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Implementation of the Hyogo Framework for Action

Integrating disaster risk reduction into socio-economic development policies in Asia and the Pacific

Note by the secretariat

Summary

The present document contains a discussion of the importance of mainstreaming the concept of disaster risk in the development process in order to address the challenges of disaster risks. It also contains an assessment of the prospects and constraints in mainstreaming disaster risk in the development process and a discussion on relevant strategy and policy options. The document puts forward the case for prioritizing social vulnerability to disasters and investing in social sectors as part of recovery and reconstruction efforts for long-term inclusive development. The outcomes of the Fourth Asian Ministerial Conference on Disaster Risk Reduction, which was held in Incheon, Republic of Korea, from 25 to 28 October 2010, are highlighted, and consideration is given to ways in which disaster risk reduction could be prioritized and mainstreamed in social and economic development planning processes.

The Committee may wish to review the document and provide the secretariat with guidance on its future strategic direction in promoting the integration of disaster risk reduction into socio-economic development policies in the Asia-Pacific region.

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I. Impact of disasters on inclusive and sustainable development

1. The number of disasters in the Asia-Pacific region is on the rise and a significant number of people remain at risk from them. In the past several years, the Asia-Pacific region has been affected by an increase in extreme weather events, such as tropical cyclones, intense rainfall and floods, prolonged drought and wildfires, as well as earthquakes and tsunamis. The Asia-Pacific region, which generates only one quarter of the world's gross domestic product (GDP), accounted for a staggering 85 per cent of deaths globally and 38 per cent of global economic losses due to disasters during the period 1980-2009.¹

2. In 2010, Asia remained the continent most adversely affected by disasters: 89 per cent of all people distressed by disasters in 2010 were living in Asia. The number of reported disaster events amounted to 144 in the Asia-Pacific region. In terms of economic impacts, China, Pakistan, New Zealand and the Russian Federation figured among the 10 most severely affected countries, with the total damage in absolute terms being an estimated \$35.9

¹ *Economic and Social Survey of Asia and the Pacific 2010* (United Nations publication, Sales No. E.10.II.F.2). Available from: www.unescap.org/survey2010.

billion.² The historic floods that swept across Pakistan in 2010 affected 20 million people, and caused the loss of nearly 2,000 lives. Those floods damaged the country's infrastructure, farms and homes, among other things; the direct and indirect losses caused by the floods were estimated at \$9.7 billion.³

3. Starting in late 2010, several disasters struck in quick succession, first in Australia, then in New Zealand and finally in Japan. A series of floods, beginning in December 2010, severely affected three quarters of the state of Queensland, Australia. An earthquake struck New Zealand on 22 February 2011 and caused serious damage to the city of Christchurch; it had a magnitude of 6.3 on the Richter scale. That earthquake was part of seismic activity in that country that began on 4 September 2010 with an earthquake in Canterbury; that one had a magnitude of 7.1 on the Richter scale.⁴ The 11 March 2011 earthquake off the coast of Japan, which registered a magnitude of 9.0 on the Richter scale, was the largest such disaster ever observed in that country; it generated a gigantic tsunami — as high as 20 metres in some parts of the country — and caused record damage and extensive loss of life. Various secondary disasters were associated with that earthquake and tsunami in the form of explosions at chemical plants, the outbreak of numerous fires and the leakage of radioactive material from damaged nuclear power reactors. While the detailed economic and social impacts of these disasters have yet to be published, it is important to emphasize that these countries were well prepared to deal with such extremes. Even in the best-case scenarios, however, their economic and social resilience did not match the scale of the impacts of the disasters.

