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DEVELOPING INDICATORS FOR MEASURING PROGRESS OF DISASTER RISK REDUCTION

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Introduction

Indicators are important tools for monitoring and evaluation of any mission, programme or activity. These provide useful ready reckoners to monitor the levels progress achieved for a set of activities or sub-activities, identify the strong and weak areas and facilitate mid-course corrections, if necessary, for achieving the objectives. Every organisation routinely develops its own set of indicators for measuring the progress achieved towards realisation of its goals, objectives and targets.

It is relatively easy to develop indicators when the goals and targets of the organisation or mission are set in quantitative terms and the required data sets are also available in computing the progress achieved. It is far more difficult to develop indicators when the goals are not so well defined or are too broad and qualitative or oriented towards setting a process for achieving long term objectives rather than achieving some outputs that can be easily identified in quantitative terms.

The global development goals like poverty alleviation, gender equity, sustainable development etc are complex, long-haul and multi-dimensional and are not easily susceptible to be captured in simple indicators. The task is further complicated by the absence of easily verifiable information on various issues and presence of a large number of stakeholders at the local, national and international levels who have their diverse perspectives and inputs that cannot be easily brought in common formats.

However, despite these complexities many international organisations and multi-lateral institutions have developed global indicators for measuring human progress in different sectors at regular intervals, often on an annual basis. The United Nations Development Programme (UNDP) developed Human Development Index (HDI) as a composite statistical index of life expectancy, education and income and ranked countries into four tiers of human development – very high, high, medium and low.¹ A decade later in 2010 UNDP modified 'income' to 'decent standard of living' to upgrade the composite index to Inequality-adjusted HDI (IHDI).² Earlier in 1995 UNDP had introduced the Gender Development Index (GDI) and Gender Empowerment Measures (GEM), which were subsequently merged into Gender Inequality Index (GEI), constructed around statistical indexes based on reproductive health, empowerment and labour market participation.³

The World Bank has been publishing its annual flagship World Development Report on various thematic issues since 1978 which presents development indicators on the countries around the world on a wide range of issues on economic, social and human development. The World Development Report 2014 presented selected indicators on management of risks at the household, enterprise and macro-economic levels besides natural disasters and climate change.⁴

The UN Commission on Sustainable Development (UNCSD) developed a set of 134 indicators on sustainable development in 1995 which was subsequently condensed to 95 indicators around 14 themes of sustainable development.⁵

¹ UNDP, Human Development Index, 1990

² UNDP, The Real Wealth of Nations- The Pathways to Human Development, 2010

³ UNDP, Gender Inequality Index, 2010

⁴ The World Bank, World Development Report 2014 - Risk and Opportunity: Managing Risks for Development, 2013

⁵ UNCSD, Indicators for Sustainable Development: Guidelines and Methodologies, 2007

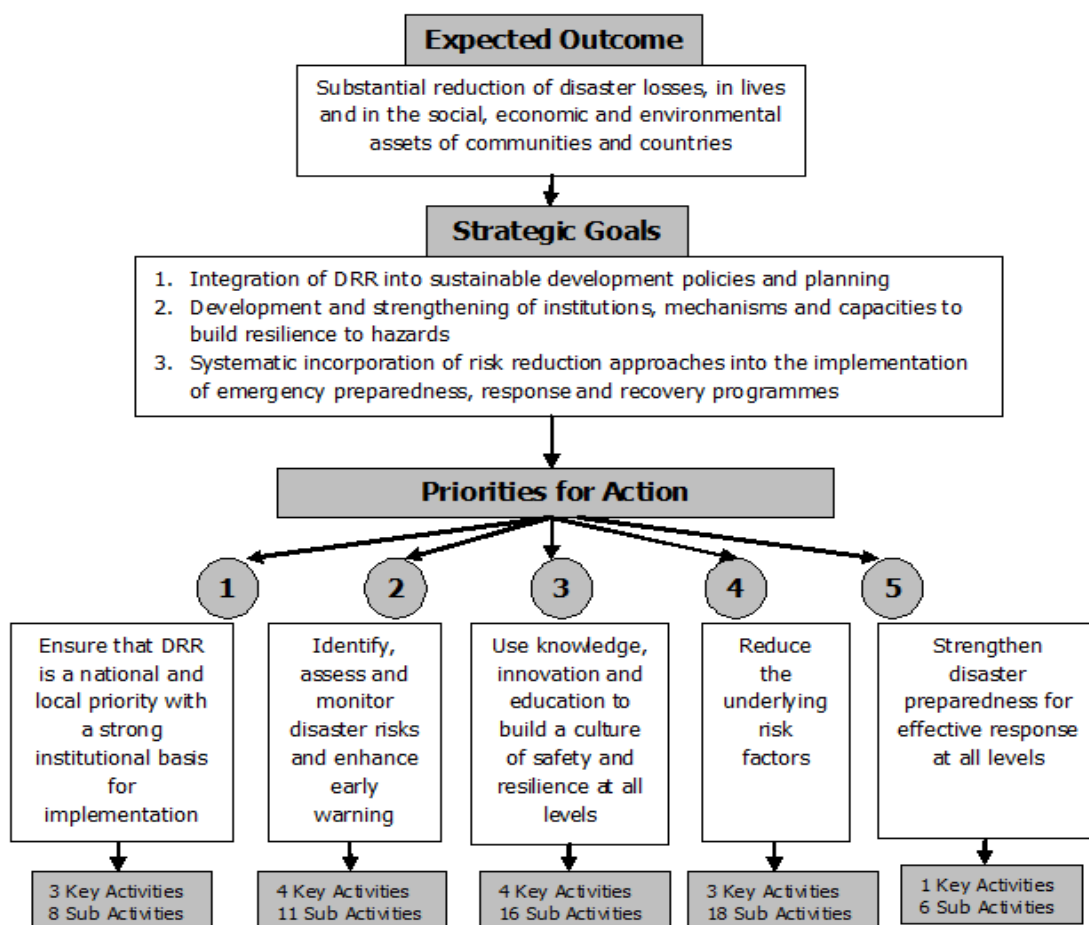
Similarly, robust methodology was developed by the United Nations Development Group (UNDG) for monitoring the progress made by the countries for achieving the Millennium Development Goals.⁶ A set of 50 indicators were developed on the 8 MDGs around which the statistical indices of the countries were brought into an inter-operable common platform for measuring progress on an annual basis.

HFA Indicators

In 2005, at the World Conference on Disaster Reduction in the city of Kobe in Hyogo Province of Japan, 168 States of the world adopted the *Hyogo Framework of Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, with the overarching goal of achieving a substantial reduction in global disaster risk. The Hyogo Framework of Action (HFA) provided detailed action-oriented policy guidance based on a comprehensive understanding of disaster risks, which arise from human vulnerability to natural disasters.

The comprehensive set of activities prescribed by the HFA is structured around the Expected Outcome, 3 Strategic Goals, 5 Priorities of Action, 15 Key Activities, which is presented in the diagram below:

Structure of Hyogo Framework of Action 2005-2015



⁶ UNDG, Indicators for Monitoring Millennium Development Goals, 2003

Para 33(c) of the HFA mandated the United Nations International Strategy for Disaster Reduction (UNISDR) to

Consult with relevant United Nations agencies and organisations, regional and multi-lateral organisations and technical and scientific institutions, as well as interested States and civil society, with the view to developing generic, realistic and measurable indicators, keeping in mind available resources of individual States. These indicators could assist States to assess their progress in the implementation of the Framework of Action. The indicators should be in conformity with the internationally agreed development goals, including those contained in the Millennium Declaration; Once that first stage has been completed, States are encouraged to develop or refine indicators at the national level reflecting their individual disaster risk reduction priorities, drawing upon the generic indicators.⁷

The UNISDR, through a long process of consultations with numerous organisations, experts and individuals developed *Words into Action: A Guide for Implementing the Hyogo Framework*. This provided practical guidelines to the States and other stakeholders for taking concrete steps for implementing the HFA.⁸ Simultaneously, through further process of consultations and on line dialogue the ISDR produced *Indicators of Progress: Guidance on Measuring the Reduction of Disaster Risks and the Implementation of the Hyogo Framework of Action*.⁹

The *Indicators of Progress* prescribed a set of 22 Core Indicators for measuring the progress in the implementation of 5 Priorities of Action of the Hyogo Framework of Action:

| Priorities of Action | Core Indicators |
|---|---|
| 1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. | 1. National institutional and legal frameworks for disaster risk reduction exist with decentralized responsibilities and capacities at all levels. 2. Dedicated and adequate resources are available to implement disaster risk reduction plans at all administrative levels. 3. Community participation and decentralization is ensured through the delegation of authority and resources to local levels. 4. A national multi-sectoral platform for disaster risk reduction is functioning |
| 2. Identify, assess and monitor disaster risks and enhance early warning | 5. National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors. 6. Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities. 7. Early warning systems are in place for all major hazards, with outreach to communities. 8. National and local risk assessments take account of regional/ trans-boundary risks, with a view to regional cooperation on risk reduction. |
| 3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels. | 9. Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing system. 10. School curricula, education material and relevant trainings include risk reduction and recovery concepts and practices. 11. Research methods and tools for multi risk assessments and cost benefit analysis are developed and strengthened. 12. Country wide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities. |
| 4. Reduce the underlying risk factors. | 13. Disaster risk reduction is an integral objective of environment-related policies and plans, including for land use, natural resource management and climate change adaptation. 14. Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk. 15. Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities. |

⁷ UNISDR Geneva, *Hyogo Framework of Action- Building the Resilience of Countries and Communities to Disasters*, 2005

⁸ UNISDR Geneva, *Words into Action: A Guide for Implementing the Hyogo Framework*, 2007

⁹ UNISDR Geneva, *Indicators of Progress: Guidance on Measuring the Reduction of Disaster Risks and the Implementation of the Hyogo Framework of Action*, 2008.

| | |
|---|--|
| | <p>16. Planning and management of human settlements incorporate disaster risk reduction elements including enforcement of building codes.</p> <p>17. Disaster risk reduction measures are integrated into post-disaster recovery and rehabilitation processes.</p> <p>18. Procedures are in place to assess disaster risk impacts of all major development projects, especially infrastructure.</p> |
| 5. Strengthen disaster preparedness for effective response at all levels. | <p>19. Strong policy, technical and institutional capacities and mechanisms for disaster management, with a disaster risk reduction perspective are in place.</p> <p>20. Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.</p> <p>21. Financial reserves and contingency mechanisms are in place to enable effective response and recovery when required.</p> <p>22. Procedures are in place to exchange relevant information during disasters and to undertake post-event reviews.</p> |

Besides, 3 Indicators on 'Expected Outcome' and 7 Indicators on 'Strategic Goals' of the HFA were also prescribed. In addition the *Indicators of Progress* prescribed 118 'Additional Possible Indicators' – 9 on Strategic Goals and 109 on Priorities of Action. In addition 30 Indicators were prescribed for regional and international use. A list of these indicators is annexed-I.

In order to measure the progress achieved in the implementation of the HFA the *Indicators of Progress* prescribed a five level assessment to convert the 'qualitative characteristics' of the Hyogo Framework of Action into 'quantitative values'.

| Level of achievement | Generic description of achievement |
|----------------------|--|
| 5 | Comprehensive achievement has been attained, with the commitment and capacities to sustain efforts at all levels. |
| 4 | Substantial achievement has been attained, but with some recognised deficiencies in commitment, financial resources or operational capacities. |
| 3 | There is some commitment and capacities to achieving DRR but progress is not substantial |
| 2 | Achievements have been made but are relatively small or incomplete, but while improvements are planned, the commitment and capacities are limited. |
| 1 | Achievements are minor and there are few signs of planning or forward action to improve the situation. |

HFA Monitor

Based on the *Indicators of Progress - Guidance on Measuring the Reduction of Disaster Risks and the Implementation of the Hyogo Framework of Action* the ISDR developed *Practical Guide to National HFA Monitoring and Review through a Multi-Stakeholder Engagement Process* for biennial review of the progress achieved and challenges faced in the implementation of the HFA at all levels.¹⁰ This Guide is meant primarily for the Focal Points on Disaster Risk Reduction of the National Governments who are expected to review the implementation of the HFA through the process of multi-stakeholder consultations and submit their reports through on-line HFA Monitor. The Guide, framed originally in 2008 for the biennial monitoring cycle 2007-2009, has been further refined in 2010 and 2012 for the cycles 2009-2011 and 2011-2013 respectively.

Based on this Guide the ISDR further issued *HFA Monitor Template* to facilitate the submission

¹⁰ UNISDR Geneva, *Practical Guide to National HFA Monitoring and Review through a Multi-Stakeholder Engagement Process*, 2008, 2010, 2012.

of reports by the national governments through the on-line HFA Monitor.¹¹ This template has similarly undergone refinements for the successive biennial review of the progress in the implementation of the HFA. Similar *Regional HFA Monitor Template and Guidance* was issued in 2010 for the regional/ sub-regional organisations¹² and *Local HFA – Local Government Self-Assessment Tools* was issued 2012 for the local urban self-governing institutions around the world.¹³

HFA Monitor Template for the national governments, which is the main focus of HFA Indicators, is structured in 10 different sections covering Outcomes (Section 1), Strategic Goals (Section 2), Priorities of Action (Sections 3 to 7), Drivers of Progress (Section 8), Future Outlook (Section 9) and Stakeholders (Section 10). The sections on Outcome, Strategic Goals and Future Outlook solicit statements from the national governments regarding the achievements made, challenges faced and future plans on 3 Strategic Goals of the HFA, namely (a) integration of disaster risk reduction into sustainable development policies and practices; (b) development and strengthening of institutions, mechanisms and capacities to build resilience to hazards; and (c) systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes. The *Monitor Template* for the 2011-2013 biennial cycle added an additional element in the section on Future Outlook – post-2015 framework for disaster risk reduction. The statements submitted by the national governments around the world are generally couched in generic terms and provide very little information regarding specific strategic interventions made by the governments or stakeholders in achieving the goals or the outcome of these interventions. These statements are routinely similar for most of the countries, reiterating their commitments and highlighting the challenges but disclosing very little about the concrete action taken for implementing the priorities of action.

The concrete interventions are captured more specifically in the five sections on Priorities of Action which cover the 22 Core Indicators. Each of these five sections deals with one of the five Priorities of Action and their Core Indicators and is divided in five sub-sections - Levels of Progress, Key Questions, Means of Verification, Description and Contexts and Constraints. While the 'Levels of Progress' is the quantitative self-assessment of the national governments in a scale of 5, 'Description' and 'Contexts and Constraints' are qualitative narratives in support of the claims of progress. The 'Key Questions' and 'Means of Verification' were added in the *HFA Monitor Template* of 2009-2011 cycle to verify the claims made by the governments. However, the means of verification were never applied and self assessments of the national governments were taken in their face value in compiling the progress in the implementation of the progress of the HFA.

Section 8 of the *HFA Monitor Template* is interesting as it seeks the narration of the national governments on five cross-cutting themes of disaster risk reduction and recovery, namely (a) multi-hazard approach; (b) gender perspectives; (c) capacity development; (d) human security and social equity aspects; and (e) engagement with multi-stakeholders. The narrations are all qualitative, but specific questions are asked on levels of resilience and specific action taken in binary yes/no format which has the potentiality to generate information in quantitative terms. Section 9 of the *Template* solicits information on the stakeholders that have contributed to the process of the biennial review of the implementation of the HFA. The reports of most of the national governments indicate that multi-stakeholder consultations have taken place mostly among various sectors with the governments.

