Disasters and what to do about them

Reid Basher

With the prospect of more extreme weather events, it makes sense to strengthen the efforts of governments and communities to reduce disaster risks.

Poor countries are disproportionately affected by natural hazards, owing to their intrinsically greater vulnerability to hazards and comparatively low capacities for risk reduction measures, while richer countries tend to sustain large economic costs. Over the period 1991-2005, developing and least developed countries suffered 884,845 deaths and $401 billion in economic losses, while OECD countries suffered 61,918 deaths and $715 billion in economic losses. Disasters can disrupt a country's development progress by decimating production and diverting scarce national resources to rebuilding activities, and are thus a threat to the achievement of the Millennium Development Goals. Grenada's losses of $919 million as a result of Hurricane Ivan in 2004 were equal to 2.5 times its GDP. Disasters create social and economic stresses that can result in significant dislocation and migration.

Of great concern is the evidence that the reported numbers of disasters approximately doubled over the last 20 years, and that the reported economic costs grew at an even faster rate. Hurricanes Katrina, Rita and Wilma in 2005 together caused record reported losses of $166 billion. It is tempting to blame climate change, which is already affecting the weather, but of more critical importance is the growing exposure and vulnerability of communities to natural hazards, especially for the poor, and the resulting accumulation of latent disaster risk.

Certainly, the view of the experts is that disaster risks are increasing.[1] More people inhabit risky places and risky dwellings, undertaking large-scale activities that raise risk, like settling on flood plains, storm-exposed coasts and landslide-prone hillsides, and building schools and apartments that will collapse in cyclones or earthquakes. Protective mangroves are cleared for shrimp farms, flood-buffering wetlands are filled for industrial zones, and rainfall-absorbing forests are stripped from steep and unstable hillsides. The increase in disasters can be seen as a red light, a warning of unsustainable development.

The risk of disasters is often neglected until revealed by a major event. Then people are shocked and ask how such devastation could possibly occur. Enquiries are held and public officials are held to account. This is a time when lessons can be learned and advances made. In this technical age, it is assumed that we can engineer our way out of problems but this is often not the solution. The reasons for the inadequate state of the levees protecting New Orleans and for the reportedly disorganised response of the authorities to the accurate and timely warnings about Hurricane Katrina are now being revealed by sober analysis to be essentially social and political in nature. This is a common lesson worldwide. Social factors also strongly differentiate the impacts of disasters. In particular, gender and age are important risk factors, for example with studies showing greater death rates for women in the Indian Ocean tsunami and for elderly people in both the 2003 heatwave in Europe and Hurricane Katrina in 2005.

Climate change is likely to result in more extreme events of the type associated with disasters, such as heatwaves, changes in weather patterns, longer and more intense drought, more intense rainfalls, and more frequent coastal and inland flooding. The most vulnerable areas are the existing areas of vulnerability to hazards: Africa, on account of its rain-fed subsistence agriculture and its generally low risk reduction capacities, the low-lying and heavily populated deltas of Asia and Africa, and the small and low-lying islands.

While the control and reduction of greenhouse gas emissions is a fundamental objective at the centre of the current climate change debate, there also looms the problem of adapting to the inevitable changes that we face as a result of past and ongoing emissions. Adaptation may be an unfamiliar concept but its methods and tools look very similar to those of disaster risk reduction – risk maps, improved zoning of land, enforcement of building codes, safer hospitals and other critical facilities, better early warning systems, accessible insurance schemes, and programmes to enable communities to assess and manage their own risks. There are many examples of disaster risk reduction initiatives that have high benefit-cost ratios and therefore offer no-regrets actions for adaptation.