4. One of the key findings of the *2009 Global Assessment Report on Disaster Risk Reduction*⁵ was that large disasters destroy the economic and social infrastructure of small economies, derailing their economic development process, possibly for decades. In contrast, except for extreme disasters, the impact of such disasters on high-income countries is imperceptible. Countries with small and vulnerable economies have the highest ratio of economic loss to capital stock and often have very low national savings rates, a situation which constrains their capacity to absorb such impacts and begin efforts to recover. Small economies—especially least developed countries, landlocked developing countries and small island developing States—together comprise about two thirds of the countries with very high economic vulnerability to disasters, as measured by the above-mentioned variables. They also comprise about two thirds of all countries with extreme limitations on their ability to benefit from international trade, for example a very low participation rate in global export markets and a low level of export diversification.

² Centre for Research on the Epidemiology of Disasters, “Disaster data: a balanced perspective”, *CRED Crunch*, No. 23, February 2011.

³ Asian Development Bank and World Bank, “ADB-World Bank assess Pakistan flood damage at \$9.7 billion”, News release, Brussels, 14 October 2010. Available from: www.adb.org/Media/Articles/2010/13363-pakistan-flooding-assessments/ADB-WB-pakistan-assessment.pdf.

⁴ Malcolm Holland, “Christchurch: The ticking timebomb”, *The Daily Telegraph* (Australia: News Limited), 25 February 2011. Available from: www.dailytelegraph.com.au/christchurch-the-ticking-timebomb/story-fn6b3v4f-1226011617484. Accessed on 25 February 2011.

⁵ Inter-Agency Secretariat of the International Strategy for Disaster Reduction, *2009 Global Assessment Report on Disaster Risk Reduction: Risk and Poverty in a Changing Climate*, 2009. Available from: www.preventionweb.net/gar09.

5. Disaster risk reduction could help countries in their efforts to achieve the Millennium Development Goals.⁶ At its High-level Plenary Meeting on the Millennium Development Goals, held in September 2010, the General Assembly noted that disaster risk reduction and increasing resilience to all types of natural hazards in developing countries could have multiplier effects and accelerate achievement of the Goals.⁷ One disaster in the Asia-Pacific region, an earthquake and tsunami in Samoa in 2009, hindered the graduation of Samoa from least developed country status to that of a middle-income country. Although the region has yet to recover fully from the external shocks caused by the recent global economic crisis, the increasing number of natural disasters is aggravating the distressing situation, undermining the region's efforts to achieve the Millennium Development Goals, eroding hard-earned development gains and derailing the region's efforts to achieve inclusive and sustainable development. It is therefore important that the region determine the best way forward in further reducing the adverse effects of disasters on countries and communities.

6. Disasters cause loss of human life and extensive injuries, together with physical damage to capital assets, such as houses, schools and hospitals, other infrastructure and livestock. The longer-term consequences of disasters can be far-reaching through their impacts on human capital, and hold implications for socio-economic growth and development. Such impacts reflect both loss of life and disruption to the process of education due to the damage done to school buildings and the lower rates of attendance by students, and longer-term negative impacts on public health. With 950 million people living in poverty and with wide development gaps, especially in the least developed countries and in the small island economies, vulnerable communities, such as women, children, the elderly and the disabled, are often particularly susceptible to natural hazards, a situation reflecting wider socio-economic and cultural inequalities.

II. Key issues for mainstreaming disaster risk reduction into development planning

A. Issues and challenges in addressing social vulnerability

7. Vulnerability refers to the susceptibility to harm of a society or a place owing to its exposure to a hazard, which affects the society's capacity to prepare for, respond to and recover from such hazards and disasters.⁸ Social vulnerability refers to socio-economic and demographic factors that influence the level of harm affecting a local population. Priority action 4 of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters⁹ addresses the reduction of underlying risk factors and social vulnerability to disasters. In this regard, focus is placed on indicator 4.2, that is, on implementing social development policies and plans in order to reduce the vulnerability of populations most at risk in this area.

⁶ Regional Consultative Committee on Disaster Management and others, "Disaster proofing the Millennium Development Goals", 2010. Available from: www.preventionweb.net/english/professional/publications/v.php?id=16098.

