.00	8.12	0.00	1
RUS	Russia	Europe	no	6 325 795.00	24.90	0.00	2
ITA	Italy	Europe	no	8 604 332.00	1.48	0.00	3
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	4
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	5
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	6
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	7
FRA	France	Europe	no	10 329 420.00	0.00	0.00	8
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	9
ALB	Albania	Europe	no	40 459.65	0.00	0.00	10
GBR	United Kingdom	Europe	no	7 806 797.00	0.00	0.00	11
IRL	Ireland	Europe	no	778 821.60	0.00	0.00	12
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	13
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	14
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	15
MLT	Malta	Europe	no	36 990.21	0.00	0.00	16
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	17
PRT	Portugal	Europe	no	1 054 344.00	0.00	0.00	18
POL	Poland	Europe	no	1 614 716.00			19
BGR	Bulgaria	Europe	no	163 821.60			20
LUX	Luxembourg	Europe	no	201 130.60			21
MCO	Monaco	Europe	no	20 716.40			22
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			23
EST	Estonia	Europe	no	79 617.31			24
SMR	San Marino	Europe	no	4 049.35			25
AND	Andorra	Europe	no	8 381.65			26
BEL	Belgium	Europe	no	1 980 551.00			27
CZE	Czech Republic	Europe	no	1 007 263.00			28
SRB	Serbia	Europe	no	57 317.24			29
AUT	Austria	Europe	no	1 801 472.00			30
HUN	Hungary	Europe	no	562 479.60			31
CHE	Switzerland	Europe	no	3 421 606.00			32
LTU	Lithuania	Europe	no	135 613.80			33
ISL	Iceland	Europe	no	57 291.68			34
FIN	Finland	Europe	no	965 383.40			35
LIE	Liechtenstein	Europe	no	18 837.10			36
LVA	Latvia	Europe	no	95 608.77			37
MKD	Macedonia	Europe	no	32 996.37			38
BLR	Belarus	Europe	no	229 399.90			39
ROU	Romania	Europe	no	555 697.40			40
UKR	Ukraine	Europe	no	676 833.60			41
SVK	Slovakia	Europe	no	414 782.80			42
SWE	Sweden	Europe	no	1 747 501.00			43
FRO	Faroe Islands	Europe	no	9 272.37			44
MDA	Moldova	Europe	no	33 762.68			45
CHL	Chile	Latin America and the Caribbean	no	784 154.10	65.07	0.01	1
COL	Colombia	Latin America and the Caribbean	no	944 576.90	63.84	0.01	2

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	4.42	0.00	3
PER	Peru	Latin America and the Caribbean	no	692 344.50	10.78	0.00	4
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.10	0.00	5
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	1.58	0.00	6
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	28.49	0.00	7
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.51	0.00	8
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.26	0.00	9
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	10
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	11
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	12
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.00	0.00	13
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.00	0.00	14
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	15
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	0.00	0.00	16
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	17
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			18
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			19
USA	United States	Northern America	no	54 922 480.00	2 036.40	0.00	1
CAN	Canada	Northern America	no	6 291 917.00	15.16	0.00	2
NZL	New Zealand	Oceania	no	679 705.40	353.59	0.05	1
AUS	Australia	Oceania	no	6 616 533.00	851.79	0.01	2
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	3

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Economy

Earthquake

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	64.44	1 199.63	53.72	1 Low
AFG	Afghanistan	Asia	no	60 187.87	146.81	3 601.40	40.76	2 Low
MWI	Malawi	Africa	no	18 356.97	8.20	731.37	11.21	3 Low
NPL	Nepal	Asia	no	53 996.57	29.50	4 356.14	6.77	4 Low
RWA	Rwanda	Africa	no	13 197.39	12.68	1 920.52	6.60	5 Low
BDI	Burundi	Africa	no	3 616.17	3.87	780.29	4.96	6 Low
UGA	Uganda	Africa	no	43 697.09	22.14	5 121.46	4.32	7 Low
BGD	Bangladesh	Asia	no	381 431.90	126.46	42 581.72	2.97	8 Low
MOZ	Mozambique	Africa	no	36 409.45	7.91	2 723.39	2.90	9 Low
SSD	South Sudan	Africa	no	19 958.30	3.90	1 399.32	2.79	10 Low
ERI	Eritrea	Africa	no	9 081.79	0.71	260.73	2.72	11 Low
TZA	Tanzania	Africa	no	50 142.79	26.08	10 658.54	2.45	12 Low
ZWE	Zimbawue	Africa	no	22 038.05	4.18	1 752.82	2.38	13 Low
CAF	Central African Republic	Africa	no	3 893.74	0.43	320.25	1.34	14 Low
SOM	Somalia	Africa	no	6 408.32	0.16	136.64	1.17	15 Low
GIN	Guinea	Africa	no	13 665.89	0.45	919.65	0.49	16 Low
MDG	Madagascar	Africa	no	23 496.42	0.58	1 666.80	0.35	17 Low
GMB	The Gambia	Africa	no	2 097.61	0.05	187.47	0.27	18 Low
LBR	Liberia	Africa	no	1 911.24	0.11	440.32	0.25	19 Low
ETH	Ethiopia	Africa	no	65 598.93	2.94	17 012.56	0.17	20 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.10	685.06	0.15	21 Low
BEN	Benin	Africa	no	21 971.91	0.23	2 182.62	0.11	22 Low
TGO	Togo	Africa	no	12 513.67	0.07	685.82	0.10	23 Low
MLI	Mali	Africa	no	27 719.15	0.15	1 684.06	0.09	24 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 889.80	0.02	25 Low
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	26 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	4 539.50	148.90	1 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	7 693.87	91.20	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3 663.90	68.34	3 MiddleLow
GEO	Georgia	Asia	no	53 823.53	167.01	3 542.58	47.14	4 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	2 207.36	28.36	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2 574.11	28.17	6 MiddleLow
ARM	Armenia	Asia	no	22 895.19	45.24	2 183.10	20.72	7 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	6.99	363.96	19.21	8 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	15.77	855.33	18.44	9 MiddleLow
SYR	Syria	Asia	no	204 643.30	149.11	8 252.62	18.07	10 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	225.05	13 153.84	17.11	11 MiddleLow
YEM	Yemen	Asia	no	79 113.56	45.87	3 126.31	14.67	12 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	5 844.96	12.75	13 MiddleLow
PHL	Philippines	Asia	no	566 948.60	703.46	55 644.78	12.64	14 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	7.98	842.11	9.48	15 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	2.95	317.86	9.28	16 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	272.05	30 125.80	9.03	17 MiddleLow
MAR	Morroco	Africa	no	374 846.30	157.28	31 321.40	5.02	18 MiddleLow
EGY	Egypt	Africa	no	617 149.20	176.90	37 477.12	4.72	19 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	274 943.80	4.06	20 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	17.41	5 247.76	3.32	21 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	9.88	5 736.52	1.72	22 MiddleLow
MDA	Moldova	Europe	no	33 762.68	2.83	1 821.11	1.55	23 MiddleLow
LAO	Laos	Asia	no	21 925.62	5.03	3 279.79	1.53	24 MiddleLow
KEN	Kenya	Africa	no	98 382.66	12.57	11 277.32	1.11	25 MiddleLow
IND	India	Asia	no	5 769 372.00	446.55	530 741.66	0.84	26 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	3.83	5 086.03	0.75	27 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	20.64	75 511.10	0.27	28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	8.67	32 236.10	0.27	29 MiddleLow
COG	Congo	Africa	no	69 047.72	0.99	4 329.13	0.23	30 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.79	3 706.12	0.21	31 MiddleLow
SDN	Sudan	Africa	no	70 368.78	1.89	13 307.19	0.14	32 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.22	1 578.96	0.14	33 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	3.95	40 823.56	0.10	34 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.33	5 292.23	0.06	35 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.17	3 701.42	0.05	36 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.77	19 647.18	0.04	37 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	4 394.85	0.04	38 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.09	10 912.64	0.01	39 MiddleLow
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	53 841.99	68.15	1 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	4 190.90	73 681.58	56.88	2 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	26 312.88	47.46	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	92 724.40	33.86	4 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	10 406.53	22.70	5 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	282.02	18 074.31	15.60	6 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	991.52	71 040.48	13.96	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ALB	Albania	Europe	no	40 459.65	46.73	3 379.49	13.83	8 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	10 060.78	13.45	9 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	167 069.99	13.17	10 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	103 818.81	10.63	11 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	26.26	2 530.04	10.38	12 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	97.19	9 509.45	10.22	13 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	119.65	12 363.32	9.68	14 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	601.24	67 780.45	8.87	15 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	49 121.75	7.88	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	83.36	11 609.87	7.18	17 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	31.51	5 015.09	6.28	18 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	5.10	847.70	6.02	19 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	265 421.77	5.10	20 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	46.25	9 168.09	5.04	21 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	3 192.49	4.67	22 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	159.43	35 983.20	4.43	23 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	33.37	8 634.55	3.86	24 MiddleHigh
CHN	China	Asia	no	31 726 110.00	6 954.76	4 370 835.96	1.59	25 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	19.25	16 597.51	1.16	26 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	3.39	3 368.79	1.01	27 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	2.90	6 432.02	0.45	28 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	32.56	103 523.57	0.31	29 MiddleHigh
AGO	Angola	Africa	no	176 182.50	4.60	18 242.56	0.25	30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	408 331.78	0.16	31 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	10.49	84 107.08	0.12	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.14	26 490.10	0.01	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	5 109.11	27 154.95	188.15	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	65 444.15	36.62	2 High
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 068 884.62	29.80	3 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	77 440.20	26.40	4 High
ITA	Italy	Europe	no	8 604 332.00	9 772.86	383 197.87	25.50	5 High
SVN	Slovenia	Europe	no	139 899.70	159.19	9 461.85	16.82	6 High
HRV	Croatia	Europe	no	188 113.70	152.79	11 171.45	13.68	7 High
ISL	Iceland	Europe	no	57 291.68	31.50	2 314.22	13.61	8 High
KWT	Kuwait	Asia	no	469 418.40	201.43	19 039.58	10.58	9 High
QAT	Qatar	Asia	no	624 817.70	152.90	15 282.42	10.00	10 High
MLT	Malta	Europe	no	36 990.21	13.32	1 333.61	9.99	11 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	88 386.66	8.52	12 High
ISR	Israel	Asia	no	853 829.30	381.32	56 565.68	6.74	13 High
CYP	Cyprus	Asia	no	71 610.53	28.55	4 260.93	6.70	14 High
AUT	Austria	Europe	no	1 801 472.00	524.60	95 015.40	5.52	15 High
CHE	Switzerland	Europe	no	3 421 606.00	786.78	160 510.43	4.90	16 High
HUN	Hungary	Europe	no	562 479.60	123.20	26 595.35	4.63	17 High
USA	United States	Northern America	no	54 922 480.00	14 458.98	3 244 299.91	4.46	18 High
DEU	Germany	Europe	no	15 114 870.00	2 350.12	737 992.70	3.18	19 High
SVK	Slovakia	Europe	no	414 782.80	60.97	19 975.29	3.05	20 High
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	52 070.81	2.88	21 High
OMN	Oman	Asia	no	202 533.60	43.37	17 256.96	2.51	22 High
BRN	Brunei	Asia	no	71 236.46	5.94	2 466.98	2.41	23 High
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	440 106.84	2.03	24 High
POL	Poland	Europe	no	1 614 716.00	188.81	98 972.34	1.91	25 High
BEL	Belgium	Europe	no	1 980 551.00	190.39	116 900.65	1.63	26 High
NLD	Netherlands	Europe	no	3 410 955.00	237.82	155 739.98	1.53	27 High
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 257.46	1.29	28 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	173 661.86	0.94	29 High
FRA	France	Europe	no	10 329 420.00	501.01	619 955.29	0.81	30 High
CAN	Canada	Northern America	no	6 291 917.00	294.11	433 369.09	0.68	31 High
RUS	Russia	Europe	no	6 325 795.00	296.92	450 238.87	0.66	32 High
NZL	New Zealand	Oceania	no	679 705.40	22.81	38 213.65	0.60	33 High
LBY	Libya	Africa	no	73 757.40	11.49	25 993.79	0.44	34 High
IRL	Ireland	Europe	no	778 821.60	12.72	35 221.45	0.36	35 High
ESP	Spain	Europe	no	6 233 955.00	72.48	257 993.28	0.28	36 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	9 099.23	0.28	37 High
PRT	Portugal	Europe	no	1 054 344.00	7.35	34 419.00	0.21	38 High
EST	Estonia	Europe	no	79 617.31	1.09	6 795.36	0.16	39 High
AUS	Australia	Oceania	no	6 616 533.00	61.35	442 013.06	0.14	40 High
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	65 379.04	0.12	41 High
KOR	South Korea	Asia	no	5 538 605.00	45.48	386 884.93	0.12	42 High
LTU	Lithuania	Europe	no	135 613.80	0.85	7 517.23	0.11	43 High
NOR	Norway	Europe	no	1 933 679.00	10.36	116 071.15	0.09	44 High
LVA	Latvia	Europe	no	95 608.77	0.45	6 324.84	0.07	45 High
DNK	Denmark	Europe	no	1 346 393.00	3.01	61 547.69	0.05	46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SWE	Sweden	Europe	no	1 747 501.00	5.48	128 378.82	0.04	47 High
MAC	Macau	Asia	no	56 709.10	0.27	6 610.47	0.04	48 High
FIN	Finland	Europe	no	965 383.40	1.18	56 624.15	0.02	49 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	50 High
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	51 High
MCO	Monaco	Europe	no	20 716.40	11.70			52 High
LIE	Liechtenstein	Europe	no	18 837.10	9.80			53 High
SMR	San Marino	Europe	no	4 049.35	5.92			54 High
PRK	North Korea	Asia	no	77 982.15	10.88			1 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			2 ---
REU	Reunion	Africa	no	67 897.68	0.00			3 ---
MMR	Myanmar	Asia	no	195 390.10	35.57			4 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			5 ---
ESH	Western Sahara	Africa	no	3 690.88	0.14			6 ---
ROU	Romania	Europe	no	555 697.40	255.64			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			8 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.00			9 ---
AND	Andorra	Europe	no	8 381.65	0.12			10 ---
GIB	Gibraltar	Europe	no	4 042.19	2.53			11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			12 ---
MYT	Mayotte	Africa	no	6 949.04	1.79			13 ---
PSE	State of Palestine	Asia	no	69 454.30	26.75			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	64.44	998.87	64.51	1 Low
AFG	Afghanistan	Asia	no	60 187.87	146.81	2 492.12	58.91	2 Low
BGD	Bangladesh	Asia	no	381 431.90	126.46	7 673.71	16.48	3 Low
NPL	Nepal	Asia	no	53 996.57	29.50	1 917.21	15.39	4 Low
UGA	Uganda	Africa	no	43 697.09	22.14	1 787.04	12.39	5 Low
RWA	Rwanda	Africa	no	13 197.39	12.68	1 065.41	11.90	6 Low
MWI	Malawi	Africa	no	18 356.97	8.20	818.79	10.01	7 Low
BDI	Burundi	Africa	no	3 616.17	3.87	599.64	6.45	8 Low
TZA	Tanzania	Africa	no	50 142.79	26.08	6 321.86	4.13	9 Low
CAF	Central African Republic	Africa	no	3 893.74	0.43	166.29	2.59	10 Low
MOZ	Mozambique	Africa	no	36 409.45	7.91	3 190.27	2.48	11 Low
ZWE	Zimbawue	Africa	no	22 038.05	4.18	2 703.00	1.55	12 Low
SSD	South Sudan	Africa	no	19 958.30	3.90	2 720.34	1.43	13 Low
ERI	Eritrea	Africa	no	9 081.79	0.71	549.64	1.29	14 Low
SOM	Somalia	Africa	no	6 408.32	0.16	133.83	1.20	15 Low
GIN	Guinea	Africa	no	13 665.89	0.45	594.52	0.76	16 Low
ETH	Ethiopia	Africa	no	65 598.93	2.94	3 941.08	0.75	17 Low
GMB	The Gambia	Africa	no	2 097.61	0.05	67.53	0.74	18 Low
MDG	Madagascar	Africa	no	23 496.42	0.58	915.01	0.63	19 Low
LBR	Liberia	Africa	no	1 911.24	0.11	268.18	0.41	20 Low
BEN	Benin	Africa	no	21 971.91	0.23	934.54	0.25	21 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.10	428.35	0.23	22 Low
TGO	Togo	Africa	no	12 513.67	0.07	359.57	0.19	23 Low
MLI	Mali	Africa	no	27 719.15	0.15	1 172.08	0.13	24 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.03	1 951.39	0.02	25 Low
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	26 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	3 077.08	219.67	1 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	5 637.22	124.47	2 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	646.93	112.07	3 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	2 899.00	86.37	4 MiddleLow
GEO	Georgia	Asia	no	53 823.53	167.01	2 692.49	62.03	5 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	1 306.25	47.92	6 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	17.41	568.19	30.64	7 MiddleLow
SYR	Syria	Asia	no	204 643.30	149.11	4 971.97	29.99	8 MiddleLow
ARM	Armenia	Asia	no	22 895.19	45.24	1 508.90	29.98	9 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	7.98	311.85	25.59	10 MiddleLow
PHL	Philippines	Asia	no	566 948.60	703.46	30 212.56	23.28	11 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	15.77	878.46	17.95	12 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	225.05	12 744.63	17.66	13 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	4 243.72	17.56	14 MiddleLow
YEM	Yemen	Asia	no	79 113.56	45.87	2 625.09	17.47	15 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	79 076.93	14.11	16 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	2.95	212.95	13.85	17 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	272.05	25 463.41	10.68	18 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	6.99	753.93	9.27	19 MiddleLow
MAR	Morroco	Africa	no	374 846.30	157.28	19 696.51	7.99	20 MiddleLow
EGY	Egypt	Africa	no	617 149.20	176.90	31 768.68	5.57	21 MiddleLow
LAO	Laos	Asia	no	21 925.62	5.03	1 626.13	3.09	22 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	3.83	1 298.34	2.95	23 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	9.88	3 421.99	2.89	24 MiddleLow
IND	India	Asia	no	5 769 372.00	446.55	221 700.44	2.01	25 MiddleLow
MDA	Moldova	Europe	no	33 762.68	2.83	1 618.04	1.75	26 MiddleLow
KEN	Kenya	Africa	no	98 382.66	12.57	7 759.48	1.62	27 MiddleLow
COG	Congo	Africa	no	69 047.72	0.99	1 908.75	0.52	28 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	20.64	42 180.53	0.49	29 MiddleLow
SDN	Sudan	Africa	no	70 368.78	1.89	5 000.18	0.38	30 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	3.95	10 550.52	0.37	31 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.79	2 289.33	0.35	32 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.22	706.94	0.31	33 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	8.67	34 350.49	0.25	34 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.17	1 026.17	0.17	35 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.33	2 613.28	0.13	36 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.77	8 808.70	0.09	37 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	3 496.64	0.05	38 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.09	8 003.31	0.01	39 MiddleLow
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	22 647.04	162.03	1 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	4 190.90	31 978.13	131.06	2 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	13 315.00	93.79	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	63 198.81	49.68	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	3 793.90	35.68	5 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	282.02	8 252.01	34.18	6 MiddleHigh
ALB	Albania	Europe	no	40 459.65	46.73	1 381.39	33.83	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	8 897.75	26.55	8 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	991.52	39 734.87	24.95	9 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	119.65	6 530.19	18.32	10 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	123 751.24	17.78	11 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	23 889.95	16.21	12 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	26.26	1 787.08	14.69	13 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	94 570.07	11.67	14 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	97.19	8 918.25	10.90	15 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	31.51	2 912.71	10.82	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	83.36	8 993.34	9.27	17 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	149 707.18	9.05	18 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	601.24	77 967.19	7.71	19 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	46.25	6 618.91	6.99	20 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	19.25	3 114.55	6.18	21 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	5.10	876.28	5.82	22 MiddleHigh
CHN	China	Asia	no	31 726 110.00	6 954.76	1 299 157.61	5.35	23 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	33.37	7 977.96	4.18	24 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	4 063.51	3.67	25 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	159.43	48 846.71	3.26	26 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	2.90	1 026.90	2.82	27 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	3.39	3 617.67	0.94	28 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	32.56	53 487.73	0.61	29 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	10.49	42 433.27	0.25	30 MiddleHigh
AGO	Angola	Africa	no	176 182.50	4.60	24 725.13	0.19	31 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	493 431.00	0.13	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.14	10 166.04	0.01	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	5 109.11	48 425.35	105.50	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	34 332.88	69.81	2 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	46 486.26	43.98	3 High
JPN	Japan	Asia	no	39 255 200.00	31 857.11	1 012 070.61	31.48	4 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	27 530.57	27.36	5 High
ITA	Italy	Europe	no	8 604 332.00	9 772.86	417 993.98	23.38	6 High
SVN	Slovenia	Europe	no	139 899.70	159.19	9 765.51	16.30	7 High
HRV	Croatia	Europe	no	188 113.70	152.79	11 594.94	13.18	8 High
CHE	Switzerland	Europe	no	3 421 606.00	786.78	75 147.62	10.47	9 High
ISL	Iceland	Europe	no	57 291.68	31.50	3 730.06	8.44	10 High
MLT	Malta	Europe	no	36 990.21	13.32	1 879.07	7.09	11 High
KWT	Kuwait	Asia	no	469 418.40	201.43	29 360.33	6.86	12 High
CYP	Cyprus	Asia	no	71 610.53	28.55	4 557.62	6.26	13 High
QAT	Qatar	Asia	no	624 817.70	152.90	24 487.36	6.24	14 High
AUT	Austria	Europe	no	1 801 472.00	524.60	84 928.57	6.18	15 High
ISR	Israel	Asia	no	853 829.30	381.32	65 345.00	5.84	16 High
USA	United States	Northern America	no	54 922 480.00	14 458.98	2 547 499.93	5.68	17 High
HUN	Hungary	Europe	no	562 479.60	123.20	26 544.35	4.64	18 High
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	40 979.05	3.66	19 High
SVK	Slovakia	Europe	no	414 782.80	60.97	17 642.66	3.46	20 High
DEU	Germany	Europe	no	15 114 870.00	2 350.12	718 583.82	3.27	21 High
OMN	Oman	Asia	no	202 533.60	43.37	14 871.52	2.92	22 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	1 036.62	2.44	23 High
BRN	Brunei	Asia	no	71 236.46	5.94	2 950.69	2.01	24 High
POL	Poland	Europe	no	1 614 716.00	188.81	95 412.26	1.98	25 High
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	542 121.89	1.64	26 High
BEL	Belgium	Europe	no	1 980 551.00	190.39	128 131.48	1.49	27 High
LBY	Libya	Africa	no	73 757.40	11.49	8 664.60	1.33	28 High
LUX	Luxembourg	Europe	no	201 130.60	13.27	10 391.43	1.28	29 High
NLD	Netherlands	Europe	no	3 410 955.00	237.82	224 781.17	1.06	30 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	165 700.80	0.98	31 High
CAN	Canada	Northern America	no	6 291 917.00	294.11	395 958.78	0.74	32 High
FRA	France	Europe	no	10 329 420.00	501.01	677 049.47	0.74	33 High
RUS	Russia	Europe	no	6 325 795.00	296.92	409 820.63	0.72	34 High
NZL	New Zealand	Oceania	no	679 705.40	22.81	34 691.31	0.66	35 High
IRL	Ireland	Europe	no	778 821.60	12.72	40 563.02	0.31	36 High
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	25 520.99	0.31	37 High
ESP	Spain	Europe	no	6 233 955.00	72.48	271 148.52	0.27	38 High
KOR	South Korea	Asia	no	5 538 605.00	45.48	194 728.35	0.23	39 High
EST	Estonia	Europe	no	79 617.31	1.09	4 754.17	0.23	40 High
AUS	Australia	Oceania	no	6 616 533.00	61.35	276 915.26	0.22	41 High
PRT	Portugal	Europe	no	1 054 344.00	7.35	43 081.93	0.17	42 High
LTU	Lithuania	Europe	no	135 613.80	0.85	8 076.66	0.11	43 High
LVA	Latvia	Europe	no	95 608.77	0.45	4 413.54	0.10	44 High
NOR	Norway	Europe	no	1 933 679.00	10.36	112 012.76	0.09	45 High
MAC	Macau	Asia	no	56 709.10	0.27	3 378.13	0.08	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
SWE	Sweden	Europe	no	1 747 501.00	5.48	151 944.31	0.04	47 High
DNK	Denmark	Europe	no	1 346 393.00	3.01	89 732.55	0.03	48 High
FIN	Finland	Europe	no	965 383.40	1.18	66 675.15	0.02	49 High
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	50 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	51 High
SMR	San Marino	Europe	no	4 049.35	5.92			52 High
MCO	Monaco	Europe	no	20 716.40	11.70			53 High
LIE	Liechtenstein	Europe	no	18 837.10	9.80			54 High
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			1 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			2 ---
PSE	State of Palestine	Asia	no	69 454.30	26.75			3 ---
AND	Andorra	Europe	no	8 381.65	0.12			4 ---
ESH	Western Sahara	Africa	no	3 690.88	0.14			5 ---
MYT	Mayotte	Africa	no	6 949.04	1.79			6 ---
PRK	North Korea	Asia	no	77 982.15	10.88			7 ---
GIB	Gibraltar	Europe	no	4 042.19	2.53			8 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			9 ---
REU	Reunion	Africa	no	67 897.68	0.00			10 ---
MMR	Myanmar	Asia	no	195 390.10	35.57			11 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			12 ---
ROU	Romania	Europe	no	555 697.40	255.64			13 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.00			14 ---

