

ADRC MEMBER COUNTRY PROFILES



Asian Disaster Reduction Center
March 2006

275



Foreword

The World Conference on Disaster Reduction (WCDR) was held in January 2005 in Kobe, Hyogo, Japan, and adopted the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.

Since adoption of the HFA, the task of reviewing the progress made, identifying the challenges, and promoting the implementation of disaster risk reduction has become crucial as a follow-up activity.

The Asian Conference on Disaster Reduction (ACDR) 2006 to be held in Seoul in 15-17 March 2006, one year after the WCDR, aims to carry out the above activities with a view to ensuring sustainable social and economic development in the Asian region.

Taking this opportunity, ADRC has developed and issued the first version of "ADRC Member Country Profiles" booklet, which includes information such as description of natural hazards, disaster management system and plan, budget allocated to disaster management, the progress and situation of the HFA and description of actual projects on disaster reduction. These Profiles will serve as an effective tool to follow up on the implementation of HFA.

In my capacity as the Executive Director of ADRC, I would like to express my appreciation to member countries that provided us with valuable country information. I strongly believe that those contributions will be beneficial to those countries themselves and to building a safer Asia.

Since most countries are implementing the HFA actively, the information included in these Profiles may change in due course. Therefore, I would like to further review and update the booklet. I would appreciate your continued support and guidance to ADRC.

10 March 2006

Masayuki Kitamoto
Executive Director
Asian Disaster Reduction Center (ADRC)

Acknowledgements

The "ADRC Member Country Profiles" was edited and compiled for the purpose of following up on the implementation of the HFA in the Asian region. The inputs and basic information were contributed by the member countries. ADRC is grateful to the member countries for their time and efforts to contribute to this publication.

Asian Disaster Reduction Center (ADRC)

Index

Armenia	2
Bangladesh	10
Cambodia	16
China	22
India	32
Indonesia	44
Japan	52
Kazakhstan	60
Republic of Korea	68
Kyrgyz Republic	76
Lao PDR	84
Malaysia	92
Mongolia	98
Myanmar	106
Nepal	110
Pakistan	118
Papua New Guinea	126
Philippines	134
Russia	142
Singapore	148
Sri Lanka	158
Tajikistan	164
Thailand	178
Uzbekistan	186
Viet Nam	190

Note:

ADRC received inputs and basic information from the following countries:

Armenia, Bangladesh, China, Indonesia, Japan, Republic of Korea, Kyrgyz Republic, Mongolia, Nepal, Philippines, Russia, Singapore, Tajikistan, Thailand

For those countries that did not provide inputs and/or basic information, ADRC prepared their profiles based on the existing country reports and/or relevant sources.

ARMENIA

ARMENIA

I. Natural hazards in Armenia

1.1 Natural hazards likely to affect the country

Earthquake (every year), flood (almost every year), strong wind (once a couple of year), snowstorm (almost every year), frost (almost every year), hail (once a couple of year).

1.2 Recent major disasters

Date/s of Occurrence	Disaster Type	No. of People Affected	No. of People Killed	Cost of Damage in USD
2004	Flood	Not available	0	2,156,112
2004	Rock avalanche	Not available	0	Not available
2004	Landslide	Not available	0	Not available
2004	Strong wind	Not available	0	Not available
2004	Snowstorm	Not available	1	Not available
2004	Heavy rain	Not available	0	Not available
2004	Frost	Not available	0	16,233,445
2004	Hailstorm	Not available	0	7,658,556
2004	Earthquake	Not available	0	Not available

- In March 2005 Earthquake near Vardenis city in Gegharkunik region caused minor structural damage and local population concern.

Armenian National Survey for Seismic Protection (Armenian NSSP) Reconnaissance Team comprising the seismologists, structural engineers, geologists and psychologists rushed to the epicentral zone for immediate response and provided relevant investigation. Recommendations have been made and presented to the Government to undertake the appropriate measures for recovery and retrofitting the damaged structures.

- In April 2004 the temperature has strikingly dropped by 15 degrees and caused severe frost damaging crops in vast agriculture area. To help the farmers to cover losses the Government provided funding of the amount of USD16M. for recovery and rehabilitation.
- In spring 2004 the severe hailstorms caused substantial damage to crops and lifelines. The Government has responded providing the appropriate funding (USD7.6M) for recovery and rehabilitation.

II. Disaster Management System

1. Administrative system

<i>Conventional long form:</i>	Republic of Armenia
<i>Conventional short form:</i>	Armenia
<i>Government type:</i>	Republic
<i>Capital:</i>	Yerevan
<i>Administrative divisions:</i>	11 provinces (marzer, singular - marz); Aragatsotn, Ararat, Armavir, Geghark'unik', Kotayk', Lorri, Shirak, Syunik', Tavush, Vayots' Dzor, Yerevan

The Government of the Republic of Armenia recognizes that the integration of mutual efforts aimed at minimizing natural hazards and ecological disasters is one of the most effective mechanisms of ensuring sustainable development will attach special importance to the joint preparation and implementation of regional programs on reduction of hazards and disasters bearing a cross border nature through highlighting their both.