⁷ See General Assembly resolution 65/1, para. 35.

⁸ Economic and Social Commission for Asia and the Pacific and the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, *Protecting Development Gains: Reducing Disaster Vulnerability and Building Resilience in Asia and the Pacific: Asia-Pacific Disaster Report, 2010*.

⁹ A/CONF.206/6 and Corr.1, chap. I, resolution 2.

8. The Mid-term Review of the Hyogo Framework for Action¹⁰ indicates continued difficulties in integrating risk reduction into public investment planning and urban development, making key social and economic development sectors risk-sensitive. Countries continue to report the lowest levels of progress in addressing underlying risk drivers under Priority 4.¹¹

9. Priority 4 in many ways is the most challenging area under the framework, as it signifies a major departure from the previous emphasis upon response; instead, it depends upon the preceding priorities, namely solid risk assessments and information management systems, clear risk-reduction strategies, strong institutions, awareness of risks and risk-reduction options and the capacity to implement, enforce and evaluate. All responses illustrate a reasonable level of commitment, recognizing the need to integrate disaster risk reduction into environmental plans, land use and natural resource management, economic human settlement planning and major development projects, among others. Translating hazard and risk information into integrated policies across planning documents and undertaking coordinated and concerted actions are challenging tasks. The increasingly high losses and impacts from disasters are accounted for by the difficulties in addressing the underlying risk drivers embedded in the various development sectors. The draft 2011 global assessment report on disaster risk reduction points out that this unaccounted risk will translate into increased poverty and inequalities.¹²

10. With regard to gender, the overall performance record of countries continues to be weak. Although the issue of gender has been acknowledged and integrated into strategic and action plans and policy directives, very little is being done about it. Some responses reflect a perspective of gender that concentrates on vulnerability rather than on the capacities and complementary roles that women and men play in risk reduction. Several countries have reported a lack of disaggregated data on gender and the impact of disasters as factors complicating the design of comprehensive strategies. Policy directives that promote the participation of women in decision-making on disaster risk reduction may encounter resistance at the local level, particularly in multicultural societies.

11. Studies have found that women are more likely than men to die as a result of disasters in countries where their socio-economic status is low. For instance, in one eastern coastal district of Sri Lanka, female mortality rates following the 2004 tsunami were twice those of males; in Myanmar, in 2009 the majority (61 per cent) of the victims of Cyclone Nargis were female. Women are also at greater risk of sexual and domestic violence in a post-disaster context, reflecting heightened levels of psychological stress within households and the close proximity of large numbers of people in makeshift relief camps. Poor female-headed households can suffer particularly high loss of life and assets because they often exist in conditions of social exclusion, have less access to early warning information and seasonal weather forecasts and have difficulty in participating in training processes. Their access to

¹⁰ Inter-Agency Secretariat of the International Strategy for Disaster Reduction, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters: Mid-term Review 2010-2011*, 2011. Available from: www.unisdr.org/files/18197_midterm.pdf.

¹¹ Ibid., p. 28.

¹² Inter-Agency Secretariat of the International Strategy for Disaster Reduction, *2011 Global Assessment Report on Disaster Risk Reduction: Revealing Risk, Redefining Development*.

financial resources is also more limited, which in turn affects other factors, such as the quality of housing and opportunities for livelihood diversification.

12. Disasters can produce long-term negative impacts on the health of the populations affected. In Nepal, for example, people living in areas frequently affected by floods are more likely to suffer from wasting and low weight. Similarly people living in areas affected by landslides have been associated with higher percentages of stunting.¹³ Problems of water contamination are exacerbated in such areas, leading to increases in water-borne diseases, such as cholera and diarrhoea, and contributing to food insecurity by destroying crops and agricultural land.¹³

