Disaster Preparedness for Effective Response

Guidance and Indicator Package for Implementing Priority Five of the Hyogo Framework

*Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters*
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Acknowledgements

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Based on this request, OCHA’s Policy Development and Studies Branch in collaboration with the ISDR secretariat led the development of this guidance package.

To date, a wide range of organisations and individuals have been involved in this process, either through participation in a multi-stakeholder workshop held in November 2006, or through providing comments or inputs to various drafts.

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Introduction

Disaster Preparedness: Saving lives and livelihoods

Over the past two decades, the number of recorded disasters has doubled from approximately 200 to over 400 per year. Nine out of every ten of these disasters have been climate related. Current projections regarding climate change suggest this trend is set to continue and that weather related hazard events will become more frequent and more volatile. Patterns of drought and desertification are also intensifying. In addition, vulnerability is also growing in many countries. Increasing urbanisation, including growing concentrations of people in unplanned and unsafe urban settlements and exposed coastal areas, poverty, HIV prevalence, and inadequate attention to changing risk patterns, are placing more and more people in disaster-prone locations.

Never before has the challenge “to substantially reduce the impact of disasters and to make risk reduction an essential component of development policies and programmes” spelled out in the Hyogo Framework for Action 2005-2015 (HFA) being more urgent or more compelling. In 2005, shortly after the Asian Tsunami, over 168 governments pledged to implement the Hyogo Framework’s three strategic goals: to integrate disaster risk reduction into sustainable development policies and planning, to develop and strengthen institutions, mechanisms and capacities to build resilience to hazards and to systematically incorporate risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes. To achieve these goals, the HFA outlined five specific Priorities for Action:

1. Making disaster risk reduction a priority
2. Improving risk information and early warning
3. Building a culture of safety and resilience
4. Reducing the risks in key sectors
5. Strengthening preparedness for response

The Framework also stressed that disaster risk reduction is not just an issue to be addressed by humanitarians, scientists or environmentalists, but is also critical to sustainable social and economic development processes. Disasters undermine development achievements, impoverishing people and nations. In the absence of concerned efforts to address root causes, disasters represent an increasingly serious obstacle to the achievement of the Millennium Development Goals.

In Priority Five; strengthening preparedness for response at all levels, the HFA highlighted the essential role that disaster preparedness can play in saving lives and livelihoods particularly when integrated into an overall disaster risk reduction approach. Strengthened preparedness for hazard events is mainly concerned with two objectives: increasing capacity to predict, monitor and be prepared to reduce damage or address potential threats and strengthening preparedness to respond in an emergency and to assist those who have been adversely affected.
Structure of the Document and Use of this Indicator and Guidance Tool

This Guidance and Indicator Tool is designed to provide guidance on how to meet the challenge of being prepared to respond as set out in Priority Five of the Hyogo Framework for Action (HFA). This tool aims primarily to assist governments, local authorities, and other stakeholders concerned with natural hazards in potentially vulnerable settings.


This document is primarily geared towards those who are at the beginning of the process of developing a disaster preparedness capability. Given that many governments and others have gained a wide range of experience in developing disaster preparedness systems in a risk reduction framework, it is expected that stakeholders will adapt the tool to their particular context as appropriate.

This guidance begins by situating disaster preparedness within a holistic risk reduction framework. It goes on to provide a basic overview of the institutional and legislative frameworks that must be in place to support disaster preparedness. It then outlines key steps essential for developing a national disaster preparedness capability and highlights the critical role that contingency planning and capacity analysis can play in strengthening preparedness. The latter sections underline essential elements for an effective response, including the establishment and maintenance of early warning systems, stand-by capacities and effective funding mechanisms. It also stresses the need for these processes to integrate early-recovery analysis and planning.

Each section includes a suggested outcome and a set of indicators to help measure levels of preparedness and progress. The indicators take various forms, measuring, for example, outputs and processes. Ideally, indicators collected during the preparedness phase can be used as a baseline for measuring change over time and across different contexts. At a minimum they should serve as a checklist for ensuring that preparedness activities are being undertaken in a participatory and comprehensive manner. (See Annex 1 for more information on indicators.) The number of indicators has been kept to a minimum and it is expected that users of the guidance package may track supplementary indicators and use additional monitoring tools based on their particular contexts.

A list of additional resources and websites that can support the development of a preparedness capability is also provided in Annex 3.

Terminology

There is much debate among disaster management practitioners regarding definitions. The ISDR secretariat, based on revisions of existing glossaries and expert consultations has proposed basic terminology for Disaster Risk Reduction. This is used wherever possible in this text. A number of basic definitions are included overleaf, while Annex 2 includes a more comprehensive list of definitions of terms used throughout this guidance package.
Key terms

Disaster Risk Reduction: The conceptual framework of elements considered with the possibilities to mini-
mise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and
preparedness) adverse impact of hazards, within the broad context of sustainable development (ISDR
2007).

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 (ISDR
2007).

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 (ISDR 2007). This can
include latent conditions that may represent future threats and can have different origins: natural (geological,
hydro-meteorological and biological) or induced by human processes (environmental degradation and technolog-
ical hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is character-
ised by its location, intensity, frequency and probability.

Preparedness: The capacities and knowledge developed by governments, professional response organisations,
communities and individuals to anticipate and respond effectively to the impact of likely, imminent or current hazard
events or conditions.

Comment: Preparedness action is carried out within the context of disaster risk management and should be
based on a sound analysis of disaster risks and be well linked to early warning systems. It includes contingency
planning, stockpiling of equipment and supplies, emergency services and stand-by arrangements, communications,
information management and coordination arrangements, personnel training, community drills and exercises, and
public education. It must be supported by formal institutional, legal and budgetary capacities (ISDR 2008).

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 (ISDR 2007).

Resilience: The capacity to absorb stress or destructive forces through resistance or adaptation; to manage or
maintain certain basic functions and structures during disastrous events; and to recover or ‘bounce back’ after an
event (John Twigg / DFID DRR Interagency Coordination Group 2007).

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 (ISDR 2007). Risk is often also expressed as the equation: Risk = Hazard x
Vulnerability/ Response Capacity (IASC 2007).

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 (ISDR 2007).

Contingency planning: Contingency planning is a management tool used to analyse the impact of potential
crises so that adequate and appropriate arrangements are made in advance to respond in a timely, effective
and appropriate way to the needs of affected populations. Contingency planning is a tool to anticipate and solve
problems that typically arise during a humanitarian response (IASC 2007).

A more complete list of relevant definitions for preparedness and risk reduction are included in Annex 2 of this
document.
Guiding Principles for implementing Disaster Risk Reduction

The provision of assistance in disasters should be informed by the underlying humanitarian principles of neutrality, humanity and impartiality. The holistic and strategic approach of the Hyogo Framework is based on a number of further guiding principles that are outlined in detail in the ISDR document Words Into Action: Implementing the Hyogo Framework. These include that:

- **Effective disaster risk reduction requires community participation.** The involvement of communities in the design and implementation of activities helps to ensure that they are well tailored to the actual vulnerabilities and to the needs of the affected people. This informed engagement helps to avoid problems and secondary effects when hazard events occur. Participatory approaches can more effectively capitalise on existing indigenous capacities. They are usually also more sensitive to gender, cultural and other context-specific issues that can undermine or empower particular groups and individuals to take locally based action. The incorporation of local perspectives into decision and activities also helps to ensure that changes in vulnerability and perception of risk are recognised and factored into institutional processes, risk assessments, and other programmes and policies.

- **States have the primary responsibility for implementing measures to reduce disaster risk.** Disaster risk reduction needs to be an essential part of a state’s investment in sustainable development. States have the power as well as the responsibility to protect their citizens and their national assets by reducing the losses from disasters. States, however cannot do the job alone. Effective disaster risk reduction relies on the efforts of many different stakeholders, including regional and international organisations, civil society, including volunteers, the private sector, the media and scientific community.

- **Disaster risk reduction must be integrated into development activities.** Disasters undermine hard-won development gains, destroying lives and livelihoods and trapping many people in poverty.

- **A multi-hazard approach can improve effectiveness.** A particular community is usually exposed to risk from a variety of hazards. The resulting cumulative risk cannot be tackled effectively if actors plan merely for selected hazardous events. A multi-hazard approach involves translating and linking knowledge of a full-range of hazards into disaster and risk management. It will look not only at natural hazards, but also factors including political strategies, technical analysis, and operational capabilities and public understanding. This approach will ultimately lead to greater effectiveness and cost-efficiency.

- **Capacity development is a central strategy for reducing risk.** Capacity development is needed to build and maintain the ability of people, organisations and societies to manage their risks successfully themselves. This requires not only training and specialised technical assistance, but also the strengthening of capacities of communities and individuals to recognise and reduce risks in their localities.
• **Decentralise responsibility for disaster risk reduction.** Many disaster risk reduction activities need to be implemented at the provincial, municipal and local levels, as the hazards faced and the populations exposed are specific to particular geographic areas. It is necessary to decentralise responsibilities and resources for disaster risk reduction to relevant sub national or local authorities as appropriate. Decentralisation can also motivate increased local participation along with improved efficiency and equitable benefits from local services.

• **Gender is a core factor in disaster risk and in the reduction of risk.** Gender is a central organising principle in all societies. Differences in gender roles will lead to differing risk profiles for women and men in a disaster. In all settings- at home, at work or in the neighbourhoods-gender shapes the capacities and resources of individuals to minimise harm, to adapt to hazards and respond to disasters. It is evident from past disasters that low-income women and those who are marginalised due to marital status, physical ability or age, social stigma or caste are especially disadvantaged. At the grass roots level, on the other hand, women are often well positioned to manage risk due to their roles as both users and managers of environmental resources, as economic providers, and as caregivers and community workers. For these reasons it is necessary to identify and use gender differentiation information, to ensure that risk reduction strategies are correctly targeted at the most vulnerable and are effectively implemented through the roles of both women and men.

• **Public-private partnerships are an important tool for disaster risk reduction.** Public-private partnerships are voluntary joint associations formed to address shared objectives through collaborative actions. They may involve public organisations such as government agencies, professional and/or academic institutions and NGOs, together with business organisations such as companies, industry associations and private foundations. Because the threats from natural hazards affect both public and private interests alike, private-public partnerships can offer opportunities to combine resources and expertise and to act jointly to reduce risks and potential losses. They can therefore improve the resilience of communities.

• **Disaster risk reduction needs to be customised to a particular setting.** States vary greatly in their political, socio-economic, cultural, environment, and hazard circumstances. Measures that succeed in reducing risk in one setting may not work in others. Customising involves making use of others’ experience, for instance by reviewing the contexts of particular measures and the nature of good practices and lessons learned, and then tailoring these to implement policies and activities that are appropriate for the local contexts.
Chapter 1

Holistic Approaches, Strategies, and Institutional Frameworks

The Hyogo Framework for Action specifically challenges states to foster a “holistic approach” to disaster risk reduction that will “promote and support dialogue, exchange of information and coordination among early warning, disaster risk reduction, disaster response, development and other relevant agencies and institutions at all levels”.
Chapter 1 - Holistic Approaches, Strategies, and Institutional Frameworks

1.1 Holistic Approaches and Preparedness

**Expected Outcome:** Realistic and measurable objectives, outputs, and activities to strengthen and maintain disaster preparedness capabilities are an integral component of a holistic national disaster risk reduction strategy.

