



A Global Review:

**UNDP Support to Institutional and Legislative
Systems for Disaster Risk Management**



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Final Draft

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List of Acronyms

ADPC	Asian Disaster Preparedness Centre
BCPR	Bureau for Crisis Prevention and Recovery
CBO	Community Based Organization
CCA	Common Country Assessment (UN)
CCF	Country Cooperation Framework (UNDP)
CDB	Caribbean Development Bank
CDERA	Caribbean Disaster Emergency Response Agency
CEPRENAC	Coordinating Centre for the Prevention of Natural Disasters in America
CIS	Commonwealth of Independent States
DIPECHO	ECHO Program for Disaster Prevention
DMFC	Disaster Mitigation Facility for the Caribbean
DMTP	Disaster Management Training Program (UN)
DMU	Disaster Management Unit (SOPAC)
DPCCN	Coordinating Council for Prevention and Combat of Natural Disasters (Mozambique; acronym from Portuguese)
DRM	Disaster Risk Management
DRU	Disaster Reduction Unit (BCPR/ UNDP)
EIA	Environmental Impact Assessment
GTZ	Gesellschaft fuer Technische Zusammenarbeit
IGAD	Inter-Governmental Authority on Development (East Africa)
ILS	Institutional and Legislative Systems
INGC	Institute for Disaster Management (Mozambique)
ISDR	International Strategy for Disaster Reduction
MDGs	Millennium Development Goals
MEE	Ministry of Environment and Emergencies (Kyrgyzstan)
NDMO	National Disaster Management Office
NEX	National Execution (UNDP implementation modality)
NGO	Non Governmental Organization
NHIA	National Hazard Impact Assessment
PAHO	Pan American Health Organization
PREANDINO	Andean Regional Programme for Risk Prevention and Reduction
SADC	South African Development Community
SOPAC	South Pacific Applied Geoscience Commission
SPDRP	South Pacific Disaster Reduction Program
SRF	Strategic Results Framework (UNDP)
TRAC	Target for Resource Assignment from the Core
UNDAF	United Nations Development Assistance Framework
UNDMT	United Nations Disaster Management Team
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WB	World Bank
WFP	World Food Program

1. Study background

1.1 Objectives and study arrangements

This review reflects the results of a global analysis undertaken by the United Nations Development Programme (UNDP), which examined UNDP's role in strengthening institutional and legislative systems (ILS) for disaster risk management, so as to better direct future UNDP commitment in this area. The analysis identified important factors that have contributed to and influenced the establishment of ILS for disaster risk management (DRM) in a selected number of countries around the world. This review documents the status of ILS and summarizes the key trends and programme activities which are necessary for the achievement of effective and sustainable systems.

The analysis was undertaken by a study team composed of six consultants to carry out the field research in the selected countries, UNDP regional disaster reduction advisors and their teams, as well as the thematic advisor and the project coordinator from Geneva. The consultants undertook field visits to countries under review that lasted, on average, five days. Extensive reports on findings in regions and individual countries were prepared, which provided the basis for this review.

The regions reported on include Africa, Asia & Pacific, Latin America & the Caribbean, and Europe & CIS¹.

1.2 Selection of countries

UNDP has supported and encouraged the establishment and strengthening of ILS for DRM in a substantive body of programmes, implemented through its country offices, regional bureaus and specialized programmes. Approximately 48 individual countries as well as two regional groupings received some form of institutional capacity-building support through UNDP, including:

- Africa (Botswana, Cameroon, Kenya, Madagascar, Mozambique, Namibia, Rwanda, South Africa, Uganda and the United Republic of Tanzania);
- Arab States (Algeria, Djibouti, Jordan, Sudan and Yemen);
- Asia (Bangladesh, Cambodia, China, India, Indonesia, Islamic Republic of Iran, Mongolia, Nepal, Pakistan, Sri Lanka and Viet Nam);
- Eastern Europe and CIS (Albania, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan and Romania);
- Latin America and the Caribbean (Bolivia, Colombia, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Nicaragua, Peru and Venezuela); and
- Two regional mechanisms in the South Pacific and the Caribbean. The SPDRP² assisted a total of 15 South Pacific Island countries, and the CDERA³ a total of 16 Caribbean countries.

Some of the countries above have ILS initiatives dating back to the 1980s, others, particularly in Europe and the CIS are relatively recent recipients of UNDP support in this area.

¹ Commonwealth of Independent States.

² South Pacific Disaster Reduction Programme.

³ Caribbean Disaster Emergency Response Agency.

The following criteria guided the selection of countries in which field visits for in-depth studies were carried out.

- **Sample cross-section.** The countries were selected to provide a sampling cross-section of ILS. Geographical area, population size and hazard exposure were not selection criteria per se. However, effort was made to avoid choosing countries from the same region that have similar populations, geographical sizes, disaster profiles and levels of risk.
- **Recipient of UNDP support for ILS.** The countries chosen have benefited from UNDP support in at least two of the following areas: policy drafting, plan development at different levels, drafting of new or revised legislation, establishment of training and capacity building programmes, establishment of government DRM structures at different levels and implementation of a comprehensive public awareness programme.
- **Period of analysis.** Without defining the time period too strictly, UNDP provides (or provided) support to the development of ILS consistently for a period of time (guideline: more than two years). Similarly, ILS programmes need not be currently active, but could have finished some time ago (period of analysis from 1994 to present).
- **National interest in ILS.** The countries concerned expressed interest in developing ILS initially (even though the country does not have a high disaster risk profile).
- **DRM included in the United Nations Development Assistance Framework (UNDAF).** At least one country selected has included DRM (or similar) as a component of the UNDAF.
- **Country office interest.** The country office expressed interest in assessing its contribution to ILS and had a good working relationship with the national government.

In Asia, and to a limited degree in Europe, the analysis benefited from desk studies which were carried out for a number of countries. These provided an overview of UNDP programmes in the area of institutional capacity building as well as background information on the key features of the country's ILS. The analysis also benefited from a parallel study on local level risk management that was conducted in Latin America, the Caribbean and South Asia.

Table 1. Overview of countries selected for analysis

Region	In-depth analysis	Desk studies
Africa	Djibouti	—
	Madagascar	—
	Mozambique	—
	Uganda	—
Asia & Pacific	Sri Lanka	Sri Lanka
	Nepal	Nepal
	Viet Nam	Viet Nam
	Cook Islands	—
	Vanuatu	Vanuatu
	Fiji	—

Latin America & Caribbean	Nicaragua	—
	Bolivia	—
	Colombia	—
	Barbados	—
	Jamaica	—
	Saint Lucia	—
Europe & CIS	Georgia	Albania
	Kyrgyzstan	—

1.3 Methodology

The review was guided by a global analysis methodology, which provided a consistent global approach but made provision for regional adaptation. The methodology provided:

- common underlying core concepts and definitions;
- an analytical framework for guiding data collection; and
- a data collection matrix.

The design of the project methodology and the establishment of key questions to be answered during the regional analyses were derived from:

- a consideration of the elements that comprise ILS including the relationship between good governance and the success of ILS; and
- the establishment of key areas of analysis.

The elements that comprise ILS were grouped into four broad areas: organizational aspects, policy and planning, legislative and regulatory frameworks and resources. Disaster risk reduction, which can be seen as a policy objective of such systems, is composed of the following fields of action: (i) public commitment and institutional frameworks, which includes legislation, and organizational, policy, and community action; (ii) risk awareness and assessment, which includes hazard analysis and vulnerability/capacity analysis; (iii) knowledge development, which includes education, training, research and information; (iv) instruments for risk management; and (v) preparedness and emergency management. As highlighted above, ILS systems are considered important from a governance perspective; governance is seen to be an important prerequisite and component of successful disaster risk reduction and sustainable human development.

Taking into account the conceptual and component aspects summarized above, the project methodology established an analytical framework for guiding information collection, where the conceptual and component aspects guided the analytical procedure. This framework comprised six key areas for analysis: the potential outcome of UNDP involvement in ILS; the current status of ILS in the different countries; the broader country context for ILS and disaster risk reduction; external and internal factors that have influenced ILS; UNDP's contribution to ILS; and UNDP's partnership strategy. Additional analysis steps were required including the compilation of main lessons learned and best practice, to form the basis upon which UNDP and other actors in ILS and DRM will design improved assistance strategies.

Once concept, components and key areas for analysis had been identified, the project methodology included a data-collection matrix providing information on:

- key topics and sub-topics to order data;
- a list of possible questions to elicit data;
- a list of data collection tools to draw upon, supporting triangulation; and
- a list of likely primary informants.

1.4 Constraints of the analysis process

The application of the project methodology in different regions revealed problems not so much with the conceptual and methodological framework as such but rather with the time and information available for achieving the ambitious project goals as suggested in the methodology. For instance, there was insufficient time to reflect the vast array of concerns with the required level of detail or specificity. These problems were compounded by the fact that most consultants found baseline information to be weak in almost all countries. A range of proposed data collection tools could not be applied due to time constraints and most consultants resorted to semi-structured interviews as the primary data-collection tool supported by available secondary information. As a result the analysis was less process-oriented than it could have been and opportunities to involve national stakeholders were missed. Nevertheless important inclusion could be drawn from the facts obtained.

At least in two regions consultants felt that the selection of countries did not follow the established criteria – countries showed too much similarity with respect to the types of UNDP interventions in place and/or similar demographic and risk profiles. As a result countries did not capture the full range of interventions UNDP could promote, thus perhaps leaving gaps in terms of what may be recommended in the future.

While the methodology provided for tools and guidelines with regard to country and regional analysis, it required adaptation to guide the global analysis of results across regions and countries. A more generic framework was therefore developed that allowed for an analysis of common themes and issues in the individual countries as well as for an identification of parameters that influenced the development and sustainability of ILS for DRM. This framework and its main components are presented in section 2.

This global review can be characterized as a ‘cross-country’ report: the 19 countries covered have widely different social, economic, administrative and political characteristics. What unites them is that they all, at least at some stage, expressed particular interest in developing ILS for disaster risk management. Certain similarities between countries or subgroups of countries can be observed and are highlighted in the following sections of the report as tentative trends. Similarities are also clearly observable regarding UNDP interventions and sustainability.

The more generic trends in countries that have eventually embarked upon creating or reforming their ILS are complemented by specific country experience and practice from all four regions under review. The analysis has benefited from the results of a three-day workshop in which regional consultants and UNDP staff from the regions exchanged views regarding the status of ILS in the countries under review and identified certain common lessons learned, positive and negative practices and recommendations for future interventions.

1.5 Intended use of the review

Lessons learned from the global review will guide the formulation of DRM programmes in selected countries where national governments are committed to their initiation. The results will also be incorporated into UNDP's ongoing work in capacity building and training with a view to increasing the effectiveness of its interventions and the relevance of its programmes.

In particular, the review will result in the development of a policy paper on governance for DRM, practical guidelines for UNDP country offices, and training materials for the UN Disaster Management Training Programme (DMTP) or other training programmes. This will allow country offices to develop viable and positive implementation strategies, which will result in concrete action.

Thus, knowledge derived from this review is not only of interest to UNDP, but also to the international community as its findings provide a better understanding of certain trends in the development and strengthening of ILS, and reveal areas of opportunity for more effective assistance to the countries reviewed. The review (and in particular the more detailed regional and country reports) will also create an important baseline on the characteristics of ILS, which will serve UNDP for further monitoring purposes. Ultimately the project should lead to more relevant and effective UNDP interventions at the national level, thus contributing to a sustainable reduction in disaster risk.

2. Conceptual and analytical framework of the analysis

2.1 Key concepts and definitions

2.1.1 Disaster risk management and reduction

UNDP is mandated to support the broader implementation of the International Strategy for Disaster Reduction (ISDR) – and as such, follows the disaster reduction terminology of the ISDR (see Annex 1). This terminology defines disaster risk management as

...the systematic management of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impact of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevent) or limit (mitigation and preparedness) adverse effects of hazards.

Disaster risk reduction is defined as

...the conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.⁴

2.1.2 Institutional and legislative systems in the context of disaster risk management

The UNDP Bureau for Crisis Prevention and Recovery (BCPR) defines ILS for disaster risk management as

...a system of organizational structures, mechanisms & processes, strategies, policies, laws & regulations, resources and procedures, at all levels of administration, governing how the country manages disasters and disaster risks. The state, civil society and the private sector are all integral parts of the ILS for disaster risk management. The interaction between the components and actors of the ILS may be formal or informal.

This definition implies that ILS for DRM also comprises the broader management functions such as leadership, planning, organizing, developing and controlling. Management is often described as creative problem-solving, a much needed skill in the context of complex risk management functions. Ultimately, the effectiveness of the ILS in a country will depend on good management practices, which ensure that the individuals, institutions and departments involved are aware of their roles and responsibilities and have the skills to exercise them.

For the purpose of this methodology, the elements that comprise ILS were grouped into five broad categories. These are an adaptation of the thematic area “Political Commitment and Institutional Aspects (Governance)” in the ISDR/UNDP Draft Framework to Guide and Monitor Disaster Risk Reduction (Annex 2). They include:

- legal and regulatory frameworks
- policy and planning

⁴ ISDR/UNDP Framework to understand, guide and monitor disaster risk reduction (Annex C).

- organizational aspects
- resources and capacities
- partnerships (international and national levels).

The strengthening or establishment of ILS involves the preparation and formalization of policy frameworks, the creation of national structures for DRM, the preparation of national plans and other planning instruments, the review and revision of existing legislation, the development of new legislation and the creation of national capacity building and management support programmes. Not all countries pass through all these phases. However, the establishment of such systems is considered important from a governance perspective in view of minimizing losses and deaths from disasters, limiting disruption of socio-economic systems and reducing disaster risks.

2.1.3 Definition and scope of governance

Governance is an important determining factor of the potential success of DRM and is considered key for achieving sustainable human development. It is defined as

...the system of values, policies, and institutions by which a society manages its economic, political, and social affairs through interactions within and among the state, civil society and private sectors. It is the way a society organizes itself to make and implement decisions – achieving mutual understanding, agreement and action. It comprises the mechanisms and processes for citizens and groups articulate their interest, mediate their differences and exercise their legal rights and obligations. It is the rules, institutions and practices that set limits and provide incentives for individuals, organizations and firms. Governance, including its social, political and economic dimensions, operates at every level of human enterprise, be it the household, village, municipality, nation, region or globe.⁵

In its governance policy UNDP emphasizes the need for a holistic approach in capacity building for governance recognizing the links which exist between institutions, levels and systems. In countries that are not experiencing serious political, economic or social crises four focus areas have been identified to facilitate UNDP's provision of comprehensive programme assistance to governance efforts.

- Governing institutions (key political institutions of the state, including legislatures, legal and judicial systems and electoral and human rights bodies).
- Public and private sector management (institutions in charge of the management of economic transactions and social resources).
- Decentralization (i.e. the distribution of the financial and administrative processes of decision-making and management of public programmes among central, regional and local levels).
- Civil society organizations (various groups and individuals which can actively contribute to the public policy-making process and participate in the political, economic, and social affairs of the state).⁶

⁵ UNDP: Democratic Governance for Human Development: A UNDP Strategy Paper, Jan 2001, p. 10.

⁶ UNDP "UNDP and Governance", Experience and Lessons Learned, Lessons Learned Series 1.

The approach of UNDP to the promotion of democratic governance is to apply the principles and processes of democracy i.e. equity, participation, pluralism, partnership, subsidiary, transparency, accountability, rule of law, effectiveness, efficiency, responsiveness and sustainability to the institutions and processes of governance. This approach works under the umbrella of UNDP's broader goal of poverty eradication.

2.1.4 Governance for disaster risk management

Governance for disaster risk management must be guided by the same core principles and overall goals as democratic governance. More specifically it aims to do the following.

Make disaster risk management a policy priority: National policies are examples of firm commitments of the state to address development priorities and give a clear mandate to decision-makers, planners, practitioners as well as civil society. Thus, making DRM part of a national policy is critical to its success. This can be approached in two ways, namely by (i) drafting a specific disaster/risk management policy, and (ii) incorporating or 'mainstreaming' DRM and reduction into development policy and planning. The latter approach will avoid the creation of parallel structures (duplication of effort) and ensure that development does not lead to new risks. Good policy statements will refer to the importance of disaster reduction in achieving sustainable human development, and set out the broad goals and strategic objectives for reducing disaster vulnerability and risks, as well as for strengthening key capacities.

Generate political commitment: Political commitment toward DRM can best be generated in the context of good governance. Possible indicators of political commitment may be the formulation of legislation on risk reduction issues or the launching of reform processes. Such processes, within a framework of good governance, are carried out in a participatory and consultative manner at all levels of society.

Promote disaster risk management as a multisector responsibility: DRM is not a discipline in and of itself, but a cross-cutting issue that needs to be considered at all levels of polity, society and economy. This requires interdisciplinary and multisectoral approaches which depend upon institutionalization and the creation of appropriate mechanisms to stimulate and further inter-agency and intersectoral cooperation at all levels of administration.

Assign accountability for disaster losses and impacts: Decisions about the allocation of scarce resources or emergency relief are frequently influenced by political considerations rather than the needs of marginalized populations. Good governance in DRM facilitates transparency and accountability, and thus reduces opportunities for corruption at the government as well as civil society level. This in turn will strengthen the legitimacy of the actors involved.

