Investing in Ecosystem-based Disaster Risk Reduction (Eco-DRR) and Climate Change Adaptation

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IUCN (International Union for Conservation of Nature)
Biodiversity for DRR

Biodiversity → crucial, often underestimated role in the mitigation of disaster risks

Hydrological disasters
- e.g. Tsunamis
- Mangrove and reef systems protect coastlines

Meteorological disasters
- e.g. Storms
- Riparian forests control sedimentation, reduce effects of flooding

Biotic disasters
- e.g. Invasive species
- Diverse ecosystems are less prone to intrusion of invasive species
Publications on DRR following Western Indian Ocean Tsunami
Mosaic landscaping for Fire Management - Lebanon
IWRM - tropical storms and flooding in Guatemala / Mexico following Stan, 2005
Mangrove Rehabilitation
Workshop on Ecosystem-based DRR (Eco-DRR)
Sendai July 2012
Documentation of Perceptions and Practices on Ecosystem Based Solutions for DRR in the Affected Areas
Linking CCA to disaster risk reduction

Overlaps between DRR and CCA

Source: Mitchell and van Aalst, 2008
EbA in IUCN
EbA in IUCN

- **Asia**: Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Maldives, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam
- **West Asia**: Egypt, Jordan, Lebanon, Morocco and Palestine
- **Central America**: Mexico, Honduras, Guatemala, Panama, El Salvador and Costa Rica
- **South America**: Peru, Chile, Colombia, Ecuador, Bolivia
- **Eastern and Southern Africa**: Botswana, Ethiopia, Kenya, Lesotho, Namibia, Seychelles, South Africa, Sudan, Tanzania and Uganda
- **West and Central Africa**: Benin, Burkina Faso, Cameroon, Central African Republic (CAR), Chad, Congo, Ivory Coast, Democratic Republic of Congo (DRC), Gabon, Gambia, Ghana, Guinea, Equatorial Guinea, Mali, Niger, Nigeria, Rwanda, Senegal, Sierra Leone and Togo
Established Global Coordination – Partnership for Environment and Disaster Risk Reduction (PEDRR)

http://www.pedrr.net/
International Science – Policy Workshop 2014 on Eco-DRR and CCA

Ecosystem-based disaster risk reduction and climate change adaptation: Guiding development policies in the 21st century.

Dates: 16-18 June 2014
Venue: Jakarta/Bogor, Indonesia
Massive Open Online Course
Disasters and Ecosystems: Resilience in a Changing Climate

In 2014, the United Nations Environment Programme (UNEP), through its Global Universities Partnership on Environment for Sustainability (GUPES), and Cologne University of Applied Sciences (CUAS), Germany, will launch the first Massive Open Online Course (MOOC) on Disasters and Ecosystems: Resilience in a Changing Climate.

“Development cannot be sustainable if the disaster risk reduction approach is not fully integrated into development planning and investments.”

Ban Ki-moon
Hyogo Framework of Action (HFA)

• Hyogo Framework for Action is a global plan to reduce disaster risk
• 168 signatory nations

Five Priority Areas 2005-2015:
1. Strengthening institutions
2. Identify, monitor & communicate risks
3. Improve education & awareness – culture of safety
4. Address underlying risks
5. Strengthen preparedness
# Global Assessment Report on DRR(2011)

**Key elements for successful disaster risk management (DRM) across governance scales and development sectors identified in the 2011 Global Assessment Report on Disaster Risk Reduction**

<table>
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<tr>
<th>Integrate DRM into existing development instruments and mechanisms</th>
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<tr>
<td><strong>Regulate urban and local development</strong></td>
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<td>Use participatory planning and budgeting to upgrade informal settlements, allocate land and promote safe building</td>
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<tr>
<td><strong>Protect ecosystems</strong></td>
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<td>Employ participatory valuation and management of ecosystem services and mainstreaming of ecosystem approaches in DRM</td>
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<td><strong>Offer social protection</strong></td>
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<td>Adapt conditional cash transfer and temporary employment schemes; bundle micro-insurance and loans; consider social floor and poverty line</td>
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<tr>
<td><strong>Use national planning and public investment systems</strong></td>
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<tr>
<td>Include risk assessments in national and sector development planning and investment</td>
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Progress of HFA

Average score of progress

- Governance and institutional arrangements: 3.3
- Risk identification and early warning: 3.1
- Knowledge and education: 3.0
- Underlying risk: 2.8
- Preparedness and response: 3.4

HFA Priority Areas

UNISDR, 2011
Ecosystems for DRR: No-Regrets strategy

- Locally accessible solutions
- Relatively low-cost installation and maintenance
- Natural infrastructure can reduce hazard impacts and vulnerability
- Livelihood benefits for human well-being regardless of a disaster event
- Yet ecosystems also have limitations
Sustainable development

- Ecosystem management
- Ecosystem-based DRR
- Climate Change Adaptation
- DRR
International Symposium on Ecosystem-based Disaster Risk Reduction

12 November 2013, Tokyo, Japan
Asia Parks Congress and Sanriku Reconstruction National Park
Towards a post-2015 framework for Disaster Risk Reduction

Proposed Elements for Consideration in the Post-2015 Framework for Disaster Risk Reduction by the UN Special Representative of the Secretary-General (SRSG) for Disaster Risk Reduction
Ecosystem-based Solutions for Disaster Risk Reduction!