

NEED FOR SCIENTIFIC ASSESSMENT BY IPCC ON MANAGING THE RISK OF EXTREME EVENTS TO ADVANCE CLIMATE CHANGE ADAPTATION

PROPOSED BY THE SECRETARIAT OF THE
INTERNATIONAL STRATEGY FOR DISASTER REDUCTION (ISDR) SYSTEM

Given the urgency and scale of the adaptation challenge it is imperative to learn from long experience in managing—and reducing—the risk of extreme climate events, such as floods, droughts, storms and extreme temperatures. The IPCC Fourth Assessment Report recognises the opportunity to advance adaptation through the use of such policies and tools. In particular, it states: “Reducing vulnerability to current climatic variability can effectively reduce vulnerability to increased hazard risk associated with climate change.”¹

Need for further assessment

The IPCC Fourth Assessment Report identifies the usefulness of taking a *risk perspective* in order to identify synergies to “promote sustainable development, reduce the risk of climate-related damages and take advantage of climate-related opportunities”². The Report, however, does not systematically review the literature detailing *recommended policies and measures* to reduce disaster risk. Such policies and measures include building the institutional basis for risk reduction, increasing both scientific and popular understanding of risk, strengthening early warning systems, improving environmental management and construction practices, and establishing preparedness to respond to inevitable climate impacts, through contingency planning for instance. A review of such literature—including guides, frameworks and tools—would be very helpful to guide the adaptation policies and processes in respect to extreme events.

Similarly, further assessment of existing risk reduction *practice* is required. Although the Report reviews those practices that are specifically identified as adaptation efforts, it does not review the great range of efforts undertaken worldwide labelled under terms like “disaster risk reduction” and “sustainable development”, or “environmental risk management”. In-depth assessment to understand which practices are the most successful, with information on appropriate contexts, cost and constraints, would provide concrete guidance to governments in planning and implementing adaptation activities. A systematic review would also enable governments to identify those existing practices that should be strengthened because they provide important synergies with adaptation strategies.

The Report also identifies a “disconnect between disaster risk reduction and adaptation”³ but does not assess recent initiatives to bring the disparate communities together to work on common concerns, such as the development of cross-sectoral plans to manage climate risks. A review of such efforts could guide governments and donors on priorities for directing attention and scarce resources.

¹ IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Chapter 20.5 pg 821.

² IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Chapter 20.9 pg 837.

³ IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Chapter 20.5 pg 820.

It is for these reasons that the International Strategy for Disaster Reduction system⁴ suggests that further analysis by the IPCC of policies, measures, tools and practice to reduce disaster risk would be greatly beneficial to advancing knowledge on effective adaptation.

Policy linkages with risk reduction

Disaster risk reduction and adaptation to climate change share the same ultimate goal of reducing vulnerability to weather and climate hazards. Over the past 30 to 40 years, a large body of knowledge has been accumulated in the field of disaster risk reduction, especially regarding climate-related hazards, which are responsible for 75 percent of disasters worldwide⁵. Disaster risk reduction efforts are guided by *The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, to which 168 Governments agreed in Hyogo, Kobe, Japan, in 2005⁶. The Framework aims for “the substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.” As part of its text, Governments agreed to integrate climate change adaptation and disaster risk reduction through:

- (i) The identification of climate-related disaster risks,
- (ii) The design of specific risk reduction measures, and
- (iii) The improved and routine use of climate risk information by planners, engineers and other decision makers.

Outline of the proposed assessment

The proposed IPCC assessment would build on the Fourth Assessment Report to provide more specialized and detailed information on the nexus between climate change adaptation, disaster risk reduction and sustainable development, possibly in the form of an IPCC special report⁷ through the assessment of policies, measures, tools and practice to reduce disaster risk.

To capture existing practice, a case-study approach may be helpful. Case studies would be useful in illustrating local practice and would provide a means to include in the assessment information that is nationally held but not published in scientific journals. Through case studies a wider spectrum of information, held by Governments and community-based organizations, would be integrated. For example, the integration of disaster risk reduction and climate change adaptation strategies might be best profiled in a case study from a Small Island Developing State. A successful drought risk reduction effort that strengthened early warning could be highlighted in a Least Developed Country case study, while risk transfer tools, such as insurance and micro-credit, could be illustrated through a case study of a hurricane-resilient community.

The proposed assessment would:

Identify information and reveal trends about socio-economic vulnerabilities and capacities, from sources specializing in disaster risk assessment.

⁴ The ISDR is a system made up of governments, inter-governmental and non-governmental organisations, international financial institutions and technical bodies and networks as well as civil society and private sector—all of which have essential roles to play in disaster risk reduction at global, regional, national and local levels.

⁵ EM-DAT: The OFDA/CRED International Disaster Database.

⁶ Referred to in IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Chapter 20.8 pg 832.

⁷ From the Chair's Summary of the ISDR system's first session of the Global Platform: "The Intergovernmental Panel on Climate Change and ISDR system should collaborate on the preparation of a special report on adaptation, disaster risk reduction and sustainable development." See ISDR/GP/2007/6 at http://www.preventionweb.net/globalplatform/first-session/docs/session_docs/ISDR_GP_2007_6.pdf

Identify statistical data and figures on disaster occurrence and losses from international, regional and national disaster risk management literature and databases (e.g. EMDAT, NatCat, Sigma, Desinventar, GLIDE, etc) to estimate the appropriate targets for relevant adaptation action.

Assess, by sector, the success of current risk reduction practices to present-day climate risks, such as in food security, water management and the protection of critical infrastructure and energy investments.

Examine and develop lessons learned from community-level risk reduction (good practices).

Identify opportunities to build on existing adaptive successes.

Provide an accurate baseline for worldwide adaptation efforts and identify needed adjustments for the increased hazard risk associated with climate change.

Quantify the costs and benefits of specific measures to reduce climate-related risks and the costs of relief and recovery⁸.

Identify risk reduction efforts that have been “mainstreamed” into development and reveal opportunities to integrate adaptation, disaster risk reduction and sustainable development.

Contribution to international and national efforts

Further assessment as proposed through an IPCC special report, would contribute to the goals of the UNFCCC⁹ and to the work of its Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change. The assessment would inform the UNFCCC post-2012 negotiations in respect to adaptation to climate change by identifying practical measures to reduce risk. It would likewise promote the implementation of the Hyogo Framework.

The proposed assessment would contribute to improved understanding of the implications of climate-related risks for the Millennium Development Goals and the achievement of sustainable development. It would help Government officials to frame the issues of climate change adaptation and disaster risk reduction in the context of national development efforts in particular sectors. The assessment would provide a tool to gain the support of policy makers and strategic partners to promote more effective and “climate resilient” investment, as well international cooperation and assistance.

Ultimately the knowledge generated by the assessment would enable Governments and communities to jump-start the implementation of adaptation activities and proceed confidently in a systematic and well-targeted fashion. It would also stimulate the development of scientific and technical networks in many countries, which in turn would assist their Governments in the implementation of adaptation.

⁸ The United Nations (through the ISDR system) and the World Bank are jointly undertaking a study of the economics of disaster risk reduction, to be completed in 2008.

⁹ See UNFCCC Article 2 and 4.8.