By underlining the importance of a holistic approach, the HFA recognises the interconnectedness of its five priorities areas. It also challenges governments to consider disaster risk reduction in national development and disaster planning, and highlights the role of communities and other actors in reducing risk.

Recognising that failing to build disaster risk reduction into national development processes could result in activities that either reinforce, or even exacerbate risk, both the United Nations Development Programme (UNDP) and the World Bank have committed to integrating disaster risk reduction into their national strategic planning processes with Governments. Humanitarian actors are also increasingly recognising that their activities can contribute either positively or negatively to risk.

The HFA also stresses the need for a holistic approach to disaster risk reduction that can link international, regional, national and community level initiatives. Communities themselves are not only usually the first responders to disasters but are also central actors in reducing risk. Therefore one of the key tasks of a national preparedness capability is to strengthen and enhance this capacity at the community level (including resource capacity), and to make sure that this capacity is reflected in national level planning processes.

Capacity development is a key component of strengthening community-level preparedness. All levels of the preparedness and response system require skilled people in disaster management with a clear understanding of their role within that system. This capacity development should not only include community members, but should create

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**Indicators**

**Governments:** A disaster risk reduction strategy and disaster management implementation plan that clearly encompasses preparedness for response is developed based on a sound assessment of risks, hazards and capacities and with the participation of all key stakeholders at all levels.

A system or structure, such as a National Platform, is in place to promote the exchange of information and experiences and to harmonise capacities that are critical to a coordinated response to disasters.

Resources are allocated at all levels to maintain and enhance disaster risk reduction systems that include preparedness activities.

National plans and strategies reflect clearly how community capacities will be used and supported during an emergency.

Plans include specific activities to enable potentially vulnerable populations, such those living with HIV, older people, or the disabled to access essential support during emergencies.

All population data is age and sex-disaggregated and actions are taken to ensure equitable access to services by both men and women.

**Civil Society:** Civil society and community members actively participate in the process of developing, monitoring and evaluating national disaster preparedness activities.

Potentially vulnerable groups such as older people, those with disabilities, chronic illnesses, as well as young people actively participate in the development and implementation of preparedness activities.

Women and men are equitably represented in preparedness planning activities.

**Regional Organisations:** Regional bodies disseminate good practices and lessons learned and provide technical support to individual Member States in developing disaster risk reduction strategies.
dialogue and learning between all actors that form part of the disaster management system. This would generally include relevant government agencies; community-based and grassroots organisations; schools; universities; informal education sector; media, technical agencies with specialised knowledge of hazards; international, national, and local disaster management agencies; regional disaster management agencies; international and UN agencies.

Regional organisations participate in strategy development so that regional and cross-border issues are considered in the development of plans and their implementation.

All population data is age and sex-disaggregated.

**International Actors:** A holistic understanding of disaster risk reduction is reflected in the planning, resource allocation, and implementation of internationally assisted programmes at both the national and regional level.

International actors support the sharing of global lessons learned with regards to holistic risk reduction approaches.
### National Institutional and Legislative Frameworks

**Expected Outcome:** An approved national legislative framework that details disaster preparedness, response, and recovery roles, responsibilities, and funding mechanisms is developed or updated, widely disseminated through appropriate channels, local language and media, and consistently implemented.

A national disaster preparedness plan should clearly define the institutional “architecture” necessary to implement it. It should also define a coordination structure, articulating both horizontal (between different sectors) and vertical (between national, sub-national and local entities and authorities) linkages. Although the exact nature of the architecture will vary based on the national context, some common elements that should be clearly specified in the institutional arrangements include:

- **Composition:** Which entities (including non-governmental bodies) are responsible for disaster preparedness at the local, sub-regional and national levels? Is this clearly reflected in their mandates, work-plans and staff job descriptions?

- **Roles and responsibilities:** Which entities are responsible for the various tasks and outcomes considered essential to building preparedness capability? How are different elements expected to relate to each other so that they operate in a cohesive and coordinated manner?

- **Processes, agreements or interagency protocols:** Are arrangements in place to facilitate consistent coordination and communication between different entities with responsibilities for preparedness? Have these been written down and are they agreed upon both by all organisations concerned, and by both senior managers and field staff?

- **Protocols regarding external assistance:** Have rules and procedures for requesting and receiving non-governmental (NGO) assistance, private donations, international or regional assistance, if required, been agreed and approved in advance?

### Indicators

**Governments:** A clearly defined institutional architecture for disaster risk reduction including preparedness is in place and has the commitment of stakeholders at all levels. An approved legislative framework that accurately reflects institutional arrangements, and the relevant policies, protocols, procedures and funding mechanisms is in place.

Mechanisms for compliance and enforcement of laws, regulations and codes, including penalties for non-compliance are in place.

Information on the legislative framework is widely disseminated and the Government actively trains staff and other stakeholders on its content and application.

**Civil Society:** Local organisations and communities participate in the development of the legislative framework, bylaws and policies.

Civil society and community organisations are clear on their roles and responsibilities within the national disaster management system, and are aware of and understand the relevant legislation.

Roles and responsibilities of all non-governmental stakeholders are clearly defined, agreed upon, and disseminated.

**Regional Organisations:** Technical support is provided to States in the development of legislative frameworks.

Harmonised regional policies, procedures, and protocols are in place to facilitate working in a regionally coordinated manner, including mechanisms for requesting assistance intra-regionally when needed.

**International Actors:** Technical support, based on their particular situations and needs, is provided to States and regional organisations in the assessment and development of effective institutional frameworks.

Individual States and Regional Organisations are supported to develop policies and procedures to facilitate the incorporation of international assistance if needed during an emergency.
National Institutional and Legislative Frameworks

- **Civil-Military relations:** Does the system specify under what conditions military assets can be deployed in disasters?

- **Strengthening capacities:** What arrangements are in place to build and maintain preparedness and response capacity, and does this cover capacity building at all levels?

- **Decision making on warning dissemination:** Who is responsible for issuing warnings of impending threats and how is this meant to be done?

In most cases, responsibility for the overall coordination of disaster preparedness activities is assigned to one government department (i.e.; the Prime Minister’s Office) as well as an implementation authority (e.g. a designated disaster management ministry or other authority.) However, it may be necessary to account for specific types of emergencies that may require different agencies assuming authority (e.g. a disease outbreak or a pandemic that may require greater leadership from the Ministry of Health).

Linkages between the Government and external actors including governmental and non-governmental organisations, the Red Cross or Red Crescent Society, the private sector, NGOs and civil society groups should also be clearly be articulated in advance. The preparedness system should also specify how the resources of the United Nations systems in country and from Headquarters might be utilised by all actors, particularly with regards to such areas as Search and Rescue and Disaster Assessment and Coordination.

**A. National Legislatives Frameworks**

It is important that the institutional arrangements necessary for preparedness are also reflected in local/state and national legislation. This law, or laws will guide which activities can be implemented under what conditions and establish who has overall responsibility in a disaster. Such legislation should specify the role of key ministries, national and international organisations and civil society actors in preparedness and response to avoid confusion in the early days of a response. Legislation should also clearly establish decentralised mechanisms and encourage community participation.

Legislation should identify the source of funding and other resources required for preparedness (See section 4.3 for more details). Ideally, it should establish a specific line item, or funding source, in the overall national budget for building preparedness capabilities prior to disasters. It should also outline how additional emergency disaster funds might be allocated in the face of a major disaster.

National legislation should also outline a monitoring and enforcement regime that requires entities responsible for building a preparedness capability to report back on their work, and should set targets for accountability within the system.

**B. Relationship with Regional and International Institutional Framework**

As many disasters cross national borders and affect more than one country simultaneously, it is important to make sure that national legislation is compatible regionally. Ideally, prior bi-lateral and regional agreements on mutual assistance should be signed so that they can be applied should a hazard event occur that exceeds national capacities or crosses international borders.

Rules and procedures for requesting and receiving international or regional assistance should also be agreed and approved in advance, even if it is not anticipated that they will be necessary for responses in most cases.
Chapter 1 - Holistic Approaches, Strategies, and Institutional Frameworks

1.2 National Institutional and Legislative Frameworks

There are a number of initiatives to strengthen and develop international law, principles and guidelines applicable to disasters that Governments may consider when developing their legislative frameworks. In the area of emergency telecommunications, States should for example consider becoming signatories to the Tampere Convention that aims to put in place a framework for reducing regulatory and other barriers to the use of telecommunications in disaster mitigation and relief before disasters occur.

The International Federation of the Red Cross has been active in leading a project to promote International Disaster Response Law, Rules and Principles (IDRL). This has primarily included the development of Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance, which were unanimously adopted by state parties to the Geneva Conventions and the components of the International Red Cross and Red Crescent Movement in November 2007. Issues covered include the issuing of visas to humanitarian personnel, work permits, customs clearance and duties, over flight and landing rights, taxation and domestic legal personality. States should consider using these guidelines in the development of their national legislation.

The Oslo Guidelines on the Use of Military and Civil Defence Assets in Disaster Relief are also a tool for building legal preparedness. The Guidelines establish the basic framework for formalising and improving the effectiveness and efficiency of foreign military and civil defence teams and expertise in international disaster relief operations should they be required as a last-resort measure.

Any resulting legal framework should be consistent with international and human rights law. The IASC Operational Guidelines on Human Rights in Natural Disasters provide guidance on key issues including evacuation, access to goods and services, property and possession, documentation, and freedom of movement for persons affected by disasters associated with natural hazards.

Case study: Costa Rica

Costa Rica’s 2006 National Disaster Management Law clearly outlines the roles and responsibilities of each of the government and non-government partners involved in preparedness and response. This legislation also established a revolving Emergency Fund for Emergency Response as part of the national budget. The law stipulates that 3% of residual municipal funds are to disaster preparedness activities and outlines how additional emergency funds can be accessed. As such, a locally mandated government authority has immediate access to funds when they are needed in the face of a hazard event, and can also fund a number of priority preparedness activities directly.

For more information see: www.preventionweb.org
Expected Outcome: A well-functioning disaster coordination mechanism is in place with clear policies and procedures and in which all entities are clear about their roles and responsibilities.

Indicators

Governments: Coordination mechanisms are in place within the Government to link all Ministries and Government bodies with a role to play in disaster preparedness.

A broader based nationally led coordination mechanism is in place that links this Government system to civil society stakeholders, technical and academic specialists, international and non-governmental organisations and to communities.

Civil Society: Civil society participates and supports the development of disaster preparedness coordination efforts at all levels.

Civil society participates in forums for dialogue with national and international stakeholders that facilitate the sharing of information, experiences and lessons learned.

Civil society organisations are aware of regional policies and protocols and their role within regional disaster management systems.

Regional Organisations: A regional coordination mechanism is in place that brings together representatives from the individual Member States and key regional disaster management agencies.

Coordination mechanisms are established in advance that can be used in the case of regional and intra-regional disasters.

International Actors: Technical and other support is provided for the development of regional and global coordination mechanisms on preparedness.

