



**Name of Event: [Preparatory Event] Partnership for Environment and Disaster Risk Reduction – Learning Event on Environment and Disaster Risk Reduction**

**Date of Event: May 9, 2011**

**1) Outline**

As the title states, this session sought to be a meeting point where different stakeholders could exchange a range of tools and good practices while learning from one another. The lively discussion focused on the benefits and difficulties of integrating the ecosystem approach into disaster risk reduction (DRR). The contributions from the various experts from so many different backgrounds added to the diversity and content of the discussion.

**2) Key Messages, outcomes, recommendations**

- The first contributions aimed to define the concept of Ecosystem-based Disaster Risk Reduction (Eco-DRR) and clarify the terms used. For instance, Karen Sudmeier-Rieux of the IUCN (International Union for Conservation of Nature) started by defining risk through an interesting "equation":  $RISK = HAZARD \times VULNERABILITY \times EXPOSURE$ . Hazard can be natural or biological, for instance, and refers to the catastrophic event in itself. Vulnerability is defined both in terms of population and assets. Exposure has a geographical and time dimension.
- During the discussion, the equation was developed even further by introducing the notion of capacity that allows mitigating the effect of the hazard, vulnerability and exposure. Even though a common consensus was reached on the importance of the concept of capacity, it remains difficult to define.
- The core message of the first section was the multiple benefits of the ecosystem-based management for risk reduction, climate change adaptation and sustainable development. This approach is cost efficient and effective at different levels, from local community to country economy. A concrete lesson could be learned from the mistakes made during the post disaster phase of the

tsunami in 2004. For example, the removal of sand dunes near the village of Yala aimed at improving the seaside view from a tourist resort caused twenty-seven casualties. However, the success of certain projects such as "Making space for water", or the work done by the Swiss protection of the forest, and the agro-forestry schemes for reduced landslides could also be valuable lessons to learn from.

- Further contributions focused more specifically on Disaster Risk Reduction (DRR) and the challenges to combine it in practice with the ecological approach. A cyclical model was proposed, highlighting the points where ecosystem management could be integrated in DRR. Shortly after a disaster, relief operations are put into place and then reconstruction starts. At this point it is crucial to introduce development planning to recreate better and "greener". This phase would be followed by the risk vulnerability analysis and ecosystem management to prevent similar future events or limit their impact. Impressive examples were given to demonstrate how a poor or a lack of ecosystem management results in more severe damages after a catastrophe. For instance, in the border region between Haiti and the Dominican Republic, the death toll in Haiti was 5 times higher than in the nearby country. One of the causes: uncontrolled deforestation.
- Another concept was that of risk assessment, introduced by Anita van Breda of the World Wide Fund for Nature (WWF). It would be the first step in any project or planning, and includes 5 key elements: (1) hazard, (2) vulnerability, (3) mapping population, assets and major ecosystems, (4) the existent capacity, and finally (5) action planning. A good example of the procedure is the Maldives safe island program.
- Finally, the last part of the event aimed to introduce an end-user perspective. A remarkable contribution was that of **Pieter van Eijk** of Wetlands International. The project he presented, in the Mahanadi Delta, tries to use ecosystems management as a strategy for DRR. The first step was to "read the environment", the landscape and its relation to the population. Then the project engaged in a multi-stakeholder dialogue. Dialogue is essential to raise awareness and to find a compromise between divergent, sometimes opposite, interests in order to propose the most sustainable solution. A relevant message emerged from this practical experience: if on the one hand it is important to involve the local

community and look for tailor-made solutions, it is equally important not to lose the big picture of why an ecosystem is complex interaction.

- Among the many questions raised, several caught the attention of the audience and would surely be a starting point for further discussion. For instance, how to convince governments to integrate the ecosystem-based disaster risk reduction strategies in the official policy; or how to persuade them that the ecosystem approach brings actually multiple benefits? One possible answer is successful practice.

### **3) Conclusions**

The message that clearly emerged from this learning event was the need to integrate an ecosystem approach in development planning and disaster risk reduction. It is encouraging to see that a growing consent is forming on that, as well as the willingness to act. Of course it is a long way to go, but there are plenty of tools and good practice already available.