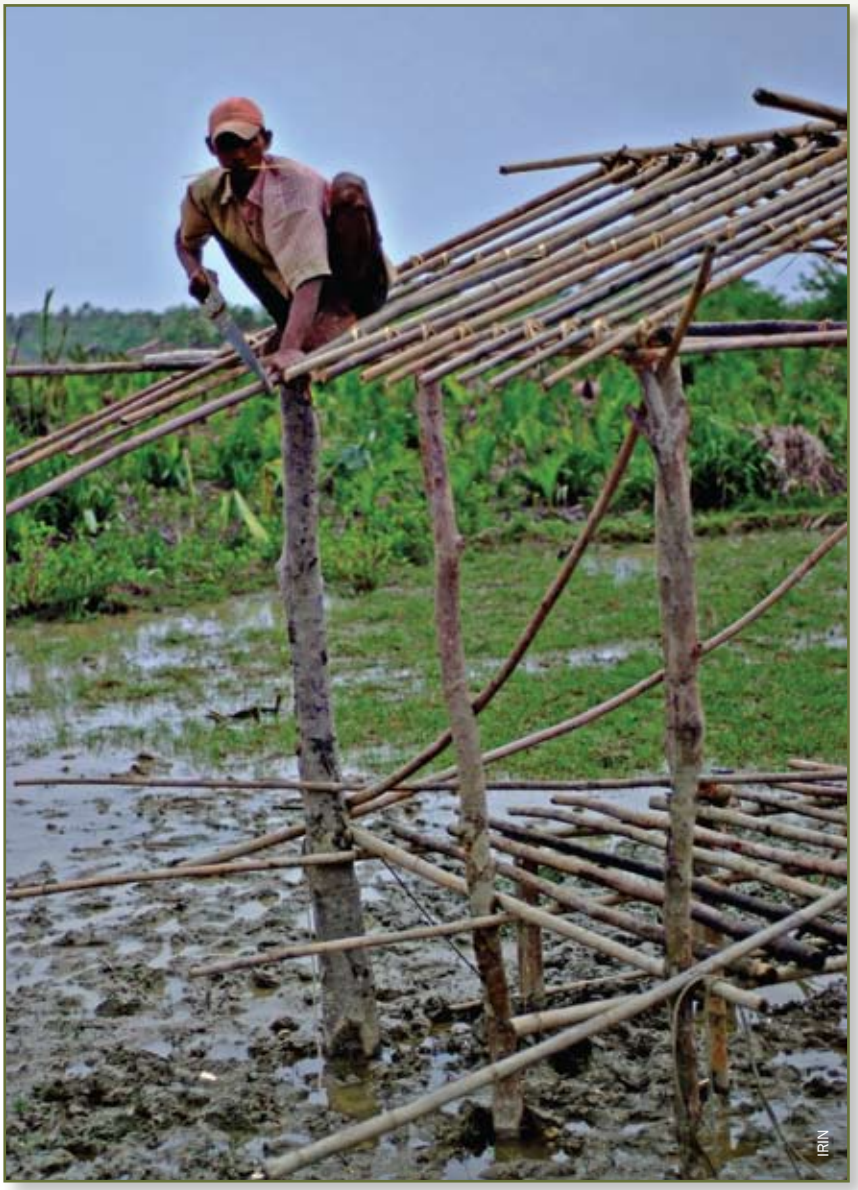
Action plans and frameworks

In this way, we have a new opportunity to simultaneously reduce disaster risks and adapt to climate change. Happily, climate change negotiators have begun to think along these same lines. The Bali Action Plan's directions for adaptation call for the consideration of: "…risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance; and disaster reduction strategies and means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change."[2]

This convergence is easier said than done, as the two issues of disaster risk and climate change are usually dealt with as separate policy processes and by different government departments. Ministries responsible for climate change policy, such as ministries of environment, will need to talk with those responsible for disaster risk

reduction, such as ministries of civil protection or the new disaster risk reduction offices that are increasingly being established to tackle the root causes of disasters and to cut national disaster risks. And vice versa: ministries and offices concerned with disaster reduction and response will need to engage with climate change groups in order to prepare for the changes in future risks.

Longstanding concerns about the growing threat of disasters, amplified by the shocks of the Indian Ocean tsunami disaster, led to the formulation of the internationally agreed Hyogo Framework for Action, which aims to jumpstart and guide action over the decade 2005-2015 to achieve "the substantial reduction of losses, in lives and in the social, economic and environmental assets of communities and countries."[3] This landmark document stresses the need to link disaster risk reduction to sustainable development policies and to shift attention towards addressing the root causes of disaster risk, away from the traditional preoccupation with responding to disasters. It specifically identifies the need to promote the integration of risk reduction into strategies for adaptation to climate change, and its subtitle – 'building the resilience of nations and communities' – could equally apply as a motto for adaptation strategies.



Villagers start to reconstruct their houses in the Irrawaddy Delta region of Burma, after Cyclone Nargis.

The Hyogo Framework elaborates five priorities for action, which are based on a careful review of past successes and failures in reducing disaster risks:

- Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation.
- Identify, assess and monitor disaster risks and enhance early warning.
- Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
- Reduce the underlying risk factors.
- Strengthen disaster preparedness for effective response at all levels.

Many individual organisations and inter-governmental mechanisms are now using the Hyogo Framework to structure and guide their own strategies and programmes on disaster risk, for example the Asian Ministerial Conference on Disaster Risk Reduction, the World Bank's Global Facility for Disaster Risk Reduction and Recovery[4] and the World Meteorological Organization[5]. The five priorities offer a strong basis for developing concrete measures both for disaster risk reduction and for adaptation to climate change.

The factors that make us vulnerable to natural hazards are often of our own making, arising from how we exploit the land and how we build our houses and our cities. But we can easily factor disaster risk into our planning and management and make use of readily available knowledge, tools and policy frameworks – particularly the Hyogo Framework – to substantially reduce disaster risks globally. It is now time that we scaled up the level of action to achieve this important goal.

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For more information, please explore the following websites: www.emdat.be, www.un.org/climatechange/, www.ipcc.ch, www.unfccc.int, www.unisdr.org, www.preventionweb.net

1. UN/ISDR, 2007. *Disaster Risk Reduction: Global Review 2007*. See www.preventionweb.net/globalplatform/first-session/docs/session_docs/ISDR_GP_2007_3.pdf
2. unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3
3. www.unisdr.org/eng/hfa/hfa.htm
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