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1 Please refer also to the John Twigg “Characteristics”: Thematic Area 5: Disaster Preparedness and Response, Component 1: Organisational capacities and coordination.
Chapter 1 - Holistic Approaches, Strategies, and Institutional Frameworks

1.3 Coordination at the Local, National, Regional, and International Level

It is the responsibility of government to coordinate disaster management initiatives. However, external partners can offer a wide range of support services that may be necessary for comprehensive preparedness initiatives and large response operations. Many focus on specialised technical areas (e.g. meteorological forecasting or pandemic preparedness) that are invaluable to any preparedness capability. Increasingly international organisations are stressing the need for improved coordination both between themselves and with Governments. In many countries Inter-Agency Standing Committee Member organisations, (including UN agencies, many non-governmental organisations and some international organisations) are increasingly establishing regular sectoral coordination mechanisms through a mechanism called the “Cluster Approach.”

At the regional level, governments should consider coordinating closely with regional organisations working on disaster related issues. For example, the African Union (AU), Southern African Development Co-ordination Conference (SADCC), and Association of Southeast Asian Nations (ASEAN) have been very active on disaster issues in their respective areas. Most regions also have regional disaster preparedness centres that can act as important resources for skills and information. For example, in Asia, the Asian Disaster Preparedness Centre (ADPC) and Asian Disaster Reduction Centre (ADRC) have extensive experience in training and working with Governments and other stakeholders to increase disaster resilience. The Regional Disaster Information Centre for Latin America and the Caribbean (CRID) and the Caribbean Disaster Emergency Response Agency (CDERA) also have extensive information on regional disaster risk reduction initiatives. There are also a number of global networks and platforms working on disaster risk reduction that can support Governments to strengthen preparedness.

Case study: Mozambique

Mozambique has recently developed multi-level coordination mechanisms and a decentralised model for disaster response. The National Institute for Disaster Management is part of the government’s Ministry of State Administration. It coordinates Ministries and Regional Directorates and ten Provincial Councils for Emergencies. In addition, a stakeholders’ forum, that includes local civil society organisations, the UN, the Red Cross and Red Crescent family, and NGOs functions at the national, regional and local level. These mechanisms worked together to develop a contingency plan as part of an overall Disaster Risk Reduction Framework. While flooding in 2001 killed over 700 people, in 2007, when flooding of somewhat similar if lesser magnitude affected the country, less than 20 people lost their lives.

For more information see: www.preventionweb.org

Case study: Government Preparedness Mechanisms: Bangladesh’s Disaster Management Bureau (DMB)

The DMB works at the national level in close collaboration with district and local authorities, and the concerned line ministries under the overall authority of high–level inter-ministerial committee. It is a technical arm to the Ministry of Food and Disaster Management which co-ordinates all activities related to disaster management from the national to the grass-root level.

During Normal Times, the roles and responsibilities of the DMB include:

• Developing a National Disaster Action Plan, and associated practical guidelines for those responsible for its implementation;
• Helping line ministries and agencies to develop and test their own contingency/action plans;
• Helping district (thana) level authorities to develop and test their own disaster preparedness plans;
• Working with local authorities, the Bangladesh Red Crescent Society, NGOs and others to help union councils and village communities in high-risk areas to develop their own contingency plans and increase their own coping capacity.
• Collaborating with existing training institutes, training materials development units, and NGOs already engaged in relevant training activities, to co-ordinate and promote the production of curricula and relevant training materials for various target groups.

• Collaborating with line agencies, local authorities, existing training institutes, and relevant NGOs, in planning organising training for a wide variety of government personnel, elected officials and others;

• Establishing facilities, information systems operating procedures, and telecommunications systems, for a national emergency operations centre (EOC) control room, for immediate use when an emergency arises;

• Establishing arrangements for the mobilisation of additional personnel for the EOC and to assist local authorities in the field, when required;

• Providing documentation and information services on disaster management for line agencies and others;

• Working with the Planning Commission and concerned line agencies to increase awareness of disaster risks and ensure that such risks, and possibilities to reduce them, are considered and appropriate measures incorporated in development planning;

• Monitoring and reporting to the Government and Parliament on the risks faced, the vulnerability of people and economic assets to known hazards, the status of preparedness in the country and any delays/bottlenecks in the implementation of disaster prevention/preparedness programmes.

During an Emergency

• Ensuring the effective dissemination of appropriate warnings, of flood, cyclones (through collaboration with the Meteorological Department, Water Development Board, Cyclone Preparedness Programme, Radio, TV, and other authorities).

• Activating and operating the national EOC (control room), receiving, analysing, storing, incoming information, arranging rapid reconnaissance and assess mission, where needed.

• Providing secretarial services and expert advice to the National Disaster Management Council and Inter-ministerial Disaster Management Co-ordination Committee (IMDMCC).

• Providing information to, and liaising with, the Economic Relations Division concerning the requirement of international assistance, and with the Ministry of Information.

During Post-Disaster Recovery

• Co-operating with the Planning Commission and line agencies, as required in compiling data on reconstruction requirements and in co-ordinating the preparedness of an integrated reconstruction programme;

• Ensuring that risk reduction measures are built into all reconstruction programmes as much as possible;

• Undertaking a final evaluation, or at least a "post mortem", on the overall operation, drawing lessons and feeding them back to the IMDMCC training activities and up-dated guidelines.

For more information see www.dmb.gov.bd
Chapter 2 - Key Components in Preparedness Planning

Preparedness planning aims to establish a standing capacity to respond to a range of different situations that may affect a country or region by putting in place a broad set of preparedness measures. This includes for example early warning systems, ongoing risk and vulnerability assessment, capacity building, the creation and maintenance of stand-by capacities and the stockpiling of humanitarian supplies. Undertaking a contingency planning process will be a key component in developing an analysis of what needs to be done in this process, and will help in the designing, testing and implementation of response actions.

In order for a plan to be effective, it is essential that all participating actors are meaningfully involved in its development. A process which is built around participation will lead to increased ownership by all those involved and will contribute to the smooth implementation of plans during times of disaster. This includes participation at the local, national and international levels. Coordinated participation will help to work out problems of who is responsible for what when a disaster occurs. It also allows for effective scaling up during disasters; thereby ensuring the required goods and services get to the most affected and vulnerable populations.

ISDR’s Words in Action Guidance highlights that some useful questions to ask when assessing participation in preparedness planning include:

- Are all relevant and mandated agencies represented including technical sectors?
- Are relevant local, regional and international organisations represented? Remember that local organisations have better information on local conditions (social, cultural, political), prevalent risks and present actors that can contribute to the implementation of the plan. At the international level, priority should be placed on those organisations with a more permanent presence in the country.
- Is the actual planning process organised in such a manner whereby all participants are able to attend planning sessions? The process must be well defined prior to initiation (e.g. monthly meetings, multi-day workshops, etc.)
- Have traditional social and community structures and cultural considerations been addressed in the planning and delivery of goods and services?
- Have the differing roles of men and women been considered in the planning process?
- How have community members been involved in decision-making, planning, implementation and evaluation of service provision and programmes?
- Have the specific needs of vulnerable groups been assessed and accounted for?
- Are potential sources of tension between communities sectors assessed and considered?
- Have local capacities been assessed including how community members can be encouraged to actively participate in disaster operation and recovery that is then linked to the local and national planning process?
Sound preparedness planning should lead to an improved state of readiness that ultimately leads to safeguarding lives and livelihoods. The process of developing a national preparedness capability should bring together each of the elements described in this document reflecting legislative and institutional arrangements, coordination structures, contingency and response plans as well as information and communication systems. While the process may require significant time and resources, it is essential that all partners have a genuine sense of ownership, as this is a requirement for sustainability. The objective of the planning process is not simply to write a plan but to stimulate ongoing interactions between parties that should result in written, usable agreements. The plan is a product to facilitate improved readiness; it is not the goal of the planning process\(^2\).

### Case study: Community-Based Disaster Management, Indonesia

Since 1999, Oxfam and local NGO partners have been working in several provinces of Indonesia to strengthen community-based disaster preparedness, including working with local NGOs, district governments and communities to address the impacts of disasters and to reduce vulnerability to risks that they pose. For example, on the slopes of the volcano, Mt. Merapi, in Central Java, local organisations have trained community members on basic concepts of community-based disaster management, preparedness and mitigation of volcanic hazards, capacity and vulnerability mapping, first aid management and establishment of early warning systems. As a result of community-based risk mapping, communities were supported to undertake activities to increase capacity to deal with imminent threats and disasters, including:

- Each village built a security and observation post using its own materials and equipment
- Routine meetings were established for drills (evacuation, first aid, early warning), thus maintaining high levels of preparedness
- Preparation to establish an AM radio station link to be operated by the community as a tool for daily volcano monitoring and communication among villages
- Construction of bunkers in villages to protect people from hot vaporous gases
- Efforts to minimise environment degradation (tree cutting, and extraction of sand and stone) that increases vulnerability to lava slides
- Training for women’s groups to address gender issues
- All participants made a commitment to share their skills and knowledge with their family and community members
- Environmental education on volcano to schoolteachers and students.

In late February 2001, there was a small eruption followed by an explosion of ash and vaporous gas. Residents of two villages fled to evacuation shelters for three days. They were able to demonstrate their readiness and new skills through early detection of the eruption and their orderly evacuation. Government officials arrived in the villages to assist the evacuation hours after the community had evacuated itself. As communities were well prepared, having identified the Evacuation Centre and having prepared basic items needed during the evacuation, no emergency assistance was required. Having identified inadequate roads as a factor hindering rapid evacuation during a volcanic eruption, vulnerable communities lobbied the district government to support improved road construction, and received a favourable and quick response. The government provided asphalt and equipment to rehabilitate one km of road identified as critical for rapid evacuation. The communities contributed stone, sand, labour and funds to the project.

In 2006, there was a major eruption of the volcano and some 20,000 community members used their skills to evacuate the area to safety.

For more information see [www.oxfam.org](http://www.oxfam.org)
## Contingency Planning

**Expected Outcome:** A contingency plan that includes an in-depth analysis of hazard risk, vulnerability, and capacities is developed and regularly updated.

Contingency planning is a management tool used to analyse the impact of potential hazard events so that adequate and appropriate arrangements are made in advance to respond in a timely, effective and appropriate way to the needs of the affected population(s). Contingency planning is a tool to anticipate, pre-empt, and solve problems that typically arise during a humanitarian response. A well-developed and consistently updated contingency plan is an essential element of an overall national preparedness capability.

Contingency plans should be clear, accessible and concise; otherwise the reader risks becoming lost in the detail. A national contingency plan should be readable in one sitting. Sectoral, Ministry or humanitarian agencies plans can be attached as annexes.

A number of UN and disaster management agencies have developed their own manuals on contingency planning that can be adapted to a specific national context. (The selected resources are appended in the Annex of this Guidance which provides some examples.) The Inter-Agency Contingency Planning Guidelines for Humanitarian Assistance endorsed by the IASC outlines four key steps in the contingency planning process: preparation, analysis, response planning, and implementing preparedness.

### Indicators

**Governments:** The contingency plan is multi-sectoral and based on solid multi-hazard assessment and risk analysis. Training and simulation exercises are carried out at least once a year with the participation of all actors and lessons learned are incorporated into revisions of the contingency plan.

**Civil Society:** Civil society participates in the development, testing and implementation of disaster contingency plans.

**Regional Organisations:** Technical and other support is provided to States in the development of a national disaster contingency plan.

**International Actors:** Technical and other support is provided to States and regional organisations in the development of contingency plans.

