



United Nations
International Strategy for Disaster Reduction

UNISDR DISCUSSION PAPER

10 October 2011

PREPARING FOR RIO+20: Redefining Sustainable Development

DEVELOPMENT EFFORTS ARE AT RISK

1. Disaster risk is increasing globally. A series of catastrophes in 2011 reminded us yet again that disaster risks associated with hazards such as tropical cyclones, floods, earthquake, droughts, tsunamis, as well as technological hazards, constitute a major challenge to development. While developing countries and poor people are disproportionately at risk, the Great East Japan earthquake and tsunami was a stark reminder that developed countries are also exposed to high risks.

2. More people and assets are located at areas of high risk. Over the past 30 years, the world's population has grown by 87 percent. The proportion of the population living in flood-prone river basins increased by 114 percent and on cyclone-exposed coastlines by 192 percent.¹ More than half of the world's large cities, with populations ranging from 2 to 15 million, are currently located in areas of high risk of seismic activity². There is still little knowledge and understanding of the long term – beyond 10 years – social consequences of disasters on communities.

3. Risk of economic loss is increasing. Since 1980, risk of economic loss due to floods has increased by over 160 percent and to tropical cyclones by 265 percent in OECD countries. Economic loss risk to floods and cyclones in the OECD is growing faster than GDP per capita. This means that the risk of losing wealth in weather-related disasters is now outstripping the rate at which the wealth itself is being created. It is well documented that developing countries suffer a 2 to 15 percent annual loss to disasters depending on the profile of the country – and the intensity of the disaster.

4. Disaster risk levels are driven by factors such as climate variability, poverty, poor land-use planning and management and ecosystem degradation. Similarly, these risk drivers are also recognized as some of the challenges that limit the progress of sustainable development. Any actions that address reduction of disaster risk significantly contribute towards the realization of sustainable development.

DISASTER RISK REDUCTION BRINGS MULTIPLE BENEFITS TO SUSTAINABLE DEVELOPMENT

5. The practical application, as well as political, financial and technological commitment to disaster risk reduction, needs to be reinforced as a core component of sustainable development and climate adaptation in order to achieve the objectives set out in the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. Such reinforcement is important in international processes like the Rio+20 Summit, the review and implementation of the MDGs, and the UNFCCC Cancún Adaptation Framework³.

¹ UNISDR, 2011 : Revealing Risk, Redefining Development. Global Assessment Report on Disaster Risk Reduction 2011. Geneva: UNISDR.

² UNDP. April 2011. "Supercities face high quake risk". Newsroom UNDP. Accessed: 4 October 2011. <<http://content.undp.org/go/newsroom/2011/april/supercities-face-high-quake-risk-says-undp-expert.en>>

³ FCCC/CP/2010/7/Add.1

6. Disaster risk reduction generates multiple economic, environmental and social benefits. For example, improved water management is an effective measure that addresses drought risk and at the same time helps in increasing generation of hydroelectricity, water storage capacity for agricultural use, and availability of domestic drinking water. Similarly, ecosystems could be utilized as a protective barrier and buffer against physical hazards, thus saving lives, assets and protecting livelihoods⁴.

7. Disaster risk reduction measures positively contribute to economic growth through reducing losses to disasters and contributes to reduction of poverty by protecting livelihoods, effecting use of social safety net programs and opening new potentials for developing social capital and assets.

8. Disaster risk reduction investments pay. The benefits of investing human, financial, technological resources in disaster risk reduction outweigh the costs and negative outcomes of disaster losses and impacts. For example, in a study conducted in Colombia, the inclusion of disaster risk considerations in land-use planning and building is found to be four times less expensive than rebuilding or repairing infrastructure damages from disasters. Corrective measures such as retrofitting or relocation are less cost-effective but can reduce mortality by 40 percent⁵. Protecting schools and hospitals is particularly critical in this regard.

POLICY RECOMMENDATIONS

9. Disaster risk reduction is essential for achieving sustainable development. Any future framework for sustainable development needs to include a clear prescription and the practical application of disaster and climate risk management. Equally, poverty and vulnerability reduction are integral to effective risk management. The recommendations below highlight the key opportunities and areas for government action.

