
Disaster Risk and its Reduction: Who Is Responsible?

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Rural and urban communities alike are more at risk to disaster than ever before, owing to a diverse set of factors ranging from poverty and unplanned settlements to environmental mismanagement and climate change.¹ Many cities and communities lie on storm-exposed coasts, flooding river deltas, volcanic or landside-prone slopes, and in earthquake zones. Often their water and energy supplies are limited to a few vulnerable sources, and the typical housing is inadequate to withstand the prevailing hazards of wind, water, and seismic stress. In short, the combination of these realities with continued urbanization and rural change means that millions of people around the globe are increasingly at risk of losing their assets and livelihoods, and even their lives.

But this need not be the case—for while extreme weather and geological outbursts are natural phenomenon and inevitable, they need not lead to disasters. The key to this is to understand how such hazards translate into disaster risks for the people and communities who are exposed to and vulnerable to them. Disaster risk should be seen as a pervasive variable in society, a potentiality, growing and changing, awaiting to be revealed with a vengeance when a hazardous event sweeps through. One only has

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to compare different countries to see what can be done to reduce risks. For example, the death rates from tropical cyclones are much lower in Japan and Cuba than in their neighboring countries, because these two countries have active policies and programs to reduce the exposure and the vulnerability of their citizens.

Many governments are now taking the lead in systematically managing and reducing risk, by shaping policy, stimulating public awareness and participation, and allocating budgets for risk reduction activities. International agreements, in particular the Hyogo Framework for Action, and international collaboration and information exchange can provide critical support to all actors, both inside and outside of governments, helping to build necessary understanding and commitment and to envision what needs to be done in practical terms to identify, reduce and manage disaster risk.

A powerful argument for disaster risk reduction action is that, if left unattended, disaster risk will steadily grow, and thereby set up conditions for massive destruction of decades of development gains—and potentially also the destabilization of communities and Governments. Examples of development impacts sadly abound. Grenada's losses of \$919 million as a

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result of Hurricane Ivan in 2004 were equal to 2.5 times its GDP. In 2008, Cyclone Nargis struck the largely unprepared populations on the coast and deltas of Myanmar, causing an estimated 140,000 death toll, 20,000 injured, 2.4 million people severely affected, and possibly \$10 billion in damages. Globally, in 2008, the last year for which records are complete, some 321 disasters took the lives

of 235,816 people and affected 211 million more; the costs of disasters reached \$181 billion—twice the annual average for 2000–2007.²

If this were not enough, we can now see that climate change will compound the problem. As the effects of climate change become more apparent, we will see greater impacts of extreme weather events, not just because of their increasing strength or frequency, but also because of the increased conditions of vulnerability, such as water stress, that will impede the capacity of communities to handle weather hazards. Ironically, climate change is also a direct result of the same unsustainable development processes that have led to the existing accumulations of disaster risk. While it would be a mistake to blame current disasters on climate change, the recent signs

are that climate change is already becoming a factor to be reckoned with. In coming decades, it will become one of the primary drivers of disaster risk. With these issues in mind, and to provide a solid evidence base for tackling them, the Intergovernmental Panel on Climate Change (IPCC) has begun to prepare a special report on “Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.” Originally proposed by the United Nations International Strategy for Disaster Reduction (UNISDR), this report will draw widely on the literature and expertise of the risk reduction field and will be completed by mid-2011.

Vulnerability is not distributed evenly between developed and the developing countries. Many developing countries—particularly poor individuals within these countries—do not have the financial or physical capacity to deal with disasters as they are happening or in the aftermath recovery phase. Perversely, it is the poor countries that have the most to lose in a disaster, even though they possess less than wealthy nations to begin with. The little they do have is essential to sustaining daily life, and back-up safety nets such as savings and insurance are limited or nonexistent. The large industrialized economies, on the other hand, have diversified economies that can withstand disasters, including through public finances, insurance of assets and personal resources. Although losses may run into the billions of dollars, such economies have the ability and resilience to bounce back. This was the case with Hurricane Katrina in the United States, where the financial markets barely experienced a ripple at the time, and significant reinvestment in New Orleans and other affected communities subsequently occurred.

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Risk is inherent to life on Earth and is clearly impossible to eliminate completely. The challenge is therefore to intelligently identify, manage, and reduce those risks that are present, and to efficiently marshal the available resources to do so. Governments have a primary responsibility, as agreed in the Hyogo Framework for Action,³ but the task is one that also involves civil society: individuals, private businesses, NGOs, technical organizations, and local government and community organizations. As but one example, the Government of Philippines has regulated—and supported with loans from a development bank—the construction of cyclone-resistant houses; meanwhile it has developed cyclone early warning systems in partnership with international NGOs and community stakeholders.