62 national governments submitted their HFA Progress Reports for the biennial cycle 2007-2009; the numbers went up to 105 for the 2009-2011 cycle, but came down to 99 for the 2011-2013 cycle. So far 140 national governments, out of 168 signatories of the Hyogo Framework of

¹¹ UNISDR Geneva, *HFA Monitor Template - HFA Monitoring and Review through a Multi-Stakeholder Engagement Process*, 2008, 2010, 2012.

¹² UNISDR Geneva, *Regional HFA Monitor Template and Guidance*, 2010.

¹³ UNISDR Geneva, *Local HFA – Local Government Self-Assessment Tools (LGSAT)*, 2012

Action, have participated in this process; but only 33 have taken part in the review of all the three biennial cycles, while the number of countries that participated in the process twice and only once are 35 and 69 respectively.¹⁴

The *Regional HFA Monitor Template* collects information on sub-regional priorities of action aligned to HFA Priorities of Action, synthesis of national progress reports, contribution of inter-governmental and international organisations for disaster risk reduction in the sub-region, challenges in the implementation of the HFA, and the recommendations for future actions. The sub-regional priorities of action are sought to be captured on the following 14 indicators, which is a modified version of the 18 indicators prescribed in the *Indicators of Progress*.¹⁵

| HFA Priorities of Action | Sub-Regional Indicators |
|---|---|
| 1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. | 1. A sub-regional framework, strategy or action plan for disaster risk reduction exists. 2. A multi-sectoral sub-regional institutional mechanism exists. 3. Institutional mechanism in place to monitor risk reduction status and progress at sub-regional level. 4. Sub-regional training/ capacity building programmes/ institutions exist to support capacity building for DRR at national/ regional levels. |
| 2. Identify, assess and monitor disaster risks and enhance early warning | 5. Institutional mechanism and procedures are in place to carry out trans-boundary risk assessments. 6. Sub-regional early warning systems exist. |
| 3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels. | 7. Sub-regional information and knowledge sharing mechanism available. 8. Sub-regional research institutions for disaster risk reduction exist. |
| 4. Reduce the underlying risk factors. | 9. DRR is an integral objective of sub-regional policies and plans. 10. Sub-regional infrastructure projects have processes to assess disaster risk impacts. |
| 5. Strengthen disaster preparedness for effective response at all levels. | 11. Sub-regional response mechanism in place to address disaster preparedness, emergency relief and rehabilitation issues across borders. 12. Sub-regional contingency mechanism exists to support countries in post disaster recovery. 13. Sub-regional catastrophe risk pooling facility available. 14. Sub-regional information exchange mechanism in place for effective communication during trans- boundary disasters. |

On the pattern of national governments the sub-regional organisations are asked to submit a descriptive narration of the progress achieved on each of these indicators, measure the level of progress in a scale 5 and provide the means of verification. Only 3 sub-national organisations, namely the South Asian Association for Regional Cooperation (SAARC), Secretariat of the Pacific Community Secretariat of the Pacific Community (SOPAC) and Comité Andino para la Prevención y Atención de Desastres (CAPRADE) submitted their progress reports for the biennial cycle 2011-13, while 4 of them Comité Andino para la Prevención y Atención de Desastres_ (CDEMA), Organisation of American States (OAS), Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC) and CAPRDE had responded during the review process of 2009-2011 cycle.¹⁶

The *Local HFA – Local Government Self-Assessment Tools* (LGSAT) was developed in 2012 in response to the ongoing ISDR campaign for Making Cities Resilient. The indicators developed for

¹⁴ <http://www.preventionweb.net/applications/hfa/qbnhfa/>

¹⁵ The details of these 18 indicators are provided in section

¹⁶ <http://www.preventionweb.net/english/hyogo/progress/reports/regional.php?pid:222&pil:1>

Indicators for Local Government Self-Assessment of HFA Progress

- Essential 1: Put in place organization & coordination to clarify everyone's roles & responsibilities [HFA 1]
Essential 2: Assign a budget & provide incentives for homeowners, low-income families, private sector to invest in risk reduction [HFA 1 and 4]
Essential 3: Update data on hazards & vulnerabilities, prepare & share risk assessments [HFA 2, 3 and 4]
Essential 4: Invest in and maintain risk reducing infrastructure, such as storm drainage [HFA 4]
Essential 5: Assess the safety of all schools and health facilities & upgrade these as necessary [HFA 2, 4 and 5]
Essential 6: Apply and enforce realistic, risk compliant building regulations and land use planning principles. Identify safe land for low-income citizens and develop upgrading of informal settlements, wherever feasible. [HFA 2, 4 and 5]
Essential 7: Ensure education programmes & training on disaster risk reduction are in place in schools and communities [HFA 1, 3 and 5]
Essential 8: Protect ecosystems & natural buffers to mitigate hazards, adapt to climate change [HFA 4]
Essential 9: Install early warning systems & emergency management capacities [HFA 2 and 5]
Essential 10: Ensure that the needs and participation of the affected population are at the centre of reconstruction [HFA 4 and 5]

Local HFA are innovative adaptations of the *Ten-point checklist for Making Cities Resilient*. 3 to 6 lead questions are asked on each of the 10 Essentials on which the city governments have to respond both in descriptive terms as well as quantitative measurement in a scale of 5, as in national and regional reports. 112 municipal/ city governments around the world submitted their progress reports in this format for the years 2011-2013. The number may not be very significant compared to the hundred thousands of city governments around the world and at least 1634 local governments that signed their commitments for making cities resilient, but this was surely a good beginning to take the HFA Monitor to the local levels.

HFA Progress

A large number of reports submitted by the national, regional and local governments through the HFA Monitor have been compiled by the ISDR and their regional offices in the shape of global and regional synthesis reports for each of the three biennial review cycles.¹⁷ ISDR has come out with a summary of all these reports 2007-2013.¹⁸ This process has further contributed to the Global Assessment Reports,¹⁹ the biennial review of the assessment of progress at the Global Platform,²⁰ the mid-term appraisal of the HFA²¹ as also the on-going global dialogue and consultations on post-Hyogo framework on disaster risk reduction.²²

The main findings of these exercises are the following:

- a) First, there has been significant progress in making disaster risk reduction both a national and a local priority among countries. Progress has been especially strong in establishing national policies and legal frameworks having decentralized responsibilities and capacities as well as in increasing the interest in establishing National Platforms for DRR. Since 2005, for example, 121 countries have enacted legislations to establish policy and legal frameworks for disaster risk reduction, 191 countries have established HFA Focal Points

¹⁷ UNISDR Europe, *Implementing the Hyogo Framework of Action in Europe: Advances and Challenges, Reports for the Period 2007-09 and 2009-11, Regional Synthesis Report 2011-13*; UNISDR Asia-Pacific, *HFA Progress in Asia-Pacific: Regional Synthesis Report 2009-11*;

¹⁸ UNISDR Geneva, *Implementation of the Hyogo Framework of Action – Summary of Reports 2007-2013*.

¹⁹ United Nations, *Global Assessment Report 2009: Risk and Poverty in a Changing Climate – Invest Today for a Safer Tomorrow*; *Global Assessment Report 2011: Revealing Risk, Redefining Development*; *Global Assessment Report 2013: From Shared Risk to Shared Value – the Business Case for Disaster Risk Reduction*.

²⁰ UNISDR Geneva, *Proceedings of the Global Platform 2007, 2009, 2011 and 2013*

²¹ UNISDR Geneva, *Hyogo Framework of Action 2005-2015: Building the Resilience of Nations and Communities to Disasters – Mid Term Review 2010-2011*.

²² UNISDR Geneva, *Synthesis Report on Consultations on the Post-2015 Framework on Disaster Risk Reduction, 2013*.

and 85 countries have established National Platforms for disaster risk reduction. However, these achievements mirror certain challenges. Countries have reported that they are struggling to mobilize sufficient resources to invest on disaster risk reduction.

- b) Second, regarding the HFA Priority Action-2 on identification, assessment and monitoring risk assessment and enhancing early warning 26% of countries reported substantial or comprehensive achievement across all indicators in 2013, an improvement over the previous cycles. New regional initiatives and trans-boundary cooperation in risk assessment have created additional opportunities that help accomplish critical DRR goals, while existing regional initiatives have advanced.
- c) Use of knowledge, innovation and education to build a culture of safety and resilience, as prescribed in HFA Priority Action-3, remains low as only 15% of countries reported substantial or comprehensive achievement across all indicators in this area. However, countries recognize that better coordination of the flow of information and warnings from the national to the local levels could enhance effectiveness. Countries further felt the need for sound knowledge management to ensure that the information collected can be identified, retrieved and used in an effective and efficient manner. The extent to which school curricula, education material and relevant training include disaster risk reduction as well as recovery concepts and practices shows significant variation. There has been, however, innovation within individual countries to educate school children, the public and professionals about disaster resilience and safety. Progress has been limited in devising nationwide public awareness strategies to create a culture of resilience. This is a common challenge in both high-income and lower-income countries.
- d) Progress has been limited with respect to this Priority for Action-4 on reducing the underlying risk factors. Only 13% of countries undertaking the review in 2013 reported comprehensive or substantial achievement across all indicators in this area, a marginal increase from the 10% that reported the same in 2009. Lack of financial resources is the major barrier to progress, especially at the local level.
- e) In 2009, 23% of countries reported substantial or comprehensive achievement across all indicators in strengthening disaster preparedness at all levels, which increased to 35% in 2013, showing that Priority Action-5 remained the second most active area of engagement. However, the country reports show uneven results regarding local preparedness both nationally and regionally, with lack of financial resources often cited as a constraint. Many countries require that local governments establish disaster preparedness plans and regular training drills, although they do not provide adequate resources for doing so.
- f) Five main drivers have pushed the agenda of disaster risk reduction forward in national policies and frameworks, but these concerns have not been matched by capacities and resources to produce substantial results on the ground. First, governments are increasingly taking a multi-hazard approach to DRR, translating and linking knowledge of the full range of hazards to all aspects of risk management. Second, gender is coming to be recognized as a critical factor in reducing vulnerabilities, but only a minority of countries is dealing with gender issues through legislations and specific programmes of empowerment. Third, capacity development is recognized as a central element in reducing disaster risk, with 60% of countries reporting ongoing implementation of strategies and frameworks developed to tackle capacity issues; but these same countries recognize that implementation is incomplete across policy and practice, and that complete buy-in from key stakeholders has not yet been secured. Fourth, the proportion of countries stating a full acknowledgement of a security/social equity approach to disaster risk reduction has increased from 46% in 2007 56% in 2013; although countries state that application is not fully implemented across policy and practice, and complete buy-in by key stakeholders is

yet to be achieved. Fifth, countries recognise that effective disaster risk reduction requires strong community engagement and partnerships can capitalize on existing coping mechanisms more effectively and strengthen community capacities. 48% of the countries have reported that significant and ongoing reliance on this approach has remained stable throughout review cycles, and another 51% of countries reporting partial reliance.

- g) While these drivers of progress have improved things, countries report a number of challenges that will have to be faced now and in the coming years. For instance, legal and policy frameworks are important but they do not automatically translate into effective DRR. Lack of clarity as to roles and assignment of priorities are organizational issues that cannot be resolved simply by referring to what is offered in frameworks. At the same time, in many cases the material means are lacking for implementing the framework in the way that legislators intended. Progress depends on having the necessary human, technical and financial resources available, with countries at all income levels reporting that insufficient resources hinder the development of everything from early warning systems to school education.
- h) The Regional HFA Monitor was introduced in 2010, but only 4 regional organisations participated in the process for the assessment cycle 2009-2011; the number came down to 3 for the 2011-2013 cycle. The reports indicate good progress achieved in trans-boundary risk assessment and regional early warning and response mechanism and highlighted the prospects of enhanced regional cooperation on capacity building and sharing of knowledge and good practices. The reports are weak in regional synthesis of national progress reports as many national governments did not participate in the process and the analysis did not add any particular value to the information already available on the subject.
- i) 112 local city governments participated in the Local HFA Monitor that was introduced in 2012 - 5 from Africa, 28 from the Americas, 8 from Europe, and 71 from Asia. Most cities assess that they are at the half way point in implementing their risk reduction programmes. The majority report relatively good progress on assessment of hazards and vulnerabilities, although there are uncertainties about the impact of climate change. Cities are investing in strengthening infrastructure but are constrained by inadequate allocation of budget and lack of incentives for investments on risk prevention and mitigation. The cities from Asia and Africa reported weak system of enforcement of building regulation and lack of transparency and accountability in risk governance.
- j) There is consensus among the countries that there should be a strong post-2015 framework for DRR to address the weak areas and emerging issues of concern as well as to take the existing agendas forward with more organized practical action. Since climate change exacerbates the risk of many disasters and is the source of new ones, climate change adaptation would be an obvious thing to include in DRR policies. Almost every country reported having difficulty inserting climate change adaptation measures into national policies. Countries further reported little success in incorporating DRR into environmental issues as well. A major challenge to implementing a security/social equity approach occurs in war-torn and post-war states. Here human capacities are so challenged that there is little time or energy available to plan, while funding constraints are extreme, limiting public investment in disaster risk reduction. Resource and logistical issues are also impediments to identifying and reaching vulnerable populations.

Are HFA Indicators adequate to measure HFA Progress?

Various national, regional, global and local reports on progress in the implementation of Hyogo Framework of Action have expressed that HFA indicators could not always be the guiding instrument in assessing the progress of HFA. The Mid-Term Appraisal of the implementation of the

Hyogo Framework of Action informed that interaction and discussion with the stakeholders was the main methodology employed for the appraisal.

The Mid-Term Review was conducted through a participatory approach involving disaster risk reduction stakeholders at regional, and, when feasible, national levels. It was guided by the 2009 Global Platform, which discussed Terms of Reference for the Mid-Term Review in three informal plenary sessions. In accordance with this guidance, the Mid-Term Review became a broad strategic review of the HFA as an instrument; it was not meant to be an evaluation of the state of disaster risk reduction worldwide or a quantitative evaluation of the implementation of the HFA to date. The information collected is therefore primarily of a qualitative nature, based on self-assessments and perceptions of the stakeholders involved.²³

The Summary of Reports on Implementation of the Hyogo Framework of Action 2007-13 by the UNISDR pointed out the inadequacy of the HFA Indicators

There are certain limitations to this. For individual countries, first of all, quantitative ratings are the subjective opinions of the multiple stakeholders contributing to the review. Multi-stakeholder dialogue reduces the level of this subjectivity, by broadening the range of input into the assessment, thereby raising the level of confidence in the results. Second, not all countries participating in the HFA file reports during all cycles, confounding strict comparisons across time periods. Because complete information is therefore not available, this report provides only a partial, indicative account of progress.²⁴

The Summary of Reports further pointed out that the progress achieved so far is qualitative, laying the foundation of more quantitative measurable achievements in the future.

The main progress made in living up to the expectations of the HFA in recent years has been qualitative, grounded in policies, legislation and planning that lay the foundation for more quantitatively measurable achievements in the future. As such, this progress represents a crucial first stage, a change of mindset without which little that is significant can be achieved. As an indication of this, governments' commitment and responsiveness to the expectations of the HFA are widely visible in their establishment of HFA Focal Points and National Platforms since 2005, indicating a shift from a crisis management approach to one of proactive risk reduction and safety.²⁵

The Global Assessment Report 2009 underscored the limitations of the existing methodology for assessing the progress in the implementation of the HFA.

