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International Strategy for Disaster Reduction

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Background note for consultation
Synergies between disaster risk reduction and climate change

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Sub-paragraph 1(c) (ii, iii) of the Bali Action Plan: Background and Options for Reducing Disaster Risks

Key recommendations for national action

- Develop national mechanisms to link and coordinate adaptation and disaster risk reduction policies
- Conduct a baseline assessment on the status of disaster risk reduction and related adaptation efforts in the country
- Prepare adaptation plans drawing on the *Hyogo Framework*

I. Introduction: Disaster Risk Reduction in the Bali Action Plan

The Bali Action Plan's[1] directions for adaptation are set out in Paragraph 1(c).[2] Sub-paragraph 1 (c) (ii) and (iii) call for enhanced action on adaptation through consideration of:

- *Risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance;*
- *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.*

Through these elements the Parties' have made clear that existing knowledge and capacities for coping with extreme weather events must be harnessed to adapt to climate change.

In addition, Sub-paragraph 1 (c) (i) identifies a number of general principles and requirements necessary for adaptation – many of these have been identified in other settings as being highly relevant to reducing disaster risk, particularly vulnerability assessments, capacity-building and response strategies, as well as integration of actions into sectoral and national planning. There are clear linkages between adaptation and disaster risk reduction.

The purpose of this paper is to assist Government policy advisors and negotiators in their follow up on Sub-paragraph 1 (c) (ii) and (iii) of the Bali Action Plan. It provides background on the substance, practice and approach of disaster risk reduction and recommendations for specific actions.

[1] Agreed by the United Nations Framework Convention on Climate Change Thirteenth Conference of the Parties, held in Bali, Indonesia, 3-14 December 2007. See: FCCC/CP/2007/6/Add.1 Decision 1/CP.13

[2] The full text of Paragraph 1(c) is set out at the end of the present paper.

II. A primer on disaster risk

The core idea and starting point is the concept of risk. Risk is the probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions[3].

Levels of risk awareness depend on the quantity and quality of available information and on individual perceptions of risk. People are more vulnerable when they are not aware of the hazards that pose a threat to their lives and property.

In the simplest terms, the two key elements that give rise to risk are, firstly, the hazards – the potential damaging events or phenomenon –, and secondly, the vulnerability of people and populations to these hazards. It is crucial to recognize that human agency and social systems can exacerbate the level of risks by not recognizing and not addressing the hazards faced. Storms, droughts and floods may be inevitable, but they need not necessarily lead to disasters.

Many risks are likely to increase in future. The IPCC Fourth Assessment Report has made it clear that climate change is likely to not only worsen hazard occurrence and impacts, but also to aggravate the vulnerability of particular social groups and economic sectors to weather-related – and other – hazards.

A successful risk reduction strategy is one that ensures that every development plan considers risk factors and endeavors to reduce possible loss and damage.

The aim of disaster risk reduction is to identify and systematically reduce the factors that contribute to disaster risk.

III. Approaches to reducing disaster risk

Public authorities can help communities lessen the impacts of natural hazards, or manage risk, through administrative decisions, organization and operational capacities to implement risk-reducing strategies and policies. To avoid or to limit the adverse effects of hazards requires both structural measures, such as levees and strong buildings, and non-structural measures, such as public education and warning capacities.

[3] See the International Strategy for Disaster Reduction (ISDR) Terminology of Disaster Reduction at: www.unisdr.org

Disasters caused by vulnerability to natural hazards can exert an enormous toll on development and may pose a significant threat to prospects for achieving the Millennium Development Goals, in particular the overarching target of halving extreme poverty by 2015. Disaster risk reduction is an intrinsic element of sustainable development.

Countries that are similarly exposed to natural hazards may experience widely differing impacts when particular events occur, depending not only on how well prepared they are but also on the kind of development paths they have taken. Well-thought out efforts on environmental protection, land use planning, natural resource management, and settlement development, can substantially reduce disaster risks. Public awareness and local preparedness, coupled with early warnings systems can greatly reduce losses when events occur. Effective disaster risk reduction practices take a systematic approach that extends to all sectors and aims to build resilience to current and future hazards and to minimize loss and damage in respect to human, social, economic and environmental factors.

Governments typically will develop a disaster risk reduction strategy and plan to address disaster risk and to incorporate specific risk reduction actions in development plans and sector activities. For example, the plan would ensure that: critical infrastructure is sited away from hazard-prone areas, considering the occurrence of likely hazards and their recurrence rate (including possible increased frequency resulting from climate change); populations are encouraged to settle away from hazardous areas; and communities understand their risk and are prepared to respond to warnings. Building codes would be updated and enforced as required. All of these policies and actions are relevant to adaptation.