13. With regard to education in Nepal, disasters have been found to have a significant impact on children's attendance in school by physically preventing them from reaching school, as well as by reducing the capacity of households to pay school fees and cover other costs, such as stationery. Disasters also have a negative impact when parents are forced to place their children in income-generating activities to supplement household earnings. Further, as disasters result in increased (adult) male migration, children may be required to stay at home to help perform domestic and agricultural work.¹⁴ The flooding in 2008 of the Koshi River in Nepal alone disrupted the education of some 23,000 students, including displaced students and the students of host schools where displaced persons were sheltered.¹⁵ In Viet Nam, disaster-related damage to school buildings also disrupted the quality of schooling when students had to be temporarily relocated to schools in neighbouring localities, thereby increasing class sizes and forcing the students to study in shifts so that, instead of attending a full day of classes, the school day was cut by half or even two thirds, a situation that continued sometimes for periods of a year or more.

14. As the table shows, disasters significantly affect social sectors: housing, education and health subsectors. However, most of the needs assessments conducted show that relatively lower investment tended to be given to the social sectors for recovery and reconstruction. The previously mentioned Cyclone Nargis in Myanmar affords an example of a disaster where needs assessments placed particular importance on the social sector: while the social sector suffered 24.1 per cent of the damage and losses from the storm, the sector was accorded 85.7 per cent of the funds in the needs assessments. The lack of social safety nets in the country was reflected in the Post-Nargis Joint Assessment, a comprehensive multisectoral assessment of the situation coordinated jointly by the Association of Southeast Asian Nations (ASEAN), the United Nations and the Government of Myanmar, all three of which comprised the Tripartite Core Group.

15. As a result of these efforts, the ASEAN Humanitarian Task Force for the Victims of Cyclone Nargis concluded in its final report in March 2010 that significant progress had been made in housing, health and education. Through facilitation by the Tripartite Core Group, more than 17,000 new family shelters had been built, 31,000 shelters rehabilitated and 30,000 households provided with materials for building safer and more durable shelters. In the health sector, almost 10,000 children had been provided with therapeutic and supplementary

¹³ Economic and Social Commission for Asia and the Pacific and the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, *Protecting Development Gains: Reducing Disaster Vulnerability and Building Resilience in Asia and the Pacific: Asia-Pacific Disaster Report, 2010*, chap. 2.

¹⁴ Ibid., p. 24.

¹⁵ Ibid.

feeding, 45 rural health centres had been rehabilitated and 850 rural health centres were being regularly supplied with drugs. The Myanmar example illustrates that, with the commitment of the Tripartite Core Group, inclusive economic and social recovery is possible, paving the path towards long-term development of the country.

Table

Damage, loss and needs assessments in selected developing countries and least developed countries in Asia and the Pacific