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3 This section applies the definitions and key methodology components of the IASC Inter-Agency Contingency Planning Guidelines for Humanitarian Assistance.

4 For more details on how to ensure effective contingency planning at the local level, please refer to the 'Characteristics', Thematic Area 5: Disaster Preparedness and Response, Component 3: Preparedness and Contingency Planning.
2.1 Contingency Planning

A. Preparation

The organisation tasked with disaster management is best placed to lead, or coordinate a national contingency planning process although all key stakeholders should be included. Before developing a contingency plan, an analysis of existing emergency plans and procedures, resource and equipment inventories, training records and reviews of past disaster experiences and lessons learned in research studies and reports should be undertaken.

Staff that has been involved in responding to previous disasters, as well as those who have worked on recovery should be involved in the contingency planning process. Representatives of disaster-impacted populations should be involved in developing and/or reviewing the plan. Ensuring that staff with administrative and logistics functions, as well as from financing bodies, or donors also participate can be important in facilitating effective resource flows during an emergency.

While external experts may provide valuable input as part of the team developing a plan, it is important that the user organisations actually determine its content. Hiring an external consultant to develop a plan is not advised. However, it may be helpful to draw on specialist expertise during the contingency planning process or to have a specialist review draft plans before they are finalised.

B. Analysis

A contingency plan should be based on a sound analysis of risk in a specific context, and will therefore reflect the nature of the hazards or threats, as well as the vulnerabilities and capacities in a particular context.

Scenario planning should try to look at a full range of possible hazard events and then to try to prioritise those most relevant to the risk profile of the area. When developing scenarios it is important to undertake an honest analysis of previous disasters, to assess current levels of risk, and to develop projections of the likely humanitarian implications of a particular hazard/threat within a particular risk context.

There is also a need for a clear understanding and appreciation of who is vulnerable and why, and measures that can be taken to strengthen the resilience of disaster-prone communities including the extent to which indigenous coping mechanisms are sustainable. This, invariably, includes a people-centred approach that is sensitive to gender, culture and other context-specific issues that undermine or empower particular groups and individuals. Information must be collected through the undertaking of a detailed vulnerability mapping exercise to clearly identify areas and communities of high vulnerability.

Although scenarios should be based on the most likely and frequent events, it is important to consider what might happen in an abnormally large event, or how responses would need to be adapted in the case of a possible, but less frequent type of hazard event. It is also useful to discuss what would be the early warning signs and triggers that could be used to monitor the progress of a hazard event and its human impact.

A contingency planning exercise should enable designated organisations to spell out their strategy for how they will meet their obligations for building a preparedness capability. As such, the process should clearly articulate the minimum standards of assistance that organisations will be expected to provide.

Plans should be based on clear and established standards, such as those developed by the Sphere project. Issues of the quantity and quality of services expected to be provided should be discussed prior to the disaster, and should be considered both in the pre-positioning of stocks and in budgeting processes. Effective accountability mechanisms should be put in place that are accessible to local actors and communities.

Contingency plans should also include an analysis of how response organisations themselves would function if their own facilities, staff or systems were immobilised by the hazard event (such as key warehouses being
Chapter 2 - Key Components in Preparedness Planning

2.1 Contingency Planning

destroyed in an earthquake, or staff not being able to report to work as usual during a flood). This process, known as ‘business continuity planning’ can be essential to making sure that key organisations remain operational in the face of a hazard event.

Each organisation involved in developing the plan will have different capacities and resources to bring to the table. Each has the right to participate in the development of the contingency plan and each has something to contribute. Different skills and resources are required depending on the specific disaster scenario. While some organisations will be specialised in very technical areas (e.g. meteorological forecasting) while others will have equally essential more generally applicable community based knowledge and skills. By using a process whereby various voices are heard early, a dialogue can be initiated and differences worked out before, rather than during, a hazard response.

What are the Sphere Standards: Humanitarian Charter and Minimum Standards in Disaster Response?

The Sphere Project was launched in 1997 by a group of humanitarian NGOs and the Red Cross and Red Crescent movement. Sphere is three things: a set of standards, a broad process of collaboration, and an expression of commitment to quality and accountability. The project has developed several widely accepted tools, the key one being the handbook.

The handbook outlines clear minimum standards in a range of key areas such as water, sanitation, nutrition, protection and education. Many humanitarian organisations and some governments have made commitments to the effect that assistance by humanitarian actors meets or exceed Sphere standards. Referring to the Sphere standards when developing a response plan can make sure that planned assistance will meet minimum standards. As many donors and international organisations have also agreed to abide by the Sphere standards, referring to them in developing national response plans can also be a tool for making sure that all stakeholders are working towards the same goal and that aid is delivered in an accountable and consistent manner.

The handbook has been translated into many languages, and can be downloaded from www.sphere.org. The project also conducts trainings and a range of other activities to promote its work and encourage humanitarian accountability.

C. Response Planning

Based on agreed upon roles and responsibilities, it is important for participants in the contingency planning process to define response objectives and strategies in more detail. While the institutional arrangements outlined earlier in this document spell out overarching common objectives and strategies for response, the contingency planning process will provide more detail on how they will meet their responsibilities.

In most cases this is done at the ministerial level based on specific sectoral arrangements, and a summary of these can be included in updates to the overall contingency plan. Through the development of these plans, gaps may be identified that should be addressed, or the need for greater joint operations across sectors may be required.
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2.1 Contingency Planning

These plans should also include information on dissemination and communication that explains how impacted populations, key stakeholders such as decision-makers and donors will get information and also how the media will be briefed. It should also enable information and local knowledge to feed back into the government system enabling disaster-affected people to express their views, share lessons learned. Findings from community assessments should also be made available to all interested parties (within and outside community) and should feed into disaster and development planning5.

D. Implementing Preparedness: Consolidating the process and follow-up actions

A plan in and of itself is not enough. The plan needs to be tested and exercised by the people and organisations that will use it. Classroom or actual field simulation exercises, based on specific scenarios, are an effective means to determine how realistic the plan is and to assess the capacity of the different actors. Based on the results and lessons learned during such exercises, plans (procedures, responsibilities, etc.) can then be modified accordingly.

Simulation and response exercises can help to identify strengths and weaknesses, as well as what training is required so that all participants are able to meet their identified responsibilities. The use of simulation exercises also serve to maintain the plan ‘fresh’ in the minds of all the actors and to keep knowledge and skills up to date. The same holds true in the testing of the effectiveness of early warning and alert systems. Conducting lessons learned exercises from previous responses is also important.

Simulation exercises can also be a good means of reviewing how well cross-cutting issues are reflected in the plan, and if vulnerable groups will be able to access extra support during a potential hazard response.

Once the planning process has been completed, it is essential that its content be used to directly increase levels of readiness through activities such as upgrading early warning systems, pre-positioning resources within sectors likely to be impacted, or the provision of contingency budgets for associated government departments with central responsibilities for preparedness.

It is also important that sufficient resources are allocated for the review and dissemination of the plan by all of those who are expected to play a role in its implementation. It is vital that all clearly understand the plan and their role and responsibilities.

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5 For more information on this particular aim see John Twiggs, “Characteristics” Thematic Area 2, Component 2 and Thematic Area 5, Component 6.
2.2 Capacity Analysis and Capacity-Building

Expected Outcome: All organisations, persons and volunteers responsible for maintaining preparedness are equipped and trained for effective disaster preparedness and response.

Building a preparedness capability requires an assessment of current systems and resources. Capacity assessments can reveal hidden assets and resources in governmental agencies and civil society that can be built upon to strengthen preparedness and lead to a more predictable and efficient response and recovery process. Major deficiencies can also be uncovered and made known, spurring corrective actions.

The assessment should be based on the relationship between hazards and the levels of vulnerability in a particular context (and as such, should refer to the analysis undertaken during the contingency planning process). Assessments should not be an extractive process and trainings need to be inclusive and participatory. Capacity building activities need to be based on principles of empowerment of affected communities and of accountability of all stakeholders.

The assessment should consider available resources, existing capacities, operational plans and procedures, as well as communications and coordination systems at every level in order to identify gaps and capacity building needs and to plan accordingly. It should look at all phases of an emergency, including preparedness and response and early-recovery.

In most cases, capacity analysis is best done by an inter-disciplinary team. Executive and organisational support for the assessment, as well as sufficient resources to complete the task is essential. Activities that may want to be considered when undertaking the assessment may include:

### Indicators

**Governments:** An inter-agency, multi-sectoral capacity assessment has been completed resulting in clear measurable actions to strengthen and maintain preparedness capacity.

Appropriate ongoing training programmes, including simulation exercises have been developed and implemented at the national, provincial and local levels.

Funding for institutional capacity building and technical training is included in budgets and available in a consistent and timely manner.

**Civil Society:** Civil society stakeholders participate in the capacity assessment process.

Civil society stakeholders and communities receive adequate training and other support to be able to fulfil their roles within the preparedness system.

Universities, specialised technical agencies, and disaster preparedness organisations are involved in capacity building initiatives for disaster preparedness.

**Regional Organisations:** Training materials and courses are provided to Member States and other stakeholders to increase regional capacity in disaster preparedness and response.

Regional self-assessment conducted to assess capacities available within the region to support States and disaster management actors, and to identify and prioritise action to address possible gaps.

Regional training and capacity standards are in place and disseminated throughout the region.

**International Actors:** Lessons learned and good case studies are collected and shared with other countries.

Technical support provided to regional and national actors to implement capacity building plans as appropriate.

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6 This indicator is also included in Words into Action for Implementation of Priority 5 of the HFA.
Capacity Analysis and Capacity-Building

- Visits to operational facilities of existing authorities with responsibilities for disaster preparedness,
- Interviews with various actors of the system at the national, regional, departmental, municipal and local level, and visits to highly vulnerable regions,
- Observation of simulations and simulation exercises, studies and analysis of official documents,
- Reviews of disaster histories and the participation in meetings on disaster preparedness and stand-by arrangements.

The capacity analysis process should also assess material resource needs, and the availability of funds in comparison to needs. If necessary, a strategy should be developed to bridge the gap between available and required resources. This may include the preparation of specific proposals to international donor organisations (see section below on funding).

The analysis process should be used as the base for developing a comprehensive capacity building programme which will likely include training courses, but also research, evaluation and other activities to enhance preparedness capacity.

Training materials for different target audiences (decision makers, managers, technical staff, community organisations) will need to be developed and made available, and experienced trainers identified. Increasingly, tools such as web-based training are also being used to expand the scope and decrease the costs of training activities.

Training schedules developed should be realistic regarding competing demands on staff time, and should include provisions for updating skills when necessary.

Capacity building activities should include activities to analyse responses to previous disasters and lessons learnt incorporated into future capacity building strategies. They should also include monitoring and evaluations activities to assess changes in preparedness as a result of activities.

Staff and communities should also be trained in the national standards and procedures for all disaster preparedness and response technical areas, including needs assessment for immediate relief and early recovery. Recognising and addressing vulnerability and negative environmental impact should be part of this training. The plan should also consider undertaking technical training modules focusing on adapting technical skills to disaster situations.

It is critical that appropriate trainers be identified either within the national system or through external support. This could include representation from the educational sector, training agencies, agencies with specialised knowledge in all technical areas as well as international; national, regional and local disaster management agencies; and relevant community groups.

