



MINISTRY OF SOCIAL SOLIDARITY
Secretary of State for Social Assistance and Natural Disasters
National Disaster Management Directorate

National Disaster Risk Management Policy

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FORWARD

Because of its geography Timor-Leste is vulnerable to disasters caused by climatic changes which can have a big impact on economic and social infrastructure and affect the lives of Timorese people.

In this context, the Government considers as a priority the development of policies which contain measures to prevent natural disaster in order to save human lives and property.

Toward this end, there is a need to consolidate a culture of prevention and to provide the Nation with means to prevent natural disasters and or at least to minimise the effects of disasters. For this purpose, the Government deems as essential priorities the need to:

- *Promote studies of the identification of risks zones;*
- *Create early warning systems, particularly relating to rains and droughts;*
- *Conduct training and capacity building of human resources in the area of disaster risk management*
- *Be able to provide immediate response when disaster occurs;*
- *Establish inter-sectoral coordination mechanisms to respond to natural disasters.”*

**IV Constitutional Government Program
Chair of the Council of Ministers
2007-2012**

Introduction

Our Constitution recognizes and guarantees the right to life of all Timorese citizens. This includes the right to live, healthy and ecologically balanced lives and the obligation to protect the environment for future generations.

In this context, disaster risk management is fundamental to the socio-economic development of the country. The IV Constitutional Government takes this responsibility with seriousness, and the National Disaster Risk Management Policy establishes the objectives for the Disaster Risk Management sector for the next five years.

The Ministry of Social Solidarity, through the Secretary of State for Social Assistance and Natural Disasters, has the task of developing an integrated disaster prevention system. The Ministry must be able to respond to our national reality and be able to provide disaster response support to all national citizens and foreigners who, in case of a disaster, require assistance.

This document is consistent with the National Development Plan, the State Budget and the Financial Plan, and the IV Constitutional Government Program, as well as with the plan for gradual decentralization of public administration.

This policy lays out the Government's approach to disaster risk management. Previously, the Government's approach was contained in the form of National Disaster Management Plan by the Ministry of Interior. However, it has now been transformed into a national policy by the Ministry of Social Solidarity, the Secretary of State for Social Assistance and Natural Disasters and National Disaster Management Directorate. This policy is the result of extensive research and consultations with a range of stakeholders including technical groups, professionals, scientists, specialized regional and international agencies, members of civil society from various parts of the country in addition to other Ministries of the Government and the civil protection services.

The principle and the objectives of the National Disaster Risk Management Policy will enable the Timorese people to be more prepared and participative in the prevention of disasters and disaster risk management with the aim to protect and reduce the loss of human lives and properties, contributing to the wellbeing and tranquility of our people.

Dra. Maria Domingas Fernandes Alves
Minister of Social Solidarity

GLOSSARY

DA	District Administrator
NSA	National Security Advisor
DDC	District Disaster Coordinator
DDMC	District Disaster Management Committee
NDRMIC	National Disaster Risk Management Inter-Ministerial Commission
CND	National Disaster Coordinator
CNOD	National Disaster Operation Centre
CSGD	Sub-District Disaster Management Committee
CSN	National Security Council
CVTL	Cruz Vermelha de Timor-Leste
NDMD	National Disaster Management Directorate
F-FDTL	Forces of Defence Timor-Leste
NDMO	National Disaster Management Office
GTL	Government of Timor-Leste
NGO	Non-Governmental Organisation
NDRMP	National Disaster Risk Management Policy
PNTL	National Police of Timor-Leste
UNDP	United Nations Development Programme
SOP	Standard Operating Procedures
NCMF	National Crisis Management Framework
DAMS	Relief Supply Management System DAMS - Disaster Assistance Management System
SUMA	Disaster Assistance Management System
GIS	Geographical Information System
DMIS	Disaster Management Information System – hazard, risk and vulnerability data and geographical information system at the NDMD
UNDAC	United Nations Disaster Assessment and Coordination Team
UNDMT	United Nations Disaster Management Team
UNMISSET	United Nations Mission in Support of Timor-Leste
UNMIT	United Nations Mission in East-Timor
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs

TABLE OF CONTENTS

Forward.....	iii
Introduction.....	iv
Glossary.....	v
Table of Contents.....	vi
Terminology.....	viii
Executive Summary.....	x
1. Background and Context	
1.1 General Situation.....	1
1.2 Cartographic and Demographic Profile of the Country.....	3
1.3 Risk Assessment	4
1.4 Disaster Risk Reduction Framework.....	4
1.4.1 Risks Assessment and Analyses.....	7
1.4.2 Risk Management	7
1.4.3 Risk Communication to the Public	8
1.4.4 The Social, Economic and Environmental Context of Disaster Risk Reduction Framework..	9
2. Vision, Mission, Basic Principles and Objectives	
2.1 The Vision for the Disaster Risk Management Sector.	11
2.2 The Mission of MSS.....	11
2.3 Main Objectives of Disaster Risk Management.....	11
2.4 Basic Principles.....	13
3. Policies and Priorities	
3.1 General Policies.....	14
3.2 Specific Policies	15
3.2.1 Strategies for the Sector	15
3.2.2 Integrated Hazard, Vulnerability,Risk Analysis to Action Systems (Early Warning)	16
3.2.2.1 Specific Policy 1: Hazard and Vulnerability Monitoring and Analysis	16
3.2.2.2 Specific Policy 2: Regional Early Warning Monitoring and Analysis	17
3.2.2.3 Specific Policy3: Emergency Disaster Reporting and Communication to the Public	18
3.2.2.4 Specific Policy 4: Principles and Responsibilities for Effective Early Warning.	18
3.2.3 Emergency Management.....	19
3.2.3.1 Specific Policy of Safe Refuge and Evacuation Plans	19
3.2.3.2 Specific Policy of Post-Disaster Survey	20
3.2.3.3 Specific Policy on International Assistance	20
3.2.4 Customs, Emigration and Quarantine	21
3.2.5 Financial Consideration	21
3.3 Priority Actions.....	21
3.3.1 Awareness Raising.....	21
3.3.2 Recovery and Knowledge Development.....	23
3.3.2.1 Damage Assessment Reports and Recovery Activities	23
3.3.2.2 Post-Disaster Review.....	24
3.3.2.3 Operational Debriefings	25
3.3.3 Capacity Building Needs and Tools	25

3.3.3.1 Guiding Principles for Training.....	26
3.3.3.2 Capacity Building Tools.....	27
4. Organization and Disaster Risk Management	
4.1 Organizational Structure.....	29
4.1.1 Inter-Ministerial Commission for Disaster Management (CIGD)	29
4.1.2 National Disaster Management Directorate (NDMD).....	30
4.1.3 National Disaster Operation Centre (CNOD).	31
4.1.4 Organizational Structure at District, Sub-district and Sucos.....	32
4.1.4.1 Districts.....	32
4.1.4.2 Sub-Districts.....	32
4.1.4.3 Sucos.....	33
4.2 Declaration of State of Disaster.....	33
4.3 Responsibilities of Departments/ Agencies.....	36
4.3.1 Operational Response and Tasks of Departments/Agencies.....	37
4.4 Sub-Plans and Contingency Plans.....	38
4.4.1 Food Security.....	38
4.4.2 Health	39
4.4.3 Education.....	39
4.4.4 Defense.....	39
4.4.5 Internal Plans for all Departments and Agencies.....	39

TERMINOLOGY

The following terminology and definitions are used in this policy ¹

Biological hazard	<p>Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.</p> <p>Examples of biological hazards: outbreaks of epidemic diseases, plant or animal contagion, insect plagues and extensive infestations.</p>
Building codes	<p>Ordinances and regulations controlling the design, construction, materials, alteration and occupancy of any structure to insure human safety and welfare. Building codes include both technical and functional standards.</p>
Capacity	<p>A combination of all the strengths and resources available within a community, society or organisation that can reduce the level of risk, or the effects of a disaster.</p> <p>Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.</p>
Capacity building	<p>Efforts aimed to develop human skills or societal infrastructures within a community or organisation needed to reduce the level of risk.</p> <p>In extended understanding, capacity building also includes development of institutional, financial, political and other resources, such as technology at different levels and sectors of the society.</p>
Climate change	<p>The climate of a place or region is changed if over an extended period (typically decades or longer) there is a statistically significant change in measurements of either the mean state or variability of the climate for that place or region.</p> <p>Changes in climate may be due to natural processes or to persistent anthropogenic changes in atmosphere or in land use. Note that the definition of climate change used in the United Nations Framework Convention on Climate Change is more restricted, as it includes only those changes, which are</p>

¹ Most of the terminology has been taken from ISDR: *Living with Risk, A Global Review of Disaster Reduction Initiatives*, United Nations, New York and Geneva, 2004, page 2 – 7, <http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm>; some of the terminology is from Abarquez, Imelda & Murshed, Zubair: *Community-Based Disaster Risk Management*, ADPC, Thailand, 2004, pp. 6-9.

	attributable directly or indirectly to human activity.
Community	In the context of disaster risk management, a community can be defined as people living in one geographical area, who are exposed to common hazards due to their location. They may have common experience in responding to hazards and disasters. However, they may have different perception of and exposure to risk. Groups within the locality will have a stake in risk reduction measures (either in favour or against)
Community Based Disaster Risk Management (CBDRM)	A process of disaster risk management in which at-risk communities are actively engaged in the identification, analysis, treatment, monitoring and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities. This means the people are at the heart of decision-making and implementation of disaster risk management activities. The involvement of the most vulnerable is paramount and the support of the least vulnerable is necessary. In CBDRM, local and national governments are involved and supportive (ADPC-CBDRM-11, 2003).
Counter measures	All measures taken to counter and reduce disaster risk. They most commonly refer to engineering (structural) measures but can also include non-structural measures and tools designed and employed to avoid or limit the adverse impact of natural hazards and related environmental and technological disasters.
Disaster	<p>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.</p> <p>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.</p>
Disaster risk management	<p>The systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters.</p> <p>This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.</p>
Disaster risk reduction (disaster reduction)	The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

	<p>The disaster risk reduction framework is composed of the following fields of action (as described in ISDR's publication 2002 "Living with Risk: a global review of disaster reduction initiatives", page 23):</p> <ul style="list-style-type: none"> • Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis; • Knowledge development including education, training, research and information; • Public commitment and institutional frameworks, including organizational, policy, legislation and community action; • Application of measures including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments; • Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities.
Early warning	<p>The provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.</p> <p>Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population, and undertaking appropriate and timely actions in response to the warnings.</p> <p>In the conflict management sector, early warning is a product of an ‘Analysis to Action System’ that is conceptualized as a comprehensive and integrated end-to-end risk management system that allows communities, states and international community to make informed decisions and actions to mitigate conflict and disasters. Analysis to Action is applied in this Policy as a mechanism to manage integrated disaster, conflict and climate change risk.</p>
El Niño-southern oscillation (ENSO)	<p>A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns.</p> <p>The El Niño part of ENSO refers to the well-above-average ocean temperatures along the coasts of Ecuador, Peru and northern Chile and across the eastern equatorial Pacific Ocean, while the Southern Oscillation refers to the associated global patterns of changed atmospheric pressure and rainfall. La Niña</p>

	is approximately the opposite condition to El Niño. Each El Niño or La Niña episode usually lasts for several seasons.
Emergency management	The organisation and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation. Emergency management involves plans, structures and arrangements established to engage the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to respond to the whole spectrum of emergency needs. This is also known as disaster management.
Environmental degradation	The reduction of the capacity of the environment to meet social and ecological objectives and needs. Potential effects are varied and may contribute to an increase in vulnerability and the frequency and intensity of natural hazards. Some examples: land degradation, deforestation, desertification, wildland fires, loss of biodiversity, land, water and air pollution, climate change, sea level rise and ozone depletion.
Evaluation	The assessment of results and impact of a project in order to see to what extent the project objectives have been achieved. Mid-term evaluation is done to analyze the project halfway and if necessary make some adjustment or changes. Terminal evaluation is undertaken to determine whether the overall purpose of the project is reached.
Forecast	Definite statement or statistical estimate of the occurrence of a future event (UNESCO, WMO). This term is used with different meanings in different disciplines.
Geological hazard	Natural earth processes or phenomena that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Geological hazard includes internal earth processes or tectonic origin, such as earthquakes, geological fault activity, tsunamis, volcanic activity and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surfaces collapses, expansive soils and debris or mud flows. Geological hazards can be single, sequential or combined in their origin and effects.
Geographic information systems (GIS)	Analysis that combine relational databases with spatial interpretation and outputs often in the form of maps. A more elaborate definition is that of computer programs for capturing, storing, checking, integrating, analysing and displaying data