CAPRA Team

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	64.44	12 690.19	5.08	1 Low
AFG	Afghanistan	Asia	no	60 187.87	146.81	29 010.12	5.06	2 Low
MWI	Malawi	Africa	no	18 356.97	8.20	4 366.74	1.88	3 Low
RWA	Rwanda	Africa	no	13 197.39	12.68	8 767.59	1.45	4 Low
NPL	Nepal	Asia	no	53 996.57	29.50	24 466.26	1.21	5 Low
BDI	Burundi	Africa	no	3 616.17	3.87	3 443.34	1.12	6 Low
UGA	Uganda	Africa	no	43 697.09	22.14	23 933.64	0.93	7 Low
BGD	Bangladesh	Asia	no	381 431.90	126.46	160 820.74	0.79	8 Low
TZA	Tanzania	Africa	no	50 142.79	26.08	39 205.30	0.67	9 Low
MOZ	Mozambique	Africa	no	36 409.45	7.91	17 220.44	0.46	10 Low
SSD	South Sudan	Africa	no	19 958.30	3.90	14 712.88	0.27	11 Low
ERI	Eritrea	Africa	no	9 081.79	0.71	2 836.63	0.25	12 Low
ZWE	Zimbawue	Africa	no	22 038.05	4.18	17 196.10	0.24	13 Low
CAF	Central African Republic	Africa	no	3 893.74	0.43	2 389.56	0.18	14 Low
SOM	Somalia	Africa	no	6 408.32	0.16	1 173.40	0.14	15 Low
GIN	Guinea	Africa	no	13 665.89	0.45	7 750.84	0.06	16 Low
ETH	Ethiopia	Africa	no	65 598.93	2.94	55 403.13	0.05	17 Low
GMB	The Gambia	Africa	no	2 097.61	0.05	1 029.01	0.05	18 Low
MDG	Madagascar	Africa	no	23 496.42	0.58	11 984.82	0.05	19 Low
LBR	Liberia	Africa	no	1 911.24	0.11	2 724.73	0.04	20 Low
BEN	Benin	Africa	no	21 971.91	0.23	9 572.30	0.02	21 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.10	4 191.60	0.02	22 Low
TGO	Togo	Africa	no	12 513.67	0.07	4 390.62	0.02	23 Low
MLI	Mali	Africa	no	27 719.15	0.15	11 011.34	0.01	24 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.03	11 452.71	0.00	25 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	26 Low
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	22 559.82	29.96	1 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	59 883.48	11.72	2 MiddleLow
GEO	Georgia	Asia	no	53 823.53	167.01	18 230.53	9.16	3 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	28 969.70	8.64	4 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	10 749.10	5.82	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	12 562.44	5.77	6 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	15.77	3 740.58	4.22	7 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	225.05	59 039.46	3.81	8 MiddleLow
SYR	Syria	Asia	no	204 643.30	149.11	40 077.56	3.72	9 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	7.98	2 173.58	3.67	10 MiddleLow
ARM	Armenia	Asia	no	22 895.19	45.24	12 628.86	3.58	11 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	2.95	1 018.02	2.90	12 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	28 469.09	2.62	13 MiddleLow
PHL	Philippines	Asia	no	566 948.60	703.46	283 131.84	2.48	14 MiddleLow
YEM	Yemen	Asia	no	79 113.56	45.87	18 997.54	2.41	15 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	6.99	3 944.56	1.77	16 MiddleLow
MAR	Morroco	Africa	no	374 846.30	157.28	117 556.24	1.34	17 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	885 677.23	1.26	18 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	272.05	247 867.95	1.10	19 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	17.41	26 244.17	0.66	20 MiddleLow
EGY	Egypt	Africa	no	617 149.20	176.90	291 083.68	0.61	21 MiddleLow
LAO	Laos	Asia	no	21 925.62	5.03	12 246.45	0.41	22 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	9.88	32 007.42	0.31	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	3.83	14 036.94	0.27	24 MiddleLow
MDA	Moldova	Europe	no	33 762.68	2.83	10 971.97	0.26	25 MiddleLow
IND	India	Asia	no	5 769 372.00	446.55	1 944 284.82	0.23	26 MiddleLow
KEN	Kenya	Africa	no	98 382.66	12.57	63 770.87	0.20	27 MiddleLow
COG	Congo	Africa	no	69 047.72	0.99	12 612.41	0.08	28 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.22	4 169.52	0.05	29 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	8.67	192 523.67	0.05	30 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.79	17 930.59	0.04	31 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	20.64	495 416.77	0.04	32 MiddleLow
SDN	Sudan	Africa	no	70 368.78	1.89	70 927.03	0.03	33 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	3.95	164 388.68	0.02	34 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.17	14 228.09	0.01	35 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.33	31 142.79	0.01	36 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.77	73 583.10	0.01	37 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	27 647.87	0.01	38 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.09	50 578.29	0.00	39 MiddleLow
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	204 179.29	17.97	1 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	4 190.90	255 619.28	16.40	2 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	96 787.63	12.90	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	387 419.05	8.10	4 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	282.02	57 484.51	4.91	5 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	991.52	204 165.74	4.86	6 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	51 412.23	4.60	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	36 126.55	3.75	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65	46.73	15 227.71	3.07	9 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	876 064.28	2.51	10 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	119.65	50 384.63	2.37	11 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	26.26	12 119.46	2.17	12 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	31.51	15 490.96	2.03	13 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	97.19	51 302.58	1.89	14 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	205 086.26	1.89	15 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	611 844.88	1.80	16 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	601.24	360 489.06	1.67	17 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	83.36	54 795.79	1.52	18 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	1 269 259.96	1.07	19 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	46.25	43 390.10	1.07	20 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	5.10	5 312.54	0.96	21 MiddleHigh
CHN	China	Asia	no	31 726 110.00	6 954.76	9 003 382.87	0.77	22 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	19.25	25 014.09	0.77	23 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	159.43	226 497.10	0.70	24 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	21 616.92	0.69	25 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	33.37	50 611.94	0.66	26 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	3.39	15 480.83	0.22	27 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	2.90	14 724.33	0.20	28 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	32.56	374 528.18	0.09	29 MiddleHigh
AGO	Angola	Africa	no	176 182.50	4.60	105 476.81	0.04	30 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	10.49	284 108.03	0.04	31 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	2 301 443.96	0.03	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.14	73 747.80	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	5 109.11	249 410.75	20.48	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	278 153.13	8.62	2 High
JPN	Japan	Asia	no	39 255 200.00	31 857.11	5 059 261.76	6.30	3 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	373 895.14	5.47	4 High
ITA	Italy	Europe	no	8 604 332.00	9 772.86	2 100 502.86	4.65	5 High
SVN	Slovenia	Europe	no	139 899.70	159.19	45 103.27	3.53	6 High
HRV	Croatia	Europe	no	188 113.70	152.79	57 600.31	2.65	7 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	318 951.13	2.36	8 High
ISL	Iceland	Europe	no	57 291.68	31.50	14 052.90	2.24	9 High
KWT	Kuwait	Asia	no	469 418.40	201.43	96 682.69	2.08	10 High
QAT	Qatar	Asia	no	624 817.70	152.90	91 904.94	1.66	11 High
MLT	Malta	Europe	no	36 990.21	13.32	8 864.05	1.50	12 High
ISR	Israel	Asia	no	853 829.30	381.32	286 558.36	1.33	13 High
CHE	Switzerland	Europe	no	3 421 606.00	786.78	602 400.29	1.31	14 High
AUT	Austria	Europe	no	1 801 472.00	524.60	413 112.76	1.27	15 High
CYP	Cyprus	Asia	no	71 610.53	28.55	24 622.91	1.16	16 High
HUN	Hungary	Europe	no	562 479.60	123.20	123 292.26	1.00	17 High
USA	United States	Northern America	no	54 922 480.00	14 458.98	17 276 300.43	0.84	18 High
OMN	Oman	Asia	no	202 533.60	43.37	56 792.46	0.76	19 High
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	196 764.65	0.76	20 High
DEU	Germany	Europe	no	15 114 870.00	2 350.12	3 513 506.86	0.67	21 High
BRN	Brunei	Asia	no	71 236.46	5.94	9 075.14	0.65	22 High
SVK	Slovakia	Europe	no	414 782.80	60.97	93 274.32	0.65	23 High
BEL	Belgium	Europe	no	1 980 551.00	190.39	517 763.60	0.37	24 High
POL	Poland	Europe	no	1 614 716.00	188.81	515 943.50	0.37	25 High
LUX	Luxembourg	Europe	no	201 130.60	13.27	38 962.95	0.34	26 High
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	2 728 637.76	0.33	27 High
NLD	Netherlands	Europe	no	3 410 955.00	237.82	765 364.08	0.31	28 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	590 125.33	0.28	29 High
LBY	Libya	Africa	no	73 757.40	11.49	55 976.41	0.21	30 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	12 451.63	0.20	31 High
FRA	France	Europe	no	10 329 420.00	501.01	2 848 015.52	0.18	32 High
CAN	Canada	Northern America	no	6 291 917.00	294.11	1 857 561.03	0.16	33 High
RUS	Russia	Europe	no	6 325 795.00	296.92	1 973 571.68	0.15	34 High
NZL	New Zealand	Oceania	no	679 705.40	22.81	182 403.61	0.13	35 High
IRL	Ireland	Europe	no	778 821.60	12.72	183 798.12	0.07	36 High
ESP	Spain	Europe	no	6 233 955.00	72.48	1 345 564.18	0.05	37 High
EST	Estonia	Europe	no	79 617.31	1.09	24 664.81	0.04	38 High
AUS	Australia	Oceania	no	6 616 533.00	61.35	1 579 571.61	0.04	39 High
KOR	South Korea	Asia	no	5 538 605.00	45.48	1 238 504.83	0.04	40 High
PRT	Portugal	Europe	no	1 054 344.00	7.35	225 098.65	0.03	41 High
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	271 683.76	0.03	42 High
NOR	Norway	Europe	no	1 933 679.00	10.36	457 625.37	0.02	43 High
LTU	Lithuania	Europe	no	135 613.80	0.85	43 719.88	0.02	44 High
LVA	Latvia	Europe	no	95 608.77	0.45	29 570.85	0.02	45 High
MAC	Macau	Asia	no	56 709.10	0.27	20 216.60	0.01	46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
SWE	Sweden	Europe	no	1 747 501.00	5.48	551 152.52	0.01	47 High
DNK	Denmark	Europe	no	1 346 393.00	3.01	316 596.75	0.01	48 High
FIN	Finland	Europe	no	965 383.40	1.18	269 912.39	0.00	49 High
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	50 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	51 High
LIE	Liechtenstein	Europe	no	18 837.10	9.80			52 High
SMR	San Marino	Europe	no	4 049.35	5.92			53 High
MCO	Monaco	Europe	no	20 716.40	11.70			54 High
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			1 ---
AND	Andorra	Europe	no	8 381.65	0.12			2 ---
PRK	North Korea	Asia	no	77 982.15	10.88			3 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18			4 ---
REU	Reunion	Africa	no	67 897.68	0.00			5 ---
MMR	Myanmar	Asia	no	195 390.10	35.57			6 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02			8 ---
MYT	Mayotte	Africa	no	6 949.04	1.79			9 ---
PSE	State of Palestine	Asia	no	69 454.30	26.75			10 ---
ROU	Romania	Europe	no	555 697.40	255.64			11 ---
ESH	Western Sahara	Africa	no	3 690.88	0.14			12 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.00			13 ---
GIB	Gibraltar	Europe	no	4 042.19	2.53			14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	64.44	3.14	1 Low
AFG	Afghanistan	Asia	no	60 187.87	146.81	2.44	2 Low
BDI	Burundi	Africa	no	3 616.17	3.87	1.07	3 Low
RWA	Rwanda	Africa	no	13 197.39	12.68	0.96	4 Low
NPL	Nepal	Asia	no	53 996.57	29.50	0.55	5 Low
TZA	Tanzania	Africa	no	50 142.79	26.08	0.52	6 Low
UGA	Uganda	Africa	no	43 697.09	22.14	0.51	7 Low
MWI	Malawi	Africa	no	18 356.97	8.20	0.45	8 Low
BGD	Bangladesh	Asia	no	381 431.90	126.46	0.33	9 Low
MOZ	Mozambique	Africa	no	36 409.45	7.91	0.22	10 Low
SSD	South Sudan	Africa	no	19 958.30	3.90	0.20	11 Low
ZWE	Zimbawue	Africa	no	22 038.05	4.18	0.19	12 Low
CAF	Central African Republic	Africa	no	3 893.74	0.43	0.11	13 Low
ERI	Eritrea	Africa	no	9 081.79	0.71	0.08	14 Low
LBR	Liberia	Africa	no	1 911.24	0.11	0.06	15 Low
ETH	Ethiopia	Africa	no	65 598.93	2.94	0.04	16 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.10	0.03	17 Low
GIN	Guinea	Africa	no	13 665.89	0.45	0.03	18 Low
SOM	Somalia	Africa	no	6 408.32	0.16	0.02	19 Low
MDG	Madagascar	Africa	no	23 496.42	0.58	0.02	20 Low
GMB	The Gambia	Africa	no	2 097.61	0.05	0.02	21 Low
BEN	Benin	Africa	no	21 971.91	0.23	0.01	22 Low
TGO	Togo	Africa	no	12 513.67	0.07	0.01	23 Low
MLI	Mali	Africa	no	27 719.15	0.15	0.01	24 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.03	0.00	25 Low
NER	Niger	Africa	no	12 723.49	0.00	0.00	26 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	675.94	8.67	1 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	701.65	4.06	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	250.38	3.50	3 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	62.60	3.39	4 MiddleLow
GEO	Georgia	Asia	no	53 823.53	167.01	3.10	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	72.50	2.02	6 MiddleLow
ARM	Armenia	Asia	no	22 895.19	45.24	1.98	7 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	225.05	1.48	8 MiddleLow
PHL	Philippines	Asia	no	566 948.60	703.46	1.24	9 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	74.50	1.23	10 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	15.77	0.88	11 MiddleLow
SYR	Syria	Asia	no	204 643.30	149.11	0.73	12 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	7.98	0.72	13 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	2.95	0.62	14 MiddleLow
YEM	Yemen	Asia	no	79 113.56	45.87	0.58	15 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	272.05	0.54	16 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	6.99	0.51	17 MiddleLow
MAR	Morroco	Africa	no	374 846.30	157.28	0.42	18 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	1 116.01	0.39	19 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	17.41	0.36	20 MiddleLow
EGY	Egypt	Africa	no	617 149.20	176.90	0.29	21 MiddleLow
LAO	Laos	Asia	no	21 925.62	5.03	0.23	22 MiddleLow
KEN	Kenya	Africa	no	98 382.66	12.57	0.13	23 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	9.88	0.12	24 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	3.83	0.10	25 MiddleLow
MDA	Moldova	Europe	no	33 762.68	2.83	0.08	26 MiddleLow
IND	India	Asia	no	5 769 372.00	446.55	0.08	27 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	20.64	0.03	28 MiddleLow
SDN	Sudan	Africa	no	70 368.78	1.89	0.03	29 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.79	0.02	30 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.22	0.02	31 MiddleLow
COG	Congo	Africa	no	69 047.72	0.99	0.01	32 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	8.67	0.01	33 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	3.95	0.01	34 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.33	0.01	35 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.17	0.01	36 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.77	0.00	37 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.16	0.00	38 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.09	0.00	39 MiddleLow
PER	Peru	Latin America and the Caribbean	no	692 344.50	3 669.56	5.30	1 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	1 248.86	4.42	2 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	3 140.03	3.32	3 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	4 190.90	2.03	4 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	236.24	1.68	5 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	282.02	1.46	6 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	159.43	1.20	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
ALB	Albania	Europe	no	40 459.65	46.73	1.15	8 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2 200.39	1.13	9 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	991.52	1.10	10 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	135.35	1.09	11 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	1 103.92	0.80	12 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	26.26	0.80	13 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	33.37	0.58	14 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	119.65	0.58	15 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	5.10	0.57	16 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	97.19	0.54	17 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	19.25	0.53	18 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	387.30	0.53	19 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	83.36	0.51	20 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	14.91	0.49	21 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	601.24	0.47	22 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	46.25	0.38	23 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	31.51	0.35	24 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 354.65	0.30	25 MiddleHigh
CHN	China	Asia	no	31 726 110.00	6 954.76	0.22	26 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	3.39	0.08	27 MiddleHigh
AGO	Angola	Africa	no	176 182.50	4.60	0.03	28 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	2.90	0.02	29 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	32.56	0.02	30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	64.47	0.01	31 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	10.49	0.01	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.14	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	5 109.11	4.33	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	2 396.64	3.06	2 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2 044.24	1.77	3 High
SMR	San Marino	Europe	no	4 049.35	5.92	1.46	4 High
SVN	Slovenia	Europe	no	139 899.70	159.19	1.14	5 High
ITA	Italy	Europe	no	8 604 332.00	9 772.86	1.14	6 High
HRV	Croatia	Europe	no	188 113.70	152.79	0.81	7 High
JPN	Japan	Asia	no	39 255 200.00	31 857.11	0.81	8 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	753.10	0.59	9 High
MCO	Monaco	Europe	no	20 716.40	11.70	0.56	10 High
ISL	Iceland	Europe	no	57 291.68	31.50	0.55	11 High
LIE	Liechtenstein	Europe	no	18 837.10	9.80	0.52	12 High
ISR	Israel	Asia	no	853 829.30	381.32	0.45	13 High
KWT	Kuwait	Asia	no	469 418.40	201.43	0.43	14 High
CYP	Cyprus	Asia	no	71 610.53	28.55	0.40	15 High
MLT	Malta	Europe	no	36 990.21	13.32	0.36	16 High
AUT	Austria	Europe	no	1 801 472.00	524.60	0.29	17 High
USA	United States	Northern America	no	54 922 480.00	14 458.98	0.26	18 High
QAT	Qatar	Asia	no	624 817.70	152.90	0.24	19 High
CHE	Switzerland	Europe	no	3 421 606.00	786.78	0.23	20 High
HUN	Hungary	Europe	no	562 479.60	123.20	0.22	21 High
OMN	Oman	Asia	no	202 533.60	43.37	0.21	22 High
LBY	Libya	Africa	no	73 757.40	11.49	0.16	23 High
DEU	Germany	Europe	no	15 114 870.00	2 350.12	0.16	24 High
CZE	Czech Republic	Europe	no	1 007 263.00	149.90	0.15	25 High
SVK	Slovakia	Europe	no	414 782.80	60.97	0.15	26 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	2.53	0.13	27 High
POL	Poland	Europe	no	1 614 716.00	188.81	0.12	28 High
GBR	United Kingdom	Europe	no	7 806 797.00	891.59	0.11	29 High
BEL	Belgium	Europe	no	1 980 551.00	190.39	0.10	30 High
BRN	Brunei	Asia	no	71 236.46	5.94	0.08	31 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	162.74	0.08	32 High
NLD	Netherlands	Europe	no	3 410 955.00	237.82	0.07	33 High
LUX	Luxembourg	Europe	no	201 130.60	13.27	0.07	34 High
FRA	France	Europe	no	10 329 420.00	501.01	0.05	35 High
RUS	Russia	Europe	no	6 325 795.00	296.92	0.05	36 High
CAN	Canada	Northern America	no	6 291 917.00	294.11	0.05	37 High
NZL	New Zealand	Oceania	no	679 705.40	22.81	0.03	38 High
IRL	Ireland	Europe	no	778 821.60	12.72	0.02	39 High
EST	Estonia	Europe	no	79 617.31	1.09	0.01	40 High
ESP	Spain	Europe	no	6 233 955.00	72.48	0.01	41 High
AUS	Australia	Oceania	no	6 616 533.00	61.35	0.01	42 High
KOR	South Korea	Asia	no	5 538 605.00	45.48	0.01	43 High
PRT	Portugal	Europe	no	1 054 344.00	7.35	0.01	44 High
HKG	Hong Kong	Asia	no	1 250 063.00	7.91	0.01	45 High
LTU	Lithuania	Europe	no	135 613.80	0.85	0.01	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
NOR	Norway	Europe	no	1 933 679.00	10.36	0.01	47 High
MAC	Macau	Asia	no	56 709.10	0.27	0.00	48 High
LVA	Latvia	Europe	no	95 608.77	0.45	0.00	49 High
SWE	Sweden	Europe	no	1 747 501.00	5.48	0.00	50 High
DNK	Denmark	Europe	no	1 346 393.00	3.01	0.00	51 High
FIN	Finland	Europe	no	965 383.40	1.18	0.00	52 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	53 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	54 High
TWN	Taiwan	Asia	no	1 680 401.00	2 702.02	1.61	1 ---
GIB	Gibraltar	Europe	no	4 042.19	2.53	0.63	2 ---
ROU	Romania	Europe	no	555 697.40	255.64	0.46	3 ---
PSE	State of Palestine	Asia	no	69 454.30	26.75	0.39	4 ---
MYT	Mayotte	Africa	no	6 949.04	1.79	0.26	5 ---
MMR	Myanmar	Asia	no	195 390.10	35.57	0.18	6 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	4.18	0.15	7 ---
PRK	North Korea	Asia	no	77 982.15	10.88	0.14	8 ---
ESH	Western Sahara	Africa	no	3 690.88	0.14	0.04	9 ---
AND	Andorra	Europe	no	8 381.65	0.12	0.01	10 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.18	0.01	11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	12 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.00	0.00	13 ---
REU	Reunion	Africa	no	67 897.68	0.00	0.00	14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	8 508.10	542.87	6.38	1 Low
AFG	Afghanistan	Asia	no	60 187.87	20 309.67	1 037.97	5.11	2 Low
MWI	Malawi	Africa	no	18 356.97	3 705.39	128.66	3.47	3 Low
NPL	Nepal	Asia	no	53 996.57	19 294.35	586.14	3.04	4 Low
RWA	Rwanda	Africa	no	13 197.39	7 521.26	153.12	2.04	5 Low
BDI	Burundi	Africa	no	3 616.17	2 714.51	49.09	1.81	6 Low
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	2 593.90	1.73	7 Low
UGA	Uganda	Africa	no	43 697.09	21 493.61	295.21	1.37	8 Low
TZA	Tanzania	Africa	no	50 142.79	33 225.04	362.98	1.09	9 Low
SSD	South Sudan	Africa	no	19 958.30	11 804.41	67.69	0.57	10 Low
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	83.61	0.53	11 Low
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	53.91	0.40	12 Low
CAF	Central African Republic	Africa	no	3 893.74	1 538.18	5.91	0.38	13 Low
SOM	Somalia	Africa	no	6 408.32	917.04	1.79	0.20	14 Low
ERI	Eritrea	Africa	no	9 081.79	3 444.10	6.68	0.19	15 Low
GIN	Guinea	Africa	no	13 665.89	6 144.13	7.32	0.12	16 Low
GMB	The Gambia	Africa	no	2 097.61	903.50	0.89	0.10	17 Low
ETH	Ethiopia	Africa	no	65 598.93	47 525.19	42.45	0.09	18 Low
MDG	Madagascar	Africa	no	23 496.42	10 613.49	6.15	0.06	19 Low
LBR	Liberia	Africa	no	1 911.24	1 950.96	1.01	0.05	20 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	1.72	0.04	21 Low
BEN	Benin	Africa	no	21 971.91	8 307.22	3.42	0.04	22 Low
MLI	Mali	Africa	no	27 719.15	10 942.73	3.17	0.03	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56	0.33	0.00	24 Low
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.03	0.00	25 Low
NER	Niger	Africa	no	12 723.49	7 407.42	0.00	0.00	26 Low
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	4 872.83	26.27	1 MiddleLow
GEO	Georgia	Asia	no	53 823.53	16 140.05	2 068.79	12.82	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	2 283.57	9.41	3 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 781.26	148.27	8.32	4 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30	581.64	8.05	5 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	4 239.25	7.88	6 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 334.99	177.78	7.61	7 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	614.50	5.46	8 MiddleLow
SYR	Syria	Asia	no	204 643.30	40 405.00	2 122.14	5.25	9 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 432.17	515.39	4.94	10 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66	2 102.92	3.70	11 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	1 456.34	52.99	3.64	12 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16	912.25	2.98	13 MiddleLow
PHL	Philippines	Asia	no	566 948.60	272 066.56	7 614.45	2.80	14 MiddleLow
MAR	Morroco	Africa	no	374 846.30	103 835.71	2 168.47	2.09	15 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	232 286.78	3 925.04	1.69	16 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 791.30	62.11	1.64	17 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	13 637.63	1.57	18 MiddleLow
YEM	Yemen	Asia	no	79 113.56	35 954.50	468.21	1.30	19 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 820.87	247.05	0.92	20 MiddleLow
LAO	Laos	Asia	no	21 925.62	11 242.53	76.70	0.68	21 MiddleLow
EGY	Egypt	Africa	no	617 149.20	271 972.83	1 711.53	0.63	22 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	29 567.50	139.47	0.47	23 MiddleLow
MDA	Moldova	Europe	no	33 762.68	7 969.62	35.68	0.45	24 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	11 516.41	44.63	0.39	25 MiddleLow
KEN	Kenya	Africa	no	98 382.66	55 243.06	116.19	0.21	26 MiddleLow
IND	India	Asia	no	5 769 372.00	1 876 797.16	2 773.38	0.15	27 MiddleLow
COG	Congo	Africa	no	69 047.72	14 085.85	18.12	0.13	28 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	4 158.18	4.25	0.10	29 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 791.70	13.78	0.09	30 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	177 430.61	123.46	0.07	31 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	521 803.30	333.43	0.06	32 MiddleLow
TCD	Chad	Africa	no	26 745.14	13 513.55	3.87	0.03	33 MiddleLow
SDN	Sudan	Africa	no	70 368.78	66 565.89	15.99	0.02	34 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	6.71	0.02	35 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	171 390.01	29.82	0.02	36 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41	0.75	0.00	37 MiddleLow
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.95	0.00	38 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.43	0.00	39 MiddleLow
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	11 412.80	12.08	1 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	22 235.81	10.99	2 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	34 146.74	9.02	3 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	368 904.34	22 842.17	6.19	4 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	2 498.80	5.04	5 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	210 183.41	8 893.15	4.23	6 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 352.42	1 723.55	3.89	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48	2 763.64	3.76	8 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	46 993.60	1 503.01	3.20	9 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 923.24	413.11	3.20	10 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	1 354.94	3.18	11 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 195.40	264.54	2.59	12 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	7 858.85	2.24	13 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28	5 064.06	2.18	14 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 784.71	299.30	2.02	15 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	15 897.64	1.93	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	54 479.87	960.68	1.76	17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	10 602.51	1.74	18 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 678.50	532.27	1.58	19 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 416.08	47.64	1.08	20 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	45 519.65	418.44	0.92	21 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33	152.19	0.85	22 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	8 506.37	0.67	23 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 327.29	1 536.84	0.67	24 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88	237.13	0.57	25 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	13 113.07	48.56	0.37	26 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	19 343.51	45.66	0.24	27 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	387 252.16	545.84	0.14	28 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 240 270.86	8 625.80	0.09	29 MiddleHigh
AGO	Angola	Africa	no	176 182.50	124 178.24	67.98	0.05	30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	1 059.24	0.05	31 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	126.51	0.04	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	71 709.52	2.95	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	242 230.33	42 370.12	17.49	1 High
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	307 551.60	6.25	2 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	16 700.24	6.02	3 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	20 878.94	4.76	4 High
SVN	Slovenia	Europe	no	139 899.70	47 987.30	2 273.95	4.74	5 High
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	96 882.93	4.51	6 High
SMR	San Marino	Europe	no	4 049.35	1 899.81	81.57	4.29	7 High
ISL	Iceland	Europe	no	57 291.68	15 330.06	497.40	3.24	8 High
HRV	Croatia	Europe	no	188 113.70	57 868.67	1 716.00	2.97	9 High
CYP	Cyprus	Asia	no	71 610.53	21 911.45	409.25	1.87	10 High
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17	85.68	1.78	11 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	6 907.72	1.72	12 High
ISR	Israel	Asia	no	853 829.30	290 550.61	4 479.75	1.54	13 High
AUT	Austria	Europe	no	1 801 472.00	428 321.90	6 545.42	1.53	14 High
MCO	Monaco	Europe	no	20 716.40	6 074.51	88.07	1.45	15 High
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21	9 049.37	1.32	16 High
MLT	Malta	Europe	no	36 990.21	9 642.33	122.14	1.27	17 High
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	36 237.72	0.97	18 High
HUN	Hungary	Europe	no	562 479.60	133 423.90	1 247.39	0.93	19 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	17 405.72	0.65	20 High
KWT	Kuwait	Asia	no	469 418.40	175 830.50	1 063.19	0.60	21 High
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02	1 164.94	0.56	22 High
BEL	Belgium	Europe	no	1 980 551.00	524 805.54	2 861.98	0.55	23 High
SVK	Slovakia	Europe	no	414 782.80	97 707.33	522.66	0.53	24 High
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	4 270.60	0.50	25 High
POL	Poland	Europe	no	1 614 716.00	525 865.98	2 429.79	0.46	26 High
OMN	Oman	Asia	no	202 533.60	79 655.92	273.56	0.34	27 High
QAT	Qatar	Asia	no	624 817.70	203 235.16	655.30	0.32	28 High
BRN	Brunei	Asia	no	71 236.46	16 111.14	48.75	0.30	29 High
FRA	France	Europe	no	10 329 420.00	2 806 427.94	6 665.54	0.24	30 High
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	4 121.51	0.23	31 High
LUX	Luxembourg	Europe	no	201 130.60	60 130.85	126.81	0.21	32 High
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	365.46	0.20	33 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	29.83	0.19	34 High
LBY	Libya	Africa	no	73 757.40	74 199.53	136.26	0.18	35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	36 High
IRL	Ireland	Europe	no	778 821.60	232 077.43	304.01	0.13	37 High
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	2 624.86	0.13	38 High
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	134.26	0.05	39 High
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	682.02	0.05	40 High
EST	Estonia	Europe	no	79 617.31	24 880.27	12.00	0.05	41 High
LTU	Lithuania	Europe	no	135 613.80	45 931.97	17.92	0.04	42 High
LVA	Latvia	Europe	no	95 608.77	30 956.69	11.76	0.04	43 High
NOR	Norway	Europe	no	1 933 679.00	512 580.42	163.36	0.03	44 High
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	460.80	0.03	45 High
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	57.20	0.03	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	289.14	0.02	47 High
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	48.91	0.01	48 High
SWE	Sweden	Europe	no	1 747 501.00	579 680.01	63.12	0.01	49 High
MAC	Macau	Asia	no	56 709.10	51 753.10	5.15	0.01	50 High
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	1 056.66	0.01	51 High
FIN	Finland	Europe	no	965 383.40	267 328.62	10.63	0.00	52 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	53 High
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	54 High
AND	Andorra	Europe	no	8 381.65	2 849.17	0.64	0.02	1 ---
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.05	0.00	2 ---
REU	Reunion	Africa	no	67 897.68				3 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				4 ---
PSE	State of Palestine	Asia	no	69 454.30				5 ---
PRK	North Korea	Asia	no	77 982.15				6 ---
ESH	Western Sahara	Africa	no	3 690.88				7 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				8 ---
TWN	Taiwan	Asia	no	1 680 401.00				9 ---
ROU	Romania	Europe	no	555 697.40				10 ---
MYT	Mayotte	Africa	no	6 949.04				11 ---
GIB	Gibraltar	Europe	no	4 042.19				12 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				13 ---
MMR	Myanmar	Asia	no	195 390.10				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	8 457.87	542.87	6.42	1 Low
AFG	Afghanistan	Asia	no	60 187.87	20 450.66	1 037.97	5.08	2 Low
MWI	Malawi	Africa	no	18 356.97	3 574.19	128.66	3.60	3 Low
NPL	Nepal	Asia	no	53 996.57	19 443.42	586.14	3.01	4 Low
RWA	Rwanda	Africa	no	13 197.39	7 406.89	153.12	2.07	5 Low
BDI	Burundi	Africa	no	3 616.17	2 713.09	49.09	1.81	6 Low
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	2 593.90	1.60	7 Low
UGA	Uganda	Africa	no	43 697.09	22 316.73	295.21	1.32	8 Low
TZA	Tanzania	Africa	no	50 142.79	33 033.24	362.98	1.10	9 Low
SSD	South Sudan	Africa	no	19 958.30	10 791.19	67.69	0.63	10 Low
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	83.61	0.54	11 Low
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	53.91	0.43	12 Low
CAF	Central African Republic	Africa	no	3 893.74	1 537.09	5.91	0.38	13 Low
SOM	Somalia	Africa	no	6 408.32	834.95	1.79	0.21	14 Low
ERI	Eritrea	Africa	no	9 081.79	3 412.88	6.68	0.20	15 Low
GIN	Guinea	Africa	no	13 665.89	5 696.70	7.32	0.13	16 Low
GMB	The Gambia	Africa	no	2 097.61	875.76	0.89	0.10	17 Low
ETH	Ethiopia	Africa	no	65 598.93	47 418.40	42.45	0.09	18 Low
MDG	Madagascar	Africa	no	23 496.42	10 279.21	6.15	0.06	19 Low
LBR	Liberia	Africa	no	1 911.24	1 751.03	1.01	0.06	20 Low
BEN	Benin	Africa	no	21 971.91	8 247.34	3.42	0.04	21 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	1.72	0.04	22 Low
MLI	Mali	Africa	no	27 719.15	10 272.74	3.17	0.03	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53	0.33	0.00	24 Low
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.03	0.00	25 Low
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	26 Low
NER	Niger	Africa	no	12 723.49	7 223.22	0.00	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	4 872.83	28.27	1 MiddleLow
GEO	Georgia	Asia	no	53 823.53	15 835.00	2 068.79	13.06	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	2 283.57	9.75	3 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 665.34	148.27	8.90	4 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86	581.64	8.39	5 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	4 239.25	8.07	6 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	775.82	52.99	6.83	7 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 861.49	177.78	6.21	8 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	614.50	5.62	9 MiddleLow
SYR	Syria	Asia	no	204 643.30	39 715.80	2 122.14	5.34	10 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 972.97	515.39	4.70	11 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38	2 102.92	3.62	12 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34	912.25	3.18	13 MiddleLow
PHL	Philippines	Asia	no	566 948.60	326 316.43	7 614.45	2.33	14 MiddleLow
MAR	Morroco	Africa	no	374 846.30	100 965.44	2 168.47	2.15	15 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 434.79	62.11	1.81	16 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	13 637.63	1.62	17 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	244 280.84	3 925.04	1.61	18 MiddleLow
YEM	Yemen	Asia	no	79 113.56	34 721.48	468.21	1.35	19 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 049.97	247.05	0.95	20 MiddleLow
LAO	Laos	Asia	no	21 925.62	10 602.76	76.70	0.72	21 MiddleLow
EGY	Egypt	Africa	no	617 149.20	264 562.52	1 711.53	0.65	22 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	28 948.12	139.47	0.48	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	10 751.45	44.63	0.42	24 MiddleLow
MDA	Moldova	Europe	no	33 762.68	8 846.50	35.68	0.40	25 MiddleLow
KEN	Kenya	Africa	no	98 382.66	54 934.72	116.19	0.21	26 MiddleLow
COG	Congo	Africa	no	69 047.72	11 049.89	18.12	0.16	27 MiddleLow
IND	India	Asia	no	5 769 372.00	1 855 591.42	2 773.38	0.15	28 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	3 892.41	4.25	0.11	29 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 606.22	13.78	0.09	30 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	180 979.14	123.46	0.07	31 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	499 041.44	333.43	0.07	32 MiddleLow
TCD	Chad	Africa	no	26 745.14	12 987.28	3.87	0.03	33 MiddleLow
SDN	Sudan	Africa	no	70 368.78	63 769.45	15.99	0.03	34 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	6.71	0.02	35 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	164 181.67	29.82	0.02	36 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36	0.75	0.00	37 MiddleLow
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.95	0.00	38 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.43	0.00	39 MiddleLow
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	11 412.80	12.27	1 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	22 235.81	11.60	2 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	34 146.74	9.38	3 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	369 271.87	22 842.17	6.19	4 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	2 498.80	5.15	5 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	206 267.88	8 893.15	4.31	6 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41	2 763.64	3.98	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
LBN	Lebanon	Asia	no	207 723.70	44 926.34	1 723.55	3.84	8 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	44 799.78	1 503.01	3.35	9 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	1 354.94	3.20	10 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 951.12	413.11	3.19	11 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 110.99	264.54	2.62	12 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82	5 064.06	2.45	13 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	7 858.85	2.29	14 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 678.53	299.30	2.04	15 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	15 897.64	1.96	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	52 675.80	960.68	1.82	17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	10 602.51	1.77	18 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 339.06	532.27	1.60	19 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 503.08	47.64	1.06	20 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	43 641.10	418.44	0.96	21 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73	152.19	0.84	22 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	8 506.37	0.69	23 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 027.28	1 536.84	0.67	24 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54	237.13	0.61	25 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	12 989.72	48.56	0.37	26 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	17 298.19	45.66	0.26	27 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	361 245.34	545.84	0.15	28 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 196 167.76	8 625.80	0.09	29 MiddleHigh
AGO	Angola	Africa	no	176 182.50	112 289.11	67.98	0.06	30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	1 059.24	0.05	31 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	126.51	0.04	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	69 000.62	2.95	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	242 155.98	42 370.12	17.50	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	16 700.24	6.28	2 High
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	307 551.60	6.03	3 High
SMR	San Marino	Europe	no	4 049.35	1 681.06	81.57	4.85	4 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	20 878.94	4.84	5 High
SVN	Slovenia	Europe	no	139 899.70	47 633.96	2 273.95	4.77	6 High
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	96 882.93	4.51	7 High
ISL	Iceland	Europe	no	57 291.68	15 047.05	497.40	3.31	8 High
HRV	Croatia	Europe	no	188 113.70	56 412.38	1 716.00	3.04	9 High
CYP	Cyprus	Asia	no	71 610.53	21 453.80	409.25	1.91	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	6 907.72	1.85	11 High
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82	85.68	1.78	12 High
ISR	Israel	Asia	no	853 829.30	284 226.45	4 479.75	1.58	13 High
AUT	Austria	Europe	no	1 801 472.00	427 916.46	6 545.42	1.53	14 High
MLT	Malta	Europe	no	36 990.21	8 946.39	122.14	1.37	15 High
MCO	Monaco	Europe	no	20 716.40	6 919.24	88.07	1.27	16 High
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49	9 049.37	1.26	17 High
HUN	Hungary	Europe	no	562 479.60	129 554.20	1 247.39	0.96	18 High
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	36 237.72	0.95	19 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	17 405.72	0.65	20 High
KWT	Kuwait	Asia	no	469 418.40	165 127.08	1 063.19	0.64	21 High
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47	1 164.94	0.60	22 High
BEL	Belgium	Europe	no	1 980 551.00	519 519.14	2 861.98	0.55	23 High
SVK	Slovakia	Europe	no	414 782.80	95 768.45	522.66	0.55	24 High
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	4 270.60	0.50	25 High
POL	Poland	Europe	no	1 614 716.00	506 714.23	2 429.79	0.48	26 High
BRN	Brunei	Asia	no	71 236.46	10 784.47	48.75	0.45	27 High
QAT	Qatar	Asia	no	624 817.70	190 319.79	655.30	0.34	28 High
LUX	Luxembourg	Europe	no	201 130.60	38 189.94	126.81	0.33	29 High
OMN	Oman	Asia	no	202 533.60	90 220.81	273.56	0.30	30 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	29.83	0.28	31 High
FRA	France	Europe	no	10 329 420.00	2 855 136.13	6 665.54	0.23	32 High
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	4 121.51	0.23	33 High
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	365.46	0.22	34 High
LBY	Libya	Africa	no	73 757.40	61 985.45	136.26	0.22	35 High
IRL	Ireland	Europe	no	778 821.60	197 446.98	304.01	0.15	36 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63	1 020.87	0.14	37 High
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	2 624.86	0.13	38 High
EST	Estonia	Europe	no	79 617.31	24 010.33	12.00	0.05	39 High
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	682.02	0.05	40 High
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	134.26	0.05	41 High
LTU	Lithuania	Europe	no	135 613.80	44 274.32	17.92	0.04	42 High
LVA	Latvia	Europe	no	95 608.77	30 883.23	11.76	0.04	43 High
NOR	Norway	Europe	no	1 933 679.00	520 892.58	163.36	0.03	44 High
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	460.80	0.03	45 High
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	57.20	0.03	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	289.14	0.02	47 High
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	48.91	0.01	48 High
MAC	Macau	Asia	no	56 709.10	37 762.88	5.15	0.01	49 High
SWE	Sweden	Europe	no	1 747 501.00	599 333.40	63.12	0.01	50 High
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	1 056.66	0.01	51 High
FIN	Finland	Europe	no	965 383.40	268 134.55	10.63	0.00	52 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	53 High
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	54 High
AND	Andorra	Europe	no	8 381.65	2 539.76	0.64	0.03	1 ---
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.05	0.00	2 ---
REU	Reunion	Africa	no	67 897.68				3 ---
GIB	Gibraltar	Europe	no	4 042.19				4 ---
TWN	Taiwan	Asia	no	1 680 401.00				5 ---
PRK	North Korea	Asia	no	77 982.15				6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				7 ---
ROU	Romania	Europe	no	555 697.40				8 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				9 ---
ESH	Western Sahara	Africa	no	3 690.88				10 ---
MYT	Mayotte	Africa	no	6 949.04				11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				12 ---
PSE	State of Palestine	Asia	no	69 454.30				13 ---
MMR	Myanmar	Asia	no	195 390.10				14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
TJK	Tajikistan	Asia	no	20 536.86	542.87	2.64	1 Low
AFG	Afghanistan	Asia	no	60 187.87	1 037.97	1.72	2 Low
BDI	Burundi	Africa	no	3 616.17	49.09	1.36	3 Low
RWA	Rwanda	Africa	no	13 197.39	153.12	1.16	4 Low
NPL	Nepal	Asia	no	53 996.57	586.14	1.09	5 Low
TZA	Tanzania	Africa	no	50 142.79	362.98	0.72	6 Low
MWI	Malawi	Africa	no	18 356.97	128.66	0.70	7 Low
BGD	Bangladesh	Asia	no	381 431.90	2 593.90	0.68	8 Low
UGA	Uganda	Africa	no	43 697.09	295.21	0.68	9 Low
SSD	South Sudan	Africa	no	19 958.30	67.69	0.34	10 Low
ZWE	Zimbawue	Africa	no	22 038.05	53.91	0.24	11 Low
MOZ	Mozambique	Africa	no	36 409.45	83.61	0.23	12 Low
CAF	Central African Republic	Africa	no	3 893.74	5.91	0.15	13 Low
ERI	Eritrea	Africa	no	9 081.79	6.68	0.07	14 Low
ETH	Ethiopia	Africa	no	65 598.93	42.45	0.06	15 Low
SLE	Sierra Leone	Africa	no	3 031.82	1.72	0.06	16 Low
GIN	Guinea	Africa	no	13 665.89	7.32	0.05	17 Low
LBR	Liberia	Africa	no	1 911.24	1.01	0.05	18 Low
GMB	The Gambia	Africa	no	2 097.61	0.89	0.04	19 Low
SOM	Somalia	Africa	no	6 408.32	1.79	0.03	20 Low
MDG	Madagascar	Africa	no	23 496.42	6.15	0.03	21 Low
BEN	Benin	Africa	no	21 971.91	3.42	0.02	22 Low
MLI	Mali	Africa	no	27 719.15	3.17	0.01	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.33	0.00	24 Low
KHM	Cambodia	Asia	no	27 390.49	0.03	0.00	25 Low
NER	Niger	Africa	no	12 723.49	0.00	0.00	26 Low
TGO	Togo	Africa	no	12 513.67	0.00	0.00	27 Low
HND	Honduras	Latin America and the Caribbean	no	77 974.77	4 872.83	6.25	1 MiddleLow
GEO	Georgia	Asia	no	53 823.53	2 068.79	3.84	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	2 283.57	3.19	3 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	581.64	3.15	4 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	4 239.25	2.45	5 MiddleLow
ARM	Armenia	Asia	no	22 895.19	515.39	2.25	6 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	614.50	1.71	7 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	912.25	1.51	8 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	2 102.92	1.38	9 MiddleLow
PHL	Philippines	Asia	no	566 948.60	7 614.45	1.34	10 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	148.27	1.34	11 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	52.99	1.12	12 MiddleLow
SYR	Syria	Asia	no	204 643.30	2 122.14	1.04	13 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	177.78	0.99	14 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	3 925.04	0.78	15 MiddleLow
YEM	Yemen	Asia	no	79 113.56	468.21	0.59	16 MiddleLow
MAR	Morroco	Africa	no	374 846.30	2 168.47	0.58	17 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	247.05	0.50	18 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	13 637.63	0.48	19 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	62.11	0.45	20 MiddleLow
LAO	Laos	Asia	no	21 925.62	76.70	0.35	21 MiddleLow
EGY	Egypt	Africa	no	617 149.20	1 711.53	0.28	22 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	139.47	0.17	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	44.63	0.12	24 MiddleLow
KEN	Kenya	Africa	no	98 382.66	116.19	0.12	25 MiddleLow
MDA	Moldova	Europe	no	33 762.68	35.68	0.11	26 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	333.43	0.06	27 MiddleLow
IND	India	Asia	no	5 769 372.00	2 773.38	0.05	28 MiddleLow
SEN	Senegal	Africa	no	35 335.24	13.78	0.04	29 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	4.25	0.04	30 MiddleLow
COG	Congo	Africa	no	69 047.72	18.12	0.03	31 MiddleLow
SDN	Sudan	Africa	no	70 368.78	15.99	0.02	32 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	123.46	0.02	33 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	6.71	0.01	34 MiddleLow
TCD	Chad	Africa	no	26 745.14	3.87	0.01	35 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	29.82	0.01	36 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.95	0.00	37 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.75	0.00	38 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.43	0.00	39 MiddleLow
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	11 412.80	4.04	1 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	34 146.74	3.62	2 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	22 235.81	3.21	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	2 498.80	1.78	4 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	2 763.64	1.43	5 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	1 536.84	1.16	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	22 842.17	1.10	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
PAN	Panama	Latin America and the Caribbean	no	124 686.60	1 354.94	1.09	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65	413.11	1.02	9 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	8 893.15	0.99	10 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	1 503.01	0.84	11 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	1 723.55	0.83	12 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	15 897.64	0.82	13 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	264.54	0.80	14 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	10 602.51	0.77	15 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	418.44	0.73	16 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	5 064.06	0.69	17 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	237.13	0.66	18 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	7 858.85	0.61	19 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	960.68	0.59	20 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	47.64	0.54	21 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	152.19	0.50	22 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	532.27	0.44	23 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	299.30	0.33	24 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	8 506.37	0.19	25 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	48.56	0.12	26 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	545.84	0.04	27 MiddleHigh
AGO	Angola	Africa	no	176 182.50	67.98	0.04	28 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	45.66	0.04	29 MiddleHigh
CHN	China	Asia	no	31 726 110.00	8 625.80	0.03	30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	1 059.24	0.02	31 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	126.51	0.01	32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	2.95	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	34 MiddleHigh
GRC	Greece	Europe	no	1 181 283.00	42 370.12	3.59	1 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	16 700.24	2.13	2 High
SMR	San Marino	Europe	no	4 049.35	81.57	2.01	3 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	20 878.94	1.81	4 High
SVN	Slovenia	Europe	no	139 899.70	2 273.95	1.63	5 High
ITA	Italy	Europe	no	8 604 332.00	96 882.93	1.13	6 High
HRV	Croatia	Europe	no	188 113.70	1 716.00	0.91	7 High
ISL	Iceland	Europe	no	57 291.68	497.40	0.87	8 High
JPN	Japan	Asia	no	39 255 200.00	307 551.60	0.78	9 High
CYP	Cyprus	Asia	no	71 610.53	409.25	0.57	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	6 907.72	0.54	11 High
ISR	Israel	Asia	no	853 829.30	4 479.75	0.52	12 High
LIE	Liechtenstein	Europe	no	18 837.10	85.68	0.45	13 High
MCO	Monaco	Europe	no	20 716.40	88.07	0.43	14 High
AUT	Austria	Europe	no	1 801 472.00	6 545.42	0.36	15 High
MLT	Malta	Europe	no	36 990.21	122.14	0.33	16 High
CHE	Switzerland	Europe	no	3 421 606.00	9 049.37	0.26	17 High
DEU	Germany	Europe	no	15 114 870.00	36 237.72	0.24	18 High
KWT	Kuwait	Asia	no	469 418.40	1 063.19	0.23	19 High
GBR	United Kingdom	Europe	no	7 806 797.00	17 405.72	0.22	20 High
HUN	Hungary	Europe	no	562 479.60	1 247.39	0.22	21 High
LBY	Libya	Africa	no	73 757.40	136.26	0.18	22 High
POL	Poland	Europe	no	1 614 716.00	2 429.79	0.15	23 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	29.83	0.15	24 High
BEL	Belgium	Europe	no	1 980 551.00	2 861.98	0.14	25 High
OMN	Oman	Asia	no	202 533.60	273.56	0.14	26 High
SVK	Slovakia	Europe	no	414 782.80	522.66	0.13	27 High
NLD	Netherlands	Europe	no	3 410 955.00	4 270.60	0.13	28 High
CZE	Czech Republic	Europe	no	1 007 263.00	1 164.94	0.12	29 High
QAT	Qatar	Asia	no	624 817.70	655.30	0.10	30 High
BRN	Brunei	Asia	no	71 236.46	48.75	0.07	31 High
CAN	Canada	Northern America	no	6 291 917.00	4 121.51	0.07	32 High
FRA	France	Europe	no	10 329 420.00	6 665.54	0.06	33 High
LUX	Luxembourg	Europe	no	201 130.60	126.81	0.06	34 High
NZL	New Zealand	Oceania	no	679 705.40	365.46	0.05	35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	1 020.87	0.05	36 High
RUS	Russia	Europe	no	6 325 795.00	2 624.86	0.04	37 High
IRL	Ireland	Europe	no	778 821.60	304.01	0.04	38 High
EST	Estonia	Europe	no	79 617.31	12.00	0.02	39 High
LTU	Lithuania	Europe	no	135 613.80	17.92	0.01	40 High
LVA	Latvia	Europe	no	95 608.77	11.76	0.01	41 High
ESP	Spain	Europe	no	6 233 955.00	682.02	0.01	42 High
HKG	Hong Kong	Asia	no	1 250 063.00	134.26	0.01	43 High
MAC	Macau	Asia	no	56 709.10	5.15	0.01	44 High
NOR	Norway	Europe	no	1 933 679.00	163.36	0.01	45 High
AUS	Australia	Oceania	no	6 616 533.00	460.80	0.01	46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
PRT	Portugal	Europe	no	1 054 344.00	57.20	0.01	47 High
KOR	South Korea	Asia	no	5 538 605.00	289.14	0.01	48 High
DNK	Denmark	Europe	no	1 346 393.00	48.91	0.00	49 High
SWE	Sweden	Europe	no	1 747 501.00	63.12	0.00	50 High
USA	United States	Northern America	no	54 922 480.00	1 056.66	0.00	51 High
FIN	Finland	Europe	no	965 383.40	10.63	0.00	52 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	53 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	54 High
TWN	Taiwan	Asia	no	1 680 401.00	24 722.79	1.47	1 ---
ROU	Romania	Europe	no	555 697.40	3 551.71	0.64	2 ---
GIB	Gibraltar	Europe	no	4 042.19	22.62	0.56	3 ---
PSE	State of Palestine	Asia	no	69 454.30	265.67	0.38	4 ---
MMR	Myanmar	Asia	no	195 390.10	595.51	0.30	5 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	59.85	0.22	6 ---
PRK	North Korea	Asia	no	77 982.15	159.46	0.20	7 ---
MYT	Mayotte	Africa	no	6 949.04	8.01	0.12	8 ---
ESH	Western Sahara	Africa	no	3 690.88	2.48	0.07	9 ---
AND	Andorra	Europe	no	8 381.65	0.64	0.01	10 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.21	0.00	11 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.05	0.00	12 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	13 ---
REU	Reunion	Africa	no	67 897.68	0.00	0.00	14 ---

