Partnership for Environment and Disaster Risk Reduction

PEDRR
Ecosystems for Adaptation and Disaster Risk Reduction

Focal Point: Susanna Tol, Wetlands International/PEDRR Chair)
Susanna.Tol@wetlands.org

Suggested Inputs to the Pre-Zero Draft of HFA2

PEDRR welcomes the Co-Chair's pre-zero draft of HFA2, dated 08 August 2014. Partners would like to put forward a set of priority language for inclusion in the post-2015 framework on DRR. The rationale behind PEDRR's suggested inputs to the pre-zero draft is found in Annex 1. The full set of recommended text/language is found in Annex 2.

Current language in the pre-zero draft recognizes sustainable ecosystems management under Section D on Priorities for Action, Investing in Social, Economic and Environmental Resilience. This is most welcome and reflects current knowledge and growing practice, by placing emphasis on the role of ecosystems as a DRR *solution*.

However, language on environment/ecosystems in the pre-zero draft could be further strengthened, and suggested text is provided in this briefing note.

1. Additional language is needed in the Preamble and Guiding Principles Sections, in order to emphasize the importance of addressing environmental degradation as a risk driver and provide the rationale for sustainable ecosystems management in managing and reducing risks.

Suggested text (in bold and underlined):

Preamble, Paragraph 4, suggested text:

Trends, such as the increasing interconnectedness and interdependence of globalization, a world heavily-reliant on technology, patterns of consumptions and production, a changing climate, ~~land~~ **environmental** degradation, ~~and desertification~~ **and the unsustainable management and use of land, water and other natural resources,** all contribute to modify the nature and characteristics of, and amplify disaster risk. Such trends require that the actions and programs initiated under the HFA continue with perseverance and determination. The momentum generated by the HFA needs to be reinforced further by the post-2015 framework for disaster risk reduction with a much stronger focus on anticipating long-term risk scenarios and concrete measures to prevent the creation of new risk, reduce the existing risk and strengthen economic**, environmental** and social resilience of countries and people, by addressing both people and assets' exposure and vulnerability.

Preamble, Paragraph 5, proposed additional bullet:

- **Recognizing the role of ecosystem-based approaches as a means to manage disaster risks and deliver multiple socio-economic benefits for building disaster resilient communities.**[1]

Guiding Principles, Paragraph 12, proposed additional bullet:

- **Ecosystem-based approaches or nature-based solutions to disaster risk management, including the conservation and restoration of ecosystems and biodiversity and the sustainable management of land, water and other natural resources, are vital to reducing disaster risk, adapting to climate change and strengthening the resilience of countries and people.**[2]

2. Strengthen language on the role of sustainable ecosystems management for disaster risk reduction

There is need to provide further guidance to Member States, by citing specific examples of environmental instruments and ecosystem management approaches that could be harnessed for disaster risk reduction. These approaches have been endorsed through the ISDR Global Platforms on Disaster Risk Reduction (2011 and 2013), Asia, America and Africa Regional Platforms on Disaster Risk Reduction (May-June 2014), as well as the European Ministerial Meeting on DRR (July 2014).

Suggested text (in bold and underlined):

Paragraph 17. h) Promote the integration of disaster risk management measures in **environmental impact assessments and strategic environmental assessments**[3] **for both public and private investments, as well as** in economic valuations, cost-benefit analyses, competitiveness strategies and investment decisions, including in debt ratings, risk analysis and growth forecasts, as well as the determination of incentives, investment scale and timeliness of disbursement, and the spreading of costs over time.

[1] Outcomes of the Africa Regional Platform on DRR (May 2014), Asia Regional Platform on DRR (June 2014), European Ministerial Meeting on DRR (July 2014); Commitment of Local Government Leaders to the Global Conference for Disaster Risk Reduction, at the Americas Regional Platform, May 2014; see also Official statements at the 1st PrepCom on HFA2 delivered by CDEMA , African Member States (i.e. on river basin management), and Senegal.

[2] UNFCCC Nairobi Work Programme; UNFCCC Cancun Agreements (CoP 16); UN Convention on Biological Diversity; UN Convention to Combat Desertification, 10-year strategic plan framework; United Nations Environment Assembly of the United Nations Environment Programme, Resolution 8 adopted June 2014. See also: ISDR Global Assessment Reports on Disaster Risk Reduction (2009 and 2011); IPCC Special Report on Extreme Events (2012); World Bank's *Convenient solutions to an inconvenient truth* (2009); World Bank and United Nations's *Natural Hazards and Unnatural Disasters* (2011). For a review of literature, see Renaud et.al. (2013), *The role of ecosystems in disaster risk reduction* (UNU Press). For recommended reading on ecosystems and disaster risk reduction, consult www.pedrr.org.

