

Healthy Ecosystems Reduce Vulnerability to Disaster Risk

International Union for Conservation of Nature (IUCN) Statement to the Second Session of the Global Platform for Disaster Risk Reduction, Geneva, 16-19 June 2009

Address made by Mr. Neville Ash, Head of the IUCN Delegation

Mr. Chairman, distinguished delegates, the ISDR Global Assessment Report on DRR, launched last month in Bahrain has made it clear that if we want to build resilience to disasters and to achieve the goals set by the Hyogo Framework for Action, then we need to manage ecosystems in a more sustainable way to provide the services that communities need for their well-being. The Assessment Report highlighted environmental degradation, leading to the loss of critical ecosystem services, as one of the main reasons for the unprecedented increase in global disaster risk.

Environmental degradation is reducing the capacity of ecosystems to meet people's need for food and other products, and to protect them from hazards through services such as flood regulation, slope stabilization, and protection from storm surges. The most vulnerable people are often also those that, due to their poverty, are most dependent on natural resources for their livelihoods. Appropriate management of ecosystems can play a critical role in their ability to prevent, cope with, and recover from disasters. Ecosystems also provide many livelihood benefits, such as food, firewood, clean water, fibres, and medicine that contribute to the overall resilience of communities to disasters and climate change.

The 2009 Global Platform is focused on financing disaster risk reduction. Mr. Chairman, ecosystems can provide cost-effective solutions to mitigating the impacts of hazards. A recent study by the Nature Conservancy for instance has estimated Indonesia's coral reefs to have a value of some US\$314 million for coastal erosion prevention alone, without including the value to fisheries and tourism. Another study in Bintuni Bay, West Papua, valued mangroves at US\$600 per household per year based on their ability to control erosion.

Ecosystem degradation also reduces the ability of natural systems to sequester carbon, further exacerbating climate change related disasters. Healthy and diverse ecosystems are more robust themselves to extreme weather events, and are therefore more able to continue to provide benefits to communities in post-disaster situations.

Sustainable development, human well-being, human security and gender equality are common goals for disaster risk management, ecosystem management, economic development, and climate change adaptation. Improved dialogue and coordinating mechanisms between these sectors will achieve greater convergence between ecosystem management and disaster risk management. This can be achieved through:

1. **Recognizing the contribution of ecosystem-based disaster risk reduction in national and local policy;** by granting relevant legal authority to environmental, planning and disaster management agencies to coordinate and enforce sustainable environmental DRR policies and procedures; by seeking to integrate national DRR strategies with adaptation processes, such as National Adaptation Programmes of Action (NAPAs), and with national

environmental and development strategies; and encouraging new financial incentives for investments in sustainable ecosystem management.

2. **Implementing environmental monitoring and enforcing sustainable resource use planning.** There is an urgent need to promote and enforce integrated resource use planning and zoning; to conduct environmental monitoring and assessments, as well as integrated gender-sensitive risk assessments; to implement ecosystem restoration and rehabilitation that matches local needs and priorities; and to incorporate environmental safeguards into disaster emergency response plans.
3. **Engaging with stakeholders,** through dialogue and mechanisms for collaboration between environmental, planning, development, and disaster risk management agencies and authorities, and with communities most affected by the decisions, recognizing the special role that women play as agents of change and stewards of natural resources, as well as being most affected by extreme events.
4. **Creating and sharing knowledge,** through promoting new knowledge creation and sharing among scientists, practitioners, communities, and policy makers; recognizing the value of local knowledge, practices, and coping strategies.

Ecosystem-based disaster risk management is the meeting point for enhanced livelihood security for the poor and long-term management of ecosystems. Sustainable ecosystem management is based on equitable stakeholder involvement in land management decisions, land-use trade-offs and long-term goal setting. These are central elements to reducing underlying risk factors for disasters and climate change impacts.

IUCN is working to enhance ecosystem management for DRR at national and local scales around the world, and is committed to supporting national platforms in the implementation of the Hyogo Framework for Action. In collaboration with the ISDR Partnership on Environment and DRR¹, IUCN has developed guidance on the benefits of, and ways for, integrating environmental concerns into DRR strategies at local and national levels.

IUCN strongly believes that investing in ecosystems and mainstreaming disaster risk and ecosystem management in development planning and budgetary processes will make a major contribution to the goals of achieving sustainable livelihoods for the poor and substantially reducing disaster losses.

Thank you.