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Economy

Tropical Cyclone Wind

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	1 666.80	116.74	1 Low
MOZ	Mozambique	Africa	no	36 409.45	38.72	2 723.39	14.22	2 Low
BGD	Bangladesh	Asia	no	381 431.90	465.85	42 581.72	10.94	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	0.06	1 752.82	0.03	4 Low
MWI	Malawi	Africa	no	18 356.97	0.01	731.37	0.01	5 Low
KHM	Cambodia	Asia	no	27 390.49	0.01	2 753.57	0.00	6 Low
CAF	Central African Republic	Africa	no	3 893.74	0.00	320.25	0.00	7 Low
ETH	Ethiopia	Africa	no	65 598.93	0.00	17 012.56	0.00	8 Low
NER	Niger	Africa	no	12 723.49	0.00	2 551.37	0.00	9 Low
BDI	Burundi	Africa	no	3 616.17	0.00	780.29	0.00	10 Low
NPL	Nepal	Asia	no	53 996.57	0.00	4 356.14	0.00	11 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	12 Low
TJK	Tajikistan	Asia	no	20 536.86	0.00	1 199.63	0.00	13 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	14 Low
MLI	Mali	Africa	no	27 719.15	0.00	1 684.06	0.00	15 Low
UGA	Uganda	Africa	no	43 697.09	0.00	5 121.46	0.00	16 Low
SSD	South Sudan	Africa	no	19 958.30	0.00	1 399.32	0.00	17 Low
RWA	Rwanda	Africa	no	13 197.39	0.00	1 920.52	0.00	18 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	19 Low
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	20 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	21 Low
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	22 Low
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 889.80	0.00	24 Low
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	25 Low
AFG	Afghanistan	Asia	no	60 187.87	0.00	3 601.40	0.00	26 Low
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	27 Low
PHL	Philippines	Asia	no	566 948.60	4 071.51	55 644.78	73.17	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	4 539.50	4.62	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 160.44	530 741.66	2.19	3 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	2 574.11	0.98	4 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	35.14	40 823.56	0.86	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	7.50	30 125.80	0.25	6 MiddleLow
LAO	Laos	Asia	no	21 925.62	0.35	3 279.79	0.11	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.70	19 647.18	0.09	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	7 693.87	0.06	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	0.49	274 943.80	0.00	10 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.00	3 706.12	0.00	11 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	0.00	855.33	0.00	12 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.00	31 321.40	0.00	13 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	14 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	4 394.85	0.00	15 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	16 MiddleLow
SDN	Sudan	Africa	no	70 368.78	0.00	13 307.19	0.00	17 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	0.00	5 247.76	0.00	18 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	19 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.00	3 701.42	0.00	20 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	21 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	22 MiddleLow
MDA	Moldova	Europe	no	33 762.68	0.00	1 821.11	0.00	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	0.00	5 086.03	0.00	24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	0.00	842.11	0.00	25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	0.00	13 153.84	0.00	26 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	0.00	32 236.10	0.00	28 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	29 MiddleLow
EGY	Egypt	Africa	no	617 149.20	0.00	37 477.12	0.00	30 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	3 663.90	0.00	31 MiddleLow
ARM	Armenia	Asia	no	22 895.19	0.00	2 183.10	0.00	32 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	33 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	34 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.00	8 252.62	0.00	35 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	2 207.36	0.00	36 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	0.00	363.96	0.00	37 MiddleLow
GEO	Georgia	Asia	no	53 823.53	0.00	3 542.58	0.00	38 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	265 421.77	2.31	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	1 271.05	4 370 835.96	0.29	2 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	10 406.53	0.08	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	92 724.40	0.01	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	10 060.78	0.01	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.02	103 523.57	0.00	6 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	53 841.99	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	8 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	9 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.00	3 379.49	0.00	10 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	103 818.81	0.00	11 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.00	84 107.08	0.00	12 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.00	67 780.45	0.00	13 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.00	26 490.10	0.00	14 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	0.00	2 530.04	0.00	15 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	26 312.88	0.00	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	0.00	11 609.87	0.00	17 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	0.00	5 015.09	0.00	18 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	19 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	49 121.75	0.00	20 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	0.00	16 597.51	0.00	21 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	0.00	35 983.20	0.00	22 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	0.00	12 363.32	0.00	23 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	0.00	167 069.99	0.00	24 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	25 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.00	71 040.48	0.00	26 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	0.00	8 634.55	0.00	27 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.00	9 509.45	0.00	28 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	29 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.00	3 368.79	0.00	30 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	0.00	18 074.31	0.00	31 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	73 681.58	0.00	32 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	408 331.78	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	19 778.35	3 244 299.91	6.10	1 High
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 068 884.62	4.24	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	65 379.04	1.74	3 High
OMN	Oman	Asia	no	202 533.60	8.97	17 256.96	0.52	4 High
MAC	Macau	Asia	no	56 709.10	2.18	6 610.47	0.33	5 High
AUS	Australia	Oceania	no	6 616 533.00	129.23	442 013.06	0.29	6 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	77 440.20	0.28	7 High
CAN	Canada	Northern America	no	6 291 917.00	97.47	433 369.09	0.22	8 High
KOR	South Korea	Asia	no	5 538 605.00	64.15	386 884.93	0.17	9 High
IRL	Ireland	Europe	no	778 821.60	2.84	35 221.45	0.08	10 High
NZL	New Zealand	Oceania	no	679 705.40	1.05	38 213.65	0.03	11 High
PRT	Portugal	Europe	no	1 054 344.00	0.23	34 419.00	0.01	12 High
RUS	Russia	Europe	no	6 325 795.00	2.01	450 238.87	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	440 106.84	0.00	14 High
FRA	France	Europe	no	10 329 420.00	0.80	619 955.29	0.00	15 High
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	16 High
EST	Estonia	Europe	no	79 617.31	0.00	6 795.36	0.00	17 High
FIN	Finland	Europe	no	965 383.40	0.00	56 624.15	0.00	18 High
ISL	Iceland	Europe	no	57 291.68	0.00	2 314.22	0.00	19 High
LVA	Latvia	Europe	no	95 608.77	0.00	6 324.84	0.00	20 High
KWT	Kuwait	Asia	no	469 418.40	0.00	19 039.58	0.00	21 High
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	22 High
SVK	Slovakia	Europe	no	414 782.80	0.00	19 975.29	0.00	23 High
SWE	Sweden	Europe	no	1 747 501.00	0.00	128 378.82	0.00	24 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	88 386.66	0.00	25 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	26 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	65 444.15	0.00	27 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	28 High
AUT	Austria	Europe	no	1 801 472.00	0.00	95 015.40	0.00	29 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	30 High
QAT	Qatar	Asia	no	624 817.70	0.00	15 282.42	0.00	31 High
HUN	Hungary	Europe	no	562 479.60	0.00	26 595.35	0.00	32 High
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	33 High
CHE	Switzerland	Europe	no	3 421 606.00	0.00	160 510.43	0.00	34 High
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	35 High
LTU	Lithuania	Europe	no	135 613.80	0.00	7 517.23	0.00	36 High
ITA	Italy	Europe	no	8 604 332.00	0.00	383 197.87	0.00	37 High
ESP	Spain	Europe	no	6 233 955.00	0.00	257 993.28	0.00	38 High
MLT	Malta	Europe	no	36 990.21	0.00	1 333.61	0.00	39 High
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 257.46	0.00	40 High
ISR	Israel	Asia	no	853 829.30	0.00	56 565.68	0.00	41 High
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	42 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	43 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	44 High
POL	Poland	Europe	no	1 614 716.00	0.00	98 972.34	0.00	45 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
GRC	Greece	Europe	no	1 181 283.00	0.00	27 154.95	0.00	47 High
BRN	Brunei	Asia	no	71 236.46	0.00	2 466.98	0.00	48 High
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	52 070.81	0.00	49 High
CYP	Cyprus	Asia	no	71 610.53	0.00	4 260.93	0.00	50 High
LBY	Libya	Africa	no	73 757.40	0.00	25 993.79	0.00	51 High
SMR	San Marino	Europe	no	4 049.35	0.00			52 High
MCO	Monaco	Europe	no	20 716.40	0.00			53 High
LIE	Liechtenstein	Europe	no	18 837.10	0.00			54 High
PSE	State of Palestine	Asia	no	69 454.30	0.00			1 ---
FRO	Faroe Islands	Europe	no	9 272.37	1.13			2 ---
REU	Reunion	Africa	no	67 897.68	114.65			3 ---
MMR	Myanmar	Asia	no	195 390.10	41.76			4 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			5 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			6 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			8 ---
AND	Andorra	Europe	no	8 381.65	0.00			9 ---
MYT	Mayotte	Africa	no	6 949.04	36.31			10 ---
ROU	Romania	Europe	no	555 697.40	0.00			11 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			12 ---
PRK	North Korea	Asia	no	77 982.15	0.11			13 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	915.01	212.65	1 Low
BGD	Bangladesh	Asia	no	381 431.90	465.85	7 673.71	60.71	2 Low
MOZ	Mozambique	Africa	no	36 409.45	38.72	3 190.27	12.14	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	0.06	2 703.00	0.02	4 Low
KHM	Cambodia	Asia	no	27 390.49	0.01	795.24	0.01	5 Low
MWI	Malawi	Africa	no	18 356.97	0.01	818.79	0.01	6 Low
CAF	Central African Republic	Africa	no	3 893.74	0.00	166.29	0.00	7 Low
ETH	Ethiopia	Africa	no	65 598.93	0.00	3 941.08	0.00	8 Low
NER	Niger	Africa	no	12 723.49	0.00	1 083.62	0.00	9 Low
BDI	Burundi	Africa	no	3 616.17	0.00	599.64	0.00	10 Low
NPL	Nepal	Asia	no	53 996.57	0.00	1 917.21	0.00	11 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	12 Low
TJK	Tajikistan	Asia	no	20 536.86	0.00	998.87	0.00	13 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	14 Low
MLI	Mali	Africa	no	27 719.15	0.00	1 172.08	0.00	15 Low
UGA	Uganda	Africa	no	43 697.09	0.00	1 787.04	0.00	16 Low
SSD	South Sudan	Africa	no	19 958.30	0.00	2 720.34	0.00	17 Low
RWA	Rwanda	Africa	no	13 197.39	0.00	1 065.41	0.00	18 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	19 Low
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	20 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	21 Low
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	22 Low
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.00	1 951.39	0.00	24 Low
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	25 Low
AFG	Afghanistan	Asia	no	60 187.87	0.00	2 492.12	0.00	26 Low
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	27 Low
PHL	Philippines	Asia	no	566 948.60	4 071.51	30 212.56	134.76	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	3 077.08	6.82	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 160.44	221 700.44	5.23	3 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	646.93	3.90	4 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	35.14	10 550.52	3.33	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	7.50	25 463.41	0.29	6 MiddleLow
LAO	Laos	Asia	no	21 925.62	0.35	1 626.13	0.22	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.70	8 808.70	0.19	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	5 637.22	0.08	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	0.49	79 076.93	0.01	10 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.00	2 289.33	0.00	11 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	0.00	878.46	0.00	12 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.00	19 696.51	0.00	13 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	14 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	3 496.64	0.00	15 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	16 MiddleLow
SDN	Sudan	Africa	no	70 368.78	0.00	5 000.18	0.00	17 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	0.00	568.19	0.00	18 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	19 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.00	1 026.17	0.00	20 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	21 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	22 MiddleLow
MDA	Moldova	Europe	no	33 762.68	0.00	1 618.04	0.00	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	0.00	1 298.34	0.00	24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	0.00	311.85	0.00	25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	0.00	12 744.63	0.00	26 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	0.00	34 350.49	0.00	28 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	29 MiddleLow
EGY	Egypt	Africa	no	617 149.20	0.00	31 768.68	0.00	30 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	2 899.00	0.00	31 MiddleLow
ARM	Armenia	Asia	no	22 895.19	0.00	1 508.90	0.00	32 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	33 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	34 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.00	4 971.97	0.00	35 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	1 306.25	0.00	36 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	0.00	753.93	0.00	37 MiddleLow
GEO	Georgia	Asia	no	53 823.53	0.00	2 692.49	0.00	38 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	149 707.18	4.09	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	1 271.05	1 299 157.61	0.98	2 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	8 897.75	0.09	3 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	3 793.90	0.02	4 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	63 198.81	0.02	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.02	53 487.73	0.00	6 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	22 647.04	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	8 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	9 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.00	1 381.39	0.00	10 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	94 570.07	0.00	11 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.00	42 433.27	0.00	12 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.00	77 967.19	0.00	13 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.00	10 166.04	0.00	14 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	0.00	1 787.08	0.00	15 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	13 315.00	0.00	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	0.00	8 993.34	0.00	17 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	0.00	2 912.71	0.00	18 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	19 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	23 889.95	0.00	20 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	0.00	3 114.55	0.00	21 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	0.00	48 846.71	0.00	22 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	0.00	6 530.19	0.00	23 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	0.00	123 751.24	0.00	24 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	25 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.00	39 734.87	0.00	26 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	0.00	7 977.96	0.00	27 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.00	8 918.25	0.00	28 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	29 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.00	3 617.67	0.00	30 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	0.00	8 252.01	0.00	31 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	31 978.13	0.00	32 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	493 431.00	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	19 778.35	2 547 499.93	7.76	1 High
JPN	Japan	Asia	no	39 255 200.00	4 533.35	1 012 070.61	4.48	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	25 520.99	4.44	3 High
MAC	Macau	Asia	no	56 709.10	2.18	3 378.13	0.65	4 High
OMN	Oman	Asia	no	202 533.60	8.97	14 871.52	0.60	5 High
AUS	Australia	Oceania	no	6 616 533.00	129.23	276 915.26	0.47	6 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	46 486.26	0.46	7 High
KOR	South Korea	Asia	no	5 538 605.00	64.15	194 728.35	0.33	8 High
CAN	Canada	Northern America	no	6 291 917.00	97.47	395 958.78	0.25	9 High
IRL	Ireland	Europe	no	778 821.60	2.84	40 563.02	0.07	10 High
NZL	New Zealand	Oceania	no	679 705.40	1.05	34 691.31	0.03	11 High
PRT	Portugal	Europe	no	1 054 344.00	0.23	43 081.93	0.01	12 High
RUS	Russia	Europe	no	6 325 795.00	2.01	409 820.63	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	542 121.89	0.00	14 High
FRA	France	Europe	no	10 329 420.00	0.80	677 049.47	0.00	15 High
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	16 High
EST	Estonia	Europe	no	79 617.31	0.00	4 754.17	0.00	17 High
FIN	Finland	Europe	no	965 383.40	0.00	66 675.15	0.00	18 High
ISL	Iceland	Europe	no	57 291.68	0.00	3 730.06	0.00	19 High
LVA	Latvia	Europe	no	95 608.77	0.00	4 413.54	0.00	20 High
KWT	Kuwait	Asia	no	469 418.40	0.00	29 360.33	0.00	21 High
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	22 High
SVK	Slovakia	Europe	no	414 782.80	0.00	17 642.66	0.00	23 High
SWE	Sweden	Europe	no	1 747 501.00	0.00	151 944.31	0.00	24 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	27 530.57	0.00	25 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	26 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	34 332.88	0.00	27 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	28 High
AUT	Austria	Europe	no	1 801 472.00	0.00	84 928.57	0.00	29 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	30 High
QAT	Qatar	Asia	no	624 817.70	0.00	24 487.36	0.00	31 High
HUN	Hungary	Europe	no	562 479.60	0.00	26 544.35	0.00	32 High
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	33 High
CHE	Switzerland	Europe	no	3 421 606.00	0.00	75 147.62	0.00	34 High
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	35 High
LTU	Lithuania	Europe	no	135 613.80	0.00	8 076.66	0.00	36 High
ITA	Italy	Europe	no	8 604 332.00	0.00	417 993.98	0.00	37 High
ESP	Spain	Europe	no	6 233 955.00	0.00	271 148.52	0.00	38 High
MLT	Malta	Europe	no	36 990.21	0.00	1 879.07	0.00	39 High
LUX	Luxembourg	Europe	no	201 130.60	0.00	10 391.43	0.00	40 High
ISR	Israel	Asia	no	853 829.30	0.00	65 345.00	0.00	41 High
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	42 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	43 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	44 High
POL	Poland	Europe	no	1 614 716.00	0.00	95 412.26	0.00	45 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
GRC	Greece	Europe	no	1 181 283.00	0.00	48 425.35	0.00	47 High
BRN	Brunei	Asia	no	71 236.46	0.00	2 950.69	0.00	48 High
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	40 979.05	0.00	49 High
CYP	Cyprus	Asia	no	71 610.53	0.00	4 557.62	0.00	50 High
LBY	Libya	Africa	no	73 757.40	0.00	8 664.60	0.00	51 High
SMR	San Marino	Europe	no	4 049.35	0.00			52 High
MCO	Monaco	Europe	no	20 716.40	0.00			53 High
LIE	Liechtenstein	Europe	no	18 837.10	0.00			54 High
PSE	State of Palestine	Asia	no	69 454.30	0.00			1 ---
FRO	Faroe Islands	Europe	no	9 272.37	1.13			2 ---
REU	Reunion	Africa	no	67 897.68	114.65			3 ---
MMR	Myanmar	Asia	no	195 390.10	41.76			4 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			5 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			6 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			8 ---
AND	Andorra	Europe	no	8 381.65	0.00			9 ---
MYT	Mayotte	Africa	no	6 949.04	36.31			10 ---
ROU	Romania	Europe	no	555 697.40	0.00			11 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			12 ---
PRK	North Korea	Asia	no	77 982.15	0.11			13 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	11 984.82	16.24	1 Low
BGD	Bangladesh	Asia	no	381 431.90	465.85	160 820.74	2.90	2 Low
MOZ	Mozambique	Africa	no	36 409.45	38.72	17 220.44	2.25	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	0.06	17 196.10	0.00	4 Low
MWI	Malawi	Africa	no	18 356.97	0.01	4 366.74	0.00	5 Low
KHM	Cambodia	Asia	no	27 390.49	0.01	16 467.91	0.00	6 Low
CAF	Central African Republic	Africa	no	3 893.74	0.00	2 389.56	0.00	7 Low
ETH	Ethiopia	Africa	no	65 598.93	0.00	55 403.13	0.00	8 Low
NER	Niger	Africa	no	12 723.49	0.00	8 745.32	0.00	9 Low
BDI	Burundi	Africa	no	3 616.17	0.00	3 443.34	0.00	10 Low
NPL	Nepal	Asia	no	53 996.57	0.00	24 466.26	0.00	11 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	12 Low
TJK	Tajikistan	Asia	no	20 536.86	0.00	12 690.19	0.00	13 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	14 Low
MLI	Mali	Africa	no	27 719.15	0.00	11 011.34	0.00	15 Low
UGA	Uganda	Africa	no	43 697.09	0.00	23 933.64	0.00	16 Low
SSD	South Sudan	Africa	no	19 958.30	0.00	14 712.88	0.00	17 Low
RWA	Rwanda	Africa	no	13 197.39	0.00	8 767.59	0.00	18 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	19 Low
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	20 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	21 Low
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	22 Low
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.00	11 452.71	0.00	24 Low
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	25 Low
AFG	Afghanistan	Asia	no	60 187.87	0.00	29 010.12	0.00	26 Low
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	27 Low
PHL	Philippines	Asia	no	566 948.60	4 071.51	283 131.84	14.38	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	22 559.82	0.93	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 160.44	1 944 284.82	0.60	3 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	35.14	164 388.68	0.21	4 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	12 562.44	0.20	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	7.50	247 867.95	0.03	6 MiddleLow
LAO	Laos	Asia	no	21 925.62	0.35	12 246.45	0.03	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.70	73 583.10	0.02	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	59 883.48	0.01	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	0.49	885 677.23	0.00	10 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.00	17 930.59	0.00	11 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	0.00	3 740.58	0.00	12 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.00	117 556.24	0.00	13 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	14 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	27 647.87	0.00	15 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	16 MiddleLow
SDN	Sudan	Africa	no	70 368.78	0.00	70 927.03	0.00	17 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	0.00	26 244.17	0.00	18 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	19 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.00	14 228.09	0.00	20 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	21 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	22 MiddleLow
MDA	Moldova	Europe	no	33 762.68	0.00	10 971.97	0.00	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	0.00	14 036.94	0.00	24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	0.00	2 173.58	0.00	25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	0.00	59 039.46	0.00	26 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	0.00	192 523.67	0.00	28 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	29 MiddleLow
EGY	Egypt	Africa	no	617 149.20	0.00	291 083.68	0.00	30 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	28 969.70	0.00	31 MiddleLow
ARM	Armenia	Asia	no	22 895.19	0.00	12 628.86	0.00	32 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	33 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	34 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.00	40 077.56	0.00	35 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	10 749.10	0.00	36 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	0.00	3 944.56	0.00	37 MiddleLow
GEO	Georgia	Asia	no	53 823.53	0.00	18 230.53	0.00	38 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	1 269 259.96	0.48	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	1 271.05	9 003 382.87	0.14	2 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	51 412.23	0.02	3 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	36 126.55	0.00	4 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	387 419.05	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.02	374 528.18	0.00	6 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	204 179.29	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	8 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	9 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.00	15 227.71	0.00	10 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	611 844.88	0.00	11 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.00	284 108.03	0.00	12 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.00	360 489.06	0.00	13 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.00	73 747.80	0.00	14 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	0.00	12 119.46	0.00	15 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	96 787.63	0.00	16 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	0.00	54 795.79	0.00	17 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	0.00	15 490.96	0.00	18 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	19 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	205 086.26	0.00	20 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	0.00	25 014.09	0.00	21 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	0.00	226 497.10	0.00	22 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	0.00	50 384.63	0.00	23 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	0.00	876 064.28	0.00	24 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	25 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.00	204 165.74	0.00	26 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	0.00	50 611.94	0.00	27 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.00	51 302.58	0.00	28 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	29 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.00	15 480.83	0.00	30 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	0.00	57 484.51	0.00	31 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	255 619.28	0.00	32 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	2 301 443.96	0.00	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	19 778.35	17 276 300.43	1.14	1 High
JPN	Japan	Asia	no	39 255 200.00	4 533.35	5 059 261.76	0.90	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	271 683.76	0.42	3 High
OMN	Oman	Asia	no	202 533.60	8.97	56 792.46	0.16	4 High
MAC	Macau	Asia	no	56 709.10	2.18	20 216.60	0.11	5 High
AUS	Australia	Oceania	no	6 616 533.00	129.23	1 579 571.61	0.08	6 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	373 895.14	0.06	7 High
CAN	Canada	Northern America	no	6 291 917.00	97.47	1 857 561.03	0.05	8 High
KOR	South Korea	Asia	no	5 538 605.00	64.15	1 238 504.83	0.05	9 High
IRL	Ireland	Europe	no	778 821.60	2.84	183 798.12	0.02	10 High
NZL	New Zealand	Oceania	no	679 705.40	1.05	182 403.61	0.01	11 High
PRT	Portugal	Europe	no	1 054 344.00	0.23	225 098.65	0.00	12 High
RUS	Russia	Europe	no	6 325 795.00	2.01	1 973 571.68	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	2 728 637.76	0.00	14 High
FRA	France	Europe	no	10 329 420.00	0.80	2 848 015.52	0.00	15 High
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	16 High
EST	Estonia	Europe	no	79 617.31	0.00	24 664.81	0.00	17 High
FIN	Finland	Europe	no	965 383.40	0.00	269 912.39	0.00	18 High
ISL	Iceland	Europe	no	57 291.68	0.00	14 052.90	0.00	19 High
LVA	Latvia	Europe	no	95 608.77	0.00	29 570.85	0.00	20 High
KWT	Kuwait	Asia	no	469 418.40	0.00	96 682.69	0.00	21 High
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	22 High
SVK	Slovakia	Europe	no	414 782.80	0.00	93 274.32	0.00	23 High
SWE	Sweden	Europe	no	1 747 501.00	0.00	551 152.52	0.00	24 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	318 951.13	0.00	25 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	26 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	278 153.13	0.00	27 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	28 High
AUT	Austria	Europe	no	1 801 472.00	0.00	413 112.76	0.00	29 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	30 High
QAT	Qatar	Asia	no	624 817.70	0.00	91 904.94	0.00	31 High
HUN	Hungary	Europe	no	562 479.60	0.00	123 292.26	0.00	32 High
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	33 High
CHE	Switzerland	Europe	no	3 421 606.00	0.00	602 400.29	0.00	34 High
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	35 High
LTU	Lithuania	Europe	no	135 613.80	0.00	43 719.88	0.00	36 High
ITA	Italy	Europe	no	8 604 332.00	0.00	2 100 502.86	0.00	37 High
ESP	Spain	Europe	no	6 233 955.00	0.00	1 345 564.18	0.00	38 High
MLT	Malta	Europe	no	36 990.21	0.00	8 864.05	0.00	39 High
LUX	Luxembourg	Europe	no	201 130.60	0.00	38 962.95	0.00	40 High
ISR	Israel	Asia	no	853 829.30	0.00	286 558.36	0.00	41 High
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	42 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	43 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	44 High
POL	Poland	Europe	no	1 614 716.00	0.00	515 943.50	0.00	45 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
GRC	Greece	Europe	no	1 181 283.00	0.00	249 410.75	0.00	47 High
BRN	Brunei	Asia	no	71 236.46	0.00	9 075.14	0.00	48 High
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	196 764.65	0.00	49 High
CYP	Cyprus	Asia	no	71 610.53	0.00	24 622.91	0.00	50 High
LBY	Libya	Africa	no	73 757.40	0.00	55 976.41	0.00	51 High
SMR	San Marino	Europe	no	4 049.35	0.00			52 High
MCO	Monaco	Europe	no	20 716.40	0.00			53 High
LIE	Liechtenstein	Europe	no	18 837.10	0.00			54 High
PSE	State of Palestine	Asia	no	69 454.30	0.00			1 ---
FRO	Faroe Islands	Europe	no	9 272.37	1.13			2 ---
REU	Reunion	Africa	no	67 897.68	114.65			3 ---
MMR	Myanmar	Asia	no	195 390.10	41.76			4 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			5 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			6 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48			8 ---
AND	Andorra	Europe	no	8 381.65	0.00			9 ---
MYT	Mayotte	Africa	no	6 949.04	36.31			10 ---
ROU	Romania	Europe	no	555 697.40	0.00			11 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			12 ---
PRK	North Korea	Asia	no	77 982.15	0.11			13 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	194.58	8.28	1 Low
BGD	Bangladesh	Asia	no	381 431.90	465.85	1.22	2 Low
MOZ	Mozambique	Africa	no	36 409.45	38.72	1.06	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	0.06	0.00	4 Low
MWI	Malawi	Africa	no	18 356.97	0.01	0.00	5 Low
KHM	Cambodia	Asia	no	27 390.49	0.01	0.00	6 Low
CAF	Central African Republic	Africa	no	3 893.74	0.00	0.00	7 Low
ETH	Ethiopia	Africa	no	65 598.93	0.00	0.00	8 Low
NER	Niger	Africa	no	12 723.49	0.00	0.00	9 Low
BDI	Burundi	Africa	no	3 616.17	0.00	0.00	10 Low
NPL	Nepal	Asia	no	53 996.57	0.00	0.00	11 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	12 Low
TJK	Tajikistan	Asia	no	20 536.86	0.00	0.00	13 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	14 Low
MLI	Mali	Africa	no	27 719.15	0.00	0.00	15 Low
UGA	Uganda	Africa	no	43 697.09	0.00	0.00	16 Low
SSD	South Sudan	Africa	no	19 958.30	0.00	0.00	17 Low
RWA	Rwanda	Africa	no	13 197.39	0.00	0.00	18 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	19 Low
BEN	Benin	Africa	no	21 971.91	0.00	0.00	20 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	21 Low
TGO	Togo	Africa	no	12 513.67	0.00	0.00	22 Low
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	23 Low
BFA	Burkina Faso	Africa	no	24 689.43	0.00	0.00	24 Low
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	25 Low
AFG	Afghanistan	Asia	no	60 187.87	0.00	0.00	26 Low
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	27 Low
PHL	Philippines	Asia	no	566 948.60	4 071.51	7.18	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	20.99	0.27	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 160.44	0.20	3 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	35.14	0.07	4 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	2.52	0.07	5 MiddleLow
LAO	Laos	Asia	no	21 925.62	0.35	0.02	6 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	7.50	0.01	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.70	0.01	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.44	0.00	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	0.49	0.00	10 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	11 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	0.00	0.00	12 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	13 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	14 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	0.00	0.00	15 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	0.00	16 MiddleLow
SDN	Sudan	Africa	no	70 368.78	0.00	0.00	17 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	0.00	0.00	18 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	19 MiddleLow
TCD	Chad	Africa	no	26 745.14	0.00	0.00	20 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	21 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	22 MiddleLow
MDA	Moldova	Europe	no	33 762.68	0.00	0.00	23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	0.00	0.00	24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	0.00	0.00	25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	0.00	0.00	26 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	0.00	0.00	28 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	29 MiddleLow
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	30 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.00	0.00	31 MiddleLow
ARM	Armenia	Asia	no	22 895.19	0.00	0.00	32 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	33 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	34 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.00	0.00	35 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	0.00	0.00	36 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	0.00	0.00	37 MiddleLow
GEO	Georgia	Asia	no	53 823.53	0.00	0.00	38 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	613.02	0.14	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	1 271.05	0.04	2 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.83	0.01	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.96	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.09	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.02	0.00	6 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	0.00	0.00	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	8 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	9 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	10 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.00	0.00	11 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	12 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.00	0.00	13 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	14 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	0.00	0.00	15 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	0.00	0.00	16 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	0.00	0.00	17 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	0.00	0.00	18 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	0.00	0.00	19 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	20 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	0.00	0.00	21 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	0.00	0.00	22 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	0.00	0.00	23 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	24 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	25 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	0.00	26 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	27 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	0.00	0.00	28 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	29 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	30 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	31 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	0.00	0.00	32 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	33 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	19 778.35	0.36	1 High
JPN	Japan	Asia	no	39 255 200.00	4 533.35	0.12	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	113.44	0.09	3 High
OMN	Oman	Asia	no	202 533.60	8.97	0.04	4 High
MAC	Macau	Asia	no	56 709.10	2.18	0.04	5 High
AUS	Australia	Oceania	no	6 616 533.00	129.23	0.02	6 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	21.56	0.02	7 High
CAN	Canada	Northern America	no	6 291 917.00	97.47	0.02	8 High
KOR	South Korea	Asia	no	5 538 605.00	64.15	0.01	9 High
IRL	Ireland	Europe	no	778 821.60	2.84	0.00	10 High
NZL	New Zealand	Oceania	no	679 705.40	1.05	0.00	11 High
RUS	Russia	Europe	no	6 325 795.00	2.01	0.00	12 High
PRT	Portugal	Europe	no	1 054 344.00	0.23	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	1.44	0.00	14 High
FRA	France	Europe	no	10 329 420.00	0.80	0.00	15 High
POL	Poland	Europe	no	1 614 716.00	0.00	0.00	16 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	17 High
GRC	Greece	Europe	no	1 181 283.00	0.00	0.00	18 High
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	19 High
BRN	Brunei	Asia	no	71 236.46	0.00	0.00	20 High
CZE	Czech Republic	Europe	no	1 007 263.00	0.00	0.00	21 High
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	22 High
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	23 High
EST	Estonia	Europe	no	79 617.31	0.00	0.00	24 High
FIN	Finland	Europe	no	965 383.40	0.00	0.00	25 High
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	26 High
LIE	Liechtenstein	Europe	no	18 837.10	0.00	0.00	27 High
LVA	Latvia	Europe	no	95 608.77	0.00	0.00	28 High
KWT	Kuwait	Asia	no	469 418.40	0.00	0.00	29 High
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	30 High
SVK	Slovakia	Europe	no	414 782.80	0.00	0.00	31 High
SWE	Sweden	Europe	no	1 747 501.00	0.00	0.00	32 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	33 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	34 High
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	35 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	0.00	0.00	36 High
QAT	Qatar	Asia	no	624 817.70	0.00	0.00	37 High
HUN	Hungary	Europe	no	562 479.60	0.00	0.00	38 High
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	39 High
CHE	Switzerland	Europe	no	3 421 606.00	0.00	0.00	40 High
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	41 High
LTU	Lithuania	Europe	no	135 613.80	0.00	0.00	42 High
ITA	Italy	Europe	no	8 604 332.00	0.00	0.00	43 High
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	44 High
MLT	Malta	Europe	no	36 990.21	0.00	0.00	45 High
LUX	Luxembourg	Europe	no	201 130.60	0.00	0.00	46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
ISR	Israel	Asia	no	853 829.30	0.00	0.00	47 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	48 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	49 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	50 High
LBY	Libya	Africa	no	73 757.40	0.00	0.00	51 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	52 High
AUT	Austria	Europe	no	1 801 472.00	0.00	0.00	53 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	54 High
MYT	Mayotte	Africa	no	6 949.04	36.31	5.23	1 ---
TWN	Taiwan	Asia	no	1 680 401.00	2 913.48	1.73	2 ---
REU	Reunion	Africa	no	67 897.68	114.65	1.69	3 ---
MMR	Myanmar	Asia	no	195 390.10	41.76	0.21	4 ---
FRO	Faroe Islands	Europe	no	9 272.37	1.13	0.12	5 ---
PRK	North Korea	Asia	no	77 982.15	0.11	0.00	6 ---
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	7 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	8 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	9 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	10 ---
ROU	Romania	Europe	no	555 697.40	0.00	0.00	11 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	12 ---
AND	Andorra	Europe	no	8 381.65	0.00	0.00	13 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	1 021.64	9.63	1 Low
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	13 259.33	8.84	2 Low
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	496.79	3.18	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00	2.32	0.02	4 Low
MWI	Malawi	Africa	no	18 356.97	3 705.39	0.30	0.01	5 Low
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.24	0.00	6 Low
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	7 Low
BDI	Burundi	Africa	no	3 616.17	2 714.51			8 Low
NPL	Nepal	Asia	no	53 996.57	19 294.35			9 Low
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			10 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			11 Low
MLI	Mali	Africa	no	27 719.15	10 942.73			12 Low
UGA	Uganda	Africa	no	43 697.09	21 493.61			13 Low
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			14 Low
NER	Niger	Africa	no	12 723.49	7 407.42			15 Low
GIN	Guinea	Africa	no	13 665.89	6 144.13			16 Low
SSD	South Sudan	Africa	no	19 958.30	11 804.41			17 Low
RWA	Rwanda	Africa	no	13 197.39	7 521.26			18 Low
GMB	The Gambia	Africa	no	2 097.61	903.50			19 Low
BEN	Benin	Africa	no	21 971.91	8 307.22			20 Low
TZA	Tanzania	Africa	no	50 142.79	33 225.04			21 Low
TGO	Togo	Africa	no	12 513.67	4 338.58			22 Low
LBR	Liberia	Africa	no	1 911.24	1 950.96			23 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			24 Low
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			25 Low
ERI	Eritrea	Africa	no	9 081.79	3 444.10			26 Low
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			27 Low
PHL	Philippines	Asia	no	566 948.60	272 066.56	21 838.96	8.03	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	583.44	3.15	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 876 797.16	19 632.54	1.05	3 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	83.20	0.74	4 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	171 390.01	613.38	0.36	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	232 286.78	216.40	0.09	6 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	44.80	0.07	7 MiddleLow
LAO	Laos	Asia	no	21 925.62	11 242.53	5.14	0.05	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	6.13	0.01	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	19.70	0.00	10 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	0.17	0.00	11 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 791.70			12 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 334.99			13 MiddleLow
MAR	Morroco	Africa	no	374 846.30	103 835.71			14 MiddleLow
KEN	Kenya	Africa	no	98 382.66	55 243.06			15 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			16 MiddleLow
COG	Congo	Africa	no	69 047.72	14 085.85			17 MiddleLow
SDN	Sudan	Africa	no	70 368.78	66 565.89			18 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 820.87			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05	48 137.03			20 MiddleLow
TCD	Chad	Africa	no	26 745.14	13 513.55			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	4 158.18			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			23 MiddleLow
MDA	Moldova	Europe	no	33 762.68	7 969.62			24 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	11 516.41			25 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 781.26			26 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			27 MiddleLow
YEM	Yemen	Asia	no	79 113.56	35 954.50			28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	177 430.61			29 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	1 456.34			30 MiddleLow
EGY	Egypt	Africa	no	617 149.20	271 972.83			31 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 432.17			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	29 567.50			34 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	521 803.30			35 MiddleLow
SYR	Syria	Asia	no	204 643.30	40 405.00			36 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53	16 140.05			39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	12 953.98	1.03	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 240 270.86	13 469.76	0.15	2 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	38.32	0.04	0.10	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	16.30	0.03	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	4.76	0.01	5 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	30.63	0.01	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 923.24			9 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			10 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09			11 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			12 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	71 709.52			13 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 195.40			14 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			15 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			16 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 784.71			17 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 678.50			18 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			19 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 327.29			20 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 352.42			21 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			23 MiddleHigh
AGO	Angola	Africa	no	176 182.50	124 178.24			24 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	210 183.41			25 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	45 519.65			26 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	46 993.60			27 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			28 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	13 113.07			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			31 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			32 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 416.08			33 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	19 343.51			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	210 585.74	1.26	1 High
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	34 023.36	0.69	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	1 372.35	0.50	3 High
OMN	Oman	Asia	no	202 533.60	79 655.92	210.30	0.26	4 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	935.00	0.21	5 High
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	2 046.55	0.13	6 High
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	2 199.73	0.12	7 High
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	1 111.95	0.09	8 High
MAC	Macau	Asia	no	56 709.10	51 753.10	35.89	0.07	9 High
IRL	Ireland	Europe	no	778 821.60	232 077.43	98.21	0.04	10 High
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	44.03	0.02	11 High
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.06	0.00	12 High
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	7.55	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	49.84	0.00	14 High
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	34.63	0.00	15 High
FRA	France	Europe	no	10 329 420.00	2 806 427.94	29.46	0.00	16 High
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	17 High
ISL	Iceland	Europe	no	57 291.68	15 330.06	0.00	0.00	18 High
BRN	Brunei	Asia	no	71 236.46	16 111.14			19 High
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			20 High
CYP	Cyprus	Asia	no	71 610.53	21 911.45			21 High
LBY	Libya	Africa	no	73 757.40	74 199.53			22 High
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			23 High
AUT	Austria	Europe	no	1 801 472.00	428 321.90			24 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			25 High
QAT	Qatar	Asia	no	624 817.70	203 235.16			26 High
EST	Estonia	Europe	no	79 617.31	24 880.27			27 High
FIN	Finland	Europe	no	965 383.40	267 328.62			28 High
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			29 High
LVA	Latvia	Europe	no	95 608.77	30 956.69			30 High
KWT	Kuwait	Asia	no	469 418.40	175 830.50			31 High
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			32 High
SVK	Slovakia	Europe	no	414 782.80	97 707.33			33 High
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			34 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12			35 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			36 High
MCO	Monaco	Europe	no	20 716.40	6 074.51			37 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			38 High
POL	Poland	Europe	no	1 614 716.00	525 865.98			39 High
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			40 High
GRC	Greece	Europe	no	1 181 283.00	242 230.33			41 High
SMR	San Marino	Europe	no	4 049.35	1 899.81			42 High
HUN	Hungary	Europe	no	562 479.60	133 423.90			43 High
SVN	Slovenia	Europe	no	139 899.70	47 987.30			44 High
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			45 High
HRV	Croatia	Europe	no	188 113.70	57 868.67			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
LTU	Lithuania	Europe	no	135 613.80	45 931.97			47 High
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			48 High
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			49 High
MLT	Malta	Europe	no	36 990.21	9 642.33			50 High
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			51 High
ISR	Israel	Asia	no	853 829.30	290 550.61			52 High
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			53 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			54 High
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14	0.64	0.03	1 ---
PSE	State of Palestine	Asia	no	69 454.30				2 ---
TWN	Taiwan	Asia	no	1 680 401.00				3 ---
ROU	Romania	Europe	no	555 697.40				4 ---
ESH	Western Sahara	Africa	no	3 690.88				5 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				6 ---
REU	Reunion	Africa	no	67 897.68				7 ---
MMR	Myanmar	Asia	no	195 390.10				8 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				9 ---
MYT	Mayotte	Africa	no	6 949.04				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				12 ---
AND	Andorra	Europe	no	8 381.65	2 849.17			13 ---
PRK	North Korea	Asia	no	77 982.15				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	1 021.64	9.94	1 Low
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	13 259.33	8.18	2 Low
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	496.79	3.19	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00	2.32	0.02	4 Low
MWI	Malawi	Africa	no	18 356.97	3 574.19	0.30	0.01	5 Low
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.24	0.00	6 Low
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	7 Low
BDI	Burundi	Africa	no	3 616.17	2 713.09			8 Low
NPL	Nepal	Asia	no	53 996.57	19 443.42			9 Low
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			10 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			11 Low
MLI	Mali	Africa	no	27 719.15	10 272.74			12 Low
UGA	Uganda	Africa	no	43 697.09	22 316.73			13 Low
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			14 Low
NER	Niger	Africa	no	12 723.49	7 223.22			15 Low
GIN	Guinea	Africa	no	13 665.89	5 696.70			16 Low
SSD	South Sudan	Africa	no	19 958.30	10 791.19			17 Low
RWA	Rwanda	Africa	no	13 197.39	7 406.89			18 Low
GMB	The Gambia	Africa	no	2 097.61	875.76			19 Low
BEN	Benin	Africa	no	21 971.91	8 247.34			20 Low
TZA	Tanzania	Africa	no	50 142.79	33 033.24			21 Low
TGO	Togo	Africa	no	12 513.67	3 696.32			22 Low
LBR	Liberia	Africa	no	1 911.24	1 751.03			23 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			24 Low
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			25 Low
ERI	Eritrea	Africa	no	9 081.79	3 412.88			26 Low
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			27 Low
PHL	Philippines	Asia	no	566 948.60	326 316.43	21 838.96	6.69	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	583.44	3.38	2 MiddleLow
IND	India	Asia	no	5 769 372.00	1 855 591.42	19 632.54	1.06	3 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	83.20	0.76	4 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	164 181.67	613.38	0.37	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	244 280.84	216.40	0.09	6 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	44.80	0.07	7 MiddleLow
LAO	Laos	Asia	no	21 925.62	10 602.76	5.14	0.05	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	6.13	0.01	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	19.70	0.00	10 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	0.17	0.00	11 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 606.22			12 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 861.49			13 MiddleLow
MAR	Morroco	Africa	no	374 846.30	100 965.44			14 MiddleLow
KEN	Kenya	Africa	no	98 382.66	54 934.72			15 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			16 MiddleLow
COG	Congo	Africa	no	69 047.72	11 049.89			17 MiddleLow
SDN	Sudan	Africa	no	70 368.78	63 769.45			18 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 049.97			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05	47 004.17			20 MiddleLow
TCD	Chad	Africa	no	26 745.14	12 987.28			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	3 892.41			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			23 MiddleLow
MDA	Moldova	Europe	no	33 762.68	8 846.50			24 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	10 751.45			25 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 665.34			26 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			27 MiddleLow
YEM	Yemen	Asia	no	79 113.56	34 721.48			28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	180 979.14			29 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	775.82			30 MiddleLow
EGY	Egypt	Africa	no	617 149.20	264 562.52			31 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 972.97			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	28 948.12			34 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	499 041.44			35 MiddleLow
SYR	Syria	Asia	no	204 643.30	39 715.80			36 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53	15 835.00			39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	12 953.98	1.05	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 196 167.76	13 469.76	0.15	2 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	55.31	0.04	0.07	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	16.30	0.03	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	4.76	0.01	5 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	30.63	0.01	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 951.12			9 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			10 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55			11 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			12 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	69 000.62			13 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 110.99			14 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			15 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			16 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 678.53			17 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 339.06			18 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			19 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 027.28			20 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 926.34			21 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			23 MiddleHigh
AGO	Angola	Africa	no	176 182.50	112 289.11			24 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	206 267.88			25 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	43 641.10			26 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	44 799.78			27 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			28 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	12 989.72			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			31 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			32 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 503.08			33 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	17 298.19			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	210 585.74	1.24	1 High
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	34 023.36	0.67	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	1 372.35	0.49	3 High
OMN	Oman	Asia	no	202 533.60	90 220.81	210.30	0.23	4 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	935.00	0.22	5 High
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	2 046.55	0.13	6 High
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	2 199.73	0.12	7 High
MAC	Macau	Asia	no	56 709.10	37 762.88	35.89	0.10	8 High
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	1 111.95	0.08	9 High
IRL	Ireland	Europe	no	778 821.60	197 446.98	98.21	0.05	10 High
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	44.03	0.03	11 High
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.06	0.00	12 High
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	7.55	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	49.84	0.00	14 High
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	34.63	0.00	15 High
FRA	France	Europe	no	10 329 420.00	2 855 136.13	29.46	0.00	16 High
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	17 High
ISL	Iceland	Europe	no	57 291.68	15 047.05	0.00	0.00	18 High
BRN	Brunei	Asia	no	71 236.46	10 784.47			19 High
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			20 High
CYP	Cyprus	Asia	no	71 610.53	21 453.80			21 High
LBY	Libya	Africa	no	73 757.40	61 985.45			22 High
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			23 High
AUT	Austria	Europe	no	1 801 472.00	427 916.46			24 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			25 High
QAT	Qatar	Asia	no	624 817.70	190 319.79			26 High
EST	Estonia	Europe	no	79 617.31	24 010.33			27 High
FIN	Finland	Europe	no	965 383.40	268 134.55			28 High
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			29 High
LVA	Latvia	Europe	no	95 608.77	30 883.23			30 High
KWT	Kuwait	Asia	no	469 418.40	165 127.08			31 High
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			32 High
SVK	Slovakia	Europe	no	414 782.80	95 768.45			33 High
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			34 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97			35 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			36 High
MCO	Monaco	Europe	no	20 716.40	6 919.24			37 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			38 High
POL	Poland	Europe	no	1 614 716.00	506 714.23			39 High
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			40 High
GRC	Greece	Europe	no	1 181 283.00	242 155.98			41 High
SMR	San Marino	Europe	no	4 049.35	1 681.06			42 High
HUN	Hungary	Europe	no	562 479.60	129 554.20			43 High
SVN	Slovenia	Europe	no	139 899.70	47 633.96			44 High
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			45 High
HRV	Croatia	Europe	no	188 113.70	56 412.38			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
LTU	Lithuania	Europe	no	135 613.80	44 274.32			47 High
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			48 High
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			49 High
MLT	Malta	Europe	no	36 990.21	8 946.39			50 High
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			51 High
ISR	Israel	Asia	no	853 829.30	284 226.45			52 High
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			53 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			54 High
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31	0.64	0.03	1 ---
PSE	State of Palestine	Asia	no	69 454.30				2 ---
TWN	Taiwan	Asia	no	1 680 401.00				3 ---
ROU	Romania	Europe	no	555 697.40				4 ---
ESH	Western Sahara	Africa	no	3 690.88				5 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				6 ---
REU	Reunion	Africa	no	67 897.68				7 ---
MMR	Myanmar	Asia	no	195 390.10				8 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				9 ---
MYT	Mayotte	Africa	no	6 949.04				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				12 ---
AND	Andorra	Europe	no	8 381.65	2 539.76			13 ---
PRK	North Korea	Asia	no	77 982.15				14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	1 021.64	4.35	1 Low
BGD	Bangladesh	Asia	no	381 431.90	13 259.33	3.48	2 Low
MOZ	Mozambique	Africa	no	36 409.45	496.79	1.36	3 Low
ZWE	Zimbawue	Africa	no	22 038.05	2.32	0.01	4 Low
MWI	Malawi	Africa	no	18 356.97	0.30	0.00	5 Low
KHM	Cambodia	Asia	no	27 390.49	0.24	0.00	6 Low
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	7 Low
BDI	Burundi	Africa	no	3 616.17			8 Low
NPL	Nepal	Asia	no	53 996.57			9 Low
TJK	Tajikistan	Asia	no	20 536.86			10 Low
SLE	Sierra Leone	Africa	no	3 031.82			11 Low
MLI	Mali	Africa	no	27 719.15			12 Low
UGA	Uganda	Africa	no	43 697.09			13 Low
CAF	Central African Republic	Africa	no	3 893.74			14 Low
NER	Niger	Africa	no	12 723.49			15 Low
GIN	Guinea	Africa	no	13 665.89			16 Low
SSD	South Sudan	Africa	no	19 958.30			17 Low
RWA	Rwanda	Africa	no	13 197.39			18 Low
GMB	The Gambia	Africa	no	2 097.61			19 Low
BEN	Benin	Africa	no	21 971.91			20 Low
TZA	Tanzania	Africa	no	50 142.79			21 Low
TGO	Togo	Africa	no	12 513.67			22 Low
LBR	Liberia	Africa	no	1 911.24			23 Low
BFA	Burkina Faso	Africa	no	24 689.43			24 Low
AFG	Afghanistan	Asia	no	60 187.87			25 Low
ERI	Eritrea	Africa	no	9 081.79			26 Low
ETH	Ethiopia	Africa	no	65 598.93			27 Low
PHL	Philippines	Asia	no	566 948.60	21 838.96	3.85	1 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	583.44	0.75	2 MiddleLow
IND	India	Asia	no	5 769 372.00	19 632.54	0.34	3 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	83.20	0.23	4 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	613.38	0.13	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	216.40	0.04	6 MiddleLow
LAO	Laos	Asia	no	21 925.62	5.14	0.02	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	44.80	0.02	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	6.13	0.00	9 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	19.70	0.00	10 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.17	0.00	11 MiddleLow
SEN	Senegal	Africa	no	35 335.24			12 MiddleLow
LSO	Lesotho	Africa	no	17 938.00			13 MiddleLow
MAR	Morroco	Africa	no	374 846.30			14 MiddleLow
KEN	Kenya	Africa	no	98 382.66			15 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			16 MiddleLow
COG	Congo	Africa	no	69 047.72			17 MiddleLow
SDN	Sudan	Africa	no	70 368.78			18 MiddleLow
ZMB	Zambia	Africa	no	48 954.52			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05			20 MiddleLow
TCD	Chad	Africa	no	26 745.14			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63			23 MiddleLow
MDA	Moldova	Europe	no	33 762.68			24 MiddleLow
MNG	Mongolia	Asia	no	36 587.61			25 MiddleLow
BTN	Bhutan	Asia	no	11 083.66			26 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10			27 MiddleLow
YEM	Yemen	Asia	no	79 113.56			28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60			29 MiddleLow
DJI	Djibouti	Africa	no	4 744.66			30 MiddleLow
EGY	Egypt	Africa	no	617 149.20			31 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73			34 MiddleLow
NGA	Nigeria	Africa	no	592 030.40			35 MiddleLow
SYR	Syria	Asia	no	204 643.30			36 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53			39 MiddleLow
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	12 953.98	0.29	1 MiddleHigh
CHN	China	Asia	no	31 726 110.00	13 469.76	0.04	2 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.04	0.03	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	16.30	0.01	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	4.76	0.00	5 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	30.63	0.00	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65			9 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			10 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00			11 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00			12 MiddleHigh
BLR	Belarus	Europe	no	229 399.90			13 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37			14 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			15 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60			16 MiddleHigh
BWA	Botswana	Africa	no	90 628.62			17 MiddleHigh
JOR	Jordan	Asia	no	121 481.20			18 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90			19 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60			20 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70			21 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02			22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00			23 MiddleHigh
AGO	Angola	Africa	no	176 182.50			24 MiddleHigh
DZA	Algeria	Africa	no	899 206.20			25 MiddleHigh
SRB	Serbia	Europe	no	57 317.24			26 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60			27 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			28 MiddleHigh
NAM	Namibia	Africa	no	42 062.66			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00			30 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			31 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50			32 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93			33 MiddleHigh
GAB	Gabon	Africa	no	120 252.20			34 MiddleHigh
USA	United States	Northern America	no	54 922 480.00	210 585.74	0.38	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	1 372.35	0.11	2 High
OMN	Oman	Asia	no	202 533.60	210.30	0.10	3 High
JPN	Japan	Asia	no	39 255 200.00	34 023.36	0.09	4 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	935.00	0.08	5 High
MAC	Macau	Asia	no	56 709.10	35.89	0.06	6 High
CAN	Canada	Northern America	no	6 291 917.00	2 199.73	0.03	7 High
AUS	Australia	Oceania	no	6 616 533.00	2 046.55	0.03	8 High
KOR	South Korea	Asia	no	5 538 605.00	1 111.95	0.02	9 High
IRL	Ireland	Europe	no	778 821.60	98.21	0.01	10 High
NZL	New Zealand	Oceania	no	679 705.40	44.03	0.01	11 High
SYC	Seychelles	Africa	no	6 234.98	0.06	0.00	12 High
PRT	Portugal	Europe	no	1 054 344.00	7.55	0.00	13 High
GBR	United Kingdom	Europe	no	7 806 797.00	49.84	0.00	14 High
RUS	Russia	Europe	no	6 325 795.00	34.63	0.00	15 High
FRA	France	Europe	no	10 329 420.00	29.46	0.00	16 High
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	17 High
ISL	Iceland	Europe	no	57 291.68	0.00	0.00	18 High
BRN	Brunei	Asia	no	71 236.46			19 High
CZE	Czech Republic	Europe	no	1 007 263.00			20 High
CYP	Cyprus	Asia	no	71 610.53			21 High
LBY	Libya	Africa	no	73 757.40			22 High
DNK	Denmark	Europe	no	1 346 393.00			23 High
AUT	Austria	Europe	no	1 801 472.00			24 High
SAU	Saudi Arabia	Asia	no	2 141 419.00			25 High
QAT	Qatar	Asia	no	624 817.70			26 High
EST	Estonia	Europe	no	79 617.31			27 High
FIN	Finland	Europe	no	965 383.40			28 High
LIE	Liechtenstein	Europe	no	18 837.10			29 High
LVA	Latvia	Europe	no	95 608.77			30 High
KWT	Kuwait	Asia	no	469 418.40			31 High
DEU	Germany	Europe	no	15 114 870.00			32 High
SVK	Slovakia	Europe	no	414 782.80			33 High
SWE	Sweden	Europe	no	1 747 501.00			34 High
ARE	United Arab Emirates	Asia	no	1 282 119.00			35 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			36 High
MCO	Monaco	Europe	no	20 716.40			37 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10			38 High
POL	Poland	Europe	no	1 614 716.00			39 High
BEL	Belgium	Europe	no	1 980 551.00			40 High
GRC	Greece	Europe	no	1 181 283.00			41 High
SMR	San Marino	Europe	no	4 049.35			42 High
HUN	Hungary	Europe	no	562 479.60			43 High
SVN	Slovenia	Europe	no	139 899.70			44 High
CHE	Switzerland	Europe	no	3 421 606.00			45 High
HRV	Croatia	Europe	no	188 113.70			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
LTU	Lithuania	Europe	no	135 613.80			47 High
ITA	Italy	Europe	no	8 604 332.00			48 High
ESP	Spain	Europe	no	6 233 955.00			49 High
MLT	Malta	Europe	no	36 990.21			50 High
LUX	Luxembourg	Europe	no	201 130.60			51 High
ISR	Israel	Asia	no	853 829.30			52 High
NLD	Netherlands	Europe	no	3 410 955.00			53 High
GNQ	Equatorial Guinea	Africa	no	20 061.44			54 High
MYT	Mayotte	Africa	no	6 949.04	805.91	11.60	1 ---
REU	Reunion	Africa	no	67 897.68	4 004.22	5.90	2 ---
TWN	Taiwan	Asia	no	1 680 401.00	17 312.23	1.03	3 ---
MMR	Myanmar	Asia	no	195 390.10	405.48	0.21	4 ---
FRO	Faroe Islands	Europe	no	9 272.37	0.64	0.01	5 ---
PRK	North Korea	Asia	no	77 982.15	2.86	0.00	6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			7 ---
ESH	Western Sahara	Africa	no	3 690.88			8 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97			9 ---
ROU	Romania	Europe	no	555 697.40			10 ---
GIB	Gibraltar	Europe	no	4 042.19			11 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			12 ---
PSE	State of Palestine	Asia	no	69 454.30			13 ---
AND	Andorra	Europe	no	8 381.65			14 ---