[3] European Ministerial Meeting on DRR (July 2014); Chair Summary of the 4th Global Platform on DRR (May 2013); Asia-Pacific Input Document for the Post-2015 Framework for Disaster Risk Reduction (26 June 2014). See also newly-revised EU's EIA Directive.

Paragraph 17. k) Strengthen the sustainable use and management of ecosystems, **such as river basin management, integrated coastal zone management, integrated water resources management, wetland management and protected areas management,[4] as effective disaster prevention and recovery strategies, for managing risks and contributing to the overall resilience of communities.**

3. The pre-zero draft emphasizes the integration of disaster risk reduction in development and sectoral policies and plans; ecosystems and natural resource management can support this integration.

Suggested language is provided in order to highlight how ecosystem considerations would facilitate risk-sensitive and sustainable development planning within and across sectors.

Suggested text (in bold and underlined):

Paragraph 15.h) Promote the integration of disaster risk management into development policies and planning at all levels of government, including in poverty reduction strategies and sectors and multi sector policies and plans, **including land- and water use plans.**[5]

Paragraph 17.j) Promote the incorporation of disaster risk assessment into rural **and urban** development planning and management, in particular with regard to mountain**s,** ~~and~~ coastal flood plain areas**, wetlands and all other areas prone to droughts and flooding**, **wildfire-prone ecosystems, particularly at the wildland-urban interface,** including through the identification of land zones that are available and safe for human settlement.

Paragraph 18b) Collaboration should be ensured across mechanisms and institutions for the implementation of instruments relevant to disaster risk, such as for climate change, adaptation, sustainable development, **integrated land and water management, biodiversity conservation** and others as appropriate.

4. Engage environmental actors in HFA2 implementation

Environmental actors in disaster risk reduction - including Ministries of Environment as well as other national, regional and international institutions working on ecosystem and natural resource management – can and should play a stronger role in the implementation of HFA2, but their effective engagement will require an enabling policy framework.

Suggested text (in bold and underlined):

[4] Outcomes of the Africa Regional Platform (May 2014) and Asia Regional Platform (June 2014) and Americas Regional Platform (May 2014); Chair Summary of the 4th Global Platform on DRR (May 2013); Commitment by Local Government Leaders at the Americas Regional Platform (May 2014). On wetlands, see the Convention on Wetlands of International Importance (Ramsar Convention) and Draft Resolution on Wetlands and Disaster Risk Reduction sponsored by the Government of the Philippines for discussion at the 12th Meeting of the Conference of the Parties (CoP) of the Ramsar Convention in June 2015.

[5] European Ministerial Meeting on DRR (July 2014)

Proposed additional bullet under Paragraph 23:

- **River basin authorities, coastal managers and other authorities responsible for environmental and natural resource management are encouraged to develop and implement laws, policies and plans to integrate ecosystem-based approaches, including green infrastructure, in disaster risk management.**

5. Assessment of disaster risk should take into account ecosystem considerations

Taking into account ecosystem considerations in disaster risk assessments is essential to design effective, sustainable disaster risk management interventions and to justify how interventions related to land, water and natural resource use may affect the vulnerability or exposure of communities in one or multiple locations.

Suggested text (in bold and underlined):

Paragraph 14 b) Periodically assess disaster risks, namely **the exposure and vulnerability of** ~~persons and~~ **social,** economic and **environmental** ~~and fiscal~~ assets~~'~~ ~~exposure and vulnerability~~ **of communities and countries**, as well as hazards' characteristics.[6]

Proposed additional bullet under Paragraph 14:

Enhance capacity of government and stakeholders to assess disaster risk at the relevant spatial scale, such as within a river basin and along coastlines, *inter alia* by including landscape level considerations in risk assessment protocols.

Proposed additional bullet under Paragraph 15:

Sectoral development policies, planning and programming should include the regular assessment of risk at landscape and watershed level, that takes into account ecosystem functions and services to reduce disaster risk

6. Link resilience to disaster risk reduction

Presently, the pre-zero draft outlines three main strategic goals under paragraph 11. Goal 3 on strengthening resilience does not incorporate the concept of risk prevention (Goal 1) or risk reduction (Goal 2). In order to present a holistic and integrated HFA2 framework, whereby disaster risk reduction and prevention are understood as inter-linked with resilience building, suggested text could be:

Paragraph 11, Goal III. The strengthening of persons, communities and countries' disaster resilience which requires social, economic and environmental measures that enable persons, communities and countries to **prevent and reduce risk,** absorb loss, minimize impact and recover.