The following list serves as a guide in developing an institutional capacity building programme:

- A detailed assessment of current needs and capacities has been completed that specifically addresses policies, procedures and systems at all levels.
- Experienced trainers have been identified and oriented to training requirements.
- Training materials for different target audiences (decision makers, managers, technical staff, community organisations) have been developed and made available including web-based training when feasible.
- A training schedule has been developed including provisions for updating skills when necessary.
- Responses to previous disasters are analysed and lessons learnt incorporated into future capacity building strategies and programmes.
- Institution-wide training in standards, procedures, and protocols are in place.
- Monitoring and evaluation systems have been developed and staff at all levels and all sectors has been assigned to implement them.
Chapter 2 - Key Components in Preparedness Planning

2.2 Capacity Analysis and Capacity-Building

- A communication strategy and system for the timely sharing and distribution of information during times of disaster is in place and appropriate personnel trained in its use.
- Institutional partnerships have been developed as needed with accompanying signed agreements outlining roles, responsibilities and accountability.
- Training modules in all technical areas have been developed focusing on adapting technical skills to disaster situations. All relevant personnel from all participating agencies and communities have been trained accordingly.
- National standards and procedures for all disaster preparedness and response technical areas have been developed and all personnel from all sectors and from other agencies trained in their implementation.
- Technical response teams (logistics, water and sanitation, health) have been formed and trained along with associated procedures and activation protocols.
- Personnel have been trained in damage and needs assessment.
- All personnel have been trained in cross-cutting themes such as gender, environment, culture and working with communities.
- Training in project design and implementation for all disaster management phases is on-going.
**Chapter 2 - Key Components in Preparedness Planning**

### 2.3 Hazard Monitoring, Forecasting and Early Warning

**Expected Outcome:** An effective national and regional early warning system that applies sound scientific information and risk knowledge is in place and able to communicate warnings to mobilise action in all at-risk communities.

Early warning refers to the systematic collection and analysis of information for the purpose of anticipating and identifying emerging, deteriorating, or reoccurring humanitarian crises. Early warning allows the public and emergency responders to take pre-emptive and protective action to avoid harm. Early warning should trigger action by designated agencies or community members to prepare for a hazard event and/or assist the evacuation in an area at risk. In most countries, a number of organisations including meteorological organisations, seismic and volcanic observatories, academic institutions, regional interest groups, UN agencies, agricultural associations and other organisations will all generate hazard-monitoring information.

At a minimum, as part of the national preparedness capability, disaster authorities should be linked to the meteorological and seismic monitoring departments both nationally and regionally, and to key government or academic institutions that consistently track disaster trends. Depending on the hazard type, community-based monitoring mechanisms may be able to monitor changes at the local level. These need to be developed and strengthened by providing support to the development of early warning indicators at community level.

Ongoing dialogue with the scientific and technological communities is crucial, particularly in the context of emerging trends that will impact disaster vulnerability including climate change. Improved data sharing, space based earth and risk observation, climate modelling and forecasting, and strengthened early warning systems can all contribute to enhanced early warning capacity. The challenge for the agency responsible for disaster management is to generate effective analysis and application of multiple information sources, particularly in cases

**Indicators**

**Governments:** National legislation clearly indicates roles and responsibilities of all stakeholders including which agencies are responsible for generating and disseminating hazard warnings to the public.

The national system for issuing early warning has multiple means of reaching the entire population, including difficult-to-access groups, in a clear and easily understood manner.

Early warning systems are based on community knowledge of relevant hazards and risks and include provisions for two-way information flow.

Early warning systems are regularly tested and modified based on lessons learned.

Institutional arrangements are in place and tested to facilitate effective and timely early warning systems including all stakeholders.

**Civil Society:** Local networks regularly provide training on the national system for issuing early warnings.

Communities and other civil society stakeholders are active participants in all aspects of the development, operation, training and testing of early warning systems.

Early warning systems are aligned to community capacity with special emphasis on ensuring communication systems work and warning messages are recognised and understood.

**Regional Organisations:** Information and advisory services are provided to States to support the establishment of early-warning systems.

Local, national and regional risk and multi-hazard maps are developed for high-risk areas.

Regional early warning and dissemination systems for potential widespread cross-border disasters developed.

Regional best practice is shared between Member States.

**International Actors:** Early warning standards and guides developed and disseminated.

Advisory, technical, organisational and policy development support is provided to States and regional organisations in the development, implementation and testing of early warning systems.

Individual States and Regional Organisations are supported to develop policies and procedures to facilitate the incorporation of international assistance if needed during an emergency.
Chapter 2 - Key Components in Preparedness Planning

Disaster Preparedness for Effective Response
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where information can at times be contradictory. As soon as a potential hazard event is detected, organisations with responsibilities within the disaster preparedness system should be notified, and stand-by capacities mobilised for action.

National institutional arrangements for preparedness should clearly designate who can authorise the release of warnings to the public, what organisations should be notified, and the procedures to be followed. Standard warning formats and elements should be prepared in advance, and appropriate means or systems for issuing the warning should be determined, based on the nature of the imminent hazard event. These systems should be consistent for all hazards.

Early warning systems should be based on thorough hazard/risk assessments, and vulnerability and capacity assessments (VCA) at all levels, including at the community level. Community disaster preparedness and response organisations should be capable of acting on EW messages and mobilising communities for action7.

It is imperative that preparedness and warning systems are designed to reach the entire population, including seasonal populations and remote locations. These communication systems should be two-way and interactive to allow for verification that warnings have been received, and to be able to monitor the impact of an event. Warning alerts and messages should be geographically specific so that warnings are targeted to those at risk only.

It is also advisable to ensure that multiple communication mediums are used for warning dissemination (e.g. mass media and informal communication). Warnings generated should be distributed to those at risk by credible sources (e.g. government, spiritual leaders, respected community organisations). Volunteer networks can also be trained and empowered to receive and widely disseminate hazard warnings to remote households and communities. Relying solely on technology, such as mobile telephone communications, which are vulnerable during hazard events, should be avoided.

Dissemination systems should be tailored to the needs of individual communities (e.g. radio or television for those with access; and sirens, warning flags or messenger runners for remote communities). Warning alerts and messages should also be tailored to the specific needs of those at particularly high risk (e.g. for diverse cultural, social, gender, linguistic and educational backgrounds). Messages should incorporate the understanding of the values, concerns and interests of those who will need to take action (e.g. instructions for safeguarding livestock and pets). It is also important to try to minimise the number of false alarms to maintain trust in the warning system.

The organisation in charge of warning should also be constantly linked to a fully equipped and coordinated monitoring network that can provide on-going data analysis during a hazard event. These warning centres need to be operational and staffed at all times with trained personnel. Appropriate resources should also be in place to maintain this equipment and to provide back-up systems in the event of a failure. In establishing these systems, international organisations or experts can provide assistance in the identification and procurement of appropriate equipment and in ensuring its compatibility with regional or international systems. In some cases, it may also be appropriate to negotiate agreements to utilise private sector resources where appropriate in advance (e.g. amateur radios, safety shelters).

In order to be effective, early warning systems must also be tested to make sure that messages are well understood and that systems function effectively. Public education and awareness-raising prior to any hazard event is also essential. Ideally, on-going public awareness and education activities on disaster preparedness should be built in to school curricula from primary schools to university. Public education and awareness raising activities should provide clear information on hazards, vulnerabilities, risks, and how to reduce disaster impacts to vulnerable communities and decision-makers. They should also provide community education on how warnings will be disseminated and on how to respond to different types of hazards after an early warning message is received.

Utilising mass media and folk or alternative media to improve public awareness can also be effective in this regard. In addition, public awareness and education campaigns should be tailored to the specific needs of each target group (e.g. children, emergency managers, media). Public awareness strategies and programmes should be reviewed at least once per year (so that they can be updated as required).

More information on hazard monitoring and early warning is included in: Words into Action; Hyogo Priority Two; identifying, assessing and monitoring disaster risks and enhance early warning.

7 For more information, see John Twigg, Characteristics of a Disaster Resilient Community, ibid.
## Expected Outcome:
An information management and dissemination system that facilitates the two-way exchange of pertinent technical and management information between internal and external stakeholders is developed and maintained.

The communication of accurate, timely, and useful information and instructions to the public is necessary throughout a disaster, not only during the early-warning period. In addition, it is essential that a disaster preparedness capability continually collects and analyses information for its own use, so that it can make sure that humanitarian needs are met and can learn from its experiences.

### A. Public Information Management

Information must reach not only the people at risk but also the public at large. During and immediately after a hazard event there will likely be a high demand for updates and information by those indirectly affected by the disaster event, for example, those with family or friends at risk, or persons who may want to volunteer to assist in providing relief. Systems should be designed and tested in advance in which field staff provide clear information on key issues such as the type and quantities of assistance provided, the most vulnerable locations, key problems encountered or gaps in assistance. Being able to communicate effective and timely information to the wider public will require establishing and maintaining strong relationships with the local broadcast and print media.

Responsibility for the communication of public information during an emergency should be assigned to a specific department or team. Procedures should be established in advance for securing approval by the appropriate authority regarding which information is released through which channels.

### Indicators

#### Governments:
Modalities and resources for handling media relations and information dissemination are planned for during all phases of an emergency. An information system is in place for the collection, compilation, and dissemination of relevant knowledge and information on a full range of hazards, vulnerabilities, and capacities at the local, national and regional levels. Coordination structures regularly schedule exchanges of disaster management information between all levels.

#### Civil Society:
Civil society organisations contribute to and receive information from information systems developed. Mass media campaigns are undertaken to increase awareness of disaster hazards and preparedness steps and the impact of these campaigns is regularly assessed and monitored.

The general public is aware of and informed about disaster risks and how to manage them.

The private sector is actively involved in supporting training and dissemination of knowledge with all sectors of government and the general public.

#### Regional Organisations:
Mechanisms are developed for the exchange of ideas and technical information at the regional level between States and non-governmental agencies involved in disaster management.

Technical and other support in the development of information and communication strategies to improve response is provided.

#### International Actors:
Technical and other support for State, regional and global dialogue, information exchange and the development of information and communication strategies to improve response is provided. Technical support provided to regional and national actors to implement capacity building plans as appropriate.
B. Data Management

It is also important that data is collected and managed throughout an emergency. This will not only increase financial and end-user accountability, but will also be essential if lessons are to be learned for future responses. This may include the creation of a central library or database to store hazard risk information and disaster statistics. The maintenance and updating of such a service is essential.

Clear systems for financial data tracking and management should also be developed and tested in advance. Information management should be a routine activity and should begin in the preparedness phase and continue through the early recovery period. Where possible data is collected, it should also be made publicly accessible. This data will be essential in the evaluation of preparedness systems after a hazard event, and in promoting ongoing learning to enhance systems to develop.
Chapter 3

Readiness for Response

Strengthened preparedness for response in disasters is concerned mainly with two objectives: 1) increasing the capacity to predict, monitor and reduce or avoid possible damage or addressing potential threats and 2) strengthening preparedness for response to a disaster or assist those who have been adversely affected.
Chapter 3 - Readiness for Response

3.1 Emergency Services and Stand-by Arrangements

Expected Outcome: Multi-stakeholder response mechanisms, supported by legislation and accompanied by the necessary resources, are developed and tested based on the contingency plan, enabling efficient action during times an emergency.