A country's progress in implementing the HFA can only be measured with respect to its disaster risk, without which, any judgment on the relevance or effectiveness of disaster risk reduction efforts would be inaccurate. A challenge is posed by the fact that while current knowledge permits a broad categorization of global risk by some hazard types, disaster risk information is still heterogeneous in quality and incomplete in coverage. The lack of gender disaggregated data in most countries poses a significant additional challenge.

Therefore, the results presented for the levelling of progress must be interpreted with some caveats: while guidance was offered online to assist countries with interpreting the indicators and levels of progress, the levels accorded in the national reports are entirely based on a country's self assessment. The levelling of progress is relative and not necessarily comparable across countries (on some indicators, countries may mark themselves higher – or lower - on a relative scale because of 'rate' of progress rather than any 'absolute' criteria of progress achieved). Finally, scores on the 1-5 levels of progress do not necessarily indicate that a minimum or maximum level

²³ UNISDR Geneva, *Hyogo Framework of Action 2005-2015: Building the Resilience of Nations and Communities to Disasters – Mid Term Review 2010-2011*, page-16.

²⁴ UNISDR Geneva, *Implementation of the Hyogo Framework of Action – Summary of Reports 2007-2013*, page-4.

²⁵ Op.cit, page-6.

of progress in implementation of disaster risk reduction has been attained. Instead, a level 2 might indicate far more progress (in relative terms) for some countries than a level 3 for others.²⁶

The shortcomings of the existing HFA Indicators are inherent in its approach, methodology, process and application.

Approach

The approach of the HFA Indicators developed by the UNISDR is that it is voluntary self-assessment of three important stakeholders, namely the national governments, the regional organisations and the local city governments. Initially the Indicators were developed for the national governments, subsequently the regional organisations and city governments were included in the process through separate but inter related monitoring systems. UNISDR developed the facility of on-line HFA Monitor, and impressed upon all the concerned organisations to participate in the process, but it is not at all binding upon them to do so. Only 32% of the countries participated in the process in 2009; the numbers went up to 55% in 2011, but came down to 52% in 2013. Therefore nearly half of the countries who adopted the HFA are outside the purview of the HFA monitoring system. This cannot be considered very desirable.

The reason why the system was made voluntary was probably because the Hyogo Framework, unlike various UN Conventions like Universal Declaration of Human Rights, Convention on Rights of Children, Convention on Elimination of Discriminations Against Women, Convention on Rights of People with Disabilities etc are not legally binding upon the national governments; yet the fact remains that the HFA was negotiated and adopted by 168 countries in the Second World Conference on Disaster Reduction held in Kobe Japan in 2005 and subsequently 23 more countries have joined. The Framework itself prescribes that the UNISDR shall develop 'generic, realistic, and measurable indicators' to 'assist States to assess their progress in the implementation of the Framework of Action'. This can be interpreted to mean that UNISDR shall not only develop the indicators, it shall also assist the States in assessing their progress in the implementation of the HFA. If nearly half of the countries remain outside the monitoring system it cannot be construed to be the appropriate mechanism that would be assisting them.

Self-assessment is not always the best assessment; it could most probably be otherwise, as such assessments would have the tendency to highlight the achievements and underplay the shortcomings, particularly when such assessments are placed in public domain, opening itself to comparisons with countries around the world. During informal discussion with the national focal points of some of the developing countries it transpired that they reported very modest progress to project higher donor assistance. Either way – under or over assessment – has the danger of colouring the assessments, not making them 'realistic', as the HFA Indicators are expected to be, thereby defeating the purpose of such assessments.

Surely, there is need to review the approach. Given the non-binding character of the Hyogo Framework, States cannot be compelled to submit their self-assessments; many States may do so, many others may prefer not to, as they do at present. Therefore self-assessments should not be the sole basis of monitoring the progress, it could at best be the beginning of the process. States should be asked to submit their self-assessment along with all the supporting documents but without any self-grading. This can be considered as one of several inputs for assessing the progress of the countries. A possible list of such inputs can be listed and most of these can be collected from various sources, which can feed into the process of a rigorous, objective and transparent system of assessment and measurement of progress by an independent group of experts within the ISDR.

²⁶ United Nations, Global Assessment Report 2009, Appendix-3

Independent assessment and measurement of progress and even ranking of countries according to the progress achieved by them should not be objected by the national governments as several such assessments are regularly carried out by various international and multi-lateral organisations. Any credible and objective assessment shall be useful to the national governments to understand their strengths and weaknesses and take corrective actions to improve the position, which are the objectives of such assessments. It will be useful to the parliamentarians, policy makers, researchers, donors and other stakeholders to use the assessment reports to advocate better policies, strategies and investments.

National governments should continue to remain the main focus of the indicators as prescribed in para 33(c) of the HFA. This focus should not be diluted by extending the scope of the indicators to include supra-national and sub-national entities. The Regional Organisations and Institutions and International Organisations have their defined roles to play in the Hyogo Framework, and therefore their role and contributions should be assessed, but developing regional and local indicators to assess the progress of regional organisations and local governments are clearly not mandated by the HFA, and therefore these should be separated from the HFA monitoring process. Participation of only three sub-regional organisations out of three dozen such organisations and hundred city governments out of hundred thousand such governments around the world does not lend credence to the effectiveness of such monitoring. Therefore Regional and Local Indicators should be taken out of the HFA monitoring system; these may be pursued separately as part of advocacy campaigns of the ISDR for making cities resilient or enhancing cooperation among countries of geographical sub-regions.

Methodology

The Hyogo Framework of Action had mandated the UNISDR to develop “generic, realistic and measurable indicators, keeping in mind available resources of individual States”. Further, such indicators should be “in conformity with the internationally agreed development goals, including those contained in the Millennium Declaration.”

The UNISDR issued ‘guidance on measuring progress in reduction of risks and implementation of the HFA’²⁷, without seriously considering the methodological challenges involved in developing indicators as per the mandate of the HFA. It started with the promise that ‘the indicators may be created for the different stages of implementation’ - inputs, outputs, results and impacts – but this was not pursued and all the indicators were treated alike. It outlined ‘the characteristics that contribute to the quality of an indicator’²⁸, but did not check whether the suggested indicators have any of these characteristics. It underscored ‘the need to be quantifiable to have value in a monitoring or assessment oriented process’, but did not go beyond a graduated 5-point scale of self assessment, which were inherently subjective and lacked the vigour of scientific analysis. It emphasised the importance of selecting ‘a limited number of indicators that focus on the more essential aspects of the matter at hand that can be readily implemented and sustained over many years’, but ended up suggesting a large number of indicators.

UNISDR initially prescribed a set of 22 ‘Core Indicators’ on Priorities of Action, besides 3 indicators on Expected Outcome, 7 on Strategic Goals and 118 ‘Additional Possible Indicators’; subsequently the HFA Monitor that was developed to provide a format for submission of progress reports by the national governments, retained the Core Indicators, but modified the remaining indicators into a set Statements, Drivers of Progress, Key Questions and Means of Verification²⁹, which made the indicators a mix of highly generalized statements that do not easily lend

²⁷ UNISDR Geneva, *Indicators of Progress: Guidance on Measuring the Reduction of Disaster Risks and the Implementation of the Hyogo Framework of Action*, 2008.

²⁸ Twelve such characteristics that were outlined are – attainable, clarity/validity, comparability, cost, currency, measurable, redundancy, relevance, reliability, sensitivity, social benefits, time-bound.

²⁹ A matrix showing all these parameters is provided in Annexure-II.

themselves to scientific measurement of actual progress achieved in the implementation of the Hyogo Framework of Action. The statements on drivers of progress and key challenges and constraints contain valuable information, but these could not be captured in the indicators, thus defeating the purpose of indicators as 'management tool' for 'measuring what is actually happening against what has been planned for or hoped for' and hence 'offering insight into the effectiveness of a policy or programme, in terms of quality, quantity and timeliness, as well as any unintended consequences'.³⁰

In the context of the experiences gained during the last three biennial assessment cycles of the HFA, the effectiveness of these indicators/ monitors may be reviewed in respect of all the three components of the HFA – the expected outcome, the strategic goals and the priorities of action.

Expected Outcome

UNISDR proposed to capture the expected outcome of the HFA - substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and States – through three simple statistical indicators of natural hazard events: (a) number of deaths, (b) total economic losses, and (c) number of people affected; but these would not cover the entire gamut of 'social, economic and environmental assets of communities and States' which are far more complex. Further, data of a few years may not indicate any trend which would be clear over a longer period of time. Occurrence of a single high-intensity disaster in any year, even in a developed country, may give a highly exaggerated account which may not indicate a true picture of the actual outcome. Appreciating these difficulties HFA Monitor preferred not to broach the subject in the biennial assessment cycle; probably it should figure in end of the decade assessment - GAR 2015 – with a host of other indicators that can capture the overall outcome, over a longer period of time. Monitoring the expected outcome should not be the starting point but the end result of the overall monitoring of the implementation of HFA. Based on the progress achieved in the implementation of the priorities of action of the HFA, a composite index may be worked out for measuring the overall outcome. This is missing in the existing system of indicators.

Strategic Goals

Hyogo Framework of Action 2005-2015 has three strategic goals – integration of disaster risk reduction into sustainable development policies and practices; development and strengthening of institutions, mechanisms and capacities to build resilience to hazards; and systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes. UNISDR had proposed a set of 7 indicators and 9 possible additional indicators for measuring the progress in achieving the goals, as detailed in the matrix annexed-I, but HFA Monitor preferred to ignore these indicators and instead prescribed descriptive accounts in the shape of 'outcome statement' and 'strategic goal statement' on each of the strategic goals. Such statements are usually very general, perceptive and value loaded, which give good picture about the state of affairs, but are not very useful for measuring specific progress in precise terms.

Most of the 16 (7+9) indicators and possible additional indicators proposed by the UNISDR overlap with many of the Core Indicators of Priorities for Action 1, 4 and 5. This is contrary to the principle laid down in the same document that 'having many indicators that overlap can lead to difficulties of interpretation, confusion and a weakening of managerial action'.³¹ Probably that could be the reason why HFA Monitor did not prescribe any indicator for the strategic goals, and instead called for descriptive statements on outcome and strategic goal statements.

The strategic goals of HFA are not stand alone objectives; these sum up the core priorities of

³⁰ OP. Cit., page-6

³¹ Op. Cit., page-7

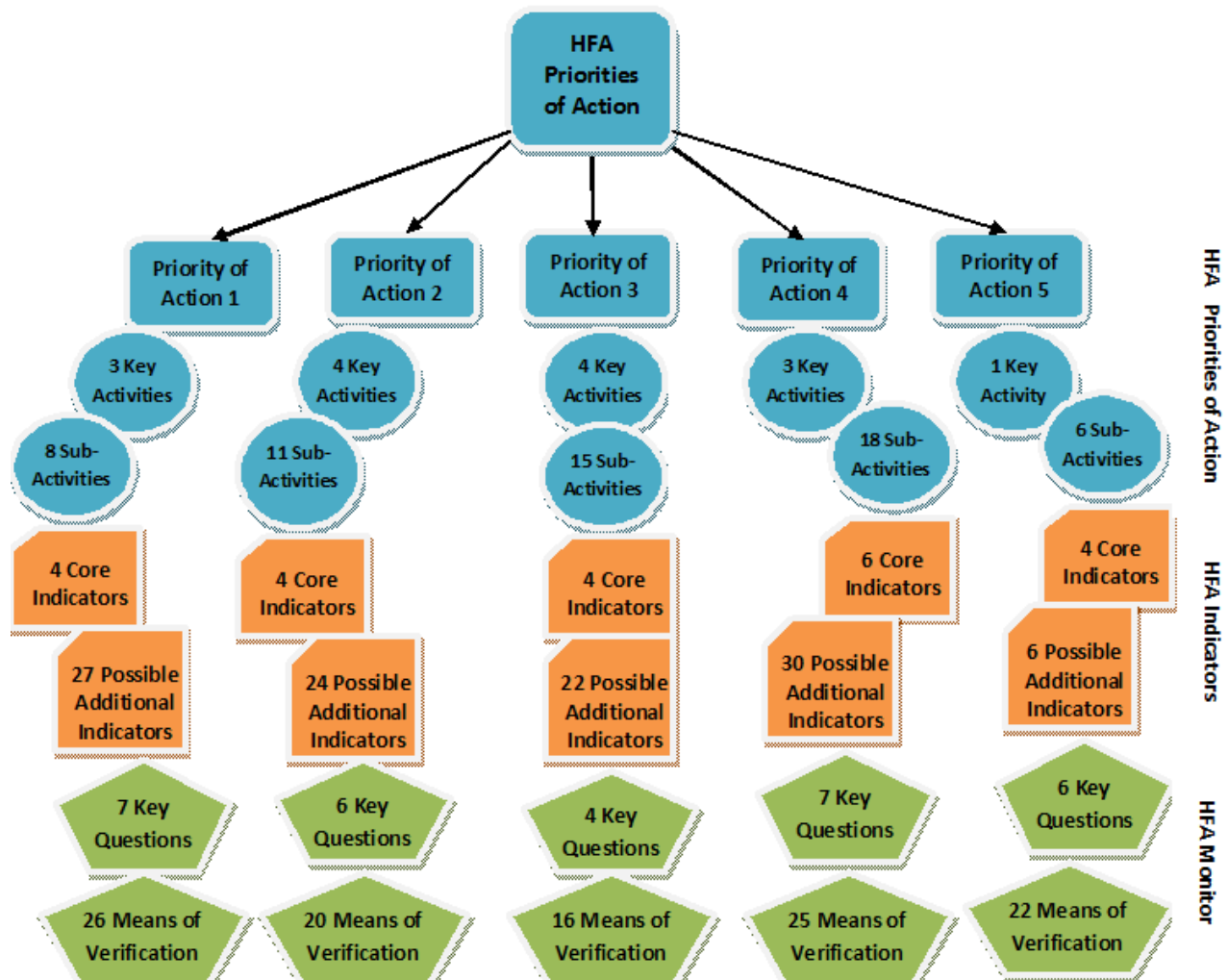
action of the HFA. Therefore, ideally indicators of strategic goals should be built on the indicators of the priorities of action, with specific values assigned to indicators relevant for the goals. The relative weightage or values to the indicators can be decided in consultation with the experts and representatives of the stakeholders. The indicators in the present form shall not be adequate to capture the actual progress achieved in the implementation of the strategic goals of the HFA.

Priorities of Action

22 core indicators of the 5 Priorities of Action of the HFA are the quintessence of the HFA indicators to monitor and measure the progress in the implementation of the HFA. The HFA Monitor has adopted these indicators without any change, but supplemented this with key questions and means of verification, some of these drawn from possible additional indicators. Analysis and examination of the relevance, appropriateness and effectiveness of these indicators should be the first step for designing indicators for the post-Hyogo Framework.

The 5 Priorities of Action are structured around 15 key activities and 62 sub-activities, which are contracted to 22 core indicators, but further expanded to 109 possible additional indicators, around which key questions and means of verification of HFA Monitor are developed. The matrix at Annexure-I provides the complete picture; the diagram below gives a synoptic view.