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Economy

Tropical Cyclone Storm Surge

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	1 666.80	7.01	1 Low
MOZ	Mozambique	Africa	no	36 409.45	6.36	2 723.39	2.34	2 Low
BGD	Bangladesh	Asia	no	381 431.90	23.35	42 581.72	0.55	3 Low
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	4 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	5 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	6 Low
BDI	Burundi	Africa	no	3 616.17		780.29		7 Low
CAF	Central African Republic	Africa	no	3 893.74		320.25		8 Low
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		9 Low
UGA	Uganda	Africa	no	43 697.09		5 121.46		10 Low
NER	Niger	Africa	no	12 723.49		2 551.37		11 Low
BEN	Benin	Africa	no	21 971.91		2 182.62		12 Low
NPL	Nepal	Asia	no	53 996.57		4 356.14		13 Low
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		14 Low
GIN	Guinea	Africa	no	13 665.89		919.65		15 Low
SSD	South Sudan	Africa	no	19 958.30		1 399.32		16 Low
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		17 Low
RWA	Rwanda	Africa	no	13 197.39		1 920.52		18 Low
MWI	Malawi	Africa	no	18 356.97		731.37		19 Low
TGO	Togo	Africa	no	12 513.67		685.82		20 Low
ERI	Eritrea	Africa	no	9 081.79		260.73		21 Low
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		22 Low
SLE	Sierra Leone	Africa	no	3 031.82		685.06		23 Low
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		24 Low
MLI	Mali	Africa	no	27 719.15		1 684.06		25 Low
GMB	The Gambia	Africa	no	2 097.61		187.47		26 Low
LBR	Liberia	Africa	no	1 911.24		440.32		27 Low
PHL	Philippines	Asia	no	566 948.60	2 541.62	55 644.78	45.68	1 MiddleLow
IND	India	Asia	no	5 769 372.00	726.92	530 741.66	1.37	2 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	40.93	40 823.56	1.00	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	18.57	19 647.18	0.95	4 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	4 539.50	0.74	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	18.10	30 125.80	0.60	6 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	2 574.11	0.52	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	37.86	274 943.80	0.14	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	7 693.87	0.05	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	3 663.90	0.02	10 MiddleLow
GEO	Georgia	Asia	no	53 823.53		3 542.58		11 MiddleLow
MAR	Morroco	Africa	no	374 846.30		31 321.40		12 MiddleLow
KEN	Kenya	Africa	no	98 382.66		11 277.32		13 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		855.33		14 MiddleLow
COG	Congo	Africa	no	69 047.72		4 329.13		15 MiddleLow
SDN	Sudan	Africa	no	70 368.78		13 307.19		16 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		5 247.76		17 MiddleLow
SEN	Senegal	Africa	no	35 335.24		3 706.12		18 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		19 MiddleLow
GHA	Ghana	Africa	no	74 174.05		10 912.64		20 MiddleLow
TCD	Chad	Africa	no	26 745.14		3 701.42		21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52		1 578.96		22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63		5 292.23		23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		5 086.03		24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		842.11		25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		26 MiddleLow
MDA	Moldova	Europe	no	33 762.68		1 821.11		27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		32 236.10		28 MiddleLow
YEM	Yemen	Asia	no	79 113.56		3 126.31		29 MiddleLow
LAO	Laos	Asia	no	21 925.62		3 279.79		30 MiddleLow
DJI	Djibouti	Africa	no	4 744.66		317.86		31 MiddleLow
EGY	Egypt	Africa	no	617 149.20		37 477.12		32 MiddleLow
ARM	Armenia	Asia	no	22 895.19		2 183.10		33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73		5 736.52		34 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		35 MiddleLow
NGA	Nigeria	Africa	no	592 030.40		75 511.10		36 MiddleLow
SYR	Syria	Asia	no	204 643.30		8 252.62		37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		363.96		38 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		39 MiddleLow
CHN	China	Asia	no	31 726 110.00	4 834.00	4 370 835.96	1.11	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	265 421.77	0.39	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.52	84 107.08	0.01	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	92 724.40	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	10 060.78	0.00	5 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.09	73 681.58	0.00	6 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.10	103 523.57	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50		53 841.99		8 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				9 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93		847.70		10 MiddleHigh
GAB	Gabon	Africa	no	120 252.20		6 432.02		11 MiddleHigh
ALB	Albania	Europe	no	40 459.65		3 379.49		12 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		103 818.81		13 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		26 312.88		14 MiddleHigh
DZA	Algeria	Africa	no	899 206.20		71 040.48		15 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		5 015.09		16 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60		9 509.45		17 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		18 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		3 192.49		19 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		10 406.53		20 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		408 331.78		21 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00		167 069.99		22 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		23 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		2 530.04		24 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		8 634.55		25 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00		67 780.45		26 MiddleHigh
JOR	Jordan	Asia	no	121 481.20		9 168.09		27 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70		12 363.32		28 MiddleHigh
AGO	Angola	Africa	no	176 182.50		18 242.56		29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		30 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		26 490.10		31 MiddleHigh
NAM	Namibia	Africa	no	42 062.66		3 368.79		32 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		35 983.20		34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	386 884.93	19.87	1 High
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 068 884.62	16.66	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	65 379.04	13.74	3 High
NZL	New Zealand	Oceania	no	679 705.40	323.42	38 213.65	8.46	4 High
USA	United States	Northern America	no	54 922 480.00	8 774.38	3 244 299.91	2.70	5 High
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	442 013.06	2.43	6 High
OMN	Oman	Asia	no	202 533.60	15.92	17 256.96	0.92	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	77 440.20	0.20	8 High
RUS	Russia	Europe	no	6 325 795.00	12.40	450 238.87	0.03	9 High
BRN	Brunei	Asia	no	71 236.46	0.02	2 466.98	0.01	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	88 386.66	0.00	11 High
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	12 High
SVK	Slovakia	Europe	no	414 782.80		19 975.29		13 High
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		14 High
KWT	Kuwait	Asia	no	469 418.40		19 039.58		15 High
GBR	United Kingdom	Europe	no	7 806 797.00		440 106.84		16 High
IRL	Ireland	Europe	no	778 821.60		35 221.45		17 High
ITA	Italy	Europe	no	8 604 332.00		383 197.87		18 High
EST	Estonia	Europe	no	79 617.31		6 795.36		19 High
ISL	Iceland	Europe	no	57 291.68		2 314.22		20 High
LIE	Liechtenstein	Europe	no	18 837.10				21 High
LVA	Latvia	Europe	no	95 608.77		6 324.84		22 High
FRA	France	Europe	no	10 329 420.00		619 955.29		23 High
DEU	Germany	Europe	no	15 114 870.00		737 992.70		24 High
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		25 High
HRV	Croatia	Europe	no	188 113.70		11 171.45		26 High
NOR	Norway	Europe	no	1 933 679.00		116 071.15		27 High
LTU	Lithuania	Europe	no	135 613.80		7 517.23		28 High
FIN	Finland	Europe	no	965 383.40		56 624.15		29 High
MLT	Malta	Europe	no	36 990.21		1 333.61		30 High
ESP	Spain	Europe	no	6 233 955.00		257 993.28		31 High
CAN	Canada	Northern America	no	6 291 917.00		433 369.09		32 High
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		33 High
ISR	Israel	Asia	no	853 829.30		56 565.68		34 High
NLD	Netherlands	Europe	no	3 410 955.00		155 739.98		35 High
GNQ	Equatorial Guinea	Africa	no	20 061.44		9 099.23		36 High
PRT	Portugal	Europe	no	1 054 344.00		34 419.00		37 High
MAC	Macau	Asia	no	56 709.10		6 610.47		38 High
MCO	Monaco	Europe	no	20 716.40				39 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		12 763.68		40 High
POL	Poland	Europe	no	1 614 716.00		98 972.34		41 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10		65 444.15		42 High
SMR	San Marino	Europe	no	4 049.35				43 High
BEL	Belgium	Europe	no	1 980 551.00		116 900.65		44 High
GRC	Greece	Europe	no	1 181 283.00		27 154.95		45 High
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
CYP	Cyprus	Asia	no	71 610.53		4 260.93		47 High
LBY	Libya	Africa	no	73 757.40		25 993.79		48 High
SAU	Saudi Arabia	Asia	no	2 141 419.00		173 661.86		49 High
QAT	Qatar	Asia	no	624 817.70		15 282.42		50 High
DNK	Denmark	Europe	no	1 346 393.00		61 547.69		51 High
AUT	Austria	Europe	no	1 801 472.00		95 015.40		52 High
HUN	Hungary	Europe	no	562 479.60		26 595.35		53 High
SVN	Slovenia	Europe	no	139 899.70		9 461.85		54 High
FRO	Faroe Islands	Europe	no	9 272.37				1 ---
PSE	State of Palestine	Asia	no	69 454.30				2 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				3 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				4 ---
PRK	North Korea	Asia	no	77 982.15	1.95			5 ---
REU	Reunion	Africa	no	67 897.68	24.99			6 ---
MYT	Mayotte	Africa	no	6 949.04	6.12			7 ---
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			8 ---
MMR	Myanmar	Asia	no	195 390.10	40.61			9 ---
AND	Andorra	Europe	no	8 381.65				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
ESH	Western Sahara	Africa	no	3 690.88				12 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				13 ---
ROU	Romania	Europe	no	555 697.40				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	915.01	12.76	1 Low
BGD	Bangladesh	Asia	no	381 431.90	23.35	7 673.71	3.04	2 Low
MOZ	Mozambique	Africa	no	36 409.45	6.36	3 190.27	1.99	3 Low
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	6 Low
LBR	Liberia	Africa	no	1 911.24		268.18		7 Low
ERI	Eritrea	Africa	no	9 081.79		549.64		8 Low
SLE	Sierra Leone	Africa	no	3 031.82		428.35		9 Low
MLI	Mali	Africa	no	27 719.15		1 172.08		10 Low
BDI	Burundi	Africa	no	3 616.17		599.64		11 Low
TGO	Togo	Africa	no	12 513.67		359.57		12 Low
CAF	Central African Republic	Africa	no	3 893.74		166.29		13 Low
BEN	Benin	Africa	no	21 971.91		934.54		14 Low
GIN	Guinea	Africa	no	13 665.89		594.52		15 Low
MWI	Malawi	Africa	no	18 356.97		818.79		16 Low
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		17 Low
GMB	The Gambia	Africa	no	2 097.61		67.53		18 Low
SSD	South Sudan	Africa	no	19 958.30		2 720.34		19 Low
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		20 Low
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		21 Low
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		22 Low
NER	Niger	Africa	no	12 723.49		1 083.62		23 Low
UGA	Uganda	Africa	no	43 697.09		1 787.04		24 Low
RWA	Rwanda	Africa	no	13 197.39		1 065.41		25 Low
TJK	Tajikistan	Asia	no	20 536.86		998.87		26 Low
NPL	Nepal	Asia	no	53 996.57		1 917.21		27 Low
PHL	Philippines	Asia	no	566 948.60	2 541.62	30 212.56	84.12	1 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	40.93	10 550.52	3.88	2 MiddleLow
IND	India	Asia	no	5 769 372.00	726.92	221 700.44	3.28	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	18.57	8 808.70	2.11	4 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	646.93	2.06	5 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	3 077.08	1.09	6 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	18.10	25 463.41	0.71	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	37.86	79 076.93	0.48	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	5 637.22	0.06	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	2 899.00	0.03	10 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		11 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		1 298.34		12 MiddleLow
SYR	Syria	Asia	no	204 643.30		4 971.97		13 MiddleLow
SEN	Senegal	Africa	no	35 335.24		2 289.33		14 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		311.85		15 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		16 MiddleLow
MDA	Moldova	Europe	no	33 762.68		1 618.04		17 MiddleLow
NGA	Nigeria	Africa	no	592 030.40		42 180.53		18 MiddleLow
GEO	Georgia	Asia	no	53 823.53		2 692.49		19 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		568.19		20 MiddleLow
SDN	Sudan	Africa	no	70 368.78		5 000.18		21 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		34 350.49		22 MiddleLow
YEM	Yemen	Asia	no	79 113.56		2 625.09		23 MiddleLow
MRT	Mauritania	Africa	no	11 985.52		706.94		24 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63		2 613.28		25 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		753.93		26 MiddleLow
TCD	Chad	Africa	no	26 745.14		1 026.17		27 MiddleLow
GHA	Ghana	Africa	no	74 174.05		8 003.31		28 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		29 MiddleLow
ARM	Armenia	Asia	no	22 895.19		1 508.90		30 MiddleLow
CMR	Cameroon	Africa	no	81 683.73		3 421.99		31 MiddleLow
LAO	Laos	Asia	no	21 925.62		1 626.13		32 MiddleLow
COG	Congo	Africa	no	69 047.72		1 908.75		33 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		878.46		34 MiddleLow
KEN	Kenya	Africa	no	98 382.66		7 759.48		35 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		36 MiddleLow
DJI	Djibouti	Africa	no	4 744.66		212.95		37 MiddleLow
MAR	Morroco	Africa	no	374 846.30		19 696.51		38 MiddleLow
EGY	Egypt	Africa	no	617 149.20		31 768.68		39 MiddleLow
CHN	China	Asia	no	31 726 110.00	4 834.00	1 299 157.61	3.72	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	149 707.18	0.69	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.52	42 433.27	0.01	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	63 198.81	0.01	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	3 793.90	0.01	5 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.09	31 978.13	0.00	6 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.10	53 487.73	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		493 431.00		8 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		7 977.96		9 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50		22 647.04		10 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00		123 751.24		11 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		48 846.71		12 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				13 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93		876.28		14 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		15 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		16 MiddleHigh
ALB	Albania	Europe	no	40 459.65		1 381.39		17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		94 570.07		18 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		13 315.00		19 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00		77 967.19		20 MiddleHigh
JOR	Jordan	Asia	no	121 481.20		6 618.91		21 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70		6 530.19		22 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		23 MiddleHigh
DZA	Algeria	Africa	no	899 206.20		39 734.87		24 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		8 897.75		25 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		2 912.71		26 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		4 063.51		27 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		1 787.08		28 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60		8 918.25		29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		30 MiddleHigh
GAB	Gabon	Africa	no	120 252.20		1 026.90		31 MiddleHigh
AGO	Angola	Africa	no	176 182.50		24 725.13		32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		10 166.04		33 MiddleHigh
NAM	Namibia	Africa	no	42 062.66		3 617.67		34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	194 728.35	39.49	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	25 520.99	35.20	2 High
JPN	Japan	Asia	no	39 255 200.00	17 812.27	1 012 070.61	17.60	3 High
NZL	New Zealand	Oceania	no	679 705.40	323.42	34 691.31	9.32	4 High
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	276 915.26	3.89	5 High
USA	United States	Northern America	no	54 922 480.00	8 774.38	2 547 499.93	3.44	6 High
OMN	Oman	Asia	no	202 533.60	15.92	14 871.52	1.07	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	46 486.26	0.33	8 High
RUS	Russia	Europe	no	6 325 795.00	12.40	409 820.63	0.03	9 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	27 530.57	0.01	10 High
BRN	Brunei	Asia	no	71 236.46	0.02	2 950.69	0.01	11 High
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	12 High
LVA	Latvia	Europe	no	95 608.77		4 413.54		13 High
KWT	Kuwait	Asia	no	469 418.40		29 360.33		14 High
NLD	Netherlands	Europe	no	3 410 955.00		224 781.17		15 High
GNQ	Equatorial Guinea	Africa	no	20 061.44		1 036.62		16 High
PRT	Portugal	Europe	no	1 054 344.00		43 081.93		17 High
MAC	Macau	Asia	no	56 709.10		3 378.13		18 High
ISL	Iceland	Europe	no	57 291.68		3 730.06		19 High
GBR	United Kingdom	Europe	no	7 806 797.00		542 121.89		20 High
IRL	Ireland	Europe	no	778 821.60		40 563.02		21 High
MCO	Monaco	Europe	no	20 716.40				22 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		7 713.60		23 High
FRA	France	Europe	no	10 329 420.00		677 049.47		24 High
EST	Estonia	Europe	no	79 617.31		4 754.17		25 High
POL	Poland	Europe	no	1 614 716.00		95 412.26		26 High
DEU	Germany	Europe	no	15 114 870.00		718 583.82		27 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10		34 332.88		28 High
SMR	San Marino	Europe	no	4 049.35				29 High
BEL	Belgium	Europe	no	1 980 551.00		128 131.48		30 High
GRC	Greece	Europe	no	1 181 283.00		48 425.35		31 High
SVK	Slovakia	Europe	no	414 782.80		17 642.66		32 High
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		33 High
CYP	Cyprus	Asia	no	71 610.53		4 557.62		34 High
LBY	Libya	Africa	no	73 757.40		8 664.60		35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00		165 700.80		36 High
QAT	Qatar	Asia	no	624 817.70		24 487.36		37 High
DNK	Denmark	Europe	no	1 346 393.00		89 732.55		38 High
FIN	Finland	Europe	no	965 383.40		66 675.15		39 High
AUT	Austria	Europe	no	1 801 472.00		84 928.57		40 High
HUN	Hungary	Europe	no	562 479.60		26 544.35		41 High
SVN	Slovenia	Europe	no	139 899.70		9 765.51		42 High
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		43 High
HRV	Croatia	Europe	no	188 113.70		11 594.94		44 High
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		45 High
NOR	Norway	Europe	no	1 933 679.00		112 012.76		46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
LTU	Lithuania	Europe	no	135 613.80		8 076.66		47 High
MLT	Malta	Europe	no	36 990.21		1 879.07		48 High
ITA	Italy	Europe	no	8 604 332.00		417 993.98		49 High
ESP	Spain	Europe	no	6 233 955.00		271 148.52		50 High
CAN	Canada	Northern America	no	6 291 917.00		395 958.78		51 High
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		52 High
LIE	Liechtenstein	Europe	no	18 837.10				53 High
ISR	Israel	Asia	no	853 829.30		65 345.00		54 High
ESH	Western Sahara	Africa	no	3 690.88				1 ---
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			2 ---
ROU	Romania	Europe	no	555 697.40				3 ---
PSE	State of Palestine	Asia	no	69 454.30				4 ---
AND	Andorra	Europe	no	8 381.65				5 ---
FRO	Faroe Islands	Europe	no	9 272.37				6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				7 ---
PRK	North Korea	Asia	no	77 982.15	1.95			8 ---
MYT	Mayotte	Africa	no	6 949.04	6.12			9 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
REU	Reunion	Africa	no	67 897.68	24.99			12 ---
MMR	Myanmar	Asia	no	195 390.10	40.61			13 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	11 984.82	0.97	1 Low
MOZ	Mozambique	Africa	no	36 409.45	6.36	17 220.44	0.37	2 Low
BGD	Bangladesh	Asia	no	381 431.90	23.35	160 820.74	0.15	3 Low
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	6 Low
LBR	Liberia	Africa	no	1 911.24		2 724.73		7 Low
ERI	Eritrea	Africa	no	9 081.79		2 836.63		8 Low
SLE	Sierra Leone	Africa	no	3 031.82		4 191.60		9 Low
MLI	Mali	Africa	no	27 719.15		11 011.34		10 Low
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		11 Low
BDI	Burundi	Africa	no	3 616.17		3 443.34		12 Low
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		13 Low
BEN	Benin	Africa	no	21 971.91		9 572.30		14 Low
GIN	Guinea	Africa	no	13 665.89		7 750.84		15 Low
MWI	Malawi	Africa	no	18 356.97		4 366.74		16 Low
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		17 Low
GMB	The Gambia	Africa	no	2 097.61		1 029.01		18 Low
NPL	Nepal	Asia	no	53 996.57		24 466.26		19 Low
SSD	South Sudan	Africa	no	19 958.30		14 712.88		20 Low
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		21 Low
TGO	Togo	Africa	no	12 513.67		4 390.62		22 Low
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		23 Low
NER	Niger	Africa	no	12 723.49		8 745.32		24 Low
UGA	Uganda	Africa	no	43 697.09		23 933.64		25 Low
RWA	Rwanda	Africa	no	13 197.39		8 767.59		26 Low
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		27 Low
PHL	Philippines	Asia	no	566 948.60	2 541.62	283 131.84	8.98	1 MiddleLow
IND	India	Asia	no	5 769 372.00	726.92	1 944 284.82	0.37	2 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	18.57	73 583.10	0.25	3 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	40.93	164 388.68	0.25	4 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	22 559.82	0.15	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	12 562.44	0.11	6 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	18.10	247 867.95	0.07	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	37.86	885 677.23	0.04	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	59 883.48	0.01	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	28 969.70	0.00	10 MiddleLow
GHA	Ghana	Africa	no	74 174.05		50 578.29		11 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		14 036.94		12 MiddleLow
SYR	Syria	Asia	no	204 643.30		40 077.56		13 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		14 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		2 173.58		15 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		16 MiddleLow
MDA	Moldova	Europe	no	33 762.68		10 971.97		17 MiddleLow
NGA	Nigeria	Africa	no	592 030.40		495 416.77		18 MiddleLow
GEO	Georgia	Asia	no	53 823.53		18 230.53		19 MiddleLow
SEN	Senegal	Africa	no	35 335.24		17 930.59		20 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63		31 142.79		21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52		4 169.52		22 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		23 MiddleLow
TCD	Chad	Africa	no	26 745.14		14 228.09		24 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		25 MiddleLow
ARM	Armenia	Asia	no	22 895.19		12 628.86		26 MiddleLow
CMR	Cameroon	Africa	no	81 683.73		32 007.42		27 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		26 244.17		28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		192 523.67		29 MiddleLow
YEM	Yemen	Asia	no	79 113.56		18 997.54		30 MiddleLow
SDN	Sudan	Africa	no	70 368.78		70 927.03		31 MiddleLow
LAO	Laos	Asia	no	21 925.62		12 246.45		32 MiddleLow
COG	Congo	Africa	no	69 047.72		12 612.41		33 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		3 740.58		34 MiddleLow
KEN	Kenya	Africa	no	98 382.66		63 770.87		35 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		36 MiddleLow
DJI	Djibouti	Africa	no	4 744.66		1 018.02		37 MiddleLow
MAR	Morroco	Africa	no	374 846.30		117 556.24		38 MiddleLow
EGY	Egypt	Africa	no	617 149.20		291 083.68		39 MiddleLow
CHN	China	Asia	no	31 726 110.00	4 834.00	9 003 382.87	0.54	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	1 269 259.96	0.08	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.52	284 108.03	0.00	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	387 419.05	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	36 126.55	0.00	5 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.09	255 619.28	0.00	6 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.10	374 528.18	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00		2 301 443.96		8 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		50 611.94		9 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50		204 179.29		10 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00		876 064.28		11 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		226 497.10		12 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				13 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93		5 312.54		14 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		15 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		16 MiddleHigh
ALB	Albania	Europe	no	40 459.65		15 227.71		17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00		611 844.88		18 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90		96 787.63		19 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00		360 489.06		20 MiddleHigh
JOR	Jordan	Asia	no	121 481.20		43 390.10		21 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70		50 384.63		22 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		23 MiddleHigh
DZA	Algeria	Africa	no	899 206.20		204 165.74		24 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40		51 412.23		25 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		15 490.96		26 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21		21 616.92		27 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		12 119.46		28 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60		51 302.58		29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		30 MiddleHigh
GAB	Gabon	Africa	no	120 252.20		14 724.33		31 MiddleHigh
AGO	Angola	Africa	no	176 182.50		105 476.81		32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		73 747.80		33 MiddleHigh
NAM	Namibia	Africa	no	42 062.66		15 480.83		34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1 238 504.83	6.21	1 High
JPN	Japan	Asia	no	39 255 200.00	17 812.27	5 059 261.76	3.52	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	271 683.76	3.31	3 High
NZL	New Zealand	Oceania	no	679 705.40	323.42	182 403.61	1.77	4 High
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	1 579 571.61	0.68	5 High
USA	United States	Northern America	no	54 922 480.00	8 774.38	17 276 300.43	0.51	6 High
OMN	Oman	Asia	no	202 533.60	15.92	56 792.46	0.28	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	373 895.14	0.04	8 High
RUS	Russia	Europe	no	6 325 795.00	12.40	1 973 571.68	0.01	9 High
BRN	Brunei	Asia	no	71 236.46	0.02	9 075.14	0.00	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	318 951.13	0.00	11 High
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	12 High
LVA	Latvia	Europe	no	95 608.77		29 570.85		13 High
KWT	Kuwait	Asia	no	469 418.40		96 682.69		14 High
NLD	Netherlands	Europe	no	3 410 955.00		765 364.08		15 High
GNQ	Equatorial Guinea	Africa	no	20 061.44		12 451.63		16 High
PRT	Portugal	Europe	no	1 054 344.00		225 098.65		17 High
MAC	Macau	Asia	no	56 709.10		20 216.60		18 High
ISL	Iceland	Europe	no	57 291.68		14 052.90		19 High
GBR	United Kingdom	Europe	no	7 806 797.00		2 728 637.76		20 High
IRL	Ireland	Europe	no	778 821.60		183 798.12		21 High
MCO	Monaco	Europe	no	20 716.40				22 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70		57 529.86		23 High
FRA	France	Europe	no	10 329 420.00		2 848 015.52		24 High
EST	Estonia	Europe	no	79 617.31		24 664.81		25 High
POL	Poland	Europe	no	1 614 716.00		515 943.50		26 High
DEU	Germany	Europe	no	15 114 870.00		3 513 506.86		27 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10		278 153.13		28 High
SMR	San Marino	Europe	no	4 049.35				29 High
BEL	Belgium	Europe	no	1 980 551.00		517 763.60		30 High
GRC	Greece	Europe	no	1 181 283.00		249 410.75		31 High
SVK	Slovakia	Europe	no	414 782.80		93 274.32		32 High
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		33 High
CYP	Cyprus	Asia	no	71 610.53		24 622.91		34 High
LBY	Libya	Africa	no	73 757.40		55 976.41		35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00		590 125.33		36 High
QAT	Qatar	Asia	no	624 817.70		91 904.94		37 High
DNK	Denmark	Europe	no	1 346 393.00		316 596.75		38 High
FIN	Finland	Europe	no	965 383.40		269 912.39		39 High
AUT	Austria	Europe	no	1 801 472.00		413 112.76		40 High
HUN	Hungary	Europe	no	562 479.60		123 292.26		41 High
SVN	Slovenia	Europe	no	139 899.70		45 103.27		42 High
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		43 High
HRV	Croatia	Europe	no	188 113.70		57 600.31		44 High
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		45 High
NOR	Norway	Europe	no	1 933 679.00		457 625.37		46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
LTU	Lithuania	Europe	no	135 613.80		43 719.88		47 High
MLT	Malta	Europe	no	36 990.21		8 864.05		48 High
ITA	Italy	Europe	no	8 604 332.00		2 100 502.86		49 High
ESP	Spain	Europe	no	6 233 955.00		1 345 564.18		50 High
CAN	Canada	Northern America	no	6 291 917.00		1 857 561.03		51 High
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		52 High
LIE	Liechtenstein	Europe	no	18 837.10				53 High
ISR	Israel	Asia	no	853 829.30		286 558.36		54 High
ESH	Western Sahara	Africa	no	3 690.88				1 ---
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08			2 ---
ROU	Romania	Europe	no	555 697.40				3 ---
PSE	State of Palestine	Asia	no	69 454.30				4 ---
AND	Andorra	Europe	no	8 381.65				5 ---
FRO	Faroe Islands	Europe	no	9 272.37				6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				7 ---
PRK	North Korea	Asia	no	77 982.15	1.95			8 ---
MYT	Mayotte	Africa	no	6 949.04	6.12			9 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
REU	Reunion	Africa	no	67 897.68	24.99			12 ---
MMR	Myanmar	Asia	no	195 390.10	40.61			13 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
MDG	Madagascar	Africa	no	23 496.42	11.68	0.50	1 Low
MOZ	Mozambique	Africa	no	36 409.45	6.36	0.17	2 Low
BGD	Bangladesh	Asia	no	381 431.90	23.35	0.06	3 Low
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	6 Low
LBR	Liberia	Africa	no	1 911.24			7 Low
ERI	Eritrea	Africa	no	9 081.79			8 Low
SLE	Sierra Leone	Africa	no	3 031.82			9 Low
MLI	Mali	Africa	no	27 719.15			10 Low
BFA	Burkina Faso	Africa	no	24 689.43			11 Low
BDI	Burundi	Africa	no	3 616.17			12 Low
CAF	Central African Republic	Africa	no	3 893.74			13 Low
BEN	Benin	Africa	no	21 971.91			14 Low
GIN	Guinea	Africa	no	13 665.89			15 Low
MWI	Malawi	Africa	no	18 356.97			16 Low
ETH	Ethiopia	Africa	no	65 598.93			17 Low
GMB	The Gambia	Africa	no	2 097.61			18 Low
NPL	Nepal	Asia	no	53 996.57			19 Low
SSD	South Sudan	Africa	no	19 958.30			20 Low
AFG	Afghanistan	Asia	no	60 187.87			21 Low
TGO	Togo	Africa	no	12 513.67			22 Low
ZWE	Zimbawue	Africa	no	22 038.05			23 Low
NER	Niger	Africa	no	12 723.49			24 Low
UGA	Uganda	Africa	no	43 697.09			25 Low
RWA	Rwanda	Africa	no	13 197.39			26 Low
TJK	Tajikistan	Asia	no	20 536.86			27 Low
PHL	Philippines	Asia	no	566 948.60	2 541.62	4.48	1 MiddleLow
IND	India	Asia	no	5 769 372.00	726.92	0.13	2 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	18.57	0.09	3 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	40.93	0.08	4 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	3.35	0.04	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	1.33	0.04	6 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	18.10	0.04	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	37.86	0.01	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.36	0.00	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.08	0.00	10 MiddleLow
GHA	Ghana	Africa	no	74 174.05			11 MiddleLow
MNG	Mongolia	Asia	no	36 587.61			12 MiddleLow
SYR	Syria	Asia	no	204 643.30			13 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			14 MiddleLow
BTN	Bhutan	Asia	no	11 083.66			15 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10			16 MiddleLow
MDA	Moldova	Europe	no	33 762.68			17 MiddleLow
NGA	Nigeria	Africa	no	592 030.40			18 MiddleLow
GEO	Georgia	Asia	no	53 823.53			19 MiddleLow
SEN	Senegal	Africa	no	35 335.24			20 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52			22 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24			23 MiddleLow
TCD	Chad	Africa	no	26 745.14			24 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60			25 MiddleLow
ARM	Armenia	Asia	no	22 895.19			26 MiddleLow
CMR	Cameroon	Africa	no	81 683.73			27 MiddleLow
ZMB	Zambia	Africa	no	48 954.52			28 MiddleLow
UKR	Ukraine	Europe	no	676 833.60			29 MiddleLow
YEM	Yemen	Asia	no	79 113.56			30 MiddleLow
SDN	Sudan	Africa	no	70 368.78			31 MiddleLow
LAO	Laos	Asia	no	21 925.62			32 MiddleLow
COG	Congo	Africa	no	69 047.72			33 MiddleLow
LSO	Lesotho	Africa	no	17 938.00			34 MiddleLow
KEN	Kenya	Africa	no	98 382.66			35 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			36 MiddleLow
DJI	Djibouti	Africa	no	4 744.66			37 MiddleLow
MAR	Morroco	Africa	no	374 846.30			38 MiddleLow
EGY	Egypt	Africa	no	617 149.20			39 MiddleLow
CHN	China	Asia	no	31 726 110.00	4 834.00	0.15	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	103.05	0.02	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	0.52	0.00	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	0.38	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.02	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.10	0.00	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.09	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			8 MiddleHigh
SRB	Serbia	Europe	no	57 317.24			9 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50			10 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00			11 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60			12 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26			13 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93			14 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90			15 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02			16 MiddleHigh
ALB	Albania	Europe	no	40 459.65			17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			18 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			19 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00			20 MiddleHigh
JOR	Jordan	Asia	no	121 481.20			21 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70			22 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00			23 MiddleHigh
DZA	Algeria	Africa	no	899 206.20			24 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			25 MiddleHigh
BWA	Botswana	Africa	no	90 628.62			26 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			27 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37			28 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60			29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60			30 MiddleHigh
GAB	Gabon	Africa	no	120 252.20			31 MiddleHigh
AGO	Angola	Africa	no	176 182.50			32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90			33 MiddleHigh
NAM	Namibia	Africa	no	42 062.66			34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	7 688.85	1.39	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	898.23	0.72	2 High
NZL	New Zealand	Oceania	no	679 705.40	323.42	0.48	3 High
JPN	Japan	Asia	no	39 255 200.00	17 812.27	0.45	4 High
AUS	Australia	Oceania	no	6 616 533.00	1 076.23	0.16	5 High
USA	United States	Northern America	no	54 922 480.00	8 774.38	0.16	6 High
OMN	Oman	Asia	no	202 533.60	15.92	0.08	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	15.43	0.01	8 High
RUS	Russia	Europe	no	6 325 795.00	12.40	0.00	9 High
BRN	Brunei	Asia	no	71 236.46	0.02	0.00	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.32	0.00	11 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	12 High
MAC	Macau	Asia	no	56 709.10			13 High
DEU	Germany	Europe	no	15 114 870.00			14 High
SVK	Slovakia	Europe	no	414 782.80			15 High
SWE	Sweden	Europe	no	1 747 501.00			16 High
PRT	Portugal	Europe	no	1 054 344.00			17 High
GNQ	Equatorial Guinea	Africa	no	20 061.44			18 High
KWT	Kuwait	Asia	no	469 418.40			19 High
GBR	United Kingdom	Europe	no	7 806 797.00			20 High
IRL	Ireland	Europe	no	778 821.60			21 High
MCO	Monaco	Europe	no	20 716.40			22 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			23 High
NLD	Netherlands	Europe	no	3 410 955.00			24 High
POL	Poland	Europe	no	1 614 716.00			25 High
FIN	Finland	Europe	no	965 383.40			26 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10			27 High
SMR	San Marino	Europe	no	4 049.35			28 High
BEL	Belgium	Europe	no	1 980 551.00			29 High
GRC	Greece	Europe	no	1 181 283.00			30 High
ISR	Israel	Asia	no	853 829.30			31 High
CZE	Czech Republic	Europe	no	1 007 263.00			32 High
MLT	Malta	Europe	no	36 990.21			33 High
ISL	Iceland	Europe	no	57 291.68			34 High
EST	Estonia	Europe	no	79 617.31			35 High
LIE	Liechtenstein	Europe	no	18 837.10			36 High
LVA	Latvia	Europe	no	95 608.77			37 High
FRA	France	Europe	no	10 329 420.00			38 High
ESP	Spain	Europe	no	6 233 955.00			39 High
CYP	Cyprus	Asia	no	71 610.53			40 High
LBY	Libya	Africa	no	73 757.40			41 High
SAU	Saudi Arabia	Asia	no	2 141 419.00			42 High
QAT	Qatar	Asia	no	624 817.70			43 High
DNK	Denmark	Europe	no	1 346 393.00			44 High
LUX	Luxembourg	Europe	no	201 130.60			45 High
AUT	Austria	Europe	no	1 801 472.00			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
HUN	Hungary	Europe	no	562 479.60			47 High
SVN	Slovenia	Europe	no	139 899.70			48 High
CHE	Switzerland	Europe	no	3 421 606.00			49 High
HRV	Croatia	Europe	no	188 113.70			50 High
CAN	Canada	Northern America	no	6 291 917.00			51 High
NOR	Norway	Europe	no	1 933 679.00			52 High
LTU	Lithuania	Europe	no	135 613.80			53 High
ITA	Italy	Europe	no	8 604 332.00			54 High
TWN	Taiwan	Asia	no	1 680 401.00	1 494.08	0.89	1 ---
MYT	Mayotte	Africa	no	6 949.04	6.12	0.88	2 ---
REU	Reunion	Africa	no	67 897.68	24.99	0.37	3 ---
MMR	Myanmar	Asia	no	195 390.10	40.61	0.21	4 ---
PRK	North Korea	Asia	no	77 982.15	1.95	0.03	5 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97			6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			7 ---
FRO	Faroe Islands	Europe	no	9 272.37			8 ---
AND	Andorra	Europe	no	8 381.65			9 ---
PSE	State of Palestine	Asia	no	69 454.30			10 ---
GIB	Gibraltar	Europe	no	4 042.19			11 ---
ROU	Romania	Europe	no	555 697.40			12 ---
ESH	Western Sahara	Africa	no	3 690.88			13 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	82.85	0.78	1 Low
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	89.63	0.57	2 Low
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	305.42	0.20	3 Low
SOM	Somalia	Africa	no	6 408.32	917.04	0.02	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	15 238.69	0.02	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	6 Low
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			7 Low
BDI	Burundi	Africa	no	3 616.17	2 714.51			8 Low
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			9 Low
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			10 Low
UGA	Uganda	Africa	no	43 697.09	21 493.61			11 Low
NER	Niger	Africa	no	12 723.49	7 407.42			12 Low
BEN	Benin	Africa	no	21 971.91	8 307.22			13 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			14 Low
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			15 Low
GIN	Guinea	Africa	no	13 665.89	6 144.13			16 Low
SSD	South Sudan	Africa	no	19 958.30	11 804.41			17 Low
RWA	Rwanda	Africa	no	13 197.39	7 521.26			18 Low
MWI	Malawi	Africa	no	18 356.97	3 705.39			19 Low
LBR	Liberia	Africa	no	1 911.24	1 950.96			20 Low
ERI	Eritrea	Africa	no	9 081.79	3 444.10			21 Low
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			22 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28			23 Low
NPL	Nepal	Asia	no	53 996.57	19 294.35			24 Low
MLI	Mali	Africa	no	27 719.15	10 942.73			25 Low
GMB	The Gambia	Africa	no	2 097.61	903.50			26 Low
TGO	Togo	Africa	no	12 513.67	4 338.58			27 Low
PHL	Philippines	Asia	no	566 948.60	272 066.56	3 827.86	1.41	1 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	385.00	0.57	2 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	53.72	0.48	3 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	66.33	0.36	4 MiddleLow
IND	India	Asia	no	5 769 372.00	1 876 797.16	4 526.74	0.24	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	232 286.78	294.43	0.13	6 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	171 390.01	212.61	0.12	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	481.01	0.06	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	8.44	0.02	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.52	0.01	10 MiddleLow
GEO	Georgia	Asia	no	53 823.53	16 140.05			11 MiddleLow
MAR	Morroco	Africa	no	374 846.30	103 835.71			12 MiddleLow
KEN	Kenya	Africa	no	98 382.66	55 243.06			13 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 334.99			14 MiddleLow
COG	Congo	Africa	no	69 047.72	14 085.85			15 MiddleLow
SDN	Sudan	Africa	no	70 368.78	66 565.89			16 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 820.87			17 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 791.70			18 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05	48 137.03			20 MiddleLow
TCD	Chad	Africa	no	26 745.14	13 513.55			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	4 158.18			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03			23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	11 516.41			24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 781.26			25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			26 MiddleLow
MDA	Moldova	Europe	no	33 762.68	7 969.62			27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	177 430.61			28 MiddleLow
YEM	Yemen	Asia	no	79 113.56	35 954.50			29 MiddleLow
LAO	Laos	Asia	no	21 925.62	11 242.53			30 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	1 456.34			31 MiddleLow
EGY	Egypt	Africa	no	617 149.20	271 972.83			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 432.17			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	29 567.50			34 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			35 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	521 803.30			36 MiddleLow
SYR	Syria	Asia	no	204 643.30	40 405.00			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			38 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			39 MiddleLow
CHN	China	Asia	no	31 726 110.00	9 240 270.86	11 492.35	0.12	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	1 486.01	0.12	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	19.94	0.01	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	9.59	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.61	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	387 252.16	2.89	0.00	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	368 904.34	1.90	0.00	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85			8 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	38.32			9 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 416.08			10 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	19 343.51			11 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 923.24			12 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96			13 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68			14 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	210 183.41			15 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 784.71			16 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	46 993.60			17 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			18 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			19 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09			20 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09			21 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	822 135.16			22 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			23 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 195.40			24 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	45 519.65			25 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12			26 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 678.50			27 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 352.42			28 MiddleHigh
AGO	Angola	Africa	no	176 182.50	124 178.24			29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			30 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	71 709.52			31 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	13 113.07			32 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 327.29			34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	50 115.44	3.84	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	9 688.13	3.54	2 High
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	3 830.06	2.06	3 High
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	45 243.59	0.92	4 High
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	87 253.88	0.52	5 High
OMN	Oman	Asia	no	202 533.60	79 655.92	405.68	0.51	6 High
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	4 610.10	0.30	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	425.43	0.10	8 High
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	217.02	0.01	9 High
BRN	Brunei	Asia	no	71 236.46	16 111.14	1.18	0.01	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	5.63	0.00	11 High
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62			12 High
SVK	Slovakia	Europe	no	414 782.80	97 707.33			13 High
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			14 High
KWT	Kuwait	Asia	no	469 418.40	175 830.50			15 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01			16 High
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46			17 High
EST	Estonia	Europe	no	79 617.31	24 880.27			18 High
ISL	Iceland	Europe	no	57 291.68	15 330.06			19 High
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			20 High
LVA	Latvia	Europe	no	95 608.77	30 956.69			21 High
FRA	France	Europe	no	10 329 420.00	2 806 427.94			22 High
HRV	Croatia	Europe	no	188 113.70	57 868.67			23 High
NOR	Norway	Europe	no	1 933 679.00	512 580.42			24 High
LTU	Lithuania	Europe	no	135 613.80	45 931.97			25 High
FIN	Finland	Europe	no	965 383.40	267 328.62			26 High
MLT	Malta	Europe	no	36 990.21	9 642.33			27 High
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16			28 High
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55			29 High
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			30 High
ISR	Israel	Asia	no	853 829.30	290 550.61			31 High
SYC	Seychelles	Africa	no	6 234.98	1 443.35			32 High
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36			33 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56			34 High
PRT	Portugal	Europe	no	1 054 344.00	227 323.72			35 High
MAC	Macau	Asia	no	56 709.10	51 753.10			36 High
IRL	Ireland	Europe	no	778 821.60	232 077.43			37 High
MCO	Monaco	Europe	no	20 716.40	6 074.51			38 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94			39 High
POL	Poland	Europe	no	1 614 716.00	525 865.98			40 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77			41 High
SMR	San Marino	Europe	no	4 049.35	1 899.81			42 High
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			43 High
GRC	Greece	Europe	no	1 181 283.00	242 230.33			44 High
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			45 High
CYP	Cyprus	Asia	no	71 610.53	21 911.45			46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
LBY	Libya	Africa	no	73 757.40	74 199.53			47 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			48 High
QAT	Qatar	Asia	no	624 817.70	203 235.16			49 High
DNK	Denmark	Europe	no	1 346 393.00	335 877.54			50 High
AUT	Austria	Europe	no	1 801 472.00	428 321.90			51 High
HUN	Hungary	Europe	no	562 479.60	133 423.90			52 High
SVN	Slovenia	Europe	no	139 899.70	47 987.30			53 High
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			54 High
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			1 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				2 ---
AND	Andorra	Europe	no	8 381.65	2 849.17			3 ---
ESH	Western Sahara	Africa	no	3 690.88				4 ---
ROU	Romania	Europe	no	555 697.40				5 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				6 ---
PRK	North Korea	Asia	no	77 982.15				7 ---
GIB	Gibraltar	Europe	no	4 042.19				8 ---
MYT	Mayotte	Africa	no	6 949.04				9 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				10 ---
MMR	Myanmar	Asia	no	195 390.10				11 ---
PSE	State of Palestine	Asia	no	69 454.30				12 ---
TWN	Taiwan	Asia	no	1 680 401.00				13 ---
REU	Reunion	Africa	no	67 897.68				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	82.85	0.81	1 Low
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	89.63	0.58	2 Low
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	305.42	0.19	3 Low
SOM	Somalia	Africa	no	6 408.32	834.95	0.02	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	14 486.36	0.02	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	6 Low
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			7 Low
BDI	Burundi	Africa	no	3 616.17	2 713.09			8 Low
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			9 Low
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			10 Low
UGA	Uganda	Africa	no	43 697.09	22 316.73			11 Low
NER	Niger	Africa	no	12 723.49	7 223.22			12 Low
BEN	Benin	Africa	no	21 971.91	8 247.34			13 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			14 Low
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			15 Low
GIN	Guinea	Africa	no	13 665.89	5 696.70			16 Low
SSD	South Sudan	Africa	no	19 958.30	10 791.19			17 Low
RWA	Rwanda	Africa	no	13 197.39	7 406.89			18 Low
MWI	Malawi	Africa	no	18 356.97	3 574.19			19 Low
LBR	Liberia	Africa	no	1 911.24	1 751.03			20 Low
ERI	Eritrea	Africa	no	9 081.79	3 412.88			21 Low
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			22 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60			23 Low
NPL	Nepal	Asia	no	53 996.57	19 443.42			24 Low
MLI	Mali	Africa	no	27 719.15	10 272.74			25 Low
GMB	The Gambia	Africa	no	2 097.61	875.76			26 Low
TGO	Togo	Africa	no	12 513.67	3 696.32			27 Low
PHL	Philippines	Asia	no	566 948.60	326 316.43	3 827.86	1.17	1 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	385.00	0.59	2 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	53.72	0.49	3 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	66.33	0.38	4 MiddleLow
IND	India	Asia	no	5 769 372.00	1 855 591.42	4 526.74	0.24	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	164 181.67	212.61	0.13	6 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	244 280.84	294.43	0.12	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	481.01	0.06	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	8.44	0.02	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.52	0.01	10 MiddleLow
GEO	Georgia	Asia	no	53 823.53	15 835.00			11 MiddleLow
MAR	Morroco	Africa	no	374 846.30	100 965.44			12 MiddleLow
KEN	Kenya	Africa	no	98 382.66	54 934.72			13 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 861.49			14 MiddleLow
COG	Congo	Africa	no	69 047.72	11 049.89			15 MiddleLow
SDN	Sudan	Africa	no	70 368.78	63 769.45			16 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 049.97			17 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 606.22			18 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05	47 004.17			20 MiddleLow
TCD	Chad	Africa	no	26 745.14	12 987.28			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	3 892.41			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67			23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	10 751.45			24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 665.34			25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			26 MiddleLow
MDA	Moldova	Europe	no	33 762.68	8 846.50			27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	180 979.14			28 MiddleLow
YEM	Yemen	Asia	no	79 113.56	34 721.48			29 MiddleLow
LAO	Laos	Asia	no	21 925.62	10 602.76			30 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	775.82			31 MiddleLow
EGY	Egypt	Africa	no	617 149.20	264 562.52			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 972.97			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	28 948.12			34 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			35 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	499 041.44			36 MiddleLow
SYR	Syria	Asia	no	204 643.30	39 715.80			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			38 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			39 MiddleLow
CHN	China	Asia	no	31 726 110.00	9 196 167.76	11 492.35	0.12	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	1 486.01	0.12	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	19.94	0.01	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	9.59	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.61	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	361 245.34	2.89	0.00	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	369 271.87	1.90	0.00	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74			8 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	55.31			9 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 503.08			10 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	17 298.19			11 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 951.12			12 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42			13 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08			14 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	206 267.88			15 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 678.53			16 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	44 799.78			17 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			18 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			19 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75			20 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64			21 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	812 788.29			22 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			23 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 110.99			24 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	43 641.10			25 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96			26 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 339.06			27 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 926.34			28 MiddleHigh
AGO	Angola	Africa	no	176 182.50	112 289.11			29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			30 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	69 000.62			31 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	12 989.72			32 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 027.28			34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	50 115.44	3.81	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	9 688.13	3.47	2 High
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	3 830.06	2.34	3 High
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	45 243.59	0.89	4 High
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	87 253.88	0.51	5 High
OMN	Oman	Asia	no	202 533.60	90 220.81	405.68	0.45	6 High
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	4 610.10	0.30	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	425.43	0.10	8 High
BRN	Brunei	Asia	no	71 236.46	10 784.47	1.18	0.01	9 High
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	217.02	0.01	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	5.63	0.00	11 High
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97			12 High
SVK	Slovakia	Europe	no	414 782.80	95 768.45			13 High
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			14 High
KWT	Kuwait	Asia	no	469 418.40	165 127.08			15 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20			16 High
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65			17 High
EST	Estonia	Europe	no	79 617.31	24 010.33			18 High
ISL	Iceland	Europe	no	57 291.68	15 047.05			19 High
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			20 High
LVA	Latvia	Europe	no	95 608.77	30 883.23			21 High
FRA	France	Europe	no	10 329 420.00	2 855 136.13			22 High
HRV	Croatia	Europe	no	188 113.70	56 412.38			23 High
NOR	Norway	Europe	no	1 933 679.00	520 892.58			24 High
LTU	Lithuania	Europe	no	135 613.80	44 274.32			25 High
FIN	Finland	Europe	no	965 383.40	268 134.55			26 High
MLT	Malta	Europe	no	36 990.21	8 946.39			27 High
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03			28 High
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67			29 High
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			30 High
ISR	Israel	Asia	no	853 829.30	284 226.45			31 High
SYC	Seychelles	Africa	no	6 234.98	1 392.89			32 High
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61			33 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45			34 High
PRT	Portugal	Europe	no	1 054 344.00	222 332.29			35 High
MAC	Macau	Asia	no	56 709.10	37 762.88			36 High
IRL	Ireland	Europe	no	778 821.60	197 446.98			37 High
MCO	Monaco	Europe	no	20 716.40	6 919.24			38 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34			39 High
POL	Poland	Europe	no	1 614 716.00	506 714.23			40 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05			41 High
SMR	San Marino	Europe	no	4 049.35	1 681.06			42 High
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			43 High
GRC	Greece	Europe	no	1 181 283.00	242 155.98			44 High
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			45 High
CYP	Cyprus	Asia	no	71 610.53	21 453.80			46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
LBY	Libya	Africa	no	73 757.40	61 985.45			47 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			48 High
QAT	Qatar	Asia	no	624 817.70	190 319.79			49 High
DNK	Denmark	Europe	no	1 346 393.00	347 488.39			50 High
AUT	Austria	Europe	no	1 801 472.00	427 916.46			51 High
HUN	Hungary	Europe	no	562 479.60	129 554.20			52 High
SVN	Slovenia	Europe	no	139 899.70	47 633.96			53 High
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			54 High
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			1 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				2 ---
AND	Andorra	Europe	no	8 381.65	2 539.76			3 ---
ESH	Western Sahara	Africa	no	3 690.88				4 ---
ROU	Romania	Europe	no	555 697.40				5 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				6 ---
PRK	North Korea	Asia	no	77 982.15				7 ---
GIB	Gibraltar	Europe	no	4 042.19				8 ---
MYT	Mayotte	Africa	no	6 949.04				9 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				10 ---
MMR	Myanmar	Asia	no	195 390.10				11 ---
PSE	State of Palestine	Asia	no	69 454.30				12 ---
TWN	Taiwan	Asia	no	1 680 401.00				13 ---
REU	Reunion	Africa	no	67 897.68				14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	82.85	0.35	1 Low
MOZ	Mozambique	Africa	no	36 409.45	89.63	0.25	2 Low
BGD	Bangladesh	Asia	no	381 431.90	305.42	0.08	3 Low
SOM	Somalia	Africa	no	6 408.32	0.02	0.00	4 Low
KHM	Cambodia	Asia	no	27 390.49	0.02	0.00	5 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	6 Low
AFG	Afghanistan	Asia	no	60 187.87			7 Low
BDI	Burundi	Africa	no	3 616.17			8 Low
CAF	Central African Republic	Africa	no	3 893.74			9 Low
ETH	Ethiopia	Africa	no	65 598.93			10 Low
UGA	Uganda	Africa	no	43 697.09			11 Low
NER	Niger	Africa	no	12 723.49			12 Low
BEN	Benin	Africa	no	21 971.91			13 Low
BFA	Burkina Faso	Africa	no	24 689.43			14 Low
ZWE	Zimbawue	Africa	no	22 038.05			15 Low
GIN	Guinea	Africa	no	13 665.89			16 Low
SSD	South Sudan	Africa	no	19 958.30			17 Low
RWA	Rwanda	Africa	no	13 197.39			18 Low
MWI	Malawi	Africa	no	18 356.97			19 Low
LBR	Liberia	Africa	no	1 911.24			20 Low
ERI	Eritrea	Africa	no	9 081.79			21 Low
TJK	Tajikistan	Asia	no	20 536.86			22 Low
SLE	Sierra Leone	Africa	no	3 031.82			23 Low
NPL	Nepal	Asia	no	53 996.57			24 Low
MLI	Mali	Africa	no	27 719.15			25 Low
GMB	The Gambia	Africa	no	2 097.61			26 Low
TGO	Togo	Africa	no	12 513.67			27 Low
PHL	Philippines	Asia	no	566 948.60	3 827.86	0.68	1 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	385.00	0.18	2 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	53.72	0.15	3 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	66.33	0.09	4 MiddleLow
IND	India	Asia	no	5 769 372.00	4 526.74	0.08	5 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	294.43	0.06	6 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	212.61	0.04	7 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	481.01	0.02	8 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	8.44	0.00	9 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.52	0.00	10 MiddleLow
GEO	Georgia	Asia	no	53 823.53			11 MiddleLow
MAR	Morroco	Africa	no	374 846.30			12 MiddleLow
KEN	Kenya	Africa	no	98 382.66			13 MiddleLow
LSO	Lesotho	Africa	no	17 938.00			14 MiddleLow
COG	Congo	Africa	no	69 047.72			15 MiddleLow
SDN	Sudan	Africa	no	70 368.78			16 MiddleLow
ZMB	Zambia	Africa	no	48 954.52			17 MiddleLow
SEN	Senegal	Africa	no	35 335.24			18 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			19 MiddleLow
GHA	Ghana	Africa	no	74 174.05			20 MiddleLow
TCD	Chad	Africa	no	26 745.14			21 MiddleLow
MRT	Mauritania	Africa	no	11 985.52			22 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63			23 MiddleLow
MNG	Mongolia	Asia	no	36 587.61			24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66			25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10			26 MiddleLow
MDA	Moldova	Europe	no	33 762.68			27 MiddleLow
UKR	Ukraine	Europe	no	676 833.60			28 MiddleLow
YEM	Yemen	Asia	no	79 113.56			29 MiddleLow
LAO	Laos	Asia	no	21 925.62			30 MiddleLow
DJI	Djibouti	Africa	no	4 744.66			31 MiddleLow
EGY	Egypt	Africa	no	617 149.20			32 MiddleLow
ARM	Armenia	Asia	no	22 895.19			33 MiddleLow
CMR	Cameroon	Africa	no	81 683.73			34 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			35 MiddleLow
NGA	Nigeria	Africa	no	592 030.40			36 MiddleLow
SYR	Syria	Asia	no	204 643.30			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24			38 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60			39 MiddleLow
CHN	China	Asia	no	31 726 110.00	11 492.35	0.04	1 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 486.01	0.03	2 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	19.94	0.00	3 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	9.59	0.00	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.61	0.00	5 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	2.89	0.00	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	1.90	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
PER	Peru	Latin America and the Caribbean	no	692 344.50			8 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26			9 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93			10 MiddleHigh
GAB	Gabon	Africa	no	120 252.20			11 MiddleHigh
ALB	Albania	Europe	no	40 459.65			12 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00			13 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90			14 MiddleHigh
DZA	Algeria	Africa	no	899 206.20			15 MiddleHigh
BWA	Botswana	Africa	no	90 628.62			16 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60			17 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00			18 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			19 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40			20 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00			21 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00			22 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02			23 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37			24 MiddleHigh
SRB	Serbia	Europe	no	57 317.24			25 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00			26 MiddleHigh
JOR	Jordan	Asia	no	121 481.20			27 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70			28 MiddleHigh
AGO	Angola	Africa	no	176 182.50			29 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60			30 MiddleHigh
BLR	Belarus	Europe	no	229 399.90			31 MiddleHigh
NAM	Namibia	Africa	no	42 062.66			32 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60			34 MiddleHigh
KOR	South Korea	Asia	no	5 538 605.00	50 115.44	0.90	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	9 688.13	0.78	2 High
NZL	New Zealand	Oceania	no	679 705.40	3 830.06	0.56	3 High
OMN	Oman	Asia	no	202 533.60	405.68	0.20	4 High
USA	United States	Northern America	no	54 922 480.00	87 253.88	0.16	5 High
JPN	Japan	Asia	no	39 255 200.00	45 243.59	0.12	6 High
AUS	Australia	Oceania	no	6 616 533.00	4 610.10	0.07	7 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	425.43	0.04	8 High
RUS	Russia	Europe	no	6 325 795.00	217.02	0.00	9 High
BRN	Brunei	Asia	no	71 236.46	1.18	0.00	10 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	5.63	0.00	11 High
DEU	Germany	Europe	no	15 114 870.00			12 High
SVK	Slovakia	Europe	no	414 782.80			13 High
SWE	Sweden	Europe	no	1 747 501.00			14 High
KWT	Kuwait	Asia	no	469 418.40			15 High
GBR	United Kingdom	Europe	no	7 806 797.00			16 High
ITA	Italy	Europe	no	8 604 332.00			17 High
EST	Estonia	Europe	no	79 617.31			18 High
ISL	Iceland	Europe	no	57 291.68			19 High
LIE	Liechtenstein	Europe	no	18 837.10			20 High
LVA	Latvia	Europe	no	95 608.77			21 High
FRA	France	Europe	no	10 329 420.00			22 High
HRV	Croatia	Europe	no	188 113.70			23 High
NOR	Norway	Europe	no	1 933 679.00			24 High
LTU	Lithuania	Europe	no	135 613.80			25 High
FIN	Finland	Europe	no	965 383.40			26 High
MLT	Malta	Europe	no	36 990.21			27 High
ESP	Spain	Europe	no	6 233 955.00			28 High
CAN	Canada	Northern America	no	6 291 917.00			29 High
LUX	Luxembourg	Europe	no	201 130.60			30 High
ISR	Israel	Asia	no	853 829.30			31 High
SYC	Seychelles	Africa	no	6 234.98			32 High
NLD	Netherlands	Europe	no	3 410 955.00			33 High
GNQ	Equatorial Guinea	Africa	no	20 061.44			34 High
PRT	Portugal	Europe	no	1 054 344.00			35 High
MAC	Macau	Asia	no	56 709.10			36 High
IRL	Ireland	Europe	no	778 821.60			37 High
MCO	Monaco	Europe	no	20 716.40			38 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70			39 High
POL	Poland	Europe	no	1 614 716.00			40 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10			41 High
SMR	San Marino	Europe	no	4 049.35			42 High
BEL	Belgium	Europe	no	1 980 551.00			43 High
GRC	Greece	Europe	no	1 181 283.00			44 High
CZE	Czech Republic	Europe	no	1 007 263.00			45 High
CYP	Cyprus	Asia	no	71 610.53			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
LBY	Libya	Africa	no	73 757.40			47 High
SAU	Saudi Arabia	Asia	no	2 141 419.00			48 High
QAT	Qatar	Asia	no	624 817.70			49 High
DNK	Denmark	Europe	no	1 346 393.00			50 High
AUT	Austria	Europe	no	1 801 472.00			51 High
HUN	Hungary	Europe	no	562 479.60			52 High
SVN	Slovenia	Europe	no	139 899.70			53 High
CHE	Switzerland	Europe	no	3 421 606.00			54 High
MYT	Mayotte	Africa	no	6 949.04	196.12	2.82	1 ---
REU	Reunion	Africa	no	67 897.68	686.71	1.01	2 ---
MMR	Myanmar	Asia	no	195 390.10	570.46	0.29	3 ---
TWN	Taiwan	Asia	no	1 680 401.00	3 603.04	0.21	4 ---
PRK	North Korea	Asia	no	77 982.15	21.00	0.03	5 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40			6 ---
FRO	Faroe Islands	Europe	no	9 272.37			7 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97			8 ---
PSE	State of Palestine	Asia	no	69 454.30			9 ---
GIB	Gibraltar	Europe	no	4 042.19			10 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94			11 ---
AND	Andorra	Europe	no	8 381.65			12 ---
ESH	Western Sahara	Africa	no	3 690.88			13 ---
ROU	Romania	Europe	no	555 697.40			14 ---