[6] Official statement at the 1st PrepCom on HFA2 delivered by Finland

Annex 1. Rationale behind PEDRR suggested inputs to the pre-zero draft[7]

Environment and disasters interact in multiple ways; the most important linkages are:

1) Environmental degradation can lead to disasters (e.g. deforestation causing landslides and flashfloods);
2) Environmental degradation aggravates other hazards and may increase hazard frequency and impacts (e.g. destruction of coral reefs, mangroves and seagrasses intensifies the impacts of storm surges on coasts);
3) Disasters cause environmental damage (e.g. tsunami destroying coastal habitats, chemical spills impacting rivers; and post-disaster reconstruction can exacerbate water abstraction and deforestation);
4) Environmental degradation linked to disasters impacts people's livelihoods, which in turn reduces their resilience to all disasters;
5) Ecosystems (wetlands, forests, coastal and marine systems such as mangroves, reefs, seagrasses and dunes) have important functions that influence all three dimensions of the disaster risk equation – *by preventing, mitigating or regulating hazards* (e.g. forests can reduce incidence of landslides and avalanches, wetlands help regulate flooding and droughts), *by acting as natural buffers and reducing people's exposure to hazards* (e.g. mangroves, coral reefs and seagrasses protect coastal areas from storm surge impacts), and *by reducing vulnerability* to hazard impacts through supporting livelihoods and basic needs (food, water, shelter, fuel) before, during and after disasters.

Environmental degradation as a major driver of disaster risk is already widely acknowledged. Explicit recognition of environment as an underlying risk factor is found under the HFA Priority 4. Addressing environmental degradation as an underlying risk factor remains critical. However, there is large scope and opportunity in HFA2 to recognize and harness ecosystem-based solutions for disaster risk reduction.

Healthy, well-managed ecosystems play an important role in reducing disaster and climate risks and contributing to the overall resilience of communities, including their livelihood, food and water security. More and more countries around the world, in both developing, emerging and developed economies, are recognizing and applying ecosystem-based approaches for risk reduction and risk management (see Box 1 for some practical examples).

[7] See also PEDRR position paper on the post-2015 global framework on disaster risk reduction (May 2013) at www.pedrr.org or at http://pedrr.org/pedrr/wp-content/uploads/2013/11/PEDRR-Key-Messages-Post-2015-DRR-Framework_FINAL-with-17-logos.pdf

Box 1. Examples of implementing ecosystem-based approaches for disaster risk reduction

- After Typhoon Yolanda devastated coastal areas in the Philippines, the Philippine government quickly pledged USD 22 million from its own budget towards mangrove reforestation and rehabilitation activities to function as natural buffers against future storm surge impacts.
- After Hurricane Sandy, the Governor of New York (USA) set up a USD 400 million fund to buy back homes from residents in Sandy-affected communities, with plans to convert these areas into green spaces that would function as coastal buffer zones.
- From 2012-2015, the Government of the Democratic Republic of the Congo and the Lukaya River Users Association are pilot-testing river basin management for the first time to better manage flood risks and improve water quality.
- In Burkina Faso and Niger, local farmers restored degraded drylands by applying traditional agricultural and agroforestry techniques, significantly increasing local resilience against droughts. In Burkina Faso, more than 200,000 hectares of drylands have been rehabilitated, now producing an additional 80,000 tons of food per year. In Niger, more than 200 million on-farm trees have been regenerated, providing 500,000 additional tons of food per year. (Reij, C., G. Tappan, and M. Smale. 2010)
- In Bolivia, community-based forest rehabilitation, improved both slope stability and the condition of watersheds, increasing community resilience to landslides and extended dry periods (Robledo, C., Fischler, M. and Patiño, A. 2004)
- European countries affected by severe flooding in recent years, including the UK, Netherlands, Belgium and Germany have made significant policy shifts to "make space for water" to protect people from flooding, restoring floodplains, applying river basin management and integrated coastal zone management. (Temmerman, S., Meire, P., Bouma, T. et.al. 2013)
- Netherlands invested €2.3 billion to make "Room for the River" and re-established floodplains, resulting in reduced flood risk for 4 million people along its main rivers (Van Eijk, P., C. Baker, R. Gaspirc, and R. Kumar, 2013)
- Switzerland invests up to 150 million Swiss francs per year in forest management which provides protection against mountain hazards, such as rockfalls, snow avalanches and landslides and is 5 to 10 times less costly than engineered measures (Wehrli, A and L. Dorren, 2013).
- In north-eastern India, in Orissa, the State government and communities are working together to restore floodplains and allow floods of moderate intensity. This strategy provides significant benefits for local agriculture and downstream fisheries, while sustainably managing flood regimes and water flows (Van Eijk, P., C. Baker, R. Gaspirc, and R. Kumar, 2013)
- In Ethiopia, the Government and local communities have been implementing, since the 1980s, a sustainable land management and rain catchment programme, which has increased food production and mitigated the impacts of drought and floods. The programme known as MERET has increased food security of MERET households by 50%, reduced the average annual food gap from 6 to 3 months, rehabilitated 1 million hectares of land, and reforested 600,000 hectares (World Food Programme, Office for Climate Change and Disaster Risk Reduction, 2010).