Effective emergency stand-by capacity is a critical component of a preparedness system. Stand-by capacity should include monitoring systems as well as human, physical and logistics resources. The contingency planning process should clearly summarise existing stand-by arrangements, and these should be regularly tested and updated based on lessons learned in responses or through simulation exercises.

A core group of staff from each sector or area with responsibilities in the contingency plan should also form the basis of stand-by roster for rapidly deployment in case of an emergency. This core group should be centrally involved in the contingency planning process itself, and should also participate in simulation exercises. These teams should exist not only at the national, but also at the regional and local levels. They should have immediate access to basic communications materials (satellite phones, vehicles, support services) that may be necessary in a response. They should also be very clear on their roles and responsibilities and their reporting relationships to other service providers.

Designating and equipping an Emergency Operations Centre (EOC) is also an important preparedness measure. This is a facility that provides a single focal location for three key activities during an emergency situation or disaster: 1) multi-agency coordination; 2) decision-making; and 3) management of information. It may also assume the responsibility for coordination and allocation of operational resources although this depends on prior inter-agency agreements.

The EOC can be located in either dedicated or multi-purpose space and should include facilities to accommodate 24-hour staffing. EOCs can be very elaborate facilities or very simple conference rooms that are converted when needed. The EOC should be physically arranged to facilitate coordination and information sharing among all participants. A common model provides a central operations room,
in which all functions are located, with adjacent support areas for eating, sleeping, communications and mechanical equipment. The equipment and supplies should be adequate to support prolonged operations and include back-up power, multiple communications systems, information management systems, maps and geographic information systems, etc. The EOC can be particularly helpful in coordinating the activities of different actors, especially those with particularly high-cost and time-sensitive technical roles, such as Search and Rescue teams, specialised medical services and air support.

Representatives from key services and utilities such as hospitals and providers of electricity, water and other essential services, as well as political and administrative leaders; the media, public information officers and communications specialists should be involved in the design of stand-by arrangements and in the establishment of an EOC.

In many cases, much of the loss of life during a hazard event occurs in the first 24-48 hours. Maximising the speed and efficiency of the response effort, and particularly of search and rescue teams, in this initial phase is critical. As specialised search-and-rescue and medical teams are limited and costly resources that will likely be in high demand during the first hours of an emergency, it is essential that their movements are well coordinated to make sure they reach those in greatest need. These and other high-cost, low availability, assets such as air support may be best coordinated through a central EOC. Training community volunteers in advance in basic techniques for search and rescue, as well as in basic first aid for disaster victims can reduce the pressure on such assets, as well as increase the reach of search and rescue activities in the first hours of a disaster.

The contingency planning process should lead to the development of systems to track both the likely needs and actual availability of essential goods, services and human resources that could be immediately deployed in an emergency, (for example, medical resources, food, water, emergency shelter, body bags and other materials; and human resources including search and rescue, communication, engineering etc. that are immediately deployable for a given scenario). These systems should track not only Government resources, but also those of other organisations, such as the Red Cross/Red Crescent, UN organisations or others that may be in the country and earmarked for response. This information should be immediately available to those coordinating responses, and staff must be trained and able to update them regularly during a response.

Depending on scenarios developed, pre-positioning of stocks in safe locations in high-risk areas should be considered. Plans should also include information on how and where additional supplies could be sourced in case of a larger than expected disaster.

Policies should be developed that address issues of compliance and accountability. It is essential that participating entities meet their obligations in a timely and ethical fashion and agree to established terms, based on their respective institutional mandates and their assigned role in building preparedness capability. Assistance should be provided in a manner consistent with the rights of people affected under national and international law. Consequences for non-compliance should be clearly spelled out in any policy or signed document.

It is important to be prepared for both planned and unplanned population movements before, during and after a hazard event. Populations that may have been evacuated prior to a disaster will need support as will those people who may have moved using their own resources. Other groups may also move as a result of the hazard event. Supporting these temporarily displaced populations may require significant resources and can create new stresses on hosting communities outside the initial disaster impacted areas.

Particularly in high-risk areas, every effort should be made prior to a likely hazard event to strengthen communities own response capacities in advance. In areas where communities have been involved in disaster preparedness activities, they will have already been able to map vulnerable areas and populations, will be aware of early warning and evacuation procedures, and often will be able to begin response activities without external intervention. Community members and organisations can also be supported to develop relevant skills for disaster preparedness and response (e.g. hazard-risk-vulnerability assessment, community DRM planning, search and rescue, first aid, management of emergency shelters, needs assessment, relief distribution, fire-fighting). Such interventions are not only usually quicker than external responses; they are also more cost effective and sustainable over the longer term.

There are a number of resources that provide additional assistance in designing and assessing response capacity (see Annex 3 for more details).
**HFA 3.2**

**Incorporating Early Recovery into Preparedness Planning**

**Expected Outcome:** The transition to early recovery activities is considered and planned for contingency and other preparedness planning processes and integrated within comprehensive disaster risk reduction frameworks.

Humanitarian assistance is vital to reducing loss of life and suffering. However, emergency relief is not designed to address the underlying causes that resulted in the disaster, nor does it automatically stimulate rapid and sustainable recovery. In some situations, post-disaster relief efforts may even exacerbate the underlying causes of vulnerability and increase risk.

Previously, reconstruction was often conceptualised and designed to return a disaster-affected community to pre-existing disaster conditions. This often led to rebuilding the conditions of risk that existed before the disaster, thus preparing the ground for future disasters. Recently policy makers and practitioners have begun to look beyond replicating the pre-disaster situation of communities. It is increasingly recognised that closer integration of early recovery activities with life saving interventions can lead to more sustainable interventions that will reduce risk while simultaneously accelerating the recovery process.

It is vital that skilled people with experience in early recovery are included during the development of a preparedness capability. Successful early recovering planning will require the participation of a wide range of actors including:

- Relevant Government Ministries, including potentially some additional departments responsible for developmental initiatives,
- Government local authorities in zones of high disaster risk,
- Finance, planning and infrastructure departments,
- Public and private service utilities (electricity, water supply etc.),
- Local NGOs and community based organisations in the identified high risk zones,
- Private businesses located in the high risk zones,
- Associations of professionals such as engineers and architects,
- Media networks,

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**Indicators**

**Governments:** Key early recovery stakeholders are consulted as part of building a preparedness capability. Early recovery needs are considered in disaster assessments and processes. Funds for early recovery are anticipated in allocation of disaster preparedness and response funds.

**Civil Society:** Civil society organisations and community groups participate in developing early recovery elements of preparedness planning and are active in any implementation strategy.

**Regional Organisations:** Technical advance and other support is provided to States and other stakeholders on early recovery and disasters.

**International Actors:** Technical advice and other support is provided to States and national and regional organisations in the development of recovery strategies.

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*8 For more information see John Twigg’s “Characteristics of a Disaster Resilient Community,” ibid, particularly Thematic Area 5: Disaster Preparedness and Response.*
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- Finance, planning and infrastructure departments,
- Public and private service utilities (electricity, water supply etc.),
- Local NGOs and community based organisations in the identified high risk zones,
- Private businesses located in the high risk zones,
- Associations of professionals such as engineers and architects,
- Media networks,
- Participation by authorities from provincial to local levels who would have executive authority for planning and implementing post disaster recovery and reconstruction plans,
- Finance and budgeting authorities so that they could earmark contingency resources for disaster recovery upfront.

Integrating early recovery into contingency planning can help strengthen community resilience to hazard events. This should include measures to reduce immediate risk, for example by locating shelters for displaced populations outside of flood-zones or in areas at lower risk from future hazards. It should also include actions to reduce threats to livelihoods and assets that will strongly impact a community’s ability to recover after a disaster.

Discussions should begin well in advance of a hazard event about how quickly ‘emergency’ projects to provide basic services such as food, healthcare and education will give way to more transitional, or developmental interventions. Having these discussions early on can potentially lead to more sustainable and effective interventions and can minimise the use of temporary emergency supplies. Activities more compatible with longer-term recovery (such as cash for relief projects in the immediate aftermath of a disaster) may also want to be considered during the response phase to enable populations to retain their assets and livelihoods as far as possible in the wake of a hazard event.

More information on early recovery is included in guidance materials, such as ISDR’s Words into Action related to Hyogo Priority Four: Reducing the Risks in Key Sectors.
**Expected Outcome:** Financial reserves and emergency funding mechanisms are in place to support effective preparedness, response and early recovery as required.

Having adequate funding and resources available for both planning and operations is fundamental to a well-functioning disaster management system. National legal frameworks should include a national budget allocation and institutionalised funding mechanism for risk management and disaster management. This should not be limited to emergency funds that are accessible during times of disasters (e.g. through the proclamation of an emergency declaration) but should be permanent and applicable to preparedness, recovery and rehabilitation activities as well.

The law should also clearly state how relief funds allocated will be replenished at local and national levels after an emergency and where additional funds can be drawn from in case of a larger than anticipated disaster.

Even if a national plan does not recommend first asking for international assistance, appropriate legislation and policies should be in place to facilitate the entry and management of external funds, and ensure they are transferred effectively to local levels, should these be required at some point. This should include the development and approval of systems for mobilising resources such as the passing of financial laws and the creation of standard operating procedures for access and use. In addition, procedures should be in place to expedite customs/tariffs for incoming relief items and other in-kind donations. Procurement procedures should reflect these arrangements.

There are additional means for increasing the availability of funds for use in disaster management, many of which involve agreements that do not necessarily bring in extra funds per se, but rather allow for the freeing up of existing funds. However, all of these need to be developed based on a clear understanding of how they will benefit affected communities and local economies directly. These include:

- Public-private partnerships that offer affordable insurance services that would spread the burden of disaster risks for individuals or for governments,
- Schemes to cover governments, especially of smaller states, against the massive fiscal impacts of disasters (e.g. Commonwealth and Small States Disaster Management Scheme),

**Indicators**

**Governments:** Budgets allocated for preparedness activities are institutionalised as part of the disaster management plan at all levels. Government funding mechanisms for disaster preparedness and response are developed, institutionalised and regularly reported on. A system for ensuring accountability in the use of public resources is developed and institutionalised.

Bilateral agreements are signed with donor agencies for access to funding and technical assistance at the international or regional level for preparedness, emergency and recovery if required.

**Civil Society:** Funds are made available to strengthen the capacity and activities of civil society stakeholders who are active members and contributors to disaster preparedness according to their defined roles and responsibilities.

**Regional Organisations:** Joint funding mechanisms, activated in the case of cross-border events, are in place including appropriate policies, protocols and procedures.

**International Actors:** Support is provided to States, regional organisations and civil society stakeholders in securing the needed funds to implement disaster preparedness, emergency, and recovery plans.
• Mechanisms that spread the risk across international reinsurance markets along with the necessary instruments to link world financiers with poor people,
• Government social protection programmes in partnership with private sector financial service providers,
• Systems for restructuring risk sharing through improved financial intermediation mechanisms.

Including international organisations in the contingency planning process, and integrating disaster risk reduction (DRR) into national development processes such as World Bank funded Poverty Reduction Strategies (PRS) enables governments to have dialogue prior to a disaster about the possible availability of international preparedness and response funds. However, many international disaster funds cannot directly fund government relief operations, but instead require that UN agencies or NGOs undertake the actual work on the ground.