Diagram showing architecture of HFA Priorities of Action, HFA Indicators and HFA Monitor



We will take a look at Priority of Action 1 to examine whether the key activities and sub-activities outlined under this priority are adequately reflected in the core indicators and possible additional indicators, and whether these indicators along with the key questions and means of verification are smart enough to monitor and measure the progress achieved in implementation of this priority of action. All these parameters are juxtaposed in a matrix to facilitate closer scrutiny and analysis:

| PRIORITIES OF ACTION 1 | | | | |
|--|--|--|---|---|
| Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation | | | | |
| Key Activities | Sub-Activities | Core Indicators | Possible Additional Indicators | Key Questions and Means of Verification |
| <p>1. National institutional and legislative frameworks</p> <p>2. Resources</p> <p>3. Community participation</p> | <p>(a) Support creation and strengthening of national integrated disaster risk reduction mechanism, such as multi-sectoral national platforms.</p> <p>(b) Integrate risk reduction into development policies and planning at all levels of government, including in poverty reduction strategies and sectors.</p> <p>(c) Adopt, or modify where necessary, legislation to support disaster risk reduction</p> <p>(d) Recognise the importance and specificity of local risk patterns and trends, decentralise responsibilities and resources for disaster risk reduction to relevant sub-national or local authorities, as appropriate.</p> <p>(e) Assess existing human resource capacities for disaster risk reduction at all levels and develop</p> | <p>1. National institutional and legal frameworks for disaster risk reduction exist with decentralized responsibilities and capacities at all levels.</p> <p>2. Dedicated and adequate resources are available to implement disaster risk reduction plans at all administrative levels.</p> <p>3. Community participation and decentralization is ensured through the delegation of authority and resources to local levels.</p> <p>4. A national multi-sectoral platform for disaster risk reduction is functioning.</p> <p>Note: The quantitative self assessment of the progress in a scale of 1-5 by the national focal points on DRR of the national governments are made on each of the core indicators</p> | <p>Multi-sectoral policies and plans</p> <p>1). Multi-stakeholder and multi-sector national platform exists.</p> <p>2). Composition of multi-sector national platform is effective.</p> <p>3). Disaster risk reduction has been included in the country's CCA/UNDAF.</p> <p>4). Country has included disaster risk reduction initiatives in MDG reports.</p> <p>5). Country has included disaster risk reduction in sustainable development plans/national development plans.</p> <p>6). Inclusion of disaster risk reduction policies and strategies in sector policies and plans.</p> <p>7). Country identifies disaster risk reduction allocations in annual budget.</p> <p>8). Country receives international cooperation/ ODA for issues related to disaster risk reduction.</p> <p>9). Proportion of official development assistance provided that goes to national disaster risk reduction issues.</p> <p>Legislation</p> <p>10). Coverage by type (e.g. hurricane, flood) and objective (e.g. mitigation) of national legislation that has been adopted or modified to support disaster risk reduction.</p> <p>-- Codes and standards exist and are regularly updated.</p> <p>-- Compliance with disaster risk reduction regulations is required by law.</p> <p>11). Coverage by type and objective of national legislation enforcement systems.</p> <p>Decentralization</p> <p>12). Location and level by type of responsible designated agencies, institutions and offices for the implementation of enforcement system.</p> <p>Community Participation</p> <p>13). Participation by type and objective of NGOs, civil society,</p> | <p>Core Indicator-1</p> <p>Key Questions</p> <p>Question 1. Is disaster risk taken into account in public investment and planning decisions?</p> <p>Means of verification:</p> <p>a. National development plan</p> <p>b. Sector strategies and plans</p> <p>c. Climate change policy and strategy</p> <p>d. Poverty reduction strategy papers</p> <p>e. CCA/UNDAF (Common Country Assessment/UN Development Assistance Framework)</p> <p>f. Civil defence policy, strategy and contingency planning</p> <p>Question 2. Have legislative and/or regulatory provisions been made for managing disaster risk?</p> <p>Core Indicator-2</p> <p>Key Question</p> <p>Question 3. What is the ratio of the budget allocation to risk reduction versus disaster relief and reconstruction?</p> <p>Means of verification:</p> <p>a. National budget - Risk reduction / prevention (%)</p> <p>b. National budget - Relief and reconstruction (%)</p> <p>c. Decentralised / sub-national budget - Risk reduction / prevention (%)</p> <p>d. Decentralised / sub-national budget - Relief and reconstruction (%)</p> <p>e. USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture, infrastructure)</p> <p>Core Indicator-3</p> <p>Key Questions</p> <p>Question 4. Do local governments have legal responsibility and regular / systematic budget allocations for DRR?</p> <p>Means of Verification</p> <p>a. Regular budget allocations</p> |

| | | | | |
|--|---|--|--|--|
| | <p>capacity-building plans and programmes for meeting ongoing and future requirements.</p> <p>(f) Allocate resources for the development and implementation of disaster risk reduction in all relevant sectors at all levels of administration and budgets on the basis of clearly prioritised actions.</p> <p>(g) Governments should demonstrate the strong political determination required to promote and integrate disaster risk reduction into development programming.</p> <p>(h) Promote community participation in disaster risk reduction through the adoption of specific policies, the promotion of networking, the strategic management of volunteer resources, the attribution of roles and responsibilities, and the delegation and provision of the necessary authority and resources.</p> | | <p>volunteers and private sector in national platforms.</p> <p>14). Coverage by type and objective of disaster risk reduction policies, plans and programmes developed in consultation with NGOs and civil society.</p> <p>15). One or more national and sub-national events organised on Disaster Risk Reduction Day for public awareness campaigns.</p> <p>16). Coverage by type and objective of risk management plans that are implemented with involvement of the local community.</p> <p>17). Coverage by type and objective of assessment of human resources capacity, technical and financial assessments for disaster risk reduction.</p> <p>18). Presence of identifiable leaders, institutions or collaborations that lead disaster risk reduction activities at the local level;</p> <p>19). Coverage of disaster risk reduction related activities by media.</p> <p>20). Disaster reported by media that include recommendations to reduce disaster risk.</p> <p>21). Identified means and sources to convey local relevance, community experience or traditional knowledge in disaster risk reduction.</p> <p>22). Amount of community training and community-based preparedness.</p> <p>23). State has halved the average of annual casualties by 2015.</p> <p>Multi-hazard</p> <p>24). Coverage by type and objective of risk specific management policies, planning and programming into sector activities.</p> <p>25). Evidence of multi-hazard approach integrated into risk management policies, planning and programming.</p> <p>Capacity development</p> <p>26). Number of higher-level education degree disaster management programmes.</p> <p>27). Capacities in disaster risk reduction assessed and reported as basic information for all project and programme development.</p> | <p>for DRR to local government</p> <p>b. Estimated % of local budget allocation assigned to DRR</p> <p>Question 5. Legislation (Is there a specific legislation for local governments with a mandate for DRR?)</p> <p>Core Indicator-4 Key Questions</p> <p>Question 6. Are civil society organizations, national finance and planning institutions, key economic and development sector organizations represented in the national platform?</p> <p>Means of verification:</p> <ol style="list-style-type: none"> civil society members (specify absolute number) national finance and planning institutions (specify absolute number) sectoral organisations (specify absolute number) private sector (specify absolute number) science and academic institutions (specify absolute number) women's organisations participating in national platform (specify absolute number) other (please specify) <p>Question 7. Where is the coordinating lead institution for disaster risk reduction located?</p> <p>Means of verification:</p> <ol style="list-style-type: none"> In the Prime Minister's/President's Office In a central planning and/or coordinating unit In a civil protection department In an environmental planning ministry In the Ministry of Finance Other (Please specify) |
|--|---|--|--|--|

3 Key Activities (KA) and 8 Sub-Activities (SA) are given in the HFA Priority Action-1. Two important questions for analysis are: First, do the 4 Core Indicators (CI), 27 Possible Additional

Indicators (PAI), 7 Key Questions (KQ) and the related Means of Verification (MOV), developed by the UNISDR, capture these activities? Second, are these 'generic, realistic and measurable', the three litmus standards prescribed by the HFA?

A close analysis of KA and SA would indicate that there are four key issues in Priority of Action-1: (a) legal and institutional framework for DRR (KA-1, SA-a-c-d); (b) policy framework for DRR (KA-1, SA-b-g); (c) allocation of resources (KA-2, SA-f); and (d) community participation (KA-3, SA-e-h). CI-1 and 4 are logically related to legal and institutional framework, CI-2 relates to allocation of resources and CI-3 is concerned with community participation. This leaves out the policy framework (integration of DRR in development policies and planning and political determination for such integration) which does not seem to be captured in any of the 4 CIs. There should have been a separate CI on policy framework, while national platform could be clubbed with CI-1. Further, capacity assessment and development at all levels which is highlighted in SA-e is not adequately captured with CI-1. There should have been either a separate CI on capacity development, or this included in CI-4.

27 PAIs are very loosely formulated and not well structured around the CIs. The emphasis given in the KA and SA are shifted and even diluted to some extent and additional elements are introduced. National Platform figures under both 'multi-sectoral policies and plans' and 'capacity participation', whereas it should have been under the institutional framework. 'Multi-hazard' is included as a separate category but this does not figure in KA or SA. Resource allocation is included in 'multi-sectoral policies and plans' even though it is shown separately under both KA and SA. The PAIs cannot be described as 'generic, realistic and measurable', and some of them are patently vague, such as 'presence of identifiable leaders, institutions and collaborators that lead DRR activities at the local level' or 'amount of community training and community-based preparedness' which are impossible to be compiled and measured. Classification of community participation in terms of coverage by various types of activities as mentioned in PAI 14-17 and 19 are also vague and not easily amenable to analysis. Surely, the PAIs are conceived very poorly and do not provide any guidance to the national governments to assess their progress; it must be confusing them further. No wonder the PAIs are not taken into account seriously even in HFA Monitor which discards most of the additional indicators, except a few of them retained in Means of Verification.

HFA Monitor shifts the emphasis from 'generic, realistic and measurable' indicators to a set of key questions. 7 KQs are asked on 4 CIs, but these do not cover all the issues of KA and SA. For example, 'community participation' and 'capacity development' do not figure at all in the questions, while one question – question 7 regarding location of coordinating lead institution - does not find any mention either in CI or PAI. Questions are framed in a focused manner that would elicit reply in binary 'yes' or 'no' form but this information does not feed into the measurement of progress. The quantitative binary response is supplemented by qualitative descriptions regarding key contextual reasons for the country's assessment, the contexts and constraints. These descriptions from the national governments do provide valuable information which again remains stand alone and are not taken into account in assessing the progress of the countries.

In the assessment cycle of 2007-2009 the self-assessment of many countries were not found very realistic and therefore a provision on 'Means of Verification' was added in the assessment cycle 2009-2011, which was continued for 2011-2013 cycle, but no system was put in place for using the MOV in verifying the claims made by the State. Information generated through MOV remained largely unutilized and did not much inform the process of monitoring and measurement of the progress in the implementation of HFA. Some of the MOVs looked simple, but collecting relevant and correct information would not be very easy for most of the States. For example, working out the percentage of national budget spent on risk reduction at national and local levels or investments made for hazard proofing of sectoral development would be tall order for the States as disaggregated data on such investments are not available for most of the States.

Therefore none of the States could provide any solid evidence in support of their response to question no.3. This surely calls for a review of the MOVs to make these more realistic.

A similar analysis could be made for the indicators of other Priorities of Action as well, which would in probability give similar findings - CIs and PAIs not fully capturing KAs and SAs, leaving many critical issues uncovered and incorporating issues that are not in the priorities; PAIs framed in rather loose and vague terms; KQs and MOVs not fully reflecting KAs, SAs and CIs; some of the MOVs rather difficult and unrealistic; MOV not used for verification of assessed progress; and qualitative assessments through KQs totally disconnected with quantitative measurement of progress. There is therefore a strong case for reviewing the methodology of indicators to make them more 'generic, realistic and measurable'.

Measurement of Progress

The existing system of measuring progress achieved by the countries in the implementation of Hyogo Framework of Action is fundamentally flawed as it is based on self-assessment which is inherently subjective and not very rational. Enormous information collected through the process of Global Assessment Reports and HFA Monitor are not fed into the process of measuring the progress. Nearly half of the countries are not participating in the process of self-assessment and the half that do are not very realistic and scientific in their approach. Therefore any analysis based on this approach is bound to be rather lop-sided and not give a correct account of the actual progress.

The Global Assessment Report 2009 and 2011 made reliance on the reports submitted by the countries during the assessment cycle 2007-2009 and 2009-2011 respectively and devoted exclusive chapters for reviewing the progress in the implementation of HFA based on these reports, but this was discontinued in the GAR 2013, presumably because the data generated through the process was not capturing the actual progress on ground, which was indicated in some alternate and independent assessments.³²

We have made a comparative study of the quantitative self-assessment of the countries during the three biennial cycles and the results are provided in Annexure-II. The inherent subjectivity and inconsistency in self-assessments in three cycles are quite apparent. For example, Iran assessed itself a composite score of 4.50 in a scale of 5 during 2007-09, but downgraded itself to 3.23 in 2011-13, but this drastic down scaling is not explained. Brazil gave itself overall average score of 4.66 in 2009-2011, the highest for any country during all three cycles, but there is sudden slide in 2011-2013 without any plausible reason. Kenya gave itself score of 4.28 during 2009-2011 which many advanced countries did not achieve. Self-assessment of only handful of countries was consistent throughout the three assessment cycles. The self-score of most of the countries have no logical co-relationship with other indices of development such as HDI, GDI, SDI etc. Inter-se comparisons of achievements among the countries are contrary to general perception that developed countries have done better than middle income or rising economies. Further, comparison of achievements made among different priorities of action are not always in conformity with the findings of Mid-Term appraisal and other studies that achievements on Priority Area 3 and 4 have been much less than Priority Area 1, 2 or 5; in many cases the differences are shown marginal. Therefore data set generated by the self-assessment are quite confusing and cannot be relied for any serious analysis except to suggest that a much more rigorous and objective methodology should be put in place for assessing the progress achieved by the countries.

Suggested methodology

On the basis of the analysis of the indicators for Priority of Action-1 and of quantitative

³² The most important was the Views from the Frontline, which is an independent assessment of HFA progress by Global Network of Civil Society Organisations for Disaster reduction (GNDR).

self-assessments of progress currently being made by the countries, a revised methodology is suggested for consideration. This is a work in progress and needs to be further developed through a consultative process. First, for each Priority of Action a maximum of 6 generic indicators may be developed which would fully capture the essence of all the key activities and sub-activities. For each generic indicator a set of sub-indicators may be developed which would fully capture all the elements of the key and sub activities. For each sub-indicator countries will be advised to provide documentary evidences in support of the progress claimed. An indicative list of documents that are relevant, practical and realistic may be suggested, but the countries will be free to submit any other document that they might think relevant for the process. A set of key questions shall be asked for each indicator requiring response in qualitative terms, describing the contexts, achievements, constraints, challenges and opportunities, as at present, but self-assessment of progress shall be dispensed with. The HFA Monitor shall be revised appropriately to reflect these changes in methodology.

The countries will submit their biennial progress reports through the revised on-line HFA Monitor system. But these reports shall not be the only inputs for assessing the progress of the countries. Based on the progress reports submitted by the countries during the three assessment cycles and other resources from various sources, UNISDR shall maintain database on each country which will be updated on a continuing basis. For this purpose Preventionweb may open a separate window for the countries and different stakeholder to upload the resources. These data base shall be used for verifying the progress claimed by the countries and further assessing progress of countries that have not submitted their progress reports through on-line HFA Monitor.