Further references can be found at: www.pedrr.org

Annex 2.
Proposed amendments to the pre-zero draft text to the HFA2:

(Additions are **bold and underlined**, deletions are ~~stricken out.~~):

A. Preamble

4. Trends, such as the increasing interconnectedness and interdependence of globalization, a world heavily-reliant on technology, patterns of consumptions and production, a changing climate, ~~land~~ **environmental** degradation, ~~and desertification~~ **and the unsustainable management and use of land, water and other natural resources,** all contribute to modify the nature and characteristics of, and amplify disaster risk. Such trends require that the actions and programs initiated under the HFA continue with perseverance and determination. The momentum generated by the HFA needs to be reinforced further by the post-2015 framework for disaster risk reduction with a much stronger focus on anticipating long-term risk scenarios and concrete measures to prevent the creation of new risk, reduce the existing risk and strengthen economic, **environmental** and social resilience of countries and people, by addressing both people and assets' exposure and vulnerability.

5. The consultations on the post-2015 framework for disaster risk reduction have provided clear guidance on the following:

Proposed additional paragraph:

- **Recognizing the role of ecosystem-based approaches as a means to manage disaster risks and deliver multiple socio-economic benefits for building disaster resilient communities.**[8]

B. Purpose, Scope, Outcome and Goals

III The strengthening of persons, communities and countries' disaster resilience which requires social, economic and environmental measures that enable persons, communities and countries to **prevent and reduce risk,** absorb loss, minimize impact and recover.

C. Guiding principles

[8] Outcomes of the Africa Regional Platform on DRR (May 2014), Asia Regional Platform on DRR (June 2014), European Ministerial Meeting on DRR (July 2014); Commitment of Local Government Leaders to the Global Conference for Disaster Risk Reduction, at the Americas Regional Platform, May 2014; see also Official statements at the 1st PrepCom on HFA2 delivered by CDEMA , African Member States (i.e. on river basin management), and Senegal.

12. The principles contained in the Yokohama Strategy and the HFA general considerations retain their full relevance and are complemented as follows to guide implementation.

b) Managing the risk of disasters should also be aimed at protecting persons, their livelihoods and property, **and environmental assets** while respecting their human rights.

Proposed additional paragraph:

Ecosystem-based approaches or nature-based solutions to disaster risk management, including the conservation and restoration of ecosystems and biodiversity and the sustainable management of land, water and other natural resources, are vital to reducing disaster risk, adapting to climate change and strengthening the resilience of countries and people.

D. Priorities for action

I. National and local context

Understanding disaster risk

(under pargraph 14)

a) Systematically survey, record and publicly account for all disaster loss and economic, **environmental** and social impact**s**, taking into account gender-specific and sex/age/disability- disaggregated data.

b) Periodically assess disaster risks, namely **the exposure and vulnerability of** ~~persons and~~ **social,** economic and **environmental** ~~and fiscal~~ assets~~'~~ ~~exposure and vulnerability~~ **of communities and countries**, as well as hazards' characteristics.[9]

Proposed additional paragraph:

Enhance capacity of government and stakeholders to assess disaster risk at the relevant spatial scale, such as within a river basin and along coastlines, *inter alia* by including landscape level considerations in risk assessment protocols.

h) Promote and improve dialogue and cooperation among scientific communities, including social, economic **and environmental** sciences, and practitioners working on disaster risk management.

Strengthening Governance to Manage Disaster Risk

[9] Official statement at the 1st PrepCom on HFA2 delivered by Finland

(under paragraph 15):

Keep:

g) Promote the coherence of, and further develop as appropriate, national and local frameworks of laws, regulations and public policies that, through defining roles and responsibilities:

– Guide the public sector in addressing disaster risk in **publicly** owned, managed or regulated services and infrastructure, and in the environment;

Add:

h) Promote the integration of disaster risk management into development policies and planning at all levels of government, including in poverty reduction strategies and sectors and multi sector policies and plans, **including land- and water use plans**.[10]

Proposed additional paragraph:

Sectoral development policies, planning and programming should include the regular assessment of risk at the landscape and watershed level, that takes into account ecosystem functions and services to reduce disaster risk.