¹ The UN/ISDR Partnership for Environment and Disaster Risk Reduction (PEDRR), benefits from the participation of the following organisations: Asian Disaster Preparedness Centre (ADPC), Global Fire Monitoring Center (GFMC), International Union for Conservation of Nature (IUCN), ProAct Network, Stockholm Environment Institute (SEI), World Wildlife Fund (WWF), United Nations Environment Programme (UNEP), United Nations University – Institute for Environment and Human Security (UNU-EHS).

Ecosystems and Disaster Risk Reduction

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Healthy ecosystems, such as intact forests, wetlands, mangroves, and coral reefs provide natural buffers to hazard events, and reduce the impacts of climate change. They contribute to flood abatement, slope stabilization, coastal protection and avalanche protection, in addition to other structural and disaster preparedness measures. They also provide many livelihood benefits, such as firewood, clean water, fibres, medicine and food.

Ecosystem degradation has been identified by the ISDR 2009 Global Assessment Report on Disaster Risk Reduction as one of three key drivers of disaster risk. The people affected by reoccurring disasters are often the most dependent on natural resources for their livelihoods, and the management of ecosystems can play a critical role in their ability to prevent, cope with, and recover from disasters.

Why do Ecosystems matter to Disaster Risk Reduction?

1. **Human well-being depends on ecosystems** that also enable people to withstand, cope with, and recover from disasters. There is a two-way relationship between poverty and disaster, with poor communities being subject to greater disasters, especially in areas where ecosystems are degraded.
2. **Ecosystems, such as wetlands, forests, and coastal systems, can provide cost-effective natural buffers** against hazard events and the impacts of climate change. Investments in preventive measures, including in maintaining healthy ecosystems, are estimated to be seven-fold more cost-effective than the costs incurred by disasters (World Bank, 2004).
3. **Healthy and diverse ecosystems are more resilient to extreme weather events.** Intact ecosystems are less likely to be affected by, and more likely to recover from the impacts of extreme events. However, disasters can affect ecosystems through habitat loss and species mortality. Poorly designed post-disaster clean-up efforts can also negatively impact on ecosystems, with negative consequences on progress toward achieving the objectives of the UN Convention on Biological Diversity and Millennium Development Goals.
4. **Ecosystem degradation, especially of forests and peatlands, reduces the ability of natural systems to sequester carbon**, exacerbating climate change, and climate change -related disasters.

What is Ecosystem-based Disaster Risk Reduction?

Ecosystem-based DRR refers to activities that recognize the role of ecosystems in supporting communities to prepare for, cope with, and respond to disasters. This is of particular relevance to the field of disaster risk management as it is a meeting point for enhanced livelihood security for the poor and long-term sustainable management of ecosystems. Sustainable ecosystem management is based on equitable stakeholder involvement in resource management decisions, resource-use trade-offs, and long-term goal setting. These are central elements to reducing underlying risk factors for

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disasters and climate change impacts.

Integrating Ecosystem Management in Disaster Risk Management

Sustainable development, human well-being, human security and gender equality are common goals for disaster risk management, ecosystem management, economic development, and climate change adaptation. Improved dialogue and coordinating mechanisms between these sectors will achieve greater convergence between ecosystem management and disaster risk management. This can be achieved through:

5. **Recognizing the contribution of ecosystem-based disaster risk reduction in national and local policy;** by granting relevant legal authority to environmental, planning and disaster management agencies to coordinate and enforce sustainable environmental DRR policies and procedures; by seeking to integrate national DRR strategies with adaptation processes, such as National Adaptation Programmes of Action (NAPAs), and with national environmental and development strategies; and encouraging new financial incentives for investments in sustainable ecosystem management.
6. **Implementing environmental monitoring and enforcing sustainable resource use planning.** There is an urgent need to promote and enforce integrated resource use planning and zoning; to conduct environmental monitoring and assessments; as well as integrated gender-sensitive risk assessments; to implement ecosystem restoration and rehabilitation that matches local needs and priorities; and to incorporate environmental safeguards into disaster emergency response plans.
7. **Engaging with stakeholders,** through dialogue and mechanisms for collaboration between environmental, planning, development, and disaster risk management agencies and authorities, and with communities most affected by the decisions, recognizing in particular the special role that women play as agents of change and stewards of natural resources, as well as being most affected by extreme events.
8. **Creating and sharing knowledge,** through promoting new knowledge creation and sharing among scientists, practitioners and communities, and policy makers; and recognizing the value of local practices, coping strategies and knowledge.

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Investing in ecosystems and mainstreaming disaster risk and ecosystem management in development planning and budgetary processes will make a major contribution to the goals of achieving sustainable livelihoods for the poor and substantially reducing disaster losses.

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