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Economy

Flood

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	136.64	207.63	1 Low
KHM	Cambodia	Asia	no	27 390.49	251.19	2 753.57	91.22	2 Low
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	42 581.72	57.85	3 Low
ERI	Eritrea	Africa	no	9 081.79	12.50	260.73	47.94	4 Low
TJK	Tajikistan	Asia	no	20 536.86	48.23	1 199.63	40.20	5 Low
MWI	Malawi	Africa	no	18 356.97	24.11	731.37	32.97	6 Low
NPL	Nepal	Asia	no	53 996.57	143.34	4 356.14	32.91	7 Low
MLI	Mali	Africa	no	27 719.15	44.76	1 684.06	26.58	8 Low
AFG	Afghanistan	Asia	no	60 187.87	92.17	3 601.40	25.59	9 Low
MDG	Madagascar	Africa	no	23 496.42	36.07	1 666.80	21.64	10 Low
GIN	Guinea	Africa	no	13 665.89	17.64	919.65	19.18	11 Low
TGO	Togo	Africa	no	12 513.67	10.94	685.82	15.95	12 Low
CAF	Central African Republic	Africa	no	3 893.74	4.92	320.25	15.36	13 Low
MOZ	Mozambique	Africa	no	36 409.45	39.00	2 723.39	14.32	14 Low
SSD	South Sudan	Africa	no	19 958.30	17.42	1 399.32	12.45	15 Low
RWA	Rwanda	Africa	no	13 197.39	17.68	1 920.52	9.21	16 Low
BEN	Benin	Africa	no	21 971.91	19.22	2 182.62	8.81	17 Low
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 889.80	8.77	18 Low
ETH	Ethiopia	Africa	no	65 598.93	135.52	17 012.56	7.97	19 Low
NER	Niger	Africa	no	12 723.49	19.29	2 551.37	7.56	20 Low
SLE	Sierra Leone	Africa	no	3 031.82	5.09	685.06	7.43	21 Low
LBR	Liberia	Africa	no	1 911.24	3.06	440.32	6.95	22 Low
GMB	The Gambia	Africa	no	2 097.61	1.24	187.47	6.61	23 Low
ZWE	Zimbawue	Africa	no	22 038.05	9.92	1 752.82	5.66	24 Low
UGA	Uganda	Africa	no	43 697.09	20.60	5 121.46	4.02	25 Low
BDI	Burundi	Africa	no	3 616.17	3.05	780.29	3.91	26 Low
TZA	Tanzania	Africa	no	50 142.79	37.79	10 658.54	3.55	27 Low
SWZ	Swaziland	Africa	no	13 701.24	28.92	363.96	79.46	1 MiddleLow
LAO	Laos	Asia	no	21 925.62	219.52	3 279.79	66.93	2 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	54.65	842.11	64.90	3 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	2 295.39	40 823.56	56.23	4 MiddleLow
MDA	Moldova	Europe	no	33 762.68	101.07	1 821.11	55.50	5 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	1 153.80	32 236.10	35.79	6 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	29.51	855.33	34.50	7 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	1 029.80	30 125.80	34.18	8 MiddleLow
COG	Congo	Africa	no	69 047.72	126.48	4 329.13	29.22	9 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	4 539.50	24.66	10 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	4 394.85	21.01	11 MiddleLow
YEM	Yemen	Asia	no	79 113.56	57.50	3 126.31	18.39	12 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	2 207.36	16.22	13 MiddleLow
IND	India	Asia	no	5 769 372.00	7 471.82	530 741.66	14.08	14 MiddleLow
SYR	Syria	Asia	no	204 643.30	114.65	8 252.62	13.89	15 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	2 574.11	13.39	16 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	74.86	5 736.52	13.05	17 MiddleLow
GEO	Georgia	Asia	no	53 823.53	45.09	3 542.58	12.73	18 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	18.88	1 578.96	11.96	19 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	5 844.96	11.83	20 MiddleLow
TCD	Chad	Africa	no	26 745.14	38.75	3 701.42	10.47	21 MiddleLow
PHL	Philippines	Asia	no	566 948.60	545.43	55 644.78	9.80	22 MiddleLow
ARM	Armenia	Asia	no	22 895.19	21.18	2 183.10	9.70	23 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	7 693.87	8.93	24 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	274 943.80	8.63	25 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	44.43	5 292.23	8.40	26 MiddleLow
KEN	Kenya	Africa	no	98 382.66	90.33	11 277.32	8.01	27 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	39.40	5 086.03	7.75	28 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	143.75	19 647.18	7.32	29 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	543.42	75 511.10	7.20	30 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	78.64	13 153.84	5.98	31 MiddleLow
SDN	Sudan	Africa	no	70 368.78	71.67	13 307.19	5.39	32 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	25.96	5 247.76	4.95	33 MiddleLow
EGY	Egypt	Africa	no	617 149.20	161.27	37 477.12	4.30	34 MiddleLow
MAR	Morroco	Africa	no	374 846.30	132.04	31 321.40	4.22	35 MiddleLow
GHA	Ghana	Africa	no	74 174.05	45.95	10 912.64	4.21	36 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	3 663.90	3.42	37 MiddleLow
SEN	Senegal	Africa	no	35 335.24	11.38	3 706.12	3.07	38 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.19	317.86	0.60	39 MiddleLow
GAB	Gabon	Africa	no	120 252.20	200.15	6 432.02	31.12	1 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	2 586.19	103 523.57	24.98	2 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	64.55	3 368.79	19.16	3 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	163.25	8 634.55	18.91	4 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	3 192.49	17.14	5 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	449.46	26 490.10	16.97	6 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	84 107.08	15.11	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ZAF	South Africa	Africa	no	1 282 854.00	910.25	67 780.45	13.43	8 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	408 331.78	10.88	9 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	49 121.75	9.73	10 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	344.33	35 983.20	9.57	11 MiddleHigh
AGO	Angola	Africa	no	176 182.50	165.69	18 242.56	9.08	12 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	668.26	73 681.58	9.07	13 MiddleHigh
ALB	Albania	Europe	no	40 459.65	30.59	3 379.49	9.05	14 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	103 818.81	8.52	15 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	26 312.88	8.09	16 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	38.66	5 015.09	7.71	17 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	92 724.40	7.06	18 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	53 841.99	6.72	19 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	58.23	11 609.87	5.02	20 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	3.99	847.70	4.71	21 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	77.11	16 597.51	4.65	22 MiddleHigh
CHN	China	Asia	no	31 726 110.00	18 765.75	4 370 835.96	4.29	23 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	40.60	9 509.45	4.27	24 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	10 406.53	4.10	25 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	265 421.77	3.28	26 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	7.23	2 530.04	2.86	27 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	178.37	71 040.48	2.51	28 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	10 060.78	2.48	29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	44.02	18 074.31	2.44	30 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	296.12	167 069.99	1.77	31 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	8.08	12 363.32	0.65	32 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	3.01	9 168.09	0.33	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				34 MiddleHigh
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 595.35	58.81	1 High
LVA	Latvia	Europe	no	95 608.77	172.80	6 324.84	27.32	2 High
SVK	Slovakia	Europe	no	414 782.80	532.30	19 975.29	26.65	3 High
LTU	Lithuania	Europe	no	135 613.80	134.90	7 517.23	17.95	4 High
HRV	Croatia	Europe	no	188 113.70	147.78	11 171.45	13.23	5 High
BRN	Brunei	Asia	no	71 236.46	30.95	2 466.98	12.55	6 High
RUS	Russia	Europe	no	6 325 795.00	4 987.01	450 238.87	11.08	7 High
NZL	New Zealand	Oceania	no	679 705.40	399.98	38 213.65	10.47	8 High
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	442 013.06	9.51	9 High
EST	Estonia	Europe	no	79 617.31	61.56	6 795.36	9.06	10 High
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	52 070.81	8.06	11 High
AUT	Austria	Europe	no	1 801 472.00	749.13	95 015.40	7.88	12 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	88 386.66	7.23	13 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	65 444.15	6.57	14 High
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	433 369.09	6.50	15 High
NLD	Netherlands	Europe	no	3 410 955.00	984.03	155 739.98	6.32	16 High
POL	Poland	Europe	no	1 614 716.00	621.52	98 972.34	6.28	17 High
IRL	Ireland	Europe	no	778 821.60	199.25	35 221.45	5.66	18 High
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	386 884.93	5.65	19 High
CHE	Switzerland	Europe	no	3 421 606.00	845.26	160 510.43	5.27	20 High
FRA	France	Europe	no	10 329 420.00	3 091.69	619 955.29	4.99	21 High
ESP	Spain	Europe	no	6 233 955.00	1 109.18	257 993.28	4.30	22 High
SVN	Slovenia	Europe	no	139 899.70	39.17	9 461.85	4.14	23 High
PRT	Portugal	Europe	no	1 054 344.00	141.38	34 419.00	4.11	24 High
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 068 884.62	4.05	25 High
DEU	Germany	Europe	no	15 114 870.00	2 697.57	737 992.70	3.66	26 High
USA	United States	Northern America	no	54 922 480.00	9 408.88	3 244 299.91	2.90	27 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	77 440.20	2.77	28 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	12 763.68	2.76	29 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	9 099.23	2.17	30 High
GRC	Greece	Europe	no	1 181 283.00	55.33	27 154.95	2.04	31 High
ITA	Italy	Europe	no	8 604 332.00	777.37	383 197.87	2.03	32 High
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	440 106.84	1.98	33 High
OMN	Oman	Asia	no	202 533.60	26.27	17 256.96	1.52	34 High
BEL	Belgium	Europe	no	1 980 551.00	167.25	116 900.65	1.43	35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	173 661.86	1.28	36 High
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 257.46	1.13	37 High
SWE	Sweden	Europe	no	1 747 501.00	110.38	128 378.82	0.86	38 High
LBY	Libya	Africa	no	73 757.40	12.82	25 993.79	0.49	39 High
QAT	Qatar	Asia	no	624 817.70	7.04	15 282.42	0.46	40 High
DNK	Denmark	Europe	no	1 346 393.00	27.85	61 547.69	0.45	41 High
ISR	Israel	Asia	no	853 829.30	9.52	56 565.68	0.17	42 High
KWT	Kuwait	Asia	no	469 418.40	2.91	19 039.58	0.15	43 High
CYP	Cyprus	Asia	no	71 610.53	0.46	4 260.93	0.11	44 High
HKG	Hong Kong	Asia	no	1 250 063.00		65 379.04		45 High
FIN	Finland	Europe	no	965 383.40		56 624.15		46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ISL	Iceland	Europe	no	57 291.68		2 314.22		47 High
NOR	Norway	Europe	no	1 933 679.00		116 071.15		48 High
LIE	Liechtenstein	Europe	no	18 837.10				49 High
MLT	Malta	Europe	no	36 990.21		1 333.61		50 High
SMR	San Marino	Europe	no	4 049.35				51 High
MCO	Monaco	Europe	no	20 716.40				52 High
SYC	Seychelles	Africa	no	6 234.98		484.95		53 High
MAC	Macau	Asia	no	56 709.10		6 610.47		54 High
MMR	Myanmar	Asia	no	195 390.10	1 956.65			1 ---
PSE	State of Palestine	Asia	no	69 454.30	0.29			2 ---
ROU	Romania	Europe	no	555 697.40	519.75			3 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			4 ---
REU	Reunion	Africa	no	67 897.68				5 ---
AND	Andorra	Europe	no	8 381.65				6 ---
ESH	Western Sahara	Africa	no	3 690.88	0.02			7 ---
FRO	Faroe Islands	Europe	no	9 272.37				8 ---
PRK	North Korea	Asia	no	77 982.15	157.21			9 ---
MYT	Mayotte	Africa	no	6 949.04				10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
TWN	Taiwan	Asia	no	1 680 401.00	79.41			12 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				13 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	7 673.71	320.99	1 Low
KHM	Cambodia	Asia	no	27 390.49	251.19	795.24	315.87	2 Low
SOM	Somalia	Africa	no	6 408.32	28.37	133.83	211.99	3 Low
NPL	Nepal	Asia	no	53 996.57	143.34	1 917.21	74.76	4 Low
TJK	Tajikistan	Asia	no	20 536.86	48.23	998.87	48.28	5 Low
MDG	Madagascar	Africa	no	23 496.42	36.07	915.01	39.42	6 Low
MLI	Mali	Africa	no	27 719.15	44.76	1 172.08	38.19	7 Low
AFG	Afghanistan	Asia	no	60 187.87	92.17	2 492.12	36.98	8 Low
ETH	Ethiopia	Africa	no	65 598.93	135.52	3 941.08	34.39	9 Low
TGO	Togo	Africa	no	12 513.67	10.94	359.57	30.43	10 Low
GIN	Guinea	Africa	no	13 665.89	17.64	594.52	29.67	11 Low
CAF	Central African Republic	Africa	no	3 893.74	4.92	166.29	29.59	12 Low
MWI	Malawi	Africa	no	18 356.97	24.11	818.79	29.45	13 Low
ERI	Eritrea	Africa	no	9 081.79	12.50	549.64	22.74	14 Low
BEN	Benin	Africa	no	21 971.91	19.22	934.54	20.57	15 Low
GMB	The Gambia	Africa	no	2 097.61	1.24	67.53	18.36	16 Low
NER	Niger	Africa	no	12 723.49	19.29	1 083.62	17.80	17 Low
RWA	Rwanda	Africa	no	13 197.39	17.68	1 065.41	16.59	18 Low
MOZ	Mozambique	Africa	no	36 409.45	39.00	3 190.27	12.22	19 Low
SLE	Sierra Leone	Africa	no	3 031.82	5.09	428.35	11.88	20 Low
UGA	Uganda	Africa	no	43 697.09	20.60	1 787.04	11.53	21 Low
LBR	Liberia	Africa	no	1 911.24	3.06	268.18	11.41	22 Low
BFA	Burkina Faso	Africa	no	24 689.43	16.58	1 951.39	8.50	23 Low
SSD	South Sudan	Africa	no	19 958.30	17.42	2 720.34	6.40	24 Low
TZA	Tanzania	Africa	no	50 142.79	37.79	6 321.86	5.98	25 Low
BDI	Burundi	Africa	no	3 616.17	3.05	599.64	5.09	26 Low
ZWE	Zimbawue	Africa	no	22 038.05	9.92	2 703.00	3.67	27 Low
VNM	Vietnam	Asia	no	487 574.40	2 295.39	10 550.52	217.56	1 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	54.65	311.85	175.24	2 MiddleLow
LAO	Laos	Asia	no	21 925.62	219.52	1 626.13	135.00	3 MiddleLow
COG	Congo	Africa	no	69 047.72	126.48	1 908.75	66.26	4 MiddleLow
MDA	Moldova	Europe	no	33 762.68	101.07	1 618.04	62.46	5 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	646.93	53.28	6 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	25.96	568.19	45.69	7 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	1 029.80	25 463.41	40.44	8 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	28.92	753.93	38.36	9 MiddleLow
TCD	Chad	Africa	no	26 745.14	38.75	1 026.17	37.76	10 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	3 077.08	36.38	11 MiddleLow
IND	India	Asia	no	5 769 372.00	7 471.82	221 700.44	33.70	12 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	29.51	878.46	33.59	13 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	1 153.80	34 350.49	33.59	14 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	39.40	1 298.34	30.35	15 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	79 076.93	30.00	16 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	1 306.25	27.41	17 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	18.88	706.94	26.71	18 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	3 496.64	26.41	19 MiddleLow
SYR	Syria	Asia	no	204 643.30	114.65	4 971.97	23.06	20 MiddleLow
YEM	Yemen	Asia	no	79 113.56	57.50	2 625.09	21.90	21 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	74.86	3 421.99	21.88	22 MiddleLow
PHL	Philippines	Asia	no	566 948.60	545.43	30 212.56	18.05	23 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	44.43	2 613.28	17.00	24 MiddleLow
GEO	Georgia	Asia	no	53 823.53	45.09	2 692.49	16.75	25 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	143.75	8 808.70	16.32	26 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	4 243.72	16.30	27 MiddleLow
SDN	Sudan	Africa	no	70 368.78	71.67	5 000.18	14.33	28 MiddleLow
ARM	Armenia	Asia	no	22 895.19	21.18	1 508.90	14.04	29 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	543.42	42 180.53	12.88	30 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	5 637.22	12.19	31 MiddleLow
KEN	Kenya	Africa	no	98 382.66	90.33	7 759.48	11.64	32 MiddleLow
MAR	Morroco	Africa	no	374 846.30	132.04	19 696.51	6.70	33 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	78.64	12 744.63	6.17	34 MiddleLow
GHA	Ghana	Africa	no	74 174.05	45.95	8 003.31	5.74	35 MiddleLow
EGY	Egypt	Africa	no	617 149.20	161.27	31 768.68	5.08	36 MiddleLow
SEN	Senegal	Africa	no	35 335.24	11.38	2 289.33	4.97	37 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	2 899.00	4.33	38 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.19	212.95	0.89	39 MiddleLow
GAB	Gabon	Africa	no	120 252.20	200.15	1 026.90	194.91	1 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	2 586.19	53 487.73	48.35	2 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	449.46	10 166.04	44.21	3 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	42 433.27	29.96	4 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	77.11	3 114.55	24.76	5 MiddleHigh
ALB	Albania	Europe	no	40 459.65	30.59	1 381.39	22.14	6 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	668.26	31 978.13	20.90	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
SRB	Serbia	Europe	no	57 317.24	163.25	7 977.96	20.46	8 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	23 889.95	20.00	9 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	64.55	3 617.67	17.84	10 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	13 315.00	15.99	11 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	22 647.04	15.98	12 MiddleHigh
CHN	China	Asia	no	31 726 110.00	18 765.75	1 299 157.61	14.44	13 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	4 063.51	13.46	14 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	38.66	2 912.71	13.27	15 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	910.25	77 967.19	11.67	16 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	63 198.81	10.36	17 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	94 570.07	9.36	18 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	493 431.00	9.00	19 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	344.33	48 846.71	7.05	20 MiddleHigh
AGO	Angola	Africa	no	176 182.50	165.69	24 725.13	6.70	21 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	3 793.90	6.58	22 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	58.23	8 993.34	6.47	23 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	149 707.18	5.81	24 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	44.02	8 252.01	5.33	25 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	8 897.75	4.79	26 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	3.99	876.28	4.55	27 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	40.60	8 918.25	4.55	28 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	178.37	39 734.87	4.49	29 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	7.23	1 787.08	4.05	30 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	296.12	123 751.24	2.39	31 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	8.08	6 530.19	1.24	32 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	3.01	6 618.91	0.45	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				34 MiddleHigh
HUN	Hungary	Europe	no	562 479.60	1 564.07	26 544.35	58.92	1 High
LVA	Latvia	Europe	no	95 608.77	172.80	4 413.54	39.15	2 High
SVK	Slovakia	Europe	no	414 782.80	532.30	17 642.66	30.17	3 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	27 530.57	23.21	4 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	1 036.62	19.09	5 High
LTU	Lithuania	Europe	no	135 613.80	134.90	8 076.66	16.70	6 High
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	276 915.26	15.18	7 High
EST	Estonia	Europe	no	79 617.31	61.56	4 754.17	12.95	8 High
HRV	Croatia	Europe	no	188 113.70	147.78	11 594.94	12.75	9 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	34 332.88	12.52	10 High
RUS	Russia	Europe	no	6 325 795.00	4 987.01	409 820.63	12.17	11 High
NZL	New Zealand	Oceania	no	679 705.40	399.98	34 691.31	11.53	12 High
CHE	Switzerland	Europe	no	3 421 606.00	845.26	75 147.62	11.25	13 High
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	194 728.35	11.22	14 High
BRN	Brunei	Asia	no	71 236.46	30.95	2 950.69	10.49	15 High
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	40 979.05	10.24	16 High
AUT	Austria	Europe	no	1 801 472.00	749.13	84 928.57	8.82	17 High
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	395 958.78	7.12	18 High
POL	Poland	Europe	no	1 614 716.00	621.52	95 412.26	6.51	19 High
IRL	Ireland	Europe	no	778 821.60	199.25	40 563.02	4.91	20 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	46 486.26	4.62	21 High
FRA	France	Europe	no	10 329 420.00	3 091.69	677 049.47	4.57	22 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	7 713.60	4.56	23 High
NLD	Netherlands	Europe	no	3 410 955.00	984.03	224 781.17	4.38	24 High
JPN	Japan	Asia	no	39 255 200.00	4 328.15	1 012 070.61	4.28	25 High
ESP	Spain	Europe	no	6 233 955.00	1 109.18	271 148.52	4.09	26 High
SVN	Slovenia	Europe	no	139 899.70	39.17	9 765.51	4.01	27 High
DEU	Germany	Europe	no	15 114 870.00	2 697.57	718 583.82	3.75	28 High
USA	United States	Northern America	no	54 922 480.00	9 408.88	2 547 499.93	3.69	29 High
PRT	Portugal	Europe	no	1 054 344.00	141.38	43 081.93	3.28	30 High
ITA	Italy	Europe	no	8 604 332.00	777.37	417 993.98	1.86	31 High
OMN	Oman	Asia	no	202 533.60	26.27	14 871.52	1.77	32 High
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	542 121.89	1.60	33 High
LBY	Libya	Africa	no	73 757.40	12.82	8 664.60	1.48	34 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	165 700.80	1.34	35 High
BEL	Belgium	Europe	no	1 980 551.00	167.25	128 131.48	1.31	36 High
GRC	Greece	Europe	no	1 181 283.00	55.33	48 425.35	1.14	37 High
LUX	Luxembourg	Europe	no	201 130.60	11.61	10 391.43	1.12	38 High
SWE	Sweden	Europe	no	1 747 501.00	110.38	151 944.31	0.73	39 High
DNK	Denmark	Europe	no	1 346 393.00	27.85	89 732.55	0.31	40 High
QAT	Qatar	Asia	no	624 817.70	7.04	24 487.36	0.29	41 High
ISR	Israel	Asia	no	853 829.30	9.52	65 345.00	0.15	42 High
CYP	Cyprus	Asia	no	71 610.53	0.46	4 557.62	0.10	43 High
KWT	Kuwait	Asia	no	469 418.40	2.91	29 360.33	0.10	44 High
HKG	Hong Kong	Asia	no	1 250 063.00		25 520.99		45 High
MCO	Monaco	Europe	no	20 716.40				46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
SMR	San Marino	Europe	no	4 049.35				47 High
LIE	Liechtenstein	Europe	no	18 837.10				48 High
ISL	Iceland	Europe	no	57 291.68		3 730.06		49 High
FIN	Finland	Europe	no	965 383.40		66 675.15		50 High
NOR	Norway	Europe	no	1 933 679.00		112 012.76		51 High
MLT	Malta	Europe	no	36 990.21		1 879.07		52 High
SYC	Seychelles	Africa	no	6 234.98		369.27		53 High
MAC	Macau	Asia	no	56 709.10		3 378.13		54 High
PRK	North Korea	Asia	no	77 982.15	157.21			1 ---
PSE	State of Palestine	Asia	no	69 454.30	0.29			2 ---
ESH	Western Sahara	Africa	no	3 690.88	0.02			3 ---
TWN	Taiwan	Asia	no	1 680 401.00	79.41			4 ---
REU	Reunion	Africa	no	67 897.68				5 ---
ROU	Romania	Europe	no	555 697.40	519.75			6 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				7 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			8 ---
FRO	Faroe Islands	Europe	no	9 272.37				9 ---
MMR	Myanmar	Asia	no	195 390.10	1 956.65			10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			12 ---
MYT	Mayotte	Africa	no	6 949.04				13 ---
AND	Andorra	Europe	no	8 381.65				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
SOM	Somalia	Africa	no	6 408.32	28.37	1 173.40	24.18	1 Low
BGD	Bangladesh	Asia	no	381 431.90	2 463.17	160 820.74	15.32	2 Low
KHM	Cambodia	Asia	no	27 390.49	251.19	16 467.91	15.25	3 Low
NPL	Nepal	Asia	no	53 996.57	143.34	24 466.26	5.86	4 Low
MWI	Malawi	Africa	no	18 356.97	24.11	4 366.74	5.52	5 Low
ERI	Eritrea	Africa	no	9 081.79	12.50	2 836.63	4.41	6 Low
MLI	Mali	Africa	no	27 719.15	44.76	11 011.34	4.06	7 Low
TJK	Tajikistan	Asia	no	20 536.86	48.23	12 690.19	3.80	8 Low
AFG	Afghanistan	Asia	no	60 187.87	92.17	29 010.12	3.18	9 Low
MDG	Madagascar	Africa	no	23 496.42	36.07	11 984.82	3.01	10 Low
TGO	Togo	Africa	no	12 513.67	10.94	4 390.62	2.49	11 Low
ETH	Ethiopia	Africa	no	65 598.93	135.52	55 403.13	2.45	12 Low
GIN	Guinea	Africa	no	13 665.89	17.64	7 750.84	2.28	13 Low
MOZ	Mozambique	Africa	no	36 409.45	39.00	17 220.44	2.26	14 Low
NER	Niger	Africa	no	12 723.49	19.29	8 745.32	2.21	15 Low
CAF	Central African Republic	Africa	no	3 893.74	4.92	2 389.56	2.06	16 Low
RWA	Rwanda	Africa	no	13 197.39	17.68	8 767.59	2.02	17 Low
BEN	Benin	Africa	no	21 971.91	19.22	9 572.30	2.01	18 Low
BFA	Burkina Faso	Africa	no	24 689.43	16.58	11 452.71	1.45	19 Low
SLE	Sierra Leone	Africa	no	3 031.82	5.09	4 191.60	1.21	20 Low
GMB	The Gambia	Africa	no	2 097.61	1.24	1 029.01	1.21	21 Low
SSD	South Sudan	Africa	no	19 958.30	17.42	14 712.88	1.18	22 Low
LBR	Liberia	Africa	no	1 911.24	3.06	2 724.73	1.12	23 Low
TZA	Tanzania	Africa	no	50 142.79	37.79	39 205.30	0.96	24 Low
BDI	Burundi	Africa	no	3 616.17	3.05	3 443.34	0.89	25 Low
UGA	Uganda	Africa	no	43 697.09	20.60	23 933.64	0.86	26 Low
ZWE	Zimbawue	Africa	no	22 038.05	9.92	17 196.10	0.58	27 Low
BTN	Bhutan	Asia	no	11 083.66	54.65	2 173.58	25.14	1 MiddleLow
LAO	Laos	Asia	no	21 925.62	219.52	12 246.45	17.93	2 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	2 295.39	164 388.68	13.96	3 MiddleLow
COG	Congo	Africa	no	69 047.72	126.48	12 612.41	10.03	4 MiddleLow
MDA	Moldova	Europe	no	33 762.68	101.07	10 971.97	9.21	5 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	29.51	3 740.58	7.89	6 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	28.92	3 944.56	7.33	7 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	1 153.80	192 523.67	5.99	8 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	111.95	22 559.82	4.96	9 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	18.88	4 169.52	4.53	10 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	1 029.80	247 867.95	4.15	11 MiddleLow
IND	India	Asia	no	5 769 372.00	7 471.82	1 944 284.82	3.84	12 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	92.35	27 647.87	3.34	13 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	35.80	10 749.10	3.33	14 MiddleLow
YEM	Yemen	Asia	no	79 113.56	57.50	18 997.54	3.03	15 MiddleLow
SYR	Syria	Asia	no	204 643.30	114.65	40 077.56	2.86	16 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	39.40	14 036.94	2.81	17 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	34.47	12 562.44	2.74	18 MiddleLow
TCD	Chad	Africa	no	26 745.14	38.75	14 228.09	2.72	19 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	2 372.47	885 677.23	2.68	20 MiddleLow
GEO	Georgia	Asia	no	53 823.53	45.09	18 230.53	2.47	21 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	69.16	28 469.09	2.43	22 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	74.86	32 007.42	2.34	23 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	143.75	73 583.10	1.95	24 MiddleLow
PHL	Philippines	Asia	no	566 948.60	545.43	283 131.84	1.93	25 MiddleLow
ARM	Armenia	Asia	no	22 895.19	21.18	12 628.86	1.68	26 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	44.43	31 142.79	1.43	27 MiddleLow
KEN	Kenya	Africa	no	98 382.66	90.33	63 770.87	1.42	28 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	78.64	59 039.46	1.33	29 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	68.73	59 883.48	1.15	30 MiddleLow
MAR	Morroco	Africa	no	374 846.30	132.04	117 556.24	1.12	31 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	543.42	495 416.77	1.10	32 MiddleLow
SDN	Sudan	Africa	no	70 368.78	71.67	70 927.03	1.01	33 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	25.96	26 244.17	0.99	34 MiddleLow
GHA	Ghana	Africa	no	74 174.05	45.95	50 578.29	0.91	35 MiddleLow
SEN	Senegal	Africa	no	35 335.24	11.38	17 930.59	0.63	36 MiddleLow
EGY	Egypt	Africa	no	617 149.20	161.27	291 083.68	0.55	37 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	12.54	28 969.70	0.43	38 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.19	1 018.02	0.19	39 MiddleLow
GAB	Gabon	Africa	no	120 252.20	200.15	14 724.33	13.59	1 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	2 586.19	374 528.18	6.91	2 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	449.46	73 747.80	6.09	3 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	1 271.09	284 108.03	4.47	4 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	64.55	15 480.83	4.17	5 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	163.25	50 611.94	3.23	6 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	77.11	25 014.09	3.08	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
IRN	Iran	Asia	no	2 067 640.00	668.26	255 619.28	2.61	8 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	54.71	21 616.92	2.53	9 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	910.25	360 489.06	2.53	10 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	38.66	15 490.96	2.50	11 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	477.77	205 086.26	2.33	12 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	212.86	96 787.63	2.20	13 MiddleHigh
CHN	China	Asia	no	31 726 110.00	18 765.75	9 003 382.87	2.08	14 MiddleHigh
ALB	Albania	Europe	no	40 459.65	30.59	15 227.71	2.01	15 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	4 443.29	2 301 443.96	1.93	16 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	361.86	204 179.29	1.77	17 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	654.81	387 419.05	1.69	18 MiddleHigh
AGO	Angola	Africa	no	176 182.50	165.69	105 476.81	1.57	19 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	344.33	226 497.10	1.52	20 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	884.85	611 844.88	1.45	21 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	58.23	54 795.79	1.06	22 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	178.37	204 165.74	0.87	23 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	42.65	51 412.23	0.83	24 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	40.60	51 302.58	0.79	25 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	44.02	57 484.51	0.77	26 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	3.99	5 312.54	0.75	27 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	24.96	36 126.55	0.69	28 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	870.08	1 269 259.96	0.69	29 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	7.23	12 119.46	0.60	30 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	296.12	876 064.28	0.34	31 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	8.08	50 384.63	0.16	32 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	3.01	43 390.10	0.07	33 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26				34 MiddleHigh
HUN	Hungary	Europe	no	562 479.60	1 564.07	123 292.26	12.69	1 High
LVA	Latvia	Europe	no	95 608.77	172.80	29 570.85	5.84	2 High
SVK	Slovakia	Europe	no	414 782.80	532.30	93 274.32	5.71	3 High
BRN	Brunei	Asia	no	71 236.46	30.95	9 075.14	3.41	4 High
LTU	Lithuania	Europe	no	135 613.80	134.90	43 719.88	3.09	5 High
AUS	Australia	Oceania	no	6 616 533.00	4 202.96	1 579 571.61	2.66	6 High
HRV	Croatia	Europe	no	188 113.70	147.78	57 600.31	2.57	7 High
RUS	Russia	Europe	no	6 325 795.00	4 987.01	1 973 571.68	2.53	8 High
EST	Estonia	Europe	no	79 617.31	61.56	24 664.81	2.50	9 High
NZL	New Zealand	Oceania	no	679 705.40	399.98	182 403.61	2.19	10 High
CZE	Czech Republic	Europe	no	1 007 263.00	419.82	196 764.65	2.13	11 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	638.98	318 951.13	2.00	12 High
AUT	Austria	Europe	no	1 801 472.00	749.13	413 112.76	1.81	13 High
KOR	South Korea	Asia	no	5 538 605.00	2 185.41	1 238 504.83	1.76	14 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	19.79	12 451.63	1.59	15 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	429.79	278 153.13	1.55	16 High
CAN	Canada	Northern America	no	6 291 917.00	2 817.82	1 857 561.03	1.52	17 High
CHE	Switzerland	Europe	no	3 421 606.00	845.26	602 400.29	1.40	18 High
NLD	Netherlands	Europe	no	3 410 955.00	984.03	765 364.08	1.29	19 High
POL	Poland	Europe	no	1 614 716.00	621.52	515 943.50	1.20	20 High
FRA	France	Europe	no	10 329 420.00	3 091.69	2 848 015.52	1.09	21 High
IRL	Ireland	Europe	no	778 821.60	199.25	183 798.12	1.08	22 High
SVN	Slovenia	Europe	no	139 899.70	39.17	45 103.27	0.87	23 High
JPN	Japan	Asia	no	39 255 200.00	4 328.15	5 059 261.76	0.86	24 High
ESP	Spain	Europe	no	6 233 955.00	1 109.18	1 345 564.18	0.82	25 High
DEU	Germany	Europe	no	15 114 870.00	2 697.57	3 513 506.86	0.77	26 High
PRT	Portugal	Europe	no	1 054 344.00	141.38	225 098.65	0.63	27 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	35.17	57 529.86	0.61	28 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	214.66	373 895.14	0.57	29 High
USA	United States	Northern America	no	54 922 480.00	9 408.88	17 276 300.43	0.54	30 High
OMN	Oman	Asia	no	202 533.60	26.27	56 792.46	0.46	31 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	222.18	590 125.33	0.38	32 High
ITA	Italy	Europe	no	8 604 332.00	777.37	2 100 502.86	0.37	33 High
BEL	Belgium	Europe	no	1 980 551.00	167.25	517 763.60	0.32	34 High
GBR	United Kingdom	Europe	no	7 806 797.00	870.03	2 728 637.76	0.32	35 High
LUX	Luxembourg	Europe	no	201 130.60	11.61	38 962.95	0.30	36 High
LBY	Libya	Africa	no	73 757.40	12.82	55 976.41	0.23	37 High
GRC	Greece	Europe	no	1 181 283.00	55.33	249 410.75	0.22	38 High
SWE	Sweden	Europe	no	1 747 501.00	110.38	551 152.52	0.20	39 High
DNK	Denmark	Europe	no	1 346 393.00	27.85	316 596.75	0.09	40 High
QAT	Qatar	Asia	no	624 817.70	7.04	91 904.94	0.08	41 High
ISR	Israel	Asia	no	853 829.30	9.52	286 558.36	0.03	42 High
KWT	Kuwait	Asia	no	469 418.40	2.91	96 682.69	0.03	43 High
CYP	Cyprus	Asia	no	71 610.53	0.46	24 622.91	0.02	44 High
HKG	Hong Kong	Asia	no	1 250 063.00		271 683.76		45 High
SMR	San Marino	Europe	no	4 049.35				46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
MCO	Monaco	Europe	no	20 716.40				47 High
LIE	Liechtenstein	Europe	no	18 837.10				48 High
ISL	Iceland	Europe	no	57 291.68		14 052.90		49 High
FIN	Finland	Europe	no	965 383.40		269 912.39		50 High
NOR	Norway	Europe	no	1 933 679.00		457 625.37		51 High
MLT	Malta	Europe	no	36 990.21		8 864.05		52 High
SYC	Seychelles	Africa	no	6 234.98		1 607.64		53 High
MAC	Macau	Asia	no	56 709.10		20 216.60		54 High
COD	Democratic Republic of the Congo	Africa	no	27 401.97	64.12			1 ---
PSE	State of Palestine	Asia	no	69 454.30	0.29			2 ---
TWN	Taiwan	Asia	no	1 680 401.00	79.41			3 ---
ESH	Western Sahara	Africa	no	3 690.88	0.02			4 ---
REU	Reunion	Africa	no	67 897.68				5 ---
ROU	Romania	Europe	no	555 697.40	519.75			6 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				7 ---
PRK	North Korea	Asia	no	77 982.15	157.21			8 ---
FRO	Faroe Islands	Europe	no	9 272.37				9 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	147.81			10 ---
GIB	Gibraltar	Europe	no	4 042.19				11 ---
MMR	Myanmar	Asia	no	195 390.10	1 956.65			12 ---
MYT	Mayotte	Africa	no	6 949.04				13 ---
AND	Andorra	Europe	no	8 381.65				14 ---