Investing in Social, Economic and Environmental Resilience

Keep areas highlighted:

17. Social, economic and environmental investments are essential to strengthen the resilience of persons, communities, countries and their assets. A continued focus on key development areas, such as health, education, food security, water, ecosystem management, housing, cultural heritage, public awareness, innovative financial and risk transfer mechanisms, especially for local governments, households, and the poor and vulnerable is required. In particular, the following may be prioritized:

h) Promote the integration of disaster risk management measures in **environmental impact assessments and strategic environmental assessments[11] for both public and private investments, as well as** in economic valuations, cost-benefit analyses, competitiveness strategies and investment decisions, including in debt ratings, risk analysis and growth forecasts, as well as the determination of incentives, investment scale and timeliness of disbursement, and the spreading of costs over time.

i) Land- **and water** use policy development and implementation, including urban planning, informa and non-permanent housing, should be given special attention due to their direct

[10] European Ministerial Meeting on DRR (July 2014)

[11] European Ministerial Meeting on DRR (July 2014); Chair Summary of the 4th Global Platform on DRR (May 2013); Asia-Pacific Input Document for the Post-2015 Framework for Disaster Risk Reduction (26 June 2014)

impact on risk exposure.

j) Promote the incorporation of disaster risk assessment into rural **and urban** development planning and management, in particular with regard to mountain**s,** ~~and~~ coastal flood plain areas**, wetlands and all other areas prone to droughts and flooding**, **wildfire-prone ecosystems, particularly at the wildland-urban interface,** including through the identification of land zones that are available and safe for human settlement.

k) Strengthen the sustainable use and management of ecosystems, **such as river basin management, integrated coastal zone management, integrated water resources management, wetland management and protected areas management,[12] as effective disaster prevention and recovery strategies, for managing risks and contributing to the overall resilience of communities.**

l) Implement integrated environmental and natural resource management approaches, **including the conservation and restoration of ecosystems and biodiversity** that incorporate disaster risk reduction.

m) Encourage the revision of existing or the development of new building codes, standards, rehabilitation and reconstruction practices at the national or local levels**, including guidance for the implementation of green infrastructure or ecosystem-based approaches**, as appropriate, with the aim of making them more applicable in the local context, particularly in informal and marginal human settlements, and reinforce the capacity to implement, monitor and enforce such codes, through a consensus-based approach, with a view to fostering disaster-resistant structures.

II. Global and regional context

(under paragraph 18):

Understanding Disaster Risk

Proposed new paragraph:

Enhance capacities of government and other stakeholders to assess disaster risk that takes into consideration shared resources, such as river basins, and ecosystem based approaches for transboundary risk management.

Strengthening governance to manage disaster risk

b) Collaboration should be ensured across mechanisms and institutions for the implementation of instruments relevant to disaster risk, such as for climate change,

[12] Outcomes of the Africa Regional Platform (May 2014) and Asia Regional Platform (June 2014) and Americas Regional Platform (May 2014); Chair Summary of the 4th Global Platform on DRR (May 2013); Commitement by Local Government Leaders at the Americas Regional Platform (May 2014)

adaptation, sustainable development, **integrated land and water management, biodiversity conservation** and others as appropriate.

Keep:

21 b) Disaster risk reduction measures should be mainstreamed appropriately into multilateral and bilateral development assistance programmes including those related to poverty reduction, natural resource management, urban development and adaptation to climate change.

III. Role of Stakeholders

23. [new indent]

– **River basin authorities, coastal managers and other authorities responsible for environmental and natural resource management are encouraged to develop and implement laws, policies and plans to integrate ecosystem-based approaches, including green infrastructure, in disaster risk management.**

Endorsed by the Partnership for Environment and Disaster Risk Reduction (as of 01 Sept 2014):

PEDRR
Ecosystems for Adaptation and Disaster Risk Reduction

1. Stockholm Environment Institute (SEI)
2. Council of Europe
3. Global Fire Monitoring Center (GFMC)
4. HELVETAS Swiss Intercooperation
5. United Nations University – Institute for Environment and Human Security
6. Wetlands International
7. United Nations Environment Programme
8. ProAct Network
9. Global Risk Forum
10. World Wildlife Fund
11. The Nature Conservancy
12. UNESCO
13. UNDP
14. International Union for the Conservation of Nature (IUCN)