GAR 2015 Global Assessment Report on Disaster Risk Reduction

Country risk profile

UNISDR The United Nations Office for Disaster Risk Reduction

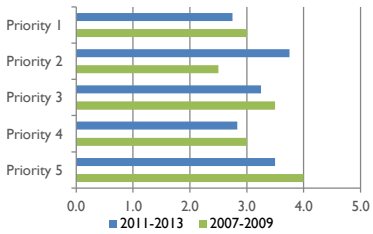
European Commission

MALAWI

Sub-Saharan Africa

[16]

HFA progress



BASIC COUNTRY STATISTICS AND INDICATORS

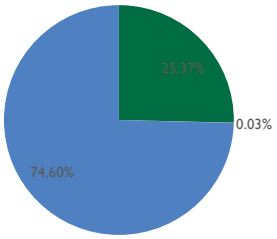
Population (million people)[1]	(2013)	16	GFCF - Gross Fixed Capital Formation (million US$)[1]	(2011)	500
Population density (People/km²)[1]	(2013)	173,6	Social expenditure (million US$)[3]		198
GDP-Gross Domestic Product (million US$)[1]	(2013)	3.705	Gross savings (million US$)[1]	(2012)	334
GDP per capita (US$)[1]	(2013)	226	Total reserves (million US$)[1]	(2013)	413
Capital stock (million US$)[2]	(2014)	18.357			

Risk drivers

Hazard Exposure			**Urbanization**		
Population growth (annual %)[1]	(2013)	2,83	Urban population growth (%)[1]	(2013)	3,7
GFCF (% GDP)[1]	(2011)	13,5	Pop living in slums (% of urban pop)[5]	(2009)	68,9
Poverty and inequality			Urban population (%)[1]	(2013)	15,9
GINI Index (0 - 100)[1]	(2010)	43,9	**Environment**		
Life expentancy at birth (years)[1]	(2012)	54,7	Ecological footprint (global hectares per capita)[6]	(2007)	0,73
Pov gap at national poverty lines (%)[1]	()	0,00	Environmental performance index (0 - 100)[7]	(2014)	40,1
Social expenditure (% GDP)[3]		5,35	Forest change (% - 2000-2012)[7]	(2012)	-7,9
Governance indicators			Freshwater withdrawals (% of internal resources)[1]	(2007)	8,4
Rule of law (-2.5 - 2.5)[4]	(2013)	-0,19	**Climate change**		
Government effectiveness (-2.5 - 2.5)[4]	(2013)	-0,56	Electiricty production from renewable energy (% total)[1]	()	
Voice and accountability (-2.5 - 2.5)[4]	(2013)	-0,19	CO2 emissions (metric tons per capita)[1]	(2010)	0,08
Control of corruption (-2.5 - 2.5)[4]	(2013)	-0,64			

DISASTER RISK[8]

Average Annual Loss (AAL)[9] by hazard



Hazard	Value	AAL/Capital stock	AAL/GFCF	AAL/Social expenditure	AAL/Total reserves	AAL/Gross savings
	[million US$]	[%]	[%]	[%]	[%]	[%]
Earthquake	8,20	0,04	1,64	4,13	1,98	2,46
Cyclonic Wind	0,01	0,00	0,00	0,01	0,00	0,00
Storm Surge	0,00	0,00	0,00	0,00	0,00	0,00
Tsunami	0,00	0,00	0,00	0,00	0,00	0,00
Volcano		0,00	---	---	---	---
Flood[10]	24,11	0,13	4,82	12,15	5,84	7,22
TOTAL	**32**	**0,2**	**6,5**	**16,3**	**7,8**	**9,7**

Risk and Development Implications[11]

Economic implications (Capital stock - savings) **60,2**

Growth and financial implications (GFCF - Reserves) **63,5**

Social Implications (Social expenditure) **64,4**

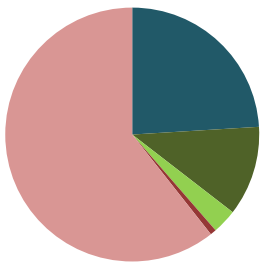
62,7

Ranking **32** out of 213

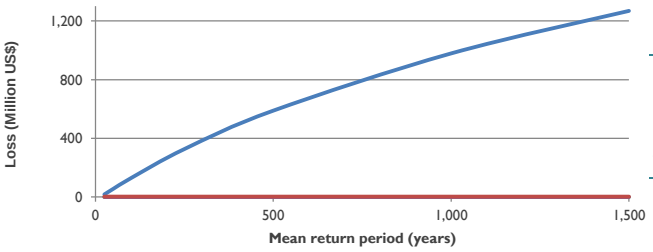
Multihazard AAL results by sector (Earthquake and cyclonic wind)