	<p>about the earth that is spatially referenced.</p> <p>Geographical information systems are increasingly being utilised for hazard and vulnerability mapping and analysis, as well as for the application of disaster risk management measures.</p>
Goal group	<p>Goal group is a segment of a population sharing characteristics relevant to a specific issue or the object of a given information campaign. Goal groups can be defined, among other categories, by the level of fear or professional affiliation. Ideally, for maximum effect, each specifically identified and defined goal group should be the target of separate, tailor-made messages.</p>
Hazard	<p>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.</p> <p>Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability.</p>
Hazard analysis	<p>Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behaviour.</p>
Hydrometeorological hazards	<p>Natural processes or phenomena of atmospheric, hydrological or oceanographic nature, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.</p> <p>Hydrometeorological hazards include: floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wildland fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches.</p> <p>Hydrometeorological hazards can be single, sequential or combined in their origin and effects.</p>
La Niña	<p>See El Niño-Southern Oscillation (ENSO)</p>
Land-use planning	<p>Branch of physical and socio-economic planning that determines the means and assesses the values or limitations of various options in which land is to be utilised, with the corresponding effects on different segments of the population or interests of a community taken into account in resulting decisions.</p> <p>Land-use planning involves studies and mapping, analysis of environmental and hazard data, formulation of alternative land-</p>

	<p>use decisions and design of a long-range plan for different geographical and administrative scales.</p> <p>Land-use planning can help to mitigate disasters and reduce risks by discouraging high-density settlements and construction of key installations in hazard-prone areas, control of population density and expansion, and in the siting of service routes for transport, power, water, sewage and other critical facilities.</p>
Mitigation	Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.
Monitoring	The continuous or periodic review and overseeing by stakeholders of the implementation of an activity, to ensure that input deliveries, work schedules, target outputs are proceeding according to plan.
Natural hazards	<p>Natural processes or phenomena occurring in the biosphere that may constitute a damaging event.</p> <p>Natural hazards can be classified by origin namely: geological, hydrometeorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.</p>
Preparedness	Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.
Prevention	<p>Activities to provide outright avoidance of the adverse impact of hazards and means to minimise related environmental, technological and biological disasters.</p> <p>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 contributes to promoting a “culture of prevention”.</p>
Project	An organised social process involving the provision of inputs (cash, labour, technology, methodology) over a defined period of time to implement activities and generate outputs or results, to achieve a previously defined objective or purpose and desired development goal (impact/effect).
Project planning	Sequencing of tasks to achieve the project objectives through timely project implementation and ensuring efficient use of resources. It includes determining tasks, benchmarks of achievements, assigning responsibilities, developing a timetable based on activities, and determining resource allocation and

	timing.
Public awareness	<p>The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards.</p> <p>This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster.</p> <p>Public awareness activities foster changes in behaviour leading towards a culture of risk reduction. This involves public information, dissemination, education, radio or television broadcasts, use of printed media, as well as the establishment of information centres and networks and community and participation actions.</p>
Public information	Information, facts and knowledge provided or learned as a result of research or study, available to be disseminated to the public.
Recovery	<p>Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.</p> <p>Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.</p>
Relief/response	The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration.
Resilience/resilient	The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.
Risk	<p>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.</p> <p>Conventionally risk is expressed by the notation $Risk = Hazards \times Vulnerability$. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability.</p>

	Beyond expressing a possibility of physical harm, it is crucial to recognise that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore do not necessarily share the same perceptions of risk and their underlying causes.
Risk assessment/analysis	<p>A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.</p> <p>The process of conducting a risk assessment is based on a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability and exposure, while taking particular account of the coping capabilities pertinent to the risk scenarios.</p>
Risk communication	<p>Risk communication is a critical component of the risk management process targeted to the provision of information to the public, which will reduce fear and anxiety before, during and after the hazard impact.</p> <p>A successful information campaign (possibly consisting of several information projects) is greatly dependent on the overall <i>credibility</i> of central sources, public information releases, the channels used for transmission, and the diffusion of messages to psychologically affected masses. To manage these masses, disaster planners should consider <i>goal group</i> (see terminology) strategies.</p> <p>Credibility is the discriminating quality of an information source providing crucial information to a risk-prone group of more or less frightened people, and to some extent also of the medium used as channel between the source and the information receivers.</p>
Risk reduction measures	These are various activities, projects and programs that the communities may identify after assessing and analyzing the risks that they face. These measures are specifically intended to reduce the current and prevent future risks in the community.
Structural/non-structural measures	<p>Structural measures refer to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure.</p> <p>Non-structural measures refer to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the</p>

	provision of information, which can reduce risk and related impacts.
Sustainable development	<p>Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.</p> <p>It contains within it two key concepts: the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and the future needs.</p> <p>Sustainable development is based on socio-cultural development, political stability and decorum, economic growth and ecosystem protection, which all relate to disaster risk reduction.</p>
Technological hazards	<p>Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.</p> <p>Some examples: industrial pollution, nuclear activities and radioactivity, toxic wastes, dam failures; transport, industrial or technological accidents (explosions, fires, spills).</p>
Vulnerability	<p>The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.</p> <p>For positive factors, which increase the ability of people to cope with hazards, see definition of capacity.</p>
Wildland fire	Any fire occurring in vegetation areas regardless of ignition sources, damages or benefits.

Executive Summary

This National Disaster Risk Management Policy (Policy) aims to respond to the constitutional mandate to identify priorities to guide Government objectives and strategies in order to guarantee the security and safety of our citizens and their property and to safeguard our natural resources against natural or human-induced disasters.

A contextualised analysis of the current and future gaps and needs linked to a coherent vision and mission for peace and security for the population and the promotion of continual national economic growth justify and guide the present proposal.

Timor-Leste is located in a region that is highly vulnerable to natural disasters, include droughts, cyclones, earthquake, floods, storm winds, landslides, emerging infectious diseases and pests such as locusts. A retrospective analysis and assessment of disasters occurring in the region shows that there is a need to develop and strengthen national capacities to manage natural disasters, as well as disasters and emergencies caused by human beings.

It is the objective of the Ministry of Social Solidarity, in partnership and cooperation with other relevant institutions and government agencies, civil society, international partners and communities to be effectively organized in order to be able to guarantee the human security of the population in case of a disaster.

The Policy outlines plans to develop disaster risk management programs including risk analyses, vulnerability monitoring, early warning, emergency management, post-disaster research and review, recovery and knowledge development, awareness raising and human resource development. The Policy is in line with internationally recognised approaches to DRM, notably the Hyogo Plan of Action 2005-2015. The policy also takes into account socio-cultural, local, regional, political, economical and environmental realities of Timor-Leste. It recognises the need for institutional capacity building, organizational and decentralised administration of disaster risk management as well as the need for participation of children, youth, women and vulnerable groups.

In this context, the Ministry of Social Solidarity through the National Disaster Management Directorate (NDMD) is seeking to: engage all levels of society; promote the integration of disaster management in different government development programs; improve disaster risk management in all sectors at all institutional and operational levels; achieve financial sustainability through the use of greater resources; and preserve our natural environment to guarantee peace for all Timorese people.

These priorities need to be refined and improved through evaluation, monitoring, improving our meteorology services, decentralisation and developing better oversight mechanisms for disaster risk management beginning with the development of process and results focused performance indicators.

In regard to institutional, technical and human capacity development, administration and management are priority issues that require special attention. Improving the organisation and management of disaster risk management services as well as training and building the capacity of disaster managers at national, district and community levels in community awareness raising, among other things, constitutes a key challenge for the Ministry of Social Solidarity to ensure the sustainability of its policies and actions.

The creation of national, district and local bodies for disaster risk management with the skills and mandate to provide technical and political assistance to disaster managers to be supported, in turn by community members and non-governmental and international institutions provides a framework for the State and the community to work together, recognising the needs, rights and obligations of each party.

Finally, the integration of the disaster management sector in all plans and development programs of Government institutions, constitutes an important aspect for strengthening the post-disaster recovery process.

This Policy is the result of a genuine and integrated vision of civil society, institutions involved in disaster management, political leaders and Government agencies and bodies. It provides platform from which to develop programs, plans and management in disaster risk management over the period of 2008 – 2012.

1

BACKGROUND AND CONTEXT

1.1 General Situation

This document is a result of the work of the National Disaster Management Directorate (NDMD) established by the United Nations Transitional Administration East Timor (UNTAET), the East Timor Transitional Authority (ETTA) and UNDP who conducted an overall analysis of the risks of and vulnerabilities to disasters that face Timor-Leste.

A turning point for Disaster Risk Management (DRM) in Timor-Leste was the Indian Ocean Tsunami which occurred in late December 2004, immediately after which a strong sense of vulnerability to potential earthquakes and tsunamis emerged among the Timorese community. This led to recognition in Timor-Leste of the need for a proactive approach to managing disasters.

In response to the raised level of concern among the community, the importance of disaster management increased as a priority for the Government. The Government of Timor-Leste now keenly supports the development of DRM policy directives and dissemination channels for distribution of information on risks of disasters. In particular, two points are highlighted:

- **Investment in preparedness** is essential. This includes **contingency planning** for key sectors and substantial **capacity building and training** in the areas of civil protection, education, health, public works and communication, among others. Furthermore, expediting membership in existing early warning systems is essential and a civil society right. However, regional and national systems will only work if they are linked to local warning and emergency response systems that ensure that the warning is received, communicated and acted upon by the potentially affected communities.
- The approach adopted by the Government is an **all-hazards approach**, which deals with the management of all hazards.

While the Government of Timor-Leste shares the internationally accepted principles of disaster risk management, there are many areas that require improved performance in order to reach internationally accepted standards. To improve the profile and performance of disaster risk management the Government will focus on:

- *Elevating disaster risk management as a policy priority*
- *Generating political commitment*
- *Promoting disaster risk management as a multi-sector responsibility*
- *Assigning accountability for disaster losses and impacts*
- *Allocating necessary resources for disaster risk reduction*
- *Enforcing the implementation of disaster risk management*
- *Facilitating participation from civil society and the private sector*

1.2 Cartographic and Demographic Profile of the Country

Timor-Leste is located in an area that is highly vulnerable to natural disasters. Timor-Leste is vulnerable to earthquakes and associated hazards such as tsunami due to its geographical location north of the subduction zone between the Eurasian and Australian plates. It experiences the El Niño/ Southern Oscillation (ENSO) related weather anomalies associated with droughts in this region occurring in cycles every couple of years. Timor-Leste is prone to floods, landslides and erosion resulting from the combination of heavy monsoonal rain, steep topography and widespread deforestation. In addition to El Niño, the La Niña weather phenomena also has had a significant impact on Timor-Leste communities, both positive, in terms of improving agricultural production and water security, and negative in terms of increased flooding, landslides and erosion. Although Timor has no active volcanoes, Timor-Leste could be affected by the Holocene volcanic groups on neighbouring Indonesian Islands to the West and East. To date, cyclones have a low frequency of occurrence. In the future, however, this is likely to change. Climatologists are predicting that, due to climate change, Timor-Leste is likely to become increasingly vulnerable to cyclones, tropical storms, flood, landslides and vector born diseases like Malaria, Dengue and other emerging infectious diseases. Radical climate adaptation measures will be required.

Trans-boundary hazards are also a significant threat to Timor-Leste's human and national security. Timor is within a major migratory bird pathway between Australia and Asia, a vehicle for the possible transmission of animal to human disease with pandemic potential, notably the highly pathogenic Avian Influenza (H5N1). Agricultural pests such as locusts are a major threat to a country already vulnerable to food in-security. Timor also sits within major flight paths for Australasian and Asia aviation, shipping and submarine traffic channels but has limited capacity to respond to an emergency in these areas.

Timor-Leste's human and national security, recovery and development has recently been challenged by a significant crisis of internal conflict. Chronic, protracted and worsening human and national security vulnerabilities over recent years require the Government, communities and partners to strengthen integrated community resilience to both disasters and conflict crisis. Whilst oil and gas revenue offers a positive economic outlook for recovery, the poor state of the environment and the continued dramatic rate of degradation and the forecasted impact of climate change makes this Policy together with policies relating to National Security and the environment a critical tool for national recovery and development.