Allocate necessary resources for disaster risk reduction: Among the most telling indicators of political commitment for DRM is the level of resources allocated to risk reduction by governments, civil society and private sectors. In many cases, the scarcity of resources suggests that mainstreaming disaster risk into development processes and budgets will increase effective utilization of resources.

Enforce the implementation of disaster risk management: Ultimately only the application of good risk management principles and practices will bring about the

desired change at all levels of intervention and reduce vulnerabilities in the long term. Examples of good DRM principles and practices include risk and impact assessments, early warning systems, public awareness, education and training, information management and research alongside environmental and natural resource management, social and economic development practices, physical and technical measures and lastly, preparedness and emergency management.

Facilitate participation from civil society and the private sector: While it is recognized that the state has important responsibilities in DRM, the roles of civil society and the private sector are crucial for success. Participatory processes ensure that the needs and priorities of the most vulnerable and marginalized populations are met. Additionally, local knowledge of hazards, vulnerabilities and the capacity for coping with disaster in combination with technical and scientific solutions provide the best basis for lasting improvements. Participation empowers all actors and ensures that the most basic levels of society, especially the level of local government and community-based governance, shape decision-making processes. Consequently this participation will also impact resource allocation and negotiations on acceptable levels of risk to which a society may be exposed. Decentralization is an important approach that allows for the sharing of responsibilities between central, regional and local levels and for fostering participation. It is not an end in itself, however, but only valuable if it ensures that adequate government interventions in disaster reduction reach communities more effectively.

The approach of UNDP to the promotion of governance to risk management must also be guided by the reviewed principles and processes of democracy applied to the institutions and of governance, which, within the framework of this review have been termed institutional and legislative systems, or ILS.

UNDP's goal in DRM is risk reduction and ultimately poverty reduction, and thus its governance procedures and policies work toward this end.

2.2 Parameters of the global review

Governance and risk management are interdependent, and lead to supportive and occasionally unsupportive relationships. Effective governance is not only an important prerequisite for DRM: Institutional and legislative systems for DRM are by definition part of governance structures and systems and should be guided by the same principles. DRM, particularly in disaster-prone countries, may offer important 'windows of opportunity' to incorporate and deepen the application of these principles while pursuing the overall goals of reducing risk and poverty.

The following summary of findings from four regions and 19 countries strives to review the five dimensions of DRM against the governance objectives highlighted above and to identify some of the enabling factors and constraints that have affected progress in achieving these objectives and the overall goal of vulnerability and risk reduction in the countries under review. The global review then moves on to identify UNDP's experience and contributions to promoting and strengthening good governance and achieving the outlined set of objectives. Findings represent a synthesis of the detailed country and regional reports produced within the framework of this global review. Therefore what will be described as a common pattern encountered in 'many' or 'most' countries does not reflect the specific situation in each individual country. In order to add specificity several case studies from the regional and country reports, which illustrate certain findings, have been added in boxes. It must be noted that given the huge geographical, political, social, economic

and demographic variations between these countries findings are necessarily somewhat generic.

3. Status of governance for disaster risk management

3.1 Institutional and legislative systems

3.1.1 Legal and regulatory frameworks

Governments set out laws and regulations, which provide the basis for promoting and enforcing certain rights and obligations of groups and individuals. This is a fundamental difference between government, the private sector and civil society. In the context of governance for DRM, laws set standards and objectives and assign mandates and responsibilities to different actors. Regulations and codes describe specific procedures and norms and seek to encourage or discourage certain behaviour. This rests upon the basic principle of “allowing or prohibiting activities”⁷ and creating incentives/disincentives (taxes, penalties, tax breaks, subsidies, grants, etc.) that will either reward or punish. The effectiveness of legislation rests upon the administrative capacity of a country but also on the acceptance and awareness of rules and norms by the populace.

3.1.1.1 Disaster risk management acts

The review found that overarching and comprehensive DRM legislation has been passed in 11 of the 19 countries reviewed, mostly during the past decade.⁸ Four countries have either updated or created new DRM legislation that currently awaits approval.⁹ The remaining four countries have either outdated or no comprehensive DRM legislation at all.¹⁰ The reasons for the lack of progress in the latter group seem to be associated with lack of capacity, changes of government and/or internal tensions and conflicts preoccupying governments. Some of the countries reviewed have preferred to first review strategies and policies before changing the legal basis. Where laws are still in draft form this can partly be explained by the fact that the process of drafting and further refinement is ongoing and partly because laws have been stuck in the parliamentary process.

Some of the created and adopted legal frameworks have been refined and acted upon, others have so far remained theoretical frameworks and will take years to implement. The latter typically occurs where the full realization of DRM legislation requires a decentralized basic capacity at the local government level, which is absent. Kyrgyzstan (Box 1) provides a good example for this particular difficulty but many more countries in a process of decentralization share similar problems.

Box 1: Legal base in Kyrgyzstan

The legal base for DRM in Kyrgyzstan consists of a very comprehensive “Law on the protection of the population and territory from emergency situations of natural or technological origins” (no. 45, February 24, 2000). It outlines general responsibilities of the national government, local governments, the president and parliament as well as the individual Kyrgyz citizen in prevention, mitigation and response. The law also provides space for the activities of non-governmental organizations (NGOs) in DRM. However this is a ‘mother law’, which gives no clear indication of what exactly is to be done, by whom and with which resources. This lack of clarity concerns in particular the “demarcation” of

⁷ Hughes, 1998, p.89.

⁸ Albania, Bolivia, Colombia, Fiji, Jamaica, Kyrgyzstan, Madagascar, Nicaragua, Saint Lucia, Vanuatu, Viet Nam.

⁹ Barbados, Mozambique, Sri Lanka, Uganda (drafting stage).

¹⁰ Djibouti, Georgia (revision in process), Nepal (revision started), Cook Islands (no legislation).

responsibilities between the Ministry of Emergencies and Environment and local governments. Repeated reference is made to an “integrated government system” for the prevention of disasters and response but no lead agency is identified to manage or coordinate the activities described in the law. So far no DRM plan and only few by-laws and implementation guidelines have been formulated. These include government regulations on the “Classification of emergency situations and criteria of their estimation in Kyrgyz Republic” (no. 702, November 29, 2000) and “On assignments of funds for prevention and liquidation of emergency situations in the Kyrgyz Republic” (February 27, 2002). However the principles of territorial responsibility for DRM and subsidiarity, which are at the heart of the regulation “Classification of emergency situations” and the assignment of primary responsibility to local governments, require capacity at the local level, which is currently weak or absent.

There is nothing ‘wrong’ with the Kyrgyz law at this stage of development. However, step-by-step the gaps need to be filled in order to move from an expression of intent to action and implementation. In addition, structures of accountability must be established and systematic efforts undertaken to incorporate disaster risk reduction concerns into relevant sectors. The current law provides the necessary space for further refinement as such progress is being made, but this will require major efforts on the part of the Kyrgyz government.

An important aspect of making legislation work is the elaboration of clear guidelines for implementation, particularly in order to spread DRM across sectors as well as take it to the provincial and local level. However the review found that initially enthusiastic efforts to create or update legislation for DRM have sometimes waned over time and that political commitment, which is often highest just after a major disaster, has not been sustained. This affects the elaboration and continued refinement of implementation guidelines including the identification and regulation of funding sources and mechanisms. Under these circumstances the legal framework remains theory with no benefit to communities at risk.

Some of the most advanced enacted legislation which clearly distinguish the institutional requirements for disaster reduction and response but incorporate both concerns, can be found in Latin America. In countries like Colombia (Box 2), laws and decrees have been formulated that require the integration of risk concerns in national, regional, sectoral and local planning schemes, and in public and private investment decisions.

Box 2: Enacted legislation – the Colombian case

The present DRM legislation in Colombia is the result of Law no. 46 passed in October 1988, which created the National System for Disaster Prevention and Response. This law was regulated by Decree no. 919, passed in 1989. The law created a multisectoral, multidisciplinary, decentralized system of managing both disaster risk reduction and response. It was socially inclusive and participatory, based on the subsidiarity principle and the notion of social and individual responsibility for risk. This system was innovative in Latin America. Due to this it has been used and considered as a model for change in many countries of the region (the cases of Bolivia and Nicaragua are two clear examples of a hybrid version of the Colombian system in place in Latin America today).

The law assigns maximum authority to the National Committee headed by the president and including representatives from the major ministries (identified with disaster response and preparedness and those identified with sectoral and territorial development processes and risk management goals related to prevention or mitigation), the National Department of Planning, Civil Defence and the Red Cross and private sector members. The committee is responsible

for major policy and planning decisions. The system is coordinated by a General Directorate, which is currently located at the Ministry of the Interior.

Functionally, the system operates via two committees: the National Technical Committee and the National Operations Committee. The National Technical Committee is made up of National Advisory Commissions on such topics as micro-river basins, environmental health, education, development planning and environment, volcanic and seismic risk, forest fires, health, hazard maps, etc., and National Services, such as the hydro-meteorological early warning network, the volcanological observatories and the national seismologic network. These commissions and services are made up of representatives from different relevant institutions and are responsible for policy implementation in their respective areas. The private sector is represented in relevant committees.

The second committee, the National Operations Committee, is presided by the head of Civil Defence and charged with disaster response operations and activities (search and rescue, communications, food distribution, geographical information systems, etc.). The Emergency Operations Centre is under the control of this committee.

The system operates on a decentralized basis through regional (departmental) and local (municipal) committees that have technical, operational and educational commissions, thus replicating the national structure. Departmental governors and mayors head these two types of committee.

Since 2001, finance for the General Directorate comes directly from the Ministry of Interior's budget. Previously, the Directorate had a direct budgetary allocation from central government.

Additionally, a National Calamity Fund exists, which was created in 1984 following the Popoyan earthquake disaster. This fund receives finance each year for response and prevention activities and is not accumulative.

In contrast to many other countries under review Colombia has a very long experience with local and regional autonomy and thus, management of affairs and governance is highly decentralized and participatory. Laws on popular participation and decentralization have provided entry points for enhancing risk reduction. Furthermore, the principle that the populace has the fundamental right to protection is well established and a largely well-educated populace is conscious of it. These factors contributed substantially to the implementation of DRM legislation in Colombia.

It would seem that the dissemination of the idea that protection from hazards is a fundamental right would provide the 'social' basis for legislators and civil servants to further the elaboration and implementation of adequate DRM legislation. Citizens should have the opportunity to understand the basics of DRM, monitor relevant actions of government and articulate grievances and discontent in a way that will eventually lead to sustained improvements in law and practice. For various reasons related to historical, political and social factors, this 'ideal' state of affairs has not been achieved in most countries.

Finally, the inclusion of non-state actors in DRM has been promoted by acts and laws in many of the countries reviewed. Laws and decrees mention the Red Cross in particular, and cooperation with this organization seems widespread but often restricted to response activities. Regulation of private sector involvement seems more challenging and relatively few country examples revealed active involvement of business in DRM.

3.1.1.2 Disaster risk management codes and regulations

A majority of countries reviewed have specific codes and provisions that regulate construction and physical development. These include building codes, land-use and urban plans based upon zoning, etc. Judging the technical quality of codes and plans in different countries is beyond the scope of this review. However the enforcement of these codes was found to be generally weak. Factors include the lack of clear assignment of responsibilities for the enforcement of legislation as well as the lack of incentives and disincentives (including penalties) to promote the application of DRM and reduction measures. Accountability for losses has not been activated as a guiding principle. Few examples (Saint Lucia is one) illustrate a creative use of financial instruments such as tax breaks to create incentives for individuals or institutions for the investment in disaster mitigation measures.

In some countries urban development plans or orders are outdated or their status is currently unclear (e.g. in Kingston, Jamaica and Bishkek, Kyrgyzstan). In addition, codes and plans need to reflect not only the magnitude of the expected physical hazard but also the socio-economic realities of a country, that is, the feasibility of imposing codes and plans on poor and vulnerable communities that require considerable resources (or relocation of entire settlements). Few codes seem to exist that have involved local communities and sought to get their feedback on the practicality of proposed, new standards.

In countries in political and economic transition an additional concern is the sheer number of laws and decrees that have been passed over the past 12 years (sources in Kyrgyzstan referred to over 20,000 legal acts). A clear overview of legislation relevant to DRM is currently missing and in some cases individual laws are said to contradict each other.

In two regions (Asia and Europe/CIS) consultants noticed the pronounced efforts of governments to adhere to standards and codes set out in international treaties and protocols of which they are signatories (climate-related treaties, maritime laws, civil aviation laws, etc.) and which are actively monitored by international organizations. This includes the use of incentives and disincentives for compliance and non-compliance according to clear and well-defined standards and benchmarks. Such practices are often in contrast to the lack of monitoring and enforcement of purely national safety standards and codes.

3.1.2 Policy and planning

3.1.2.1 National disaster risk management policies and plans

A majority of the countries reviewed have gone through relatively recent strategy formulation, policy-making and planning processes in the area of DRM. In several countries these processes were conducted in parallel with the elaboration (or formulation) of a legal framework. Policies, strategies and plans are interlocked with legislation in two ways: the formulation of policies, strategies and plans may be defined as a legal requirement (in certain sectors or at various administrative levels mandating lead organizations) and the enactment of a national plan or strategy often requires supportive legislation. As in other areas of government legislation assigning responsibility facilitates the development and implementation of DRM policies and plans. This may be the reason why the status of the development and implementation of these policies and plans is slightly reminiscent of the situation described in section 3.1.1.

In two countries policy is either outdated or lacking, and plans are nonexistent at both the national and local levels.¹¹ Nine countries have national level policy/strategy documents and/or a national plan but these have not yet been adopted; sometimes because they have been developed very recently or because they are still being drafted, at others because the parliament or an inter-ministerial body has yet to approve them.¹² For example, with a 20-year timeline Viet Nam bases its strategic plan on a unique long-term vision (the plan is currently under revision and will be adopted thereafter).

Another group of countries has created national policy documents but these have been translated into regional or local policies and plans to a limited degree or not at all (Box 3).¹³

Only three countries have managed to create a process that has stirred planning and policy formulation at both national and local levels.¹⁴ In Colombia the formulation and particularly the implementation of plans and policies is currently stronger at the local level than at the national level, particularly in the bigger and richer municipalities (see Box 2). In the case of several island states with small populations and limited geographical size there is no need to develop distinct local level policies or plans. However, the multi-sector breadth of Barbados' planning and policy process, which led to the integration of disaster reduction concerns into the physical development plan and sustainable development policy, is impressive.

Box 3: Disaster management planning in Vanuatu: the problem of decentralizing systems and supporting them

As a relatively new nation, Vanuatu has expressed a desire in the past to develop its DRM capacity and passed a National Disaster Management Act in 2000. The act, in combination with the National Disaster Management Plan of 2001 that followed, sets out guidelines for capacity development for the National Disaster Management Office (NDMO) and six provinces. According to the National Disaster Plan, provinces are responsible for various activities including hazard and risk assessments, the integration of risk reduction into provincial development plans, the identification of disaster mitigation projects, public awareness activities, the establishment of a provincial disaster coordination centre and initial response before calling upon wider support from regional or national levels.

According to the act, each provincial council and the municipal council (if existing) within that province is to form a Provincial Disaster Committee and prepare a Provincial Disaster Plan which is consistent with the National Disaster Plan in the prevention of, preparation for, response to and recovery from disasters in that province. The NDMO is to oversee the development of these plans.

In reality, however, the NDMO is mainly active in response and lacks the management capacity and funds for longer-term and comprehensive DRM coordination. Most activities at the provincial level occur when a disaster is declared and during immediate recovery. Responsibility for response has fallen largely on the Red Cross and NGOs. Operational support plans for every hazard and to address specific hazards faced by each island do not widely exist and where they do they are not generally known by the communities they are supposed to protect. Thus, communities lack the support they need to reduce risks.

¹¹ Bolivia, Cook Islands.

¹² Albania, Djibouti, Georgia, Jamaica, Kyrgyzstan, Nepal, Sri Lanka, Uganda, Viet Nam.

¹³ Madagascar, Mozambique, Nicaragua, Saint Lucia, Vanuatu.

¹⁴ Barbados (no particular need to create distinct local level policy due to limited size), Colombia, Fiji.

The National Disaster Plan is currently under review, and steps toward its ratification are being taken. Even though disaster committees are to be formed at provincial levels to communicate with the NDMO, this is not done in every case, necessitating extra work from those provincial administrations where the committee is absent.

Many governments encounter difficulties in actualizing policies, plans and legislation at the local level. The reasons for this are not only the limited capacity of local government but also a lack of quality assessments and analysis done before embarking upon policy and strategy formulation. Assessments often seem to focus upon hazards (and only eventually on risks) but rarely upon the identification of capacities to effectively manage those hazards/risks at various levels and in different sectors. Communities are not consulted and/or not informed about existing plans and procedures. Failure to take local capacity (or lack thereof) into account often leads to plans and policies that are not viable or simply unrealistic (e.g. the case in Vanuatu).

While difficulties can arise in actualizing policies, the process of formulating those policies offers opportunities to build ownership among stakeholders at the national level and to appeal to the technical interests of various staff working in different ministries and organizations – it provides them with an opportunity to apply their specific knowledge and expertise. Sectoral working groups composed of key stakeholders foster common interest, learning and cooperation around specific themes. Such participatory processes have been found to be as important as the final product and may lead to a greater impact in the long-term, as has been the case in Barbados.