The assessments of progress made by the national governments shall be made strictly on the basis of numerical weightages to be given on carefully considered indices on each indicator and sub-indicator. An expert group may suggest these indices which may be finalized through a process of consultations with the national governments and other stakeholders. The procedure for objective examination and analysis of the information provided by the national governments in their biennial progress reports shall also be finalized through this process.

The progress reports may be assessed in two stages. In the first stage the assessments for the countries in particular geographical regions shall be made by the regional office of the UNISDR on the basis of procedure finalized by the Expert Group. In the second stage the assessments shall be scrutinised and finalized by the HFA Monitoring Cell in UNISDR headquarter in Geneva.

The progress made by all the member countries of the United Nations, irrespective of whether they have submitted their biennial progress reports, shall be assessed and countries may be ranked according to the numeric weightages given through this process. An explanatory note may be prepared, highlighting the achievements, constraints and challenges and suggesting practical and realistic steps that may be taken by each country for improving its performance. This explanatory note may be appended with the national progress reports and uploaded in Preventionweb to make the entire process open and transparent.

It is suggested that some of these changes may be introduced in HFA Monitor for the assessment cycle 2013-2015 to make it more effective and the results reflected in Global Assessment Report 2015, so that it truly becomes global and not limited to half of the globe as at present. The approach to new methodology, as suggested, may be further discussed and applied with such modifications as considered necessary for developing a new set of indicators for the post-Hyogo Framework, as and when developed.

**MATRIX OF INDICATORS, ADDITIONAL POSSIBLE INDICATORS,
KEY QUESTIONS AND MEANS OF VERIFICATION DEVELOPED BY UNISDR FOR MONITORING PROGRESS OF HYOGO
FRAMEWORK OF ACTION 2005-2015**

| EXPECTED OUTCOME HYOGO FRAMEWORK OF ACTION | | |
|--|--|---|
| Expected Outcome | | Indicators |
| The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and States. | | <ol style="list-style-type: none"> 1. Number of deaths arising from natural hazard events 2. Total economic losses attributed to natural hazard events 3. Number of people affected by natural hazard events |
| STRATEGIC GOALS OF HYOGO FRAMEWORK OF ACTION | | |
| Strategic Goals | Indicators | Possible Additional Indicators |
| 1. The integration of disaster risk reduction into sustainable development policies and practices. | <ol style="list-style-type: none"> 1. National development plans include elements which address disaster risk reduction. 2. All international plans and programmes such as; <ol style="list-style-type: none"> a. poverty reduction strategies, b. common programming tools of the UN and international agencies, c. climate change adaptation plans and strategies, d. and donor supported country development assistance programmes include elements which address disaster risk reduction. | <ol style="list-style-type: none"> 1. A national platform and coordination mechanism has been created. 2. National platform has an effective structure and function. 3. Progress on sustainable development and achievement of MDGs is related to application of disaster risk reduction in: <ol style="list-style-type: none"> (i) CCA/UNDAF and other international common programming tools (ii) Poverty Reduction Strategy Papers (PRSPs) (iii) Climate change adaptation plans and strategies |

| | | |
|---|---|--|
| <p>2. Development and strengthening of institutions, mechanisms and capacities to build resilience to hazards</p> | <ol style="list-style-type: none"> 1. A national policy framework for disaster risk reduction exists, that includes policies, plans and activities for national to local administrative levels 2. A national multi-sectoral platform for disaster risk reduction is functioning 3. Dedicated and sufficient resources are available for planned activities to reduce disaster risks. | <ol style="list-style-type: none"> 1. Number by type of formal education programs related to emergency and risk management. 2. Number by type of sector programs for emergency and risk management. 3. Legislation has been adopted covering (presence or absence of): <ul style="list-style-type: none"> (a) Building codes for prevalent natural hazards. (b) Building inspection practices for code compliance and insurance classification. (c) Land use planning incorporating hazard zones. 4. Sector (by development area, public and private) functioning as an integral part of national platforms for disaster risk reduction. |
| <p>3. The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes.</p> | <ol style="list-style-type: none"> 1. The national policy framework incorporates disaster risk reduction into the design and implementation of emergency, response, recovery and rehabilitation processes. 2. Post-disaster reviews are routinely undertaken to learn lessons on risk reduction and these lessons are incorporated into plans and preparedness for response. | <ol style="list-style-type: none"> 1. Number by type of internationally certified emergency and recovery management specialists. 2. Incorporation and implementation of international-adopted recovery standards and criteria into reconstruction and recovery programs. |
| <p>PRIORITIES OF ACTION 1</p> <p>Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation</p> | | |
| <p style="text-align: center;">Core Indicators</p> <ol style="list-style-type: none"> 1. National institutional and legal frameworks for disaster risk reduction exist with decentralized | <p style="text-align: center;">Possible Additional Indicators</p> <p>Multi-sectoral policies and plans</p> <ol style="list-style-type: none"> 5. Multi-stakeholder and multi-sector national platform exists. 6. Composition of multi-sector national platform is | <p style="text-align: center;">Key Questions and Means of Verification</p> <p>Core Indicator-1</p> <p>Key Questions</p> <ol style="list-style-type: none"> 1. Is disaster risk taken into account in public investment and planning decisions? |

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| <p>responsibilities and capacities at all levels.</p> <p>2. Dedicated and adequate resources are available to implement disaster risk reduction plans at all administrative levels.</p> <p>3. Community participation and decentralization is ensured through the delegation of authority and resources to local levels.</p> <p>4. A national multi-sectoral platform for disaster risk reduction is functioning.</p> | <p>effective.</p> <p>7. Disaster risk reduction has been included in the country's CCA/UNDAF.</p> <p>8. Country has included disaster risk reduction initiatives in MDG reports.</p> <p>9. Country has included disaster risk reduction in sustainable development plans/national development plans.</p> <p>10. Inclusion of disaster risk reduction policies and strategies in sector policies and plans.</p> <p>11. Country identifies disaster risk reduction allocations in annual budget.</p> <p>12. Country receives international cooperation/ ODA for issues related to disaster risk reduction.</p> <p>13. Proportion of official development assistance provided that goes to national disaster risk reduction issues.</p> <p>Legislation</p> <p>14. Coverage by type (e.g. hurricane, flood) and objective (e.g. mitigation) of national legislation that has been adopted or modified to support disaster risk reduction. -- Codes and standards exist and are regularly updated. -- Compliance with disaster risk reduction regulations is required by law.</p> <p>15. Coverage by type and objective of national legislation enforcement systems.</p> <p>Decentralization</p> <p>16. Location and level by type of responsible designated agencies, institutions and offices for the implementation of enforcement system.</p> <p>Community Participation</p> <p>17. Participation by type and objective of NGOs, civil society, volunteers and private sector in national platforms.</p> <p>18. Coverage by type and objective of disaster risk reduction policies, plans and programmes developed in</p> | <p>Means of verification:</p> <ul style="list-style-type: none"> g. National development plan h. Sector strategies and plans i. Climate change policy and strategy j. Poverty reduction strategy papers k. CCA/UNDAF (Common Country Assessment/UN Development Assistance Framework) l. Civil defence policy, strategy and contingency planning <p>2. Have legislative and/or regulatory provisions been made for managing disaster risk?</p> <p>Core Indicator-2</p> <p>Key Question</p> <p>1. What is the ratio of the budget allocation to risk reduction versus disaster relief and reconstruction?</p> <p>Means of verification:</p> <ul style="list-style-type: none"> f. National budget - Risk reduction / prevention (%) g. National budget - Relief and reconstruction (%) h. Decentralised / sub-national budget - Risk reduction / prevention (%) i. Decentralised / sub-national budget - Relief and reconstruction (%) j. USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture, infrastructure) <p>Core Indicator-3</p> <p>Key Questions</p> <p>1. Do local governments have legal responsibility and regular / systematic budget allocations for DRR?</p> <p>2.</p> <p>Means of Verification</p> <ul style="list-style-type: none"> c. Regular budget allocations for DRR to local government |
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| | <p>consultation with NGOs and civil society.</p> <p>19. One or more national and sub-national events organised on Disaster Risk Reduction Day for public awareness campaigns.</p> <p>20. Coverage by type and objective of risk management plans that are implemented with involvement of the local community.</p> <p>21. Coverage by type and objective of assessment of human resources capacity, technical and financial assessments for disaster risk reduction.</p> <p>22. Presence of identifiable leaders, institutions or collaborations that lead disaster risk reduction activities at the local level;</p> <p>23. Coverage of disaster risk reduction related activities by media.</p> <p>24. Disaster reported by media that include recommendations to reduce disaster risk.</p> <p>25. Identified means and sources to convey local relevance, community experience or traditional knowledge in disaster risk reduction.</p> <p>26. Amount of community training and community-based preparedness.</p> <p>27. State has halved the average of annual casualties by 2015.</p> <p>Multi-hazard</p> <p>28. Coverage by type and objective of risk specific management policies, planning and programming into sector activities.</p> <p>29. Evidence of multi-hazard approach integrated into risk management policies, planning and programming.</p> <p>Capacity development</p> <p>30. Number of higher-level education degree disaster management programmes.</p> <p>31. Capacities in disaster risk reduction assessed and reported as basic information for all project and programme development.</p> | <p>d. Estimated % of local budget allocation assigned to DRR</p> <p>3. Legislation (Is there a specific legislation for local governments with a mandate for DRR?)</p> <p>Core Indicator-4</p> <p>Key Questions</p> <p>1. Are civil society organizations, national finance and planning institutions, key economic and development sector organizations represented in the national platform?</p> <p>Means of verification:</p> <p>h. civil society members (specify absolute number)</p> <p>i. national finance and planning institutions (specify absolute number)</p> <p>j. sectoral organisations (specify absolute number)</p> <p>k. private sector (specify absolute number)</p> <p>l. science and academic institutions (specify absolute number)</p> <p>m. women's organisations participating in national platform (specify absolute number)</p> <p>n. other (please specify)</p> <p>2. Where is the coordinating lead institution for disaster risk reduction located?</p> <p>Means of verification:</p> <p>g. In the Prime Minister's/President's Office</p> <p>h. In a central planning and/or coordinating unit</p> <p>i. In a civil protection department</p> <p>j. In an environmental planning ministry</p> <p>k. In the Ministry of Finance</p> <p>l. Other (Please specify)</p> |
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PRIORITIES OF ACTION 2
Identify, assess and monitor disaster risks and enhance early warning

| Core Indicators | Possible Additional Indicators | Key Questions and Means of Verification |
|---|---|--|
| <p>32. National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.</p> <p>33. Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.</p> <p>34. Early warning systems are in place for all major hazards, with outreach to communities.</p> <p>35. National and local risk assessments take account of regional/ trans-boundary risks, with a view to regional cooperation on risk reduction.</p> | <p>Data, analysis and dissemination</p> <p>28. Coverage by type and objective of media markets with programming disaster management awareness.</p> <p>29. Number by type (cyclone/hurricane, flood, volcanic eruption, tsunami) of national-based early warning systems (EWS).</p> <p>30. Coverage by type and objective of community vulnerability EWS.</p> <p>31. Identifiable, accessible and structured record system maintained at national and appropriate sub-national levels to a common and compatible standard.</p> <p>32. Percentage of development projects and investment based on independent risk and environmental impacts assessments, including in post disaster phases.</p> <p>33. Evidence of statistical information exchanged at international, regional, national and local levels.</p> <p>Vulnerability and disaster risks</p> <p>34. Coverage by type and objective of hazard-specific vulnerability and capacity assessments at the community level.</p> <p>35. Vulnerability and capacity indicators developed and systematically mapped and recorded.</p> <p>36. Identifiable programs assessing vulnerability and developing risk scenario.</p> <p>37. Indefinable programs/centres for hazard monitoring and analysis in institutions such as national hydro-meteorological, seismic, etc.</p> <p>Risk maps</p> <p>38. National multi-hazard vulnerability and/or risk mapping is completed.</p> | <p style="text-align: center;">Core Indicator-5</p> <p>Key Questions</p> <p>1. Is there a national multi-hazard risk assessment with a common methodology available to inform planning and development decisions?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> a. Multi-hazard risk assessment b. % of schools and hospitals assessed c. schools not safe from disasters (specify absolute number) d. Gender disaggregated vulnerability and capacity assessments e. Agreed national standards for multi hazard risk assessments f. Risk assessment held by a central repository (lead institution) g. Common format for risk assessment h. Risk assessment format customised by user <p>2. Is future/probable risk assessed?</p> <p>3. Please list the sectors that have already used disaster risk assessment as a precondition for sectoral development planning and programming.</p> <p style="text-align: center;">Core Indicator-6</p> <p>Key Questions</p> <p>1. Are disaster losses and hazards systematically reported, monitored and analyzed?</p> |

39. Coverage by type and objective of development projects and investment based on independent risk and environmental impacts assessments, including in post-disaster recovery and reconstruction.
40. Historical record available of hazards and their impacts, climate change and climate variability (catalogues, inventories).
- Early warning systems and information management**
41. Public, professional and technical evaluation made of effectiveness of EWS by hazard type at community level.
42. Robust and extended communication means available throughout areas at risk.
43. Early warning information and alerts reaching populations at risk.
- International coordination**
44. National implementation of the recommendations from the Third International Conference on Early Warning outcome document, "Developing Early Warning Systems: A Checklist".
45. International and regional efforts are underway for standards and build early warning capacity.
46. Recognised global authority, standards and procedures exist for consistent motivation of EWS at international and regional level.
47. National implementation of the disaster risk reduction elements in the Mauritius Strategy related to the Small Island Developing States.
- Research and analysis**
48. Effectiveness of national risk assessment programmes in analysing emerging risk and increased vulnerabilities.
- Exchange of data and monitoring at regional level**
49. Coverage by type and objective of trans-boundary hazard assessments.
50. Evidence of international, UN and/or bilateral assistance on the compilation and exchange of data and monitoring on regional risks.
51. Existence of border agreements on areas of shared hazard events.