Timor-Leste is divided into 13 districts and 65 sub-districts based on the divisions inherited from the Portuguese and Indonesian periods. The populations² of the districts (in order from the most populated to the least populated) are as follows: Dili (175,730), Ermera (103,169), Baucau (100,748), Bobonaro (83,579), Viqueque (65,449), Oe-cusse (57,616), Lautem (56,293), Liquica (54,973), Covalima (53,063), Ainaro (52,480), Manufahi (45,081), Aileu (37,967), and Manatuto (38,580).

The Hazard Concentration Index Map for Timor-Leste in Annex 1 shows that most of the more populated settlements are located far away from high hazard risk areas. However, the northern and southern coasts of Timor-Leste are considered to be high-risk areas for earthquake hazards and associated tsunamis due to their proximity (100 km) to an active

² Population figures are from the 2004 Census (provisional counts).

subduction zone, where the Australian-Irian Continental Plate collides and moves under the Eurasian Plate (the Timor trough).³

Contrary to the local belief, past experience and scientific data relating to recent tsunamis indicate that islands surrounding mainland would not offer any protection against a tidal wave or tsunami.

Timor-Leste is located in one of the most seismic-tectonic active areas in the region. For example, two earthquakes occurred on 12 November 2004, with an epicentre just 40 km from Dili, one with a magnitude of 6.4 at 18 km depth and one of magnitude 7.3 at 38 km depth. The destruction of homes and other property on Kepulaun Alor in Indonesia was due to the close proximity of the epicentre to population centres and could have also easily occurred in Dili. On 2 March 2005, an earthquake of magnitude 7.5 with an epicentre in the Banda Sea was felt strongly in Dili. Regional seismicity has been quite active in late 2004, early 2005 and late 2007 to early 2008.

A map showing earthquake epicentres in the Timor-Leste area from 1973-2006 can be found in Annex 2 and a Tsunami Hazard Map for Timor-Leste can be found in Annex 3.

1.3 Risk Assessment

A number of natural and human generated hazards could cause major emergencies and disasters in Timor-Leste. Annex 4 discusses the potential of different hazards to affect the country and its population. While some hazards impact every year, there are others that cause casualties and damage less frequently. Some of less frequent events, such as earthquakes may have a much greater impact than the more common events, such as heavy rains and floods. Response plans at all levels and across all sectors must take these greater impacts into consideration. Communities in high-risk areas should receive priority for community based disaster risk management training and risk communication.

1.4 Disaster Risk Reduction Framework

As a result of new thinking in disaster management, this policy uses risk management methodologies as displayed in Figure 1 below. The rationality and the methods of disaster risk management are a blend of traditional disaster management concepts and risk management approaches. A systematic analysis and decision-making process is being used widely, therefore providing a common language among all emergency responders facilitating both coordination and integration. Disaster risk management strategies will mitigate the effects of natural, human-induced and technological hazards.

With an array of issues and questions, a means of ordering and prioritising an approach to disaster response is needed. Risk analysis is an organised way to identify and evaluate hazardous conditions and to take actions to eliminate, reduce or control the risk(s) posed by such conditions. These steps can be used to formulate policies and action plans, structure planning, and identify areas needing attention, both before the disaster – including reducing the impact of the hazard agent and any preparedness needed – and in the response phase. The

³ Timor-Leste, has been affected by a number of tsunami events, although not with such destructive power of the Indian Ocean Tsunami of 26th December 2004. Perception of risk by the Timorese population was heightened in 2005 and even in the absence of either an earthquake or tsunami, the population sought refuge in elevated areas around the country .

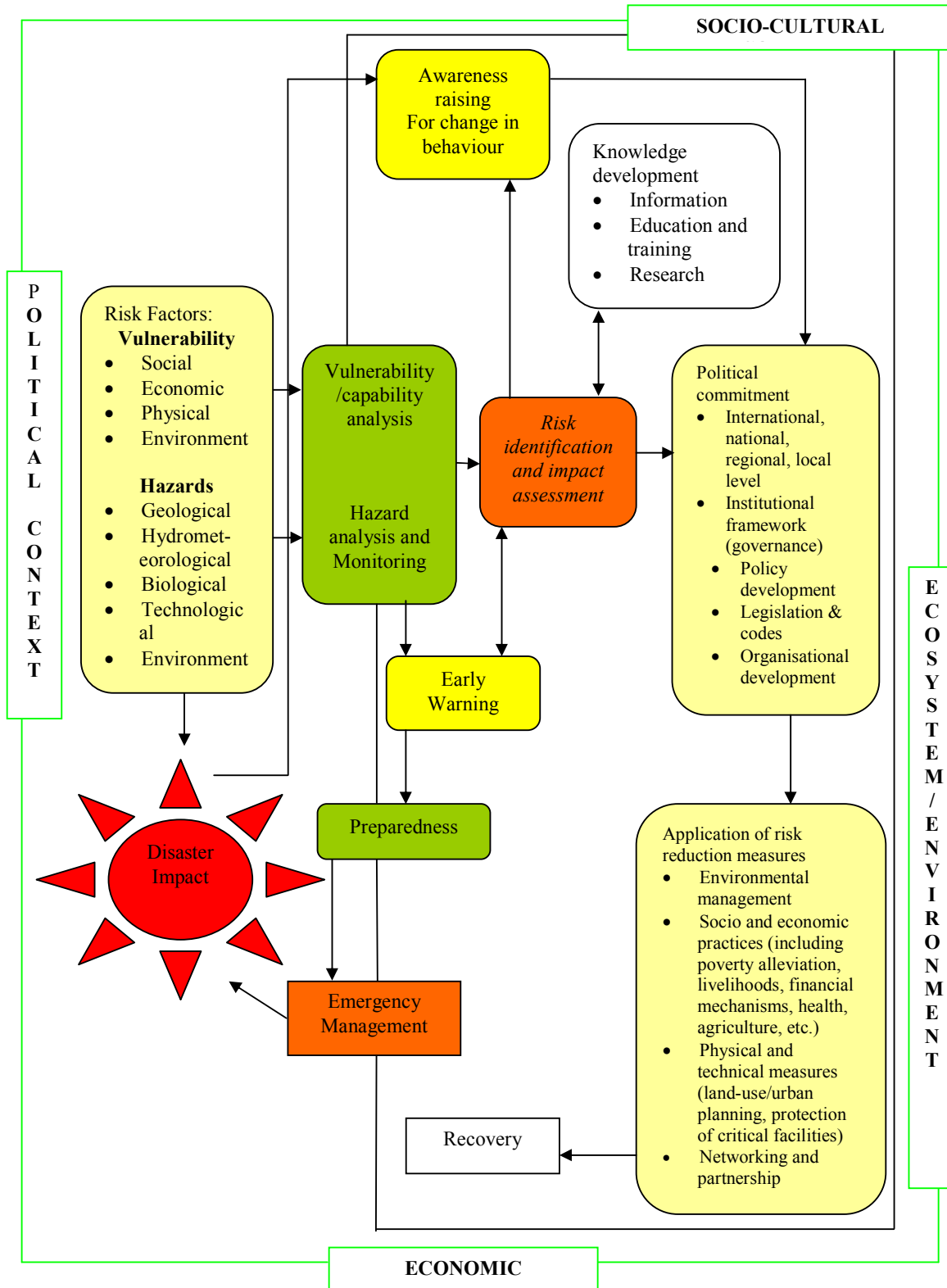
emphasis of this process is on managing progress towards disaster reduction objectives rather than producing a “plan” as an end product.⁴

The disaster risk management approach, as represented in Figure 1 below, is generally accepted to consist of the following:

- *Risk assessment and analysis*
- *Risk management and*
- *Risk communication*

⁴ ISDR (2004). *Guiding Principles, National Platforms for Disaster Reduction*. Geneva.

Figure 1. A Framework for Disaster Risk Reduction⁵



⁵ Source: UN International Strategy for Disaster Reduction ISDR (2004). *Living with Risk: A Global View of Disaster Reduction Initiatives*, Geneva, p. 15.

1.4.1 Risks Assessment and Analyses

Risk assessment includes the identification of **hazard agents** (seen as hazards risk factors in Figure 1, e.g., tsunamis, flooding, oil leakage, and urban fires), exposure and consequence assessment, and risk characterisation. The first, and perhaps most difficult step in the process, is to identify all hazardous conditions. For example, an earthquake can affect and damage key infrastructure such as water supply systems, roads, bridges petroleum depots, power, housing and trigger secondary events such as liquefaction, landslides, rock falls, raised and drops in land against sea level and flooding from water and irrigation systems. Risk cannot be reduced unless vulnerability and hazardous conditions are recognised before they trigger impact.

Once a hazardous condition is recognised it must be evaluated to determine the threat or risk it presents. The level of risk is a function of the **probability** of exposure to the hazard and the **severity** of the potential harm that would be caused by that exposure. Some hazards may present very little risk to people or equipment (e.g. a toxic chemical well enclosed in a strong container in a stationary secure and unpopulated area). Additionally, risk factors include social, economic, physical and environmental vulnerabilities.

Vulnerability is the condition or situation in which communities/settlements are already exposed to a threat and the hazard impact will only make the situation worse. For example, a family living on a riverbank is more vulnerable to a certain threat (in this case flooding) than another family whose house is located further away and on higher land that cannot be reached by the river even if it floods.

1.4.2 Risk Management

Risk management encompasses all those activities required to reach and implement decisions on risk reduction or elimination. Once a risk has been characterised, an informed decision can be made as to what control measures, if any, are needed to reduce the risks or eliminate the hazard. Control measures can consist of any action for risk reduction or elimination. Often control measures involve reducing the probability of occurrence or the severity of an incident.

Risk management also must start at the lowest possible level of government administration and community with each level accepting responsibility for an appropriate level of mitigation, preparedness, and response and/or recovery activity. This includes strengthening and supporting community level initiatives on disaster risk reduction and encouraging active participation or involvement of people in the process of risk assessment, planning, implementation of disaster risk management strategies and activities.

People within the community or village suffer the most from disaster damage. In practice, they are the first front line responders which may include ‘fright and flight’ human survival measures such as evacuating to higher ground and harvesting survival foods, building indigenous shelter and use of traditional medicines. Depending on the communities’ knowledge of certain hazards, physical and psycho-social health, they often undertake precautionary measures and respond to the disaster by assisting before outside help comes. An increase in the frequency of disasters and consequent impact on lives and livelihoods has led community members to develop some coping mechanism/strategies based on their existing capacities. However, because of limited resources, knowledge, skills and technical support, communities are often outside any rapid assistance network. The ability of communities to manage emergencies limits the number of disasters requiring external

assistance. At present many emergencies become disasters with when local resources do not have the capacity to respond. For example, often requests are made to Dili for assistance following vehicle accidents where a person is trapped and must be removed from a vehicle.

In partnership with communities, NGOs, the National Red Cross, the United Nations Systems and development partners, this Policy and the Disaster, Crisis and Climate Adaptation Management Strategy will direct community risk management capacity development programming for national risk priorities. This will need extensive integrated investments in community and District Administration human and physical resources to increase community resilience to disasters, conflict and climate change. This would commence with Community Based Disaster Risk Management (CBDRM) partners assisting communities to map hazards, vulnerability and risk. Out of the National Risk Priorities, community specific risks will be identified and community centric management solutions identified. Community-based activities may include first aid, swimming lessons, traditional and universal survival skills. For coastal communities hazard specific survival skills will include recognising and responding to tsunamis, lowland, marine flooding and sea level change. For upland and highland communities risk management would cover risks such as flash flooding, wind damage, landslides and climate change.

If a community at the village level is unable to meet disaster management needs, help should be sought from the sub-district administration. In turn, the sub-district may seek assistance from the district if it also lacks the resources to meet a need. Further the District Administration may seek national assistance when its resources cannot meet a need. If the government has reached the limit of its capacity to deal with significant events, assistance may be sought from the international community in-country and or externally.

Risk management of responses to emergencies is based on the principle that response activity should be planned well in advance during the preparedness phase including analysis and early warning. A Framework for Disaster Risk Reduction displays the various disaster-development measures that will reduce further risks, such as land use planning in safe areas, building codes and protection of critical facilities such as chemical/power installations. The sharing of knowledge and dissemination of risk information is an essential component for protection of the civil society.

1.4.3 Risk Communication to the Public

The risk management process cannot be successful without a plan for providing and receiving information to and from the public and such end-to-end systems need to be established and effectively functioning well before an emergency occurs. Communication systems must include all effective and appropriate mediums such as AM/FM radio and television broadcasts, print, multi-media, phone, UHF/VHF radio, public announcement systems such as police, CVTL, community volunteers and religious institutions. This Policy recognises that communications is central to effective disaster and conflict analysis to actions systems and those end-to-end systems must be streamlined between communities, District Administrations, Central Government, NGOs, CVTL, regional and global partners.

Clear advice should be given on how the alarm will be raised and what to do if that happens. A well-constructed media plan is essential, both as part of the pre-incident education process, and to avoid overreaction after an incident. It must contain explicit and exhaustive instructions on channels of communication and clearance procedures for potentially sensitive information. Of course, any public preparedness or information programs needs to be

evaluated in the context of the specific local circumstances, including the possibility that too much information may be counterproductive, or even dangerous.

The media, NGOs, CVTL, community volunteers, and community based Government services are critical partners that will govern the degree of success of communication systems. As the state, partners and communities establish risk analysis to action systems; special legislation will be required for disaster and conflict communications for measures such as emergency broadcasts for emergencies and mitigation of disaster and conflict threats. The Government's approach to legislation in this area could allow media agencies to be self-regulated or require that as part of the licensing process, agencies participate in professional development such as hazard specific, meteorology, climate, emergency, disaster, conflict and climate change training.

Communication gaps in Timor-Leste possess significant challenges to the effective management of disasters, conflict and climate change adaptation. Analysis of emergencies, disasters and conflict since 1999 reveals a pattern reliance on committees whose capacity to communicate effectively is limited. Often, the degree of impact of disasters and conflict and in some cases the root cause can indirectly or partly be attributed to uninformed decisions and the spread of miss-information. As important as this Policy to developing effective communication systems is the need to have available appropriate communications mediums that can survive impact and to produce information that effectively reaches communities and is appropriate for literacy and numeracy levels and the local language context.

The underlying idea in risk reduction is to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

1.4.4 The Social, Economic and Environmental Context of Disaster Risk Reduction Framework

This Policy aims to be consistent with accepted risk reduction strategies that will considerably reduce social and economic losses caused by natural and human-induced disasters such as technological hazards and conflicts.

Human development issues are related to disaster risk management. Economic, social and environmental elements of human and national security are interdependent and overlapping. Economic, social and environmental factors are shaped, retarded and sometimes accelerated by disaster and conflict. They also work directly or indirectly to decrease or increase disaster, conflict and climate change risk.

The essential points adopted in this Policy cover:

- a) A necessary shift in managing disasters from a traditional manner – emergency assistance or crisis management – to disaster, conflict and climate change risk reduction strategies;
- b) The general framework and activities of disaster risk management;
- c) Integration and mainstreaming of disaster, conflict, climate change and adaptability across all sectors through economic, social and environmental national recovery and development;

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- d) A focus on strengthening community capacities and reducing vulnerabilities;
 - e) Integration of a gender perspectives;
 - f) The need for attention to be given to children and youth in disaster risk management

Women died in larger numbers than men in most of the countries affected by the December 2004 tsunamis. The reason given was that mothers tried to protect their children and often did not know how to swim and stay afloat. Children also died in large numbers. Many had not had risk management education, and this may have contributed to the high mortality rate.

2

VISION, MISSION, BASIC PRINCIPLES AND OBJECTIVES

2.1 The Vision for the Disaster Risk Management Sector

The Ministry of Social Solidarity (MSS) has the following goal in the Disaster Risk Management sector:

“We wish for a protected social environment that is safe and clean, in order to contribute to the economic, social and cultural development of our country.”

2.2 The Mission of the Ministry of Social Solidarity

The mission of MSS

“Within the context of the National Vision for the Management of Risk Disasters, MSS has the leading role in defining the policies on disasters management at all levels. In so doing, MSS will develop a strong government institution which ensures the protection and support to the community and their goods and the environment.”

2.3 Main objectives of Disaster Risk Management

The right to life is recognized by the Constitution of the Democratic Republic of Timor-Leste. It is the mandate of the National Disaster Management Directorate (NDMD) to guarantee this right in circumstances of disasters.

The general objective of NDMD is to reduce the risk of disasters. Reducing the risks of disasters is obtained through the diminishment of the occurrences of disasters.

Internationally a focus on “reduction” was chosen because the action “*eliminate*” was deemed to be an unachievable objective.

Disaster reduction actions consist of the following global aspects:

- a) Disaster Prevention;
- b) Disaster Preparedness for Emergencies;
- c) Disaster Response;
- d) Recovery/Reconstruction Post-Disaster/Development.

In this context, MSS will concentrate on the following main objectives during the period of 2008 to 2012:

- Acting as Timor-Leste’s centre for disaster risk reduction activities and knowledge, collecting information, monitoring overseas developments and proposing developments for incorporation into the national disaster risk reduction system;

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- Promoting permanent defence and safety against natural and or human-induced disasters;
 - Preventing and minimizing the impact of disasters, assisting affected populations, rehabilitating and assisting with recovery for areas affected by disasters;
 - Developing strategies in disaster risk reduction including preparedness activities such as response plans, standard operational procedures and assisting in district planning;
 - Creating human resource capacities to use meteorological and seismic analysis, monitoring, early warning tools and systems;
 - Developing appropriate physical infrastructure for monitoring and communication of meteorological and climate conditions;
 - Securing studies for technical and scientific experts and students at national and international levels in the areas of meteorology and seismology;
 - Administering and providing secretariat support to the Inter-Ministerial Commission for Prevention of Natural Disasters (CIGD);
 - Establishing and sustaining links to hazard, vulnerability, disaster and conflict risk assessment and monitoring in the region, and interpreting and providing early warning and strategic intervention planning in relation to developments that may affect Timor-Leste;
 - Acting as the contact point for initial reports of emergencies and disasters in conjunction with the Disaster Operations Centre (DOC);
 - Coordinating disaster risk management including scheduling of regular meetings of stakeholders;
 - Organising and leading multi-sector damage and needs assessment teams during response operations and exercises when necessary;
 - Developing and conducting public information and awareness programs in cooperation with other relevant agencies;
 - Developing disaster risk reduction and emergency response training programs in conjunction with relevant partners;
 - Maintaining and developing a national disaster and conflict crisis risk management information system engaging with community to international regional hazard, vulnerability, risk mapping systems;
 - Developing information and communications technology disaster and crisis management systems across all sectors;
 - Maintaining, reviewing and developing the former National Disaster Risk Management Plan (NDRMP) as a disaster and crisis risk management operational plan including ministerial and non-government sector operational plans and hazard, vulnerability, risk standard operational procedures.
 - Advising the Government on sector development policies, strategies and legislation related to disaster risk management; and
 - Administering a national regional strategic stockpile of disaster response resources.

2.4 Basic Principles

The following principles will guide the formulation and implementation of the Policy, plans, activities and programs for disaster risk management:

- Partnership with communities to protect the life of all Timorese citizens;
- All Timorese have the right to international standards of human security balanced with sustainable economic, social and environment recovery and development;
- In partnership with communities, civil society and international partners, the government will develop all hazards, vulnerability and risk action to analysis systems for the Nation to manage the risk of disasters, climate change and conflict crisis;
- *Focus on vulnerable populations*, with emphasis on prevention, early recovery and integration into the development processes;
- *Efficiency and effectiveness*, to maximise the benefit of the available resources;
- *Participation and engagement*, especially with national, regional and international partners, civil society and the population in the remote areas and vulnerable groups;
- *Transparency and responsibility*, especially in relation to the distribution and use of resources, as well as the implementation of authority, power and decision making;
- *Sustainability*, considering the limitation of resources in the country and the high dependency on partners and external donors; and
- Partner with communities to build resilience to emergencies, disasters, conflict, climate change and dependencies on state and partner assistance for human and national security.

3

POLICIES AND PRIORITIES

3.1 General Policies

The Ministry instigates the following general policies in disaster risk management sector:

- Ensure, through the National Disaster Management Directorate (NDMD), that disaster risk is reduced in the territory of Timor-Leste;
- Implement the organisation and the functioning of the Suco Commissions, or relevant bodies, emphasizing the necessity and the importance of an articulated and timely response, by local bodies;
- Support the districts and sub-districts to implement disaster risk reduction plans with the aim of guaranteeing the reduction of disasters in the communities;
- Promote the arrangements of urban space with the aim to minimise the unorganised occupation of disaster risk areas, with the aim to reduce vulnerabilities of urban and rural areas against landslides, floods and other disasters;
- Establish criteria related to risk assessment and risk evaluation, with the aim to direct disaster risk reduction planning in the most vulnerable areas of the country;
- Prioritize actions related to disaster prevention, through evaluation and disaster risk reduction;
- Implement interaction between government agencies and local communities, especially through District, Sub-District and Suco Commissions, with the objective to guarantee and integrate response activities for the whole country;
- Implement cultural change and training for volunteers programs using participatory approach involving communities, so they are well informed, prepared and conscious of their rights and obligations in relation to community protection from disasters;
- Promote the integration of the National Disaster Risk Management Policy into other national policies, especially socio-economic development and environmental protection policies;
- Establish a National Information System on Disaster Risk Management in Timor-Leste and promote epidemiology studies, related to the intrinsic characteristic of the impact of disasters on human, materials and environment and economic and social damages;
- Seek new financial sources for NDMD, improving the existing mechanisms and implementing projects that are able to attract technological and/or financial support through international agencies and/or bilateral cooperation;

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- Implement activities to reduce natural disasters through international partnerships with the objective to promote bilateral and multilateral cooperation in the area of disaster risk reduction;
 - Foster studies and research on disasters and implement scientific and technological developmental projects related to disaster risk reduction;
 - Develop implementation plans and legislations related to disaster risk reduction.

3.2 Specific Policies

3.2.1 Strategies for the Sector

To date, intervention in disaster risk management sector has been focused only on emergencies and mostly reliant on foreign assistance. Interventions have related to disaster mitigation, targeting vulnerable populations and the most needy communities.

At the current time, it is necessary to establish an strategic framework that can give direction for improvement and sustainability in service delivery in disaster risk management including effective cooperation with key partners.

It is necessity to develop specific strategies for disaster risk management at district, sub-district and suco levels. It is also important to develop sustainable training programs for disaster risk management specialists and managers and capacity building programs in disaster risk management sector for public servants.

As a consequence, there is a necessity to respond to four main objectives related to disaster risk management as follows:

- Develop and maintain legislation on disaster risk reduction concurrently to assure its integration into development policies, plans, and projects, in the study phase as well as in the implementation phase;
- Develop and maintain early warning systems, monitoring, coordination, and operational preparation plans and response for the national territory concurrently attending to structural development limitations at the national level;
- Improve management of the DRM sector in all institutional and operation levels concurrently, to take into account the low professional capacity of staff;
- Achieve sustainability in public finance to respond to a great need for resources.

To move forward within a framework of limited resources, MSS propose that in the medium term, the following priorities of the National Development Plan and Five Year Development Program of the Ministry relating to DRM be attended to:

1. Promote the study and identification of risks zones;
2. Expansion of mechanisms of early warning in the country relating to potential national disasters, and development of human, technical and scientific, and physical resources of the Ministry;

-
3. Develop and maintain national meteorological and seismographic monitoring and early warning services;
 4. Improve management capacity and intervention conditions from Suco to districts level.

Base on these priorities and having taken into consideration the sub-sectors of disaster risk management, it is possible to implement strategic policies and priorities and achieve results in the medium-term i.e 2012.

3.2.2 Integrated Hazard, Vulnerability and risk Analysis to Action Systems (Early Warning)

Capacity and vulnerability analysis provides knowledge and understanding to communities, government and other agencies about hazards and communities' capacities to respond. The vulnerabilities of communities (e.g. poor people living on unstable slopes, in flood-prone areas, or in soil liquefaction hazard areas) are analysed so that appropriate risk reduction can be undertaken.