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

All Countries by Economy

Tsunami

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	5.50	42 581.72	0.13	1 Low
MDG	Madagascar	Africa	no	23 496.42	0.01	1 666.80	0.01	2 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	10 658.54	0.00	3 Low
MOZ	Mozambique	Africa	no	36 409.45	0.00	2 723.39	0.00	4 Low
GIN	Guinea	Africa	no	13 665.89	0.00	919.65	0.00	5 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	260.73	0.00	6 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	187.47	0.00	7 Low
TGO	Togo	Africa	no	12 513.67	0.00	685.82	0.00	8 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	2 753.57	0.00	9 Low
LBR	Liberia	Africa	no	1 911.24	0.00	440.32	0.00	10 Low
SOM	Somalia	Africa	no	6 408.32	0.00	136.64	0.00	11 Low
BEN	Benin	Africa	no	21 971.91	0.00	2 182.62	0.00	12 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	685.06	0.00	13 Low
TJK	Tajikistan	Asia	no	20 536.86		1 199.63		14 Low
NER	Niger	Africa	no	12 723.49		2 551.37		15 Low
UGA	Uganda	Africa	no	43 697.09		5 121.46		16 Low
MWI	Malawi	Africa	no	18 356.97		731.37		17 Low
MLI	Mali	Africa	no	27 719.15		1 684.06		18 Low
BDI	Burundi	Africa	no	3 616.17		780.29		19 Low
SSD	South Sudan	Africa	no	19 958.30		1 399.32		20 Low
ZWE	Zimbawue	Africa	no	22 038.05		1 752.82		21 Low
RWA	Rwanda	Africa	no	13 197.39		1 920.52		22 Low
BFA	Burkina Faso	Africa	no	24 689.43		1 889.80		23 Low
AFG	Afghanistan	Asia	no	60 187.87		3 601.40		24 Low
CAF	Central African Republic	Africa	no	3 893.74		320.25		25 Low
NPL	Nepal	Asia	no	53 996.57		4 356.14		26 Low
ETH	Ethiopia	Africa	no	65 598.93		17 012.56		27 Low
PHL	Philippines	Asia	no	566 948.60	30.63	55 644.78	0.55	1 MiddleLow
EGY	Egypt	Africa	no	617 149.20	8.52	37 477.12	0.23	2 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	48.15	274 943.80	0.18	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.75	19 647.18	0.09	4 MiddleLow
IND	India	Asia	no	5 769 372.00	19.14	530 741.66	0.04	5 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	3 663.90	0.02	6 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	0.66	40 823.56	0.02	7 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.13	8 252.62	0.02	8 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.23	31 321.40	0.01	9 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	0.17	30 125.80	0.01	10 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	7 693.87	0.01	11 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	2 574.11	0.00	12 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.01	3 706.12	0.00	13 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	4 539.50	0.00	14 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	5 736.52	0.00	15 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	11 277.32	0.00	16 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	4 329.13	0.00	17 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	10 912.64	0.00	18 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	1 578.96	0.00	19 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	5 292.23	0.00	20 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	3 126.31	0.00	21 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	317.86	0.00	22 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	75 511.10	0.00	23 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		4 394.85		24 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		855.33		25 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		13 153.84		26 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		32 236.10		27 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		842.11		28 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		5 844.96		29 MiddleLow
GEO	Georgia	Asia	no	53 823.53		3 542.58		30 MiddleLow
MDA	Moldova	Europe	no	33 762.68		1 821.11		31 MiddleLow
LAO	Laos	Asia	no	21 925.62		3 279.79		32 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		5 086.03		33 MiddleLow
SDN	Sudan	Africa	no	70 368.78		13 307.19		34 MiddleLow
ARM	Armenia	Asia	no	22 895.19		2 183.10		35 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		363.96		36 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		5 247.76		37 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		2 207.36		38 MiddleLow
TCD	Chad	Africa	no	26 745.14		3 701.42		39 MiddleLow
LBN	Lebanon	Asia	no	207 723.70	2.73	12 363.32	0.22	1 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	92 724.40	0.14	2 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	53 841.99	0.13	3 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	26 312.88	0.09	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	10 060.78	0.07	5 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	5.52	84 107.08	0.07	6 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	10 406.53	0.05	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
CHN	China	Asia	no	31 726 110.00	115.18	4 370 835.96	0.03	8 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.23	9 509.45	0.02	9 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2.50	167 069.99	0.01	10 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.04	3 379.49	0.01	11 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	265 421.77	0.01	12 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.53	103 523.57	0.01	13 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.01	3 368.79	0.00	14 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.19	67 780.45	0.00	15 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.17	71 040.48	0.00	16 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.13	73 681.58	0.00	17 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	408 331.78	0.00	18 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	103 818.81	0.00	19 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	6 432.02	0.00	20 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	18 242.56	0.00	21 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	9 168.09	0.00	22 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	847.70	0.00	23 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	3 192.49	0.00	24 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		26 490.10		25 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		18 074.31		26 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		2 530.04		27 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		5 015.09		28 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		8 634.55		29 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		16 597.51		30 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		11 609.87		31 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		35 983.20		32 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			33 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		49 121.75		34 MiddleHigh
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 068 884.62	2.80	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	65 379.04	1.82	2 High
MAC	Macau	Asia	no	56 709.10	9.30	6 610.47	1.41	3 High
NZL	New Zealand	Oceania	no	679 705.40	21.89	38 213.65	0.57	4 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	65 444.15	0.18	5 High
BRN	Brunei	Asia	no	71 236.46	0.40	2 466.98	0.16	6 High
GRC	Greece	Europe	no	1 181 283.00	3.98	27 154.95	0.15	7 High
CYP	Cyprus	Asia	no	71 610.53	0.55	4 260.93	0.13	8 High
AUS	Australia	Oceania	no	6 616 533.00	51.13	442 013.06	0.12	9 High
MLT	Malta	Europe	no	36 990.21	0.14	1 333.61	0.10	10 High
USA	United States	Northern America	no	54 922 480.00	205.15	3 244 299.91	0.06	11 High
ISR	Israel	Asia	no	853 829.30	3.52	56 565.68	0.06	12 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	77 440.20	0.03	13 High
OMN	Oman	Asia	no	202 533.60	0.36	17 256.96	0.02	14 High
LBY	Libya	Africa	no	73 757.40	0.31	25 993.79	0.01	15 High
RUS	Russia	Europe	no	6 325 795.00	2.54	450 238.87	0.01	16 High
CAN	Canada	Northern America	no	6 291 917.00	2.35	433 369.09	0.01	17 High
ESP	Spain	Europe	no	6 233 955.00	1.29	257 993.28	0.01	18 High
PRT	Portugal	Europe	no	1 054 344.00	0.16	34 419.00	0.00	19 High
ITA	Italy	Europe	no	8 604 332.00	1.47	383 197.87	0.00	20 High
KOR	South Korea	Asia	no	5 538 605.00	1.24	386 884.93	0.00	21 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	88 386.66	0.00	22 High
IRL	Ireland	Europe	no	778 821.60	0.03	35 221.45	0.00	23 High
FRA	France	Europe	no	10 329 420.00	0.07	619 955.29	0.00	24 High
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	440 106.84	0.00	25 High
NOR	Norway	Europe	no	1 933 679.00	0.00	116 071.15	0.00	26 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	155 739.98	0.00	27 High
SYC	Seychelles	Africa	no	6 234.98	0.00	484.95	0.00	28 High
HRV	Croatia	Europe	no	188 113.70	0.00	11 171.45	0.00	29 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	9 099.23	0.00	30 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	173 661.86	0.00	31 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	116 900.65	0.00	32 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	61 547.69	0.00	33 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	12 763.68	0.00	34 High
DEU	Germany	Europe	no	15 114 870.00	0.00	737 992.70	0.00	35 High
SVN	Slovenia	Europe	no	139 899.70	0.00	9 461.85	0.00	36 High
SMR	San Marino	Europe	no	4 049.35	0.00			37 High
LIE	Liechtenstein	Europe	no	18 837.10				38 High
SVK	Slovakia	Europe	no	414 782.80		19 975.29		39 High
SWE	Sweden	Europe	no	1 747 501.00		128 378.82		40 High
ISL	Iceland	Europe	no	57 291.68		2 314.22		41 High
FIN	Finland	Europe	no	965 383.40		56 624.15		42 High
EST	Estonia	Europe	no	79 617.31		6 795.36		43 High
MCO	Monaco	Europe	no	20 716.40	0.00			44 High
POL	Poland	Europe	no	1 614 716.00		98 972.34		45 High
LVA	Latvia	Europe	no	95 608.77		6 324.84		46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40		19 039.58		47 High
QAT	Qatar	Asia	no	624 817.70		15 282.42		48 High
CZE	Czech Republic	Europe	no	1 007 263.00		52 070.81		49 High
AUT	Austria	Europe	no	1 801 472.00		95 015.40		50 High
HUN	Hungary	Europe	no	562 479.60		26 595.35		51 High
CHE	Switzerland	Europe	no	3 421 606.00		160 510.43		52 High
LTU	Lithuania	Europe	no	135 613.80		7 517.23		53 High
LUX	Luxembourg	Europe	no	201 130.60		10 257.46		54 High
FRO	Faroe Islands	Europe	no	9 272.37				1 ---
MYT	Mayotte	Africa	no	6 949.04	0.00			2 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			3 ---
AND	Andorra	Europe	no	8 381.65				4 ---
REU	Reunion	Africa	no	67 897.68	0.00			5 ---
ROU	Romania	Europe	no	555 697.40				6 ---
PSE	State of Palestine	Asia	no	69 454.30	0.06			7 ---
PRK	North Korea	Asia	no	77 982.15	0.00			8 ---
MMR	Myanmar	Asia	no	195 390.10	3.27			9 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			10 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			11 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			12 ---
TWN	Taiwan	Asia	no	1 680 401.00	15.05			13 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	5.50	7 673.71	0.72	1 Low
MDG	Madagascar	Africa	no	23 496.42	0.01	915.01	0.01	2 Low
GIN	Guinea	Africa	no	13 665.89	0.00	594.52	0.00	3 Low
LBR	Liberia	Africa	no	1 911.24	0.00	268.18	0.00	4 Low
SOM	Somalia	Africa	no	6 408.32	0.00	133.83	0.00	5 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	549.64	0.00	6 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	428.35	0.00	7 Low
MOZ	Mozambique	Africa	no	36 409.45	0.00	3 190.27	0.00	8 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	6 321.86	0.00	9 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	67.53	0.00	10 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	795.24	0.00	11 Low
BEN	Benin	Africa	no	21 971.91	0.00	934.54	0.00	12 Low
TGO	Togo	Africa	no	12 513.67	0.00	359.57	0.00	13 Low
MWI	Malawi	Africa	no	18 356.97		818.79		14 Low
NPL	Nepal	Asia	no	53 996.57		1 917.21		15 Low
MLI	Mali	Africa	no	27 719.15		1 172.08		16 Low
BDI	Burundi	Africa	no	3 616.17		599.64		17 Low
AFG	Afghanistan	Asia	no	60 187.87		2 492.12		18 Low
TJK	Tajikistan	Asia	no	20 536.86		998.87		19 Low
ZWE	Zimbawue	Africa	no	22 038.05		2 703.00		20 Low
UGA	Uganda	Africa	no	43 697.09		1 787.04		21 Low
SSD	South Sudan	Africa	no	19 958.30		2 720.34		22 Low
CAF	Central African Republic	Africa	no	3 893.74		166.29		23 Low
RWA	Rwanda	Africa	no	13 197.39		1 065.41		24 Low
BFA	Burkina Faso	Africa	no	24 689.43		1 951.39		25 Low
ETH	Ethiopia	Africa	no	65 598.93		3 941.08		26 Low
NER	Niger	Africa	no	12 723.49		1 083.62		27 Low
PHL	Philippines	Asia	no	566 948.60	30.63	30 212.56	1.01	1 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	48.15	79 076.93	0.61	2 MiddleLow
EGY	Egypt	Africa	no	617 149.20	8.52	31 768.68	0.27	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.75	8 808.70	0.20	4 MiddleLow
IND	India	Asia	no	5 769 372.00	19.14	221 700.44	0.09	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	0.66	10 550.52	0.06	6 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.13	4 971.97	0.03	7 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	2 899.00	0.02	8 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	646.93	0.02	9 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.23	19 696.51	0.01	10 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	5 637.22	0.01	11 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	0.17	25 463.41	0.01	12 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.01	2 289.33	0.00	13 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	3 077.08	0.00	14 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	8 003.31	0.00	15 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	1 908.75	0.00	16 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	7 759.48	0.00	17 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	212.95	0.00	18 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	3 421.99	0.00	19 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	42 180.53	0.00	20 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	2 625.09	0.00	21 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	2 613.28	0.00	22 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	706.94	0.00	23 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		1 306.25		24 MiddleLow
SDN	Sudan	Africa	no	70 368.78		5 000.18		25 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		568.19		26 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		878.46		27 MiddleLow
TCD	Chad	Africa	no	26 745.14		1 026.17		28 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		3 496.64		29 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		1 298.34		30 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		311.85		31 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		12 744.63		32 MiddleLow
MDA	Moldova	Europe	no	33 762.68		1 618.04		33 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		34 350.49		34 MiddleLow
LAO	Laos	Asia	no	21 925.62		1 626.13		35 MiddleLow
ARM	Armenia	Asia	no	22 895.19		1 508.90		36 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		4 243.72		37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		753.93		38 MiddleLow
GEO	Georgia	Asia	no	53 823.53		2 692.49		39 MiddleLow
LBN	Lebanon	Asia	no	207 723.70	2.73	6 530.19	0.42	1 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	22 647.04	0.31	2 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	63 198.81	0.21	3 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	3 793.90	0.20	4 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	13 315.00	0.17	5 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	5.52	42 433.27	0.13	6 MiddleHigh
CHN	China	Asia	no	31 726 110.00	115.18	1 299 157.61	0.09	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	8 897.75	0.05	8 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.04	1 381.39	0.03	9 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.23	8 918.25	0.03	10 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2.50	123 751.24	0.02	11 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	149 707.18	0.01	12 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.53	53 487.73	0.01	13 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.17	39 734.87	0.00	14 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.13	31 978.13	0.00	15 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.01	3 617.67	0.00	16 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.19	77 967.19	0.00	17 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	493 431.00	0.00	18 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	94 570.07	0.00	19 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	24 725.13	0.00	20 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	4 063.51	0.00	21 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	1 026.90	0.00	22 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	876.28	0.00	23 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	6 618.91	0.00	24 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		8 993.34		25 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		23 889.95		26 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		8 252.01		27 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		7 977.96		28 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		3 114.55		29 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		1 787.08		30 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		48 846.71		31 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			32 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		10 166.04		33 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		2 912.71		34 MiddleHigh
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	25 520.99	4.67	1 High
JPN	Japan	Asia	no	39 255 200.00	2 997.17	1 012 070.61	2.96	2 High
MAC	Macau	Asia	no	56 709.10	9.30	3 378.13	2.75	3 High
NZL	New Zealand	Oceania	no	679 705.40	21.89	34 691.31	0.63	4 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	34 332.88	0.34	5 High
AUS	Australia	Oceania	no	6 616 533.00	51.13	276 915.26	0.18	6 High
BRN	Brunei	Asia	no	71 236.46	0.40	2 950.69	0.14	7 High
CYP	Cyprus	Asia	no	71 610.53	0.55	4 557.62	0.12	8 High
GRC	Greece	Europe	no	1 181 283.00	3.98	48 425.35	0.08	9 High
USA	United States	Northern America	no	54 922 480.00	205.15	2 547 499.93	0.08	10 High
MLT	Malta	Europe	no	36 990.21	0.14	1 879.07	0.07	11 High
ISR	Israel	Asia	no	853 829.30	3.52	65 345.00	0.05	12 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	46 486.26	0.05	13 High
LBY	Libya	Africa	no	73 757.40	0.31	8 664.60	0.04	14 High
OMN	Oman	Asia	no	202 533.60	0.36	14 871.52	0.02	15 High
KOR	South Korea	Asia	no	5 538 605.00	1.24	194 728.35	0.01	16 High
RUS	Russia	Europe	no	6 325 795.00	2.54	409 820.63	0.01	17 High
CAN	Canada	Northern America	no	6 291 917.00	2.35	395 958.78	0.01	18 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	27 530.57	0.01	19 High
ESP	Spain	Europe	no	6 233 955.00	1.29	271 148.52	0.00	20 High
PRT	Portugal	Europe	no	1 054 344.00	0.16	43 081.93	0.00	21 High
ITA	Italy	Europe	no	8 604 332.00	1.47	417 993.98	0.00	22 High
IRL	Ireland	Europe	no	778 821.60	0.03	40 563.02	0.00	23 High
FRA	France	Europe	no	10 329 420.00	0.07	677 049.47	0.00	24 High
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	542 121.89	0.00	25 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	7 713.60	0.00	26 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	128 131.48	0.00	27 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	165 700.80	0.00	28 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	89 732.55	0.00	29 High
SVN	Slovenia	Europe	no	139 899.70	0.00	9 765.51	0.00	30 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	1 036.62	0.00	31 High
HRV	Croatia	Europe	no	188 113.70	0.00	11 594.94	0.00	32 High
NOR	Norway	Europe	no	1 933 679.00	0.00	112 012.76	0.00	33 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	224 781.17	0.00	34 High
SYC	Seychelles	Africa	no	6 234.98	0.00	369.27	0.00	35 High
DEU	Germany	Europe	no	15 114 870.00	0.00	718 583.82	0.00	36 High
AUT	Austria	Europe	no	1 801 472.00		84 928.57		37 High
LIE	Liechtenstein	Europe	no	18 837.10				38 High
ISL	Iceland	Europe	no	57 291.68		3 730.06		39 High
SVK	Slovakia	Europe	no	414 782.80		17 642.66		40 High
SWE	Sweden	Europe	no	1 747 501.00		151 944.31		41 High
FIN	Finland	Europe	no	965 383.40		66 675.15		42 High
EST	Estonia	Europe	no	79 617.31		4 754.17		43 High
MCO	Monaco	Europe	no	20 716.40	0.00			44 High
POL	Poland	Europe	no	1 614 716.00		95 412.26		45 High
KWT	Kuwait	Asia	no	469 418.40		29 360.33		46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
SMR	San Marino	Europe	no	4 049.35	0.00			47 High
CZE	Czech Republic	Europe	no	1 007 263.00		40 979.05		48 High
QAT	Qatar	Asia	no	624 817.70		24 487.36		49 High
LVA	Latvia	Europe	no	95 608.77		4 413.54		50 High
HUN	Hungary	Europe	no	562 479.60		26 544.35		51 High
CHE	Switzerland	Europe	no	3 421 606.00		75 147.62		52 High
LTU	Lithuania	Europe	no	135 613.80		8 076.66		53 High
LUX	Luxembourg	Europe	no	201 130.60		10 391.43		54 High
ESH	Western Sahara	Africa	no	3 690.88	0.00			1 ---
MYT	Mayotte	Africa	no	6 949.04	0.00			2 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			3 ---
AND	Andorra	Europe	no	8 381.65				4 ---
REU	Reunion	Africa	no	67 897.68	0.00			5 ---
ROU	Romania	Europe	no	555 697.40				6 ---
PRK	North Korea	Asia	no	77 982.15	0.00			7 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			8 ---
MMR	Myanmar	Asia	no	195 390.10	3.27			9 ---
PSE	State of Palestine	Asia	no	69 454.30	0.06			10 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			11 ---
TWN	Taiwan	Asia	no	1 680 401.00	15.05			12 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			13 ---
FRO	Faroe Islands	Europe	no	9 272.37				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	5.50	160 820.74	0.03	1 Low
MDG	Madagascar	Africa	no	23 496.42	0.01	11 984.82	0.00	2 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	16 467.91	0.00	3 Low
BEN	Benin	Africa	no	21 971.91	0.00	9 572.30	0.00	4 Low
GIN	Guinea	Africa	no	13 665.89	0.00	7 750.84	0.00	5 Low
MOZ	Mozambique	Africa	no	36 409.45	0.00	17 220.44	0.00	6 Low
TGO	Togo	Africa	no	12 513.67	0.00	4 390.62	0.00	7 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	39 205.30	0.00	8 Low
LBR	Liberia	Africa	no	1 911.24	0.00	2 724.73	0.00	9 Low
SOM	Somalia	Africa	no	6 408.32	0.00	1 173.40	0.00	10 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	2 836.63	0.00	11 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	1 029.01	0.00	12 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	4 191.60	0.00	13 Low
NPL	Nepal	Asia	no	53 996.57		24 466.26		14 Low
MWI	Malawi	Africa	no	18 356.97		4 366.74		15 Low
SSD	South Sudan	Africa	no	19 958.30		14 712.88		16 Low
MLI	Mali	Africa	no	27 719.15		11 011.34		17 Low
BDI	Burundi	Africa	no	3 616.17		3 443.34		18 Low
ZWE	Zimbawue	Africa	no	22 038.05		17 196.10		19 Low
RWA	Rwanda	Africa	no	13 197.39		8 767.59		20 Low
CAF	Central African Republic	Africa	no	3 893.74		2 389.56		21 Low
ETH	Ethiopia	Africa	no	65 598.93		55 403.13		22 Low
NER	Niger	Africa	no	12 723.49		8 745.32		23 Low
UGA	Uganda	Africa	no	43 697.09		23 933.64		24 Low
BFA	Burkina Faso	Africa	no	24 689.43		11 452.71		25 Low
TJK	Tajikistan	Asia	no	20 536.86		12 690.19		26 Low
AFG	Afghanistan	Asia	no	60 187.87		29 010.12		27 Low
PHL	Philippines	Asia	no	566 948.60	30.63	283 131.84	0.11	1 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	48.15	885 677.23	0.05	2 MiddleLow
EGY	Egypt	Africa	no	617 149.20	8.52	291 083.68	0.03	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.75	73 583.10	0.02	4 MiddleLow
IND	India	Asia	no	5 769 372.00	19.14	1 944 284.82	0.01	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	0.66	164 388.68	0.00	6 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.13	40 077.56	0.00	7 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	28 969.70	0.00	8 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.23	117 556.24	0.00	9 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	12 562.44	0.00	10 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	0.17	247 867.95	0.00	11 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	59 883.48	0.00	12 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.01	17 930.59	0.00	13 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	22 559.82	0.00	14 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	63 770.87	0.00	15 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	32 007.42	0.00	16 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	31 142.79	0.00	17 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	12 612.41	0.00	18 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	495 416.77	0.00	19 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	1 018.02	0.00	20 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	50 578.29	0.00	21 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	18 997.54	0.00	22 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	4 169.52	0.00	23 MiddleLow
LAO	Laos	Asia	no	21 925.62		12 246.45		24 MiddleLow
LSO	Lesotho	Africa	no	17 938.00		3 740.58		25 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24		3 944.56		26 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64		27 647.87		27 MiddleLow
MNG	Mongolia	Asia	no	36 587.61		14 036.94		28 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60		10 749.10		29 MiddleLow
ZMB	Zambia	Africa	no	48 954.52		26 244.17		30 MiddleLow
BTN	Bhutan	Asia	no	11 083.66		2 173.58		31 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10		59 039.46		32 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02		28 469.09		33 MiddleLow
GEO	Georgia	Asia	no	53 823.53		18 230.53		34 MiddleLow
MDA	Moldova	Europe	no	33 762.68		10 971.97		35 MiddleLow
ARM	Armenia	Asia	no	22 895.19		12 628.86		36 MiddleLow
UKR	Ukraine	Europe	no	676 833.60		192 523.67		37 MiddleLow
TCD	Chad	Africa	no	26 745.14		14 228.09		38 MiddleLow
SDN	Sudan	Africa	no	70 368.78		70 927.03		39 MiddleLow
LBN	Lebanon	Asia	no	207 723.70	2.73	50 384.63	0.05	1 MiddleHigh
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	387 419.05	0.03	2 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	204 179.29	0.03	3 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	96 787.63	0.02	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	36 126.55	0.02	5 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	5.52	284 108.03	0.02	6 MiddleHigh
CHN	China	Asia	no	31 726 110.00	115.18	9 003 382.87	0.01	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	51 412.23	0.01	8 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.23	51 302.58	0.00	9 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2.50	876 064.28	0.00	10 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.04	15 227.71	0.00	11 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.53	374 528.18	0.00	12 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	1 269 259.96	0.00	13 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.17	204 165.74	0.00	14 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.01	15 480.83	0.00	15 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.19	360 489.06	0.00	16 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.13	255 619.28	0.00	17 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	2 301 443.96	0.00	18 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	611 844.88	0.00	19 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	43 390.10	0.00	20 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	5 312.54	0.00	21 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	21 616.92	0.00	22 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	14 724.33	0.00	23 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	105 476.81	0.00	24 MiddleHigh
BLR	Belarus	Europe	no	229 399.90		73 747.80		25 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37		12 119.46		26 MiddleHigh
BWA	Botswana	Africa	no	90 628.62		15 490.96		27 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00		57 484.51		28 MiddleHigh
SRB	Serbia	Europe	no	57 317.24		50 611.94		29 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60		226 497.10		30 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00			31 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60		54 795.79		32 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90		205 086.26		33 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02		25 014.09		34 MiddleHigh
JPN	Japan	Asia	no	39 255 200.00	2 997.17	5 059 261.76	0.59	1 High
MAC	Macau	Asia	no	56 709.10	9.30	20 216.60	0.46	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	271 683.76	0.44	3 High
NZL	New Zealand	Oceania	no	679 705.40	21.89	182 403.61	0.12	4 High
BRN	Brunei	Asia	no	71 236.46	0.40	9 075.14	0.04	5 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	278 153.13	0.04	6 High
AUS	Australia	Oceania	no	6 616 533.00	51.13	1 579 571.61	0.03	7 High
CYP	Cyprus	Asia	no	71 610.53	0.55	24 622.91	0.02	8 High
GRC	Greece	Europe	no	1 181 283.00	3.98	249 410.75	0.02	9 High
MLT	Malta	Europe	no	36 990.21	0.14	8 864.05	0.02	10 High
ISR	Israel	Asia	no	853 829.30	3.52	286 558.36	0.01	11 High
USA	United States	Northern America	no	54 922 480.00	205.15	17 276 300.43	0.01	12 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	373 895.14	0.01	13 High
OMN	Oman	Asia	no	202 533.60	0.36	56 792.46	0.01	14 High
LBY	Libya	Africa	no	73 757.40	0.31	55 976.41	0.01	15 High
RUS	Russia	Europe	no	6 325 795.00	2.54	1 973 571.68	0.00	16 High
CAN	Canada	Northern America	no	6 291 917.00	2.35	1 857 561.03	0.00	17 High
KOR	South Korea	Asia	no	5 538 605.00	1.24	1 238 504.83	0.00	18 High
ESP	Spain	Europe	no	6 233 955.00	1.29	1 345 564.18	0.00	19 High
PRT	Portugal	Europe	no	1 054 344.00	0.16	225 098.65	0.00	20 High
ITA	Italy	Europe	no	8 604 332.00	1.47	2 100 502.86	0.00	21 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	318 951.13	0.00	22 High
IRL	Ireland	Europe	no	778 821.60	0.03	183 798.12	0.00	23 High
FRA	France	Europe	no	10 329 420.00	0.07	2 848 015.52	0.00	24 High
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	2 728 637.76	0.00	25 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	517 763.60	0.00	26 High
NOR	Norway	Europe	no	1 933 679.00	0.00	457 625.37	0.00	27 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	765 364.08	0.00	28 High
DEU	Germany	Europe	no	15 114 870.00	0.00	3 513 506.86	0.00	29 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	590 125.33	0.00	30 High
HRV	Croatia	Europe	no	188 113.70	0.00	57 600.31	0.00	31 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	57 529.86	0.00	32 High
SYC	Seychelles	Africa	no	6 234.98	0.00	1 607.64	0.00	33 High
SVN	Slovenia	Europe	no	139 899.70	0.00	45 103.27	0.00	34 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	316 596.75	0.00	35 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	12 451.63	0.00	36 High
LVA	Latvia	Europe	no	95 608.77		29 570.85		37 High
SVK	Slovakia	Europe	no	414 782.80		93 274.32		38 High
SWE	Sweden	Europe	no	1 747 501.00		551 152.52		39 High
LIE	Liechtenstein	Europe	no	18 837.10				40 High
ISL	Iceland	Europe	no	57 291.68		14 052.90		41 High
FIN	Finland	Europe	no	965 383.40		269 912.39		42 High
EST	Estonia	Europe	no	79 617.31		24 664.81		43 High
MCO	Monaco	Europe	no	20 716.40	0.00			44 High
POL	Poland	Europe	no	1 614 716.00		515 943.50		45 High
SMR	San Marino	Europe	no	4 049.35	0.00			46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40		96 682.69		47 High
QAT	Qatar	Asia	no	624 817.70		91 904.94		48 High
CZE	Czech Republic	Europe	no	1 007 263.00		196 764.65		49 High
AUT	Austria	Europe	no	1 801 472.00		413 112.76		50 High
HUN	Hungary	Europe	no	562 479.60		123 292.26		51 High
CHE	Switzerland	Europe	no	3 421 606.00		602 400.29		52 High
LTU	Lithuania	Europe	no	135 613.80		43 719.88		53 High
LUX	Luxembourg	Europe	no	201 130.60		38 962.95		54 High
MYT	Mayotte	Africa	no	6 949.04	0.00			1 ---
FRO	Faroe Islands	Europe	no	9 272.37				2 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00			3 ---
AND	Andorra	Europe	no	8 381.65				4 ---
REU	Reunion	Africa	no	67 897.68	0.00			5 ---
PSE	State of Palestine	Asia	no	69 454.30	0.06			6 ---
ROU	Romania	Europe	no	555 697.40				7 ---
PRK	North Korea	Asia	no	77 982.15	0.00			8 ---
MMR	Myanmar	Asia	no	195 390.10	3.27			9 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00			10 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00			11 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00			12 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00			13 ---
TWN	Taiwan	Asia	no	1 680 401.00	15.05			14 ---

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
BGD	Bangladesh	Asia	no	381 431.90	5.50	0.01	1 Low
MDG	Madagascar	Africa	no	23 496.42	0.01	0.00	2 Low
KHM	Cambodia	Asia	no	27 390.49	0.00	0.00	3 Low
BEN	Benin	Africa	no	21 971.91	0.00	0.00	4 Low
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	5 Low
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	6 Low
TGO	Togo	Africa	no	12 513.67	0.00	0.00	7 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	8 Low
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	9 Low
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	10 Low
ERI	Eritrea	Africa	no	9 081.79	0.00	0.00	11 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	12 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	13 Low
NPL	Nepal	Asia	no	53 996.57			14 Low
MWI	Malawi	Africa	no	18 356.97			15 Low
SSD	South Sudan	Africa	no	19 958.30			16 Low
MLI	Mali	Africa	no	27 719.15			17 Low
BDI	Burundi	Africa	no	3 616.17			18 Low
ZWE	Zimbawue	Africa	no	22 038.05			19 Low
RWA	Rwanda	Africa	no	13 197.39			20 Low
CAF	Central African Republic	Africa	no	3 893.74			21 Low
ETH	Ethiopia	Africa	no	65 598.93			22 Low
NER	Niger	Africa	no	12 723.49			23 Low
UGA	Uganda	Africa	no	43 697.09			24 Low
BFA	Burkina Faso	Africa	no	24 689.43			25 Low
TJK	Tajikistan	Asia	no	20 536.86			26 Low
AFG	Afghanistan	Asia	no	60 187.87			27 Low
PHL	Philippines	Asia	no	566 948.60	30.63	0.05	1 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	48.15	0.02	2 MiddleLow
EGY	Egypt	Africa	no	617 149.20	8.52	0.01	3 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	1.75	0.01	4 MiddleLow
IND	India	Asia	no	5 769 372.00	19.14	0.00	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	0.66	0.00	6 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	0.07	0.00	7 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.13	0.00	8 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.23	0.00	9 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	0.17	0.00	10 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.01	0.00	11 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.01	0.00	12 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.04	0.00	13 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.01	0.00	14 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	15 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	16 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	17 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	18 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	19 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	20 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	21 MiddleLow
COG	Congo	Africa	no	69 047.72	0.00	0.00	22 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	23 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10			24 MiddleLow
BTN	Bhutan	Asia	no	11 083.66			25 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60			26 MiddleLow
GEO	Georgia	Asia	no	53 823.53			27 MiddleLow
MDA	Moldova	Europe	no	33 762.68			28 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			29 MiddleLow
UKR	Ukraine	Europe	no	676 833.60			30 MiddleLow
TCD	Chad	Africa	no	26 745.14			31 MiddleLow
LAO	Laos	Asia	no	21 925.62			32 MiddleLow
LSO	Lesotho	Africa	no	17 938.00			33 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24			34 MiddleLow
ARM	Armenia	Asia	no	22 895.19			35 MiddleLow
MNG	Mongolia	Asia	no	36 587.61			36 MiddleLow
ZMB	Zambia	Africa	no	48 954.52			37 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			38 MiddleLow
SDN	Sudan	Africa	no	70 368.78			39 MiddleLow
COL	Colombia	Latin America and the Caribbean	no	944 576.90	13.20	0.01	1 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	2.73	0.01	2 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	6.92	0.01	3 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	2.24	0.01	4 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.74	0.01	5 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	5.52	0.00	6 MiddleHigh
CHN	China	Asia	no	31 726 110.00	115.18	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	0.47	0.00	8 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.23	0.00	9 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	2.50	0.00	10 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.04	0.00	11 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.53	0.00	12 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1.49	0.00	13 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.01	0.00	14 MiddleHigh
DZA	Algeria	Africa	no	899 206.20	0.17	0.00	15 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.19	0.00	16 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.55	0.00	17 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.13	0.00	18 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.03	0.00	19 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	0.00	20 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	21 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	0.00	0.00	22 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	23 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	0.00	0.00	24 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	25 MiddleHigh
BLR	Belarus	Europe	no	229 399.90			26 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90			27 MiddleHigh
BWA	Botswana	Africa	no	90 628.62			28 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60			29 MiddleHigh
SRB	Serbia	Europe	no	57 317.24			30 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02			31 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00			32 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60			33 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37			34 MiddleHigh
MAC	Macau	Asia	no	56 709.10	9.30	0.16	1 High
HKG	Hong Kong	Asia	no	1 250 063.00	119.06	0.10	2 High
JPN	Japan	Asia	no	39 255 200.00	2 997.17	0.08	3 High
NZL	New Zealand	Oceania	no	679 705.40	21.89	0.03	4 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	11.81	0.02	5 High
AUS	Australia	Oceania	no	6 616 533.00	51.13	0.01	6 High
CYP	Cyprus	Asia	no	71 610.53	0.55	0.01	7 High
BRN	Brunei	Asia	no	71 236.46	0.40	0.01	8 High
LBY	Libya	Africa	no	73 757.40	0.31	0.00	9 High
ISR	Israel	Asia	no	853 829.30	3.52	0.00	10 High
MLT	Malta	Europe	no	36 990.21	0.14	0.00	11 High
USA	United States	Northern America	no	54 922 480.00	205.15	0.00	12 High
GRC	Greece	Europe	no	1 181 283.00	3.98	0.00	13 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	2.39	0.00	14 High
OMN	Oman	Asia	no	202 533.60	0.36	0.00	15 High
RUS	Russia	Europe	no	6 325 795.00	2.54	0.00	16 High
CAN	Canada	Northern America	no	6 291 917.00	2.35	0.00	17 High
KOR	South Korea	Asia	no	5 538 605.00	1.24	0.00	18 High
ESP	Spain	Europe	no	6 233 955.00	1.29	0.00	19 High
ITA	Italy	Europe	no	8 604 332.00	1.47	0.00	20 High
PRT	Portugal	Europe	no	1 054 344.00	0.16	0.00	21 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.15	0.00	22 High
IRL	Ireland	Europe	no	778 821.60	0.03	0.00	23 High
FRA	France	Europe	no	10 329 420.00	0.07	0.00	24 High
GBR	United Kingdom	Europe	no	7 806 797.00	0.02	0.00	25 High
MCO	Monaco	Europe	no	20 716.40	0.00	0.00	26 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	27 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	28 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	29 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	30 High
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	31 High
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	32 High
SMR	San Marino	Europe	no	4 049.35	0.00	0.00	33 High
BEL	Belgium	Europe	no	1 980 551.00	0.00	0.00	34 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	0.00	0.00	35 High
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	36 High
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	37 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	38 High
LVA	Latvia	Europe	no	95 608.77			39 High
SVK	Slovakia	Europe	no	414 782.80			40 High
SWE	Sweden	Europe	no	1 747 501.00			41 High
LIE	Liechtenstein	Europe	no	18 837.10			42 High
ISL	Iceland	Europe	no	57 291.68			43 High
FIN	Finland	Europe	no	965 383.40			44 High
EST	Estonia	Europe	no	79 617.31			45 High
POL	Poland	Europe	no	1 614 716.00			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
KWT	Kuwait	Asia	no	469 418.40			47 High
QAT	Qatar	Asia	no	624 817.70			48 High
CZE	Czech Republic	Europe	no	1 007 263.00			49 High
AUT	Austria	Europe	no	1 801 472.00			50 High
HUN	Hungary	Europe	no	562 479.60			51 High
CHE	Switzerland	Europe	no	3 421 606.00			52 High
LTU	Lithuania	Europe	no	135 613.80			53 High
LUX	Luxembourg	Europe	no	201 130.60			54 High
MMR	Myanmar	Asia	no	195 390.10	3.27	0.02	1 ---
TWN	Taiwan	Asia	no	1 680 401.00	15.05	0.01	2 ---
PSE	State of Palestine	Asia	no	69 454.30	0.06	0.00	3 ---
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	4 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	5 ---
REU	Reunion	Africa	no	67 897.68	0.00	0.00	6 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97	0.00	0.00	7 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	8 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	9 ---
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	10 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	11 ---
ROU	Romania	Europe	no	555 697.40			12 ---
FRO	Faroe Islands	Europe	no	9 272.37			13 ---
AND	Andorra	Europe	no	8 381.65			14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 613.49	0.00	0.00	1 Low
SOM	Somalia	Africa	no	6 408.32	917.04	0.00	0.00	2 Low
BGD	Bangladesh	Asia	no	381 431.90	149 990.46	0.00	0.00	3 Low
TGO	Togo	Africa	no	12 513.67	4 338.58	0.00	0.00	4 Low
MOZ	Mozambique	Africa	no	36 409.45	15 630.30	0.00	0.00	5 Low
LBR	Liberia	Africa	no	1 911.24	1 950.96	0.00	0.00	6 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 136.28	0.00	0.00	7 Low
GIN	Guinea	Africa	no	13 665.89	6 144.13	0.00	0.00	8 Low
BEN	Benin	Africa	no	21 971.91	8 307.22	0.00	0.00	9 Low
GMB	The Gambia	Africa	no	2 097.61	903.50	0.00	0.00	10 Low
TZA	Tanzania	Africa	no	50 142.79	33 225.04	0.00	0.00	11 Low
NER	Niger	Africa	no	12 723.49	7 407.42			12 Low
RWA	Rwanda	Africa	no	13 197.39	7 521.26			13 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 582.56			14 Low
AFG	Afghanistan	Asia	no	60 187.87	20 309.67			15 Low
NPL	Nepal	Asia	no	53 996.57	19 294.35			16 Low
MWI	Malawi	Africa	no	18 356.97	3 705.39			17 Low
ERI	Eritrea	Africa	no	9 081.79	3 444.10			18 Low
TJK	Tajikistan	Asia	no	20 536.86	8 508.10			19 Low
MLI	Mali	Africa	no	27 719.15	10 942.73			20 Low
BDI	Burundi	Africa	no	3 616.17	2 714.51			21 Low
SSD	South Sudan	Africa	no	19 958.30	11 804.41			22 Low
ZWE	Zimbawue	Africa	no	22 038.05	13 490.00			23 Low
UGA	Uganda	Africa	no	43 697.09	21 493.61			24 Low
KHM	Cambodia	Asia	no	27 390.49	15 238.69			25 Low
ETH	Ethiopia	Africa	no	65 598.93	47 525.19			26 Low
CAF	Central African Republic	Africa	no	3 893.74	1 538.18			27 Low
PHL	Philippines	Asia	no	566 948.60	272 066.56	304.05	0.11	1 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	868 345.64	923.97	0.11	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	24 259.10	1.10	0.00	3 MiddleLow
IND	India	Asia	no	5 769 372.00	1 876 797.16	22.79	0.00	4 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	53 796.71	0.26	0.00	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	171 390.01	0.16	0.00	6 MiddleLow
EGY	Egypt	Africa	no	617 149.20	271 972.83	0.00	0.00	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	67 182.01	0.00	0.00	8 MiddleLow
YEM	Yemen	Asia	no	79 113.56	35 954.50	0.00	0.00	9 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	18 550.03	0.00	0.00	10 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	1 456.34	0.00	0.00	11 MiddleLow
MAR	Morroco	Africa	no	374 846.30	103 835.71	0.00	0.00	12 MiddleLow
KEN	Kenya	Africa	no	98 382.66	55 243.06	0.00	0.00	13 MiddleLow
SYR	Syria	Asia	no	204 643.30	40 405.00	0.00	0.00	14 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 791.70	0.00	0.00	15 MiddleLow
GHA	Ghana	Africa	no	74 174.05	48 137.03	0.00	0.00	16 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	4 158.18	0.00	0.00	17 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	31 062.03	0.00	0.00	18 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	521 803.30	0.00	0.00	19 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	11 255.61	0.00	0.00	20 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	232 286.78	0.00	0.00	21 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	29 567.50	0.00	0.00	22 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	177 430.61			23 MiddleLow
COG	Congo	Africa	no	69 047.72	14 085.85			24 MiddleLow
SDN	Sudan	Africa	no	70 368.78	66 565.89			25 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 820.87			26 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 334.99			27 MiddleLow
TCD	Chad	Africa	no	26 745.14	13 513.55			28 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	29 009.41			29 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	11 516.41			30 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 781.26			31 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	56 795.66			32 MiddleLow
MDA	Moldova	Europe	no	33 762.68	7 969.62			33 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	7 226.30			34 MiddleLow
LAO	Laos	Asia	no	21 925.62	11 242.53			35 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 432.17			36 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	30 601.16			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 791.30			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53	16 140.05			39 MiddleLow
COL	Colombia	Latin America and the Caribbean	no	944 576.90	378 415.32	63.84	0.02	1 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	202 349.85	10.78	0.01	2 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	94 472.68	4.42	0.00	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	49 621.09	1.58	0.00	4 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 260 914.61	28.49	0.00	5 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 648.10	0.51	0.00	6 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	313 159.09	3.68	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
DZA	Algeria	Africa	no	899 206.20	210 183.41	0.00	0.00	8 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	350 630.12	0.00	0.00	9 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 245 673.09	0.00	0.00	10 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 240 270.86	0.00	0.00	11 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	368 904.34	0.00	0.00	12 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	387 252.16	0.00	0.00	13 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	38.32	0.00	0.00	14 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 416.08	0.00	0.00	15 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	19 343.51	0.00	0.00	16 MiddleHigh
AGO	Angola	Africa	no	176 182.50	124 178.24	0.00	0.00	17 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 352.42	0.00	0.00	18 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	13 113.07	0.00	0.00	19 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 923.24	0.00	0.00	20 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	46 993.60	0.00	0.00	21 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	609 888.96	0.00	0.00	22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	822 135.16	0.00	0.00	23 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	71 709.52			24 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 678.50			25 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	54 479.87			26 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 195.40			27 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	45 519.65			28 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 784.71			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	73 560.48			30 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	41 850.88			31 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	231 876.28			32 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	17 851.33			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 327.29			34 MiddleHigh
JPN	Japan	Asia	no	39 255 200.00	4 919 563.12	60 744.37	1.23	1 High
NZL	New Zealand	Oceania	no	679 705.40	185 787.83	353.59	0.19	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	274 012.82	444.42	0.16	3 High
AUS	Australia	Oceania	no	6 616 533.00	1 560 372.45	851.79	0.05	4 High
MAC	Macau	Asia	no	56 709.10	51 753.10	23.28	0.04	5 High
BRN	Brunei	Asia	no	71 236.46	16 111.14	4.09	0.03	6 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	277 198.77	65.07	0.02	7 High
USA	United States	Northern America	no	54 922 480.00	16 768 099.68	2 036.40	0.01	8 High
GRC	Greece	Europe	no	1 181 283.00	242 230.33	8.12	0.00	9 High
RUS	Russia	Europe	no	6 325 795.00	2 096 777.00	24.90	0.00	10 High
CAN	Canada	Northern America	no	6 291 917.00	1 826 768.55	15.16	0.00	11 High
ITA	Italy	Europe	no	8 604 332.00	2 149 484.46	1.48	0.00	12 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	15 580.56	0.00	0.00	13 High
KOR	South Korea	Asia	no	5 538 605.00	1 304 553.98	0.00	0.00	14 High
DEU	Germany	Europe	no	15 114 870.00	3 730 260.62	0.00	0.00	15 High
FRA	France	Europe	no	10 329 420.00	2 806 427.94	0.00	0.00	16 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 678 455.01	0.00	0.00	17 High
IRL	Ireland	Europe	no	778 821.60	232 077.43	0.00	0.00	18 High
OMN	Oman	Asia	no	202 533.60	79 655.92	0.00	0.00	19 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	402 340.12	0.00	0.00	20 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	55 707.94	0.00	0.00	21 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	438 283.57	0.00	0.00	22 High
CYP	Cyprus	Asia	no	71 610.53	21 911.45	0.00	0.00	23 High
LBY	Libya	Africa	no	73 757.40	74 199.53	0.00	0.00	24 High
DNK	Denmark	Europe	no	1 346 393.00	335 877.54	0.00	0.00	25 High
SVN	Slovenia	Europe	no	139 899.70	47 987.30	0.00	0.00	26 High
NOR	Norway	Europe	no	1 933 679.00	512 580.42	0.00	0.00	27 High
HRV	Croatia	Europe	no	188 113.70	57 868.67	0.00	0.00	28 High
MLT	Malta	Europe	no	36 990.21	9 642.33	0.00	0.00	29 High
ESP	Spain	Europe	no	6 233 955.00	1 393 040.16	0.00	0.00	30 High
ISR	Israel	Asia	no	853 829.30	290 550.61	0.00	0.00	31 High
SYC	Seychelles	Africa	no	6 234.98	1 443.35	0.00	0.00	32 High
NLD	Netherlands	Europe	no	3 410 955.00	853 539.36	0.00	0.00	33 High
PRT	Portugal	Europe	no	1 054 344.00	227 323.72	0.00	0.00	34 High
ISL	Iceland	Europe	no	57 291.68	15 330.06			35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			36 High
QAT	Qatar	Asia	no	624 817.70	203 235.16			37 High
LVA	Latvia	Europe	no	95 608.77	30 956.69			38 High
BEL	Belgium	Europe	no	1 980 551.00	524 805.54			39 High
MCO	Monaco	Europe	no	20 716.40	6 074.51			40 High
KWT	Kuwait	Asia	no	469 418.40	175 830.50			41 High
FIN	Finland	Europe	no	965 383.40	267 328.62			42 High
AUT	Austria	Europe	no	1 801 472.00	428 321.90			43 High
POL	Poland	Europe	no	1 614 716.00	525 865.98			44 High
LIE	Liechtenstein	Europe	no	18 837.10	4 826.17			45 High
LTU	Lithuania	Europe	no	135 613.80	45 931.97			46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
SMR	San Marino	Europe	no	4 049.35	1 899.81			47 High
HUN	Hungary	Europe	no	562 479.60	133 423.90			48 High
LUX	Luxembourg	Europe	no	201 130.60	60 130.85			49 High
SVK	Slovakia	Europe	no	414 782.80	97 707.33			50 High
SWE	Sweden	Europe	no	1 747 501.00	579 680.01			51 High
EST	Estonia	Europe	no	79 617.31	24 880.27			52 High
CZE	Czech Republic	Europe	no	1 007 263.00	208 796.02			53 High
CHE	Switzerland	Europe	no	3 421 606.00	685 434.21			54 High
MMR	Myanmar	Asia	no	195 390.10				1 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				2 ---
ROU	Romania	Europe	no	555 697.40				3 ---
ESH	Western Sahara	Africa	no	3 690.88				4 ---
REU	Reunion	Africa	no	67 897.68				5 ---
TWN	Taiwan	Asia	no	1 680 401.00				6 ---
FRO	Faroe Islands	Europe	no	9 272.37	2 198.14			7 ---
GIB	Gibraltar	Europe	no	4 042.19				8 ---
PSE	State of Palestine	Asia	no	69 454.30				9 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				10 ---
AND	Andorra	Europe	no	8 381.65	2 849.17			11 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				12 ---
PRK	North Korea	Asia	no	77 982.15				13 ---
MYT	Mayotte	Africa	no	6 949.04				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	10 279.21	0.00	0.00	1 Low
SOM	Somalia	Africa	no	6 408.32	834.95	0.00	0.00	2 Low
BGD	Bangladesh	Asia	no	381 431.90	162 054.14	0.00	0.00	3 Low
TGO	Togo	Africa	no	12 513.67	3 696.32	0.00	0.00	4 Low
MOZ	Mozambique	Africa	no	36 409.45	15 578.02	0.00	0.00	5 Low
LBR	Liberia	Africa	no	1 911.24	1 751.03	0.00	0.00	6 Low
SLE	Sierra Leone	Africa	no	3 031.82	4 515.60	0.00	0.00	7 Low
GIN	Guinea	Africa	no	13 665.89	5 696.70	0.00	0.00	8 Low
BEN	Benin	Africa	no	21 971.91	8 247.34	0.00	0.00	9 Low
GMB	The Gambia	Africa	no	2 097.61	875.76	0.00	0.00	10 Low
TZA	Tanzania	Africa	no	50 142.79	33 033.24	0.00	0.00	11 Low
NER	Niger	Africa	no	12 723.49	7 223.22			12 Low
RWA	Rwanda	Africa	no	13 197.39	7 406.89			13 Low
BFA	Burkina Faso	Africa	no	24 689.43	11 029.53			14 Low
AFG	Afghanistan	Asia	no	60 187.87	20 450.66			15 Low
NPL	Nepal	Asia	no	53 996.57	19 443.42			16 Low
MWI	Malawi	Africa	no	18 356.97	3 574.19			17 Low
ERI	Eritrea	Africa	no	9 081.79	3 412.88			18 Low
TJK	Tajikistan	Asia	no	20 536.86	8 457.87			19 Low
MLI	Mali	Africa	no	27 719.15	10 272.74			20 Low
BDI	Burundi	Africa	no	3 616.17	2 713.09			21 Low
SSD	South Sudan	Africa	no	19 958.30	10 791.19			22 Low
ZWE	Zimbawue	Africa	no	22 038.05	12 472.00			23 Low
UGA	Uganda	Africa	no	43 697.09	22 316.73			24 Low
KHM	Cambodia	Asia	no	27 390.49	14 486.36			25 Low
ETH	Ethiopia	Africa	no	65 598.93	47 418.40			26 Low
CAF	Central African Republic	Africa	no	3 893.74	1 537.09			27 Low
IDN	Indonesia	Asia	no	2 827 835.00	841 475.36	923.97	0.11	1 MiddleLow
PHL	Philippines	Asia	no	566 948.60	326 316.43	304.05	0.09	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	23 418.00	1.10	0.00	3 MiddleLow
IND	India	Asia	no	5 769 372.00	1 855 591.42	22.79	0.00	4 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	52 557.31	0.26	0.00	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	164 181.67	0.16	0.00	6 MiddleLow
EGY	Egypt	Africa	no	617 149.20	264 562.52	0.00	0.00	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	65 362.56	0.00	0.00	8 MiddleLow
YEM	Yemen	Asia	no	79 113.56	34 721.48	0.00	0.00	9 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	17 239.45	0.00	0.00	10 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	775.82	0.00	0.00	11 MiddleLow
MAR	Morroco	Africa	no	374 846.30	100 965.44	0.00	0.00	12 MiddleLow
KEN	Kenya	Africa	no	98 382.66	54 934.72	0.00	0.00	13 MiddleLow
SYR	Syria	Asia	no	204 643.30	39 715.80	0.00	0.00	14 MiddleLow
SEN	Senegal	Africa	no	35 335.24	14 606.22	0.00	0.00	15 MiddleLow
GHA	Ghana	Africa	no	74 174.05	47 004.17	0.00	0.00	16 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	3 892.41	0.00	0.00	17 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	29 881.67	0.00	0.00	18 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	499 041.44	0.00	0.00	19 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	10 942.52	0.00	0.00	20 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	244 280.84	0.00	0.00	21 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	28 948.12	0.00	0.00	22 MiddleLow
UKR	Ukraine	Europe	no	676 833.60	180 979.14			23 MiddleLow
COG	Congo	Africa	no	69 047.72	11 049.89			24 MiddleLow
SDN	Sudan	Africa	no	70 368.78	63 769.45			25 MiddleLow
ZMB	Zambia	Africa	no	48 954.52	26 049.97			26 MiddleLow
LSO	Lesotho	Africa	no	17 938.00	2 861.49			27 MiddleLow
TCD	Chad	Africa	no	26 745.14	12 987.28			28 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64	27 507.36			29 MiddleLow
MNG	Mongolia	Asia	no	36 587.61	10 751.45			30 MiddleLow
BTN	Bhutan	Asia	no	11 083.66	1 665.34			31 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10	58 119.38			32 MiddleLow
MDA	Moldova	Europe	no	33 762.68	8 846.50			33 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60	6 935.86			34 MiddleLow
LAO	Laos	Asia	no	21 925.62	10 602.76			35 MiddleLow
ARM	Armenia	Asia	no	22 895.19	10 972.97			36 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02	28 693.34			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24	3 434.79			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53	15 835.00			39 MiddleLow
COL	Colombia	Latin America and the Caribbean	no	944 576.90	364 216.88	63.84	0.02	1 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	191 718.74	10.78	0.01	2 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	93 028.08	4.42	0.00	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	48 525.75	1.58	0.00	4 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	1 234 127.03	28.49	0.00	5 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	302 328.55	3.68	0.00	6 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	42 387.00	0.51	0.00	7 MiddleHigh

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
DZA	Algeria	Africa	no	899 206.20	206 267.88	0.00	0.00	8 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	343 242.96	0.00	0.00	9 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	2 203 224.64	0.00	0.00	10 MiddleHigh
CHN	China	Asia	no	31 726 110.00	9 196 167.76	0.00	0.00	11 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	369 271.87	0.00	0.00	12 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	361 245.34	0.00	0.00	13 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	55.31	0.00	0.00	14 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	4 503.08	0.00	0.00	15 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	17 298.19	0.00	0.00	16 MiddleHigh
AGO	Angola	Africa	no	176 182.50	112 289.11	0.00	0.00	17 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	44 926.34	0.00	0.00	18 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	12 989.72	0.00	0.00	19 MiddleHigh
ALB	Albania	Europe	no	40 459.65	12 951.12	0.00	0.00	20 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	44 799.78	0.00	0.00	21 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	599 313.42	0.00	0.00	22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	812 788.29	0.00	0.00	23 MiddleHigh
BLR	Belarus	Europe	no	229 399.90	69 000.62			24 MiddleHigh
JOR	Jordan	Asia	no	121 481.20	33 339.06			25 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60	52 675.80			26 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37	10 110.99			27 MiddleHigh
SRB	Serbia	Europe	no	57 317.24	43 641.10			28 MiddleHigh
BWA	Botswana	Africa	no	90 628.62	14 678.53			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00	69 440.41			30 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02	38 617.54			31 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90	206 570.82			32 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21	18 077.73			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60	229 027.28			34 MiddleHigh
JPN	Japan	Asia	no	39 255 200.00	5 100 374.33	60 744.37	1.19	1 High
NZL	New Zealand	Oceania	no	679 705.40	163 783.43	353.59	0.22	2 High
HKG	Hong Kong	Asia	no	1 250 063.00	279 449.60	444.42	0.16	3 High
MAC	Macau	Asia	no	56 709.10	37 762.88	23.28	0.06	4 High
AUS	Australia	Oceania	no	6 616 533.00	1 521 038.52	851.79	0.06	5 High
BRN	Brunei	Asia	no	71 236.46	10 784.47	4.09	0.04	6 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	266 076.05	65.07	0.02	7 High
USA	United States	Northern America	no	54 922 480.00	16 992 399.52	2 036.40	0.01	8 High
GRC	Greece	Europe	no	1 181 283.00	242 155.98	8.12	0.00	9 High
RUS	Russia	Europe	no	6 325 795.00	2 016 574.57	24.90	0.00	10 High
CAN	Canada	Northern America	no	6 291 917.00	1 799 847.67	15.16	0.00	11 High
ITA	Italy	Europe	no	8 604 332.00	2 145 802.65	1.48	0.00	12 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	10 734.45	0.00	0.00	13 High
KOR	South Korea	Asia	no	5 538 605.00	1 316 216.64	0.00	0.00	14 High
DEU	Germany	Europe	no	15 114 870.00	3 826 364.97	0.00	0.00	15 High
FRA	France	Europe	no	10 329 420.00	2 855 136.13	0.00	0.00	16 High
GBR	United Kingdom	Europe	no	7 806 797.00	2 657 925.20	0.00	0.00	17 High
IRL	Ireland	Europe	no	778 821.60	197 446.98	0.00	0.00	18 High
OMN	Oman	Asia	no	202 533.60	90 220.81	0.00	0.00	19 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	372 613.97	0.00	0.00	20 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	53 835.34	0.00	0.00	21 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	431 079.52	0.00	0.00	22 High
CYP	Cyprus	Asia	no	71 610.53	21 453.80	0.00	0.00	23 High
LBY	Libya	Africa	no	73 757.40	61 985.45	0.00	0.00	24 High
DNK	Denmark	Europe	no	1 346 393.00	347 488.39	0.00	0.00	25 High
SVN	Slovenia	Europe	no	139 899.70	47 633.96	0.00	0.00	26 High
NOR	Norway	Europe	no	1 933 679.00	520 892.58	0.00	0.00	27 High
HRV	Croatia	Europe	no	188 113.70	56 412.38	0.00	0.00	28 High
MLT	Malta	Europe	no	36 990.21	8 946.39	0.00	0.00	29 High
ESP	Spain	Europe	no	6 233 955.00	1 383 426.03	0.00	0.00	30 High
ISR	Israel	Asia	no	853 829.30	284 226.45	0.00	0.00	31 High
SYC	Seychelles	Africa	no	6 234.98	1 392.89	0.00	0.00	32 High
NLD	Netherlands	Europe	no	3 410 955.00	855 371.61	0.00	0.00	33 High
PRT	Portugal	Europe	no	1 054 344.00	222 332.29	0.00	0.00	34 High
ISL	Iceland	Europe	no	57 291.68	15 047.05			35 High
SAU	Saudi Arabia	Asia	no	2 141 419.00	748 449.63			36 High
QAT	Qatar	Asia	no	624 817.70	190 319.79			37 High
LVA	Latvia	Europe	no	95 608.77	30 883.23			38 High
BEL	Belgium	Europe	no	1 980 551.00	519 519.14			39 High
MCO	Monaco	Europe	no	20 716.40	6 919.24			40 High
KWT	Kuwait	Asia	no	469 418.40	165 127.08			41 High
FIN	Finland	Europe	no	965 383.40	268 134.55			42 High
AUT	Austria	Europe	no	1 801 472.00	427 916.46			43 High
POL	Poland	Europe	no	1 614 716.00	506 714.23			44 High
LIE	Liechtenstein	Europe	no	18 837.10	4 816.82			45 High
LTU	Lithuania	Europe	no	135 613.80	44 274.32			46 High

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
SMR	San Marino	Europe	no	4 049.35	1 681.06			47 High
HUN	Hungary	Europe	no	562 479.60	129 554.20			48 High
LUX	Luxembourg	Europe	no	201 130.60	38 189.94			49 High
SVK	Slovakia	Europe	no	414 782.80	95 768.45			50 High
SWE	Sweden	Europe	no	1 747 501.00	599 333.40			51 High
EST	Estonia	Europe	no	79 617.31	24 010.33			52 High
CZE	Czech Republic	Europe	no	1 007 263.00	194 061.47			53 High
CHE	Switzerland	Europe	no	3 421 606.00	717 436.49			54 High
MMR	Myanmar	Asia	no	195 390.10				1 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94				2 ---
ROU	Romania	Europe	no	555 697.40				3 ---
ESH	Western Sahara	Africa	no	3 690.88				4 ---
REU	Reunion	Africa	no	67 897.68				5 ---
TWN	Taiwan	Asia	no	1 680 401.00				6 ---
FRO	Faroe Islands	Europe	no	9 272.37	2 413.31			7 ---
GIB	Gibraltar	Europe	no	4 042.19				8 ---
PSE	State of Palestine	Asia	no	69 454.30				9 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97				10 ---
AND	Andorra	Europe	no	8 381.65	2 539.76			11 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40				12 ---
PRK	North Korea	Asia	no	77 982.15				13 ---
MYT	Mayotte	Africa	no	6 949.04				14 ---