Means of Verification

- a. Disaster loss databases exist and are regularly updated
- b. Reports generated and used in planning by finance, planning and sectoral line ministries (from the disaster databases/ information systems)
- c. Hazards are consistently monitored across localities and territorial boundaries

Core Indicator-7

Key Question

- 1. Do risk prone communities receive timely and understandable warnings of impending hazard events?**

Means of Verification

- a. Early warnings acted on effectively
- b. Local level preparedness
- c. Communication systems and protocols used and applied
- d. Active involvement of media in early warning dissemination

Core Indicator-8

Key Question

- 1. Does your country participate in regional or sub-regional actions to reduce disaster risk?**

Means of Verification

- a. Establishing and maintaining regional hazard monitoring
- b. Regional or sub-regional risk assessment
- c. Regional or sub-regional early warning
- d. Establishing and implementing protocols for transboundary information sharing
- e. Establishing and resourcing regional and sub-regional strategies and frameworks

PRIORITIES OF ACTION 3
Identify, assess and monitor disaster risks and enhance early warning

| Core Indicators | Possible Additional Indicators | Key Questions and Means of Verification |
|---|--|---|
| <p>36. Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing system.</p> <p>37. School curricula, education material and relevant trainings include risk reduction and recovery concepts and practices.</p> <p>38. Research methods and tools for multi risk assessments and cost benefit analysis are developed and strengthened.</p> <p>39. Country wide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.</p> | <p>Public information</p> <p>52. Extent of state participation in international and regional workshops and meetings related to information sharing and good practices.</p> <p>53. Quantity of accurate documentation and databases on disasters.</p> <p>54. Presence and extent of applicable education material.</p> <p>55. Number of institutions, academic programs and courses focusing on good practices and lessons learnt.</p> <p>56. Dissemination of literature on disaster risk reduction and protection measures including good practices, lessons learnt, academic programs and course offerings.</p> <p>Professional vocabulary and commonly agreed concepts</p> <p>57. Percentage of publications using international standard terminology related to disaster risk reduction as per ISDR.</p> <p>Network development and cross- disciplinary interaction</p> <p>58. Coverage by type and objective of hazard, sector or disaster risk reduction action- specific professional and public networks related to disaster risk reduction.</p> <p>59. Multi-purpose data generated.</p> <p>60. Existence of a national data/information management plan.</p> <p>Access to advance technology</p> <p>61. Coverage by type and objective of hazard, vulnerability and risk information available on GIS, remote-sensing or similar technology-based files.</p> <p>62. Extent of training offered on the use and advantages of advanced technology.</p> | <p style="text-align: center;">Key Questions and Means of Verification</p> <p>Core Indicator-9 Key Question 1. Is there a national disaster information system publicly available?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> a. Information is proactively disseminated b. Established mechanisms for access / dissemination (internet, public information broadcasts - radio, TV) c. Information is provided with proactive guidance to manage disaster risk <p>Core Indicator-10 Key Question 1. Is DRR included in the national educational curriculum?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> a. primary school curriculum b. secondary school curriculum c. university curriculum d. professional DRR education programmes <p>Core Indicator-11 Key Question 1. Is DRR included in the national scientific applied-research agenda/budget?</p> |

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| | <p>Formal education and children engagement</p> <p>63. Coverage by grade level and objective of hazard, vulnerability and risk curriculum as part of school curricula.</p> <p>64. Number of nationals with advanced degrees related to disaster risk reduction.</p> <p>65. Disaster risk reduction programmes identified with professional disciplines, institutes and example courses.</p> <p>66. Extent of the implementation of initiatives related to the UN Decade of Education for Sustainable development.</p> <p>Professional and multi-sectoral training</p> <p>67. Coverage by hazard, vulnerability, risk or disaster risk reduction-action type of public sector and community-based training in risk reduction.</p> <p>68. Development of training courses for field practitioners from the public and private sectors.</p> <p>69. Development of community-based training.</p> <p>70. Percentage of women in public sector and community-based training in risk management.</p> <p>Analytical research</p> <p>71. Coverage by sector type and objective of multi-risk assessments, including socio and economic analysis.</p> <p>72. Existence and scope of national applied-research agenda for disaster risk reduction, with multiple disciplines involved.</p> <p>73. Evidence of research institutions or departments involved in disaster risk reduction activities.</p> | <p>Means of Verification</p> <ol style="list-style-type: none"> Research programmes and projects Research outputs, products or studies are applied / used by public and private institutions Studies on the economic costs and benefits of DRR <p>Core Indicator-12</p> <p>Key Question</p> <p>1. Do public education campaigns for risk-prone communities and local authorities include disaster risk?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> Public education campaigns for enhanced awareness of risk. Training of local government Disaster management (preparedness and emergency response) Preventative risk management (risk and vulnerability) Guidance for risk reduction Availability of information on DRR practices at the community level |
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PRIORITIES OF ACTION 4
Reduce the underlying risk factors

| Core Indicators | Possible Additional Indicators | Key Questions and Means of Verification |
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| 40. Disaster risk reduction is an integral objective of environment-related | <p>Environmental management</p> <p>74. Coverage by type and objective of natural hazards in environmental impact assessments.</p> | <p>Core Indicator-13</p> <p>Key Questions and Means of Verification</p> |

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| <p>policies and plans, including for land use, natural resource management and climate change adaptation.</p> <p>41. Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.</p> <p>42. Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities.</p> <p>43. Planning and management of human settlements incorporate disaster risk reduction elements including enforcement of building codes.</p> <p>44. Disaster risk reduction measures are integrated into post-disaster recovery and rehabilitation processes.</p> <p>45. Procedures are in place to assess disaster risk impacts of all major development projects, especially infrastructure.</p> | <p>75. Use of wetlands, mangroves and forest management to reduce flood risk.</p> <p>76. Trends in deforestation rate including mangroves.</p> <p>77. Use of environmental impact assessments in disaster reduction planning.</p> <p>Climate variability and change</p> <p>78. Disaster risk reduction integrated into climate variability and climate change adaptation planning and programming.</p> <p>79. Information coverage by type of hazard and risk reduction objective for incorporation of climate variability and climate change risk into project planning and assessments.</p> <p>Social protection</p> <p>80. Adding classifications and the location of the most vulnerable people to social protection and a safety net.</p> <p>81. Incorporation of social safety nets and social protection programmes in the recovery processes.</p> <p>82. Extent of natural hazard insurance coverage for homes, business, agriculture and public infrastructure</p> <p>83. Access to micro-finance services in high hazard risk areas, evidence of utilization following disasters for recovery and reconstruction.</p> <p>84. Coverage by hazard type and objective of food security initiatives in areas prone to drought, flood, cyclones and other hazards that can weaken agriculture-based livelihoods.</p> <p>Public facilities and infrastructures</p> <p>85. Coverage by type and location of schools and bridges built with full compliance to adopted natural hazard building codes and zoning requirements.</p> <p>86. Coverage by hazard type and objective of incorporation of disaster risk reduction management elements into physical planning and infrastructure development procedures.</p> <p>87. Percentage of official buildings in compliance with standards.</p> <p>88. Disaster risk reduction is integrated into post-disaster recovery and rehabilitation processes.</p> | <p>1. Is there a mechanism in place to protect and restore regulatory ecosystem services? (associated with wet lands, mangroves, forests etc)?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> Protected areas legislation Payment for ecosystem services (PES) Integrated planning (for example coastal zone management) Environmental impacts assessments (EIAs) Climate change adaptation projects and programmes <p>Core Indicator-14</p> <p>Key Question</p> <p>1. Do social safety nets exist to increase the resilience of risk prone households and communities?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> Crop and property insurance Temporary employment guarantee schemes Conditional and unconditional cash transfers Micro finance (savings, loans, etc.) Micro insurance <p>Core Indicator-15</p> <p>Key Question</p> <p>1. Are the costs and benefits of DRR incorporated into the planning of public investment?</p> <p>Means of Verification</p> <ol style="list-style-type: none"> National and sectoral public investment systems incorporating DRR. (Please provide specific examples: e.g. public infrastructure, transport and communication, economic and productive assets) |
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| | <p>Public Health</p> <p>89. Number/percent by type and location of health facilities in full compliance to adopted natural hazard building codes and zoning requirements.</p> <p>90. Number of existing hospitals certified as disaster safe.</p> <p>91. Number/percent by type and location of health facilities certified for a performance level of continuity of service following prevalent natural hazard events.</p> <p>92. National coverage of hazard zone maps with the location of critical facilities by type.</p> <p>Public-private partnership</p> <p>93. Coverage by sector and objective of public-private partnerships for disaster risk reduction management to meet acceptable risk levels.</p> <p>Risk-sharing, reinsurance</p> <p>94. Coverage by sector of hazard insurance.</p> <p>95. Trends of insurance claims.</p> <p>Displaced people</p> <p>96. Number annually of natural disaster-triggered refugees and IDPs needing international assistance.</p> <p>Planning policy and practices</p> <p>97. Coverage by administrative level and type of instrument of land use planning, land use zoning, setbacks, construction codes and standards, and occupancy permits that include natural hazard management and risk reduction elements.</p> <p>98. Percentage of construction or building projects in floodplains and other mapped hazard-prone areas.</p> <p>99. Difference between pre-disaster and post-disaster land occupation.</p> <p>100. Coverage by sector and objective of disaster risk reduction actions in rural development planning.</p> <p>Normative standards and codes</p> <p>101. Review by location, sector and citation of non-compliance and resolution of zoning, building code and occupancy permit enforcement related to disaster risk reduction.</p> <p>102. Existence of specialized legal offices controlling compliance and enforcement.</p> | <p>b. Investments in retrofitting infrastructures including schools and hospitals</p> <p>Core Indicator-16</p> <p>Key Question</p> <p>1. Is there investment to reduce the risk of vulnerable urban settlements?</p> <p>Means of Verification</p> <p>a. Investment in drainage infrastructure in flood prone areas</p> <p>b. Slope stabilisation in landslide prone areas</p> <p>c. Training of masons on safe construction technology</p> <p>d. Provision of safe land and housing for low income households and communities</p> <p>e. Risk sensitive regulation in land zoning and private real estate development</p> <p>f. Regulated provision of land titling</p> <p>Core Indicator-17</p> <p>Key Question</p> <p>1. Do post-disaster programmes explicitly incorporate and budget for DRR for resilient recovery?</p> <p>Means of Verification</p> <p>a. % of recovery and reconstruction funds assigned to DRR</p> <p>b. DRR capacities of local authorities for response and recovery strengthened</p> <p>c. Risk assessment undertaken in pre- and post-disaster recovery and reconstruction planning</p> <p>d. Measures taken to address gender based issues in recovery</p> <p>Core Indicator-18</p> <p>Key Questions</p> |
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| | <p>Recovery 103. National implementation of international post-disaster recovery and reconstruction norms and standards.</p> | <p>1. Are the impacts of disaster risk that are created by major development projects assessed?</p> <p>2. Are cost/benefits of disaster risk taken into account in the design and operation of major development projects?</p> <p>Means of Verification</p> <ul style="list-style-type: none"> a. Impacts of disaster risk taken account in Environment Impact Assessment (EIA) b. By national and sub-national authorities and institutions c. By international development actors |
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PRIORITIES OF ACTION 5
Strengthen disaster preparedness for effective response at all levels

| Core Indicators | Possible Additional Indicators | Key Questions and Means of Verification |
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| <p>46. Strong policy, technical and institutional capacities and mechanisms for disaster management, with a disaster risk reduction perspective are in place.</p> <p>47. Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster</p> | <p>Regional approach 104. Review of progress on existing regional preparedness mechanisms.</p> <p>Contingency plans 105. Adoption of a national disaster preparedness plan. 106. Coverage by sector of policy frameworks that requires disaster risk reduction incorporation into the design and implementation of emergency response, recovery and rehabilitation processes. 107. Emergency response networks and plans are regularly updated and tested.</p> <p>Emergency funds 108. Coverage by type and support level of identifiable funding and annual budgetary allocations to strengthen preparedness at the local and national levels. 109. Availability of emergency funds and stocks.</p> | <p>Core Indicator-19 Key Questions and Means of Verification</p> <p>1. Are there national programmes or policies for disaster preparedness, contingency planning and response?</p> <ul style="list-style-type: none"> a. DRR incorporated in these programmes and policies b. The institutional mechanisms exist for the rapid mobilisation of resources in a disaster, utilising civil society and the private sector; in addition to public sector support. <p>2. Are there national programmes or policies to make schools and health facilities safe in emergencies?</p> |

response programmes.

48. Financial reserves and contingency mechanisms are in place to enable effective response and recovery when required.
49. Procedures are in place to exchange relevant information during disasters and to undertake post-event reviews.

Means of Verification

- a. Policies and programmes for school and hospital safety
- b. Training and mock drills in school and hospitals for emergency preparedness

3. Are future disaster risks anticipated through scenario development and aligned preparedness planning?

Means of Verification

- a. Potential risk scenarios are developed taking into account climate change projections
- b. Preparedness plans are regularly updated based on future risk scenarios

Core Indicator-20

Key Question

1. Are the contingency plans, procedures and resources in place to deal with a major disaster?

Means of Verification

- a. Plans and programmes are developed with gender sensitivities
- b. Risk management/contingency plans for continued basic service delivery Operations and communications centre
- c. Search and rescue teams
- d. Stockpiles of relief supplies
- e. Shelters
- f. Secure medical facilities
- g. Dedicated provision for disabled and elderly in relief, shelter and emergency medical facilities
- h. Businesses are a proactive partner in planning and delivery of response

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| | | <p>Core Indicator-21 Key Question</p> <p>1. Are financial arrangements in place to deal with major disaster?</p> <p>Means of Verification</p> <ul style="list-style-type: none"> a. National contingency and calamity funds b. The reduction of future risk is considered in the use of calamity funds c. Insurance and reinsurance facilities d. Catastrophe bonds and other capital market mechanisms <p>Core Indicator-22 Key Question</p> <p>1. Has an agreed method and procedure been adopted to assess damage, loss and needs when disasters occur?</p> <p>Means of Verification</p> <ul style="list-style-type: none"> a. Damage and loss assessment methodologies and capacities available b. Post-disaster need assessment methodologies c. Post-disaster needs assessment methodologies include guidance on gender aspects d. Identified and trained human resources |
| DRIVERS OF PROGRESS | | |
| <ul style="list-style-type: none"> 1. Multi-hazard integrated approach to disaster risk reduction and development 2. Gender perspectives on risk reduction and recovery adopted and institutionalized Capacities for risk reduction and recovery identified and strengthened 3. Human security and social equity approaches integrated into disaster risk reduction and recovery activities 4. Engagement and partnerships with nongovernmental actors; civil society, private sector, amongst others, have been fostered at all levels | | |

Note: 1. The 'Expected Outcome', 'Strategic Goals' and 'Priorities of Action' are taken from the Hyogo Framework of Action 2005-2015.
2. The 'Indicators' and 'Possible Additional Indicators' are prescribed by UNISDR in the publication "Indicators of Progress" for measuring progress in implementation of HFA.
3. The 'Key Questions', 'Means of Verification' and 'Drivers of Progress' are taken from "HFA Monitor" of the UNISDR.