Many UN agencies, the Red Cross and some NGOs have emergency response funds that can be used to fund their operations as part of a national response. In addition, the International Federation of the Red Cross has an additional Disaster Relief Emergency Fund (DREF) that can be used to fund national society responses in small and medium scale disasters. Complementary to this, the United Nations has recently established the Central Emergency Relief Fund (CERF) that can rapidly disburse funds in larger scale emergencies.

More information on funding mechanisms is provided in the additional resources Annex of this Guidance.
Conclusions

Disaster preparedness is just one element of a holistic approach to the reduction of risk associated with natural hazards. However, an adequate level of preparedness can be particularly essential to saving lives and livelihoods in the face of a natural hazard event. This document has provided guidance on key indicators for an effective preparedness capability. In particular it has stressed that preparedness planning should lead to the following outputs:

• Realistic and measurable objectives, outputs, and activities to strengthen and maintain disaster preparedness capabilities that are an integral component of a holistic national disaster risk reduction strategy.

• An approved national legislative framework that details disaster preparedness, response, recovery roles, responsibilities and funding mechanisms is developed or updated, widely disseminated and consistently implemented.

• A well-functioning disaster coordination mechanism is in place with clear policies and procedures and in which all entities are clear about their roles and responsibilities.

• A contingency plan that includes an in-depth analysis of hazard risk, vulnerability and capacities is developed and regularly updated.

• All organisations, persons and volunteers responsible for maintaining preparedness are equipped and trained for effective disaster preparedness and response.

• An effective national and regional early warning system that applies sound scientific information and risk knowledge is in place and able to communicate warnings to mobilise action in all at-risk communities.

• An information management and dissemination system that facilitates the two-way exchange of pertinent technical and management information between internal and external stakeholders is maintained.

• Multi-stakeholder response mechanisms, supported by legislation and accompanied by the necessary resources, are developed and tested based on the contingency plan, enabling efficient action during times of emergency.

• The transition to early recovery activities is considered and planned for in contingency and other preparedness planning processes.

• Financial reserves and emergency funding mechanisms are in place to support effective preparedness, response and early recovery as required.

Preparedness planning is a process that requires constant and sustained vigilance. Developing a preparedness capability is only the first step. Once the basic preparedness activities outlined in this plan have been undertaken, it is critical that human and other resources are allocated to maintain and update systems, and that lessons learned in the wake of hazard events be used to strengthen preparedness in the future.
Annex 1
A Note on the Indicators

Indicators serve as an explicit measure used to determine performance; a signal that reveals progress, or lack thereof; a means of measuring what actually happens against what has been planned or anticipated in terms of quality, quantity, and timeliness. An indicator can be used to measure performance, change in processes, or outcomes.

Factors that need to be taken into account so that indicators are useful include:

- Clarity: absence of ambiguity about what is being measured to ensure the interpretation of the results is unlikely to be challenged
- Cost-effectiveness: the results justify their investment in time and money. The results should be based on affordable processes and activities
- Comparability: outputs should be available for comparison between units and over time
- Measurability: can the indicator be measured?
- Relevance: indicator should be realistic and sensitive in terms of the environment in which change is being measured
- Reliability: the data is of sufficiently reliable quality to provide a basis for confident decision-making
- Practicality: the data can be obtained in a timely way and at a reasonable cost
- Specificity: the indicator should only measure the intended unit or process
- Validity: the effectiveness with which it measures its target

There is a large body of literature on the use of different types of indicators. This typology can be broken down as follows:

- Input indicators measure investment in a particular activity or process and are usually quantitative;
- Output indicators identify what an activity produced;
- Outcome indicators measure what an activity achieved;
- Process indicators refer to the way in which an activity is moving forward or backwards and may be measured against targets or standards. Such indicators are often qualitative;
- Qualitative indicators refer to the way in which an activity is moving forward or backwards and may be measured against targets or standards;
- Quantitative indicators identify quantity or percentage change of a defined target or activity during a given period of time.
Annex 2
Definitions

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 personnel or attributes such as leadership and management. (ISDR 2007)

Contingency planning
A management tool used to analyse the impact of potential crises and ensure that adequate and appropriate arrangements are made in advance to respond in a timely, effective and appropriate way to the needs of the affected population(s). Contingency planning is a tool to anticipate and solve problems that typically arise during a humanitarian response. (IASC 2007)

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. (ISDR 2007)

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 lesson 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) the adverse effects of hazards within the broad context of sustainable development (ISDR 2007).

Disaster Risk 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) adverse impact of hazards, within the broad context of sustainable development (ISDR 2007)

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. This can include latent conditions that may represent future threats and can have different origins: natural (geological, hydro-meteorological 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 characterized by its location, intensity, frequency and probability. (ISDR 2007)
Annex 2 - Definitions

Early Warning system
The provision of timely and effective information, through identified institutions, that allows individuals exposed to hazards to take action to avoid or reduce their risk and prepare for effective response. Early warning system entail a chain of concerns, namely: understanding and mapping the hazard, monitoring and forecasting impending events, processing and disseminating understandable warnings to policy authorities and the population and undertaking appropriate and timely action in response to the warnings. (ISDR 2007)

Mitigation
Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards. (Examples of structural measures are engineering works and hazard-resistant construction, while non-structural measures include awareness-raising, knowledge development, policies on land use and resource management and facilities’ operating procedures.) (ISDR 2007)

Preparedness
Pre-disaster activities that are undertaken within the context of disaster risk management and are based on sound risk analysis. This includes the development/enhancement of an overall preparedness strategy, policy, institutional structure, warning and forecasting capabilities, and plans that define measures geared to helping at-risk communities safeguard their lives and assets by being alert to hazards and taking appropriate action in the face of an imminent threat or actual disaster (OCHA, quoted in ISDR 2007).

Prevention
Actions to provide outright avoidance of the adverse impacts 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.’ (ISDR 2007)

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. (ISDR 2007)

Recovery
Decisions and actions taken with a view to restoring or improving the pre-disaster living conditions of the affected 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. (ISDR 2007)

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. (ISDR 2007) Risk is often also expressed as the equation:

\[
\text{Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Response Capacity}} \quad \text{(IASC 2007)}
\]

Risk is dynamic AND does not affect everyone in the same way.
Scenario development

The process of making informed planning assumption about the likely humanitarian impact of a particular hazard/threat. These assumptions can be drawn up at different levels, including general contextual assumptions such as broad humanitarian consequences and more specific assumptions such as likely humanitarian needs, particular vulnerabilities and capacities of the affected communities and capacity of institutions to respond. The level of assistance that the Government and humanitarian community will be expected to provide, as well as the identification of potential constraints and gaps in the provision of assistance can also be included. (IASC 2007)

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. (ISDR 2007)
Annex 3
Sectoral Responsibilities in Disaster Contingency

Each task area of a disaster response and contingency plans is different and all elements must be accounted for necessitating that different government sectors, and all levels, assume specific responsibilities according to their mandate and capacity. Below is a list of the task areas and some of the key activities that must be included in the contingency plan. Remember that what is presented must be adapted to the scenario being planned for.

Emergency assessment

- Name lead agency responsibility for assessment and determine the roles of others in support of the assessment process
- Establish assessment standards and procedures disseminated to those responsible including the type of information needed, all required forms and who should receive this information
- Form and train assessment teams including sectoral/thematic specialists

Search and rescue and emergency health

- Name agency responsible for search and rescue and ensure they have the required capacity and funding
- Identify who is responsible for administering first aid, medical evacuations and the handling of human remains
- Ensure contingencies accounted for in the case of loss of hospital infrastructure
- Establish protocols for the incorporation of international search and rescue teams in the response operation including the required policies and systems allowing these groups to enter the country and become operational in the shortest time possible

Relief and Logistics

- Ensure there is a stockpile of sufficient quantities of basic relief items
- Procurement systems in place that can be activated quickly as well as pre-arranged contracts with local suppliers. If needed items are not available nationally suppliers have been identified outside of the country
- Implementation of a quality control process in place for purchased items
- Adequate warehousing facilities in all areas of the country must be secured
- Registration, distribution and monitoring processes established
- All necessary logistics mechanisms in place for the transport and distribution of relief items including who will have management responsibility
Annex 3 - Sectoral Responsibilities in Disaster Contingency

• Ensure that airports/seaports able to receive large amounts of goods and that these goods be processed quickly for distribution including customs clearance

• Secure required transport whether through government systems or negotiated agreements with private suppliers?

• Ensure that those responsible for logistics have the required capacity to respond to a large scale disaster

Shelter and community infrastructure

• Identify who has primary responsible for shelter managementIdentify potential shelter in all high risk areas taking into consideration land ownership, issues of weather and terrain

• Secure adequate supply of tents, construction materials, and plastic sheets as well as identify suppliers in case of shortfall

• Assess whether existing infrastructure such as schools, community centres be used for shelter in the different high risk regions as well as if those affected can seek shelter with families and friends

• In each high risk area assess what additional community structures may be needed such as schools and identify who will assume the responsibility for constructing these

Water and sanitation

• Identify who is responsible for the supply of water ensuring the appropriate technical capacities and required equipment is available during times of disaster.

• During the planning phase ensure that cultural consideration such as bathing, drinking, washing and food preparation have been taken into account

• Assess the availability of water in different regions of the country

• Assess best option for the supply and storing of drinking water

• Determine means for water distribution accounting for the potential need to ration supplies

• Identify service providers in the eventuality that water may need to be brought in by water tankers

• Determine whether a water education awareness programmes will be included and plan accordingly

• Assess what type of sanitation may be needed (e.g. latrines), where these will be located if camps are set up taking into consideration health and gender issues

• Determine how will garbage disposal be dealt with

Food, nutrition and household needs

• Identify who is responsible for assessing and coordinating information on food and nutrition needs

• Ensure that food items to be distributed appropriate for the population and whether food can be purchased locally or must be secured from other parts of the country, regionally or internationally taking into account the impact local this may have on the local economy

• Determine the composition (food type, quantity) of the food basket ensuring adequate caloric requirements have been accounted for depending on weather conditions and according to established standards (e.g. SPHERE)

• Plan appropriately for special requirements for children and other vulnerable sectors

• Arrangements for adequate storage

• Establish a food distribution system and who will be responsible for management
Annex 3 - Sectoral Responsibilities in Disaster Contingency

- Determine whether food assistance will also be provided to the local community as well
- Be sure to include community members and beneficiaries in the decision-making process as much as possible
- Assess what household items are needed ensuring the needs of target populations in high-risk areas in order to account for cultural issues and the special needs of women (hygienic kits, sanitary napkins)
- Determine what quantities are needed for both individuals and families
- Establish how distribution will be carried out and recorded for non-food items
- Determine what type of fuel will be used for cooking and warmth and the potential impact of this on health and the environment?

