



**22th OSCE Economic and Environmental Forum - Swiss OSCE Chairmanship
2014**

Briefing Note for The Ministry of Foreign Affairs, Government of Switzerland

January 2014

Background:

Over the past three decades, global disaster risk has increased steadily, with over 2.2 million of lost lives and associated economic losses amounting to US\$1,527.6 billion. In 2011 alone, natural hazard-induced disasters, including the Great East Japan earthquake and tsunami, caused a record US\$366 billion (€285 million) of damages, with close to 30,000 people killed in 302 recorded disasters last year. Disasters not only have significant social, economic and environmental impacts but also undermine development gains and progress towards poverty reduction.

Yet in countries that have been pro-active in taking disaster mitigation and adaptation measures, such as in Bangladesh, the death toll from comparable disasters today is considerably much lower than it was 20 years ago. This demonstrates that natural hazards need not become disasters, and there are numerous, cost-effective measures that vulnerable communities and countries can take to reduce the impact of natural hazards. Indeed, the 2011 *UNISDR Global Assessment Report on Disaster Risk Reduction* shows that global mortality risk from floods has declined while economic loss risk is still increasing, mainly due to growing population and asset exposure.

Box 1: Reducing landslides, avalanches and rock falls

In addition to providing improved aesthetics compared to engineered structures, forests are estimated to save between \$US 2-3.5 billion per year in disaster damage (UNISDR, 2004). Switzerland, for example, long ago recognized the value of 'protection forests' in reducing damage from avalanches, landslides and rock falls, and forests are a key part of the country's disaster prevention plan. Healthy forests are less likely to be invaded by pests, invasive alien species and destroyed by natural hazards, and provide numerous additional benefits such as the storage of carbon, and the opportunity for recreation and timber production. Sudmeier-Rieux, Ash and Murti (2013)

Ecosystem management is recognized by the international community as a key instrument for disaster risk reduction (DRR), as exemplified in the Hyogo Framework for Action (HFA) 2005-2015. Healthy, well-managed ecosystems can provide natural protection against common natural hazards, such as landslides, flooding, avalanches, storm surges, wildfires and drought. By sustaining livelihoods and providing essential goods such as food, water and construction materials, ecosystems also lessen disaster risk by reducing vulnerabilities to hazard impacts and speeding up post-disaster recovery. Both the 2009 and 2011 *UNISDR Global Assessment Report* identified ecosystems decline as a major risk driver and called for greater protection and enhancement of ecosystem services, a message reinforced by the recent IPCC Special Report on Extreme Events For Policymakers (SREX 2012). Moreover, during the course of UNFCCC negotiations for a global climate agreement, ecosystem-based approaches have been recognized as a key climate change adaptation strategy. Ecosystem management is therefore increasingly viewed as an effective approach for achieving both DRR and climate change adaptation (CCA) priorities. The World Bank, for example, recommends that adaptation programmes integrate an ecosystem-based approach into vulnerability and disaster risk reduction strategies.

Nonetheless, there remains a significant awareness and capacity gap in addressing the environmental dimensions of disasters and applying integrated ecosystem-based solutions for disaster reduction and adaptation to climate risks, as highlighted in the Mid-term Review of the HFA and outcomes of the 2011

ISDR Global Platform on Disaster Risk Reduction. Yet, substantial global knowledge and experience on integrated ecosystem management exists, and several European countries, especially Switzerland, have pioneered ecosystem management solutions for DRR. Some examples include Switzerland's protection forest policy for avalanche and landslide mitigation and the "making space for water" initiatives being implemented in the UK and the Netherlands that support more green spaces for flood mitigation. Switzerland is, therefore, well-positioned to translate and share this knowledge and experience to its priority countries, and influence the international disaster risk reduction and humanitarian agenda.

Opportunities for collaboration:

The challenge is to 1) harness the existing knowledge and experience in sustainable ecosystem management towards enhanced implementation of disaster risk reduction and climate change adaptation strategies and 2) to ensure that integrated ecosystem, DRR and CCA approaches are mainstreamed into development planning processes where decisions that influence conservation, disaster risks, climate change adaptation and development are made.

- Strengthening the knowledge base for ecosystem based DRR

A major barrier to successful incorporation of ecosystem-based disaster risk planning remains the lack of synthesized and compiled knowledge on evidence-based science, lessons learnt, economic valuation and best practices on the role that ecosystems play in hazard mitigation. Despite some evidence (Boxes 1 & 2) demonstrating the importance of environmental options to disaster risk reduction, stakeholders are still being challenged on the thresholds

Box 2: Economic Valuation of Ecosystem Services for Disaster Risk Reduction

<u>Ecosystem</u>	<u>Hazard</u>	<u>Hazard mitigation value (US\$)</u>
Coral reefs (global)	coastal	189,000 per hectare/year
Coral reefs (Caribbean)	coastal	700,000– 2.2 billion per year (total value)
Coastal wetlands (United States)	hurricane	8,240 per hectare/year
Coastal wetlands (United States)	storms	23.2 billion per year (total value)
Luznice floodplain (Czech Republic)	floods	11,788 per hectare/year
Muthurajawela marsh (Sri Lanka)	flood	5 million per year (total value); 1,750 per hectare/year

PEDRR (2011)

and viability of nature based solutions, including the economic arguments, especially because much of the information exists as anecdotes/experiences following major disasters. There is an increasing demand for organizations working in areas of climate change adaptation, disaster risk reduction and conservation to collaborate in establishing a knowledge base that would support and enhance the incorporation of ecosystem-based disaster risk planning more rapidly than currently being carried out.

During its OSCE presidency Switzerland could design and lead a research initiative to systematically collate scientifically credible evidence on the role and limits of nature for DRR and CCA, including cost benefit analyses.

- Awareness raising and capacity development for policy makers

IUCN has led the development of a capacity development course for policy makers, as a founding member of the Partnership for Environment and Disaster Risk Reduction (PEDRR¹). The training course aims to strengthen capacities of vulnerable countries and communities to mainstream Ecosystem-based DRR/CCA in national and local development planning processes. It targets government officials, as well as National Disaster Management Institutions (and their respective Training Divisions) and National Public Training Institutions with the mandate to provide trainings on DRR-related issues in-country. The training can also be adapted for other audiences, including international humanitarian/DRR actors and

¹ <http://pedrr.org/activities/national-training/>

civil society. It follows a flexible, modular structure, providing an “open menu” to suit individual training needs, for instance, catering to high-level policymakers and donors (half-day to 1-day sessions) and to programme managers and planners (up to 4 days including a field visit). Key thematic sessions include environment and disaster linkages, ecosystem management “tools” for DRR (e.g. integrated coastal zone management, integrated watershed management, etc), linkages with Ecosystem-based Climate Change Adaptation, mainstreaming Eco-DRR in Recovery and Reconstruction, etc. A training needs assessment is conducted to localize the material and identify local experts to jointly deliver the training.

During its OSCE presidency Switzerland can host a capacity development event based on this training and invite member states to participate. Such events have proven to catalyze high levels of interest, political commitment and action for promoting nature based solutions to DRR and CCA.

Contact:

Radhika Murti,

Programme Coordinator - Disaster Risk Reduction, Ecosystem Management Programme

IUCN (International Union for Conservation of Nature)

28 rue Mauverney, CH-1196 Gland, Switzerland

Tel. +41229990114; skype: radhikamurti

www.iucn.org