**Overall self-assessment of countries (on a scale 1-5) for implementation of HFA
Biennial Assessment Cycles - 2007-2009, 2009-2011 and 2011-2013**

| No. | Country | 2007-2009 | | | | | | 2009-2011 | | | | | | 2011-2013 | | | | | |
|-----|-------------------------------|-----------|------|------|------|------|-------|-----------|------|------|------|------|-------|-----------|------|------|------|------|-------|
| | | P1 | P2 | P3 | P4 | P5 | Total | P1 | P2 | P3 | P4 | P5 | Total | P1 | P2 | P3 | P4 | P5 | Total |
| 1. | Afghanistan | - | - | - | - | - | - | - | - | - | - | - | - | 2.50 | 2.00 | 2.00 | 2.00 | 2.00 | 2.09 |
| 2. | Algeria | 3.25 | 3.25 | 2.25 | 3.33 | 3.00 | 3.05 | 3.50 | 3.50 | 2.75 | 4.17 | 3.50 | 3.50 | 3.50 | 3.25 | 2.75 | 4.17 | 4.25 | 3.64 |
| 3. | Angola | 3.00 | 2.50 | 3.25 | 3.00 | 2.75 | 2.91 | - | - | - | - | - | - | - | - | - | - | - | - |
| 4. | Anguilla | 3.50 | 3.00 | 4.00 | 3.67 | 1.75 | 3.23 | 4.00 | 4.00 | 3.75 | 3.50 | 4.00 | 3.68 | 4.00 | 3.25 | 3.75 | 3.50 | 4.00 | 3.68 |
| 5. | Antigua & Barbuda | - | - | - | - | - | - | 2.75 | 2.75 | 3.25 | 2.17 | 3.25 | 2.77 | - | - | - | - | - | - |
| 6. | Argentina | - | - | - | - | - | - | 3.25 | 3.25 | 2.75 | 3.17 | 3.25 | 3.14 | 3.50 | 3.75 | 3.25 | 3.33 | 3.25 | 3.41 |
| 7. | Armenia | 3.25 | 3.50 | 3.00 | 3.00 | 3.00 | 3.14 | 3.00 | 3.00 | 3.25 | 2.83 | 3.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| 8. | Australia | 4.00 | 4.00 | 4.25 | 4.00 | 4.25 | 4.02 | 4.00 | 4.00 | 3.75 | 4.00 | 4.00 | 3.95 | 4.00 | 4.25 | 4.00 | 4.00 | 4.00 | 4.05 |
| 9. | Bahrain | 2.75 | 2.75 | 1.75 | 3.17 | 3.00 | 2.73 | 3.00 | 3.00 | 3.00 | 3.00 | 3.75 | 3.14 | 3.50 | 3.75 | 3.00 | 3.17 | 4.00 | 3.45 |
| 10. | Bangladesh | 3.25 | 3.25 | 3.25 | 2.67 | 3.50 | 3.14 | 4.00 | 4.00 | 3.25 | 3.17 | 3.75 | 3.50 | 4.00 | 3.75 | 3.75 | 3.33 | 3.75 | 3.68 |
| 11. | Barbados | - | - | - | - | - | - | 4.00 | 4.00 | 3.25 | 3.33 | 4.50 | 3.77 | 4.00 | 4.00 | 3.75 | 3.50 | 4.25 | 3.86 |
| 12. | Belarus | - | - | - | - | - | - | - | - | - | - | - | - | 3.75 | 3.75 | 4.00 | 3.67 | 3.75 | 3.77 |
| 13. | Bhutan | - | - | - | - | - | - | 2.75 | 2.75 | 1.50 | 2.67 | 2.00 | 2.23 | 2.75 | 2.00 | 2.75 | 2.67 | 2.00 | 2.45 |
| 14. | Bolivia | 2.75 | 1.75 | 2.75 | 1.83 | 2.00 | 2.18 | 4.50 | 4.50 | 4.75 | 4.67 | 5.00 | 2.05 | 3.00 | 3.25 | 2.75 | 2.83 | 2.00 | 2.77 |
| 15. | Botswana | - | - | - | - | - | - | 2.25 | 2.25 | 2.75 | 1.50 | 1.75 | 3.00 | - | - | - | - | - | - |
| 16. | Brazil | - | - | - | - | - | - | 4.50 | 4.50 | 4.75 | 4.67 | 5.00 | 4.66 | 3.50 | 3.00 | 2.75 | 3.67 | 3.50 | 3.32 |
| 17. | British Virgin Islands | 3.00 | 4.00 | 3.75 | 2.67 | 3.75 | 3.36 | 3.00 | 3.00 | 4.25 | 3.17 | 3.75 | 3.59 | 3.75 | 4.00 | 4.00 | 3.33 | 4.00 | 3.77 |
| 18. | Brunei Darussalam | - | - | - | - | - | - | 2.75 | 2.75 | 2.25 | 2.33 | 3.00 | 2.59 | - | - | - | - | - | - |
| 19. | Bulgaria | 4.00 | 2.50 | 3.50 | 3.33 | 4.50 | 3.55 | 3.50 | 3.50 | 3.50 | 3.00 | 3.25 | 3.18 | 4.00 | 4.00 | 3.50 | 2.67 | 3.50 | 3.45 |
| 20. | Burkina Faso | 3.75 | 3.25 | 2.75 | 3.67 | 2.75 | 3.27 | 4.00 | 4.00 | 2.75 | 3.67 | 3.50 | 3.45 | 4.00 | 3.25 | 3.50 | 3.00 | 4.00 | 3.50 |
| 21. | Burundi | 3.25 | 2.25 | 1.75 | 2.83 | 2.50 | 2.55 | 3.75 | 3.75 | 1.75 | 2.50 | 2.50 | 2.59 | - | - | - | - | - | - |

| | | | | | | | | | | | | | | | | | | | |
|-----|---------------------------|------|------|------|------|------|-------------|------|------|------|------|------|------|------|------|------|------|------|-------------|
| 22. | Cambodia | 2.25 | 1.75 | 2.50 | 2.50 | 2.50 | 2.32 | - | - | - | - | - | - | - | - | - | - | - | - |
| 23. | Canada | - | - | - | - | - | - | 4.25 | 4.25 | 3.50 | 3.83 | 4.00 | 3.82 | - | - | - | - | - | - |
| 24. | Cape Verde | 3.25 | 2.50 | 3.25 | 2.83 | 3.75 | 3.09 | 3.50 | 3.50 | 3.75 | 3.17 | 3.75 | 3.45 | - | - | - | - | - | - |
| 25. | Cayman Islands | 4.25 | 3.50 | 3.50 | 3.67 | 4.50 | 3.86 | 3.75 | 3.75 | 3.75 | 3.00 | 3.75 | 3.45 | - | - | - | - | - | - |
| 26. | Chile | - | - | - | - | - | - | 2.75 | 2.75 | 3.00 | 3.33 | 3.00 | 2.91 | 3.50 | 3.50 | 3.50 | 3.83 | 4.25 | 3.73 |
| 27. | China | - | - | - | - | - | - | - | - | - | - | - | - | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| 28. | Colombia | - | - | - | - | - | - | 3.75 | 3.75 | 3.00 | 3.33 | 3.75 | 3.41 | 4.25 | 3.25 | 3.75 | 3.50 | 4.00 | 3.73 |
| 29. | Comoros | - | - | - | - | - | - | 1.75 | 1.75 | 2.25 | 1.50 | 1.50 | 1.86 | - | - | - | - | - | - |
| 30. | Cook Island | - | - | - | - | - | - | - | - | - | - | - | - | 3.75 | 3.75 | 3.25 | 3.33 | 3.25 | 3.45 |
| 31. | Costa Rica | 4.25 | 4.00 | 3.75 | 3.50 | 4.00 | 3.86 | 4.25 | 4.25 | 3.75 | 4.17 | 3.75 | 4.00 | 4.50 | 4.00 | 4.25 | 4.33 | 5.00 | 4.41 |
| 32. | Côte d'Ivoire | - | - | - | - | - | - | 2.50 | 2.50 | 1.25 | 1.83 | 1.50 | 1.91 | 2.50 | 2.25 | 1.75 | 2.50 | 1.75 | 2.18 |
| 33. | Croatia | 2.75 | 4.00 | 3.00 | 3.67 | 3.50 | 3.41 | 3.75 | 3.75 | 3.50 | 3.83 | 4.00 | 3.82 | 4.00 | 4.00 | 3.50 | 4.00 | 4.00 | 3.91 |
| 34. | Cuba | - | - | - | - | - | - | 4.50 | 4.50 | 4.00 | 4.00 | 4.00 | 4.14 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| 35. | Czech Republic | 4.00 | 3.75 | 3.50 | 3.50 | 4.25 | 3.77 | 2.75 | 2.75 | 2.75 | 2.67 | 4.50 | 3.27 | - | - | - | - | - | - |
| 36. | Djibouti | - | - | - | - | - | - | - | - | - | - | - | - | 2.25 | 3.00 | 3.25 | 3.00 | 2.50 | 2.82 |
| 37. | Dominican Republic | 2.75 | 1.50 | 1.25 | 1.00 | 2.50 | 1.73 | 3.00 | 3.00 | 2.25 | 2.50 | 3.50 | 2.82 | 3.00 | 3.25 | 2.50 | 3.17 | 3.75 | 3.14 |
| 38. | Ecuador | 2.00 | 2.50 | 2.75 | 2.00 | 2.75 | 2.36 | 4.75 | 4.75 | 3.50 | 3.67 | 3.75 | 3.86 | 4.25 | 3.50 | 3.75 | 4.00 | 4.00 | 3.91 |
| 39. | Egypt | - | - | - | - | - | - | 3.50 | 3.50 | 3.00 | 3.33 | 3.50 | 3.32 | 3.50 | 3.25 | 3.00 | 3.33 | 3.50 | 3.32 |
| 40. | El Salvador | - | - | - | - | - | - | 3.25 | 3.25 | 2.50 | 2.67 | 3.25 | 2.91 | - | - | - | - | - | - |
| 41. | Fiji | - | - | - | - | - | - | 2.75 | 2.75 | 3.25 | 3.33 | 3.50 | 3.18 | 3.25 | 2.50 | 2.25 | 2.67 | 2.75 | 2.68 |
| 42. | Finland | - | - | - | - | - | - | - | - | - | - | - | - | 4.00 | 4.0 | 3.75 | 4.17 | 4.00 | 3.98 |
| 43. | France | 4.00 | 4.25 | 4.25 | 4.00 | 3.75 | 4.05 | 3.50 | 3.50 | 3.50 | 4.00 | 3.50 | 3.73 | 4.00 | 3.75 | 3.25 | 3.50 | 4.25 | 3.73 |
| 44. | Georgia | - | - | - | - | - | - | 2.75 | 2.75 | 2.50 | 2.33 | 4.00 | 2.77 | 2.75 | 2.00 | 3.00 | 2.67 | 4.00 | 2.86 |
| 45. | Germany | 4.25 | 4.00 | 3.75 | 3.33 | 4.00 | 3.82 | 4.25 | 4.25 | 3.75 | 3.33 | 4.00 | 3.82 | 4.25 | 4.00 | 3.75 | 3.33 | 4.00 | 3.82 |
| 46. | Ghana | 2.75 | 3.25 | 2.50 | 2.33 | 3.75 | 2.86 | 3.25 | 3.25 | 2.75 | 3.67 | 3.75 | 3.36 | 3.25 | 3.75 | 3.50 | 3.50 | 3.75 | 3.55 |
| 47. | Greece | - | - | - | - | - | - | - | - | - | - | - | - | 4.00 | 4.00 | 3.75 | 4.17 | 4.25 | 4.03 |
| 48. | Grenada | - | - | - | - | - | - | - | - | - | - | - | - | 3.75 | 2.50 | 3.00 | 3.17 | 3.25 | 3.14 |
| 49. | Guatemala | 2.25 | 2.00 | 2.50 | 1.00 | 2.75 | 2.00 | 3.25 | 3.25 | 3.25 | 2.67 | 3.25 | 3.00 | 3.50 | 3.25 | 3.75 | 2.67 | 3.25 | 3.23 |
| 50. | Guinea-Bissau | - | - | - | - | - | - | 1.00 | 1.00 | 1.00 | 1.17 | 1.00 | 1.05 | - | - | - | - | - | - |
| 51. | Haiti | - | - | - | - | - | - | 3.75 | 3.75 | 3.00 | 2.17 | 3.50 | - | 2.75 | 2.25 | 2.00 | 1.67 | 3.00 | 2.27 |
| 52. | Honduras | - | - | - | - | - | - | 3.25 | 3.25 | 3.50 | 3.33 | 4.00 | 3.09 | 3.25 | 2.75 | 3.00 | 1.83 | 3.75 | 2.82 |
| 53. | Hungary | - | - | - | - | - | - | 3.50 | 3.50 | 3.00 | 3.50 | 2.75 | - | 4.50 | 4.50 | 4.75 | 4.83 | 3.50 | 4.45 |
| 54. | India | 3.25 | 3.75 | 3.25 | 3.17 | 4.00 | 3.45 | 3.25 | 3.25 | 3.25 | 2.67 | 3.25 | 3.55 | 3.25 | 3.75 | 3.50 | 3.50 | 4.00 | 3.59 |

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|-----|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 55. | Indonesia | 3.25 | 3.00 | 2.50 | 3.00 | 3.00 | 2.95 | 1.00 | 1.00 | 1.00 | 1.17 | 1.00 | 3.36 | 3.50 | 3.75 | 3.25 | 3.33 | 3.50 | 3.45 |
| 56. | Iran | 4.50 | 4.00 | 4.75 | 4.50 | 4.75 | 4.50 | - | - | - | - | - | - | 3.75 | 2.50 | 3.25 | 3.17 | 3.50 | 3.23 |
| 57. | Italy | 3.50 | 4.25 | 4.00 | 3.17 | 4.50 | 3.82 | 3.50 | 3.50 | 4.00 | 3.67 | 4.50 | 3.95 | 3.50 | 4.25 | 4.00 | 3.67 | 4.50 | 3.95 |
| 58. | Jamaica | - | - | - | - | - | - | 3.75 | 3.75 | 3.75 | 3.17 | 4.00 | 3.64 | 3.75 | 3.75 | 3.75 | 3.17 | 4.00 | 3.64 |
| 59. | Japan | 4.50 | 3.75 | 4.25 | 4.17 | 4.50 | 4.23 | 4.50 | 4.50 | 4.25 | 4.17 | 4.25 | 4.23 | 4.50 | 4.00 | 4.25 | 4.17 | 4.25 | 4.23 |
| 60. | Jordan | - | - | - | - | - | - | - | - | - | - | - | - | 2.25 | 2.75 | 2.25 | 2.50 | 3.00 | 2.55 |
| 61. | Kazakhstan | 4.25 | 3.25 | 3.25 | 1.67 | 3.50 | 3.05 | 4.25 | 4.25 | 3.25 | 1.67 | 3.50 | 3.05 | 4.25 | 3.50 | 3.25 | 1.83 | 4.50 | 3.35 |
| 62. | Kenya | - | - | - | - | - | - | 4.00 | 4.00 | 4.75 | 4.67 | 4.00 | 4.45 | 3.50 | 3.50 | 3.25 | 3.33 | 2.00 | 3.14 |
| 63. | Republic of Korea | 4.00 | 4.00 | 3.50 | 3.33 | 3.50 | 3.82 | - | - | - | - | - | - | 4.25 | 4.25 | 4.50 | 4.50 | 4.50 | 4.41 |
| 64. | Kyrgyzstan | 2.75 | 2.50 | 2.75 | 3.00 | 3.50 | 2.91 | 2.50 | 2.50 | 2.75 | 3.17 | 3.50 | 3.00 | - | - | - | - | - | - |
| 65. | Lao PDR | 2.00 | 2.75 | 2.25 | 1.50 | 1.25 | 1.91 | - | - | - | - | - | - | - | - | - | - | - | - |
| 66. | Lebanon | - | - | - | - | - | - | 3.00 | 3.00 | 3.00 | 2.50 | 3.25 | 2.77 | 2.75 | 3.00 | 3.50 | 3.00 | 3.50 | 3.14 |
| 67. | Lesotho | - | - | - | - | - | - | 2.50 | 2.50 | 2.00 | 1.00 | 1.75 | 1.77 | - | - | - | - | - | - |
| 68. | Madagascar | - | - | - | - | - | - | 3.75 | 3.75 | 3.75 | 2.67 | 3.50 | 3.36 | - | - | - | - | - | - |
| 69. | Malaysia | - | - | - | - | - | - | 3.75 | 3.75 | 4.25 | 3.50 | 4.00 | 3.91 | 2.75 | 3.75 | 3.25 | 2.83 | 3.50 | 3.91 |
| 70. | Malawi | 3.00 | 2.50 | 3.50 | 3.00 | 4.00 | 3.18 | - | - | - | - | - | - | 3.75 | 4.25 | 4.50 | 3.50 | 3.75 | 3.18 |
| 71. | Maldives | 2.00 | 2.50 | 2.25 | 2.83 | 2.75 | 2.50 | 2.25 | 2.25 | 3.00 | 3.17 | 2.75 | 2.77 | 2.50 | 2.25 | 2.75 | 3.17 | 2.75 | 2.73 |
| 72. | Mali | - | - | - | - | - | - | 2.00 | 2.00 | 3.00 | 3.00 | 3.00 | 2.86 | - | - | - | - | - | - |
| 73. | Marshall Islands | - | - | - | - | - | - | 1.75 | 1.75 | 2.00 | 2.00 | 2.00 | 2.05 | 2.00 | 2.00 | 1.50 | 2.17 | 2.75 | 2.09 |
| 74. | Mauritania | - | - | - | - | - | - | - | - | - | - | - | - | 3.00 | 3.00 | 3.00 | 3.33 | 3.00 | 3.09 |
| 75. | Mauritius | 3.50 | 3.50 | 3.00 | 2.50 | 3.25 | 3.09 | 3.50 | 3.50 | 3.00 | 2.50 | 3.25 | 3.09 | 4.00 | 3.50 | 3.50 | 3.67 | 3.75 | 3.68 |
| 76. | Mexico | - | - | - | - | - | - | 4.25 | 4.25 | 4.00 | 3.67 | 4.25 | 4.00 | 4.00 | 4.00 | 3.75 | 3.67 | 4.00 | 3.86 |
| 77. | Micronesia | - | - | - | - | - | - | - | - | - | - | - | - | 2.50 | 2.75 | 2.25 | 2.50 | 3.00 | 2.59 |
| 78. | Moldova | - | - | - | - | - | - | 2.00 | 2.00 | 2.50 | 2.67 | 2.75 | 2.55 | - | - | - | - | - | - |
| 79. | Monaco | - | - | - | - | - | - | 2.25 | 2.25 | 2.75 | 1.33 | 2.25 | 2.14 | 2.25 | 2.50 | 2.75 | 1.33 | 2.25 | 2.14 |
| 80. | Mongolia | - | - | - | - | - | - | 2.75 | 2.75 | 1.75 | 2.33 | 3.75 | 2.59 | - | - | - | - | - | - |
| 81. | Montenegro | 4.25 | 3.75 | 2.25 | 3.67 | 4.25 | 3.41 | - | - | - | - | - | - | - | - | - | - | - | - |
| 82. | Morocco | - | - | - | - | - | - | 3.00 | 3.00 | 3.75 | 3.00 | 2.50 | 3.05 | 2.75 | 3.00 | 3.00 | 3.00 | 2.00 | 2.77 |
| 83. | Mozambique | 3.50 | 3.25 | 2.25 | 3.67 | 4.25 | 3.41 | 4.00 | 4.00 | 2.75 | 3.33 | 1.75 | 3.05 | 4.00 | 4.00 | 4.00 | 3.67 | 4.25 | 3.95 |
| 84. | Myanmar | - | - | - | - | - | - | 2.50 | 2.50 | 2.25 | 2.00 | 2.25 | 2.14 | - | - | - | - | - | - |
| 85. | Namibia | - | - | - | - | - | - | 3.50 | 3.50 | 2.75 | 3.50 | 3.25 | 3.32 | - | - | - | - | - | - |
| 86. | Nauru | - | - | - | - | - | - | - | - | - | - | - | - | 1.50 | 2.50 | 1.75 | 1.33 | 1.25 | 1.64 |
| 87. | Nepal | 2.50 | 1.50 | 2.25 | 2.50 | 3.50 | 2.14 | 2.75 | 2.75 | 2.50 | 2.17 | 3.00 | 2.64 | - | - | - | - | - | - |
| 88. | Netherland | - | - | - | - | - | - | - | - | - | - | - | - | 4.25 | 5.00 | 2.50 | 4.33 | 4.75 | 4.18 |