Box 4: Sectoral working groups on policy and planning in Nepal

The Nepalese Government's attention to the management of disaster risks from natural hazards has been reduced due to the Maoist insurgency that began in 1996. Before that time concerted efforts were undertaken to develop a National Comprehensive Plan for Disaster Management supported by a National Calamity Act (revised in 1992). In 1994 (following the 1993 Terai flood disaster) three sectoral working groups on health, food and agriculture, and logistics were solidified under UNDP coordination to enhance cooperation between the Nepalese Government, line departments, the UN Disaster Management Team (UNDMT) and NGOs. The sectoral groups had the following goals:

- assist in assessment by analysing and interpreting assessment data in order to formulate an appropriate intervention;
- assist in the development of a well-resourced and realistic national disaster management plan that benefits from sectoral expertise to enhance commitment and accountability; and
- establish a channel of communication between the government and the international community with which to provide technical and financial support following a disaster.

With the growing emphasis on conflict-related issues, the sectoral groups became less active in the late 1990s. However, the health sector plan was completed and approved: In 2000 the health working-group became a legal entity under the Ministry of Health. UNDP is now working to reinvigorate the logistics and food and agriculture groups with the assistance of two UN volunteers. Despite weak support from the highest levels of government, considerable interest exists on the part of ministry staff and assistance organizations.

Sectoral working group manuals and guidelines have been under development for several years and have required regular updating in the process (Government has not yet sanctioned the manuals). Among the sectoral groups' accomplishments are agreements on new damage and needs assessment formats. The Food and Agriculture Working Group has planned and implemented a central/district training programme on risk reduction for crops and livestock.

Despite the fluctuations of the Government's commitment caused by the insurgency the sectoral group processes are long-term capacity development tools; they encourage action through peer pressure and provide an applied 'training' experience by developing plans, consensus building and coordination skills. The development of the manuals represents itself a learning experience on disaster risk reduction. These practices should ultimately translate into more coordinated risk reduction activities at all levels to support citizens at risk.

The occasionally slow progress in adopting national DRM strategies and plans has led some experts to question whether they are indeed necessary. However there can be no question that national plans and strategies are part of system development and of the creation of a predictable and unified set of national standards and procedures, which is at the heart of transparent and accountable governance for DRM. This does not mean that nothing can be done until national policies and plans are eventually in place. Local and national assessment and planning processes (and DRM activities) can run in parallel and even inform each other. For instance in Albania provincial contingency plans preceded the current development of a national DRM plan and revealed several strengths and weaknesses at that level that needed to be taken into account by national planners and policy makers.

3.1.2.2 Integration of disaster risk management into development policies and plans

Currently most social and economic development strategies produced in disaster-prone countries mention DRM; yet in some countries this does not seem to be followed by concrete measures or corresponding allocations in the government budget. While there are very few countries where DRM professionals expressed satisfaction with the amount of investment in DRM, there is however a small group of countries where development and DRM seem more integrated and considerable proportions of national resources are devoted to that purpose. Another group of countries, among them Kyrgyzstan and Barbados (Box 5), have managed to raise donor attention to some of their unmet risk reduction needs and have taken substantial loans from the World Bank as well as grants to address these problems which have been consistently referred to in national poverty reduction and development strategies.

Box 5: Inclusion of disaster risk management as a component of the Barbados Sustainable Development Policy

The Government of Barbados recently completed the development of a National Sustainable Development Policy. The country embarked on the policy development process in 1997 as part of its commitment to the Rio Declaration and the Small Island Developing States Plan of Action. A National Commission on Sustainable Development comprising members from government, civil society and the private sector spearheaded the effort. Numerous national consultations were held with representatives from government, NGOs, community-based organizations (CBOs) and labour, youth and women organizations in order to capture wide stakeholder input into the process. The policy document represents recognition by the Government of Barbados of the need for a holistic integrated approach to development. It will also be instrumental in strengthening connections between the existing Physical Development, National Economic and National Strategic Plans.

The document includes DRM as one of the key areas of the National Sustainable Development Action Plan.¹⁵ This is a significant achievement as it highlights the efforts made

¹⁵ Though arguably DRM could have been treated in greater depth.

at the regional and national levels to encourage and facilitate the incorporation of disaster risk reduction into development planning. The policy helps to demonstrate the critical linkages between DRM and sustainable development as well as its relevance and connection to other areas of development such as environmental management. Framing DRM in the context of development will help to greatly enhance national attention and resources being devoted to the area.

Adoption and dissemination of the Sustainable Development Policy has coincided with heightened efforts being made by the Central Emergency Relief Organization to address comprehensive DRM and make it a policy priority. Efforts included sensitization of high-level decision-makers and the general public to the importance of adopting a comprehensive DRM approach in addressing disaster risks.

Despite these achievements Barbados still faces challenges with respect to implementing the Sustainable Development Policy. Although DRM issues are acknowledged in the document, it is not yet a priority in daily decision-making, management and operational aspects of key sectors and institutions. The necessary institutional arrangements, legal framework and education efforts must now be put in place to facilitate this change.

Occasionally the most innovative and effective examples for the inclusion of disaster risk reduction into policies and plans occur in specific sectors, such as water management, transport, etc. These sectors are among the prime bearers of losses in the case of disaster but are also critical to national and local recovery. In Mozambique, for instance, an Emergency Commission was set up in the Ministry of Public Works and Housing and the National Directorate in the aftermath of the 2000 floods to focus on the management of the water emergency. The Commission has since been transformed into a more permanent establishment and is now in the process of developing national policy and strategy for management of water resources in close coordination with the national DRM office. There may be many more similar examples, however, these are hard to identify as they may not even be officially termed 'disaster risk reduction' and ignored by national DRM institutions.

The integration of environmental management and natural disaster risk management is another area of promise. For example, the environmental management sector is clearly relevant in many countries, and linking it with DRM would mean increased considerations during development planning (Box 6). However preliminary results have yet to be analysed to determine the extent of disaster reduction gains achieved by such cooperation.

Box 6: Instituting natural hazard impact assessments as a component of environmental impact assessments in the Caribbean

The Caribbean region, through a variety of initiatives and efforts, has been steadily moving towards viewing comprehensive DRM as vital to sustainable development. Based on the need to better integrate risk reduction into development planning, efforts have been started to get natural hazard risks routinely assessed as part of the development planning and approval process, in much the same way that environmental impact assessments (EIAs) have become standard practice in most countries today.

To this end, the Caribbean Development Bank's Disaster Mitigation Facility for the Caribbean (CDB/DMFC) in collaboration with the Adaptation to Climate Change Project has produced a draft Natural Hazard Impact Assessment (NHIA) Guide and Sourcebook. The document contains an analysis of the EIA regulations and procedures in place in each country and recommends measures and actions to be taken to improve the EIA process, and begin

conducting NHIAs. The CDB/DMFC has also supported the training of forty-five environmental specialists from throughout the region in integrating NHIAs into the EIA process. The draft NHIA Guide and Sourcebook was also presented to these specialists. The CDB/DMFC has plans to replicate this training at the national level and begin lobbying for governments to establish the necessary legal and policy frameworks to adopt this new approach. The CDB/DMFC also plans to introduce the NHIA process to national and subregional banks and encourage them to incorporate it into their guidelines for loans, etc. Although the NHIA process is only in the early stages of development, it holds tremendous promise in helping to facilitate the integration of DRM into development planning.

3.1.3 Organizational aspects

In a clear majority of countries DRM responsibilities have been concentrated in one lead agency or authority integrated in a line ministry, typically the Ministry of Home Affairs/Interior or Police.¹⁶ The affiliation with these ministries often signifies an orientation towards response (but not necessarily).

In several countries DRM lead agencies have been integrated into other line ministries such as the Ministry of Water and Housing (Jamaica), Ministry of Environment (Kyrgyzstan), Ministry of Foreign Affairs (Mozambique), the Ministry of Local Government and Decentralization (Albania) and the Ministry of Women's Empowerment and Social Welfare (Sri Lanka). Such linkages have been motivated by various factors, but the objective of creating synergies between the DRM lead agency and the sector covered by the ministry is common to all. However such combinations do not always lead to the expected cross-sector synergies. In Kyrgyzstan the environmental and emergency branch of the ministry produce no common assessments or plans and interaction with the DRM lead agency seems to be limited. Additionally, the fact that many of these ministries have a lower priority for funds compared with the Ministries of Interior and Defence does not always help in the promotion of DRM.

Four countries have created DRM umbrella organizations, often overseen by and serving as a Secretariat to an inter-ministerial commission headed by the Prime Minister or President (if holding executive power).¹⁷ Such organizations can be indicative of a risk-reduction-oriented approach (or an intent to promote such an approach) to DRM. These are primarily coordinating bodies with no operational role. However, this need not be the case (in Saint Lucia the national disaster management office is operational and geared towards preparedness and response). Many of these comparatively new organizations are still relatively weak and not adequately resourced.

Operating from the position of sub-ministerial levels can signify a lack of recognition by other ministries, particularly when there is a lack of support from political leadership. For example, the inability of the DRM directorate in Georgia to take initiatives vis-à-vis other ministries has seriously stalled the development of the national DRM system.

Bolivia is the only case studied where the DRM lead agency has been recently moved from a civilian ministry (Ministry of Sustainable Development and Planning) to the Ministry of Defence. In the other countries reviewed there has been a trend to put

¹⁶ Barbados (under review), Colombia, Cook Islands, Djibouti, Fiji, Georgia, Madagascar (to be reformed), Nepal, Vanuatu.

¹⁷ Nicaragua, Saint Lucia, Uganda, Viet Nam.

DRM under the oversight of civilian authorities. However, in many other Latin American countries military-based civil defence still control DRM structures.

One of the more elaborate organizational structures for DRM can be found in Mozambique (Box 7).

Box 7: Evolution of an organizational structure in Mozambique

Mozambique has a fairly developed formal disaster management and risk reduction system, the evolution of which dates to the 1980s. Soon after independence in June 1975 the new government was faced with serious challenges, including the need to respond to the devastating effects of natural disasters and the liberation war. In September 1980, the Government of Mozambique created the DPCCN (the Portuguese acronym for the Coordinating Council for Prevention and Combat of Natural Disasters) under the Planning Commission/Ministry of Planning as the implementing body to address disaster prevention, and mitigation of natural disasters. In the years 1982–1994, characterized by national disasters and civil war, DPCCN’s primary responsibility became emergency response and relief.

In 1992 following the Rome Peace Accord, the Government of Mozambique began to shift its emphasis in disaster management from immediate response to long-term mitigation and risk reduction. In 1996 a process began to formulate a coherent national policy on disaster management supported by the World Food Programme (WFP). The National Disaster Management Policy was approved in 1999 and the INGC (the Portuguese acronym for the National Institute for Disaster Management) was created under the Ministry of Foreign Affairs and International Cooperation to replace the DPCCN, with staffing reduced significantly from over 2000 to 307 employees. The INGC serves as the government’s permanent technical unit and is mandated to develop policies and coordinate disaster management. A national director heads the INGC. The director has the responsibility to recommend disaster management legislation or ratification of international agreements, employ personnel and enter into contracts on behalf of the INGC.

Now, the Coordination Council for Disaster Management is the principal governmental coordinating body at the ministerial level for coordinating disaster management in all phases. The council is chaired by the Prime Minister and includes a wide selection of line ministries. The INGC director acts as the secretary of the council.

A multisectoral Disaster Management Technical Committee reports to the Coordinating Council for Disaster Management and integrates government ministries, donors, private sector and relevant NGOs and advises and coordinates multi-sector disaster activities. The technical committee has a number of working groups coordinated by various sectors in the areas of early warning, civil education and sensitization, search and rescue, logistics, shelter, water and sanitation, and food security and agriculture. The members of working groups meet regularly during emergencies to coordinate information. However their role in long-term planning is still limited.

Disaster management delegates represent the INGC in all 10 provinces, and are responsible for coordinating multisectoral activities at the provincial level through inter-sectoral committees. At the district level, there are as yet no designated formal roles. Depending on the nature of the emergency sector officials coordinate at the district level. For example, if there is a health problem the district health official becomes the focal person.

While Mozambique has a fairly elaborate disaster management structure, the system has a number of weaknesses. It is still highly centralized at the national level. Decentralization,

especially to the district level, remains very weak, while structures at provincial levels lack operational and human resources capacity. These gaps are also present at the central level, indicated by high levels of vacant managerial posts at the INGC headquarters. The INGC also has a limited budget, which covers only operational costs. Information management is still weak and the INGC is also constrained in exercising its authority as a coordinating mechanism because of the lack of an enabling act giving it authority.

The Mozambican example suggests that the creation of a comprehensive DRM structure requires time and experience, and in some cases follows an evolutionary path from a focus on response to a more proactive and risk-reduction oriented approach. The example also illustrates the need for basic stability in order for governments to move out of an 'emergency mode'. In countries such as Uganda, which is involved in ongoing emergency operations due to the conflict in its Northern territory, everyday emergency coordination requirements dominate the DRM agenda.

As highlighted in Box 7, moving DRM systems and organizations to regional and local levels involves considerable difficulties in most countries due to a lack of capacity and awareness/information campaigns to educate the public. Exceptions have been found in relatively affluent Latin American municipalities, however careful analysis is necessary to explore to what degree such experience is relevant for other, poorer countries and contexts.

Among civil society organizations, the Red Cross and Red Crescent societies are the most prominent actors in DRM and will often be members of inter-agency commissions at national and local levels. Some Red Cross societies have a formal agreement with the government outlining their role in response (e.g. in Djibouti). Other civil society organizations are less routinely included in national consultation and coordination mechanisms.

The Caribbean islands provide an example for relatively systematic cooperation with civil society and the private sector (Box 8). However participation focuses upon preparedness and response and the advantages and disadvantages of private sector participation are not yet sufficiently understood.

Box 8: Private sector and civil society participation in national disaster risk management in the Caribbean

Barbados, Saint Lucia and Jamaica all have primarily centralized disaster management systems, which are spearheaded by a government body. In Barbados and Saint Lucia the national disaster management organizational structure includes several national committees each with a specific disaster management-related function. It is through these various committees that the national Disaster Management Office networks with private sector and civil society entities. Representatives from the private sector and various NGOs, CBOs, service clubs and church groups often sit on these committees, which play a key role in helping to coordinate and implement disaster relief and preparedness activities. In the case of Saint Lucia, private sector representatives chair several of the national committees.

The collaboration with private sector and civil society in all three countries is primarily focused on disaster relief and preparedness. In some cases, the National Disaster Management Office partners with NGOs to provide training for communities in disaster management. The NGOs in the Caribbean for the most part lack the capacity to undertake spearheading risk assessment and management programmes.

In all three countries the private sector is mainly involved at the level of donating goods as

part of the relief efforts following disaster events. A few companies also provide minimal funding for public education and outreach programmes. In Jamaica and Saint Lucia the National Disaster Management Offices also assist companies with contingency planning. Beyond these dimensions the private sector linkage with the national disaster management efforts is weak. The National Disaster Management Offices would welcome greater involvement by the private sector, but change is slow in coming.

The review showed that the capacities and resources available in different sectors are not yet fully utilized by a functional coordination mechanism. Inter-ministerial commissions at the highest level often convene only sporadically and are most active during emergencies. The same is true for technical inter-agency mechanisms, which often lack an adequate budget to ensure their basic functioning. If not supported adequately at the national level and not given appropriate mandates DRM lead agencies cannot wield the necessary authority to coordinate line ministries and their technical counterparts. This is also true of access to funding: in order to stimulate and initiate cross-sectoral activities (joint assessments, joint training, etc.) and to increase their presence and effectiveness at the local level.

In most countries inter-ministerial mechanisms bestow legitimacy upon the activities of DRM organizations, which usually serve as technical secretariats. In some countries with a strong civil defence tradition, the 'new' DRM organizations have found themselves in competition with the Civil Defence Ministry as they claim leadership on all matters pertaining to DRM.

Finally, the involvement of civil society and the private sector requires more analysis, which will provide a clearer understanding of the ways in which these sectors contribute to DRM. Once done, more systematic efforts will be needed to increase their roles in DRM.

3.1.4 Resources and capacities

Resources and capacities are defined as human, financial and material resources. Unfortunately the brevity of the exercise did not allow for an assessment of social networks and capital even though these play an important role in the ability of individual communities (and thus collectively of nations) to organize and get involved in DRM. The following section therefore focuses upon resources provided by and through the state with occasional reflection of resources provided by the private sector, NGOs and international agencies.

3.1.4.1 Financial and material resources at the local level

With the exception of some cases in Latin America and some small island countries (where the distinction between national and local level is somewhat artificial) there is a clear gap between resources at the national level and resources available at provincial and local levels. Financial and material resources for local DRM come from four main sources: central government, local government's own income based upon taxes and fees for service provision, NGOs and international agencies. The private sector was not identified as a major or consistent source of financial or material support (except during emergencies and mainly in medium to high development countries).

Logic suggests that in a heavily centralized system, local governments have little or no possibilities to generate their own resources. They depend on transfers from central government, which are often largely insufficient. In decentralized systems

local governments often fail to raise sufficient resources to meet their own basic budgetary requirements. Therefore (and particularly so in impoverished countries) the dependency upon (strained) central government contributions and sponsorship is almost as high as in centralized countries. During this review the only adequately funded DRM offices and activities at the local level were found to be in relatively rich municipalities and big urban centres such as La Paz in Bolivia, Medellín and Bogotá in Colombia. The DRM budgets of Bogotá and Medellín surpass the national budget for DRM in Colombia. Outside such urban areas, resources invested in DRM are very limited due to low risk perception and prioritization but also low finances and human resources. In Mozambique, which has made great progress in advancing its DRM system, only 20 of 128 districts actually have a formal local structure representing the national DRM organization. It must be noted that the presence of structures does not mean that there are adequate funds available for initiatives.

In many countries the Red Cross/Red Crescent has branches at the local level and contributes its own or external resources generated through the international Red Cross and Red Crescent network towards local risk management. In many countries, particularly the poorest covered by this review, local level risk management activities are almost exclusively supported by such external contributions. In small island states, voluntary committees and organizations also play an important role. Most local level activities are geared towards preparedness and response; occasionally they include risk reduction measures. The problem however, is that initiatives are small-scale and coverage is limited. In other countries local governments are not sufficiently involved and are even bypassed by NGOs and international agencies, which creates the danger of parallel systems and a 'patchwork' rather than systematic approach to local DRM. The situation in Nicaragua may be representative of this problem (Box 9).

Box 9: Increasing synergy between local and national levels in Nicaragua

In Nicaragua resources and capacities at the local level have been promoted principally by international agencies and local and international NGOs, especially in the period following hurricane Mitch. In fact it is probably true to say that where international support is not available it is very difficult for a local government or population group to access assistance and resources.

Starting in the mid 1990s, the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) promoted its FEMID project for strengthening local structures for risk management in Central America. Four municipalities in Nicaragua were incorporated in the training and analysis components of this project. This included pilot efforts in establishing early warning systems for inland and coastal flooding. With technical assistance from the Latin American Network for the Social Study of Disaster Prevention (LA RED), GTZ, within the scope of the FEMID project, also trained civil defence personnel in local level risk management topics. This was the beginning of a transition in the country: the adoption of tenets of risk management, as opposed to solely disaster response.

The approach advanced by GTZ was later taken up and expanded in a more integral way by CARE International in its Central American Mitigation Initiative in various municipalities in Nicaragua as part of a wider regional effort. Following this, the Swiss International Development Cooperation Organization promoted a project titled "local support for the analysis and management of natural risks", which trained local technical staff in hazard mapping techniques and promoted the development of local disaster prevention plans. This was achieved in over 30 municipalities. Later, UNDP developed a similar project covering six municipalities in the Segovia region of north Nicaragua. This was followed by the more recent Swedish International Development Agency-financed AMUNIC project in 25

municipalities. The ongoing World Bank loan will provide support to 35 municipalities for the promotion of development planning experiences and risk analysis methodologies. In addition, national NGOs such as the Humboldt Centre have promoted training at the local level in participatory diagnostic techniques and with the incorporation of such information in local development planning. This has also been achieved by Action Aid in Segovia. Recently, the Nicaraguan Red Cross with the patronage of the Climate Change Centre of the Dutch Red Cross has started projects in the Atlantic coast region on the topic of climate change and risk management.

Overall, the local initiatives run by civil society and international organizations far exceed formal national level work and the active presence of a risk management section within the Civil Society Coordinating Body has served to place constant pressure on national authorities to step up their engagement. There is however no evidence to suggest that the majority of the local initiatives are synergistically or organically linked to the national system, although some institutions may claim otherwise. Rather, the organizations promoting local initiatives appear to prefer to be seen to be working separately from the national system. Municipal representatives interviewed during the study indicated that their daily activities do not include dealings with the national level, except for Civil Defence. No evidence exists that the methodologies, techniques, lessons and experiences gained at the local level through the diverse projects highlighted here are replicated or systematized in order to make them part of ongoing national policy frameworks.

In the Nicaraguan case the capacity development of individual local governments seems almost to come at a cost to the development of a nationwide government-supported DRM system. While this may be an extreme case it has been observed in several countries that capacity development at the local level implemented by international NGOs and agencies seems insufficiently integrated into a strategic and long-term approach. The amount of consistency at this level is also related to the government's strength and ability to coordinate donors and agencies. Obviously this is considerably harder when a country deals with an ongoing complex emergency and depends on international support for continued assistance to refugees and displaced people (e.g. in Uganda).

As already noted this review found evidence of strong and sustained local DRM capacities only in a few Latin American municipalities that share a high-risk profile (Box 10).

Box 10: Offices for risk management and disaster response in large cities – The cases of Bogotá, Medellín and La Paz

Bogotá and Medellín, the two largest cities in Colombia and La Paz, the capital of Bolivia, all have established and institutionalized risk management and disaster response systems and coordinating offices. All three systems have had direct or indirect support from UNDP in their establishment or consolidation. In principle these local systems are considered a component of national systems, which call for, and are constructed on, the notion of decentralized disaster risk reduction activities. In both countries, the development of local or subregional systems was facilitated and promoted by existing legislation and practices, both of which strongly support decentralization, that is, popular participation in decision-making at the local level, as well as promoting territorial and environmental planning and land use requirements and ordinances.

The Bogotá and Medellín municipal systems have now been successfully in operation for over 14 years, while that in La Paz city, and a parallel system in the surrounding Department of La Paz, have only been operating for the last two years. Despite the differing periods of

operation, the three systems have a number of commonalities that help explain their success (these commonalities also relate to the strengthening of governance).

- The three systems have been strongly promoted and supported by the elected mayors and this support has been maintained for the most part on a permanent basis. In the case of Medellín the system has grown under the influence of seven different elected local governments.
- Activities promoted by the systems have been based on a high level of scientific and technical knowledge of hazards and risk.
- Risk reduction planning and activities have been promoted in the framework of local development policy and planning. Local development and land use plans have given high importance to risk reduction aspects.
- All three local governments make annual regular-budgetary assignments for disaster reduction and response and these are consistently complimented by contributions from international agencies and other financiers.
- Popular and private sector participation are important features of the systems. The La Paz development plan, elaborated in 2001, involved a thousand local consultation meetings; following the 2002 flooding in the city and incorporated for the first time risk aspects. Medellín has over 150 neighbourhood emergency committees in action, and Bogotá is at present establishing a local risk management programme based on local participation (participation is an important aspect in explaining appropriation and sustainability of the systems).
- Although not as yet realized, the city systems may benefit from the development of higher level departmental risk management systems, which would permit a more strategic intermediate level planning mechanism that places the city in its regional development and risk context.
- In all three cities popular support for the risk management and response systems is evident. This is due to the clear benefits for the local population. Among these are the eradication of much of the small scale land-sliding in Medellín, flood and earthquake preparedness and school and hospital retrofitting in Bogotá and flood control and river basin management in La Paz.
- To date all three systems work mostly independently from the national systems; and their own organizational and financial bases allow them to overcome potential problems and vulnerabilities that may occur at this level.

Interestingly these municipal systems have reached a level of autonomy and strength that protect them against fluctuations and change of political direction at the national level. Another major factor for their sustainability is the active involvement of communities and neighbourhood committees. Among the countries reviewed this seems a fairly unique achievement. However what is still missing is a capacity at the intermediate level that could coordinate the municipal development and risk reduction measures within their wider regional context. But even if they are so far confined to the territorial boundaries of individual cities, there is no doubt that these municipal systems have created tangible benefits for vulnerable communities. In this context it should be mentioned that investment in risk reduction in densely and highly populated urban centres can be justified by an ‘economies of scale’-type of argument. It is more difficult to rationalize investments when only considerably smaller and scattered populations benefit.

3.1.4.2 Financial and material resources at the national level

Many DRM offices and organizations at the national level covered by this review receive only a minimal operational budget and rely on Finance Ministry allocations in case of an emergency. In most countries, line ministries were found to have no

emergency reserves or specific funds for DRM. Six countries have a separate DRM fund. These include the National Calamity Fund in Colombia, the Prime Minister's fund in the Cook Islands and Nepal, the President's fund in Sri Lanka and Madagascar, and various funds in Viet Nam; funds in Fiji and Kyrgyzstan are based upon special 'disaster' taxation. These funds are mostly spent on post-disaster activities (but often insufficient to allow for a comprehensive recovery of affected communities). Funding release mechanisms during emergencies are often found to be slow and hampered by ineffective emergency procedures.

It is clear that many individual sectors and agencies at the national level, including utilities, invest in what could be rightfully called 'risk reduction' measures though they are not registered as such (protecting beaches, reinforcing river banks, strengthening bridges, upgrading electricity and communication networks to increase resilience, etc.). Very few countries have undertaken multisectoral capacity and resource assessments of these measures, however. Thus, the extent to which these measures aid in risk reduction is unknown.

In many countries, a functional insurance system to adequately protect against the most widespread risks, especially for the poor, does not exist, and hence does not represent a considerable national or local resource for vulnerable communities. In a few countries losses are therefore compensated by the central government. However national budgets are frequently so constrained that compensation – employing decision-making processes that often do not seem sufficiently transparent – reaches only a chosen few. .

Overall, very limited evidence has been collected that indicate financial instruments such as subsidies, low interest loans or tax relief are being systematically used to further DRM and steer local governments, private businesses and individuals to invest in preparedness, mitigation or disaster reduction. The only comprehensive 'system' has been found to exist in Viet Nam, a socialist country where the property laws and management of resources is considerably different from the other countries reviewed. In Viet Nam the state takes a lead role in providing a wide array of financial resources, well integrated with international sources of funding and accompanied by a system of relevant policies and instruments for prevention, mitigation and recovery activities. The national system is complemented by local informal and semi-formal credit schemes that play a key role in local mitigation and recovery (Box 11).

Box 11: Financial resources for disaster risk management in Viet Nam

Viet Nam has created a system of relevant policies and instruments that steers the generation and disbursement of financial resources for all components of DRM. Although there is no special administrative expediting office to immediately allocate funds, the system is fairly strong in delivering resources on short notice. Sources of funding include state budget funds, flood and storm prevention and control funds; social assistance resources, social contingency provisions, international organizational and other external aid; sources of credit; financial security sources; and other government sources and budget lines. The following provides an overview.

State budget sources. According to the 2002 State Budget Law, there is a provision of 2–5% of the total budget for the prevention, control and mitigation of natural disasters (including fires) as well as for key defence, security and emergency missions.

In accordance with the Ordinance on Flood and Storm Prevention and Control (no. 27/200/PI-UBTVQH10) of 2000, the available financial resources for flood and storm prevention and control include:

- Annual state budget allocations;
- Flood and storm prevention and control funds, in accordance with government regulations;
- Emergency assistances from foreign and domestic organizations and individuals.

Flood and storm prevention and control funds. These financial resources are built up by annual compulsory contributions from organizations and individuals residing in specific disaster-prone localities; they are regulated by the government in accordance with Decree no. 50/CP of May 1997.

In addition, the government also runs a National Reserve Fund, and encourages subnational provinces to establish local reserve funds for disaster prevention and control. Subnational flood and storm prevention and control funds are allocated based on the following: 60% of available funds allocated to the flood and storm prevention and control funds of the centrally managed province and cities; and 40% of available funds allocated to the flood and storm prevention and control funds of provincially managed districts, towns and townlets.

Social assistance sources. These comprise humanitarian assistance from foreign and domestic individuals and organizations including: (i) donation from foreign and domestic individuals and organizations, and (ii) grants and refundable aid from foreign governments and NGOs. In case of a disaster, the affected provinces establish an emergency relief fund-raising committee.

Credit sources. The rural credit system in Viet Nam is divided into three sectors: the formal credit sector, which includes the Bank for Agriculture and Rural Development, the Social Policy Bank, People's Credit Funds under the supervision of the State Bank and Private Joint Stock Banks; the semi-formal credit sector, which operates with the participation of mass organizations and NGOs; and the informal credit sector, which includes voluntary credit schemes. In case of natural disasters all the above three credit sources are used for mitigation and recovery activities benefiting people in the affected areas.

Some poorer countries are entirely dependent upon external support – including for emergency response (Madagascar, Uganda). This is particularly the case in countries with ongoing internal emergencies, such as Uganda. It has been noted that humanitarian aid after a disaster in such countries may provide a disincentive for governments to invest in risk reduction. However, there is need to appreciate that where these emergencies are longstanding, governments have no other choice than to fall back upon external humanitarian assistance.

Finally, it must be noted that funding constraints for national and local DRM offices and activities also negatively affect the availability of hardware: information management and communication equipment, transport, etc. Some countries continue to experience tremendous difficulties in putting even the most fundamental early warning and information networks into place due to a lack of this hardware.

3.1.4.3 Human resources including knowledge management

Most countries reviewed, lack technicians with DRM expertise in various disciplines. Those versed in multidisciplinary developmental approaches are also scarce. Colombia is an exception; its success is clearly the result of long-standing experience and investment in DRM. In countries like Kyrgyzstan and Viet Nam DRM staff are also held to high educational standards and preparedness. While the educational standard of DRM staff in Mozambique may not match that of the above cited countries, there are nevertheless many experienced staff. In several countries,

however, staffing numbers in lead DRM agencies are found to be largely insufficient and positions, particularly at a managerial level, remain unfilled. Additionally, frequent turnover of staff weakens institutional memory.

In many countries DRM management practices still tend to be based upon a command and control paradigm that is typical of the emergency response or civil defence tradition of many agencies. Facilitation skills and the ability to manage inclusive processes are yet to be developed among key staff. Skill-development in assessment, planning, monitoring and evaluation but also relevant technical skills (damage assessment, mapping etc.) require continued support. However, few countries seem to have structured training programmes that can provide continued education to civil servants working in DRM. Where such opportunities exist they rarely are available to staff at the local level. There are considerable gaps in the creation and availability of accessible standards, tools and guidelines for the training of local level staff in hazard and risk mapping techniques, assessment tools, monitoring, reporting, etc. Multidisciplinary approaches to education and training are extremely rare.

Training is also needed for local politicians and administrators who are supposed to oversee and guide local DRM efforts, such as mayors and governors. As already mentioned local level and community training is rarely the result of government efforts but mostly undertaken by NGOs.¹⁸ Kyrgyzstan has recently started a laudable initiative to re-launch training at the local level and address the training needs of its local governments and public servants (Box 12).

Box 12: Kyrgyzstan's effort to educate local governments

The “Law on the protection of the population and territory from emergency situations of natural or technological origins” proposes a system based upon territorial subsidiarity for DRM, and in particular disaster response and recovery. These responsibilities are further outlined in the government regulation “Classification of emergency situations and criteria of their estimation in the Kyrgyz Republic” according to the impact of disasters i.e. number of casualties, material damages and losses. The regulation differentiates between six types of events: from small and localized to trans-border disasters. However this classification is currently not applied due to a lack of knowledge and resources at local levels. The village-level, i.e. the level below the district, is the weakest (Civil Defense staffing stops at the district level). Regional and central-level support is requested even when problems are localized and small.

Despite serious budgetary problems the Ministry of Environment and Emergencies (MEE) in Kyrgyzstan has recently revived attempts to educate local governments on DRM and disseminate implications of the national law. The MEE has also produced a brochure to support these training efforts. It contains a useful summary of local government responsibilities and interpretation of existing relevant legislation¹⁹ in the form of an “instruction” issued by the ministry. The brochure contains:

- a glossary of DRM terminology;
- the type of risks and their geographical distribution in Kyrgyz provinces and districts;
- a definition and classification of different scales of emergencies (from local to international);
- major public awareness and information messages sorted by hazard;

¹⁸ The Caribbean provides an exception to this trend with government playing a more proactive role.

¹⁹ MEE, Instruction <...>, 2004.

- recommendations for preparedness and mitigation measures to be taken by local governments, sorted by hazard; and
- relevant legislation and interpretation of its contents.

While neither training nor this brochure will entirely solve the problem of constrained resources at the local level, the longer-term approach of raising fundamental awareness of DRM with local governments and providing them with materials that can serve as a very basic handbook is commendable (even if what the ministry considers very basic may in fact still be a little too sophisticated for the very local level). The ministry has started to run this training in a limited number of particularly disaster-prone provinces and districts. It will be necessary to assess the impact of training through proper monitoring and evaluation in order to continuously improve quality and effectiveness.

Knowledge and information management systems have been built up recently in several countries (often with the support of UNDP). They facilitate the collection, analysis and dissemination of data and knowledge and unite local and national levels in an effort to keep track of disaster patterns and trends. Geographic information systems (GIS) have been successfully introduced in several countries and have apparently provided an incentive for some DRM offices to collaborate with other actors in collecting data that could be used for the expansion and refinement of the GIS. In several of the poorer countries however even basic information and communication systems to link local and national levels are not in place, seriously undermining the feasibility of early warning and monitoring networks.

3.1.5 Partnerships and regional cooperation

3.1.5.1 Regional cooperation

All reviewed countries are members of regional or subregional organizations that are mandated to further cooperation in risk management related matters. Increasingly these regional organizations promote risk reduction strategies through the sharing of information, skills and experience.

The following is a showcase of the organizations in existence and their roles in DRM. In Central America the Coordinating Centre for the Prevention of Natural Disasters in Central America, CEPREDENAC and the Andean Regional Programme for Risk Prevention and Reduction PREANDINO have actively promoted the design of risk reduction plans.

Facing similar hazards Pacific island states and those in the Caribbean have a long tradition of mutual support and cooperation in disaster relief and recovery, which has gradually embraced risk reduction objectives. In the Caribbean this is promoted by the Caribbean Disaster Emergency Response Agency, CDERA, (in cooperation with many other regional and international agencies) and in the Pacific via the South Pacific Applied Geoscience Commission (SOPAC). The latter's disaster management unit is working towards the integration of risk management into economic strategies.

Responding to humanitarian conditions in many of its member states the Intergovernmental Authority on Development (IGAD) has put forward a DRM strategy that promotes the development of well-adapted national disaster prevention and preparedness strategies. Being subject to drought, the East African countries in IGAD have prioritized the development of an early warning system continuously monitoring production and availability of food in the subregion. IGAD offers consultation and advisory services to assist members with more specialized

questions. The Southern African Development Community (SADC) has developed a strategy for joint flood and drought management providing services to member states via the Drought Monitoring Centre (DMC) in Zimbabwe in the form of managing a databank and staff development opportunities. Recently the African Union has adopted a Disaster Risk Reduction Strategy, which promises to be a powerful advocacy document.

Fifteen countries are united in the Commonwealth of Independent States' (CIS) Intergovernmental Council for Natural and Technological Emergencies with an emphasis on facilitating intergovernmental agreements, exchanges in the geosciences and the creation of legal and technical DRM norms.

Due to the diversity of social, economic and political parameters in different countries in Asia there is not a single regional organization but several initiatives that attempt to bring countries together in consultations, analysis and exchanges. For instance the Asian Disaster Preparedness Centre (ADPC) convenes a Regional Consultative Committee on Regional Cooperation in Disaster Management, and the South Asia Association for Regional Cooperation manages the exchange of experience in DRM, technology transfer and climate forecasting networks.

Regional cooperation seems particularly effective where countries share common hazards and where the dominant economic and political frameworks follow similar patterns. Under these conditions meaningful exchanges can be facilitated more easily. The Caribbean is a prime example for constructive cooperation at the regional level, established in a long tradition of mutual support during and after emergencies. But even relatively new DRM networks such as those managed by SADC and IGAD (box 13) in southern and eastern Africa, respectively, have made notable progress in adopting common approaches and furthering cooperation in the management of floods and drought risks that affect many member countries. Mechanisms of peer consultation, support and advice are particularly effective to further the DRM agenda in individual countries. The regional development networks in Africa or the CIS have the added value that they are the offspring of regional political fora, which offer an opportunity and direct link to promote key disaster reduction strategies with the region's political leaders.

Box 13: Intergovernmental Authority on Development in eastern Africa

The Intergovernmental Authority on Development (IGAD) in eastern Africa was created in 1996 to supersede the Intergovernmental Authority on Drought and Development (IGADD). Its member states are seven countries in the Horn of Africa – Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda. The Secretariat is in Djibouti.

The ultimate goal of IGAD is to achieve economic integration and sustainable development for the region. In the realm of disaster risk management IGAD is involved in initiating and promoting programmes and projects to achieve regional food security and sustainable development of natural resources and environment protection.

The following examples illustrate the mission of IGAD:

- promoting sustainable production of drought-tolerant high yield crop varieties through research
- creating a regional programme for livestock development in eastern Africa
- creating a market information system for food security in the member countries of IGAD
- promoting of community-based natural resources management (land husbandry)
- developing an Integrated Land and Water Management Initiative including capacity

building

- promoting environmental education and training in the member countries of IGAD
- establishing a regional integrated information system to enhance generation and dissemination of timely and reliable information (databases on drought, environment and development; institutions and experts in member countries, etc.)
- assisting the national meteorological services in upgrading satellite stations with new technology.

IGAD's supreme policy-making organ consists of an assembly of heads of state and governments. Thus, it is in a unique position to promote the close integration of risk management and reduction approaches into development at the highest level of government. At the same time the IGAD Secretariat is actively involved in the implementation of numerous initiatives that bring together various aspects of DRM and sustainable development.

3.1.5.2 Partnerships at the national level

Many countries benefit from support and DRM projects funded by international partners such as bilateral governments and their development agencies, UN-agencies such as UNDP, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the International Federation of Red Cross and Red Crescent Societies, international NGOs and regional banks. Some countries also benefit from DRM projects funded by the World Bank (historically those recovering from major disasters, e.g. countries affected by hurricane Mitch, now also Colombia, Kyrgyzstan and Saint Lucia). In those countries that have attracted comparatively massive investment in DRM from various players (Nicaragua, Kyrgyzstan) coordination has become a major need; and while partnerships may work at the local level there has been only limited progress in creating a network of partners collaborating with the government. In a few countries agencies even seem to compete for attention from government counterparts.

Partnerships should really be evaluated on the basis of the concrete results they produce. The example from Mozambique (box 14), describing the process that leads to the establishment of the annual contingency plan, shows the benefits of cooperation and partnerships at the regional, national and local levels.

Box 14: The multisectoral contingency planning process in Mozambique

The Emergency Contingency Plan is a yearly multisectoral and multi-level plan carried out in a participatory and consultative manner. The process begins at the regional level with a meeting at the Southern African Regional Climate Outlook Forum. The Forum consists of all the national meteorological services in the SADC, and is coordinated by the DMC in Harare, Zimbabwe. Its aim is to reach a consensus on the climate outlook for the region for the coming season.

The Early Warning Working Group is also involved in this forum. The group is coordinated by the National Institute for Disaster Management through the Technical Council for Disaster Management, and is responsible for monitoring and assessing the risk of floods, droughts, cyclones and other natural disasters. The Early Warning Working Group consists of the National Meteorological Institute, which monitors climatic changes, representing the meteorology sector; the National Water Directorate, which monitors water levels of the main rivers, representing the water sector; the Ministry of Agriculture and Rural Development, which conducts crop assessment; and the Ministry of Health, which monitors epidemics and other health and nutrition conditions.

Early warning information is gathered from the communities, districts and provinces with relevant UN agencies and NGOs providing technical support. The climate outlook and the information collected through the early warning systems is processed by INGC through the Technical Council for Disaster Management for the preparation of the National Contingency Plan beginning in October each year. Relevant UN agencies, such as UNICEF and WFP as well as NGOs are involved in the contingency planning process through the National Institute for Disaster Management. The same information is channelled simultaneously to different sectors, and affected districts and provinces, which then prepare their own sectoral plan to enable the technical working groups at these levels to prepare their contingency plans. The National Contingency Plan is thus a multisectoral and multi-level planning process.

The UN agencies are coordinated through the United Nations Disaster Management Technical Working Group chaired by WFP. A UN technical working group is responsible for preparing the UN Emergency Contingency Plan, based on the National Contingency Plan. International NGOs also participate in the preparation of the UN Contingency Plan.

Mozambique's experience with annual contingency planning has become a model in the SADC; a number of countries have sent missions to learn from its experience.

It is particularly noteworthy how well the United Nations Disaster Management Team (UNDMT) is integrated into the Mozambican national planning framework. In general it was found that UNDMTs are of varying quality and effectiveness particularly with regard to the support they provide as partners of the government: some perform very well and others need training and capacity building. Much of the reason for this seems to hinge upon the interest, experience and commitment of the individual resident coordinator and the support he or she can generate from individual member agencies.

Relationships between national DRM offices and line ministries are often stale. In many countries there is a lack of collaboration in, for instance, carrying out joint assessments, producing plans and implementing projects. In a number of countries there is even open competition for control over the (typically scarce) resources that DRM attracts. Among the non-governmental partners relatively close relations with Red Cross and Red Crescent societies seem to be the most common. However, in most countries such partnerships have not been defined thoroughly and mutual roles have not been agreed upon (e.g. in a piece of legislation, a plan or in an agreement). Interaction with other, non-governmental actors seems even more sporadic.

3.2 Obstacles and successes in governance for disaster risk management

The following section summarizes the degree of progress that has been made in creating ILS that further the attainment of the five objectives of governance for DRM and the internal and external factors that have contributed to or prevented progress.

3.2.1 Making disaster risk management a policy priority and generating political commitment

The review of the 19 countries has shown that progress has been made over the past 10–15 years. The fact that more and more governments have developed and adopted DRM policies and plans – a process that has often taken years and occasionally decades – is indicative of government commitment and interest. It seems also to be an increasingly widespread convention to mention DRM in development strategies and plans. However, while most current development plans and strategies include language on DRM and its objectives they are far from truly

incorporating risk reduction into development. More evidence of the practicality and benefits of such an approach seems to be required to promote the risk reduction agenda with governments.

Progress in generating political commitment to DRM has often hinged upon the engagement of particularly dynamic individuals such as local mayors or other prominent figures who have local or national influence. Advocacy and resources provided by international agencies have also played a role in promoting interest and better understanding of DRM. A more sustained commitment at the political level seems to be contingent upon awareness of DRM in the population and the degree to which citizens can participate in and monitor the provision of a safer environment. Traditions and experience in decentralized governance and a well-educated populace have been identified as important factors that contribute to progress. It is far more difficult to anchor the political commitment to DRM in countries with few local level institutions that facilitate citizen participation. Political commitment to DRM also depends upon a minimum level of internal stability. As a rule, conflict displaces natural disasters as a priority.

3.2.2 Promoting disaster risk management as a multisectoral responsibility

There is no doubt that most governments understand that DRM is not the responsibility of only one agency. The degree to which this is realized depends however on the creation of appropriate 'institutional machineries', which stimulate communication and cooperation across organizational and ministerial boundaries. In many countries this seems most likely to happen where the coordination of DRM is ultimately overseen and directed at the highest level of government i.e. by the prime minister or president who acts as the head of an inter-ministerial DRM commission. The downside of this arrangement can be the exposure to greater political volatility at the highest level of government. However operating from the position of sub-ministerial levels can also have problems: it can result in a lack of recognition by other ministries and less opportunities to take initiatives vis-à-vis other ministries.

The promotion of DRM as a multisectoral responsibility not only depends on the right institutional arrangements but also on the initiation of activities that actually require the involvement of various actors. Technical and inter-agency commissions that are convened without a clear agenda and purpose may satisfy formal needs but do not further multi-sector participation. Active inter-agency cooperation has been documented where there is a clear task that generates the interest of various actors and bears the promise of generating clear results: assessments, guidelines, manuals, plans or projects.

3.2.3 Assigning accountability for disaster losses and impact

While progress has been made in identifying centres of responsibility for DRM (spelled out in legislation and plans) there are not many countries that have established clear and comprehensive provisions for the assignment of accountability for disaster losses. Legal and public accountability depend upon the availability of an effective judicial system and the public's ability to pressure the providers of services and goods. These areas are deficient in many of the countries reviewed and, among other factors, are related to a lack of access to legal services, a lack of public awareness and low levels of income and education. It is clear that only when citizens start to think about public security and the provision of a safe environment as basic rights that public and legal accountability will eventually be established. Public awareness of such rights has been quoted as one of the reasons for the progress of DRM in Colombia.

3.2.4 Enforcing the implementation of disaster risk management and reduction

The enforcement of DRM and disaster reduction is obviously contingent upon the assignment of institutional and individual accountability and the obstacles to enforcement are therefore identical to the ones limiting accountability. Enforcement and implementation however not only require accountability mechanisms but also the capacity for exercising those mechanisms and for implementation, especially at the local level. In most countries reviewed local administrative capacity, including that of DRM, remain rather low especially outside capitals and well-resourced municipalities. Additionally, informal settlements include and give rise to risks that fall outside the realm of the state or government's control. Thus, they are neither accounted for nor managed by formal systems of DRM. NGOs and international agencies are seeking to devise complementary strategies that can help to promote DRM among communities at risk and to establish a direct dialogue over options to harmonize the social and economic requirements of communities. However these initiatives are currently too scattered and uncoordinated to effect systematic change.

3.2.5 Allocating necessary resources for disaster risk management

An analysis of the resources that governments invest annually in DRM is currently complicated by the fact that few countries have a central information management system that captures the allocation of resources to DRM by individual ministries and agencies. Apart from the poorest countries the review found that a wide group of agencies may engage in practices that include 'disaster reduction' but are not necessarily labelled as such. Transport- and road-directorates commission geological surveys, utility providers increase the resilience of their systems and Ministries of Tourism strengthen coastlines, for instance. The coordination of such activities is however deficient and data is not systematically collected and analysed.

Officially registered funding for DRM is low in most countries and while national DRM offices may often have a budget for the most basic staffing and operation they have no funds that would allow them to undertake risk reduction initiatives. Occasionally even the most basic means for mobility and communication are not covered by the budget. In general the funding patterns of DRM still demonstrate a bias towards preparedness and response. Few mechanisms have been established to support investment in disaster reduction initiatives. Even in Colombia, one of the countries with the biggest commitment to DRM, the National Calamity Fund has dropped over the past years and allocation patterns have shown a very distinct trend to favour response over disaster reduction.

In most countries funding allocations for local disaster risk management are dependent upon international agencies and NGOs, which means that programmes, especially in the poorest areas, may not be sustained. Considerable allocations of local government funds have been documented in a few big Latin American municipalities that generate a significant income from locally generated taxes. For instance, DRM offices in Bogotá and Medellín, Colombia, control far more funding than the national DRM office.

Funding is the ultimate measure of government commitment to DRM. Allocations to preparedness and response in particular provide visibility to governments which disaster reduction does not, and as long as there is no wider awareness that tax money might be spent more wisely if invested in disaster reduction these spending patterns are unlikely to change. Economic and political stability are needed in order to effect change, which even under the best circumstances happens slowly. In addition, the comparatively generous infusion of international donor funds after major

disasters does not help to establish a more proactive government approach towards DRM.

3.2.6 Facilitating participation from civil society and the private sector

Most governments are ready to cooperate with civil society and the private sector but few have the technical expertise and tools to do so effectively. While civil society organizations may have the capacity to engage in preparedness and response there are far fewer organizations that specialize in disaster reduction. This review has not been able to fully document the role of the private sector as a consistent source of support for DRM; preliminary evidence suggests, however, that the private sector plays a role in response in a number of middle-income countries.

The participation of civil society seems particularly dependent upon the traditions and experience of local governance and its ability and openness to seek and establish a dialogue with NGOs, religious and community-based organizations. Participation is also contingent upon the existence of local networks and institutions that have the capacity to organize people and establish common agendas. With the exception of a few countries, local government officials currently lack the skills to work with communities, and have an insufficient understanding of the role and power of local institutions with which to facilitate assessment and planning processes. These skills can more often be found among local and international NGO/agency staff and volunteers; however, as already stated these actors often avoid governments in the execution of DRM projects.

4. UNDP's contributions to strengthen institutional and legislative systems for disaster risk management

UNDP has been supporting national governments to strengthen their DRM capacities for decades, mostly as a result of programmes initiated by country offices. In some of the reviewed countries and regions these initiatives started more than twenty years ago; in other regions they are relatively recent. In some countries UNDP has provided critical support to the host government's efforts to establish and/or strengthen ILS for DRM (e.g. Viet Nam and Colombia) in other countries UNDP has been just one actor among several, notably regional organizations and banks, the World Bank, bilateral governments and NGOs. A majority of the programmes reviewed, focused on the national level. Two programmes have a regional dimension and take advantage of the fact that participating countries share similar hazards and vulnerabilities as well as capacities (the Caribbean and South Pacific). Some programmes promoted disaster risk reduction; the emphasis of most reviewed programmes however was the creation of preparedness and response capacities. That is, the scope, depth and character of UNDP involvement varies considerably from country to country and each programme deserves to be seen and reviewed in its own right and against the specific context that brought it about. The following reflections therefore identify trends and commonalities that have been observed across regions and in a significant number of individual countries participating in the review; however what applies to a considerable number of UNDP programmes need not apply to every single one.

Very often UNDP programmes have been established following major disasters, which highlighted the weaknesses of national and local systems to manage the disaster. UNDP country offices have often shown flexibility and creativity in learning from the weakness revealed, and using them to further development of DRM systems. However, this did not always translate into a more integrated approach to DRM or a more proactive longer-term vision. More on this topic will be discussed below.

4.1 Implementation modes and funding

Most reviewed projects were implemented following the provisions outlined in the National Execution modality (NEX), which makes governments responsible for daily management and reporting of UNDP programmes following established rules for the disbursement of funds and reporting. Programme management units (PMUs) were created and provided with programme funds to undertake the administration and management of project activities. Where government capacity is relatively developed this works well and PMUs have developed into strong entities; where capacity is low PMUs are weak. They are often staffed by inexperienced and junior officers and/or are exchanged frequently, which further weakens capacity. In a number of programmes chief technical advisors or programme coordinators have been enlisted, in addition to PMUs, to support the government. They remain UNDP staff but are appointed by country offices and national governments in a joint effort. Often such individuals can improve capacity but the challenge is finding qualified national or international staff that are willing to commit themselves for the length of an entire programme.

In contrast to NEX programmes regional initiatives have been implemented by organizations such as CDERA and SOPAC (the latter underwent a preparatory phase which strengthened capacity) and funding from international donors went to these organizations rather than to individual national governments.

Funding for DRM initiatives has come from various external donors, which were particularly open to fund initiatives in the aftermath of major disasters such as hurricane Mitch or following the settlement of long-standing conflicts such as in Mozambique and Sri Lanka. In a significant number of cases funding has come from UNDP's own resources, TRAC 1.1.3 in particular. This particular budget-line was created to address rapidly the special development needs of countries in crisis or countries vulnerable to crisis and should not exceed 12 months duration. TRAC 1.1.3 has played an important role in starting DRM initiatives in various countries. However more efforts are required to identify complementary funding sources to continue these programmes beyond the initial TRAC 1.1.3 contribution. The identification of additional funding sources, however, has not always been successful, and the tight deadlines of TRAC 1.1.3 resources have not been supportive of long-term capacity building processes. Ways need to be found to increase the flexibility of this budget-line.

