

## **Disaster Risk Reduction and Climate Change Adaptation - Avoiding the Unmanageable, Managing the Unavoidable**

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*"Climate change is expected to cause more severe and more frequent natural hazards. As our cities and coasts grow more vulnerable, these hazards can lead to disasters that are far worse than those we have seen to date. We have a moral, social and economic obligation to build resilience by 2015. Implementing the Hyogo Framework for Action will also help us reach the Millennium Development Goals."*

**Ban Ki-moon**, Secretary-General, United Nations, 2007

### **The changing face of risks**

The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) states that "warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level." The report further states that man-made emissions of greenhouse gases can already be blamed for fewer cold days, hotter nights, killer heat waves, floods and heavy rains, devastating droughts, and an increase in hurricane and tropical storm strength.

Disaster statistics provide us a glimpse of what is further to come. For example, compared to the average flooding data of the last seven years, 2007 had considerable increase in the number of flooding disasters, and Asia was the continent hit hardest by disasters, according to figures by the Belgian WHO collaborating Center for Research on Epidemiology of Disasters (CRED). In addition, the CRED report notes that eight out of the 10 countries with the highest disaster deaths of 2007 were in Asia, with 4,234 killed in Bangladesh by cyclone Sidr last November.

CRED further notes that these trends are "consistent with the predictions of the IPCC, in that Asia, and also West Africa are already suffering from more severe and frequent floods." The changes are happening on top of the already increased threats of disasters worldwide. For example, the World Bank's Global Hotspots Study found that 25 million square km and 3.4 billion people are highly exposed to at least one natural hazard with 105 million people highly exposed to three or more hazards.

This combination is changing the face of disaster risks, with vulnerability to hazards increasing rapidly, and climate-change-specific impacts (sea-level & temperature rise, glacier melting) expected to aggravate existing vulnerabilities to disasters. In addition to changing vulnerabilities, hazards are changing as well – we are observing increased intensity and/or frequency of known hazards, and the distribution of existing hazards shifting, with some regions expected to face hazards that they have not experienced in the past.

These can severely threaten or even roll back development, with the Stern Review (on the economics of climate change) observing that the "costs of extreme weather alone could reach 0.5 - 1% of world GDP per annum by the middle of the century, and will keep rising if the world continues to warm." The review further observed that "Climate change is happening and measures to help people adapt to it are essential. And the less mitigation we do now, the greater the difficulty of continuing to adapt in future."

These all highlight the need to implement joint risk reduction & climate change adaptation strategies, and in addition underline the need for action to urgently avoid further global warming.

## **Practical actions to adapt to climate change**

There are a number of actions that can be taken to reduce vulnerability to natural hazards and adapt to climate change, which include the promotion of a culture of prevention and resilience, the development of institutions (policies, planning legislative, multi-stakeholder mechanisms, etc.) to actively contribute to these goals; identification of risks (risk mapping, hazard & vulnerability assessments); promotion of early warning systems, building hazard-resistant structures (in particular critical infrastructures, schools, and hospitals), protection and development of hazard buffers (natural ecosystems such as forests, reefs, and mangroves); and improving preparedness, response, and the development of pre-disaster recovery plans.

Fortunately, we already have a framework that guides us in doing the above - and it's called the Hyogo Framework for Action.

The formal process for climate action still needs to be within the framework of the UNFCCC and the Kyoto Protocol. These are essential in reducing climate change risks through climate change mitigation; through sharing and learning through the UNFCCC Nairobi Work Programme on Impacts, Vulnerability & Adaptation, and the development of the Bali Action Plan's disaster risk reduction mandate. On the other hand, the HFA is essential for climate change adaptation and in effectively reducing risk of extreme events - HFA provides relevant guidance to reduce vulnerability and manage risks.

In this context, the challenge ahead of us is how to advance the linkages between DRR and climate change adaptation in the context of the Bali Action Plan.

## **Responding to Bali's DRR mandate**

The Bali Action Plan (BAP) was agreed by UNFCCC COP-13, Bali in December 2007 and will guide negotiations during 2008 – 2009 on the global climate regime to apply from 2012. The BAP recognizes the importance of risk reduction for adaptation, calls for risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance, disaster reduction strategies and means to address loss and damage.

To effectively respond to the disaster risk reduction mandate of the BAP, we now need support CC negotiators & actors at national & local levels in the following areas:

### Collaboration between climate change and DRR bodies and experts

This will include the encouragement of systematic dialogue and information exchange between national platform for DRR and climate change national communications teams; the promotion of joint development of disaster reduction and adaptation strategies and action plans; and the inclusion of disaster risk reduction experts in the national climate change adaptation policy team to support negotiations.

### Accessible DRR information and tools for climate change adaptation negotiators and managers

This will include the mobilization and the collection and summary of national risk information, including socio-economic data concerning existing vulnerability and capacity; the review national development strategies and sector plans to identify actual or potential interventions, and the provision of practical information and guidance on DRR and risk management (concepts, tools, measures, policies, etc., and sources of information).

At present, UN/ISDR is developing guidance for Governments on specific risk reduction measures to support the implementation of the Bali Action Plan.

### Draft CC adaptation and DRR strategies and action plans, drawing on the HFA

This will include the convening of cross-sectoral teams to formulate integrated multi-sector adaptation & DRR strategies and plans and to inform and advise national adaptation negotiators; the development of adaptation plans (stimulate integrated policy) drawing on the *approach and language* of the Hyogo Framework and building on available DRR strategies and action plans; and the inclusion of adaptation action on all five of the Hyogo Framework's priority areas.

Again, UN/ISDR is presently developing guidance on elements required in an adaptation and DRR framework

### **A Shared Agenda**

The Bali Action Plan is an important international recognition of the relevance of and linkages between disaster risk reduction and climate change adaptation. We have the next 18 months (the "road to Copenhagen") as our window of opportunity to make a difference, and we can do this by supporting climate change negotiators, building collaboration DRR-climate adaptation bodies at all levels, making DRR tools accessible, using the Hyogo Framework's approach and language, and planning to connect the post-Kyoto (first commitment period) and the post-Hyogo agendas more closely. We all need to work together in this regard.