The main directions of pursuing the national policy in the area of disaster reduction are made through close cooperation with international organizations, foreign states, including the states of the South Caucasus and neighboring countries, involvement of national and local governance bodies, NGOs and the population in developing and implementing initiatives to minimize emergency risks.

2. Legal system, legal framework

Following the World Summit on Environment and Development (Rio de Janeiro, 1992) the Republic of Armenia has signed and ratified about two tens of Conventions and associated Protocols, including Kyoto Protocol on greenhouse effect.

The National Assembly of the Republic of Armenia has passed more than two tens of Laws in the field of disaster reduction, including the following basic Laws:

1. Law on the Protection of the Population in Emergency
2. Law on Seismic Protection
3. Law on Fire Security
4. Law on Safe Utilization of Atomic energy for Peaceful Purposes
5. Law on Environmental Education and Public Awareness

6. Law on Task Force and Status of a Rescuer
7. Principals of Environmental Legislation

Alongside the Government of the Republic of Armenia has adopted about 40 Regulations directed at developing and introducing targeted activities on risk reduction. From those the noteworthy are: Regulation N 429 of 10 June 1999 "About the complex Program on Seismic Risk Reduction in the territory of Armenia" and Regulation N 796 of 31 December 1999 "About the Program for 2000-2004 on the reduction of emergency situations and the liquidation of consequences thereof and the protection of the population".

At present the Republic of Armenia is being involved in realization of the National Program on Partnership and Cooperation Agreement between the Republic of Armenia and the European Union and state-members of the Union. The program among other important directions incorporates also the problems of harmonization of legislation in the field of disaster reduction.

3. Structure of disaster management

In the Republic of Armenia the structure on multi-coordination and cooperation in the field of disaster reduction presented by the system of the protection of the population in emergencies. These systems incorporate the national and local governance bodies and establish authorities of the bodies covered by those systems in disaster reduction.

4. Priority on disaster risk management

Viewing the disaster risk reduction as a priority policy the Government of the Republic of Armenia has assigned political commitment through creating and up-dating an adequate national legislative base in particular, for the community based capacity building for training and education of different sections of population.

III. Disaster management plan

(1) Sort of plan

The State Complex Program on Seismic Risk Reduction in the Territory of Armenia".

(2) Legal Basis

Regulation of the Government of the Republic of Armenia N 429 of 10 June 1999 followed by the "Law on Seismic Protection" of the Republic of Armenia.

(3) Date of creation

Created in 1999, revised and updated in 2002

(4) Content

The seismic risk in Armenia has reached to it's highest level during the whole historical period. The general objective of the program is seismic risk reduction in the territory of Armenia with the commitment to ensure the sustainable development and population safety. The Program includes the solution of three major problems:

1. Seismic hazard assessment
2. Seismic risk assessment
3. Seismic risk reduction.

The basic principles of seismic risk reduction strategy in the territory of Armenia are as follows:

- preparedness priority over the recovery,
- priority of all the elements of seismic risk reduction in the field of preparedness,
- synergical efforts of ministries, departments, public organizations ,
- simultaneous realization of sub-programs in all the directions of seismic risk reduction,
- internationalization of the program by involving the best international geoscience's centers
- involving of foreign donors and investors for funding of the program,
- multistage (short, medium and long term) nature of the program.

The program will be implemented by the joint efforts of ministries, departments and public organizations in the period of time up to 30 year. The Armenian NSSP is responsible for the implementation of the program. The implementation of the program will raise the seismic awareness and preparedness of population. It will result in the significant reduction of next seismic hazard and risk and will support the sustainable societal and economic development of the country.

IV. Annual budget for disaster management

The measures on disaster risk reduction are being carried out through the national budget according to the relevant Laws. The national budget

includes the Reserve Fund to be used in case of emergency. The functioning of Armenian NSSP and Emergency Management Administration is being funded for the amount of USD7M for 2006 fiscal year.

V. Progress and Situation of HFA (Hyogo Framework for Action)

- **Priority area 1**
Development of institutional basis for DRR strategy implementation.
Upgrade of the National Legislation, harmonization and bringing it in line with internationally accepted principles.
- **Priority area 2**
Identify, assess and monitor disaster risks and enhance early warning.
Development of earthquake early warning system for Yerevan city.
- **Priority area 3**
Use knowledge, innovation and education to build a culture of safety and resilience.
In-depth development of Geographical Information System for seismic risk reduction.
- **Priority area 4**
Reduce the underlying risk factors.
Seismic isolation is provided to reduce earthquake disaster risk in Zvartnots International Airport in the city of Yerevan.
- **Priority area 5**
Strengthen disaster preparedness for effective response at all levels.
National Campaign on Public Awareness and Preparedness at national and municipal levels.

VI. Projects on Disaster Management

Project 1

(1) Sectional Topic: Objectives and Targeted Actions

Highlight main objectives of seismic protection and its management
Drawing up the system of measures for seismic safety of the country

(2) Actors

Armenian National Survey for Seismic Protection
Armenian Association of Seismology and Physics of the Earth

(3) Partners

Open Society Institute, Eurasia Foundation

(4) Title

Seismic Protection and its Development (textbook)

(5) Contents

Key issues discussed in the textbook include:

General information on earthquakes and seismicity

Seismic hazard and risk assessment

Seismic risk reduction

Earthquake disaster and its emergency stage

Rehabilitation and reconstruction management in the disaster area

(6) Means of implementation

Publication

(7) Target year

2004

(8) Target area/place

Republic of Armenia

(9) Expected outcome

Raising earthquake disaster awareness and preparedness through the dissemination among potential stakeholders.

Project 2

(1) Sectional Topic: Objectives and Targeted Actions

Seismic hazard assessment for earthquake disaster risk reduction

Installation of shaking measuring devices

(2) Actors

Armenian National Survey for Seismic Protection

Armenian Association of Seismology and Physics of the Earth

(3) Partner

Civilian Research and Development Foundation

(4) Title

Development of Armenian national strong motion network

(5) Contents

Background and State of the Art

Creation of attenuation model

Selection of sites for strong ground motion instruments installation

Seismic hazard monitoring at selected sites

(6) Means of implementation

Organizational and technical means

(7) Target year

2004

(8) Target area/place

Residential buildings in Yerevan city

(9) Expected outcome

Ground shaking instrumental definition for buildings vulnerability (risk) reduction

Project 3

(1) Sectional Topic: Objectives and Targeted Actions

Seismic hazard estimation, creation of database

(2) Actors

Armenian National Survey for Seismic Protection

Aspinall & Associates LLC

(3) Partner

Enconet Consulting GmbH

(4) Title

Seismic Hazard Evaluation at the Armenian Nuclear Power Plant (ANPP)

(5) Contents

Earthquake catalogues and focal mechanisms

Seismotectonics synthesis and seismic source models

Attenuation relationships and definition of the site seismic category

(6) Means of implementation

Organizational and technical means

(7) Target year

2006

(8) Target area/place

ANPP

(9) Expected outcome

Re-evaluation of seismic hazard at ANPP for disaster risk assessment

VII. ADRC Counterpart

National Survey for Seismic Protection Agency

Ministry of Territorial Administration,

Davidashen – Massive 4, P.O. 375054, Yerevan, Armenia

BANGLADESH

BANGLADESH

I. Natural hazards in Bangladesh

1.1 Natural hazards likely to affect the country

The cyclones and floods pose the greatest risk to Bangladesh on a country level. Sub nationally, the northern and eastern regions of the country are susceptible to earthquakes while the southeast is particularly vulnerable to cyclones, floods, droughts and earthquake. Bangladesh is also vulnerable to other natural and man-made hazards, such as river bank erosion, tornadoes, Tsunami, the high arsenic contents of ground water, water logging, water and soil salinity, etc. Bangladesh is also at a great risk from global climate change impacts because of its very low elevation and exposure to various climate related hazards. Although the magnitude of these changes may appear to be small, they could substantially increase the frequency and intensity of existing climatic events, such as floods, droughts, cyclones etc.

1.2 Recent major disasters

The following table shows recent major disasters in Bangladesh:

Year	Disaster	Death
1988	Flood	2373
1988	Cyclone	5704
1989	Drought	800
1991	Cyclone	138,868
1996	Tornado	545
1997	Cyclone	550
1998	Flood	1050
2004	Flood	747

II. Disaster Management System

2.1 Administrative system

Ministry of Food and Disaster Management (MoFDM) is the national focal point for disaster management in Bangladesh. It manages disasters through its three agencies: Disaster Management Bureau (DMB), Directorate of Relief and Rehabilitation (DRR), and Directorate General of Food. It is assisted by other government agencies, such as Fire Services and Civil Defence Department, Disaster Emergency Centre of Armed Forces Division, Bangladesh Meteorological Department (BMD), Flood Forecasting and Warning Center (FFWC), Bangladesh Police, Rapid Action Battalion (RAB), Cyclone Preparedness Programme (CPP), etc. It has technical and scientific partnership with Space Research and Remote Sensing Organization (SPARSO), Geological Survey of Bangladesh, Centre for Environmental and Geological Information System (CEGIS), Water Resources Planning Organization (WARPO),

Institute of Water Modeling (IWM), Bangladesh University of Engineering and Technology (BUET), etc. At the field level, the Office of the Deputy Commissioner at the district level, the Office of the Upazila Nirbahi Officer at the Sub-district level and the Union Parishad at the lowest level of the administration play crucial roles in disaster management.

2.2 Legal system

While Allocation of Business of the Rules of Business of the Government assigns roles and responsibilities to various ministries of the government, the Standing Order on Disasters (SOD) assigns roles and responsibilities to relevant government agencies as well as to Disaster Management Committees (DMCs) at all levels. The enactment of a disaster management law is in progress.

2.3 Structure of disaster management

Bangladesh has an elaborate system of disaster management. A series of inter-related institutions, at both national and sub-national levels have been created to ensure effective planning and coordination of disaster management and emergency response events.

Organizational structure at the national level

- i. **National Disaster Management Council (NDMC):** It is headed by the Hon'ble Prime Minister to formulate and review the disaster management policies and issue directives to all concerns.
- ii. **Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC):** It is headed by the Hon'ble Minister in charge of the Ministry of Food and Disaster Management (MoFDM) to implement disaster management policies and decisions of NDMC / Government.
- iii. **National Disaster Management Advisory Committee (NDMAC):** It is to be headed by an experienced person having been nominated by the Hon'ble Prime Minister.
- iv. **Cyclone Preparedness Program Implementation Board (CPPIB):** It is headed by the Secretary, Ministry of Food and Disaster Management to review the preparedness activities in the face of initial stage of an impending cyclone.
- v. **Disaster Management Training and Public Awareness Building Task Force (DMTATF):** It is headed by the Director General of Disaster Management Bureau (DMB) to co-ordinate the disaster related training and public awareness activities of the Government, NGOs and other organizations.
- vi. **Focal Point Operation Coordination Group of Disaster Management (FPOCG):** It is headed by the Director General of DMB to review and co-ordinate the activities of various departments/agencies related to disaster management and also to review the Contingency Plan prepared by concerned departments.

vii. **NGO Coordination Committee on Disaster Management (NGOCC):** It is headed by the Director General of DMB to review and co-ordinate the activities of concerned NGOs in the country.

viii. **Committee for Speedy Dissemination of Disaster Related Warning/ Signals (CSDDWS):** It is headed by the Director General of DMB to examine, ensure and find out the ways and means for the speedy dissemination of warning/ signals among the people.

Organizational structure at sub-national levels

i. **District Disaster Management Committee (DDMC):** It is headed by the Deputy Commissioner (DC) to co-ordinate and review the disaster management activities at the district level.

ii. **Upazila Disaster Management Committee (UZDMC):** It is headed by the Upazila Nirbahi Officer (UNO) to co-ordinate and review the disaster management activities at the Upazila level.

iii. **Union Disaster Management Committee (UDMC):** It is headed by the Chairman of the Union Parishad to co-ordinate, review and implement the disaster management activities of the concerned union.

iv. **Pourashava Disaster Management Committee (PDMC):** It is headed by Chairman of Pourashava (municipality) to co-ordinate, review and implement the disaster management activities within its area of jurisdiction.

v. **City Corporation Disaster Management Committee (CCDMC):** It is headed by the Mayor of City Corporations to co-ordinate, review and implement the disaster management activities within its area of jurisdiction.

The SOD provides detailed roles and responsibilities of all disaster management committees, relevant ministries, divisions, departments and agencies at all levels for normal period risk reduction and during emergency response periods.

2.4 Priority on disaster risk management

The government acknowledges the need for disaster risk reduction as opposed to the earlier concepts of responding after a disaster, as a necessary as well as a cost-effective approach. Thus priority has been accorded to focus on community level preparedness, response, recovery and rehabilitation. Programme to train people living in disaster prone areas for improving their capability to cope with natural disasters is highlighted.

Bangladesh has created a simplistic model to guide the design of disaster management programmes, including development or review of policy and training course material. The model has three key elements and ensures that the move to a more comprehensive risk reduction culture remains central to all efforts.

- (1) **Defining the risk environment** – This element of the model promotes the use of scientific analysis (including climate change impacts) as the basis for accurately determining the future risk environment relative to all hazards, all sectors and all geographical areas. Bangladesh has adopted the process outlined in the International Risk Management Standard AS/NZS: 4360-1999 to guide all community risk assessments.
- (2) **Managing the risk environment** – Promotes the design of risk reduction strategies (Community Based Adaptation Programmes) as an outcome of the risk assessment process. This ensures Prevention, Preparedness, Response and Recovery programmes are multi hazard focused and that they move from being hazard generic in nature to risk specific. This will enable communities to better understand their changing risk environment and thus become more resilient through proactive risk reduction efforts.
- (3) **Responding to the threat environment** – This involves responding to an actual threat situation. It helps Bangladesh disaster management officials to clearly articulate the difference between risk reduction and emergency response and how accurately defining risk environments can influence and enhance emergency response systems and decisions.

III. Disaster Management Plan

1. Sort of plan

The MoFDM Corporate Plan: Framework for Action 2005 – 2009. This document sets out the priorities and broad strategies for achieving reform within the disaster management sector and ensures that there are strong linkages with the priorities of the government in respect to the achievement of goals associated with national (PRSP) and international drivers such as the MDGs, WCDR and ISDR.

Each of the three operational agencies (Disaster Management Bureau, Directorate of Relief and Rehabilitation, Directorate General of Food) of the Ministry have prepared 2-3 year Strategic Plans based on the Corporate Plan and an Operations Plan detailing the priorities for each twelve month period. These plans are used to assist the MoFDM and its agencies to formulate collaborative partnerships, particularly with NGOs, for sustainable delivery of services relative to each strategy.

2. Legal basis

This is an administrative document. It is expected to get legal coverage under the draft disaster management act.

3. Date of creation of the plan

In March, 2005 the MoFDM launched its Corporate Plan.

4. Content

The Plan recognizes that there are many interdependent elements that make up an effective disaster management system. These elements are listed below as six strategic focus areas. The critical factor is for each of these focus areas to be viewed as being individual inputs to a bigger picture with the outputs of one or more elements, being inputs to other focus area programmes.

- Focus Area 1: Professionalising the disaster management system
- Focus Area 2: Mainstreaming of risk management programming (partnership development)
- Focus Area 3: Strengthening of community institutional mechanisms (community empowerment)
- Focus Area 4: Expanding Risk Reduction programming across a broader range of hazards.
- Focus Area 5: Strengthening emergency response systems
- Focus Area 6: Maintaining and strengthening the national food security system - with a focus on ensuring access to sustainable food supplies.

IV. Budget size on national level

Annual budget for the Ministry of Food and Disaster Management is about US\$ 500 million.

V. Progress and Situation of the Hyogo Framework for Action (HFA)
Bangladesh has established the national platform for disaster risk reduction. Bangladesh was the first country to initiate a strategic planning process in line with the HFA, when MoFDM Corporate Plan: Framework for Action 1005-2009 was launched in March 2005. Subsequently, three agencies of MoFDM have published their strategic plans, and the development of annual operational plans is underway. Government of Bangladesh has also launched a Risk Reduction Programme for people at risk in disaster prone areas of the country. Under the Comprehensive Disaster Management Programme, the MoFDM is spearheading the implementation of the HFA in five focus areas.

VI. Projects on disaster reduction headed by your ministry

- (1) Comprehensive Disaster Management Programme (CDMP)
- (2) Risk Reduction Programme
- (3) Construction of Multi Purpose Disaster Shelters
- (4) Strengthening emergency response system through enhancing search and rescue capability (Procurement of equipment)
- (5) Food policy capacity strengthening programme

VII. Counterpart of ADRC

Ministry of Food and Disaster Management, Government of the People's Republic of Bangladesh.

CAMBODIA
1991
1992
1993
1994
1995

CAMBODIA



CAMBODIA

I. Natural hazards in Cambodia

1.1 Natural hazards likely to affect the country

Flood, drought, epidemic, famine,

1.2 Recent major disasters

year	dis_type	dis_subset	people_affected	total_dam (US 000s)
2000	FL	Flood	3448053	100000
2001	FL	Flood	1669182	15000
2002	FL	Flood	1470000	—
2005	DR	Drought	600000	—
2001	DR	Drought	300000	—
2002	DR	Drought	650000	38000

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

During the floods in 2000, 2001 and 2002, and the drought in 2004, it was recognized that government leadership and actions taken by provincial Governors were crucial in the mobilization of resources to respond to urgent needs. There have been noticeable successes, such as reduction in mortality rates, decrease in damages, and improvement of flood resistant public infrastructure, and social services under the projects of flood rehabilitation and rural development.