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|------|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89. | New Zealand | 3.75 | 4.00 | 4.00 | 4.00 | 3.75 | 3.91 | 3.75 | 3.75 | 4.00 | 4.00 | 4.00 | 3.91 | 3.75 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 3.95 |
| 90. | Nicaragua | - | - | - | - | - | - | 3.75 | 3.75 | 3.00 | 2.67 | 3.50 | 3.09 | - | - | - | - | - | - | - |
| 91. | Niger | - | - | - | - | - | - | - | - | - | - | - | - | 3.00 | 2.75 | 1.75 | 2.83 | 3.25 | 2.73 | |
| 92. | Niue | - | - | - | - | - | - | - | - | - | - | - | - | 2.50 | 3.25 | 2.75 | 2.67 | 2.50 | 2.73 | |
| 93. | Norway | - | - | - | - | - | - | 3.75 | 3.75 | 4.00 | 4.17 | 4.00 | 4.00 | 4.00 | 4.25 | 4.00 | 4.00 | 3.75 | 4.00 | |
| 94. | Pakistan | - | - | - | - | - | - | 3.50 | 3.50 | 2.50 | 3.17 | 3.50 | 3.18 | 4.00 | 3.25 | 3.00 | 3.17 | 3.50 | 3.36 | |
| 95. | Palau | | | | | | | | | | | | | 2.50 | 3.25 | 2.50 | 2.17 | 2.75 | 2.45 | |
| 96. | Palestine | - | - | - | - | - | - | 2.50 | 2.50 | 3.00 | 1.83 | 1.50 | 2.45 | 2.50 | 2.75 | 3.00 | 2.00 | 2.25 | 2.59 | |
| 97. | Panama | 3.75 | 2.25 | 2.25 | 2.50 | 3.50 | 2.82 | 3.50 | 3.50 | 2.75 | 2.83 | 4.00 | 3.27 | 3.50 | 3.50 | 2.75 | 3.00 | 3.75 | 3.27 | |
| 98. | Papua New Guinea | - | - | - | - | - | - | - | - | - | - | - | - | 2.50 | 2.25 | 2.75 | 2.17 | 2.00 | 2.32 | |
| 99. | Paraguay | - | - | - | - | - | - | 3.75 | 3.75 | 4.00 | 2.83 | 3.00 | 3.45 | - | - | - | - | - | - | |
| 100. | Peru | - | - | - | - | - | - | 3.00 | 3.00 | 3.25 | 2.50 | 2.75 | 2.82 | 3.75 | 3.50 | 3.75 | 2.83 | 3.75 | 3.52 | |
| 101. | Philippines | 3.00 | 2.50 | 2.25 | 2.00 | 2.75 | 2.45 | 3.50 | 3.50 | 3.00 | 2.50 | 4.00 | 3.23 | - | - | - | - | - | - | |
| 102. | Poland | - | - | - | - | - | - | 3.25 | 3.25 | 2.25 | 2.33 | 3.25 | 3.00 | 3.50 | 4.25 | 2.25 | 2.33 | 3.50 | 3.09 | |
| 103. | Portugal | - | - | - | - | - | - | 3.75 | 3.75 | 3.50 | 4.00 | 4.00 | 3.86 | 3.25 | 3.75 | 3.50 | 3.83 | 3.75 | 3.64 | |
| 104. | Romania | - | - | - | - | - | - | 3.25 | 3.25 | 4.00 | 3.67 | 4.00 | 3.68 | 3.75 | 3.50 | 3.75 | 2.83 | 3.75 | 3.52 | |
| 105. | Rwanda | - | - | - | - | - | - | - | - | - | - | - | - | 3.50 | 4.25 | 2.25 | 2.33 | 3.50 | 3.59 | |
| 106. | Saint Kitts & Nevis | - | - | - | - | - | - | 3.50 | 3.50 | 3.00 | 3.00 | 3.00 | 3.18 | 3.50 | 3.25 | 3.25 | 2.50 | 3.25 | 3.09 | |
| 107. | Saint Lucia | 3.50 | 3.00 | 2.75 | 2.17 | 3.00 | 2.82 | 3.25 | 3.25 | 3.00 | 2.33 | 3.00 | 2.86 | - | - | - | - | - | - | |
| 108. | Samoa | - | - | - | - | - | - | 3.50 | 3.50 | 2.75 | 1.83 | 2.75 | 2.59 | 3.50 | 3.25 | 3.25 | 2.50 | 3.25 | 3.15 | |
| 109. | Senegal | 3.00 | 2.25 | 1.50 | 2.00 | 3.00 | 2.32 | 2.75 | 2.75 | 3.25 | 3.50 | 4.50 | 3.55 | - | - | - | - | - | - | |
| 110. | Serbia | - | - | - | - | - | - | - | - | - | - | - | - | 3.50 | 2.50 | 2.75 | 3.00 | 3.25 | 3.00 | |
| 111. | Seychelles | - | - | - | - | - | - | 4.00 | 4.00 | 2.00 | 3.33 | 3.75 | 3.41 | - | - | - | - | - | - | |
| 112. | Sierra Leone | - | - | - | - | - | - | 3.00 | 3.00 | 3.50 | 3.83 | 3.75 | 3.64 | - | - | - | - | - | - | |
| 113. | Slovenia | - | - | - | - | - | - | - | - | - | - | - | - | 4.50 | 5.00 | 4.75 | 2.17 | 4.75 | 4.05 | |
| 114. | Solomon Islands | - | - | - | - | - | - | 2.00 | 2.00 | 2.75 | 2.00 | 2.50 | 2.32 | - | - | - | - | - | - | |
| 115. | Sri Lanka | - | - | - | - | - | - | 3.50 | 3.50 | 3.50 | 3.17 | 3.00 | 3.32 | 3.75 | 3.75 | 3.75 | 3.50 | 3.00 | 3.55 | |
| 116. | Singapore | 4.25 | 5.00 | 5.00 | 3.67 | 4.75 | 4.45 | - | - | - | - | - | - | - | - | - | - | - | - | |
| 117. | Swaziland | 2.00 | 1.75 | 1.25 | 1.67 | 1.75 | 1.68 | - | - | - | - | - | - | - | - | - | - | - | - | |
| 118. | Sudan | - | - | - | - | - | - | - | - | - | - | - | - | 0.75 | 2.50 | 3.50 | 3.00 | 2.00 | 2.41 | |
| 119. | Sweden | 3.75 | 3.25 | 3.50 | 3.50 | 3.75 | 3.55 | 3.75 | 3.75 | 3.25 | 3.33 | 4.25 | 3.64 | 4.00 | 4.00 | 3.75 | 3.50 | 4.25 | 3.86 | |
| 120. | Switzerland | 4.75 | 4.25 | 4.25 | 4.67 | 4.50 | 4.50 | 4.75 | 4.75 | 4.25 | 4.50 | 4.50 | 4.45 | 4.75 | 4.50 | 4.25 | 4.50 | 4.75 | 4.55 | |

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|------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 121. | Syrian Arab Republic | 3.00 | 3.25 | 2.25 | 2.83 | 3.75 | 2.91 | 3.50 | 3.50 | 3.00 | 3.00 | 3.25 | 3.14 | - | - | - | - | - | - |
| 122. | Tajikistan | 3.00 | 3.75 | 2.75 | 3.17 | 3.50 | 3.23 | 3.25 | 3.25 | 3.00 | 3.33 | 3.50 | 3.18 | - | - | - | - | - | - |
| 123. | Tanzania | 3.50 | 3.00 | 3.00 | 3.00 | 4.00 | 3.27 | 3.50 | 3.50 | 3.00 | 3.00 | 4.00 | 3.27 | 3.25 | 3.00 | 3.25 | 3.33 | 3.50 | 3.27 |
| 124. | Thailand | 2.75 | 2.75 | 2.50 | 2.83 | 3.75 | 2.91 | 3.75 | 3.75 | 3.75 | 3.33 | 4.25 | 3.59 | - | - | - | - | - | - |
| 125. | Macedonian Republic | 3.50 | 3.00 | 3.50 | 3.50 | 3.25 | 3.36 | 3.25 | 3.25 | 3.50 | 3.67 | 3.00 | 3.36 | 3.25 | 3.25 | 3.50 | 3.67 | 3.00 | 3.36 |
| 126. | Timor-Leste | - | - | - | - | - | - | 3.00 | 3.00 | 2.00 | 1.17 | 3.25 | 2.36 | - | - | - | - | - | - |
| 127. | Togo | 2.25 | 3.00 | 1.00 | 3.17 | 2.50 | 2.45 | 4.00 | 4.00 | 2.50 | 2.33 | 2.00 | 2.64 | - | - | - | - | - | - |
| 128. | Tonga | - | - | - | - | - | - | - | - | - | - | - | - | 2.50 | 2.25 | 3.00 | 2.83 | 2.75 | 2.68 |
| 129. | Trinidad | - | - | - | - | - | - | - | - | - | - | - | - | 3.25 | 3.25 | 3.00 | 3.17 | 3.50 | 3.23 |
| 130. | Turkey | 3.00 | 3.75 | 3.75 | 3.17 | 3.25 | 3.36 | 3.75 | 3.75 | 4.00 | 3.67 | 3.25 | 3.59 | 3.75 | 3.50 | 4.25 | 4.00 | 4.00 | 3.91 |
| 131. | Turks- Caicos Islands | - | - | - | - | - | - | 2.25 | 2.25 | 2.25 | 3.00 | 3.25 | 3.59 | 3.00 | 3.25 | 2.50 | 3.17 | 3.50 | 3.09 |
| 132. | United Kingdom | 4.50 | 4.25 | 3.75 | 4.00 | 5.00 | 4.27 | - | - | - | - | - | - | 4.00 | 4.50 | 4.00 | 4.00 | 4.25 | 4.14 |
| 133. | United States of America | 4.00 | 4.00 | 3.50 | 3.33 | 3.75 | 3.68 | 3.50 | 3.50 | 3.75 | 3.50 | 4.00 | 3.73 | 3.75 | 4.00 | 3.75 | 3.50 | 4.00 | 3.77 |
| 134. | Uruguay | - | - | - | - | - | - | 3.75 | 3.75 | 3.25 | 3.17 | 3.25 | 3.27 | 3.75 | 3.50 | 3.25 | 3.33 | 3.25 | 3.41 |
| 135. | Uzbekistan | 3.75 | 4.00 | 4.00 | 4.00 | 4.00 | 3.95 | - | - | - | - | - | - | - | - | - | - | - | - |
| 136. | Vanuatu | - | - | - | - | - | - | - | - | - | - | - | - | 3.00 | 3.25 | 2.50 | 2.50 | 3.00 | 2.82 |
| 137. | Venezuela | 2.75 | 2.75 | 2.75 | 3.33 | 2.50 | 2.86 | - | - | - | - | - | - | - | - | - | - | - | - |
| 138. | Viet Nam | 4.00 | 3.25 | 3.25 | 3.33 | 4.00 | 3.55 | 3.75 | 3.75 | 2.75 | 2.67 | 3.75 | 3.18 | - | - | - | - | - | - |
| 139. | Yemen | 2.50 | 1.50 | 1.50 | 2.17 | 2.25 | 2.00 | 2.25 | 2.25 | 2.00 | 1.67 | 1.50 | 1.86 | 1.75 | 1.25 | 1.50 | 1.17 | 1.00 | 1.32 |
| 140. | Zambia | 3.25 | 2.50 | 2.75 | 4.17 | 4.25 | 3.45 | 3.75 | 3.75 | 2.75 | 4.17 | 4.25 | 3.64 | - | - | - | - | - | - |

Note: Compiled from database on HFA progress reports from national governments for assessment cycles 2007-2009, 2009-2011 and 2011-2013

Source: <http://www.preventionweb.net/applications/hfa/qbnhfa/step3>