CAPRA Team

GAR

Global Risk Assessment 2015

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
MDG	Madagascar	Africa	no	23 496.42	0.00	0.00	1 Low
SOM	Somalia	Africa	no	6 408.32	0.00	0.00	2 Low
BGD	Bangladesh	Asia	no	381 431.90	0.00	0.00	3 Low
TGO	Togo	Africa	no	12 513.67	0.00	0.00	4 Low
MOZ	Mozambique	Africa	no	36 409.45	0.00	0.00	5 Low
LBR	Liberia	Africa	no	1 911.24	0.00	0.00	6 Low
SLE	Sierra Leone	Africa	no	3 031.82	0.00	0.00	7 Low
GIN	Guinea	Africa	no	13 665.89	0.00	0.00	8 Low
BEN	Benin	Africa	no	21 971.91	0.00	0.00	9 Low
GMB	The Gambia	Africa	no	2 097.61	0.00	0.00	10 Low
TZA	Tanzania	Africa	no	50 142.79	0.00	0.00	11 Low
NER	Niger	Africa	no	12 723.49			12 Low
RWA	Rwanda	Africa	no	13 197.39			13 Low
BFA	Burkina Faso	Africa	no	24 689.43			14 Low
AFG	Afghanistan	Asia	no	60 187.87			15 Low
NPL	Nepal	Asia	no	53 996.57			16 Low
MWI	Malawi	Africa	no	18 356.97			17 Low
ERI	Eritrea	Africa	no	9 081.79			18 Low
TJK	Tajikistan	Asia	no	20 536.86			19 Low
MLI	Mali	Africa	no	27 719.15			20 Low
BDI	Burundi	Africa	no	3 616.17			21 Low
SSD	South Sudan	Africa	no	19 958.30			22 Low
ZWE	Zimbawue	Africa	no	22 038.05			23 Low
UGA	Uganda	Africa	no	43 697.09			24 Low
KHM	Cambodia	Asia	no	27 390.49			25 Low
ETH	Ethiopia	Africa	no	65 598.93			26 Low
CAF	Central African Republic	Africa	no	3 893.74			27 Low
PHL	Philippines	Asia	no	566 948.60	304.05	0.05	1 MiddleLow
IDN	Indonesia	Asia	no	2 827 835.00	923.97	0.03	2 MiddleLow
SLV	El Salvador	Latin America and the Caribbean	no	71 580.54	1.10	0.00	3 MiddleLow
IND	India	Asia	no	5 769 372.00	22.79	0.00	4 MiddleLow
GTM	Guatemala	Latin America and the Caribbean	no	172 911.60	0.26	0.00	5 MiddleLow
VNM	Vietnam	Asia	no	487 574.40	0.16	0.00	6 MiddleLow
EGY	Egypt	Africa	no	617 149.20	0.00	0.00	7 MiddleLow
LKA	Sri Lanka	Asia	no	208 273.50	0.00	0.00	8 MiddleLow
YEM	Yemen	Asia	no	79 113.56	0.00	0.00	9 MiddleLow
HND	Honduras	Latin America and the Caribbean	no	77 974.77	0.00	0.00	10 MiddleLow
DJI	Djibouti	Africa	no	4 744.66	0.00	0.00	11 MiddleLow
MAR	Morroco	Africa	no	374 846.30	0.00	0.00	12 MiddleLow
KEN	Kenya	Africa	no	98 382.66	0.00	0.00	13 MiddleLow
SYR	Syria	Asia	no	204 643.30	0.00	0.00	14 MiddleLow
SEN	Senegal	Africa	no	35 335.24	0.00	0.00	15 MiddleLow
GHA	Ghana	Africa	no	74 174.05	0.00	0.00	16 MiddleLow
MRT	Mauritania	Africa	no	11 985.52	0.00	0.00	17 MiddleLow
CIV	Ivory Coast	Africa	no	45 467.63	0.00	0.00	18 MiddleLow
NGA	Nigeria	Africa	no	592 030.40	0.00	0.00	19 MiddleLow
NIC	Nicaragua	Latin America and the Caribbean	no	35 973.82	0.00	0.00	20 MiddleLow
PAK	Pakistan	Asia	no	502 344.30	0.00	0.00	21 MiddleLow
CMR	Cameroon	Africa	no	81 683.73	0.00	0.00	22 MiddleLow
UKR	Ukraine	Europe	no	676 833.60			23 MiddleLow
COG	Congo	Africa	no	69 047.72			24 MiddleLow
SDN	Sudan	Africa	no	70 368.78			25 MiddleLow
ZMB	Zambia	Africa	no	48 954.52			26 MiddleLow
LSO	Lesotho	Africa	no	17 938.00			27 MiddleLow
TCD	Chad	Africa	no	26 745.14			28 MiddleLow
PRY	Paraguay	Latin America and the Caribbean	no	92 568.64			29 MiddleLow
MNG	Mongolia	Asia	no	36 587.61			30 MiddleLow
BTN	Bhutan	Asia	no	11 083.66			31 MiddleLow
UZB	Uzbekistan	Asia	no	151 891.10			32 MiddleLow
MDA	Moldova	Europe	no	33 762.68			33 MiddleLow
KGZ	Kyrgizstan	Asia	no	18 466.60			34 MiddleLow
LAO	Laos	Asia	no	21 925.62			35 MiddleLow
ARM	Armenia	Asia	no	22 895.19			36 MiddleLow
BOL	Bolivia	Latin America and the Caribbean	no	60 590.02			37 MiddleLow
SWZ	Swaziland	Africa	no	13 701.24			38 MiddleLow
GEO	Georgia	Asia	no	53 823.53			39 MiddleLow
COL	Colombia	Latin America and the Caribbean	no	944 576.90	63.84	0.01	1 MiddleHigh
ECU	Ecuador	Latin America and the Caribbean	no	282 704.90	4.42	0.00	2 MiddleHigh
PER	Peru	Latin America and the Caribbean	no	692 344.50	10.78	0.00	3 MiddleHigh
CRI	Costa Rica	Latin America and the Caribbean	no	140 412.40	1.58	0.00	4 MiddleHigh
MEX	Mexico	Latin America and the Caribbean	no	4 513 854.00	28.49	0.00	5 MiddleHigh
PAN	Panama	Latin America and the Caribbean	no	124 686.60	0.51	0.00	6 MiddleHigh
MYS	Malaysia	Asia	no	1 170 979.00	3.68	0.00	7 MiddleHigh

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
DZA	Algeria	Africa	no	899 206.20	0.00	0.00	8 MiddleHigh
ZAF	South Africa	Africa	no	1 282 854.00	0.00	0.00	9 MiddleHigh
BRA	Brazil	Latin America and the Caribbean	no	6 817 409.00	0.00	0.00	10 MiddleHigh
CHN	China	Asia	no	31 726 110.00	0.00	0.00	11 MiddleHigh
IRN	Iran	Asia	no	2 067 640.00	0.00	0.00	12 MiddleHigh
THA	Thailand	Asia	no	1 378 999.00	0.00	0.00	13 MiddleHigh
TUV	Tuvalu	Oceania	no	123.26	0.00	0.00	14 MiddleHigh
MNE	Montenegro	Europe	no	8 892.93	0.00	0.00	15 MiddleHigh
GAB	Gabon	Africa	no	120 252.20	0.00	0.00	16 MiddleHigh
AGO	Angola	Africa	no	176 182.50	0.00	0.00	17 MiddleHigh
LBN	Lebanon	Asia	no	207 723.70	0.00	0.00	18 MiddleHigh
NAM	Namibia	Africa	no	42 062.66	0.00	0.00	19 MiddleHigh
ALB	Albania	Europe	no	40 459.65	0.00	0.00	20 MiddleHigh
TUN	Tunisia	Africa	no	178 845.60	0.00	0.00	21 MiddleHigh
ARG	Argentina	Latin America and the Caribbean	no	1 380 560.00	0.00	0.00	22 MiddleHigh
TUR	Turkey	Asia	no	1 947 249.00	0.00	0.00	23 MiddleHigh
BLR	Belarus	Europe	no	229 399.90			24 MiddleHigh
JOR	Jordan	Asia	no	121 481.20			25 MiddleHigh
BGR	Bulgaria	Europe	no	163 821.60			26 MiddleHigh
MKD	Macedonia	Europe	no	32 996.37			27 MiddleHigh
SRB	Serbia	Europe	no	57 317.24			28 MiddleHigh
BWA	Botswana	Africa	no	90 628.62			29 MiddleHigh
AZE	Azerbaijan	Asia	no	192 784.00			30 MiddleHigh
TKM	Turkmenistan	Asia	no	36 127.02			31 MiddleHigh
KAZ	Kazakhstan	Asia	no	734 309.90			32 MiddleHigh
BIH	Bosnia and Herzegovina	Europe	no	30 656.21			33 MiddleHigh
IRQ	Iraq	Asia	no	132 499.60			34 MiddleHigh
JPN	Japan	Asia	no	39 255 200.00	60 744.37	0.15	1 High
NZL	New Zealand	Oceania	no	679 705.40	353.59	0.05	2 High
MAC	Macau	Asia	no	56 709.10	23.28	0.04	3 High
HKG	Hong Kong	Asia	no	1 250 063.00	444.42	0.04	4 High
AUS	Australia	Oceania	no	6 616 533.00	851.79	0.01	5 High
CHL	Chile	Latin America and the Caribbean	no	784 154.10	65.07	0.01	6 High
BRN	Brunei	Asia	no	71 236.46	4.09	0.01	7 High
USA	United States	Northern America	no	54 922 480.00	2 036.40	0.00	8 High
GRC	Greece	Europe	no	1 181 283.00	8.12	0.00	9 High
RUS	Russia	Europe	no	6 325 795.00	24.90	0.00	10 High
CAN	Canada	Northern America	no	6 291 917.00	15.16	0.00	11 High
ITA	Italy	Europe	no	8 604 332.00	1.48	0.00	12 High
GNQ	Equatorial Guinea	Africa	no	20 061.44	0.00	0.00	13 High
KOR	South Korea	Asia	no	5 538 605.00	0.00	0.00	14 High
DEU	Germany	Europe	no	15 114 870.00	0.00	0.00	15 High
FRA	France	Europe	no	10 329 420.00	0.00	0.00	16 High
GBR	United Kingdom	Europe	no	7 806 797.00	0.00	0.00	17 High
IRL	Ireland	Europe	no	778 821.60	0.00	0.00	18 High
OMN	Oman	Asia	no	202 533.60	0.00	0.00	19 High
ARE	United Arab Emirates	Asia	no	1 282 119.00	0.00	0.00	20 High
URY	Uruguay	Latin America and the Caribbean	no	116 459.70	0.00	0.00	21 High
VEN	Venezuela	Latin America and the Caribbean	no	1 154 528.00	0.00	0.00	22 High
CYP	Cyprus	Asia	no	71 610.53	0.00	0.00	23 High
LBY	Libya	Africa	no	73 757.40	0.00	0.00	24 High
DNK	Denmark	Europe	no	1 346 393.00	0.00	0.00	25 High
SVN	Slovenia	Europe	no	139 899.70	0.00	0.00	26 High
NOR	Norway	Europe	no	1 933 679.00	0.00	0.00	27 High
HRV	Croatia	Europe	no	188 113.70	0.00	0.00	28 High
MLT	Malta	Europe	no	36 990.21	0.00	0.00	29 High
ESP	Spain	Europe	no	6 233 955.00	0.00	0.00	30 High
ISR	Israel	Asia	no	853 829.30	0.00	0.00	31 High
SYC	Seychelles	Africa	no	6 234.98	0.00	0.00	32 High
NLD	Netherlands	Europe	no	3 410 955.00	0.00	0.00	33 High
PRT	Portugal	Europe	no	1 054 344.00	0.00	0.00	34 High
LIE	Liechtenstein	Europe	no	18 837.10			35 High
FIN	Finland	Europe	no	965 383.40			36 High
POL	Poland	Europe	no	1 614 716.00			37 High
KWT	Kuwait	Asia	no	469 418.40			38 High
MCO	Monaco	Europe	no	20 716.40			39 High
CZE	Czech Republic	Europe	no	1 007 263.00			40 High
ISL	Iceland	Europe	no	57 291.68			41 High
SAU	Saudi Arabia	Asia	no	2 141 419.00			42 High
QAT	Qatar	Asia	no	624 817.70			43 High
LVA	Latvia	Europe	no	95 608.77			44 High
BEL	Belgium	Europe	no	1 980 551.00			45 High
LTU	Lithuania	Europe	no	135 613.80			46 High

CAPRA Team

GAR

UNISDR
The United Nations Office for Disaster Risk Reduction

Global Risk Assessment 2015

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
AUT	Austria	Europe	no	1 801 472.00			47 High
HUN	Hungary	Europe	no	562 479.60			48 High
LUX	Luxembourg	Europe	no	201 130.60			49 High
SVK	Slovakia	Europe	no	414 782.80			50 High
SWE	Sweden	Europe	no	1 747 501.00			51 High
EST	Estonia	Europe	no	79 617.31			52 High
SMR	San Marino	Europe	no	4 049.35			53 High
CHE	Switzerland	Europe	no	3 421 606.00			54 High
TWN	Taiwan	Asia	no	1 680 401.00	4.53	0.00	1 ---
MMR	Myanmar	Asia	no	195 390.10	0.00	0.00	2 ---
FLK	Falkland Islands	Latin America and the Caribbean	no	44.94	0.00	0.00	3 ---
ESH	Western Sahara	Africa	no	3 690.88	0.00	0.00	4 ---
GIB	Gibraltar	Europe	no	4 042.19	0.00	0.00	5 ---
PSE	State of Palestine	Asia	no	69 454.30	0.00	0.00	6 ---
GUF	French Guiana	Latin America and the Caribbean	no	16 800.40	0.00	0.00	7 ---
PRK	North Korea	Asia	no	77 982.15	0.00	0.00	8 ---
MYT	Mayotte	Africa	no	6 949.04	0.00	0.00	9 ---
COD	Democratic Republic of the Congo	Africa	no	27 401.97			10 ---
FRO	Faroe Islands	Europe	no	9 272.37			11 ---
AND	Andorra	Europe	no	8 381.65			12 ---
REU	Reunion	Africa	no	67 897.68			13 ---
ROU	Romania	Europe	no	555 697.40			14 ---

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

SIDS

Earthquake

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	596.11	2 745.77	217.10	1
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	13.06	62.22	209.89	2
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	26.66	220.06	121.15	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	30.93	278.74	110.96	4
PNG	Papua New Guinea	Oceania	yes	47 017.90	73.59	712.13	103.34	5
SLB	Solomon Islands	Oceania	yes	3 693.47	3.61	61.07	59.11	6
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	8.60	167.77	51.26	7
VUT	Vanuatu	Oceania	yes	2 809.61	7.65	209.05	36.59	8
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	354.23	9 810.60	36.11	9
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	363.87	13 128.05	27.72	10
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	22.82	836.55	27.28	11
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	16.14	691.62	23.34	12
TON	Tonga	Oceania	yes	1 303.32	3.35	155.95	21.48	13
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	48.75	2 908.06	16.76	14
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	5.06	311.83	16.23	15
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	2.79	176.87	15.77	16
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	2.95	289.92	10.18	17
BHR	Bahrain	Asia	yes	103 503.00	25.66	5 920.01	4.33	18
NCL	New Caledonia	Oceania	yes	17 113.28	2.38	832.14	2.86	19
COM	Comoros	Africa	yes	1 426.14	0.25	106.33	2.35	20
FJI	Fiji	Oceania	yes	11 571.04	1.52	743.90	2.04	21
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.06	37.71	1.59	22
FSM	Micronesia	Oceania	yes	1 347.82	0.06	37.80	1.59	23
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.06	129.58	0.46	24
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	3.41	8 294.53	0.41	25
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.06	710.54	0.08	26
CPV	Cape Verde	Africa	yes	7 137.79	0.04	631.08	0.06	27
SGP	Singapore	Asia	yes	1 126 584.00	2.02	77 176.05	0.03	28
MDV	Maldives	Asia	yes	7 443.12	0.01	401.09	0.02	29
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.01	445.78	0.02	30
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.02	2 212.19	0.01	31
KIR	Kiribati	Oceania	yes	595.11	0.00	18.91	0.00	32
MUS	Mauritius	Africa	yes	44 217.93	0.00	2 528.27	0.00	33
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	20.54			34
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	78.91			35
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	119.53			36
TLS	Timor-Leste	Asia	yes	12 524.21	14.59			37
PLW	Palau	Oceania	yes	780.07	0.13			38
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	3.26			39
WSM	Samoa	Oceania	yes	1 930.49	0.40			40
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	4.44			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	179.86			42
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.10			43
BMU	Bermuda	Northern America	yes	10 451.91	0.00			44
MHL	Marshall Islands	Oceania	yes	766.31	0.00			45
PYF	French Polynesia	Oceania	yes	22 001.96	0.00			46
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	12.69			47
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	1.09			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	119.53	446.46	267.73	1
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	596.11	2 677.80	222.61	2
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	26.66	147.24	181.07	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	30.93	221.82	139.44	4
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	13.06	98.52	132.56	5
PNG	Papua New Guinea	Oceania	yes	47 017.90	73.59	601.41	122.36	6
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	8.60	140.47	61.22	7
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	363.87	6 156.66	59.10	8
VUT	Vanuatu	Oceania	yes	2 809.61	7.65	134.70	56.79	9
TON	Tonga	Oceania	yes	1 303.32	3.35	89.11	37.59	10
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	22.82	682.20	33.45	11
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	354.23	10 716.01	33.06	12
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	5.06	197.93	25.56	13
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	16.14	662.32	24.37	14
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	2.79	131.22	21.26	15
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	48.75	2 413.61	20.20	16
SLB	Solomon Islands	Oceania	yes	3 693.47	3.61	179.01	20.17	17
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	2.95	245.85	12.00	18
NCL	New Caledonia	Oceania	yes	17 113.28	2.38	237.76	10.01	19
BHR	Bahrain	Asia	yes	103 503.00	25.66	4 433.56	5.79	20
FJI	Fiji	Oceania	yes	11 571.04	1.52	530.21	2.87	21
COM	Comoros	Africa	yes	1 426.14	0.25	97.13	2.57	22
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.06	24.20	2.48	23
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.06	41.99	1.43	24
FSM	Micronesia	Oceania	yes	1 347.82	0.06	62.10	0.97	25
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.06	424.74	0.14	26
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	3.41	25 838.20	0.13	27
CPV	Cape Verde	Africa	yes	7 137.79	0.04	345.43	0.12	28
SGP	Singapore	Asia	yes	1 126 584.00	2.02	30 365.38	0.07	29
MDV	Maldives	Asia	yes	7 443.12	0.01	166.72	0.06	30
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.01	418.66	0.02	31
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.02	1 352.04	0.01	32
KIR	Kiribati	Oceania	yes	595.11	0.00	18.39	0.00	33
PYF	French Polynesia	Oceania	yes	22 001.96	0.00	699.17	0.00	34
MUS	Mauritius	Africa	yes	44 217.93	0.00	1 718.18	0.00	35
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	20.54			36
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	78.91			37
PLW	Palau	Oceania	yes	780.07	0.13			38
TLS	Timor-Leste	Asia	yes	12 524.21	14.59			39
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	3.26			40
WSM	Samoa	Oceania	yes	1 930.49	0.40			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	179.86			42
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.10			43
BMU	Bermuda	Northern America	yes	10 451.91	0.00			44
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	4.44			45
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	12.69			46
MHL	Marshall Islands	Oceania	yes	766.31	0.00			47
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	1.09			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	596.11	18 936.68	31.48	1
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	26.66	848.95	31.40	2
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	30.93	1 385.30	22.33	3
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	13.06	595.93	21.92	4
PNG	Papua New Guinea	Oceania	yes	47 017.90	73.59	3 406.96	21.60	5
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	119.53	11 390.92	10.49	6
VUT	Vanuatu	Oceania	yes	2 809.61	7.65	856.99	8.93	7
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	8.60	1 049.08	8.20	8
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	363.87	64 670.22	5.63	9
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	16.14	2 989.30	5.40	10
TON	Tonga	Oceania	yes	1 303.32	3.35	683.04	4.90	11
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	22.82	4 725.45	4.83	12
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	354.23	81 605.58	4.34	13
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	5.06	1 405.54	3.60	14
SLB	Solomon Islands	Oceania	yes	3 693.47	3.61	1 206.60	2.99	15
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	2.79	940.15	2.97	16
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	48.75	18 131.16	2.69	17
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	2.95	1 713.10	1.72	18
BHR	Bahrain	Asia	yes	103 503.00	25.66	22 622.93	1.13	19
NCL	New Caledonia	Oceania	yes	17 113.28	2.38	3 665.63	0.65	20
PLW	Palau	Oceania	yes	780.07	0.13	276.06	0.47	21
WSM	Samoa	Oceania	yes	1 930.49	0.40	959.61	0.42	22
FJI	Fiji	Oceania	yes	11 571.04	1.52	4 579.41	0.33	23
FSM	Micronesia	Oceania	yes	1 347.82	0.06	192.70	0.31	24
COM	Comoros	Africa	yes	1 426.14	0.25	870.93	0.29	25
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.06	264.75	0.23	26
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.06	423.29	0.14	27
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.06	1 110.15	0.05	28
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	3.41	67 674.48	0.05	29
CPV	Cape Verde	Africa	yes	7 137.79	0.04	2 062.97	0.02	30
SGP	Singapore	Asia	yes	1 126 584.00	2.02	229 373.05	0.01	31
MDV	Maldives	Asia	yes	7 443.12	0.01	1 376.52	0.01	32
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.01	2 057.83	0.00	33
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.02	9 584.50	0.00	34
KIR	Kiribati	Oceania	yes	595.11	0.00	337.90	0.00	35
PYF	French Polynesia	Oceania	yes	22 001.96	0.00	4 114.03	0.00	36
MUS	Mauritius	Africa	yes	44 217.93	0.00	13 384.43	0.00	37
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	20.54			38
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	78.91			39
TLS	Timor-Leste	Asia	yes	12 524.21	14.59			40
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	3.26			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	179.86			42
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.10			43
BMU	Bermuda	Northern America	yes	10 451.91	0.00			44
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	4.44			45
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	12.69			46
MHL	Marshall Islands	Oceania	yes	766.31	0.00			47
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	1.09			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Earthquake) [million US$]	AAL/PC [‰]	Ranking
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	596.11	8.68	1
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	1.09	6.88	2
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	26.66	6.48	3
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	13.06	6.44	4
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	20.54	5.34	5
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	4.44	5.13	6
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	30.93	4.94	7
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	179.86	4.37	8
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	119.53	4.23	9
VUT	Vanuatu	Oceania	yes	2 809.61	7.65	2.72	10
TON	Tonga	Oceania	yes	1 303.32	3.35	2.57	11
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	12.69	2.37	12
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	78.91	1.99	13
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	8.60	1.90	14
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	16.14	1.81	15
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	363.87	1.80	16
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	22.82	1.63	17
PNG	Papua New Guinea	Oceania	yes	47 017.90	73.59	1.57	18
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	5.06	1.51	19
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	354.23	1.37	20
TLS	Timor-Leste	Asia	yes	12 524.21	14.59	1.16	21
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	2.79	1.05	22
SLB	Solomon Islands	Oceania	yes	3 693.47	3.61	0.98	23
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	48.75	0.69	24
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	2.95	0.49	25
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	3.26	0.38	26
BHR	Bahrain	Asia	yes	103 503.00	25.66	0.25	27
WSM	Samoa	Oceania	yes	1 930.49	0.40	0.21	28
COM	Comoros	Africa	yes	1 426.14	0.25	0.18	29
PLW	Palau	Oceania	yes	780.07	0.13	0.17	30
NCL	New Caledonia	Oceania	yes	17 113.28	2.38	0.14	31
FJI	Fiji	Oceania	yes	11 571.04	1.52	0.13	32
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.10	0.10	33
FSM	Micronesia	Oceania	yes	1 347.82	0.06	0.04	34
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.06	0.03	35
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.06	0.03	36
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	3.41	0.02	37
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.06	0.01	38
CPV	Cape Verde	Africa	yes	7 137.79	0.04	0.01	39
SGP	Singapore	Asia	yes	1 126 584.00	2.02	0.00	40
MDV	Maldives	Asia	yes	7 443.12	0.01	0.00	41
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.01	0.00	42
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.02	0.00	43
BMU	Bermuda	Northern America	yes	10 451.91	0.00	0.00	44
MHL	Marshall Islands	Oceania	yes	766.31	0.00	0.00	45
MUS	Mauritius	Africa	yes	44 217.93	0.00	0.00	46
PYF	French Polynesia	Oceania	yes	22 001.96	0.00	0.00	47
KIR	Kiribati	Oceania	yes	595.11	0.00	0.00	48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	765.87	542.98	70.90	1
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	516.67	257.56	49.85	2
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 200.59	490.79	40.88	3
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	24 640.84	9 891.61	40.14	4
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 459.33	2 056.19	24.31	5
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	835.58	171.03	20.47	6
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 224.85	498.71	11.80	7
VUT	Vanuatu	Oceania	yes	2 809.61	828.24	95.44	11.52	8
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 996.00	228.10	11.43	9
TON	Tonga	Oceania	yes	1 303.32	466.26	51.10	10.96	10
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	2 584.46	282.44	10.93	11
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	61 163.68	5 241.65	8.57	12
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 335.76	105.38	7.89	13
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	14 362.26	1 106.97	7.71	14
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	103 134.78	6 228.78	6.04	15
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	709.36	38.30	5.40	16
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	1 012.44	49.34	4.87	17
SLB	Solomon Islands	Oceania	yes	3 693.47	1 096.40	48.96	4.47	18
PNG	Papua New Guinea	Oceania	yes	47 017.90	15 289.37	560.14	3.66	19
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 624.29	44.75	2.76	20
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	35.29	1.32	21
WSM	Samoa	Oceania	yes	1 930.49	801.92	7.19	0.90	22
FJI	Fiji	Oceania	yes	11 571.04	3 855.02	25.06	0.65	23
PLW	Palau	Oceania	yes	780.07	247.04	1.34	0.54	24
BHR	Bahrain	Asia	yes	103 503.00	32 890.11	110.59	0.34	25
COM	Comoros	Africa	yes	1 426.14	598.93	1.91	0.32	26
STP	Sao Tome And Principe	Africa	yes	2 122.70	310.68	0.78	0.25	27
FSM	Micronesia	Oceania	yes	1 347.82	316.25	0.75	0.24	28
GNB	Guinea-Bissau	Africa	yes	2 029.35	960.78	0.83	0.09	29
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	68 233.90	50.41	0.07	30
CPV	Cape Verde	Africa	yes	7 137.79	1 879.40	0.78	0.04	31
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	2 990.13	0.44	0.01	32
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 420.00	0.31	0.00	33
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 298.79	0.11	0.00	34
SGP	Singapore	Asia	yes	1 126 584.00	297 941.27	3.18	0.00	35
MDV	Maldives	Asia	yes	7 443.12	2 299.84	0.00	0.00	36
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				37
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54			38
MHL	Marshall Islands	Oceania	yes	766.31	190.91			39
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				40
TLS	Timor-Leste	Asia	yes	12 524.21				41
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				42
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				43
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				44
KIR	Kiribati	Oceania	yes	595.11	168.95			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				46
BMU	Bermuda	Northern America	yes	10 451.91	5 473.54			47
MUS	Mauritius	Africa	yes	44 217.93	11 929.25			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	751.25	542.98	72.28	1
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	502.59	257.56	51.25	2
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	21 217.50	9 891.61	46.62	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 169.67	490.79	41.96	4
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 520.71	2 056.19	24.13	5
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	805.98	171.03	21.22	6
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 343.90	228.10	16.97	7
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 093.85	498.71	12.18	8
VUT	Vanuatu	Oceania	yes	2 809.61	793.94	95.44	12.02	9
TON	Tonga	Oceania	yes	1 303.32	478.96	51.10	10.67	10
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	58 355.99	5 241.65	8.98	11
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	70 740.33	6 228.78	8.81	12
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	13 707.64	1 106.97	8.08	13
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 310.32	105.38	8.04	14
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	705.64	38.30	5.43	15
SLB	Solomon Islands	Oceania	yes	3 693.47	960.50	48.96	5.10	16
PNG	Papua New Guinea	Oceania	yes	47 017.90	14 641.57	560.14	3.83	17
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 506.30	44.75	2.97	18
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	35.29	1.32	19
WSM	Samoa	Oceania	yes	1 930.49	772.60	7.19	0.93	20
FJI	Fiji	Oceania	yes	11 571.04	3 774.64	25.06	0.66	21
PLW	Palau	Oceania	yes	780.07	237.98	1.34	0.56	22
BHR	Bahrain	Asia	yes	103 503.00	26 919.51	110.59	0.41	23
COM	Comoros	Africa	yes	1 426.14	617.44	1.91	0.31	24
STP	Sao Tome And Principe	Africa	yes	2 122.70	308.18	0.78	0.25	25
FSM	Micronesia	Oceania	yes	1 347.82	343.25	0.75	0.22	26
GNB	Guinea-Bissau	Africa	yes	2 029.35	959.79	0.83	0.09	27
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	67 240.57	50.41	0.07	28
CPV	Cape Verde	Africa	yes	7 137.79	1 817.52	0.78	0.04	29
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	3 018.73	0.44	0.01	30
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 217.51	0.31	0.00	31
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 261.79	0.11	0.00	32
SGP	Singapore	Asia	yes	1 126 584.00	290 759.38	3.18	0.00	33
MDV	Maldives	Asia	yes	7 443.12	1 952.47	0.00	0.00	34
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				35
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54			36
MHL	Marshall Islands	Oceania	yes	766.31	226.50			37
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				38
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				39
TLS	Timor-Leste	Asia	yes	12 524.21				40
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38				41
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				42
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				43
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				44
KIR	Kiribati	Oceania	yes	595.11	252.94			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				46
BMU	Bermuda	Northern America	yes	10 451.91	6 852.92			47
MUS	Mauritius	Africa	yes	44 217.93	11 943.22			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Earthquake) [million US$]	PML250/PC [%]	Ranking
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	9 891.61	14.41	1
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	21.48	13.56	2
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	542.98	13.20	3
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	257.56	12.70	4
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	90.84	10.50	5
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	385.67	10.02	6
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	3 238.06	7.87	7
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	490.79	7.84	8
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	2 056.19	7.27	9
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	228.10	4.27	10
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	1 670.34	4.22	11
TON	Tonga	Oceania	yes	1 303.32	51.10	3.92	12
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	171.03	3.77	13
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	498.71	3.55	14
VUT	Vanuatu	Oceania	yes	2 809.61	95.44	3.40	15
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	282.44	3.17	16
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	105.38	3.13	17
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	5 241.65	2.59	18
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	6 228.78	2.40	19
TLS	Timor-Leste	Asia	yes	12 524.21	199.51	1.59	20
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	1 106.97	1.57	21
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	38.30	1.45	22
SLB	Solomon Islands	Oceania	yes	3 693.47	48.96	1.33	23
PNG	Papua New Guinea	Oceania	yes	47 017.90	560.14	1.19	24
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	44.75	0.75	25
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	49.34	0.58	26
WSM	Samoa	Oceania	yes	1 930.49	7.19	0.37	27
FJI	Fiji	Oceania	yes	11 571.04	25.06	0.22	28
NCL	New Caledonia	Oceania	yes	17 113.28	35.29	0.21	29
PLW	Palau	Oceania	yes	780.07	1.34	0.17	30
COM	Comoros	Africa	yes	1 426.14	1.91	0.13	31
BHR	Bahrain	Asia	yes	103 503.00	110.59	0.11	32
FSM	Micronesia	Oceania	yes	1 347.82	0.75	0.06	33
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.57	0.05	34
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.83	0.04	35
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.78	0.04	36
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	50.41	0.03	37
CPV	Cape Verde	Africa	yes	7 137.79	0.78	0.01	38
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.44	0.01	39
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.11	0.00	40
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.31	0.00	41
SGP	Singapore	Asia	yes	1 126 584.00	3.18	0.00	42
MDV	Maldives	Asia	yes	7 443.12	0.00	0.00	43
KIR	Kiribati	Oceania	yes	595.11			44
BMU	Bermuda	Northern America	yes	10 451.91			45
MUS	Mauritius	Africa	yes	44 217.93			46
PYF	French Polynesia	Oceania	yes	22 001.96			47
MHL	Marshall Islands	Oceania	yes	766.31			48

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

SIDS

Tropical Cyclone Wind

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	171.57	278.74	615.53	1
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	4 035.05	9 810.60	411.30	2
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	23.83	62.22	382.98	3
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	846.32	2 212.19	382.57	4
SLB	Solomon Islands	Oceania	yes	3 693.47	21.24	61.07	347.78	5
NCL	New Caledonia	Oceania	yes	17 113.28	221.95	832.14	266.72	6
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	38.88	220.06	176.68	7
VUT	Vanuatu	Oceania	yes	2 809.61	35.05	209.05	167.66	8
TON	Tonga	Oceania	yes	1 303.32	18.03	155.95	115.62	9
FSM	Micronesia	Oceania	yes	1 347.82	4.31	37.80	114.02	10
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	307.49	2 908.06	105.74	11
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	28.15	289.92	97.10	12
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	20.42	311.83	65.48	13
FJI	Fiji	Oceania	yes	11 571.04	45.22	743.90	60.79	14
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.12	167.77	60.32	15
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	35.47	836.55	42.40	16
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	509.16	13 128.05	38.78	17
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	6.58	176.87	37.20	18
MUS	Mauritius	Africa	yes	44 217.93	57.15	2 528.27	22.60	19
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	182.37	8 294.53	21.99	20
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	59.34	2 745.77	21.61	21
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	13.30	691.62	19.23	22
COM	Comoros	Africa	yes	1 426.14	0.26	106.33	2.45	23
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.87	712.13	1.22	24
CPV	Cape Verde	Africa	yes	7 137.79	0.15	631.08	0.24	25
KIR	Kiribati	Oceania	yes	595.11	0.00	18.91	0.00	26
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	445.78	0.00	27
BHR	Bahrain	Asia	yes	103 503.00	0.00	5 920.01	0.00	28
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	710.54	0.00	29
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	37.71	0.00	30
MDV	Maldives	Asia	yes	7 443.12	0.00	401.09	0.00	31
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	129.58	0.00	32
SGP	Singapore	Asia	yes	1 126 584.00	0.00	77 176.05	0.00	33
BMU	Bermuda	Northern America	yes	10 451.91	61.19			34
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	388.26			35
PYF	French Polynesia	Oceania	yes	22 001.96	104.08			36
WSM	Samoa	Oceania	yes	1 930.49	14.29			37
PLW	Palau	Oceania	yes	780.07	11.88			38
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.65			39
MHL	Marshall Islands	Oceania	yes	766.31	0.25			40
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	94.27			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	563.47			42
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	257.35			43
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	40.65			44
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	66.12			45
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	2.56			46
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	20.61			47
TLS	Timor-Leste	Asia	yes	12 524.21	0.00			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
NCL	New Caledonia	Oceania	yes	17 113.28	221.95	237.76	933.52	1
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	171.57	221.82	773.46	2
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	846.32	1 352.04	625.96	3
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	4 035.05	10 716.01	376.54	4
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	38.88	147.24	264.06	5
VUT	Vanuatu	Oceania	yes	2 809.61	35.05	134.70	260.21	6
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	23.83	98.52	241.88	7
TON	Tonga	Oceania	yes	1 303.32	18.03	89.11	202.33	8
PYF	French Polynesia	Oceania	yes	22 001.96	104.08	699.17	148.86	9
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	307.49	2 413.61	127.40	10
SLB	Solomon Islands	Oceania	yes	3 693.47	21.24	179.01	118.65	11
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	28.15	245.85	114.50	12
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	20.42	197.93	103.17	13
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	40.65	446.46	91.05	14
FJI	Fiji	Oceania	yes	11 571.04	45.22	530.21	85.29	15
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	509.16	6 156.66	82.70	16
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.12	140.47	72.04	17
FSM	Micronesia	Oceania	yes	1 347.82	4.31	62.10	69.40	18
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	35.47	682.20	51.99	19
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	6.58	131.22	50.14	20
MUS	Mauritius	Africa	yes	44 217.93	57.15	1 718.18	33.26	21
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	59.34	2 677.80	22.16	22
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	13.30	662.32	20.08	23
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	182.37	25 838.20	7.06	24
COM	Comoros	Africa	yes	1 426.14	0.26	97.13	2.68	25
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.87	601.41	1.45	26
CPV	Cape Verde	Africa	yes	7 137.79	0.15	345.43	0.43	27
KIR	Kiribati	Oceania	yes	595.11	0.00	18.39	0.00	28
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	418.66	0.00	29
BHR	Bahrain	Asia	yes	103 503.00	0.00	4 433.56	0.00	30
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	424.74	0.00	31
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	24.20	0.00	32
MDV	Maldives	Asia	yes	7 443.12	0.00	166.72	0.00	33
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	41.99	0.00	34
SGP	Singapore	Asia	yes	1 126 584.00	0.00	30 365.38	0.00	35
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	94.27			36
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	388.26			37
PLW	Palau	Oceania	yes	780.07	11.88			38
WSM	Samoa	Oceania	yes	1 930.49	14.29			39
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.65			40
MHL	Marshall Islands	Oceania	yes	766.31	0.25			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	563.47			42
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	66.12			43
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	2.56			44
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	20.61			45
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	257.35			46
BMU	Bermuda	Northern America	yes	10 451.91	61.19			47
TLS	Timor-Leste	Asia	yes	12 524.21	0.00			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	171.57	1 385.30	123.85	1
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	846.32	9 584.50	88.30	2
NCL	New Caledonia	Oceania	yes	17 113.28	221.95	3 665.63	60.55	3
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	4 035.05	81 605.58	49.45	4
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	38.88	848.95	45.80	5
PLW	Palau	Oceania	yes	780.07	11.88	276.06	43.03	6
VUT	Vanuatu	Oceania	yes	2 809.61	35.05	856.99	40.90	7
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	23.83	595.93	39.99	8
TON	Tonga	Oceania	yes	1 303.32	18.03	683.04	26.40	9
PYF	French Polynesia	Oceania	yes	22 001.96	104.08	4 114.03	25.30	10
FSM	Micronesia	Oceania	yes	1 347.82	4.31	192.70	22.37	11
SLB	Solomon Islands	Oceania	yes	3 693.47	21.24	1 206.60	17.60	12
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	307.49	18 131.16	16.96	13
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	28.15	1 713.10	16.43	14
WSM	Samoa	Oceania	yes	1 930.49	14.29	959.61	14.89	15
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	20.42	1 405.54	14.53	16
FJI	Fiji	Oceania	yes	11 571.04	45.22	4 579.41	9.87	17
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.12	1 049.08	9.65	18
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	509.16	64 670.22	7.87	19
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	35.47	4 725.45	7.51	20
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	6.58	940.15	7.00	21
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	13.30	2 989.30	4.45	22
MUS	Mauritius	Africa	yes	44 217.93	57.15	13 384.43	4.27	23
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	40.65	11 390.92	3.57	24
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	59.34	18 936.68	3.13	25
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	182.37	67 674.48	2.69	26
COM	Comoros	Africa	yes	1 426.14	0.26	870.93	0.30	27
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.87	3 406.96	0.26	28
CPV	Cape Verde	Africa	yes	7 137.79	0.15	2 062.97	0.07	29
KIR	Kiribati	Oceania	yes	595.11	0.00	337.90	0.00	30
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	2 057.83	0.00	31
BHR	Bahrain	Asia	yes	103 503.00	0.00	22 622.93	0.00	32
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	1 110.15	0.00	33
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	264.75	0.00	34
MDV	Maldives	Asia	yes	7 443.12	0.00	1 376.52	0.00	35
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	423.29	0.00	36
SGP	Singapore	Asia	yes	1 126 584.00	0.00	229 373.05	0.00	37
TLS	Timor-Leste	Asia	yes	12 524.21	0.00			38
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	388.26			39
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.65			40
MHL	Marshall Islands	Oceania	yes	766.31	0.25			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	563.47			42
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	20.61			43
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	2.56			44
BMU	Bermuda	Northern America	yes	10 451.91	61.19			45
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	66.12			46
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	94.27			47
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	257.35			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Cyclonic Wind) [million US$]	AAL/PC [‰]	Ranking
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	388.26	45.39	1
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	171.57	27.42	2
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	20.61	19.64	3
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	846.32	18.50	4
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	94.27	17.64	5
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	66.12	17.18	6
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	2.56	16.16	7
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	4 035.05	15.58	8
PLW	Palau	Oceania	yes	780.07	11.88	15.23	9
TON	Tonga	Oceania	yes	1 303.32	18.03	13.83	10
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	563.47	13.70	11
NCL	New Caledonia	Oceania	yes	17 113.28	221.95	12.97	12
VUT	Vanuatu	Oceania	yes	2 809.61	35.05	12.48	13
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.65	12.31	14
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	23.83	11.75	15
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	38.88	9.46	16
WSM	Samoa	Oceania	yes	1 930.49	14.29	7.40	17
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	257.35	6.51	18
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	20.42	6.07	19
BMU	Bermuda	Northern America	yes	10 451.91	61.19	5.85	20
SLB	Solomon Islands	Oceania	yes	3 693.47	21.24	5.75	21
PYF	French Polynesia	Oceania	yes	22 001.96	104.08	4.73	22
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	28.15	4.70	23
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	307.49	4.35	24
FJI	Fiji	Oceania	yes	11 571.04	45.22	3.91	25
FSM	Micronesia	Oceania	yes	1 347.82	4.31	3.20	26
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	35.47	2.53	27
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	509.16	2.52	28
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	6.58	2.49	29
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.12	2.23	30
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	13.30	1.49	31
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	40.65	1.44	32
MUS	Mauritius	Africa	yes	44 217.93	57.15	1.29	33
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	182.37	1.04	34
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	59.34	0.86	35
MHL	Marshall Islands	Oceania	yes	766.31	0.25	0.33	36
COM	Comoros	Africa	yes	1 426.14	0.26	0.18	37
CPV	Cape Verde	Africa	yes	7 137.79	0.15	0.02	38
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.87	0.02	39
BHR	Bahrain	Asia	yes	103 503.00	0.00	0.00	40
SGP	Singapore	Asia	yes	1 126 584.00	0.00	0.00	41
TLS	Timor-Leste	Asia	yes	12 524.21	0.00	0.00	42
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	0.00	43
KIR	Kiribati	Oceania	yes	595.11	0.00	0.00	44
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	0.00	45
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	0.00	46
MDV	Maldives	Asia	yes	7 443.12	0.00	0.00	47
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	0.00	48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	1 012.44	6 310.05	623.25	1
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 200.59	3 759.86	313.17	2
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 420.00	16 817.83	199.74	3
PLW	Palau	Oceania	yes	780.07	247.04	418.25	169.30	4
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	4 515.48	168.34	5
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	765.87	910.93	118.94	6
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 996.00	2 211.68	110.81	7
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	516.67	527.78	102.15	8
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	103 134.78	99 284.51	96.27	9
TON	Tonga	Oceania	yes	1 303.32	466.26	406.70	87.23	10
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54	2 782.99	80.72	11
SLB	Solomon Islands	Oceania	yes	3 693.47	1 096.40	713.40	65.07	12
VUT	Vanuatu	Oceania	yes	2 809.61	828.24	523.29	63.18	13
WSM	Samoa	Oceania	yes	1 930.49	801.92	479.52	59.80	14
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	14 362.26	8 582.34	59.76	15
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 624.29	815.97	50.24	16
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 335.76	515.75	38.61	17
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	835.58	262.51	31.42	18
FSM	Micronesia	Oceania	yes	1 347.82	316.25	87.90	27.79	19
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	61 163.68	16 195.53	26.48	20
FJI	Fiji	Oceania	yes	11 571.04	3 855.02	936.45	24.29	21
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 224.85	1 015.04	24.03	22
BMU	Bermuda	Northern America	yes	10 451.91	5 473.54	1 219.97	22.29	23
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	709.36	121.90	17.18	24
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	2 584.46	366.83	14.19	25
MUS	Mauritius	Africa	yes	44 217.93	11 929.25	1 238.71	10.38	26
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 459.33	823.37	9.73	27
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	24 640.84	1 455.50	5.91	28
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	68 233.90	2 345.94	3.44	29
MHL	Marshall Islands	Oceania	yes	766.31	190.91	4.69	2.46	30
COM	Comoros	Africa	yes	1 426.14	598.93	8.41	1.40	31
CPV	Cape Verde	Africa	yes	7 137.79	1 879.40	7.17	0.38	32
PNG	Papua New Guinea	Oceania	yes	47 017.90	15 289.37	17.39	0.11	33
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	2 990.13	0.00	0.00	34
SGP	Singapore	Asia	yes	1 126 584.00	297 941.27			35
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 298.79			36
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				37
TLS	Timor-Leste	Asia	yes	12 524.21				38
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				39
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				40
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				41
BHR	Bahrain	Asia	yes	103 503.00	32 890.11			42
KIR	Kiribati	Oceania	yes	595.11	168.95			43
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				44
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				45
MDV	Maldives	Asia	yes	7 443.12	2 299.84			46
STP	Sao Tome And Principe	Africa	yes	2 122.70	310.68			47
GNB	Guinea-Bissau	Africa	yes	2 029.35	960.78			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 169.67	3 759.86	321.45	1
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 217.51	16 817.83	204.66	2
PLW	Palau	Oceania	yes	780.07	237.98	418.25	175.75	3
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	4 515.48	168.34	4
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 343.90	2 211.68	164.57	5
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	70 740.33	99 284.51	140.35	6
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	751.25	910.93	121.26	7
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	502.59	527.78	105.01	8
TON	Tonga	Oceania	yes	1 303.32	478.96	406.70	84.91	9
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54	2 782.99	80.72	10
SLB	Solomon Islands	Oceania	yes	3 693.47	960.50	713.40	74.27	11
VUT	Vanuatu	Oceania	yes	2 809.61	793.94	523.29	65.91	12
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	13 707.64	8 582.34	62.61	13
WSM	Samoa	Oceania	yes	1 930.49	772.60	479.52	62.07	14
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 506.30	815.97	54.17	15
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 310.32	515.75	39.36	16
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	805.98	262.51	32.57	17
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	58 355.99	16 195.53	27.75	18
FSM	Micronesia	Oceania	yes	1 347.82	343.25	87.90	25.61	19
FJI	Fiji	Oceania	yes	11 571.04	3 774.64	936.45	24.81	20
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 093.85	1 015.04	24.79	21
BMU	Bermuda	Northern America	yes	10 451.91	6 852.92	1 219.97	17.80	22
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	705.64	121.90	17.28	23
MUS	Mauritius	Africa	yes	44 217.93	11 943.22	1 238.71	10.37	24
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 520.71	823.37	9.66	25
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	21 217.50	1 455.50	6.86	26
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	67 240.57	2 345.94	3.49	27
MHL	Marshall Islands	Oceania	yes	766.31	226.50	4.69	2.07	28
COM	Comoros	Africa	yes	1 426.14	617.44	8.41	1.36	29
CPV	Cape Verde	Africa	yes	7 137.79	1 817.52	7.17	0.39	30
PNG	Papua New Guinea	Oceania	yes	47 017.90	14 641.57	17.39	0.12	31
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	3 018.73	0.00	0.00	32
SGP	Singapore	Asia	yes	1 126 584.00	290 759.38			33
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 261.79			34
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				35
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				36
TLS	Timor-Leste	Asia	yes	12 524.21				37
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38				38
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				39
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				40
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				41
BHR	Bahrain	Asia	yes	103 503.00	26 919.51			42
KIR	Kiribati	Oceania	yes	595.11	252.94			43
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				44
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				45
MDV	Maldives	Asia	yes	7 443.12	1 952.47			46
STP	Sao Tome And Principe	Africa	yes	2 122.70	308.18			47
GNB	Guinea-Bissau	Africa	yes	2 029.35	959.79			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Cyclonic Wind) [million US$]	PML250/PC [%]	Ranking
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	6 310.05	73.77	1
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	3 759.86	60.09	2
PLW	Palau	Oceania	yes	780.07	418.25	53.62	3
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	541.46	51.60	4
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	2 211.68	41.38	5
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	64.68	40.83	6
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	99 284.51	38.33	7
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	16 817.83	36.77	8
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	15 043.78	36.59	9
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	1 209.91	31.43	10
TON	Tonga	Oceania	yes	1 303.32	406.70	31.20	11
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	269.26	31.11	12
NCL	New Caledonia	Oceania	yes	17 113.28	4 515.48	26.39	13
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	527.78	26.03	14
WSM	Samoa	Oceania	yes	1 930.49	479.52	24.84	15
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	910.93	22.15	16
SLB	Solomon Islands	Oceania	yes	3 693.47	713.40	19.32	17
VUT	Vanuatu	Oceania	yes	2 809.61	523.29	18.62	18
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	6 707.92	16.96	19
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	515.75	15.34	20
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	815.97	13.61	21
PYF	French Polynesia	Oceania	yes	22 001.96	2 782.99	12.65	22
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	8 582.34	12.14	23
BMU	Bermuda	Northern America	yes	10 451.91	1 219.97	11.67	24
FJI	Fiji	Oceania	yes	11 571.04	936.45	8.09	25
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	16 195.53	8.01	26
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	1 015.04	7.23	27
FSM	Micronesia	Oceania	yes	1 347.82	87.90	6.52	28
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	262.51	5.79	29
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	121.90	4.61	30
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	366.83	4.12	31
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	823.37	2.91	32
MUS	Mauritius	Africa	yes	44 217.93	1 238.71	2.80	33
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	1 455.50	2.12	34
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	2 345.94	1.34	35
MHL	Marshall Islands	Oceania	yes	766.31	4.69	0.61	36
COM	Comoros	Africa	yes	1 426.14	8.41	0.59	37
CPV	Cape Verde	Africa	yes	7 137.79	7.17	0.10	38
PNG	Papua New Guinea	Oceania	yes	47 017.90	17.39	0.04	39
TLS	Timor-Leste	Asia	yes	12 524.21	0.17	0.00	40
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	0.00	41
SGP	Singapore	Asia	yes	1 126 584.00			42
KIR	Kiribati	Oceania	yes	595.11			43
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16			44
GNB	Guinea-Bissau	Africa	yes	2 029.35			45
MDV	Maldives	Asia	yes	7 443.12			46
STP	Sao Tome And Principe	Africa	yes	2 122.70			47
BHR	Bahrain	Asia	yes	103 503.00			48