IV. Sharing and transferring residual risks

Disaster risks cannot be totally reduced to zero. The remaining risks need be shared and spread so that individual people, companies, communities and countries are not forced into poverty or bankruptcy if a catastrophic event occurs. Comprehensive risk strategies therefore also include consideration of

mechanisms for sharing or transferring risk. At the national level, this can be achieved though the establishment of reserve funds, contingent credit arrangements, or offshore insurance purchasing. At the village level, social and family capital can share burdens to some extent, though not if all those involved are simultaneously affected, as is often the case in large-scale floods and droughts. Commercial insurance and reinsurance is common for physical damage and business interruption, and in some cases for crops. However, in low-income countries, only around 4 per cent of weather-related losses are currently covered. To overcome this apparent market failure, Governments can stimulate better information provision, strengthen the legal basis for insurance effectiveness, and possibly consider mandatory participation in order to build economies of scale and to reduce transaction costs. Many initiatives and pilot projects are underway to research and test new risk transfer approaches, ranging from catastrophe bonds to micro-insurance.

To promote reduced risks, national policies can stipulate that any reconstruction of infrastructure, schools and housing be undertaken in less vulnerable locations and to climate-resilient design standards. Low cost adaptation techniques can be made a condition of insurance policies; and lower premiums can be charged for such climate-resilient buildings, infrastructure and crops.

V. Existing policy frameworks for reducing risk

While deaths from disasters have been declining, mainly as a result of better flood and drought management, the number of people affected in disasters and the cost in lost livelihoods and economic assets is steadily increasing. Poor people and the less developed countries are disproportionately affected.

The UN General Assembly declared 1990-1999 to be the International Decade for Natural Disaster Reduction (IDNDR). The Yokohama Strategy and Plan of Action for a Safer World, conceived at the first World Conference on Natural Disaster Reduction in Yokohama in 1994, stressed that every country had the sovereign and primary responsibility to protect its people, infrastructure and national, social and economic assets from the impact of disasters.

The successor to the IDNDR is the International Strategy for Disaster Reduction (ISDR), founded in 2000 by the UN General Assembly. The ISDR system—a coalition of Governments, UN agencies, regional organizations and civil society organizations—aims to sustain a strong and focused international agenda for the implementation of disaster risk reduction.

The second World Conference on Disaster Reduction in Kobe, Hyogo, Japan, 2005, further reviewed and promoted the need to invest in preventive action to deal with current disaster trends. The participating Governments (168 in all) and agencies agreed on the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*[4]. Later endorsed by the UN General Assembly, 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. These are:

1. Ensure that disaster risk reduction is a national and local priority: Involves enacting legislation, planning, budgeting and implementing policies to avoid settlement in hazardous areas and to ensure that hospitals, schools, transportation and water systems, among others, are hazard resistant. These measures require clear responsibilities for action, effective enforcement and adequate funding.

2. Identify, assess and monitor disaster risks and enhance early warning: Involves generating information on the risks faced (hazards and vulnerabilities), ensuring that populations understand and can take action based on that knowledge, and developing effective, people-centred early warning systems.

3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels: Involves such actions as building knowledge capacities, and raising awareness through the media, training of community leaders and

[4] The Hyogo Framework can be downloaded from the ISDR website at: www.unisdr.org/hfa

teachers, school curricula for students and community efforts.

4. Reducing the underlying risk factors: Involves changing practices and conditions that aggravate disaster risk, including environmental protection, implementing zoning and building codes for safer development, risk sharing mechanisms, income diversification, and integrating disaster risk reduction and climate change adaptation.

5. Strengthening disaster preparedness for effective response at all levels: Involves such things as contingency plans, and emergency funds, training, and regular simulation exercises.

VI. Linking disaster risk reduction and adaptation policy at national level

Climate change adaptation and disaster risk reduction span all sectors and require attention by most ministries to ensure integration into development. Collaboration and coordination are critical to both policy fields. In this respect, the national disaster management office is a natural ally of the relevant environment ministry or national climate office, and a useful first step is to build linkages between the relevant two offices. Like adaptation, disaster risk reduction requires national policy and local-level implementation.

A national platform for disaster risk reduction is a nationally owned and led forum or committee of stakeholders from all relevant sectors.

Given the diverse interests of different ministries, agencies and levels in both disaster reduction and climate change, a concerted effort to collaborate across ministries is necessary. Each ministry can contribute to the development of the country's disaster risk reduction plan and adaptation strategy, and can jointly develop common guidance to reduce current and long-term risk. Different ministries may have information of great relevance to the others, such as vulnerability information and historical data on hazards, and climate change impact projections and long-term scenario information.