How, then, should the international community help to lessen the consequences of disasters? Fortunately, international cooperation in these areas has come a long way. Over the last two decades, there have been numerous gains in technical expertise and governments' understanding of—and commitment to—the reduction of disaster risk. The UNISDR was set up in 2000 by the United Nations General Assembly to advocate for, inform, and coordinate efforts on disaster risk reduction. In January 2005, these advances were encapsulated in a new voluntary agreement, Hyogo Framework for Action 2005-2015 by the Governments and international organizations meeting at the World Conference on Disaster Reduction held in Hyogo Prefecture, Japan. The agreement was subtitled “building the resilience of nations and communities to disasters.” This sets out the main priorities for action and the main roles of governments and relevant regional and international organizations. It reflects state-of-the-art technical knowledge about the many elements required for a resilient society, as well as political recognition among governments of the links to sustainable development and the need for concerted and comprehensive action.

The Hyogo Framework spells out key tasks, many falling to governments, but also requiring the multi-stakeholder participation of sectors and civil society, including the private sector, to ensure sound and durable results. Tasks include: developing institutional and legal frameworks, acquiring knowledge of the hazards and vulnerabilities; educating and communicating risk information to the public, diversifying economies; creating and enforcing building codes and land use planning policies; protecting environmental buffers, strengthening crucial infrastructure assets; institutionalizing risk-transfer mechanisms; implementing effective early warning systems; and developing preparedness and recovery mechanisms to deal with disasters when they occur. Some measures, for example a conversion to drought-resistant seeds in agricultural regions with elevated drought risk may be relatively straightforward to implement. Others, such as developing and enforcing land-use planning regulations and building codes, require more political capital, expertise, and funding to implement. In fact, many measures that reduce disaster risk spill over into the familiar development paradigm within which governments and the international community have been working for decades.

As with all government programs, public interest and support is critical. Since awareness always peaks after a disaster strikes, major events can be used as opportunities to communicate risk and risk reduction concepts, and to promote rebuilding in ways that do not recreate the same risks. As

President Bill Clinton often said after the 2004 Indian Ocean tsunami, we must “build back better.” Investments in education and public awareness form a foundation of disaster-resilient societies, and these measures cost relatively little compared to the costs of environmental restoration, major protection works, and building retrofitting, not to mention the large costs of reconstruction after a disaster.

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Evidence to date indicates that significant attention is being paid to early warning systems and preparedness for response. Historical data shows a marked global decrease in the massive losses of life that accompanied floods and drought over the last century, most likely due to improvements in monitoring, early warning, evacuation, and food aid. Bangladesh, for example, has actively invested in this area in recent decades and has been rewarded with greatly reduced loss of life in the recurring floods and tropical storms that affect the country. Unfortunately, this global success is not matched for other aspects of disaster risk reduction. Widespread eagerness for development still leads to badly sited settlements, environmental damage, and unsafe housing. Sustainable land-use policies, city planning, and building codes can be difficult to implement and enforce. Inadequate public information on risks means that economic or social incentives to avoid or reduce risks may be absent. The 2008 earthquake in central China and 2009 earthquake in L’Aquila, Italy both underscored the significance of effective building standards—particularly in respect to schools, hospitals, and other key public facilities.

As countries progress further toward implementing the Hyogo Framework and dealing with climate change, the demand will grow for practical guidance, protocols, methodologies, standards, and data for the detailed aspects of specific measures. Increasingly, the need will be for guidance that meshes into development goals and planning. This is an area where the United Nations and the UNISDR system of partners can play a very valuable role, drawing on the expertise of technical organizations and the practical experience of regional and non-governmental organizations, as well as linking the lessons learned from work in communities, local authorities, and national governments.

While climate change will not fundamentally alter the recommendations of the Hyogo Framework, it certainly is increasing the importance and urgency of acting on them. Countries have a particular opportunity

now *because* we are confronted with climate change—which presents an opportunity to move away from the path of unsustainable development and concentrating risk. In December 2007, the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Bali Action Plan, which expressly recognizes the need within adaptation for disaster risk reduction strategies and risk management.⁴ Momentum is thus building to systematically link the issues of disaster risk reduction and climate change adaptation.

Ultimately, international agreements mean little without action. The world took an important step in formulating the Hyogo Framework and is now starting to make useful progress on its implementation. The UNFCCC

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process is commanding the serious attention of all governments. However the disaster risk problem remains and is growing, and is deeply-rooted in continuing unsustainable development practices. Risk reduction efforts are often overshadowed by traditional focuses on disaster relief and response.

..... It is clear that greatly increased leadership and greatly increased investment are urgently needed, particularly by governments, in order to unleash the capabilities of all actors, in communities, NGOs, government departments, and the United Nations, to work together to make our societies safe and secure.■

ENDNOTES

- 1 UNISDR (2009), *Global Assessment Report on Disaster Risk Reduction: Risk and Poverty in a Changing Climate*. 208 pp. Geneva.
- 2 International Strategy for Disaster Reduction, “CRED Disaster Figures: Deaths and economic losses jump in 2008,” Press Release, UNISDR 2009/01, January 22, 2009.
- 3 Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters (HFA). See website <http://www.unisdr.org/eng/hfa/hfa.htm>.
- 4 *Report of the Conference of the Parties on its thirteenth session, held in Bali from 3 to 15 December 2007. Addendum: Part Two: Action taken by the Conference of the Parties at its thirteenth session*. United Nations Framework Convention Report FCCC/CP/2007/6/Add.1, March 14, 2008.