Hazards of various types (see Annex 4) need to be analysed and monitored, both in terms of their individual effects and also their possible cumulative effects if more than one impacts at the same time (such as flooding at the same time as an earthquake) or if a particular hazard impacts over a long period of time (such as recurrent drought). Hazard analysis and monitoring provide relevant authorities with the information they need to issue an early warning, activate plans already developed, and anticipate the deployment of emergency management teams in the early hours of an impact of a hazard agent (such as a tropical storm or flood).

At community level, local experience and preparedness enables community members to act as first responders immediately after the impact of a hazard agent. Thus, priority should be given to community based capacity building to strengthen existing locally developed coping strategies.

To comply with the guidelines and achieve the defined goals in disaster risk reduction, following are the specific policies:

3.2.2.1 Specific Policy 1: Hazard and Vulnerability Monitoring and Analysis

Monitoring is a responsibility of all government and non-government sectors. The NDMD is supporting various sectors to carry out capacity development activities. While some sectors such as the Ministry of Health and PNTL have established national to community monitoring systems, many sectors require significant technical development support to establish effective communications between communities, community groups, NGOs, District Administrations and government at national level.

The NDMD is responsible for receiving, analysing, integrating, interpreting, distributing and coordinating national hazard, vulnerability and risk monitoring data. This information is then used to advise government and non-government sectors in relation to appropriate disaster/emergency preparedness, response, and recovery and reduction measures. The NDMD has already established the Disaster Management Information System (DMIS), which has a number of GIS hazard maps for Timor-Leste's common natural hazards. The disaster database named *Desinventar* allows data on hazard type, damage caused and mortality and

morbidity to be recorded by disaster event.

3.2.2.2 Specific Policy 2: **Regional Early Warning Monitoring and Analysis**

Early warning systems can be extremely effective in saving lives and property and protecting the vulnerable when natural hazards threaten. However, many countries do not have early warning systems in place, and warning systems too often fail at times of crisis. At the international level, the International Early Warning Programs (IEWP) is comprised of early warning activities coordinated by the UN sponsoring organisations such as UNESCO.

Sources of early warning information available include the following:⁶

- **Humanitarian Early Warning Service (HEWS)** developed by WFP is a global multi-hazard watch service (www.hewsweb.org).
- **Natural Disaster Prevention and Mitigation** program of the World Meteorological Organisation (WMO) provides information on disaster activities, research programs and weather and climate events (www.wmo.int/disasters).
- **Global Information and Early Warning Systems (GIEWS)** of the Food and Agriculture Organisation (FAO) provides information on food production, food security, commodities assessment and pests (www.fao.org/giews/english/index.htm).
- **Division of Early Warning and Assessment** of the United Nations Environment Programs (UNEP) provides analysis of global and regional trends to provide policy advice and early warning information on environmental threats (www.unep.org/dewa).
- **International Tsunami Information Centre** established by UNESCO is an Hawaii-based centre that supports Pacific members states to establish and maintain tsunami early warning systems (<http://ioc.unesco.org/itsu/>).

Severe weather warnings and routine weather forecasts for Timor-Leste are available temporarily through the Australian Defence Force from the Australian Bureau of Meteorology Regional Forecasting Centre in Darwin. The NDMD monitors weather as well as extreme climate conditions to reduce the impact of seasonal hazards, drought and forest fires.

Currently, a *Tsunami Watch Information* for the Indian Ocean is available to Timor-Leste through the Japan Meteorological Agency in coordination with the Pacific Tsunami Warning Centre, the information is available to NDMD and other Ministries. The warning is expected to be issued with a target of less than 20 to 30 minutes after the occurrence of the earthquake depending on the condition of communication and the availability of seismic data. Specific information will be relayed, including the estimated tsunami travel times to reach the respective coasts of the countries in the Indian Ocean region (only for the earthquake of M>7.0). After a warning has been received, it is important to communicate the risk to the population without causing panic.

NDMD is supporting the GTL to respond to the needs of the development of emergency metrology and long-term, to be available for government, NGOs and communities. Meteorology is a vital scientific aspect for monitoring and early warnings, particularly in conditions of complex topography and climatology such as exist in Timor-Leste.

6

3.2.2.3 Specific Policy 3: Emergency Disaster Reporting and Communication to the Public

The key to achieving effective response from participating organisations and the community is to have reliable and effective warning and alert systems in place. Advice of a developing hazard or of the occurrence of a disaster will come from either of two main sources:

- Official source (e.g. geological or meteorological international agencies, NDMD, DOC, PNTL, F-FDTL, District Administrators, UN Agencies); or
- Unofficial sources, such as the church or other members of the public.

Any official or other person becoming aware that a disaster or major emergency has occurred should report the situation to the nearest District Administrator, Sub-District Administrator, police officer, civil security officer or fire service officer. Contact details for all these points should be widely promulgated to departments, agencies and the public throughout the country.

Police officers, civil security officers and fire service officers should pass reports of a disaster or major emergency to the relevant District Administrator or Sub-District Administrator. It is the responsibility of the Sub-District Administrator (as Sub-District Disaster Coordinator) and the District Administrator (as District Disaster Coordinator) on receiving an unofficial report, to verify its accuracy. Once verified, the District Administrator or Sub-District Administrator will report to the DOC and NDMD. If receiving an unofficial report directly, the NDMD should advise the relevant District Administrator and ask for the report to be verified.

When there is advance warning of the likely impact of a hazard or when a disaster has occurred, it is the responsibility of the DOC to ensure that timely and appropriate warning messages are broadcast to the public advising of the degree of threat and action that should be taken. When the threat has abated, information will be passed to the public as well as to any search and rescue and recovery efforts that are underway.

Departments and organisations should assist in this communication process by ensuring that all relevant information is forwarded to the DOC and NDMD. In addition, all disaster management focal points in the districts should ensure that they are contactable at all times and particularly after normal working hours. Personal mobile phones should be kept charged and turned on at all times.

Annex 6 provides details of the National Activation System (Alerts, Stand By, Activation and Stand Down) and Annex 10 provide a list of contacts. Details of warning systems and community alerting systems are yet to be fully developed.

3.2.2.4 Specific Policy 4: Principles and Responsibilities for Effective Early Warning

The objective of early warning is to empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life and damage to property or the environment. Risk assessment provides the starting point for an effective warning system. This knowledge is essential for policy decisions that translate warning information into effective preventive action.

The responsibility for effective early warning spans from local to international levels, each level having essential but partially overlapping functions:

- Vulnerable populations need to be aware of the hazards and the related effects to which they are exposed and be able to take specific actions to minimise the threat of loss or damage;
- Local communities need to have sufficient familiarity with the hazards to which they are exposed;
- Community leaders must understand the advisory information received to be able to advise, instruct or engage the population in a manner that increases their safety or reduces the possible loss of resources on which the community depends;
- The government needs to exercise responsibility to prepare and issue hazard warnings for its national territory in a timely and effective manner;
- The government should ensure that warnings and related protective guidance are directed to those populations determined to be most vulnerable to the hazard risk;
- The provision of support to local communities to develop knowledge and response capabilities is an essential function to translate early warning knowledge into risk reduction practices.

Problems relating to warning systems may include⁷:

- Inadequate timing of warning;
- Inadequate warning lead-time;
- Errors in warning information;
- Faults in warning systems for technical reasons;
- Delays in transmission of warning to key officials or organisations;
- Failure of public warning systems (e.g. radio broadcast stations) due to the impact of the hazard; and
- Failure of people to respond to warnings

3.2.3 Emergency Management

The Joint National Disaster Operation Centre (DOC) will have a critical role in assisting agencies/partners and coordinating emergency actions which will include:

- Directions and control of the population's survival recovery efforts and operations;
- Public information regarding emergencies;
- Monitoring global early warnings on a 24 hour basis;
- Notifying the public of probable impending disaster in time to take protective action;
- Damage assessment;
- Evacuation, traffic control and security;
- Health and emergency medical care;
- Emergency food and shelter;
- Debris clearance; and
- Restoration of utilities.

3.2.3.1 Specific Policy on Safe Refuges and Evacuation Plans

Village committees, as part of their preparedness for disasters and major emergencies, should identify safe refuges from floods and other hazards and safe routes to these refuges. The

⁷ Carter, N/ADB (1992). Disaster Management: a disaster manager's handbook. Manila. Page 248.

decision to use these refuges must be made at the local level since it is unlikely that there will be enough information even at sub-district level to instruct people to evacuate to refuges. The identification of locations that can be used as evacuation centres is the responsibility of District Administrators working with community leaders during disaster preparedness. The public should be informed of the location of shelters and the conditions under which they will be made available as a threat develops. The location of shelters, management responsibilities and location of any keys required should be documented and made available to relevant officials as a threat develops. Arrangements should be made for the provision of support to the shelters, although it is suggested that users should be encouraged to be self-sufficient for the first few days of use. Education/public information programs should not only identify the locations of shelters, but also inform the community of the self-sufficiency requirements for food, water, bedding, medicines and toiletries.

For Dili, NDMD has developed a preliminary evacuation plan in cooperation with the PNTL, Fire Services and Civil Security. In this preliminary plan, the main evacuation meeting point for Dili is the central market and the main agencies involved are MSS, Ministry of Health, PNTL and F-FDTL. Detailed evacuation routes, dissemination of those routes to the public and responsible partners' organisations to conduct evacuations need to be developed.

3.2.3.2 Specific Policy on Post-Disaster Survey

Organised surveys are a very effective way of collecting standardised information on the impact of a disaster. Survey teams, preferably with members from a range of different sectors, should be deployed to the affected area as soon as possible after the event. Annex 7 provides standard forms for Flash Reports and Initial Reports. Copies of standard forms should be held at national, district and sub-district level ready for use in an emergency. Standard instructions for survey teams should be available with the forms. If required, the results of a survey can be passed by radio using the numbers on each section of the forms as a guide. Rapid aerial surveys can provide a useful overview of the situation after a disaster and may be valuable in preparing for response, but are not an adequate substitute for a planned survey.

3.2.3.3 Specific Policy on International Assistance

Requests for international assistance including foreign military support of the Asian Regional Forum (ARF) will only be submitted when it has become clear that there are needs that cannot be met from national resources, NGOs and other agencies already present in the country. Requirements for international assistance will be determined by the CIGD, which will submit requests through the Ministry of Foreign Affairs and Cooperation. The DOC will be responsible for providing detailed information on needs and reception arrangements to assist donors to meet requests as quickly and effectively as possible. All departments and organisations that require international assistance must submit their needs to the DOC and NDMD for consideration. Under no circumstances should direct requests be made to aid agencies/donors or diplomatic missions.

All donors will be required to register all capital and human assistance with the NDMD Supply Management System (SUMA). Coordination of international assistance can impose a heavy additional workload on a response. Assistance with this coordination can be obtained from the United Nations, which has United Nations Disaster Assessment and Coordination (UNDAC) teams of experienced disaster managers on constant alert. This should only be viewed as a last resort, as it provides little capacity development opportunity. However,

UNDAC can assist through UNOCHA, UNDP and other UN system international appeals for assistance to the government. UNDAC can activate a team and send to the affected country within 24 hours, if there is transport available. Request for this type of team can be made through the NDMD to CIGD and the Ministry of Foreign Affairs and Cooperation to the Representative of Secretary General of the United Nations in Timor-Leste.

3.2.4 Customs, Immigration and Quarantine

Once an official request for international assistance has been submitted, the Ministry of Finance is to be advised by Ministry of Social Solidarity to make the necessary arrangements for “Disaster Management Assistance Endorsed by the NDMD.” This will include duty exemption for goods purchased locally with disaster relief funding and clearance for agricultural and hazardous material imports.

The NDMD or DOC is responsible for providing information on donor assistance to Border Services to facilitate this process. This includes details of the type, quantity, source, means of transportation, arrival point, estimated time of arrival and whether or not the assistance is Disaster “Management Assistance Endorsed by the NDMD.”

3.2.5 Financial Considerations

At the National level, the Central Fiscal Authority (Treasury) holds the responsibility for the management of disaster relief funds, and must authorise the expenditure of such funds in the event of a disaster, through a request by the National Disaster Coordinator (NDC). At the district level, the District Administrator, as District Disaster Coordinator (DDC), should ideally have access to a small contingency account that can be used for emergency response purposes.

Urgent requests for procurement of vitally needed supplies or services for disaster response purposes can be made directly to the Head of Treasury, or Deputy Head, who will arrange urgent allocation of funds from the contingency account and accelerated procurement.