In the context of flood mitigation and based on flood impacts in 2000, the Government has adopted both non-structural and structural measures that are implemented by concerned ministries and agencies i.e. as non-structural measures, the building code has been drafted and recommended for further construction of road, bridges, school buildings, health centers with a new standard compared with flood level of 2000. Government directives have been issued to all ministries, provinces and public for implementation to contribute to the loss of properties free from flood threat. Meanwhile, the Government through a national developed plan for flood mitigation purpose has adopted structural measures. National roads number 1, 5, 6, 7, 11 and provincial roads have been rehabilitated and developed. More large bridges and waterways are erected to discharge the floodwater as quickly as possible so as lives and properties are kept free from devastation. Protecting dikes around Phnom Penh capital, around three eastern provincial towns (Prey Veng, Kompong Cham and Kratie) have been erected and yearly maintained to ensure safety during the seasoning flood. Diverted water canal, West of Phnom Penh, has been erected to mitigate the possible flash flood from the mountainous region and to store water for supplying rice crop in the

prone drought affected areas. Through this project implementation, Bio – Diversity Echo System and natural environment preservation are promoted and contribute to Poverty Eradication Strategy of the Government. Selected safe areas have been recommended to be installed in high ground throughout target provinces in order to receive flood victims evacuated from flooded areas, and set up a systematic management to ensure the security, food supplies, water and sanitation of the evacuated people. Mobile houses have been deployed in all safe areas and managed by the armed forces.

II. Disaster management system

2.1 Administrative system

Conventional long form: Kingdom of Cambodia

Conventional short form: Cambodia

Government type: multiparty democracy under a constitutional monarchy

Capital: Phnom Penh

Administrative divisions: 20 provinces (khait, singular and plural) and 4 municipalities (krong, singular and plural)

2.2 Legal systems and national policy on DM

Sub-decree No. 35 ANK has been a core principle for disaster management in Cambodia, creating the National Committee for Disaster Management.

Cambodia has neither national policy nor law on disaster management. The proposed policy had undergone three revisions since it was first discussed in 1997, but is yet to be approved by the Council of Ministers and signed as an official document by the Prime Minister. The ability of the Government Ministries, provincial and district leadership to provide effective civil services, particularly in relation to disaster management activities is constrained due to inadequate understanding of specific roles and responsibilities, lack of clarity in “lines of communications” and criteria for decision making, planning, and implementing.

2.3 Structure of disaster management

All Ministers and Institutions concerned shall collaborate closely with NCDM when necessary in an emergency situation. In addition, NCDM shall adopt the Cambodian Red Cross as its main partner to jointly conduct relief operations in times of disasters. NCDM has a General Secretariat that acts as an implementing unit within NCDM Headquarters in order to provide advice to the Royal Government on DM issues. There shall also be CDM Structures at the Provincial/Municipal and District Levels.

2.4 Priorities on disaster risk management

COMPREHENSIVE DISASTER MANAGEMENT STRATEGY

Flood rehabilitation program Its objective is "to rehabilitate an economic and social infrastructure, while also indirectly supporting recovery in rural production and incomes.

Local based project on rural disaster management "The Community Self-Reliance and Flood Risk Reduction Project", a Technical Assistance (TA) Project that supports the Royal Government of Cambodia in increasing community self-reliance in recurrent flood disasters.

DISASTER PREPAREDNESS AND EMERGENCY RESPONSE

Preparedness aside from the yearly small allocation of rice, fuel and cash to NCDM operations, including training.

DISASTER MANAGEMENT INFORMATION SYSTEM

NCDM efforts on the development and installation of a National Disaster Damage and Needs Assessment System. The UN-DMT, with the support from the World Food Program (WFP) and UNICEF, provided for the development of such a system. Key success factors include coordinated actions, high level leadership, and participation of communities before-during- and after disasters.

PUBLIC AWARENESS AND EARLY WARNING

Orientation field visits to flood-prone provinces to disseminate new Sub-decree and Circulars by H.E. Nhim Vanda and senior staff of NCDM are conducted every May of the year. Discussion of the Circular and the new Sub-decree with various government ministries were also separately conducted. The two circulars were renewed which now include the validation and mandate by Prime Minister to be the legitimated legal based documents for disaster preparedness actions.

With limited capacity, system and procedures of information management and reporting system, NCDM is using spreadsheets for data collection and storage. NCDM relies on information collected by local authorities using spreadsheets and fax based on actual occurrence of flood and drought.

COORDINATION AND COLLABORATION

In addition, NCDM provides a coordinating role in establishing and implementing community based disaster preparedness programs with NGOs.

URGENT PRIORITY ACTION:

Development of a Strategy for RGC's National Committee for Disaster Management

III. Disaster Management Plan

National Emergency Management Plan

The Secretariats at the national, provincial, and municipal levels must cooperate closely with the Cambodian Red Cross (CRC) at all levels of planning and in emergency management. In times of emergency, NCDM General Secretariat shall collaborate with the provincial/municipal CDM and CRC to draw specific operational plans, according to existing guidelines. The plans must be sent urgently to NCDM General Secretariat after they are approved at the provincial and municipal levels.