4.2 Relevance of UNDP programme outputs and targets

The review found no examples of programmes that set targets and objectives which could be dismissed as 'irrelevant' to the needs of a country during the time of planning. If programme objectives have lost relevance (which was found to be the case in three countries) this is often due to external developments, most notably to the rise of tension and conflicts within countries, which has undermined the feasibility of nationwide efforts to manage natural disaster risks. However, if the objective of UNDP involvement in this field is assumed to be the support to or creation of ILS for DRM then programmes should not be judged by individual objectives but by the set of targets and objectives as a whole, including the integration of these targets into the wider supportive framework which reflects the needs and realities of a given environment.

According to this broader programmatic approach in determining relevance, UNDP DRM initiatives can be divided into two broad categories: comprehensive and one-dimensional. Comprehensive programmes look at the needs of various administrative levels and sectors relevant to ILS and cover a set of individual components. These programmes also engage civil society and the private sector. The review found several programmes with these characteristics (Mozambique and Viet Nam are prime examples; regional initiatives in the Caribbean and the South Pacific also fall under this category); many are relatively recent which may illustrate a rise of such comprehensive initiatives. However, many programmes reviewed are quite one-dimensional (i.e. target a specific output) and work *de facto* almost exclusively at the national level.

Programmes that target the national level often look rather similar across different regions and countries and contain the following components: legislation and policy development, hazard mapping and eventually risk assessment, training and capacity building of the official agency in charge of DRM. Where programmes have managed to create multi-sector alliances for implementing activities and been complemented by initiatives at the local level they tended to be more successful and results have been sustained. Local-level initiatives have often been prompted by localized disasters resulting in opportunities to raise resources for the investment in provincial, municipal or local systems. This is the case in several Latin American countries, particularly in Colombia. Eventually this 'mix by default' of national and local initiatives that continued occasionally over decades has led to a strengthening of the overall system with a positive impact on populations at-risk. Only in Albania, Madagascar, Viet Nam, and a few other countries did programmes include a

combination of both national and local level interventions with an emphasis of investments at the national level.

In a number of countries DRM programmes seem ‘stuck’ at the national level and have limited impact at the local level. Some programmes focus on the drafting of various planning and legislative documents which are removed from the practical and everyday experience of local governments and people at risk. Such approaches have often failed to address the implementation aspect of planning and policy-making. This is often a reflection of a lack of commitment and interest in DRM at various levels and in multiple sectors. However, it must be noted that occasionally central level institutions strongly resist investment of programme funds in local level activities.

4.3 Relevance of UNDP programme processes

Valuable opportunities are available during the planning and initiation stages of ILS programmes. These include firmly establishing programmes in the national agenda and involving stakeholders. Several programmes have gone through extended consultation phases and processes involving civil society, academia and various ministries, which has significantly contributed to their success. Where this consultation phase was absent, success of programmes suffered. While it was often impossible to exactly reconstruct the ‘history’ of individual programmes due to time constraints and a lack of institutional memory, anecdotal evidence suggests that a number of programmes were designed with insufficient involvement of national counterparts in assessment and planning. This led not only to overly ambitious programme proposals but also delays in initiation. For example, when a programme was hastily conceived and implemented, country offices had to re-negotiate and re-draft programmes to reflect priorities of national governments so that a joint programme document could eventually be signed. Better results have usually been achieved when UNDP embarked upon a preparatory assistance phase that could be used to negotiate and finalize more comprehensive programme proposals and to pilot certain approaches.

The short time-frame of most programmes (they usually include a 2–3 month period before re-initialization) reflects the funding realities of DRM – they are often dependent upon unspent relief funds from donors or specific constrained budget-lines. Some country offices have shown ingenuity in identifying additional sources of funding and thus ensured continuity. In other cases programmes had to be abandoned before completion because donor support could not be maintained and/or commitment of national counterparts proved to be insufficient. Several cases have been documented where legislation and plans had been drafted but were not adopted by government and parliament during the programme lifetime as policy priorities shifted and governments changed. In these cases, it is vital that UNDP continues to engage its partners through policy dialogue to promote their final adoption.

Integrating DRM into national agendas, therefore, is a priority. To this end, UNDP’s Country Cooperation Frameworks refer increasingly to DRM (usually under ‘environment’). This also applies to many UNDAFs even though disaster risks are usually not analyzed in great detail. A notable exception is the rights-based approach underlying the UNDAF in Mozambique. Other positive examples of a successful integration of DRM into ongoing concerns for development, environment, decentralization and local participation have been reported from UNDP offices in Bolivia and the Caribbean. However there are still too few country offices that seem to appreciate the fundamentally developmental nature of DRM projects and the possible inter-linkages with governance, poverty reduction and environment. Thus,

more needed to be done to define and promote DRM within UNDP. The current Millennium Development Goal framework mentions DRM yet does not help to identify a more critical role of DRM and its multiple linkages in disaster-prone countries.

In several country offices DRM therefore occupies a 'disaster niche' attracting attention during times of emergencies but with otherwise limited interaction with other UN development programmes. The fact that the creation of ILS may be an aspect or even an entry point for good governance (for instance in disaster-prone municipalities and communes where DRM becomes an important function of government) has not yet permeated the organization. This may be also related to the fact that DRM programmes are at times unnecessarily 'technical' and fail to promote a common purpose and partnership with other projects targeting legislation or public administration. Combined with management gaps this can lead to parallel processes (assessments, training) and duplication. Missed opportunities for cooperation concern local level DRM initiatives in particular, which would benefit from, and provide added value to, wider local governance or poverty reduction programmes (that often maintain strong networks at the local level). Given the limited budgets assigned to DRM initiatives they cannot usually build their own lines of implementation. That, combined with the lack of cooperation contributes to the concentration of DRM activities at the national level.

In a handful of programmes a high level of support for DRM was realized through legislation, as various activities were undertaken to attract commitment and interest at the national level. These included support to parliamentary committees and lobbying undertaken by UNDP with active participation from Resident Representatives. Given the natural fluctuation in political interests (and in DRM in particular) it is unrealistic to assume that DRM remain on the top of a political agenda over extended periods. Nevertheless, sustained advocacy and lobbying by UNDP can make a massive contribution – it was vital to the success of DRM in Colombia, for example. However, when DRM projects are considered too 'technical', with insufficient links to the ongoing development agenda of a UNDP office, political support is not always extended.

Some national programmes have been constrained by the fact that they worked with the official agency (either a newly created outfit with limited staffing and reputation/authority or a well established civil defence organization) in charge of DRM but not with a wider group of national government agencies. If only one single agency is seen to benefit from a project, incentives for other agencies to participate are naturally absent. This is particularly the case when the counterpart agency is primarily an emergency organization that operates in a 'command and control' mode, which is obviously not conducive to working in partnership with others or at local levels. The NEX modality sometimes creates considerable difficulties for UNDP to challenge attitudes within government that work against the achievement of project goals and objectives.

There is therefore a fundamental question whether the agency officially in charge of coordinating DRM (but often with limited or no operational budgets) is always the best counterpart, especially when it comes to risk reduction objectives. In workshop discussions following the review participants agreed that some of the more significant achievements in disaster risk reduction in countries reviewed have been made by specialized governmental agencies such as those in charge of roads, river bank and coastline protection, health and by (often private) providers of utilities. These actors work already in what could be considered disaster risk reduction. Thus, getting them involved in DRM programmes will eventually lead to more tangible outcomes and demonstrate the practicality and usefulness of DRM, which can then be used by

policy-makers to deepen the commitment to risk management and reduction. Wider participation will also lead to more sustainable results since programme outputs will be overseen by several agencies and not depend upon the capacity of just one organization.

Partnerships between UNDP and other actors and agencies have been strongest in regional programmes possibly because regional initiatives are usually built upon the premise of creating or strengthening pre-existing partnerships among participating countries. These programmes (which have usually been managed by subregional organizations) therefore seem to be ready to collaborate with other actors too. Both reviewed regional programmes in the South Pacific and Caribbean were successful in closely cooperating with regional and scientific organizations, donors and NGOs. It remains to be seen whether such partnerships will continue once the programmes come to an end. At the national level particularly strong partnerships between UN agencies and other interested NGOs and donors have evolved in Mozambique and Viet Nam.

Overall, however, partnerships between UNDP and national civil society organizations in DRM are often mentioned in advocacy documents but do not necessarily result in action. In several regions outside observers and civil society organizations in particular perceive UNDP as a relatively bureaucratic organization with which it is difficult to collaborate.. The perception among UNDP administrators, NGOs, universities, academic institutions and CBOs is that collaborating organizations are more like subcontractors that are tasked to deliver certain programme outputs rather than partners that participate in processes to strengthen communication between government, civil society and communities at risk. Only few well-versed civil society organizations eventually manage to establish an equal working relationship with UNDP.

A number of country offices conducted operation reviews following disasters in order to also reflect the relevance of DRM programme components and identify gaps and opportunities for improvement. These exercises were largely seen as useful, participatory and productive and served to improve programme performance. However, tripartite reviews between government, UNDP and PMUs, which are statutory in NEX programmes, often have a highly formal character and are of limited value to identify weaknesses and ways to address them. In several countries it was found that mid-term reviews and evaluations have not been conducted frequently or timely enough to be able to influence the direction and outcomes of a programme. Furthermore the results of some reviews have not always resulted in revised plans of action and therefore not been followed-up systematically.

4.4 UNDP contributions and accomplishments

In spite of the described limitations of the programmatic approach to DRM in UNDP there are however many individual examples of well-managed processes that helped to produce specific outputs and accomplishments in various individual projects. In the following sections examples from different regions will be given, which highlight their linkages to the objectives for governance for disaster risk reduction. The final outcome of these activities was highly dependent upon the individual external environment and the interest, engagement, expertise and skills of national partners.

4.4.1 Making disaster risk management a policy priority and generating political commitment

Considerable progress in making DRM a policy priority has been made in Colombia, Madagascar, Mozambique and Viet Nam among others due to UNDP projects. This is often due to effective coordination and cooperation between UNDP and like-minded agencies and donors (particularly strong in the Caribbean). The elaboration of national strategies, plans and policies when processed with the participation of various actors and overseen by key actors has certainly also contributed to increasing the interest in DRM. Generally the review found that countries have made considerable progress in the way they view and reflect upon disasters, that is, no longer looking at them as isolated events but being increasingly aware of linkages between the level of development and the evolution of risk patterns. The references in Poverty Reduction Strategy Papers (PRSPs) and other development plans and documents are testimony to this awareness. However a crucial step and indicator of political commitment is the allocation of resources that would allow taking action (see section 4.4.5).

4.4.2 Promoting disaster risk management as a multisectoral responsibility

In several countries UNDP's DRM projects can be credited with the establishment of one or several multi-agency and inter-ministerial consultative bodies, in particular when the elaboration of a national plan was one of the intended outcomes of the project. In some countries these bodies have flourished and continue to function. In others they have withered; technicians in particular became frustrated with the lack of outputs and slow progress. Successful bodies include that in Nepal, where UNDP initiated a targeted process to generate commitment to cooperation and coordination between different ministries and agencies (see box 4). It supported three sectoral working groups on health, agriculture and logistics, and assisted them to produce specific guidelines, assessment formats and manuals thus ensuring commitment and participation of various agencies, directorates and ministries.

The various working groups of the Technical Committee for Disaster Management in Mozambique provide institutional mechanisms for risk management in helping to integrate risk management into sectoral programmes. One of the key mechanisms is the Vulnerability Assessment Committee, a multi-disciplinary committee coordinated by the Food Security and Agriculture Working Group. The Vulnerability Assessment Committee includes representatives from government, NGOs, UN and donor agencies and is supported by UNDP. The vulnerability assessment includes information collected by various early warning systems, which are processed by the National Institute for Disaster Management (the government's 'lead agency' for DRM), and then channelled to various sectors and agencies to enhance emergency preparedness.

4.4.3 Assigning accountability for disaster losses and impact

The principle of accountable governance is still a new concept in many countries and generic weaknesses in accountability naturally also apply to DRM. UNDP can only promote the need for progressive legislation that identifies responsibility and accountability for avoidable losses by government and civil societies, which it has done in several countries. No case could however be documented where UNDP managed to assist governments to outline and adopt legal mechanisms (such as systems of penalties and rewards) to induce certain behaviours/actions that would hold organizations and individuals accountable for avoidable losses.

The issue of accountability is complex and requires a strategic and unified approach among relevant UNDP programmes (e.g. security sector reform, local governance and decentralization) and wider UN agency development programmes. An example of such an integrated approach comes from Mozambique where UNDP and the UN created an integrated strategy anchored in a rights-based conceptual framework. This was outlined in the Common Country Assessment and elaborated in the UNDAF. Following this, UNDAF has identified four strategic objectives of development assistance to Mozambique:

- to promote the fulfilment of the right to personal security;
- to promote the right to knowledge and to long and healthy lives;
- to promote the fulfilment of the right to sustainable livelihoods; and
- to promote the fulfilment of the right to full participation, protection and equality.

Under the first objective, HIV/AIDS and disaster management including natural disasters and mine action are identified as the major targets. These fundamental rights serve as the basic reference for analysing the current situation of Mozambicans and the causes and barriers that may prevent citizens, the poor and vulnerable in particular, from realizing their rights. In addition capacity analysis is undertaken to identify responsible actors and explore how they are able or unable to fulfil their obligations. The rights-based approach thus provides a comprehensive and integrated model for addressing vulnerabilities and designing strategies for DRM, the creation of capacities and eventual assignment of responsibilities and accountability.

4.4.4 Enforcing the implementation of disaster risk management and reduction

As previously mentioned, UNDP cannot enforce the implementation of DRM and reduction but it can provide governments with the necessary tools to do so. After the 1988 earthquake, UNDP and the United Nations Centre for Human Settlements (UN HABITAT) assisted the Nepalese Ministry of Housing and Physical Planning to formulate a national building code and a national housing strategy, supported research and development of better construction materials and trained engineers and construction supervisors. The act, supported by UNDP, was under development and review for more than eight years; it has recently been approved, and its approval gave confirmation for the implementation of the building code and establishment of a Building Council. While the code is not systematically enforced, some municipalities in Kathmandu have started to use it by checking designs before issuing building permits.

Implementation of DRM and risk reduction in particular requires capacity at the local level. Experience has shown that only sustained engagement over a significant period of time with parallel support to national systems has produced encouraging results. UNDP's support of the municipality of Medellín, Colombia, started in 1987 and continued for 12 years. It promoted the creation and institutionalization of the city prevention and response system (SINPAD), trained local organizations and the populace in disaster preparedness and reduction, provided curricular development at the educational level, and diffused information through an ambitious publication series aimed at sensitizing the population and creating leadership. The support led to a sustainable system that is renowned today for the levels of popular participation and commitment it has achieved. Finance was jointly provided by the mayor's office and UNDP. Similar work was done in the Department of Cundinamarca with overall positive results.

4.4.5 Allocating necessary resources for disaster risk management

UNDP has expended great effort to create the human and organizational systems necessary for DRM. Practically all of the countries reviewed received direct assistance for the establishment or strengthening of national DRM offices with particular emphasis upon the development of human resources and institutional linkages as well as some technical equipment and information management capacity. The creation of a strong DRM unit can be seen as one step towards ensuring that DRM is given more attention and that information gathering, analysis and dissemination performed by such units will eventually lead to higher investments in DRM by national governments. In most countries these units are now given budgetary allocations for basic functioning but often not more than that.

Persuading governments to allocate increased financial resources to DRM has met with limited success in many countries often due to competing priorities and a limited resource base. The usual availability of donor funding in the wake of disasters may prove a disincentive for some governments to invest in risk reduction. While this issue requires further investigation a self-sufficient approach to dealing with the impact of disasters from national resources (such as in Albania and Colombia) is the desired goal Albania has obliged its ministries to reserve 3% of their entire annual budget for disasters.

4.4.6 Facilitating participation from civil society and the private sector

The involvement of civil society organizations in UNDP-assisted DRM projects was found to be in need of strengthening; private sector participation was also not frequent. However, there are individual examples where the linkages were successful in furthering closer cooperation with government.

In Viet Nam, UNDP collaborated with the Viet Nam Red Cross and supported a programme called “Disaster Preparedness Training for Central Vietnam” in three central provinces. It also co-funded the production of training materials for national and provincial trainers together with Disaster Preparedness ECHO (DIPECHO) and the American Red Cross. Overall 41 particularly flood- and typhoon-prone communes have been reached by these training activities.

In Nepal the UNDP-sponsored Participatory Disaster Management Programme (PDMP) has been ongoing for the past seven years. It has built the capacity of communities to manage disaster risks more effectively. Self-governing community organizations are formed for mobilizing community members to participate in and implement disaster risk reduction activities, generate local resources, and optimize utilization of external resources. The leaders of such organizations are elected by the community.