Health

- Identify who is responsible for health assessment and the provision of these services and what other organizations and agencies can provide support
- Determine what health screening/services will be provided ensuring these are coordinated with health authorities
- Ensure that cultural considerations have been accounted for and that target groups are involved in the managing of health services when appropriate
- Assess the potential need for an immunisation programme
- Take into account the needs of special groups (children, pregnant and lactating women, the elderly) when planning
- Include issues pertaining to weather in the plan
- Determine whether health services be accompanied by health education and outreach programmes
- Ensure all required medical supplies and equipment available (e.g. cold chain) and if not plan for alternative procurement
- Secure storage facilities

Telecommunications

- Assess the availability of alternative communications systems in the case of disasters should others be damaged
- Ensure communication equipment (radios, satellite telephones) are in place including required radio frequencies depending on the type of radios used
- Train personnel in the use of each potential communication system

Education and Community Services

- Identify who is responsible for the provision of educational services
- Assess the possibility that the national education system be maintained (structure, curricula, etc.)
- Include the participation of local teachers and other educators in the delivery of education programmes
- Account for special cultural arrangements (e.g. different spaces for girls and boys)
- Determine whether skill training programmes be developed for adults and youth will be provided
- Account for recreation needs of the beneficiary population
Annex 3 - Sectoral Responsibilities in Disaster Contingency

- Assess what equipment and supplies will be needed and ensure their availability.
- Account for the possibility that new infrastructure may need to be constructed and whether beneficiaries provide support (e.g. labour).
- Include income generation for both the re-establishment of prior economic activities and the development of new initiatives that can be easily implemented?
- Assess the degree to which land be rehabilitated for crops and animals agricultural areas.
- Include in the assessment the potential for conflict between beneficiaries who are receiving goods/services/subsidies and local communities who have not been included in programmes and ensure that there are personnel available to address these issues. Include means for reducing the potential for conflict in the planning process.
- Determine whether an incentive programme for services provided by the beneficiary population is appropriate and if so, how this will be implemented.

Security and protection (especially in the case of complex disasters or civil unrest)
- Identify who is responsible for security and protection assessment and provision for both personnel and beneficiaries and how security information will be acquired.
- Include in the plan the specific security and protection needs of the most vulnerable groups such as women, children, elderly and the disabled.
- Establish security and protection guidelines, procedures ensuring all those involved have received training in their implementation including their roles and responsibilities.
- Determine what resources are needed to implement this component of the plan and who can provide them.
- Develop staff evacuation plans.

Monitoring and evaluation
- Identify who is responsible for overall and for sectoral monitoring and evaluation and carry out needed training.
- Establish what information should be included in the overall and operation and for each sector.
Annex 4
Selected Resources

Holistic Approaches, Strategies and Institutional Frameworks

IFRC and WPNS, Well Prepared National Society Self Assessment, 2003

Key Components in Preparedness Planning


APELL, Awareness and Preparedness for Emergencies at the Local Level, is a process designed to create public awareness of hazards and to ensure that communities and emergency services are adequately trained and prepared to respond. APELL is a modular, flexible methodological tool for preventing accidents and, failing this, to minimise their impacts. This is achieved by assisting decision-makers and technical personnel to increase community awareness and to prepare coordinated response plans involving industry, government, and the local community, in the event that unexpected events should endanger life, property or the environment. The APELL Handbook, launched in 1988, sets out a ten-step process for the development of an integrated and functional emergency response plan involving local communities, governments, emergency responders and others. This process creates awareness of hazards in communities close to industrial facilities, encourages risk reduction and mitigation, and develops preparedness for emergency response. See www.unep.fr/pc/apell/process/natural.html

Asian Disaster Preparedness Center (ADPC) in Bangkok offers numerous courses in disaster management planning and related activities, for example its Disaster Management Course; see www.adpc.net.


Community Based Disaster Risk Management and Financial Strategies for Managing the Economic Impacts of Natural Disasters. See www.worldbank.org


Inter-Agency Contingency Planning Guidelines for Humanitarian Assistance, prepared by the Inter-Agency Standing Committee Reference Group on Contingency Planning and Preparedness in 2001 and updated in 2007. Designed to provide a common inter-agency methodology for contingency planning and to ensure effective response to humanitarian needs at the onset of a crisis. www.humanitarianinfo.org


RADIUS - Risk Assessment Tools for Diagnosis of Urban Areas against Seismic Disasters - is a computer software launched by the UN/ISDR - International Strategy for Disaster Reduction in 1996 to promote worldwide activities for reduction of seismic disasters in urban areas, particularly in developing countries. The software offers practical tools for earthquake damage estimation. See www.unep.fr/apell/tools/home.html.

U.S. Federal Emergency Management Agency (FEMA), various planning guides such as Guide for All-Hazard Emergency Operations Planning, and other documents available through its publications center or on its website: www.fema.gov.us

The World Bank Institute has a Disaster Risk Management On-line Program consisting of five courses offered in English, French and Spanish and including Comprehensive Disaster Risk Management Framework, Safe Cities, Damage and Reconstruction Needs Assessment, and, in cooperation with the Environmental Planning Collaborative,

Readiness for Response

Courses are offered by the Asian Disaster Preparedness Center (see www.adpc.net), the World Bank Institute, and Red Cross/Red Crescent organizations on a number of key response issues, including the establishment of Emergency Operations Centres and information management systems.

CAMEO -- Computer-Aided Management of Emergency Operations is a system of software applications used widely to plan for and respond to chemical emergencies. It is one of the tools developed by the Environmental Protection Agency's Chemical Emergency Preparedness and Prevention Office and the National Oceanic and Atmospheric Administration to assist front-line chemical emergency planners and responders. CAMEO can be used to access, store, and evaluate information critical for developing emergency plans. The CAMEO system integrates a chemical database and a method to manage the data, an air dispersion model, and a mapping capability. All modules work interactively to share and display critical information in a timely fashion. (from APELL tools website, www.unep.fr/apell/tools/home.html).


UNDRO/ UNEP, Preparedness Aspects: A compendium of current knowledge, 1984

U.S. Federal Emergency Management Agency (FEMA), various planning guides such as Guide for All-Hazard Emergency Operations Planning, and other documents available through its publications center or on its website: www.fema.gov.us


Disaster Preparedness for Effective Response
Guidance and Indicator Package for Implementing Priority Five of the Hyogo Framework
Annex 5:
SUMMARY of the Hyogo Framework for Action 2005-2015:
Building the Resilience of Nations and Communities to Disasters

Expected outcome, strategic goals and priorities for action 2005-2015

**Expected Outcome**
The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.

**Strategic Goals**

- The integration of disaster risk reduction into sustainable development policies and planning.
- The development and strengthening of institutions, mechanisms and capacities to build resilience to hazards.
- The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes.

**Priorities for Action**

1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional base for implementation.
   - DRR institutional mechanisms (national platforms); designated responsibilities; DRR part of development policies and planning, sector wise and multisector; Legislation to support DRR; Decentralisation of responsibilities and resources; Assessment of human resources and capacities; Foster political commitment; Community participation.

2. Identify, assess and monitor disaster risks and enhance early warning.
   - Risk assessments and maps, multisector elaboration and dissemination; Indicators on DRR and vulnerability; Data and statistical bias information; Early warning: people centered information systems; public policy; Scientific and technological development, data sharing, space-based earth observation, climate modeling and forecasting, early warning; Regional and emerging risks.

3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
   - Information sharing and cooperation; Networks across disciplines and regions; dialogue; Use of standard DRR terminology; Inclusion of DRR into school curricula, formal and informal education; Training and learning on DRR: community level, local authorities, targeted sectors, youth access; Research capacity; multi-risk, socio-economic; application; Public awareness and media.

4. Reduce the underlying risk factors.
   - Sustainable ecosystems and environmental management; DRR strategies integrated with climate change adaptation; Food security for resilience; DRR integrated into health sector and safe hospitals; Protection of critical public facilities; Recovery schemes and social safety nets; Financial risk-sharing mechanisms; Public-private partnership; Land use planning and building codes; Rural development plans and DRR.

5. Strengthen disaster preparedness for effective response at all levels.
   - Disaster management capacities: policy, technical and institutional capacities; Dialogue, coordination and information exchange between disaster managers and development sectors; Regional approaches to disaster response, with risk reduction focus; Review and exercise preparedness and contingency plans; Emergency funds; Volunteering and participation.

**Cross Cutting Issues**

- Multi-hazard approach
- Gender perspective and cultural diversity
- Community and volunteers participation
- Capacity building & technology transfer

DRR= disaster risk reduction
Implementation and Follow-Up

In order to achieve the strategic goals and act upon the priorities for action, the Framework identifies the following tasks for implementation and follow-up by States, regional and international organizations in collaboration with civil society and other stakeholders. The ISDR partners, in particular the Inter-agency Task Force on Disaster Reduction (IATF/DR)* and secretariat, are requested to assist in implementing the Hyogo Framework for Action.

### General Considerations
- **Implementation by different stakeholders, multi-sectoral approach; participation of civil society (NGOs, CBOs, volunteers), scientific community & private sector is vital.**
- **States primarily responsible; an enabling international environment is vital, incl. strengthened regional capacities.**
- **Build multi-stakeholder partnerships.**
- **Particular attention to:**
  - Small island developing States: Mauritius Strategy;
  - Least developed countries;
  - Africa.
- **States, regional and international organizations to foster coordination among themselves and a strengthened International Strategy for Disaster Reduction (ISDR).**
- **Follow-up integrated with other major conferences in fields relevant to DRR; reviews as appropriate.**

### Critical Tasks
- **Designate national coordination mechanisms for the implementation and follow-up, communicated to the ISDR secretariat;**
- **National baseline assessments of the status of DRR;**
- **Draft and update a summary of national programme for DRR including international cooperation;**
- **Develop procedures for reviewing national progress including systems for cost-benefit analysis and ongoing monitoring and review.**
- **Consider accordingly, approving or ratifying relevant international legal instruments and make sure they are implemented;**
- **Promote the integration of DRR with climate variability and climate change into DRR strategies and adaptation to climate change; ensure management of risks to geological hazards.**

### Actors
- **States**
- **Regional Organizations and Institutions**
- **International Organizations (including UN System and IFIs)**

### ISDR (Inter-Agency Task Force on Disaster Reduction and secretariat)
- **Support national platforms and regional coordination;**
- **Register relevant partnerships with Commission on Sustainable Development;**
- **Stimulate the exchange, compilation, analysis and dissemination of best practices, lessons learnt;**
- **Prepare periodic review on progress towards achieving the objectives of the Hyogo Framework and provide reports to the UNGA and other UN bodies.**

### Resource Mobilization: States, Regional and International Organizations
- **Mobilize resources and capabilities of relevant national, regional and international bodies, including the UN system.**
- **Provide and support the implementation of the HFA in disaster prone developing countries including through financial and technical assistance, addressing debt sustainability, technology transfer, public-private partnership and North-South and South-South cooperation;**
- **Mainstream DRR measures into bilateral and multilateral development assistance programmes.**
- **Provide adequate voluntary financial contribution to the UN Trust Fund for DR to support follow-up activities to Hyogo Framework; review usage and feasibility for the expansion of this fund;**
- **Develop partnerships to implement schemes that spread risks, reduce insurance premiums, expand insurance coverage and increase financing for post-disaster reconstruction, including through public and private partnerships; promote an environment that encourages a culture of insurance in developing countries.**

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*The IATF/DR was replaced in 2007 by the Global Platform for Disaster Risk Reduction (www.unisdr.org)*

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Source: Outcome of the World Conference on Disaster Reduction, Kobe, Hyogo, Japan, 18-22 January 2005