Accounts charged to the disaster relief fund that have not been approved by the CIGD and processed in accordance with Finance Regulations will be returned for payment to the department, organisation or individual that incurred the costs. This procedure will ensure that the limited available funds are committed to high priority requirements, and will avoid unnecessary expenditure on items that may already be available from other sources.

3.3 Priority Actions

To fulfil the promises, the Ministry will promote the following actions:

3.3.1 Awareness Raising

The CIGD with assistance from NDMD is responsible for providing advice to the Ministers and Secretariat’s responsible for assisting NDMD to identify, develop and implement national public education and awareness programs. Target audiences should include:

- Vulnerable groups, such as women, children, the aged, widows, returnees, refugees, religious and ethnic minorities and those in hazard-prone areas;
- Community leaders;

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- Rural families and village communities;
 - Urban families;
 - District officials and District Disaster Management Committees;
 - National Disaster Risk Management Committee members;
 - Other key officials and decision makers;
 - Non-governmental organisations; and
 - Diplomatic and donor community.

The content of public education and awareness programs will vary according to the target audience, the threats and the areas in which they are undertaken. The media used to present the programs should be selected after consideration of the target audience and the acknowledged way of communicating effectively and sustainably with that audience. Media and language appropriate to one audience may be less effective with a different audience.

Options considered should include the following:

- Production of posters, brochures and warning maps;
- Radio/television - pre recorded messages, interviews and discussion programs;
- Newspaper articles, advertisements and lift-outs;
- Official briefing sessions for officials;
- Development of educational material for use in schools;
- Visits to schools and villages by theatre groups and video presentation teams;
- Village and community meetings;
- VCD community presentations;
- Production of posters, pamphlets and hazard maps.

Although day-to-day public awareness and education activities will be managed by the NDMD, a specialised working group may be established to plan specific campaigns. The group could include representatives from the following organisations:

- Ministry of Social Solidarity;
- National Disaster Management Directorate;
- National Directorate for Environment
- National Directorate for Territorial Administration;
- Timor-Leste National Police;
- National Directorate for Transport and Communications
- National Directorate for Public Work;
- Ministry of Education and Culture;
- Red Cross Timor-Leste;
- Women's Networks; and
- Other specialised institutions in accordance with the needs (e.g. representative of religious groups professional institutions).

District Administrators will be responsible for supporting the awareness and education programs by identifying special requirements for their area, disseminating material, and conducting visits to ensure that villagers are familiar with the material and are aware of preparedness measures which must be taken.

In both technological and natural disasters, how the press conveys information to the public can magnify or reduce psychosocial distress for the "at risk" population. There are certain key principles that are often applicable to both types of disaster. Threat of an impending

natural disaster and threat of contamination by a chemical, biological or nuclear emission all cause anxiety. The role of the press in increasing or reducing perceived or real fear is critical. Frightening news, if repeated many times to a community can magnify fears, leading to widespread stress and anxiety. This can be manifested in many forms and can ultimately impair decision-making processes, causing people to take wrong mitigation measures to protect themselves.

People who are not physically affected by a catastrophe, but who live within range of potential, possibly long-term and largely unknown dangers may be frightened by both proximity to the danger and the lack of credible information. To a large extent, the degree of fear and insecurity due to the lack of credible information will determine people's attitudes and overall behaviour.

Communication of public risk must use a variety of techniques in dealing with the press and the public. For example, news releases will provide the press with the basic facts about an emergency, but these will often be incomplete. The exchange of information between interested parties will allow for more informed decisions. Therefore in a public crisis situation, the local, national, and international partners should all cooperate with the press to keep the general public accurately informed. The *local media* was recently trained in how to broadcast risk messages in a workshop sponsored by ADPC and NDMO.

Communication of emergency information should consider the following:

- Media should receive information on risks reduction. Information should be controlled by a single public spokesperson who openly cooperates with the press;
- The press should also convey information on risk reduction and safety measures to be adopted by the public;
- The spokesperson should be truthful and straightforward with the press in order to maintain credibility and trust;
- The spokesperson should be clear about what is not known, as misconceptions are likely to lead to inappropriate responses by the press, the public and other partners in an emergency response.

3.3.2 Recovery and Knowledge Development

Recovery is a term used to describe the often-complex series of measures that result in both rehabilitation and reconstruction taking place. Rehabilitation encompasses measures taken after a disaster to begin restoring community life to normal by beginning the repair of essential services and environmental, social and economic damage. Recovery is a process by which communities and the country are assisted in returning to a proper level of functioning following a disaster. Depending on the severity of damage, the recovery process may take many months or, in the worst case, many years to complete. This aspect of disaster management is best tackled using established government procedures and in close cooperation with development projects and programs. Disaster officials can assist in recovery processes through providing damage assessment reports, making recommendations for recovery activities, conducting a post-disaster review and organising operational debriefings.

3.3.2.1 Damage Assessment Reports and Recovery Activities

District Administrators are responsible for preparing a full report on the impact of the disaster to the National Disaster Coordinator (NDC) within two weeks of the end of major response

operations. These reports will be added to a similar report prepared by the DOC covering the national aspects of the damage.

The NDC, after considering the damage assessment reports, may recommend to the CIGD one of the following options for managing a recovery program:

- The establishment of a recovery program management committee appointed by the CIGD. The composition of the committee will be determined by the nature of the disaster, and this committee will be responsible for managing the recovery program and ensuring that the CIGD is informed of the progress of recovery activities;
- Management by one Minister with a special temporary office or section acting on direction of the CIGD; and
- The CIGD itself providing direction to individual Ministers and their departments.

3.3.2.2 Post-Disaster Review

The CIGD is responsible for ensuring that a thorough and accurate review of the activities and procedures used during a disaster response operation is conducted to ensure that the experience gained and lessons learned can be applied towards improving future mitigation, preparedness, response and recovery procedures. The post-disaster review needs to be as comprehensive as possible and should, after a significant disaster, include the following aspects:

- Status of mitigation measures, preparedness measures and response plans prior to the disaster;
- Communications;
- Warning, including origin(s), transmission and receipt, processing, dissemination, action taken (by government, the community, etc.), functioning of warning systems;
- Activation of the response system and mobilisation of resources;
- Procedural aspects of the DOC including information acquisition, receipt, analysis, display, decision making, dissemination of information;
- Assigning of tasks to organisations involved;
- Operations conducted, including search and rescue, casualty handling, initial relief measures, clearance of vital routes/areas, evacuation, restoration of services;
- Arrangements for emergency feeding, health, welfare and shelter;
- International assistance arrangements;
- Assessment of public education/awareness programs, in the light of community reactions;
- Training aspects;
- Provision of information for recovery programs;
- Any special factors raised by the nature of the particular disaster; and
- Research requirements revealed by the disaster.

If circumstances are appropriate the review can include input from specialists on future trends and developments.

The outcomes of the review should be examined carefully for possible actions needed in relation to the following:

- Amendment or revision of the National Disaster Risk Management Policy, of sector plans and procedures, and of district plans and procedures;

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- Amendments to mitigation, preparedness and similar measures and/or the introduction of new measures;
 - Changes to organisational structure;
 - Revision of, or adjustment to, major disaster management issues, such as training and public education and awareness activities;
 - Adjustments to national or district development plans.

3.3.2.3 Operational Debriefings

Operational debriefings should be conducted as soon as possible after the event. They are aimed at determining the views of those involved while the issues are still fresh, and learning the more immediate lessons. Debriefing outcomes form a significant base for the post-disaster review. These debriefings should be conducted in stages:

- Within the DOC, the NDMD, and the MSS to review departmental operating procedures and to allow staff to submit their views on the operation;
- Within each affected district to review district, sub-district and village procedures and the success of the measures taken to respond to the event; and finally;
- An open debriefing attended by district representatives and all departments and agencies that actively participated in the operation.

□ To obtain optimal results, debriefings should be open discussions between professional staff in which the aim is to learn from mistakes, not to allocate blame. Debriefings that become exercises in self-promotion, self-justification or blaming of others by participants are of very limited value.

3.3.3 Capacity Building Needs and Tools

All personnel involved in disaster risk management activities require training. Those with permanent disaster risk management roles, such as NDMD staff, NDMD focal points, and DDMC members, should be given priority for capacity building. However, training needs to extend to sub-district and community level as well as to government staff likely to become involved in disaster risk management activities.

The NDMD, in consultation with District Disaster Coordinators (DDCs), is responsible to the CIGD for the management and co-ordination of disaster risk management training activities, including:

- The identification of training needs at national, district, sub-district and community levels;
- Arranging for appropriate training activities to be developed;
- Preparing and conducting an annual programs of national training;
- Developing and operating a system for nomination and selection of participants in training activities,
- Identifying international training activities and opportunities that can help to develop national disaster risk management capabilities and seeking support for the attendance of selected Timor-Leste disaster risk management staff at such activities;

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- Selecting appropriate and qualified persons to attend in-country, regional and international activities; and
 - Maintaining a training resource register.

3.3.3.1 Guiding Principles for Training

The importance of training for ensuring expeditious assistance to the affected population is widely recognised. Lives can be saved if a strong training component is built into the disaster risk management plans, particularly in the pre-disaster phase. Specific disaster training interventions involve situations both prior to the hazard impact (preparedness) and after the impact (response/emergency assistance and recovery).

Training prior to disasters should take into consideration the following:

- Training should be targeted to building the capacity of both the population affected (community members) and the disaster response teams;
- Training of the population at risk should include measures of mitigation and preparedness, usually under the responsibility of NDMD as well as other relevant agencies. These measures involve effective means of communicating pre-warning and warning messages through the media (see Awareness Raising).
- Disaster risk management plans should be drawn up and rehearsed well in advance of the onset of any disaster. (For instance, in Peru, a high-risk country for a number of natural disaster agents, national simulation exercises are conducted.) Exercises should include clear and simple messages containing the basics of risk and stress management, including control of such emotions as fear and techniques for maintaining calm at the time of impact. These issues should also be included in risk communication packages.
- Training of the emergency/disaster response teams includes preparation for coping with dangerous situations and control of stress.
- Helpers and emergency responders may be involved in many different aspects of assistance at the disaster site. Typically they are: disaster control and rescue operations; medical tasks (triage and treatment of dead and injured); information and communication; and support services for the injured and relatives. Persons who undertake such helping roles at the time of disaster may be either specifically trained for their tasks – **professionals** such as police, ambulance or rescue squads – or may be spontaneously formed – **non-professional helpers** such as the voluntary workers and community members who offer their services in response to the crisis;
- Training can be conducted at national level using the network of schools. This type of training is programs oriented in that it is necessary to design and implement emergency norms in conjunction with the preparedness needs of the country. For instance, because of the high risk of earthquakes in Timor-Leste, it is essential to prepare the population, particularly children, in how to protect themselves in the event of an earthquake. Such a program is designed to accommodate three levels of target groups:
 - **Level one training** targets national capacity building by training a core of specialists in the country, who will in turn provide monitoring and supervision to the other levels to be trained. The core of specialists will ensure long-term sustainability of the training programs;

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- **Level two training** is targeted to the teachers and school facilitators responsible for day-to-day interaction with students. Messages delivered on this level are mainly based on the fear-induced elements related to the prevalent disaster in the area;
 - **Level three training** involves the training of the students themselves for two reasons. Firstly, recent research data focused on children and disasters has shown that one of the reasons for child injury in large-scale natural disasters is that parents do not convey to them preparedness messages. Secondly, it is important to ask children about their valid concerns in disaster situations, thereby empowering them to behave effectively within disaster contexts. Furthermore, children will also convey these preparedness messages to their parents in their daily home interaction.