Sector	Sub Sector	Capital stock [million US$]	Average Annual Loss (AAL) [million US$]
Residential (income)[12]	Low	4.344	1,82
	Middle low	0	0,00
	Middle high	0	0,00
	High	0	0,00
Services	Commercial	2.299	0,87
	Industrial	883	0,24
Education	Private	334	0,06
	Public	10.481	4,60
Health	Private	9	0,00
	Public	14	0,00
Public buildings		0	0,00
National		18.363	7,58
Fiscal[13]		14.839	6,42

Distribution by sector



Probable Maximum Loss - PML[14] (million US$)



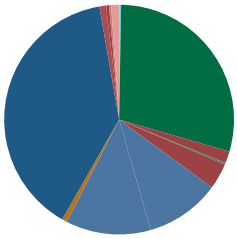
Hazard	Mean return period (years)[15]				
	100	250	500	1000	1500
Earthquake	129	327	589	979	1.268
Cyclonic Wind	0	0	0	1	1
Storm Surge	0	0	0	0	0
Tsunami	0	0	0	0	0

Earthquake — Storm Surge — Tsunami — Cyclonic wind

DISASTER LOSSES[17]

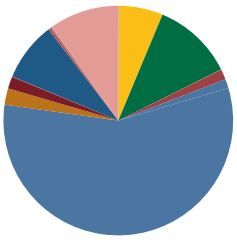
INTERNATIONALLY REPORTED LOSSES

Mortality



Alluvion, Avalanche, Earthquake, Electric Storm, Eruption, Fire, Flash Flood, Flood, Forest Fire

Total damages ('000 US$)



Avalanche, Coastal erosion, Cyclone, Drought, Earthquake, Electric Storm, Erosion, Eruption, Fire

10-year moving average

2005 - 2014

DataCards	39
Deaths	1.094
Economic Losses	31.789

Drought risk

Agricultural type: Maize

Loss	AAL	PML in US$ (mean return period - years) 5	10	20	50	100	
Baseline scenario	4500000	0	1E+07	38000000	49000000	0	5E+06
With climate change scenario	5700000	0	2E+07	48000000	60000000	0	6E+06

FALSO					
FALSO	FALSO	FALSO	FALSO	FALSO	FALSO
FALSO	FALSO	FALSO	FALSO	FALSO	FALSO

1 World Bank Development indicators. http://data.worldbank.org/ More information can be found in "Indicators definitions and sources".

2 Global Exposure Database 2014. Di Bono (2014)

3 International Labour Organisation, ILO: Total Social Protection expenditure (), Public Health Care expenditure (), World Bank Development indicators, Public Education expenditure (2011)

4 World Bank Governance indicators. http://data.worldbank.org/

5 Indicadores de los Objetivos del Desarrollo del Milenio http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=710

6 Global Footprint Network www.footprintnetwork.org

7 Environmental Performance Index, Yale Center for Environmental Law and Policy, Yale University and Center for International Earth Science Information Network (CIESIN), Columbia University http://epi.yale.edu

8 UNISDR Global Risk Assessment 2015. This section is based on technical countries risk profiles : World summarized catastrophe risk profiles: summary by country on the results from the Global Risk Model, CIMNE&INGENIAR (2015).

9 AAL: The Average Annual Loss is the expected loss per annum associated to the occurrence of future perils assuming a very long observation timeframe. It considers the damage caused on the exposed elements by small, moderate and extreme events and results a useful and robust metric for risk ranking and comparisons.

10 AAL Flood results are provisional. These results give an overview of the risk associated with river flooding. Factors other than the deth of the water also have a considerable influence on loss, which means that there is greater uncertainty compared with other hazards.

11 Risk and development implications index. This index is useful to provide a ranking of the countries based on the ratio of the expected Average Annual Loss (AAL) with relation to a set of relevant macroeconomic, financial, and social development variables. It attempts to reveal the weight of the AAL with respect to the social expenditure, 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 reflects, in adverse conditions, growth and social constraints for the country as a result of potential future disasters.

12 The fiscal portfolio is composed by the government buildings, public education and health buildings, and low income residential private buildings.

13 PML: The Probable Maximum Loss (PML) is a risk metric that represents the maximum loss that could be expected, on average, within a given number of years. PML is widely used to establish limits related to the size of reserves that, for example, insurance companies or a government should have available to buffer losses: the higher the return period, the higher the expected loss. PML always have associated a mean return period.

14 Mean return period of 100, 250, 500, 1000 and 1500 years means the 5%, 2%, 1%, 0.5% and 0.3% probability respectively of exceeding those losses in 5 years.

15 Residential buildings are classified according to the population by income level, using the GINI curve for income distribution and the countries classification limits from the World Bank. See CIMNE et al. 2013a

16 Source: OCHA/ReliefWeb. ochavisual@un.org

17 D. Guha-Sapir, R. Below, Ph. Hoyois - EM-DAT: International Disaster Database – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium.