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# Reducing the risks posed by natural hazards and climate change: the need for a participatory dialogue between the scientific community and policy makers

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## ABSTRACT

In the last two decades we witnessed a progressive shift in the approach towards the reduction of the impact of natural hazards. From a general *reactive* approach, focusing on strengthening disaster response mechanisms, we have moved to *proactive* approaches. There has been recognition that each element of society, from public institutions to private sector, from community-based organizations to every single individual, can make a difference by acting *before* disasters strike to reduce the associated risks of human and economic losses. This proactive approach can be summarized in three words: Disaster Risk Reduction (DRR).

Today, DRR is an approach used in several sectors and research areas. In the Development sphere, DRR is considered a key feature for sustainability of economic and development gains – especially for developing countries. Significantly, the *United Nations Global Assessment Report on Disaster Risk Reduction (2009)* is titled “*Risk and poverty in a changing climate*” highlighting the importance of DRR in reducing poverty while being a means to address the challenges posed by adaptation to climate change.

This paper, which serves as an introduction to the special issue of *Environment Science & Policy* on climate change impact on water-related disasters, intends to provide readers with an overview of the main policy frameworks addressing DRR internationally and in Europe. Further, it aims to offer some “food for thought” on the underlying opportunities we have to enhance the resilience of our communities towards the risks posed by weather-related hazards. It stresses the importance of governance of risks, which starts from an effective dialogue between the scientific community and the policy makers: those who have the responsibility to decide on the most cost-effective interventions to address climate change adaptation and risk reduction.

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## 1. Taking responsibility for disaster risks

On 18 January 2005, 168 countries gathered in Kobe (Hyogo prefecture), Japan, for the World Conference on Disaster Reduction (WCDR). This conference marked a historic step in the recognition of how human actions can reduce risks posed by the impact of disasters and on how governments, NGOs,

academia, community-based organizations and every single citizen have a role and responsibility in enhancing the resilience of their communities to natural hazards.

At the 2005 WCDR, the global recognition of the importance of investing in DRR resulted in the adoption of the *Hyogo Framework for Action 2005–2015: Building the resilience of nations and communities to disasters* – a ten year strategy

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(2005–2015) which guides national governments towards the “substantial reduction of disaster losses in lives and in the social, economic and environmental assets of communities and countries”. This overall goal is further elaborated in three strategic objectives:

- I. The integration of DRR into sustainable development policies and planning.
- II. The development and strengthening of institutions, mechanisms and capacities to build resilience to hazards.
- III. The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes.

and five priorities for action,<sup>1</sup> namely:

1. Making Disaster Risk Reduction a priority.
2. Improving risk information and early warning.
3. Building a culture of safety and resilience.
4. Reducing the underlying causes of disaster risk.
5. Strengthening preparedness for response.

The HFA stresses that Disaster Risk Reduction is a central issue not only to development programmes but also to policies that guide science and research as well as those concerning the humanitarian and environmental fields. Disasters undermine development achievements, especially in developing countries, where vulnerable groups are more tightly gripped by the poverty trap in the aftermath of a disaster. Without international and national efforts to address disaster risk – and mitigate disaster losses – disasters will become an increasingly significant obstacle to the achievement of the Millennium Development Goals set, like the HFA, to be achieved by 2015.

The responsibility for the implementation of the HFA is, first and foremost, in the hands of national governments. Nevertheless, the HFA recognizes that promoting DRR is “everybody’s business” and calls for contributions and coordination amongst different actors and stakeholders, identifying Academia and NGOs as crucial players to reduce the vulnerabilities of communities to natural hazards. The *International Strategy for Disaster Reduction (ISDR)*, launched in 2000 by the United Nations General Assembly,<sup>2</sup> aims to guide and coordinate the efforts of these actors to achieve substantive reduction in disaster losses and to build resilient nations and communities as an essential condition for sustainable development.

The *United Nations International Strategy for Disaster Reduction (UNISDR)* is the secretariat of the ISDR. UNISDR serves as the focal point for the implementation of the HFA and supports the coordination of the efforts undertaken to promote the DRR policy agenda, programmes and projects from the community to the international level, advocates for greater investment in DRR actions to protect people’s lives

and assets, and promotes global awareness of the benefits of DRR.

## 2. The European context: addressing disaster risk reduction and adaptation to climate change

In Europe, UNISDR is focusing on multiple policy areas concerning the regional implementation of the HFA. In this context, the promotion of the essential role of DRR into climate change adaptation policies at national and regional level is of key importance.

Following the release of the *International Panel on Climate Change (IPCC) fourth assessment report (2007)*, adaptation to climate change emerged as a necessary field of engagement both for developed and developing countries.

The IPCC report, thanks also to its high-level scientific profile, prompted the full international recognition of the importance of adaptation to climate, highlighting that adapting is no less critical than mitigating the effect of climate change through reduction of greenhouse gas emissions.

The scientific evidence produced by the IPCC report stressed that climate change poses a growing threat of disasters.<sup>3</sup> In the first place the report highlighted that the frequency and the intensity of climate-related hazards such as floods, typhoons, heat waves and droughts are likely to increase. In addition, climate change is predicted to be a driver of undesirable changes in natural ecosystem and environments, leading to their degradation and consequent reduced availability of water and food resources for communities. This will negatively impact livelihoods, especially in developing countries, with direct consequences on poverty and the capacities of vulnerable communities to cope with natural hazards.

Positively, the IPCC scientific findings on the linkages between climate change and disasters were used by policy makers in the UNFCCC Bali Action Plan<sup>4</sup>, which focused on DRR as a key element of climate change adaptation. Specifically, in Europe the *European Commission (EC)* designed a policy framework to guide climate change adaptation in the EU: the White Paper “*Adapting to climate change: Towards a European framework for action*” (2009), which includes DRR as an integral part of the adaptation strategy. In addition, the EC released a Communication to the European Parliament addressing DRR in the EU (“*A community approach on the prevention of natural and man-made disasters*”). Regarding developing countries assisted by EU aid funds, the EC released a *second Communication (2009)*: “*EU strategy for supporting disaster risk reduction in developing countries*”. Both communications are aligned with the HFA priorities of action.

<sup>1</sup> For detailed information on the structure, goals, priorities and monitoring system of the HFA please see the *ISDR publication Words into Action: A guide for implementing the Hyogo Framework* available at: <http://www.preventionweb.net/english/professional/publications/v.php?id=594>.

<sup>2</sup> UN General Assembly Resolution A/54/219.

<sup>3</sup> See *IPCC (2007)*, Fourth Assessment Synthesis Report: [http://195.70.10.65/pdf/assessment-report/ar4/syr/ar4\\_syr.pdf](http://195.70.10.65/pdf/assessment-report/ar4/syr/ar4_syr.pdf) and *UNISDR (2008)*.

<sup>4</sup> United Nations Framework on Convention on Climate Change (UNFCCC, 2007), Bali Action Plan (1/Cp.13), report of the Conference of the Parties (COP 13): <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf>.

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