3.3.3.2 Capacity Building Tools

In addition to formal training, exercises are a valuable means of capacity building as well as a useful way of testing plans and procedures. The following types of exercises can be conducted with simple preparation:

- ⇒ **Participatory capacity and vulnerability assessments.** It is necessary to first deepen the understanding of local realities.
- ⇒ **Developing indicative risk maps.** An indicative risk map is a graphic and written representation of risk conditions in a community as determined by existing threats (drought zones, seismic faults, epidemics, etc.) and vulnerabilities (such as physical, environmental and financial vulnerabilities).
- ⇒ **Hazard assessments.** A series of simple skills can be taught to district and sub-district leaders that will allow them to read a map, interpret plot indicators of on-going hazards (e.g. earthquake aftershocks, landslides, etc.) and convey to NDMD the proper records. Aspects of risk communication should be included in this basic training.
- ⇒ **Tabletop or discussion exercises.** A disaster scenario is prepared and presented to representatives of agencies likely to have a role in disaster response. Discussing a disaster scenario involves imagining the impact of an event or danger and taking its consequences into account. The participants discuss how they would coordinate their activities to meet the expected needs, identifying organisational and logistical factors and the ways of dealing with changing requirements.
- ⇒ **Hypothetical exercises.** A ‘hypothetical’ exercise is a variant of the table-top exercise. An experienced facilitator presents a scenario (it can be compared to the preparation of the various scenarios to draw a contingency plan for the current unstable security situation in Dili), then as participants develop ways of responding, identifies possible consequences of their actions and presents these as new problems to be dealt with by an individual agency or in a coordinated manner.
- ⇒ **Procedural exercises.** A procedural exercise is a simple exercise in which the messages that would be expected from a pre-determined scenario are passed in ‘real’ time to participants who practice the operational procedures for receiving, organising

and presenting the information. This type of exercise requires detailed preparation of the messages but may not need to cover more than a limited period or aspect of the scenario. These exercises are valuable for training DOC staff and equivalent district staff.

- ⇒ **‘Live’ exercises and simulations.** These are exercises in which skilled personnel are given the opportunity to practice their skills in circumstances as near as possible to reality. For example, in April 2005, the F-FDTL, PNTL, NDMD and Bombeiros cooperated in a disaster simulation exercise, which took place on Atauro Island. Some lessons learned through this simulation exercise were as follows:
- Further disaster simulation exercises should be done on a medium scale by involving a few additional stakeholders who will play an important role in emergencies;
 - The F-FDTL needs to develop an immediate action plan considering its critical role in the early stages of an emergency, such as the deployment of search and rescue teams;
 - A liaison officer responsible for international humanitarian assistance. On the other hand NDMD should provide a person responsible to liaise with international humanitarian assistance agencies and the necessities to operate on disaster scenarios in Timor-Leste.

4

ORGANIZATION AND DISASTER RISK MANAGEMENT

4.1 Organizational Structure

The organisational structure for Disaster Risk Management in Timor-Leste is shown below in Figure 2. The Minister of Social Solidarity has the mandate to coordinate preparation and response in relation to any emergency that may occur. Under this Minister's authority is the National Disaster Management Directorate (NDMD), which includes the Disaster Operation Centre (DOC), the Departments of Preparedness and Formation, Prevention and Mitigation, Response and Recovery, and disaster management committees at Districts, Sub-district and Village levels.

4.1.1. Inter-Ministerial Commission for Disaster Management (CIGD)

An Inter-Ministerial Commission for Prevention of Natural Disasters (Comissao de Prevencao das Calamidades Naturais), was established by Prime Minister's Office as a government response to the public fear of earthquakes/tsunamis after the Asian tsunamis of 26 December 2004 (Despacho 01/PM/2005). As this policy uses the *all-hazards approach*, it is necessary to expand the Commission and elevate into an Inter-Ministerial Commission for Disaster Risk Management (CIGD) comprised of the following Ministries and Agencies:

- Vice-Prime Minister (National Coordinator)
- Minister of Social Solidarity and Secretary of State for Social Assistance and Natural Disasters (Deputy-Coordinator)
- Minister of Foreign Affairs and Cooperation
- Minister of State Administration
- Minister of Finance
- Minister of Justice
- Minister of Education
- Minister of Health
- Minister of Infrastructures
- Minister of Commerce, Industry and Tourism
- Ministry of Economy and Development
- Minister of Agriculture and Fisheries
- Secretary of State Public Works
- Secretary of State for Youth and Sport
- Secretary of State for Professional Training
- Secretary State of Natural Resources
- Secretary of State for Defense
- Secretary of State for Security
- Secretary of State for the Promotion of Gender Equality
- Commander of F-FDTL
- Commander of PNTL
- Secretary General of Red Cross Timor-Leste (CVTL)

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- Representative of Civil Society include women network
 - Representative of United Nations

The Minister or Secretary of State responsible for disaster risk management may appoint representatives of other organisations to the CIGD, either for specific issues for a specific time, or for an indefinite period, or in the role of observers.

The CIGD will convene twice a year in non-disaster/emergency times. It will also be activated at Stage 2 of an impending emergency (see Annex 6 on the National Activation System).

The functions of the CIGD are as follows:

- Conduct an annual review of national disaster risk reduction policy and strategic development by the last sitting of parliament each calendar year;
- Provide an annual report to the Prime Minister on national disaster risk reduction by the 31 December each year; this report will include recommendations on priorities for the next reporting year;
- Provide technical and policy advice and resource support to the National Disaster Coordinator (NDC) and the Joint National Disaster Operations Centre (DOC) during response operations, if required;
- Assign responsibilities related to disaster risk management to relevant departments and other bodies; and
- Carry out any other disaster risk reduction related tasks as allocated by the Minister or Secretary of State responsible for disaster risk management.

4.1.2. National Disaster Management Directorate (NDMD)

The NDMD is responsible for providing disaster risk management coordination and technical support to the government and community in Timor-Leste. It works in support of the National Disaster Coordinator (NDC) during times of operational disaster response. Note that to be an effective coordinating body; the NDMD requires significant additional capacity development assistance in risk management and planning.

Functions of the NDMD include:

- Acting as Timor-Leste's centre for disaster risk reduction activities and knowledge, collecting information, monitoring overseas developments and proposing developments for incorporation into the national disaster risk reduction system;
- Developing strategies in disaster risk reduction including preparedness and response plans and procedures and assisting in district planning;
- Administering and providing secretariat support to the CIGD;
- Establishing and sustaining links to risk assessment and monitoring in the region, and interpreting and providing warning and strategic planning in relation to developments that may affect Timor-Leste;
- Acting as the contact point for initial reports of emergencies and disasters in conjunction with the DOC;
- Coordinating disaster risk management including scheduling of regular meetings of actors and stakeholders;

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- Organising and leading multi-sector damage and needs assessment teams during response when necessary;
 - Developing and conducting public information and awareness programs in cooperation with other relevant agencies;
 - Developing disaster risk reduction and emergency response training programs in conjunction with relevant partners;
 - Maintaining and developing a National Disaster Risk Management Information System;
 - Developing or identifying the sources of baseline data for use in disaster preparedness and response activities;
 - Maintaining, reviewing and developing the National Disaster Risk Management Policy (NDRMP) and advising on other sector and development policies, strategies and legislation related to disaster risk management; and
 - Administering a national regional strategic stockpile of disaster response assets.

4.1.3 National Disaster Operation Centre (DOC)

The Joint National Disaster Operation Centre (DOC) is to be staffed on a 24-hour basis by well-trained personnel and equipped with communications equipment, a secure power supply and disaster proof structures.

The DOC staff will be distributed according a 3-tier system:

- **Tier 1:** Essential personnel such as the Fire Brigade, Health and PNTL, all of them will be drawn from the core of disaster and operations managers;
- **Tier 2:** Personnel drawn from other Departments of Civil Protection Directorate to be activated in emergencies;
- **Tier 3:** Personnel from another Government Ministries to be activated in large emergencies.

The DOC will be staffed with a minimum number of essential personnel distributed in the 3 tiers and fully trained in multi-functions (one person is trained in more than one emergency required skill). Other specialized personnel such as for risk information and disaster/emergency operations would be available for risk analysis before the onset of emergencies. These will include staff from social services, public works, NGOs and other disaster actors as necessary. In particular, it needs to include staff from emergency medical services to be set up in cooperation with the Ministry of Health and other relevant agencies. In large-scale disasters, the DOC will be coordinating operations through the direct participation of the Government members, of the specialized agencies, of the press and observers. All actors will be working in the Emergency Operations Room of the DOC and thus smooth coordination is assured.

The functions of the DOC are as follows:

- Directions and control of the population's survival recovery efforts and operations;
- Public information regarding emergencies;
- Early warning and notification;
- Damage assessment;

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- Evacuation, traffic control and security;
 - Health and emergency medical care;
 - Emergency food and shelter;
 - Debris clearance;
 - Restoration of utilities:

4.1.4. Organizational Structure at District, Sub-district and Sucos

4.1.4.1 Districts

The district is the key to risk management at the administration level. District Administrators (DAs) should have their mandates extended to include their functions (as District Disaster Coordinators (DDCs)). Should the DA be unavailable, the Deputy DA will act as the DDC.

A District Disaster Management Committee (DDMC) containing district representatives of key government and non-governmental agencies likely to become involved in disaster risk management activities as well as community representatives is to be formed to assist the DDC in response operations and disaster risk reduction. Membership may vary from district to district, but typically might include members of the District Administrator's staff, sectoral officers, F-FDTL, PNTL, representatives of Catholic and Protestant Churches, mosques, CVTL, major NGOs and appropriate community leaders.

Additional members may be called from time to time to meet particular needs. Details of the committee (personnel, contact details) are to be sent to the NDMD annually or when there are significant changes. The DDMC will provide guidance and policy advice on disaster mitigation, preparedness, response and recovery matters in the district. Annual reports on disaster risk management activities within the district are to be sent to the NDMD annually by 20 October.

The DDC will be responsible for disaster response decision-making within the district, assists in decision-making by the DDMC when appropriate. Contingency plans, which will include food security, are to be developed for use in the districts affected by food shortages as well as other disasters. During an emergency response, functions of the DDMC may include:

- Coordination of rapid assessment surveys of affected areas and analysis of results (see Annex 7 for Flash Report and Initial Report Forms);
- Coordination of financial resources of the district to provide the most effective response to identified needs; and
- Recommendations on the timing and content of requests for national support, identifying the description, scale and timing of the support and the logistical information needed for effective delivery.

4.1.4.2. Sub-Districts

Generally, at sub-district level, the Sub-District Administrator (SDA) is responsible for emergency and disaster risk reduction activities. When the response to a major emergency or disaster is beyond the capability of sub-district resources, assistance should be sought from the DDC, then from national level if necessary.

4.1.4.3. Sucos

Generally, within each village, the *Suco* Chief and village leaders (such as elders, traditional leaders and village councils) are responsible for emergency and disaster risk reduction activities. When a village requires assistance, a request should be passed through the village head to the SDA.

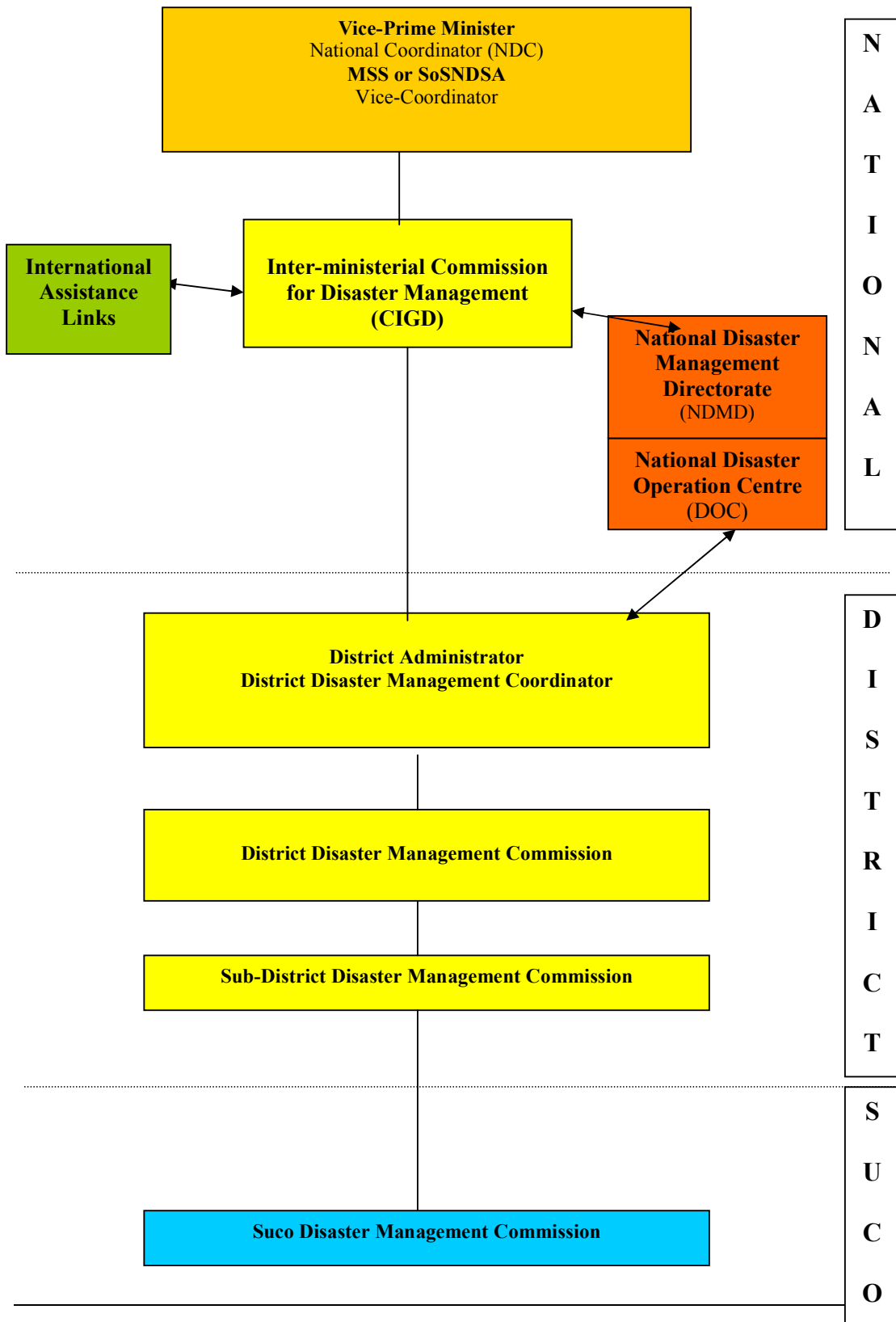
4.2 Declaration of State of Disaster

Civil authorities and agencies most appropriately manage the response to national catastrophe or public disaster situations. However, there will be times when the resources and capabilities of civil agencies alone will be insufficient to address disasters or emergency situations. Accordingly, Chapter II of the Organic Law No. 7/2004 May 5⁸ for the F-FDTL provides for civilian authority support missions by the F-FDTL.

Declaration of a State of Disaster conveys certain powers on the National Disaster Management Committee (NDC) – Inter-Ministerial Commission for Disaster Management (CIGD) and the District Disaster Management Coordinators (DDCs). It should be noted that some international donors might require declaration of a State of Disaster before disaster relief assistance will be provided.

⁸ See Article 18 on Crisis Situations, Article 19 on Catastrophes or Public Disaster Situations and Article 20 on the Crisis Cabinet.

Figure 2. National Disaster Management Structure



4.3 Responsibilities of Departments/ Agencies

The responsibilities, roles and tasks described below are to be managed and carried out by the responsible departments/agencies. The CIGD may change these responsibilities, roles and tasks if circumstances make it necessary, such as a change in the capacity of a department/agency, or a re-alignment within government of departmental portfolios.

Table 1 below details the roles and tasks of departments/agencies regarding the prevention, mitigation, preparedness and recovery aspects of disaster risk management. Note that some of the departments/agencies have been initiating in-house disaster risk management plans (for example, F-FDTL and PNTL).

Table 1. Responsibilities of Departments/Agencies

RESPONSIBILITY/ROLE/TASK	DEPARTMENT/AGENCY
Develop and maintain appropriate policy and legislation regarding land use	Ministry of Agriculture and Fisheries, infrastructure assisted by Ministry of Justice and the Ministry of Finance
Develop and maintain appropriate policy and legislation regarding environmental protection and disaster risk reduction and development	Ministry of Economy and Development and Secretary of State for Natural Resources
Develop and maintain appropriate policy and legislation regarding transport (air, sea, land) matters that involve safety of the community	Ministry of Infrastructure and Secretary of State for Security
Ensure all nationally and internationally funded development projects address risk reduction and development in feasibility studies and design phase	Ministry of Foreign Affairs and Cooperation and Ministry of Finance
Develop and maintain disaster risk management legislation	Ministry of Social Solidarity
Develop and maintain a public health management sub-plan	Ministry of Health and Secretary of State for Security
Develop and maintain policy and legislation regarding appropriate hazard related building codes	Ministry of Infrastructure and Ministry of Justice
Develop and maintain policy and advice on animal and crop related issues such as food security, agriculture technology, agro-climatology, irrigation, food preservation, and forestry that reduce community vulnerability	Ministry of Agriculture and Fisheries
Develop and maintain preparedness including planning and the necessary training for emergency responders	Ministry of Defence and Security and Ministry of Social Solidarity
Develop and deliver disaster related public education and awareness programs	Secretary of State for Social Assistance and Natural Disaster, Secretary of State for Security, Ministry of Economy and Development, Ministry of Education assisted by other ministries/departments and agencies as required
Develop and maintain disaster operational preparedness and response plans	All departments and agencies
Develop and maintain response plans for situations that would impact on the ability of the department/agency to continue operations	All departments and agencies
Develop and maintain disaster operational	All departments and agencies

response support plans, including resources lists, to support the National Disaster Risk Management Plan (NDRMP)	
Maintain the NDRMP	CIGD assisted by NDMD
Develop and maintain appropriate early warning, monitoring and coordination systems	NDMD, Meteorology and DOC assisted by other departments and agencies as required
Develop and maintain disaster related multi-sector training programs	NDMD assisted by all departments and agencies
Participate in disaster recovery programs	All departments and agencies

4.3.1 Operational Response and Tasks of Departments/Agencies

Below is described the roles and tasks of departments/agencies management during an operational response. Each department/agency must produce a support plan or procedures to effectively carry out their roles (see Table 1 above). The NDMD can assist with development and review of such plans.

Table 2. Operational Response Roles and Tasks of Departments/Agencies

RESPONSIBILITY/ROLE/TASK	DEPARTMENT/AGENCY
Provide regular information on potential weather hazards to NDMD	DOC and Meteorology
Provide warnings to government and public	NDMD and DOC
Arrange extended broadcasting time for warnings and public safety messages	Ministry of Infrastructure, Secretary of State for Security (DNPC and PNTL), Radio/TV broadcasting stations, NDMD
Provide staff for DOC	NDMD, PNTL, Meteorology and Health
Provide disaster management material support to DOC such as advice, hazard maps and other relevant information	NDMD and DOC
Provide assistance with evacuation (checkpoints, etc.)	PNTL, F-FDTL, Civil Protection and CVTL
Provide security for evacuated areas/villages	PNTL and F-FDTL
Establish and manage evacuation centres, including feeding, water, shelter, clothing, registration, etc.	MSS, Ministry of State Administration, CVTL, NGOs and UN Agencies
Provide fire vehicles and crews	Civil Protection – Fire Brigade
Arrange for provision of ambulances, ambulance crews, and emergency medical teams	Ministry of Health, CVTL and assisted by Health NGOs and UN Agencies
Arrange for the provision of vehicles (land, sea, air) for relief delivery, evacuation, and other related tasks	Ministry of Infrastructure, Secretary of State for Security, MSS, F-FDTL, CVTL and NGOs and UN agencies
Arrange for environmental health teams to check and advise on affected areas	Ministry of Health, Secretary of State for Environmental Coordination, Secretary of State for Territorial Ordainment, CVTL assisted by Health NGOs
Provide members for damage and needs assessment teams to go to affected areas if necessary	All departments and agencies as requested, CVTL and NGOs
Provide liaison officers to the DOC as requested	All departments and agencies as requested
Provide repair teams, and/or arrange urgent contracts, for restoration of communications infrastructure, and re-establishment of national and international communications links if necessary	Ministry of Infrastructure
Provide repair teams, and/or arrange urgent	Ministry of Infrastructure and Secretary of States

contracts, for restoration of water supply, power, road access, airport access, navigation aids, etc.	of Natural Resources and Energy Policy
Arrange for provision of emergency food and water	MSS, Secretary of State for Security, Secretary of State for Natural Resources, DNAS, Energy Policy, CVTL and NGOs and UN Agencies
Arrange for provision of seeds, seedlings and other planting materials	Ministry of Agriculture and Forestry and NGOs in the agriculture sector
Arrange for provision of emergency shelter materials	MSS assisted by NDMD, Ministry of Infrastructure, CVTL, UN Agencies, and NGOs
Arrange and provide briefings for the international community on the disaster	MSS-Secretary of State for Social Assistance and Natural Disasters - NDMD assisted by Ministry of Foreign Affairs and Cooperation
Arrange for reception of incoming international assistance	MSS-Secretary of State for Social Assistance and Natural Disasters - NDMD assisted by Ministry of Foreign Affairs and Cooperation
Arrange for provision of warehouse space and management for internationally supplied relief items	Ministry of Social Solidarity and Ministry of State Administration

4.4 Relationships with Sub-Plans and Contingency Plans

This policy is to be used by all districts, agencies and organisations as a guide for the development and maintenance of their own disaster risk management arrangements, plans, and procedures. The needs assessment conducted as part of the development of this plan showed a weak risk management system in place. The government needs to bring disaster risk management to acceptable levels of preparedness and response. Annex 8 compares current policy and legislation and existing capacity in Timor-Leste with optimal standard procedures.

Various government departments are willing to cooperate with NDMD in areas of their competence. In particular, the PNTL and F-FDTL have been preparing to be involved in disaster risk management operations as necessary. The participation of all actors in monthly meetings in non-crisis times is to be encouraged to facilitate coordination in crisis times.

The development of specific sub-plans is essential to guarantee an adequate emergency response. Some agencies, such as PNTL, F-FDTL and the Ministry of Health, have begun disaster response planning. This planning, as it becomes further developed, needs to be done in the context of the National Disaster Risk Management Policy. Sub-plans are also urgently needed in other ministries, such as the Ministry of Education and Culture, and the Ministry of Infrastructures.

Sectors for which contingency planning is needed include: food security, health, education, and defence. All departments and agencies also need internal contingency planning focused on protection of staff and assets in the event of an emergency.

4.4.1 Food Security

The country is prone to drought and other hazards affecting food security in vulnerable communities. Every year a large proportion of the population suffers from food shortage for a number of months. Assistance may be needed in some communities when localised food shortages result from a complex range of factors, including climatological changes. Recurrent food security issues need to be addressed through both risk reduction measures and contingency planning. The Inter-Ministerial Commission for Food Insecurity Response was established on 27 June 2005 by the Prime Minister, with the responsibility to respond to food insecurity.

4.4.2 Health

As Timor-Leste is at high risk of earthquake-related disaster and other hazards such as floods, tropical storms, landslides and epidemics (including potentially ‘bird flu’), risk management of mortality (deaths), diseases/injured (morbidity) and combinations of diseases (co-morbidity) in relation to such disasters should be part of the health sub-plan.

4.4.3 Education

Introducing disaster risk reduction strategies through the educational system is one of the key successful interventions of this policy. Disaster preparedness, prevention and response should be part of the general education curriculum. People in schools, universities and workplaces should be continuously informed and trained to cope with natural hazards and fire hazards. From an early age, all East Timorese should be taught how to behave during earthquakes/*tsunamis* or other relevant hazards.

Every year, a two-day training session in risk reduction for earthquakes/*tsunamis* and storms/flooding complete with simulation exercises and concrete preparation actions should be conducted. This facilitates the mobilisation of communities at the local level when a disaster hits. Contingency planning in education should include:

- Ongoing training programs (e.g., emergency procedures, First Aid and CPR, evacuation, search and rescue, use of fire extinguishers; damage assessment)
- Establishment of evacuation routes from schools, and
- Education of staff in public buildings.

4.4.4 Defense

The F-FDTL is an organised force with unique professional capabilities suited to supporting the civil authorities and agencies in disaster/emergency situations. Accordingly, the F-FDTL could be expected to assist in a range of emergency situations – for example, in the event of major flooding, the F-FDTL could be tasked to support the civil agencies in providing humanitarian assistance, evacuation, communications, and the critical transportation and distribution of relief supplies. To optimise F-FDTL support, it is desirable that senior F-FDTL staff participates in preparatory disaster risk management activities including the development of contingency plans.

4.4.5 Internal Plans for all Departments and Agencies

Disaster risk reduction strategies should be part of normal management practice in offices of administration and business. Every government department, office, agency, NGO, institute and organisation should have a contingency plan of measures to protect its own assets if there is a disaster threat and to assist its staff to a rapid return to normal service after a disaster.