Disaster	Sector	Damage and loss assessments				Needs assessment	
		Damage (millions of US dollars)	Losses (millions of US dollars)	Total (millions of US dollars)	Percentage by sector	Total (millions of US dollars)	Percentage by sector
Cyclone Sidr, Bangladesh, 2007	Social sectors	904.20	21.00	925.20	55.30	215.30	22.60
	Productive sectors	25.10	464.00	489.10	29.20	325.00	34.10
	Infrastructure	222.50	30.90	253.40	15.10	397.00	41.70
	Cross-sectoral	6.10	-	6.10	0.40	15.40	1.60
	Total	1 157.90	515.90	1 673.80		952.70	
Cyclone Nargis, Myanmar, 2008	Social sectors	937.54	30.00	967.70	24.10	859.00	85.70
	Productive sectors	669.00	2 138.00	2 806.80	69.80	51.00	5.10
	Infrastructure	132.26	58.00	189.00	4.70	88.00	8.80
	Cross-sectoral	15.20	42.00	57.20	1.40	4.00	0.40
	Total	1 754.00	2 268.00	4 021.60		1 002.00	
Tsunami, Samoa, 2009	Social sectors	15.78	10.51	26.29	11.20	70.16	19.30
	Productive sectors	39.45	76.33	115.78	49.50	192.11	52.80
	Infrastructure	81.68	9.78	91.46	39.10	101.24	27.80
	Cross-sectoral	-	0.32	0.32	0.10	0.64	0.20
	Total	136.91	96.94	233.85		364.15	
Typhoon Ketsana, Lao People's Democratic Republic, 2009	Social sectors	10.13	0.74	10.87	18.90	13.64	20.60
	Productive sectors	19.71	2.36	22.07	38.30	24.39	36.90
	Infrastructure	21.16	3.47	24.36	42.80	28.10	42.50
	Cross-sectoral				-		-
	Total	51.00	6.57	57.30			
Typhoon Ketsana, Cambodia, 2009	Social sectors	39.54	3.35	42.89	33.20	42.91	20.10
	Productive sectors	1.05	59.00	60.05	46.50	119.05	55.80
	Infrastructure	14.47	11.47	25.94	20.10	37.40	17.50
	Cross-sectoral	0.20	0.10	0.31	0.20	14.16	6.60
	Total	55.26	73.91	129.18		213.52	
Earthquake, Bhutan, 2009	Social sectors	13.50	52.00	65.50	100.00	41.70	95.30
	Productive sectors						
	Infrastructure						
	Cross-sectoral					2.04	4.70
	Total	13.50	52.00	65.50		43.74	
Pakistan floods, 2010	Social sectors	1 357.96	591.04	1,949.00	19.38	2 036.64	25.11
	Productive sectors	3 882.94	2 115.62	6 000.00	59.67	1 632.00	20.12
	Infrastructure	1 205.26	819.22	2 025.00	20.14	4 175.65	51.48
	Cross-sectoral	48.61	33.35	82.00	0.82	266.65	3.29
	Total	6 494.78	3 559.22	10 056.00		8 110.94	

16. Some countries base their work on an explicit social inclusion agenda, although there is common recognition of the need to address the social vulnerability dimension of risk. In several countries, there is recognition in social policies and frameworks of the impact that disasters can have on the poor; however, instruments to address vulnerability often remain restricted to

conventional programmes, such as food aid. Protection of the population at risk can be ensured through the provision of better social safety nets, which involves investing in the social sector as part of the recovery and reconstruction processes.

17. There have been encouraging initiatives. In the Philippines, the National Anti-Poverty Commission has designed a poverty reduction strategy for people in hazard-prone areas that incorporates interventions ranging from microfinance and insurance instruments to rice credits, cheap food and burial benefits. Bangladesh has reported growing diversification of social safety net programmes, with non-governmental organizations playing a very active role.

18. One challenge related to addressing social vulnerability is data constraints. Household-level data are particularly important in analysing the impacts of floods, which may create net winners and losers within the same community. However, few, if any, countries collate systematic longitudinal data on such impacts, and much of the limited snapshot information that is available, beyond initial assessments of physical damage to related infrastructure, remains unpublished. Moreover, there are issues of potential bias in measuring some impacts. For instance, as observed following the 2005 Kashmir earthquake, respondents of livelihood surveys in Pakistan may have underreported income and overreported expenses in the hope of securing more assistance.⁵

19. Countries face other challenges in reducing social vulnerability, including the lack of funding allocated to local authorities for implementing disaster risk reduction activities and undercapacity in human resources.

B. Strategic policy framework

20. In recognition of the close link between disaster and development, a strong commitment to mainstreaming disaster risk reduction into all developmental activities is necessary. Focusing solely on the recovery of the economic sector will not lead to inclusive growth; instead, the poorest and most vulnerable populations would descend deeper into poverty. This underlines the importance of dedicating more resources to the social sectors not only in the post-disaster recovery process but also, more importantly, in a country's long-term development strategy as an essential component.⁸

21. An enabling environment aimed at promoting the operationalization of mainstreaming disaster risk reduction in the development process would include establishing policy frameworks financing building institutional

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