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

SIDS

Tropical Cyclone Storm Surge

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	1 343.66	2 212.19	607.39	1
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	31.63	62.22	508.34	2
NCL	New Caledonia	Oceania	yes	17 113.28	258.21	832.14	310.30	3
SLB	Solomon Islands	Oceania	yes	3 693.47	18.42	61.07	301.61	4
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	66.72	278.74	239.37	5
FJI	Fiji	Oceania	yes	11 571.04	85.05	743.90	114.33	6
VUT	Vanuatu	Oceania	yes	2 809.61	23.82	209.05	113.94	7
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	15.11	176.87	85.43	8
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	16.50	220.06	74.98	9
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	21.25	311.83	68.15	10
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.95	167.77	65.27	11
FSM	Micronesia	Oceania	yes	1 347.82	2.07	37.80	54.76	12
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	45.25	836.55	54.09	13
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	15.36	289.92	52.98	14
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	26.05	691.62	37.67	15
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	95.42	2 908.06	32.81	16
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	320.03	9 810.60	32.62	17
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	139.54	8 294.53	16.82	18
MUS	Mauritius	Africa	yes	44 217.93	36.37	2 528.27	14.39	19
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	11.36	2 745.77	4.14	20
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	40.19	13 128.05	3.06	21
COM	Comoros	Africa	yes	1 426.14	0.30	106.33	2.82	22
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.56	712.13	0.79	23
STP	Sao Tome And Principe	Africa	yes	2 122.70		129.58		24
GNB	Guinea-Bissau	Africa	yes	2 029.35		37.71		25
SGP	Singapore	Asia	yes	1 126 584.00		77 176.05		26
TON	Tonga	Oceania	yes	1 303.32		155.95		27
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16		445.78		28
PYF	French Polynesia	Oceania	yes	22 001.96				29
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	68.73			30
MHL	Marshall Islands	Oceania	yes	766.31				31
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.07			32
WSM	Samoa	Oceania	yes	1 930.49				33
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	70.70			34
TLS	Timor-Leste	Asia	yes	12 524.21				35
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	10.51			36
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	94.11			37
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				38
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	4.38			39
BHR	Bahrain	Asia	yes	103 503.00		5 920.01		40
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06		710.54		41
CPV	Cape Verde	Africa	yes	7 137.79		631.08		42
KIR	Kiribati	Oceania	yes	595.11		18.91		43
PLW	Palau	Oceania	yes	780.07	0.93			44
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	340.04			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				46
BMU	Bermuda	Northern America	yes	10 451.91				47
MDV	Maldives	Asia	yes	7 443.12		401.09		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
NCL	New Caledonia	Oceania	yes	17 113.28	258.21	237.76	1 086.03	1
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	1 343.66	1 352.04	993.80	2
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	31.63	98.52	321.06	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	66.72	221.82	300.78	4
VUT	Vanuatu	Oceania	yes	2 809.61	23.82	134.70	176.84	5
FJI	Fiji	Oceania	yes	11 571.04	85.05	530.21	160.41	6
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	15.11	131.22	115.15	7
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	16.50	147.24	112.06	8
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	21.25	197.93	107.36	9
SLB	Solomon Islands	Oceania	yes	3 693.47	18.42	179.01	102.90	10
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.95	140.47	77.95	11
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	45.25	682.20	66.33	12
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	15.36	245.85	62.48	13
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	95.42	2 413.61	39.53	14
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	26.05	662.32	39.33	15
FSM	Micronesia	Oceania	yes	1 347.82	2.07	62.10	33.33	16
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	320.03	10 716.01	29.86	17
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	10.51	446.46	23.54	18
MUS	Mauritius	Africa	yes	44 217.93	36.37	1 718.18	21.17	19
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	40.19	6 156.66	6.53	20
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	139.54	25 838.20	5.40	21
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	11.36	2 677.80	4.24	22
COM	Comoros	Africa	yes	1 426.14	0.30	97.13	3.09	23
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.56	601.41	0.93	24
SGP	Singapore	Asia	yes	1 126 584.00		30 365.38		25
TON	Tonga	Oceania	yes	1 303.32		89.11		26
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16		418.66		27
PYF	French Polynesia	Oceania	yes	22 001.96		699.17		28
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	68.73			29
MHL	Marshall Islands	Oceania	yes	766.31				30
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.07			31
WSM	Samoa	Oceania	yes	1 930.49				32
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	70.70			33
TLS	Timor-Leste	Asia	yes	12 524.21				34
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	94.11			35
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				36
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	4.38			37
BHR	Bahrain	Asia	yes	103 503.00		4 433.56		38
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06		424.74		39
CPV	Cape Verde	Africa	yes	7 137.79		345.43		40
KIR	Kiribati	Oceania	yes	595.11		18.39		41
PLW	Palau	Oceania	yes	780.07	0.93			42
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	340.04			43
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				44
BMU	Bermuda	Northern America	yes	10 451.91				45
MDV	Maldives	Asia	yes	7 443.12		166.72		46
STP	Sao Tome And Principe	Africa	yes	2 122.70		41.99		47
GNB	Guinea-Bissau	Africa	yes	2 029.35		24.20		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	1 343.66	9 584.50	140.19	1
NCL	New Caledonia	Oceania	yes	17 113.28	258.21	3 665.63	70.44	2
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	31.63	595.93	53.08	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	66.72	1 385.30	48.16	4
VUT	Vanuatu	Oceania	yes	2 809.61	23.82	856.99	27.79	5
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	16.50	848.95	19.44	6
FJI	Fiji	Oceania	yes	11 571.04	85.05	4 579.41	18.57	7
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	15.11	940.15	16.07	8
SLB	Solomon Islands	Oceania	yes	3 693.47	18.42	1 206.60	15.27	9
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	21.25	1 405.54	15.12	10
FSM	Micronesia	Oceania	yes	1 347.82	2.07	192.70	10.74	11
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.95	1 049.08	10.44	12
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	45.25	4 725.45	9.58	13
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	15.36	1 713.10	8.97	14
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	26.05	2 989.30	8.71	15
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	95.42	18 131.16	5.26	16
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	320.03	81 605.58	3.92	17
PLW	Palau	Oceania	yes	780.07	0.93	276.06	3.37	18
MUS	Mauritius	Africa	yes	44 217.93	36.37	13 384.43	2.72	19
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	139.54	67 674.48	2.06	20
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	10.51	11 390.92	0.92	21
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	40.19	64 670.22	0.62	22
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	11.36	18 936.68	0.60	23
COM	Comoros	Africa	yes	1 426.14	0.30	870.93	0.34	24
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.56	3 406.96	0.16	25
SGP	Singapore	Asia	yes	1 126 584.00		229 373.05		26
TON	Tonga	Oceania	yes	1 303.32		683.04		27
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16		2 057.83		28
PYF	French Polynesia	Oceania	yes	22 001.96		4 114.03		29
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	68.73			30
MHL	Marshall Islands	Oceania	yes	766.31				31
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.07			32
WSM	Samoa	Oceania	yes	1 930.49		959.61		33
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	70.70			34
TLS	Timor-Leste	Asia	yes	12 524.21				35
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	94.11			36
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				37
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	4.38			38
BHR	Bahrain	Asia	yes	103 503.00		22 622.93		39
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06		1 110.15		40
CPV	Cape Verde	Africa	yes	7 137.79		2 062.97		41
KIR	Kiribati	Oceania	yes	595.11		337.90		42
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	340.04			43
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				44
BMU	Bermuda	Northern America	yes	10 451.91				45
MDV	Maldives	Asia	yes	7 443.12		1 376.52		46
STP	Sao Tome And Principe	Africa	yes	2 122.70		423.29		47
GNB	Guinea-Bissau	Africa	yes	2 029.35		264.75		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Storm Surge) [million US$]	AAL/PC [‰]	Ranking
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	1 343.66	29.37	1
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	4.38	27.65	2
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	31.63	15.60	3
NCL	New Caledonia	Oceania	yes	17 113.28	258.21	15.09	4
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	68.73	12.86	5
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	10.07	11.63	6
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	66.72	10.66	7
VUT	Vanuatu	Oceania	yes	2 809.61	23.82	8.48	8
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	340.04	8.27	9
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	70.70	8.27	10
FJI	Fiji	Oceania	yes	11 571.04	85.05	7.35	11
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	21.25	6.32	12
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	15.11	5.71	13
SLB	Solomon Islands	Oceania	yes	3 693.47	18.42	4.99	14
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	16.50	4.01	15
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	45.25	3.22	16
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	26.05	2.92	17
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	15.36	2.56	18
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	10.95	2.41	19
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	94.11	2.38	20
FSM	Micronesia	Oceania	yes	1 347.82	2.07	1.54	21
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	95.42	1.35	22
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	320.03	1.24	23
PLW	Palau	Oceania	yes	780.07	0.93	1.19	24
MUS	Mauritius	Africa	yes	44 217.93	36.37	0.82	25
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	139.54	0.80	26
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	10.51	0.37	27
COM	Comoros	Africa	yes	1 426.14	0.30	0.21	28
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	40.19	0.20	29
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	11.36	0.17	30
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.56	0.01	31
STP	Sao Tome And Principe	Africa	yes	2 122.70			32
PYF	French Polynesia	Oceania	yes	22 001.96			33
SGP	Singapore	Asia	yes	1 126 584.00			34
MHL	Marshall Islands	Oceania	yes	766.31			35
WSM	Samoa	Oceania	yes	1 930.49			36
TLS	Timor-Leste	Asia	yes	12 524.21			37
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16			38
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50			39
BHR	Bahrain	Asia	yes	103 503.00			40
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06			41
CPV	Cape Verde	Africa	yes	7 137.79			42
KIR	Kiribati	Oceania	yes	595.11			43
GNB	Guinea-Bissau	Africa	yes	2 029.35			44
TON	Tonga	Oceania	yes	1 303.32			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28			46
BMU	Bermuda	Northern America	yes	10 451.91			47
MDV	Maldives	Asia	yes	7 443.12			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 420.00	12 516.32	148.65	1
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	1 012.44	1 368.18	135.14	2
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 200.59	1 184.09	98.63	3
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	516.67	508.96	98.51	4
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	709.36	462.32	65.17	5
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	1 312.54	48.93	6
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 996.00	956.10	47.90	7
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	835.58	324.71	38.86	8
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 335.76	475.82	35.62	9
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 224.85	1 483.82	35.12	10
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	765.87	238.56	31.15	11
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 624.29	490.40	30.19	12
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	2 584.46	689.69	26.69	13
FJI	Fiji	Oceania	yes	11 571.04	3 855.02	907.78	23.55	14
SLB	Solomon Islands	Oceania	yes	3 693.47	1 096.40	256.03	23.35	15
FSM	Micronesia	Oceania	yes	1 347.82	316.25	68.04	21.51	16
PLW	Palau	Oceania	yes	780.07	247.04	33.60	13.60	17
VUT	Vanuatu	Oceania	yes	2 809.61	828.24	94.59	11.42	18
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	14 362.26	1 372.97	9.56	19
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	103 134.78	5 430.53	5.27	20
MUS	Mauritius	Africa	yes	44 217.93	11 929.25	382.82	3.21	21
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	68 233.90	1 954.53	2.86	22
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 459.33	138.19	1.63	23
COM	Comoros	Africa	yes	1 426.14	598.93	7.58	1.27	24
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	24 640.84	305.64	1.24	25
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	61 163.68	681.37	1.11	26
PNG	Papua New Guinea	Oceania	yes	47 017.90	15 289.37	16.26	0.11	27
SGP	Singapore	Asia	yes	1 126 584.00	297 941.27			28
TON	Tonga	Oceania	yes	1 303.32	466.26			29
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 298.79			30
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54			31
MHL	Marshall Islands	Oceania	yes	766.31	190.91			32
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				33
WSM	Samoa	Oceania	yes	1 930.49	801.92			34
TLS	Timor-Leste	Asia	yes	12 524.21				35
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				36
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				37
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				38
BHR	Bahrain	Asia	yes	103 503.00	32 890.11			39
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	2 990.13			40
CPV	Cape Verde	Africa	yes	7 137.79	1 879.40			41
KIR	Kiribati	Oceania	yes	595.11	168.95			42
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				43
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				44
BMU	Bermuda	Northern America	yes	10 451.91	5 473.54			45
MDV	Maldives	Asia	yes	7 443.12	2 299.84			46
STP	Sao Tome And Principe	Africa	yes	2 122.70	310.68			47
GNB	Guinea-Bissau	Africa	yes	2 029.35	960.78			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 217.51	12 516.32	152.31	1
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	502.59	508.96	101.27	2
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 169.67	1 184.09	101.23	3
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 343.90	956.10	71.14	4
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	705.64	462.32	65.52	5
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	1 312.54	48.93	6
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	805.98	324.71	40.29	7
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 310.32	475.82	36.31	8
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 093.85	1 483.82	36.25	9
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 506.30	490.40	32.56	10
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	751.25	238.56	31.76	11
SLB	Solomon Islands	Oceania	yes	3 693.47	960.50	256.03	26.66	12
FJI	Fiji	Oceania	yes	11 571.04	3 774.64	907.78	24.05	13
FSM	Micronesia	Oceania	yes	1 347.82	343.25	68.04	19.82	14
PLW	Palau	Oceania	yes	780.07	237.98	33.60	14.12	15
VUT	Vanuatu	Oceania	yes	2 809.61	793.94	94.59	11.91	16
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	13 707.64	1 372.97	10.02	17
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	70 740.33	5 430.53	7.68	18
MUS	Mauritius	Africa	yes	44 217.93	11 943.22	382.82	3.21	19
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	67 240.57	1 954.53	2.91	20
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 520.71	138.19	1.62	21
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	21 217.50	305.64	1.44	22
COM	Comoros	Africa	yes	1 426.14	617.44	7.58	1.23	23
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	58 355.99	681.37	1.17	24
PNG	Papua New Guinea	Oceania	yes	47 017.90	14 641.57	16.26	0.11	25
SGP	Singapore	Asia	yes	1 126 584.00	290 759.38			26
TON	Tonga	Oceania	yes	1 303.32	478.96			27
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 261.79			28
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54			29
MHL	Marshall Islands	Oceania	yes	766.31	226.50			30
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				31
WSM	Samoa	Oceania	yes	1 930.49	772.60			32
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				33
TLS	Timor-Leste	Asia	yes	12 524.21				34
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38				35
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				36
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				37
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				38
BHR	Bahrain	Asia	yes	103 503.00	26 919.51			39
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	3 018.73			40
CPV	Cape Verde	Africa	yes	7 137.79	1 817.52			41
KIR	Kiribati	Oceania	yes	595.11	252.94			42
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				43
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				44
BMU	Bermuda	Northern America	yes	10 451.91	6 852.92			45
MDV	Maldives	Asia	yes	7 443.12	1 952.47			46
STP	Sao Tome And Principe	Africa	yes	2 122.70	308.18			47
GNB	Guinea-Bissau	Africa	yes	2 029.35	959.79			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Storm Surge) [million US$]	PML250/PC [%]	Ranking
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	59.61	37.63	1
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	12 516.32	27.36	2
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	508.96	25.10	3
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 184.09	18.92	4
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	163.34	18.87	5
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	956.10	17.89	6
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	462.32	17.48	7
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	1 368.18	15.99	8
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	5 973.07	14.53	9
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	475.82	14.15	10
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	1 483.82	10.57	11
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	490.40	8.18	12
FJI	Fiji	Oceania	yes	11 571.04	907.78	7.85	13
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	689.69	7.74	14
NCL	New Caledonia	Oceania	yes	17 113.28	1 312.54	7.67	15
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	324.71	7.16	16
SLB	Solomon Islands	Oceania	yes	3 693.47	256.03	6.93	17
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	238.56	5.80	18
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	2 199.04	5.56	19
FSM	Micronesia	Oceania	yes	1 347.82	68.04	5.05	20
PLW	Palau	Oceania	yes	780.07	33.60	4.31	21
VUT	Vanuatu	Oceania	yes	2 809.61	94.59	3.37	22
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	5 430.53	2.10	23
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	1 372.97	1.94	24
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	1 954.53	1.12	25
MUS	Mauritius	Africa	yes	44 217.93	382.82	0.87	26
COM	Comoros	Africa	yes	1 426.14	7.58	0.53	27
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	138.19	0.49	28
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	305.64	0.45	29
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	681.37	0.34	30
PNG	Papua New Guinea	Oceania	yes	47 017.90	16.26	0.03	31
STP	Sao Tome And Principe	Africa	yes	2 122.70			32
SGP	Singapore	Asia	yes	1 126 584.00			33
PYF	French Polynesia	Oceania	yes	22 001.96			34
MHL	Marshall Islands	Oceania	yes	766.31			35
GNB	Guinea-Bissau	Africa	yes	2 029.35			36
WSM	Samoa	Oceania	yes	1 930.49			37
TLS	Timor-Leste	Asia	yes	12 524.21			38
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16			39
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50			40
BHR	Bahrain	Asia	yes	103 503.00			41
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06			42
CPV	Cape Verde	Africa	yes	7 137.79			43
KIR	Kiribati	Oceania	yes	595.11			44
TON	Tonga	Oceania	yes	1 303.32			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28			46
BMU	Bermuda	Northern America	yes	10 451.91			47
MDV	Maldives	Asia	yes	7 443.12			48

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

SIDS

Flood

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	47.27	289.92	163.05	1
PNG	Papua New Guinea	Oceania	yes	47 017.90	94.23	712.13	132.32	2
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	53.81	445.78	120.71	3
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	32.96	710.54	46.39	4
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.77	37.71	20.42	5
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	100.83	13 128.05	7.68	6
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	8.58	8 294.53	1.03	7
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	9.93	9 810.60	1.01	8
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.91	2 745.77	0.33	9
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42		176.87		10
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44				11
MHL	Marshall Islands	Oceania	yes	766.31				12
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				13
WSM	Samoa	Oceania	yes	1 930.49				14
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				15
TLS	Timor-Leste	Asia	yes	12 524.21	1.04			16
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	32.76			17
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06		220.06		18
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85		311.83		19
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38		691.62		20
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				21
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19		167.77		22
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				23
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				24
BHR	Bahrain	Asia	yes	103 503.00		5 920.01		25
FSM	Micronesia	Oceania	yes	1 347.82		37.80		26
CPV	Cape Verde	Africa	yes	7 137.79		631.08		27
KIR	Kiribati	Oceania	yes	595.11		18.91		28
FJI	Fiji	Oceania	yes	11 571.04		743.90		29
PLW	Palau	Oceania	yes	780.07				30
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29		278.74		31
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66		2 212.19		32
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94		62.22		33
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				34
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				35
BMU	Bermuda	Northern America	yes	10 451.91				36
MDV	Maldives	Asia	yes	7 443.12		401.09		37
MUS	Mauritius	Africa	yes	44 217.93		2 528.27		38
STP	Sao Tome And Principe	Africa	yes	2 122.70		129.58		39
SGP	Singapore	Asia	yes	1 126 584.00		77 176.05		40
TON	Tonga	Oceania	yes	1 303.32		155.95		41
VUT	Vanuatu	Oceania	yes	2 809.61		209.05		42
COM	Comoros	Africa	yes	1 426.14		106.33		43
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52		836.55		44
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38		2 908.06		45
NCL	New Caledonia	Oceania	yes	17 113.28		832.14		46
PYF	French Polynesia	Oceania	yes	22 001.96				47
SLB	Solomon Islands	Oceania	yes	3 693.47		61.07		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	47.27	245.85	192.27	1
PNG	Papua New Guinea	Oceania	yes	47 017.90	94.23	601.41	156.68	2
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	53.81	418.66	128.53	3
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	32.96	424.74	77.60	4
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	32.76	446.46	73.38	5
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.77	24.20	31.82	6
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	100.83	6 156.66	16.38	7
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	9.93	10 716.01	0.93	8
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.91	2 677.80	0.34	9
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	8.58	25 838.20	0.33	10
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44				11
MHL	Marshall Islands	Oceania	yes	766.31				12
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				13
WSM	Samoa	Oceania	yes	1 930.49				14
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				15
TLS	Timor-Leste	Asia	yes	12 524.21	1.04			16
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06		147.24		17
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85		197.93		18
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38		662.32		19
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				20
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19		140.47		21
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				22
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				23
BHR	Bahrain	Asia	yes	103 503.00		4 433.56		24
FSM	Micronesia	Oceania	yes	1 347.82		62.10		25
CPV	Cape Verde	Africa	yes	7 137.79		345.43		26
KIR	Kiribati	Oceania	yes	595.11		18.39		27
FJI	Fiji	Oceania	yes	11 571.04		530.21		28
PLW	Palau	Oceania	yes	780.07				29
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29		221.82		30
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66		1 352.04		31
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94		98.52		32
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				33
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				34
BMU	Bermuda	Northern America	yes	10 451.91				35
MDV	Maldives	Asia	yes	7 443.12		166.72		36
MUS	Mauritius	Africa	yes	44 217.93		1 718.18		37
STP	Sao Tome And Principe	Africa	yes	2 122.70		41.99		38
SGP	Singapore	Asia	yes	1 126 584.00		30 365.38		39
TON	Tonga	Oceania	yes	1 303.32		89.11		40
VUT	Vanuatu	Oceania	yes	2 809.61		134.70		41
COM	Comoros	Africa	yes	1 426.14		97.13		42
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52		682.20		43
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38		2 413.61		44
NCL	New Caledonia	Oceania	yes	17 113.28		237.76		45
PYF	French Polynesia	Oceania	yes	22 001.96		699.17		46
SLB	Solomon Islands	Oceania	yes	3 693.47		179.01		47
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42		131.22		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	32.96	1 110.15	29.69	1
PNG	Papua New Guinea	Oceania	yes	47 017.90	94.23	3 406.96	27.66	2
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	47.27	1 713.10	27.59	3
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	53.81	2 057.83	26.15	4
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.77	264.75	2.91	5
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	32.76	11 390.92	2.88	6
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	100.83	64 670.22	1.56	7
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	8.58	67 674.48	0.13	8
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	9.93	81 605.58	0.12	9
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.91	18 936.68	0.05	10
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44				11
MHL	Marshall Islands	Oceania	yes	766.31				12
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				13
WSM	Samoa	Oceania	yes	1 930.49		959.61		14
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				15
TLS	Timor-Leste	Asia	yes	12 524.21	1.04			16
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06		848.95		17
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85		1 405.54		18
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38		2 989.30		19
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				20
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19		1 049.08		21
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				22
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				23
BHR	Bahrain	Asia	yes	103 503.00		22 622.93		24
FSM	Micronesia	Oceania	yes	1 347.82		192.70		25
CPV	Cape Verde	Africa	yes	7 137.79		2 062.97		26
KIR	Kiribati	Oceania	yes	595.11		337.90		27
FJI	Fiji	Oceania	yes	11 571.04		4 579.41		28
PLW	Palau	Oceania	yes	780.07		276.06		29
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29		1 385.30		30
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66		9 584.50		31
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94		595.93		32
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				33
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				34
BMU	Bermuda	Northern America	yes	10 451.91				35
MDV	Maldives	Asia	yes	7 443.12		1 376.52		36
MUS	Mauritius	Africa	yes	44 217.93		13 384.43		37
STP	Sao Tome And Principe	Africa	yes	2 122.70		423.29		38
SGP	Singapore	Asia	yes	1 126 584.00		229 373.05		39
TON	Tonga	Oceania	yes	1 303.32		683.04		40
VUT	Vanuatu	Oceania	yes	2 809.61		856.99		41
COM	Comoros	Africa	yes	1 426.14		870.93		42
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52		4 725.45		43
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38		18 131.16		44
NCL	New Caledonia	Oceania	yes	17 113.28		3 665.63		45
PYF	French Polynesia	Oceania	yes	22 001.96		4 114.03		46
SLB	Solomon Islands	Oceania	yes	3 693.47		1 206.60		47
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42		940.15		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Flood) [million US$]	AAL/PC [‰]	Ranking
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	47.27	7.89	1
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	53.81	5.59	2
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	32.96	4.08	3
PNG	Papua New Guinea	Oceania	yes	47 017.90	94.23	2.00	4
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	32.76	1.16	5
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	100.83	0.50	6
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.77	0.38	7
TLS	Timor-Leste	Asia	yes	12 524.21	1.04	0.08	8
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	8.58	0.05	9
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	9.93	0.04	10
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.91	0.01	11
MHL	Marshall Islands	Oceania	yes	766.31			12
AIA	Anguilla	Latin America and the Caribbean	yes	865.50			13
WSM	Samoa	Oceania	yes	1 930.49			14
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03			15
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06			16
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85			17
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38			18
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90			19
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19			20
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50			21
MSR	Montserrat	Latin America and the Caribbean	yes	158.42			22
BHR	Bahrain	Asia	yes	103 503.00			23
FSM	Micronesia	Oceania	yes	1 347.82			24
CPV	Cape Verde	Africa	yes	7 137.79			25
KIR	Kiribati	Oceania	yes	595.11			26
FJI	Fiji	Oceania	yes	11 571.04			27
PLW	Palau	Oceania	yes	780.07			28
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29			29
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66			30
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94			31
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10			32
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28			33
BMU	Bermuda	Northern America	yes	10 451.91			34
MDV	Maldives	Asia	yes	7 443.12			35
MUS	Mauritius	Africa	yes	44 217.93			36
STP	Sao Tome And Principe	Africa	yes	2 122.70			37
SGP	Singapore	Asia	yes	1 126 584.00			38
TON	Tonga	Oceania	yes	1 303.32			39
VUT	Vanuatu	Oceania	yes	2 809.61			40
COM	Comoros	Africa	yes	1 426.14			41
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52			42
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38			43
NCL	New Caledonia	Oceania	yes	17 113.28			44
PYF	French Polynesia	Oceania	yes	22 001.96			45
SLB	Solomon Islands	Oceania	yes	3 693.47			46
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42			47
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44			48

International Center for Numerical Methods in Engineering
Centro International de Métodos Numéricos en Ingeniería
&
INGENIAR LTDA.

SIDS

Tsunami

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GFCF [million US$]	Risk Indicator AAL/GFCF [‰]	Ranking
SLB	Solomon Islands	Oceania	yes	3 693.47	0.13	61.07	2.13	1
TON	Tonga	Oceania	yes	1 303.32	0.18	155.95	1.15	2
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.59	712.13	0.83	3
FSM	Micronesia	Oceania	yes	1 347.82	0.02	37.80	0.53	4
KIR	Kiribati	Oceania	yes	595.11	0.01	18.91	0.53	5
NCL	New Caledonia	Oceania	yes	17 113.28	0.37	832.14	0.44	6
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	3.67	9 810.60	0.37	7
VUT	Vanuatu	Oceania	yes	2 809.61	0.06	209.05	0.29	8
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	0.06	278.74	0.22	9
MDV	Maldives	Asia	yes	7 443.12	0.05	401.09	0.12	10
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	0.01	167.77	0.06	11
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	0.01	176.87	0.06	12
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	0.04	836.55	0.05	13
FJI	Fiji	Oceania	yes	11 571.04	0.03	743.90	0.04	14
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	0.10	2 908.06	0.03	15
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	0.01	311.83	0.03	16
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	0.02	691.62	0.03	17
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	0.24	13 128.05	0.02	18
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.01	2 212.19	0.00	19
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.01	2 745.77	0.00	20
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	0.02	8 294.53	0.00	21
SGP	Singapore	Asia	yes	1 126 584.00	0.00	77 176.05	0.00	22
COM	Comoros	Africa	yes	1 426.14	0.00	106.33	0.00	23
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	445.78	0.00	24
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	0.00	289.92	0.00	25
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	0.00	220.06	0.00	26
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	710.54	0.00	27
CPV	Cape Verde	Africa	yes	7 137.79	0.00	631.08	0.00	28
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	0.00	62.22	0.00	29
MUS	Mauritius	Africa	yes	44 217.93	0.00	2 528.27	0.00	30
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	129.58	0.00	31
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	37.71	0.00	32
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	0.01			33
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.01			34
BMU	Bermuda	Northern America	yes	10 451.91	0.07			35
WSM	Samoa	Oceania	yes	1 930.49	0.01			36
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	0.00			37
PLW	Palau	Oceania	yes	780.07	0.06			38
MHL	Marshall Islands	Oceania	yes	766.31	0.00			39
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	0.00			40
PYF	French Polynesia	Oceania	yes	22 001.96	0.10			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	0.28			42
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	0.12			43
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	0.03			44
TLS	Timor-Leste	Asia	yes	12 524.21	0.25			45
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	0.01			46
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	0.00			47
BHR	Bahrain	Asia	yes	103 503.00		5 920.01		48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GGC [million US$]	Risk Indicator AAL/GGC [‰]	Ranking
TON	Tonga	Oceania	yes	1 303.32	0.18	89.11	2.02	1
NCL	New Caledonia	Oceania	yes	17 113.28	0.37	237.76	1.56	2
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.59	601.41	0.98	3
SLB	Solomon Islands	Oceania	yes	3 693.47	0.13	179.01	0.73	4
KIR	Kiribati	Oceania	yes	595.11	0.01	18.39	0.54	5
VUT	Vanuatu	Oceania	yes	2 809.61	0.06	134.70	0.45	6
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	3.67	10 716.01	0.34	7
FSM	Micronesia	Oceania	yes	1 347.82	0.02	62.10	0.32	8
MDV	Maldives	Asia	yes	7 443.12	0.05	166.72	0.30	9
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	0.06	221.82	0.27	10
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	0.12	446.46	0.27	11
PYF	French Polynesia	Oceania	yes	22 001.96	0.10	699.17	0.14	12
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	0.01	131.22	0.08	13
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	0.01	140.47	0.07	14
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	0.04	682.20	0.06	15
FJI	Fiji	Oceania	yes	11 571.04	0.03	530.21	0.06	16
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	0.01	197.93	0.05	17
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	0.10	2 413.61	0.04	18
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	0.24	6 156.66	0.04	19
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	0.02	662.32	0.03	20
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.01	1 352.04	0.01	21
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.01	2 677.80	0.00	22
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	0.02	25 838.20	0.00	23
SGP	Singapore	Asia	yes	1 126 584.00	0.00	30 365.38	0.00	24
COM	Comoros	Africa	yes	1 426.14	0.00	97.13	0.00	25
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	418.66	0.00	26
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	0.00	245.85	0.00	27
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	0.00	147.24	0.00	28
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	424.74	0.00	29
CPV	Cape Verde	Africa	yes	7 137.79	0.00	345.43	0.00	30
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	0.00	98.52	0.00	31
MUS	Mauritius	Africa	yes	44 217.93	0.00	1 718.18	0.00	32
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	41.99	0.00	33
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	24.20	0.00	34
BMU	Bermuda	Northern America	yes	10 451.91	0.07			35
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	0.01			36
WSM	Samoa	Oceania	yes	1 930.49	0.01			37
PLW	Palau	Oceania	yes	780.07	0.06			38
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	0.00			39
MHL	Marshall Islands	Oceania	yes	766.31	0.00			40
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	0.00			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	0.28			42
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	0.03			43
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	0.01			44
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	0.00			45
BHR	Bahrain	Asia	yes	103 503.00		4 433.56		46
TLS	Timor-Leste	Asia	yes	12 524.21	0.25			47
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.01			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	Risk Indicator GNE [million US$]	Risk Indicator AAL/GNE [‰]	Ranking
TON	Tonga	Oceania	yes	1 303.32	0.18	683.04	0.26	1
PLW	Palau	Oceania	yes	780.07	0.06	276.06	0.22	2
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.59	3 406.96	0.17	3
SLB	Solomon Islands	Oceania	yes	3 693.47	0.13	1 206.60	0.11	4
FSM	Micronesia	Oceania	yes	1 347.82	0.02	192.70	0.10	5
NCL	New Caledonia	Oceania	yes	17 113.28	0.37	3 665.63	0.10	6
VUT	Vanuatu	Oceania	yes	2 809.61	0.06	856.99	0.07	7
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	3.67	81 605.58	0.04	8
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	0.06	1 385.30	0.04	9
MDV	Maldives	Asia	yes	7 443.12	0.05	1 376.52	0.04	10
KIR	Kiribati	Oceania	yes	595.11	0.01	337.90	0.03	11
PYF	French Polynesia	Oceania	yes	22 001.96	0.10	4 114.03	0.02	12
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	0.01	940.15	0.01	13
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	0.12	11 390.92	0.01	14
WSM	Samoa	Oceania	yes	1 930.49	0.01	959.61	0.01	15
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	0.01	1 049.08	0.01	16
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	0.04	4 725.45	0.01	17
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	0.01	1 405.54	0.01	18
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	0.02	2 989.30	0.01	19
FJI	Fiji	Oceania	yes	11 571.04	0.03	4 579.41	0.01	20
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	0.10	18 131.16	0.01	21
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	0.24	64 670.22	0.00	22
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.01	9 584.50	0.00	23
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.01	18 936.68	0.00	24
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	0.02	67 674.48	0.00	25
SGP	Singapore	Asia	yes	1 126 584.00	0.00	229 373.05	0.00	26
COM	Comoros	Africa	yes	1 426.14	0.00	870.93	0.00	27
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	2 057.83	0.00	28
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	0.00	1 713.10	0.00	29
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	0.00	848.95	0.00	30
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	1 110.15	0.00	31
CPV	Cape Verde	Africa	yes	7 137.79	0.00	2 062.97	0.00	32
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	0.00	595.93	0.00	33
MUS	Mauritius	Africa	yes	44 217.93	0.00	13 384.43	0.00	34
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	423.29	0.00	35
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	264.75	0.00	36
TLS	Timor-Leste	Asia	yes	12 524.21	0.25			37
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	0.01			38
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	0.00			39
MHL	Marshall Islands	Oceania	yes	766.31	0.00			40
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	0.00			41
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	0.28			42
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	0.00			43
BHR	Bahrain	Asia	yes	103 503.00		22 622.93		44
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	0.01			45
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.01			46
BMU	Bermuda	Northern America	yes	10 451.91	0.07			47
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	0.03			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	AAL (Tsunami) [million US$]	AAL/PC [‰]	Ranking
TON	Tonga	Oceania	yes	1 303.32	0.18	0.14	1
PLW	Palau	Oceania	yes	780.07	0.06	0.08	2
SLB	Solomon Islands	Oceania	yes	3 693.47	0.13	0.04	3
NCL	New Caledonia	Oceania	yes	17 113.28	0.37	0.02	4
VUT	Vanuatu	Oceania	yes	2 809.61	0.06	0.02	5
TLS	Timor-Leste	Asia	yes	12 524.21	0.25	0.02	6
KIR	Kiribati	Oceania	yes	595.11	0.01	0.02	7
FSM	Micronesia	Oceania	yes	1 347.82	0.02	0.01	8
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	3.67	0.01	9
PNG	Papua New Guinea	Oceania	yes	47 017.90	0.59	0.01	10
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	0.06	0.01	11
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.01	0.01	12
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	0.28	0.01	13
MDV	Maldives	Asia	yes	7 443.12	0.05	0.01	14
BMU	Bermuda	Northern America	yes	10 451.91	0.07	0.01	15
WSM	Samoa	Oceania	yes	1 930.49	0.01	0.01	16
PYF	French Polynesia	Oceania	yes	22 001.96	0.10	0.00	17
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	0.12	0.00	18
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	0.01	0.00	19
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	0.01	0.00	20
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	0.04	0.00	21
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	0.01	0.00	22
FJI	Fiji	Oceania	yes	11 571.04	0.03	0.00	23
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	0.02	0.00	24
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	0.01	0.00	25
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	0.10	0.00	26
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	0.24	0.00	27
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	0.01	0.00	28
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	0.03	0.00	29
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.01	0.00	30
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.01	0.00	31
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	0.02	0.00	32
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	0.00	33
COM	Comoros	Africa	yes	1 426.14	0.00	0.00	34
MUS	Mauritius	Africa	yes	44 217.93	0.00	0.00	35
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	0.00	36
SGP	Singapore	Asia	yes	1 126 584.00	0.00	0.00	37
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	0.00	0.00	38
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	0.00	0.00	39
MHL	Marshall Islands	Oceania	yes	766.31	0.00	0.00	40
MSR	Montserrat	Latin America and the Caribbean	yes	158.42	0.00	0.00	41
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	0.00	0.00	42
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	0.00	43
CPV	Cape Verde	Africa	yes	7 137.79	0.00	0.00	44
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	0.00	0.00	45
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	0.00	0.00	46
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	0.00	47
BHR	Bahrain	Asia	yes	103 503.00			48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GDP [million US$]	Risk Indicator PML250/GDP [%]	Ranking
VUT	Vanuatu	Oceania	yes	2 809.61	828.24	1.96	0.24	1
SLB	Solomon Islands	Oceania	yes	3 693.47	1 096.40	2.54	0.23	2
TON	Tonga	Oceania	yes	1 303.32	466.26	0.91	0.20	3
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	3.19	0.12	4
PNG	Papua New Guinea	Oceania	yes	47 017.90	15 289.37	9.37	0.06	5
FSM	Micronesia	Oceania	yes	1 347.82	316.25	0.10	0.03	6
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54	0.92	0.03	7
WSM	Samoa	Oceania	yes	1 930.49	801.92	0.20	0.02	8
PLW	Palau	Oceania	yes	780.07	247.04	0.04	0.02	9
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	68 233.90	0.00	0.00	10
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 624.29	0.00	0.00	11
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	14 362.26	0.00	0.00	12
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	709.36	0.00	0.00	13
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 996.00	0.00	0.00	14
MHL	Marshall Islands	Oceania	yes	766.31	190.91	0.00	0.00	15
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	1 012.44	0.00	0.00	16
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	61 163.68	0.00	0.00	17
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 459.33	0.00	0.00	18
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	765.87	0.00	0.00	19
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 335.76	0.00	0.00	20
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	2 584.46	0.00	0.00	21
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	835.58	0.00	0.00	22
COM	Comoros	Africa	yes	1 426.14	598.93	0.00	0.00	23
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	103 134.78	0.00	0.00	24
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 224.85	0.00	0.00	25
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	2 990.13	0.00	0.00	26
CPV	Cape Verde	Africa	yes	7 137.79	1 879.40	0.00	0.00	27
KIR	Kiribati	Oceania	yes	595.11	168.95	0.00	0.00	28
FJI	Fiji	Oceania	yes	11 571.04	3 855.02	0.00	0.00	29
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 420.00	0.00	0.00	30
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 200.59	0.00	0.00	31
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	516.67	0.00	0.00	32
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	24 640.84	0.00	0.00	33
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 298.79	0.00	0.00	34
BMU	Bermuda	Northern America	yes	10 451.91	5 473.54	0.00	0.00	35
MDV	Maldives	Asia	yes	7 443.12	2 299.84	0.00	0.00	36
MUS	Mauritius	Africa	yes	44 217.93	11 929.25	0.00	0.00	37
STP	Sao Tome And Principe	Africa	yes	2 122.70	310.68	0.00	0.00	38
GNB	Guinea-Bissau	Africa	yes	2 029.35	960.78	0.00	0.00	39
SGP	Singapore	Asia	yes	1 126 584.00	297 941.27			40
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				41
TLS	Timor-Leste	Asia	yes	12 524.21				42
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				43
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				44
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				45
BHR	Bahrain	Asia	yes	103 503.00	32 890.11			46
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				47
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	Risk Indicator GNI [million US$]	Risk Indicator PML250/GNI [%]	Ranking
SLB	Solomon Islands	Oceania	yes	3 693.47	960.50	2.54	0.26	1
VUT	Vanuatu	Oceania	yes	2 809.61	793.94	1.96	0.25	2
TON	Tonga	Oceania	yes	1 303.32	478.96	0.91	0.19	3
NCL	New Caledonia	Oceania	yes	17 113.28	2 682.35	3.19	0.12	4
PNG	Papua New Guinea	Oceania	yes	47 017.90	14 641.57	9.37	0.06	5
FSM	Micronesia	Oceania	yes	1 347.82	343.25	0.10	0.03	6
PYF	French Polynesia	Oceania	yes	22 001.96	3 447.54	0.92	0.03	7
WSM	Samoa	Oceania	yes	1 930.49	772.60	0.20	0.03	8
PLW	Palau	Oceania	yes	780.07	237.98	0.04	0.02	9
STP	Sao Tome And Principe	Africa	yes	2 122.70	308.18	0.00	0.00	10
GNB	Guinea-Bissau	Africa	yes	2 029.35	959.79	0.00	0.00	11
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	13 707.64	0.00	0.00	12
MUS	Mauritius	Africa	yes	44 217.93	11 943.22	0.00	0.00	13
MDV	Maldives	Asia	yes	7 443.12	1 952.47	0.00	0.00	14
BMU	Bermuda	Northern America	yes	10 451.91	6 852.92	0.00	0.00	15
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	705.64	0.00	0.00	16
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	1 343.90	0.00	0.00	17
MHL	Marshall Islands	Oceania	yes	766.31	226.50	0.00	0.00	18
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	1 506.30	0.00	0.00	19
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	67 240.57	0.00	0.00	20
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	502.59	0.00	0.00	21
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	58 355.99	0.00	0.00	22
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	8 217.51	0.00	0.00	23
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	8 520.71	0.00	0.00	24
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	751.25	0.00	0.00	25
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	1 310.32	0.00	0.00	26
COM	Comoros	Africa	yes	1 426.14	617.44	0.00	0.00	27
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	70 740.33	0.00	0.00	28
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	805.98	0.00	0.00	29
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	4 093.85	0.00	0.00	30
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	21 217.50	0.00	0.00	31
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	5 261.79	0.00	0.00	32
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	1 169.67	0.00	0.00	33
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	3 018.73	0.00	0.00	34
CPV	Cape Verde	Africa	yes	7 137.79	1 817.52	0.00	0.00	35
KIR	Kiribati	Oceania	yes	595.11	252.94	0.00	0.00	36
FJI	Fiji	Oceania	yes	11 571.04	3 774.64	0.00	0.00	37
SGP	Singapore	Asia	yes	1 126 584.00	290 759.38			38
AIA	Anguilla	Latin America and the Caribbean	yes	865.50				39
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03				40
TLS	Timor-Leste	Asia	yes	12 524.21				41
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38				42
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90				43
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50				44
MSR	Montserrat	Latin America and the Caribbean	yes	158.42				45
BHR	Bahrain	Asia	yes	103 503.00	26 919.51			46
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10				47
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28				48

CAPRA Team

GAR

Global Risk Assessment

UNISDR
The United Nations Office for Disaster Risk Reduction

ISO code	Country Name	Region	SIDS	Produced Capital [PC] TOTAL (Exposed value) [million US$]	PML250 (Tsunami) [million US$]	PML250/PC [%]	Ranking
TON	Tonga	Oceania	yes	1 303.32	0.91	0.07	1
VUT	Vanuatu	Oceania	yes	2 809.61	1.96	0.07	2
SLB	Solomon Islands	Oceania	yes	3 693.47	2.54	0.07	3
PNG	Papua New Guinea	Oceania	yes	47 017.90	9.37	0.02	4
NCL	New Caledonia	Oceania	yes	17 113.28	3.19	0.02	5
WSM	Samoa	Oceania	yes	1 930.49	0.20	0.01	6
FSM	Micronesia	Oceania	yes	1 347.82	0.10	0.01	7
PLW	Palau	Oceania	yes	780.07	0.04	0.01	8
PYF	French Polynesia	Oceania	yes	22 001.96	0.92	0.00	9
TLS	Timor-Leste	Asia	yes	12 524.21	0.01	0.00	10
VIR	Virgin Islands	Latin America and the Caribbean	yes	5 344.44	0.00	0.00	11
MHL	Marshall Islands	Oceania	yes	766.31	0.00	0.00	12
AIA	Anguilla	Latin America and the Caribbean	yes	865.50	0.00	0.00	13
CYM	Cayman Islands	Latin America and the Caribbean	yes	8 554.03	0.00	0.00	14
DOM	Dominican Republic	Latin America and the Caribbean	yes	202 173.30	0.00	0.00	15
HTI	Haiti	Latin America and the Caribbean	yes	28 268.62	0.00	0.00	16
KNA	St Kitts and Nevis	Latin America and the Caribbean	yes	4 112.06	0.00	0.00	17
LCA	St Lucia	Latin America and the Caribbean	yes	3 361.85	0.00	0.00	18
ABW	Aruba	Latin America and the Caribbean	yes	8 909.38	0.00	0.00	19
MTQ	Martinique	Latin America and the Caribbean	yes	39 559.90	0.00	0.00	20
GRD	Grenada	Latin America and the Caribbean	yes	4 536.19	0.00	0.00	21
VGB	British Virgin Islands	Latin America and the Caribbean	yes	3 849.50	0.00	0.00	22
KIR	Kiribati	Oceania	yes	595.11	0.00	0.00	23
COM	Comoros	Africa	yes	1 426.14	0.00	0.00	24
PRI	Puerto Rico	Latin America and the Caribbean	yes	259 030.40	0.00	0.00	25
BRB	Barbados	Latin America and the Caribbean	yes	14 036.52	0.00	0.00	26
TTO	Trinidad and Tobago	Latin America and the Caribbean	yes	68 647.91	0.00	0.00	27
SUR	Suriname	Latin America and the Caribbean	yes	9 620.16	0.00	0.00	28
CUB	Cuba	Latin America and the Caribbean	yes	174 919.40	0.00	0.00	29
BLZ	Belize	Latin America and the Caribbean	yes	5 994.43	0.00	0.00	30
JAM	Jamaica	Latin America and the Caribbean	yes	70 711.38	0.00	0.00	31
VCT	St Vincent and the Grenadines	Latin America and the Caribbean	yes	2 645.42	0.00	0.00	32
MDV	Maldives	Asia	yes	7 443.12	0.00	0.00	33
MUS	Mauritius	Africa	yes	44 217.93	0.00	0.00	34
STP	Sao Tome And Principe	Africa	yes	2 122.70	0.00	0.00	35
GUY	Guyana	Latin America and the Caribbean	yes	8 076.06	0.00	0.00	36
CPV	Cape Verde	Africa	yes	7 137.79	0.00	0.00	37
GNB	Guinea-Bissau	Africa	yes	2 029.35	0.00	0.00	38
FJI	Fiji	Oceania	yes	11 571.04	0.00	0.00	39
ATG	Antigua and Barbuda	Latin America and the Caribbean	yes	6 257.29	0.00	0.00	40
BHS	The Bahamas	Latin America and the Caribbean	yes	45 743.66	0.00	0.00	41
DMA	Dominica	Latin America and the Caribbean	yes	2 027.94	0.00	0.00	42
GLP	Guadeloupe	Latin America and the Caribbean	yes	41 119.10	0.00	0.00	43
TCA	Turks and Caicos Islands	Latin America and the Caribbean	yes	1 049.28	0.00	0.00	44
BMU	Bermuda	Northern America	yes	10 451.91	0.00	0.00	45
BHR	Bahrain	Asia	yes	103 503.00			46
MSR	Montserrat	Latin America and the Caribbean	yes	158.42			47
SGP	Singapore	Asia	yes	1 126 584.00			48