A. First Sub-national Level

At the provincial and municipal levels, there shall be CDMs established with:

1. The provincial/municipal Governor as coordinator and President;
2. The first Deputy Governor as Vice President;
3. The Chiefs of each relevant government Department as members.

B. Second Sub-national Levels

At the District (Commune and Village) levels, CDM shall be established with the District Governor as President, the first deputy as Vice President and members from all government Ministries, Departments, Bureaus, Corporations, Authorities and Agencies as members.

Organization of emergency operations in all administrative subdivisions are as follows:

1. municipalities, there is hereby constituted a municipal CDM with the Governor as coordinator, and Police Superintendent as Deputy Coordinator, composed of all municipal officials, and national officials assigned at the municipal level. The Committee shall establish the Municipal Emergency Coordination Centre (MECC).
2. At the provincial level, a Provincial CDM shall likewise be constituted with the Governor as coordinator, with the provincial Police Superintendent as the Deputy Coordinator.
3. At the District, (Commune and Village) level, the provincial CDM may chose to constitute a CDM. The decision to establish a CDM at this level depends on an assessment of actual need, availability of resources and capacity for supervision and support by the Province.

C. General Tasks of Committees for DM

1. Collaborate with other national institutions on training provincial and municipal Committee members and to disseminate essential information to the public;
2. Undertake damage and needs assessments;
3. Prepare programs for rehabilitation and reconstruction;

4. Coordinate work with other related institutions, international organizations and NGOs;
5. Undertake hazard assessments and vulnerability analyses
6. Plan for emergency relief
7. Provide early warning and other information to the public of potential hazards
8. Coordinate with institutions, organizations and CRC in order to create communication networks between the National Committee and the Provincial and Municipal Committees
9. Ministries, Department, Bureaus, Corporations, Authorities and Agencies coordinate the activities of institutions, organizations and the CRC with various provincial and municipal Committees
10. Coordinate activities with institutions, organizations and the CRC with respect to providing evacuation, protective shelter, security, establishing a public awareness program with regard to being prepared for disasters, and preparing other programs;
11. Issues interim reports and final reports for each declared emergency and disaster that include recommendations for changes in national policy and practice.

IV. Budget size on national level

Funds for DM are indicated under the emergency relief fund: relief operations, medical assistance and immediate repair of damaged infrastructure to be undertaken by MOSALVY, MOH, MPWT or MND. NCDM may instruct DBM to allocate funds from the Emergency Relief Fund based on existing guidelines. Other sources of DM funds: Foreign assistance, funds from respective agencies

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by your Ministry

VII. Counterpart of ADRC

The National Committee for Disaster Management Royal
Government of Cambodia
274 Monivong Boulevard, Phnom Penh

CHINA

CHINA

I. Natural hazards in China

1.1 Natural hazards likely to affect the country

Earthquake, extreme temperature, flood, wind storm, wave surge, wild fires, drought, insect infestations, slides

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2004	Flood	133	4026	33,652,026	1,100,000
2005	Flood	58	0	11,230,000	—
2005	Flood	138	0	16,700,000	1,600,000
2005	Flood	65	0	428,000	27,000
2004	Typhoon	188	4000	9,062,000	2,190,000
2005	Winter	36	0	8,000,000	300,000
2005	Storm	19	55	458,855	16,915
2005	Storm	0	0	90,000	6,000
2005	Typhoon	9	0	13,000	260,000
2005	Storm	8	223	825,223	—
2005	Typhoon	6	0	9,160,000	808,000
2005	Typhoon	159	0	19,624,000	1,900,000
2005	Typhoon	14	0	1,350,000	—
2005	Tropical storm	9	0	5,719,000	—
2005	Typhoon	95	0	2,487,000	148,000

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

At 11:50, January 10, 1998, an earthquake (M6.2) occurred in the bordering area between Zhangbei County and Shangyi County in Hebei Province and four counties were affected. 136,000 houses collapsed, 49 were dead, 11,479 people injured. Some facilitates for livelihood and production were seriously damaged. Within 5 minutes upon earthquake occurrence, the key staff members responsible for emergency response, earthquake analysis and forecast in China Seismological Bureau (CSB) were in their posts. The epic-center was located within 20 minutes after the tremors. It was announced after two and half hours by CSB that aftershocks would not yield serious effect on Beijing. The local governments and disaster reduction departments immediately implemented the emergency response pre-plan for earthquake and entered into the working situation after 20 minutes of the tremors.