To initiate and enhance this collaboration, the national climate change focal point and/or organizations should participate in the national platform for disaster risk reduction where this exists. This is the generic name for a national body involving Governmental and non-governmental stakeholders concerned with disaster risk reduction that provides coordination, analysis and advice, and advocacy on areas of priority requiring concerted action by all parties. By participating in this body, the climate change focal point can simultaneously gain access to relevant disaster risk information and advice and influence multiple relevant actors on appropriate adaptation action.

National platforms for disaster risk reduction typically (i) explore common trade-offs between present and future action; (ii) identify synergies to make best use of available funds including for short- to longer-term adaptation to climate risks as well as to tap into additional funding sources, (iii) share human, information, technical and practical resources; (iv) make best use of past and present experience to address emerging risks; (v) avoid duplication of project activities; and (vi) collaborate on reporting requirements.

The need to systematically integrate disaster risk reduction and adaptation into national development strategies has also emerged as a key conclusion from a number of recent international policy forums. In particular, the "Stockholm Plan of Action for Integrating Disaster Risk and Climate Change Impacts in Poverty Reduction"[5] and the recent Oslo Policy Forum on "Changing the Way We Develop: Dealing with Disasters and Climate Change"[6] reiterated this view.

VII. Options for action on Sub-paragraph 1 (c) (ii) and (iii)

The coming months leading up to COP-14 are of critical importance to establishing basic ideas and directions for use at COP-15. Preparatory work at national level will greatly strengthen capacities to identify suitable actions at the international level. Drawing on past and ongoing discussions with

[5] Organised by SIDA, the World Bank and the UN/ISDR under the Global Facility for Disaster Reduction and Recovery, held in Stockholm, 24 October 2007.
[6] Organised by the Norwegian Ministry of Foreign Affairs, UNDP and ProVention Consortium, held in Oslo, 28-29 February 2008.

Government representatives and ISDR system partners, statements at UNFCCC sessions, the preliminary insights of the UNFCCC Nairobi Work Programme, and the policy dialogues referred to above, the present paper sets out the following recommendations for consideration.

Develop national coordination mechanisms for disaster risk reduction and adaptation

- ✓ Convene interdepartmental and national consultation meetings with personnel from the fields of disaster risk reduction, climate change and development, and identify modalities for implementation of the Bali Action Plan.
- ✓ Encourage systematic dialogue and information exchange between climate change and disaster reduction bodies, focal points and experts.
- ✓ Seek formal cross-linking of the national platform for disaster risk reduction and the climate change team, for collaboration on national communications for instance.
- ✓ Include disaster risk reduction experts in the national climate change adaptation policy team.

Conduct a baseline assessment on the status of disaster risk reduction and adaptation efforts in the country

- ✓ Mobilize the collection and summary of national risk information, including socio-economic data concerning existing vulnerability and capacity.
- ✓ Review national development strategies and sector plans to identify actual or potential needs and interventions for disaster risk reduction, risk management and adaptation. This step will assist in prioritizing actions, as called for in the Bali Action Plan.
- ✓ Review national progress toward achieving the objectives and priorities of the Hyogo Framework. Consider a comprehensive review to identify lessons and gaps relevant to adaptation needs.
- ✓ Review national programmes and activities on adaptation and identify and review those elements that contribute to disaster risk reduction.
- ✓ Assess national opportunities for, and barriers to, risk transfer mechanisms, for all levels, state to individual, and including the capacity of the insurance markets to operate now and in a changed climate.

Prepare adaptation plans drawing on the Hyogo Framework

- ✓ Promote the joint development of a disaster reduction plan and adaptation strategy drawing on the approach and language of the Hyogo Framework and national Plans for Disaster Risk Reduction, and on experience in climate change adaptation initiatives, such as National Adaptation Programmes of Action.
- ✓ Include in the adaptation plan, action on all five of the Hyogo Framework's priorities to ensure a comprehensive, integrated and systematic approach to adaptation.

Bali Action Plan – Paragraph 1 (c) on adaptation:

(c) Enhanced action on adaptation, including, inter alia, consideration of:

(i) International cooperation to support urgent implementation of adaptation actions, including through vulnerability assessments, prioritization of actions, financial needs assessments, capacity-building and response strategies, integration of adaptation actions into sectoral and national planning, specific projects and programmes, means to incentivize the implementation of adaptation actions, and other ways to enable climate-resilient development and reduce vulnerability of all Parties, taking into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change, especially the least developed countries and small island developing States, and further taking into account the needs of countries in Africa affected by drought, desertification and floods;

(ii) Risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance;

(iii) 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;

(iv) Economic diversification to build resilience;

(v) Ways to strengthen the catalytic role of the Convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes, as a means to support adaptation in a coherent and integrated manner.