(a) Know risks and account for disaster losses: – Estimating recurrent loss is essential in justifying increased investments in disaster risk reduction. Establishment of national disaster loss databases that account for all disaster loss and damage as well as probabilistic risk assessments can enable countries to estimate their probable maximum losses and estimate the costs and benefits of different risk management strategies and options.

(b) Integrate disaster risk reduction into public investments and sustainable development plans: Public investment projects are shaped through a number of planning processes that include land-use planning and management, development planning, sector investment planning and investment⁶. Factoring and applying disaster risk into public investment decisions directly address critical risk drivers and downplay potential disaster-related losses and costs at a scale impossible to achieve through stand-alone disaster risk management. Through the application of disaster risk reduction, quality and sustainability of public spending is enhanced and further contributes to social and economic development⁷.

(c) Utilize disaster risk reduction as an instrument to achieve a more sustainable (greener) economy: Ensuring that physical infrastructure meets disaster resilient design standards is critically important. The exposure and vulnerability of infrastructure takes a significant toll on the economy of disaster affected countries and regions. When buildings and bridges are damaged by disaster, recovery is further inhibited and the ability of businesses to bring employees back to work at full scale is reduced. Addressing these factors can reduce the scale of losses and strengthen the resilience of the local economy. Businesses – both small and large – are increasingly planning for resilience through business continuity planning and the protection of supply chains.

⁴ UNISDR, 2011 : Revealing Risk, Redefining Development. Global Assessment Report on Disaster Risk Reduction 2011. Geneva: UNISDR.

⁵ Ibid

⁶ Ibid

⁷ Ibid

ANNEX: Additional Background

Many governments have already recognized that disaster risk reduction and risk management through concrete action and political commitment could accelerate development, protect investments and reduce poverty. Recognition is reflected in the outcomes of the 2010 MDG Summit (A/RES/65/1), the 2011 Istanbul Programme of Action for the Least Developed Countries (A/Conf/219/3), and the High-Level Review Meeting on the Implementation of the Mauritius Strategy for the Further Implementation of the Programme of Action for the sustainable development of Small Island Developing States (A/RES/65/2). Furthermore, the Third Session of the Global Platform for Disaster Risk Reduction (May, 2011) called for disaster risk reduction strategies that protect development investments and achievements of sustainable development goals.

The *Hyogo Framework of Action (HFA) 2005-2015- Building the Resilience of Nations and Communities to Disasters* was agreed at the World Conference on Disaster Risk Reduction in Kobe, Hyogo, Japan, 2005 and endorsed by the UN General Assembly⁸. The Hyogo Framework sets a clear expected outcome – “the substantial reduction of disaster losses, in lives as well as the social, economic and environmental assets of communities and countries”- and lays out a detailed set of priorities to achieve this by 2015.

Major progress has been reported by many governments with regards to the implementation of HFA particularly in strengthening disaster management and the institutional legislative arrangements and mechanisms that uphold it. Regional and sub-regional strategies, frameworks⁹, plans and programmes have been developed. National and local government lead initiatives have also proliferated and have showed substantial contribution to reducing disaster losses and increasing disaster resiliency as well as protecting public assets and livelihood. One example is the (i) Social protection measures such as cash transfers that have been successfully adapted in Chile and Nicaragua as a strategy to reduce household vulnerability to disasters while tackling structural poverty. Similar social protection programmes have been adopted in other countries in Latin America and the Caribbean region that reached out to more than 114 million people.

Some governments have also taken concrete steps to integrate disaster reduction in public investments and sustainable development plans. A country such as (ii) Peru has systematically integrated risk reduction into its public investment system, through which more than US\$10 billion were channelled in 2008 alone, (iii) Indonesia has developed the Indonesian Disaster Data and Information Management Database that is now used for national policy, planning and budgeting disaster risk management and (iv) the Province of Albay in the Philippines has adopted a zero casualty policy and has allocated 4.5 percent of its 2010 budget to risk reduction and climate change adaptation.

For more information, please visit:

United Nations International Strategy for Disaster Reduction

Website: (1) www.unisdr.org,

(2) www.preventionweb.net/english/

⁸ UN General Assembly resolution 60/195

⁹ Regional platforms are multi-stakeholder forums that reflect the commitment of governments to improve coordination and implementation of disaster risk reduction activities while linking to international and national efforts. To know more about existing regional platforms: <http://www.unisdr.org/we/coordinate/regional-platforms>