In Albania UNDP facilitated the establishment of partnership agreements between the government and Albanian Red Cross (ARC) at national and provincial levels, which brought together these two entities in a more organized and systematic way and led to a better understanding and appreciation of mutual roles and responsibilities. Following the provisions in the partnership agreements ARC contributed to various elements of UNDP’s DRM project including the development of a training curriculum/manuals, public education activities and local/national disaster planning activities. ARC also undertook a nationwide assessment of vulnerabilities and capacities for UNDP. All of these activities were agreed upon in consultation with the national government; and local and national governments worked alongside ARC representatives.

5. Key lessons learned

The key lessons identified from the review of DRM projects are summarized in the following sections.

5.1 Challenges to disaster risk management

In many countries and geographic areas, legislation and formal interventions for DRM are considerably restricted. More importantly limitations are due to the fact that risks are often constructed outside the immediate control of government, be it because of restricted government presence outside major urban centres and limited government capacity or because of the rise in populations living in informal (substandard) settlements. Alternative and more informal strategies can help to promote DRM among communities by opening a dialogue over options to harmonize social and economic requirements with risk-reduction objectives. While NGOs have been working in this field for decades there is currently a communication gap between these (often small-scale) projects and national governments, and few lessons are drawn for policy-making and planning.

In most countries reviewed the transition from *disaster management* to *risk management and reduction* has not yet been acted upon in a consistent fashion. Truly permanent and active inter-ministerial or inter-agency mechanisms to devise strategies, plan and coordinate risk reduction measures exist only in a few countries. That said, some actors consistently take disaster reduction initiatives, which are not perceived as falling under the umbrella of risk reduction per se. For example, agencies such as the providers of utilities (electricity, water, communication) or government departments in charge of roads and coastlines are eager to protect their systems against external shocks and will often take independent actions that remain relatively invisible to non-specialists, but which could be considered disaster reduction initiatives.

In the poorest countries disaster reduction is impossible to place on the national agenda in front of so many other concerns. These countries are at even greater risk should disaster strike; they lack the most basic tools to put early warning systems into place, which could save lives, livelihoods and assets. Information and knowledge management also remain big challenges in these countries and resources currently provided are not adequate to address these or myriad other urgent needs.

5.2 Disasters are risk reduction opportunities

Disasters themselves provide the best example of the need for DRM. They can be used proactively to further interest and commitment to DRM but also to improve already ongoing programmes. Disaster experience can reinforce the message that disaster risk reduction and sustainable development are linked, and assessments of the economic losses can be effectively used to sensitize decision-makers about the high costs of disasters and the need to invest in disaster reduction. Reviewing the performance of partner organizations before, during and after a disaster can identify important gaps that a programme may want to address. Finally disasters provide fund-raising opportunities for necessary programme components, which may not have been a priority before the disaster.

5.3 The need for specificity and flexibility

The development of institutions and systems for DRM does not follow a linear path and there are no blueprints for their creation. Every country and context requires a specific solution adapted to its individual profile of risks, capacities and its historical, geographical, political, social and economic characteristics. In addition, contexts and planning parameters change; thus flexibility is required in the way that programmes are managed in order to adapt to shifting priorities, and take advantage of emerging opportunities.

Programme planning phases and preparatory assistance projects provide opportunities to adapt a project to a specific country context. With this time and assistance projects can be devised that will both satisfy priority needs of national governments as well as raise awareness for certain country requirements and development objectives of which a national government may initially not be aware. Conversely, rushed planning can lead to unrealistic and ambitious projects loaded with grand objectives but which identify no specific entry points for implementation and leave national counterparts alienated.

5.4 UNDP's role in disaster risk management

UNDP's role in supporting national institutional and legal systems for DRM and the expectations of many governments exceeds its financial possibilities. Compared with regional and intergovernmental banks UNDP is a small player but in terms of impact, returns on investment have been astonishingly high in several countries. UNDP has a major role to play as an advocate of DRM and trusted partner of governments and needs to use its limited funding astutely to produce good practices and examples of innovation that can be used and scaled up by other, more resourceful players. One such example of astute funding is the UNDMT programme.

In some countries UNDMTs have proven an asset to generate and sustain interest in DRM among key agencies, identify opportunities for partnerships and facilitate a dialogue with the government. This is usually the case where the UNDMTs received active support from the Resident Coordinator and collaborated with external agencies, including key government partners, donors and NGOs.

Unfortunately, institutional memory in UNDMTs and other programmes in most country offices is relatively weak. There is currently no system to identify follow-up action (for instance advocacy for the adoption of critical legal documents) once a programme is finished. However legal and institutional reform initiatives have often not yet been adopted when projects are over and such critical outputs should be supported until they have eventually been institutionalized and transformed into outcomes. One such output is the shift from disaster risk management to disaster risk reduction.

Increasingly risk management and reduction is mentioned in governmental development policies, plans and strategies but often it forms a separate chapter or section that links into development but it is not treated as a truly multisectoral concern. The same observation can be made about UNDP's Country Cooperation Frameworks and the United Nations' UNDAFs. Among other factors this may be related to a lack of tools to practically integrate disaster risk management and reduction into development.

There is no doubt that making DRM a UNDP policy priority requires much more work. Ongoing UNDP programmes, in particular those focused on decentralization, poverty

reduction and the environment, provide a platform from which DRM can be placed on country agendas. In turn these programmes can also benefit and become more relevant where communities face substantial risks from natural disasters and local governments need to act. This need not result in indiscriminate 'mainstreaming' but in specific DRM services and activities (e.g. supporting a local governance or poverty reduction programme). As long as UNDP does not truly integrate development and DRM into its own country programmes, advocating with governments to do so will have an aura of rhetoric.

5.5 Ownership, partnership and collaboration

The eventual creation of resilient national institutional and legislative systems (ILS) for DRM including a capacity to work at regional and local levels requires the sustained engagement of governments, agencies and donors. In the documented case of Colombia it has taken roughly two decades to arrive at the current level of capability and performance, which is considerably less proficient than prior to 1996. Thus, even in relatively successful cases, a system's proficiency continues to fluctuate over time.

The establishment of a national institutional and legislative system for DRM is not a narrowly 'technical' task but requires the creation of political interest and careful facilitation of a process whereby multiple actors commit to the objectives of DRM. The relevance of a process that appeals to the institutional interests and priorities of various actors is often more important than the outputs. A risk assessment or a national disaster reduction strategy, however brilliant in terms of underlying research and analysis, will often remain theory if the individual views, interests and capacities of those that are expected to act on it are not considered.

Political commitment can be generated but is typically short-lived unless maintained on the part of national and international proponents of DRM. Therefore the signing of project documents and even the passing of legislation are only steps in an ongoing process. Legal and institutional reforms can easily be undone and while they are necessary they are not sufficient to effect lasting change. Political commitment will be easier to maintain if DRM is framed as a subject of public discourse and if citizens start to demand public security and regard themselves as entitled to a minimum level of environmental safety.

DRM is the result of the engagement, actions and cooperation of many actors operating at different administrative levels and in various sectors. Outside interventions and projects can provide important incentives for various organizations and actors to take a keener interest in the subject collaborate and then act upon their specific responsibilities. Concentrating all resources at only one level and working with only one organization can undermine the prospects to construct multi-sector engagement and coordination mechanisms.

Long-term engagement at intermediate (i.e. provincial or departmental) and local (municipal in particular) levels sometimes produces tangible results that have proven to be more resistant to political fluctuations than investments at the national level. Within the parameters of this review such cases have been documented in countries with a relatively long tradition of decentralization and in municipalities with a significant population, tax base and resource generation capacity. However, as most countries have committed themselves to decentralize, the investment in intermediary and municipal systems ensures that scarce resources still reach a significant population. In general it is clear that DRM needs to be promoted by local actors in order to be effective. Programmes that concentrate on national level activities only

risk remaining isolated, as knowledge and involvement remains with a handful of actors and no visible benefit from programme investments can be created. The value of tangible projects to demonstrate successes of risk management cannot be underestimated.

6. Recommendations to UNDP

Further strengthen the programme approach

UNDP should move towards a long-term programme approach in the area of DRM. This includes exploring linkages between governance, DRM and development and identifying practical ways to integrate DRM and other relevant development initiatives in its country programmes. A more detailed reflection of the contributions DRM can make to the Millennium Development Goals, in particular in 'high risk' countries, must also be considered. Conceptual linkages at the global level need to be translated into appropriate country level development programmes (e.g. Country Cooperation Frameworks) from which detailed management arrangements can be created (e.g. Strategic Results Frameworks that outline shared objectives and cooperation between individual poverty reduction, local governance and environment programmes). DRM should not be an additional chapter or separate entry within UNDP but be treated as a component of all relevant sectoral and territorial approaches. DRM concerns should also be reflected in Common Country Assessments and UNDAFs to create synergies with other UN agencies.

Maximize opportunities for DRM advocacy and policy dialogue

UNDP should appreciate that the creation/strengthening of ILS requires systematic advocacy and lobbying, often at the highest political levels. Resident representatives and resident coordinators should participate fully in advocacy efforts. This requires increased programme appraisals and advocacy efforts in high-risk countries.

Help establish and monitor benchmarks

UNDP has a role to advocate not only for basic goals and policy measures for DRM at the global level but also for more refined benchmarks at regional, subregional and national levels. Fora like the World Conference on Disaster Reduction in Kobe provide for unique opportunities to identify and agree upon better mechanisms to ensure the monitoring of progress and implementation at the national level.

Facilitate long-term support

UNDP should fully embrace the fact that the creation of resilient and sustained ILS for DRM requires a commitment over significant periods of time and therefore continuous support. Current funding periods for DRM programmes range from 12 months to two years, which is insufficient in most cases; an initial period of at least five years would be much more optimal. If TRAC 1.1.3 funds are used for implementation of DRM programmes they should be assigned as start-up funds only; their disbursement should include a fund-raising strategy that is agreed upon (and actively supported) by the resident representative. Country offices that have experienced only limited success with DRM programmes in the past often had limited funding (two to three years); a longer funding period may have allowed more programmatic success.

Document mainstreaming successes

UNDP should further document and disseminate successful cases of the integration of disaster risk management and reduction into development plans (e.g. the critical steps identified for a programme's success). This will assist governments that may not know how to devise and implement feasible plans and strategies.

Make at-risk countries a priority

UNDP and other UN agencies should intensify efforts to prioritize and direct scarce resources towards at-risk countries, which are in need of urgent assistance to address DRM, and increase levels of protection and safety of vulnerable citizens.

Choose the appropriate counterpart institutions

The ministry or agency officially in charge of DRM or civil protection is often the first to be contacted and while it cannot be ignored, other organizations may be more appropriate to effect tangible change (e.g. contacting the Ministry of Agriculture to discuss the protection of rice fields from flooding) especially when the goal is risk reduction. Cooperation with agencies requires flexibility. For example, collaboration with agencies that focus on a specific hazard/risk (such as agencies dealing with flood control) will be more productive in countries where this hazard/risk constitutes a major concern. Such cooperation may also help to demonstrate and promote the practical applicability and dividends of DRM at all levels.

UNDP should reconsider the practice to work with only one counterpart agency at the national (and local) level, which then becomes the sole recipient of project funds. DRM is a multisectoral responsibility and a systemic approach to the creation or strengthening of institutions and legislation requires close cooperation with multiple actors. UNDP is in a unique position to assist in the facilitation of such processes. However initiating cooperation often requires incentives, and better ways need to be identified to appeal to the interests of relevant institutions. This requires “thinking out of the box” and creative management.

Target intermediate levels

UNDP should pay more attention and invest more resources in the strengthening of ILS at intermediate levels (provinces, departments) or in municipalities that reach a significant population at risk. This will contribute to the generation of more practical and tangible lessons that can then be used as examples for policy-making and planning processes at national levels. In addition, stakeholders at intermediate levels are often more available and ready to cooperate than those working at national levels; thus it may be easier to initiate truly multisectoral processes by working with them

Link NGOs, CBOs and governments

UNDP, as a trusted partner of governments, also has a major role to play to assist NGOs and CBOs in establishing better links between their (often) small-scale but effective community-level projects, and local and national governments. In return UNDP and governments have a lot to learn from these projects, which frequently constitute the only significant form of ILS at the local level in many countries.

Define capacity-building needs and purposes

Capacity assessments in DRM should be undertaken on a routine basis before engaging in national or regional programmes. Formulating legislation or policies and assessing risks and vulnerabilities are not capacity-building activities as such but rather require a certain level of skill and knowledge. This does not mean that capacity building cannot be a by-product of such activities but capacities will also (and perhaps more importantly) be increased to include the implementation of these assessment, policies and laws. Capacity assessments should be undertaken to

clearly identify gaps in each country and inform the design of specific capacity-building components to assist local and national civil servants to better execute responsibilities (this includes PMUs in nationally executed programmes) and to support local government representatives, NGOs and communities. This should include the development of easily applicable tools and guidelines, training in applicable DRM concepts and practices and eventually the development of curricula and manuals. Often such activities can be undertaken jointly or in close coordination with other development programmes.

Explore a rights-based approach to disaster risk management

UNDP should further explore a rights-based approach to the promotion of risk management and risk reduction. Experience has shown that ILS have been most sustainable where a large part of the population saw the provision of a minimally safe environment and public safety as a basic entitlement; politicians therefore regarded this as an area that requires investment to sustain support for their mandates. A common rights-based approach taken by all UN agencies and supportive NGOs and donors promises to be effective for coordinated advocacy and systematic public information and awareness campaigns. Building on the promotion of a rights-based approach (in which a safe environment is only one entitlement among others), realistic and well-targeted accountability mechanisms can eventually be created (including the ultimate instrument of popular vote based upon a better-informed electorate).

Target public awareness

UNDP should develop better-targeted, planned and executed public awareness and information campaigns and closely cooperate with other agencies on this issue to increase impact.

Allocate time and resources for the preparation of programmes

UNDP should invest sufficient time and resources into the planning and preparation of programmes and involve local and (if necessary) international expertise. The planning stage provides crucial opportunities to embark upon an inclusive and well-targeted process; during this time multiple stakeholders at central and local levels can also be enlisted. In countries where UNDP has not been involved in previous DRM initiatives or where governance frameworks have changed substantially, preparatory assistance programmes will provide an extended opportunity to build a shared vision with counterparts, agree on realistic objectives and benchmarks (including an exit-strategy) and pilot specific components.

Promote financial sustainability

UNDP should promote the establishment of DRM budget-lines within concerned departments, ministries and local governments. Programmes should address this sensitive issue early and continue to stress it (ideally with the participation of the national counterpart(s)) until their end. NEX programme documents should reflect the *intention* of the national government to provide specific funding for DRM in the future for the continuity of programme investments. Ideally governments should contribute their own resources to DRM programmes. Finally programmes, in particular NEX programmes, should not be initiated in countries where the government shows no commitment to DRM.

Review and adapt programmes

UNDP should undertake mandatory interim programme reviews and evaluations together with national governments. These will ensure objectivity and critical feedback that can then be used to adapt and improve programme plans and targets. Participatory reviews of government performance before during and after disasters can provide an opportunity to identify failures and successes, which can then be considered for the revision of programmes. In general DRM programmes require a certain degree of flexibility and contingency to be able to respond to changes in the environment and shifting priorities.

Establish disaster focal points in country offices

In disaster-prone countries UNDP should have a full-time disaster focal point. This position will be demanding: it will require the individual to identify opportunities for DRM initiatives, assist with the formulation of relevant initiatives and advise on linkages with other UNDP programmes, act as the secretary of the UNDMT, assist the national government during crisis and recovery and advise the Resident Representative and Resident Coordinator on needs for lobbying and interventions at higher political levels.

Promote disaster risk management with donors

UNDP and specifically BCPR should continue to promote DRM and encourage donors to establish budget-lines that are more generous in the allocation of funding to programmes that create or strengthen ILS in disaster-prone countries. Data will aid this effort. Thus, successes at the country level and the critical factors that facilitated them need to be documented and analysed. More cost-benefit analysis of investment in DRM should be performed and the interrelation between poverty and risk reduction in disaster-prone countries and areas needs to be substantiated. This should be undertaken in concert with other like-minded agencies.

Design disaster risk management country strategies

In the current funding climate UNDP has no choice but to use disasters to raise awareness and funding for DRM initiatives. Scarce funds should be allocated in such a way that they generate the best possible returns, which can then be replicated by agencies that have greater capacity than UNDP. Most important, however, is the preparation of a strategy document that analyses the national context, opportunities and needs, the areas of work required, the way to interact and link with development themes in the country, key actors and entry points, etc. This document can then be used when funding opportunities arise, assisting actors to take decisions with respect to disasters proactively.

Facilitate partnerships

UNDP country offices should effectively use their position as an international organization to advocate with national governments, other UN agencies, multilateral and bilateral donors and NGOs to help create effective partnerships in DRM. Partnerships should not appear to centre on the provision or generation of funding (even though this is an important aspect) but should work on the basis of effectively pooling resources in pursuit of a common objective. An effective UNDMT can broker such partnerships and also be useful in satisfying specific technical demands (i.e. preparedness planning, integrating risk reduction into development plans) in DRM by acting as a liaison between governments and more specialized agencies.

Document the lessons learned

UNDP should be able to learn further from the lessons that can be drawn from decades of involvement in DRM in all regions of the world. This requires a more careful documentation of processes, methodologies and outcomes in the future. Guidelines for country offices in high-risk countries need to be established on what type of information needs to be assembled and what kind of programme documentation should be kept once a programme has been finalized. There is also need for a more generic and centralized database on DRM and sharing of lessons learned among country offices in different regions.

ANNEXES

ANNEX 1:

Glossary of Basic Terms in Disaster Risk Management (ISDR)

Unless other noted, these definitions come from the ISDR Secretariat for use by the public, authorities and practitioners. The terms are based on a broad consideration of different international sources.

Acceptable risk

The level of loss a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

In engineering terms, acceptable risk is also used to assess structural and non-structural measures undertaken to reduce possible damage at a level, which does not harm people, and property, according to codes or “accepted practice” based, among other issues, on a known probability of hazard.

Biological hazard

Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Examples of biological hazards: outbreaks of epidemic diseases, plant or animal contagion, insect plagues and extensive infestations.

Building codes

Ordinances and regulations controlling the design, construction, materials, alteration and occupancy of any structure to insure human safety and welfare. Building codes include both technical and functional standards.

Capacity

A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.

Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.

Capacity building

Efforts aimed to develop human skills or societal infrastructures within a community or organization needed to reduce the level of risk.

In extended understanding, capacity building also includes development of institutional, financial, political and other resources, such as technology at different levels and sectors of the society.

Climate change

The climate of a place or region is changed if over an extended period (typically

decades or longer) there is a statistically significant change in measurements of either the mean state or variability of the climate for that place or region.

Changes in climate may be due to natural processes or to persistent anthropogenic changes in atmosphere or in land use. Note that the definition of climate change used in the United Nations Framework Convention on Climate Change is more restricted, as it includes only those changes, which are attributable directly or indirectly to human activity.

Coping capacity

The means by which people or organizations use available resources and abilities to face adverse consequences that could lead to a disaster.

In general, this involves managing resources, both in normal times as well as during crises or adverse conditions. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and human-induced hazards.

Counter measures

All measures taken to counter and reduce disaster risk. They most commonly refer to engineering (structural) measures but can also include non-structural measures and tools designed and employed to avoid or limit the adverse impact of natural hazards and related environmental and technological disasters.

Disaster

A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

Disaster risk management

The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.

Disaster risk reduction (disaster reduction)

The conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

The disaster risk reduction framework is composed of the following fields of action, as described in ISDR's publication 2002 "Living with Risk: a global review of disaster reduction initiatives", page 23:

- Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis;
- Knowledge development including education, training, research and information;
- Public commitment and institutional frameworks, including organisational, policy, legislation and community action;
- Application of measures including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments;
- Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities.

Early warning

The provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population, and undertaking appropriate and timely actions in response to the warnings.

Ecosystem

A complex set of relationships of living organisms functioning as a unit and interacting with their physical environment.

The boundaries of what could be called an ecosystem are somewhat arbitrary, depending on the focus of interest or study. Thus the extent of an ecosystem may range from very small spatial scales to, ultimately, the entire Earth (IPCC, 2001).

El Niño-Southern Oscillation (ENSO)

A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns.

The El Niño part of ENSO refers to the well-above-average ocean temperatures along the coasts of Ecuador, Peru and northern Chile and across the eastern equatorial Pacific Ocean, while the Southern Oscillation refers to the associated global patterns of changed atmospheric pressure and rainfall. La Niña is approximately the opposite condition to El Niño. Each El Niño or La Niña episode usually lasts for several seasons.

Emergency management

The organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation.

Emergency management involves plans, structures and arrangements established to engage the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to respond to the whole spectrum of emergency needs. This is also known as disaster management.

Environmental impact assessment (EIA)

Studies undertaken in order to assess the effect on a specified environment of the introduction of any new factor, which may upset the current ecological balance.

EIA is a policy making tool that serves to provide evidence and analysis of environmental impacts of activities from conception to decision-making. It is utilised extensively in national programming and for international development assistance projects. An EIA must include a detailed risk assessment and provide alternatives solutions or options.

Environmental degradation

The reduction of the capacity of the environment to meet social and ecological objectives, and needs.

Potential effects are varied and may contribute to an increase in vulnerability and the frequency and intensity of natural hazards.

Some examples: land degradation, deforestation, desertification, wildland fires, loss of biodiversity, land, water and air pollution, climate change, sea level rise and ozone depletion.

Forecast

Definite statement or statistical estimate of the occurrence of a future event (UNESCO, WMO).

This term is used with different meanings in different disciplines.

Geological hazard

Natural earth processes or phenomena that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Geological hazard includes internal earth processes or tectonic origin, such as earthquakes, geological fault activity, tsunamis, volcanic activity and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surfaces collapses, expansive soils and debris or mud flows.

Geological hazards can be single, sequential or combined in their origin and effects.

Geographic information systems (GIS)

Analysis that combine relational databases with spatial interpretation and outputs often in form of maps. A more elaborate definition is that of computer programmes for capturing, storing, checking, integrating, analysing and displaying data about the earth that is spatially referenced.

Geographical information systems are increasingly being utilised for hazard and vulnerability mapping and analysis, as well as for the application of disaster risk management measures.

Greenhouse gas (GHG)

A gas, such as water vapour, carbon dioxide, methane, chlorofluorocarbons (CFCs)

and hydrochlorofluorocarbons (HCFCs), that absorbs and re-emits infrared radiation, warming the earth's surface and contributing to climate change (UNEP, 1998).

Hazard

A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability.

Hazard analysis

Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behaviour.

Hydrometeorological hazards

Natural processes or phenomena of atmospheric, hydrological or oceanographic nature, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Hydrometeorological hazards include: floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wildland fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches. Hydrometeorological hazards can be single, sequential or combined in their origin and effects.

La Niña

(see El Niño-Southern Oscillation).

Land-use planning

Branch of physical and socio-economic planning that determines the means and assesses the values or limitations of various options in which land is to be utilized, with the corresponding effects on different segments of the population or interests of a community taken into account in resulting decisions.

Land-use planning involves studies and mapping, analysis of environmental and hazard data, formulation of alternative land-use decisions and design of a long-range plan for different geographical and administrative scales.

Land-use planning can help to mitigate disasters and reduce risks by discouraging high-density settlements and construction of key installations in hazard-prone areas, control of population density and expansion, and in the siting of service routes for transport, power, water, sewage and other critical facilities.

Mitigation

Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.

Natural hazards

Natural processes or phenomena occurring in the biosphere that may constitute a damaging event.

Natural hazards can be classified by origin namely: geological, hydrometeorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.

Preparedness

Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Prevention

Activities to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters.

Depending on social and technical feasibility and cost/benefit considerations, investing in preventive measures is justified in areas frequently affected by disasters. In the context of public awareness and education, related to disaster risk reduction changing attitudes and behaviour contribute to promoting a “culture of prevention”.

Public awareness

The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards. This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster.

Public awareness activities foster changes in behaviour leading towards a culture of risk reduction. This involves public information, dissemination, education, radio or television broadcasts, use of printed media, as well as, the establishment of information centres and networks and community and participation actions.

Public information

Information, facts and knowledge provided or learned as a result of research or study, available to be disseminated to the public.

Recovery

Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.

Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.

Relief / response

The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration.

Resilience / resilient

The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.

Retrofitting (or upgrading)

Reinforcement of structures to become more resistant and resilient to the forces of natural hazards.

Retrofitting involves consideration of changes in the mass, stiffness, damping, load path and ductility of materials, as well as radical changes such as the introduction of energy absorbing dampers and base isolation systems. Examples of retrofitting includes the consideration of wind loading to strengthen and minimize the wind force, or in earthquake prone areas, the strengthening of structures.

Risk

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.

Conventionally risk is expressed by the notation $\text{Risk} = \text{Hazards} \times \text{Vulnerability}$. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability.

Beyond expressing a possibility of physical harm, it is crucial to recognize that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore do not necessarily share the same perceptions of risk and their underlying causes.

Risk assessment/analysis

A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

The process of conducting a risk assessment is based on a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability and exposure, while taking particular account of the coping capabilities pertinent to the risk scenarios.

Structural / non-structural measures

Structural measures refer to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure.

Non-structural measures refer to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk and related impacts.

Sustainable development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of “needs”, in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and the future needs. (Brundtland Commission, 1987).

Sustainable development is based on socio-cultural development, political stability and decorum, economic growth and ecosystem protection, which all relate to disaster risk reduction.

Technological hazards

Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Some examples: industrial pollution, nuclear activities and radioactivity, toxic wastes, dam failures; transport, industrial or technological accidents (explosions, fires, spills).

Vulnerability

The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

For positive factors, which increase the ability of people to cope with hazards, see definition of capacity.

Wildland fire

Any fire occurring in vegetation areas regardless of ignition sources, damages or benefits.

A Draft Framework to Guide and Monitor Disaster Risk Reduction

The International Strategy for Disaster Reduction (ISDR) Secretariat and UNDP are developing a framework for understanding, guiding and monitoring disaster risk reduction at all levels. The ultimate goal of this collective and iterative endeavor is to encourage and increase appropriate, effective disaster reduction practices.

Introductory note

The framework is provided as a starting point—an initial core set of principles and goals to understand, and thus guide and monitor, disaster risk reduction. As one reads to the right across the framework in any thematic area and component, the columns suggest increasingly specific descriptions and measures in a systematic fashion, with the aim to define related benchmarks. *(It is difficult to characterize this column without making special reference to the type of hazards affecting your unit of analysis (region, country, community, etc.) Nevertheless, these criteria are kept at a generic level).*

All stakeholders are invited to contribute their experience and participate in the refinement of the course of action needed to develop the framework. In particular, views and concrete recommendations are invited on:

- The process and added value of the framework, its uses and users, its benefits, as well as potential challenges;
- The proposed thematic areas, components and characteristics;
- How can progress achieved in disaster risk reduction be monitored and assessed.

Objectives

The objectives of the consultative process to develop a framework are to:

- Develop a wider and increased understanding of disaster risk reduction practices and enhance their effectiveness. Users at any level should be able to adapt and utilize it according to their own needs and specific situation;
- Identify the elements of disaster reduction so that achievements can be recorded systematically and compared over time;
- Define benchmarks and other indicators that can be used to monitor efforts and assess progress in disaster risk reduction.

The UN and international community is the first target audience. By increasing its own performance in managing and co-ordinating its responsibilities related to disaster reduction within the wider development context, it will better serve other actors along the chain.

Benefits

By systematically compiling information about disaster reduction initiatives using an agreed framework benefits are expected to include abilities to:

- Relate and integrate disaster risk management issues into sustainable development;
- Establish generic standards and guidelines for disaster reduction;
- Help establish priorities within the domain of disaster reduction;
- Develop systematic, comprehensive data and information about disaster reduction;
- Provide a basis for research in disaster reduction;
- Compare approaches and analyze trends;
- Identify existing gaps and address them through new or improved programmes, policies, or plans;

The process should result in an increased commitment by governments and other stakeholders for disaster risk reduction. The process will draw from, and feed into, existing practices, institutional and policy-making / planning processes. It strives to be transparent and engage as many actors as possible in the development and testing of the framework, starting by addressing the international community, with the objective of reaching national and local levels.

Users will include decision-makers in Governments and agencies, project managers, researchers, NGO's, communities and educators.

DRAFT FRAMEWORK TO UNDERSTAND, GUIDE AND MONITOR DISASTER RISK REDUCTION 26/06/03

Thematic areas/ Components		Characteristics	Criteria for benchmarks (very tentative)	Scale Intl Reginl Natinl Local	Data Availability Measure feasibility	Who
Thematic areas 1: POLITICAL COMMITMENT AND INSTITUTIONAL ASPECTS (GOVERNANCE)						
Political commitment	<i>Policy and planning</i>	<ul style="list-style-type: none"> Shift in approach from response to risk reduction Promotion of disaster reduction including in reconstruction process Integration of risk reduction in development planning and sectoral policies (poverty eradication, social protection, sustainable development, climate change adaptation, desertification, energy, natural resource management, etc) 	<ul style="list-style-type: none"> National risk reduction strategy Percentage of GDP invested Disaster reduction in Poverty Reduction Strategy Papers Participation in regional and international activities, programmes, networks and structures (including major conventions) 			
	Legislation	<ul style="list-style-type: none"> Laws, acts and regulations Accountability 				
	Resources	<ul style="list-style-type: none"> Resource mobilization and allocation: financial (innovative and alternative funding, taxes, incentives), human, technical, material 	<ul style="list-style-type: none"> Percentage of budget allocation Experienced staff Administrative evidence 			
Institutional aspects	Organizational structures	<ul style="list-style-type: none"> Interministerial, multidisciplinary & multisectoral approaches Implementing and coordinating mechanisms Decentralization, civil society and community participation, local institutions 	<ul style="list-style-type: none"> Existence of disaster reduction committees or platforms with defined scope and activities Periodic review of committee activities and accomplishments 			
	Normative framework	<ul style="list-style-type: none"> Codes, standards, norms Enactment mechanisms 	<ul style="list-style-type: none"> Existence of systems to control compliance and enforcement Requirement of compliance by law 			
Thematic areas 2: RISK IDENTIFICATION						

Risk assessment	<ul style="list-style-type: none"> • Hazard analysis: characteristics, impacts, historical and spatial distribution, multi-hazard assessments, hazard monitoring including of emerging hazards • Vulnerability and capacity assessment: social, economic, physical and environmental, political, cultural factors • Risk monitoring capabilities, risk maps, risk scenarios 	<ul style="list-style-type: none"> • <i>Hazard maps</i> • <i>Historical record of hazards and their impacts (catalogues, inventories)</i> • <i>Vulnerability and capacity indicators developed and systematically mapped and recorded</i> 			
Impact assessments	<ul style="list-style-type: none"> • Loss/impact assessment, • Socio-economic and environmental impact assessment • Loss analysis 	<ul style="list-style-type: none"> • <i>Percentage of development projects and investment based on independent risk and environmental impacts assessments, including in post disaster phases</i> 			
Forecasting and early warning systems	<ul style="list-style-type: none"> • Forecast and prediction • Warning processing and dissemination • Response 	<ul style="list-style-type: none"> • <i>Use effectiveness indicators developed by IATF WG2 (to be available in October 2003)</i> 			
Thematic areas 3: KNOWLEDGE MANAGEMENT					
Information management and communication	<ul style="list-style-type: none"> • Official information and dissemination programmes and channels • Public and private information systems (including disaster, hazard and risk databases & websites) and networks for disaster risk management (scientific, technical and applied information, traditional knowledge), timely end user products 	<ul style="list-style-type: none"> • <i>Documentation and databases on disasters</i> • <i>Professionals and public networks</i> 			
Education and training	<ul style="list-style-type: none"> • Inclusion of disaster reduction from basic to higher education (curricula, material development and institutions) • Vocational training • Dissemination and use of traditional/ indigenous knowledge. • Community training programmes. 	<ul style="list-style-type: none"> • <i>Referenced educational material</i> • <i>Number of courses and institutions</i> 			

Public awareness	<ul style="list-style-type: none"> • Official public awareness policy and programmes with associated material, guidelines and instructions • Media involvement in communicating risk 	<ul style="list-style-type: none"> • <i>Coverage of disaster reduction related activities by media</i> • <i>Visibility of disaster reduction day</i> 			
Research	<ul style="list-style-type: none"> • Comprehensive research agenda for risk reduction • Related methodological development including for planning and progress assessment • Regional and international cooperation in research, science and technology development. 				
Thematic areas 4: RISK MANAGEMENT APPLICATIONS					
Environmental and natural resource management	<ul style="list-style-type: none"> • Interface between environmental management and risk reduction practices, in particular in wetland and watershed protection and restoration, integrated water resource management; reforestation, agricultural practices, ecosystem conservation 	<ul style="list-style-type: none"> • <i>Use of wetland or forestry management to reduce flood risk</i> • <i>Trends in deforestation rate</i> • <i>Use of environmental impact assessments in disaster reduction planning</i> 			
Social and economic development practices	<ul style="list-style-type: none"> • Social protection and safety nets (social solidarity strategies, e.g. PRSPs) • Financial instruments (involvement of financial sector in disaster reduction: insurance/reinsurance, risk spreading instruments for public infrastructure and private assets, micro-credit and finance, revolving community funds, social funds) • Sustainable livelihoods strategies 	<ul style="list-style-type: none"> • <i>Percentage of poor population having access to social protection and safety nets</i> • <i>Use of safety nets and social protection programmes in recovery process</i> • <i>Extent of insurance coverage.</i> • <i>Coverage of micro-finance services in high disaster risk area, evidence of take up</i> 			

<p>Technical measures</p>	<ul style="list-style-type: none"> • Land use planning, urban and regional planning • Implementation and control mechanisms for specific risk (construction, infrastructure, desertification and flood control techniques, hazard control structures) • Compliance with international standards, codes and norms 	<ul style="list-style-type: none"> • <i>Reduced percentage of construction or building projects in floodplains and other mapped hazard- prone areas</i> • <i>Enforcement of zoning plans</i> • <i>Percentage of official buildings in compliance with standards (health facilities, schools, lifelines, energy supplies, other critical facilities)</i> • <i>Retrofitting</i> 			
<p>Thematic areas 5: PREPAREDNESS AND EMERGENCY MANAGEMENT</p>					
	<ul style="list-style-type: none"> • Effective communication and coordination system between response entities • Contingency planning • Preparedness planning • Logistics, infrastructure 	<ul style="list-style-type: none"> • <i>Emergency response networks and plans (national/local, private/public), regularly updated and tested</i> • <i>Coverage of community training and community based preparedness</i> • <i>Emergency funds and stocks</i> 			

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