Source: UN/ISDR Country Report

Hundreds of cadres were immediately divided into 6 groups and rushed into the disaster areas to conduct rescue and disaster relief operations, resettle victims and popularize the knowledge for earthquake prevention and resistance. In the afternoon of the earthquake day, Hebei Provincial Government sent work and medical teams to the disaster area. 2,000 PLA personnel rushed into the disaster stricken areas for carrying out rescue work. Tens of media agencies sent reporters to the disaster areas to make timely report of the disaster combat and rescue works. At 18 O'clock of the very day, the first lots of winter clothes were dispatched to the victims. Before 12 O'clock on January 11, the relief materials from Beijing, Tianjin, Zhangjiakou and Langfang arrived in the disaster areas one after another. On January 14, all the disaster victims had got winter clothes, food, temporary frost-proof shelters and the medical services. From January 15, about 3,000 PLA officers and soldiers were urgently sent to help more than forty thousand disaster victims to build houses for winter; the work was completed in February. Because of the timely response and effective measures, nobody died of frost and hungry under a temperature of 20-30 C (below zero).

II. Disaster Management system

2.1 Administrative system

Conventional long form: People's Republic of China

Conventional short form: China

Type of Government: Communist State

Capital: Beijing

Administrative Divisions: 23 provinces (sheng, singular and plural), 5 autonomous regions (zizhiqu, singular and plural), and 4 municipalities (shi, singular and plural). 2 Special Administrative Regions (tebiexingzhengqu, singular and plural), Autonomous regions: Guangxi, Nei Mongol, Ningxia, Xinjiang, Xizang (Tibet). Municipalities: Beijing, Chongqing, Shanghai, Tianjin. Special Administrative Regions: Hong Kong, Macao.

2.2 Legal system, legal framework

More than 30 laws and regulations have been promulgated and implemented on disaster reduction, which include the following:

- Law on Water and Soil Conservation
- Law on Earthquake Prevention and Disaster Reduction
- Law on Fire-Fighting
- Meteorological Law

- Law on Production Safety
- Regulation on Forest Fire-Fighting, the Regulation on Preventing Forest Pests
- Regulation on Safety Management of Dangerous Chemicals

All these laws and regulations have legalized China's undertakings in water and soil conservation, earthquake prevention and disaster reduction, fire-fighting, flood-prevention and meteorology, and the working pattern of reducing disasters.

2.3 Structure of disaster management

China National Commission for the International Decade on Natural Disaster Reduction was established in 1989. In 2000, it was renamed China Commission for International Disaster Reduction. In January of 2005, it was renamed as China National Committee for Disaster Reduction (NCDR), headed by a Vice Premier of the State Council. It is composed of 34 ministries and departments, including relevant military agencies and social groups. It functions as an inter-agency coordination body under the State Council, which is responsible for studying and formulating principles, policies and plans for disaster reduction, coordinating major disaster activities, giving guidance to local governments in their disaster reduction work, and promoting international exchanges and cooperation. Moreover, the leadership of the disaster reduction and relief efforts has been improved with the establishment of an expert panel consisting of 18 academicians and renowned experts.

2.4 Priorities on disaster risk management

- 1) The principle of putting people's interests first and the scientific concept of development should be carried out. Disaster reduction should be secured with an important status in national economic and social development. The principle of parallel development of economy and natural disaster reduction should be followed. Disaster reduction should be included in the strategic framework of sustainable development. A series of comprehensive disaster-reduction activities should be adopted to protect people's lives and properties.
- 2) Disaster prevention should be the major priority in combination with disaster resistance and relief. The disaster-reduction awareness of the general public should be further enhanced. Disaster reduction should be taken into account in constructing production and living facilities. Multiple methods and measure should be implemented to carry out disaster-reduction projects so as to display the overall efficiency of various disaster-reduction projects and step up relevant undertakings.

- 3) Overall interests should be borne in mind with set priorities. Key issues bearing on the overall interests of disaster reduction should be well settled. Limited resources should be concentrated on strengthening the development of key projects and comprehensive work on reducing disasters in key regions. Focus should be put on reducing natural disasters having major overall or regional impacts. In the meantime, efforts should be made to explore effective ways to reduce other natural disasters.
- 4) The role of science, technology and education should be fully displayed in disaster reduction. The process of transforming existing scientific results into actual capabilities of disaster reduction should be accelerated for better abilities to reduce disasters. Disaster-reduction education should be integrated with popularized and specialized education oriented towards whole society so as to uplift the level of disaster-reduction knowledge of the general public.
- 5) All positive elements should be mobilized. Initiatives of the central and local governments as well as all social sectors should be displayed. Under the unitary organization and deployment of the government, relevant departments should coordinate closely with each other and enterprises as well as cross-sections of society should be broadly involved for effectively reducing disasters.
- 6) International exchanges and cooperation on disaster reduction should be strengthened. Multi-channeled and multi-layered international exchanges and cooperation should be actively carried out to continuously improve China's disaster-reduction undertakings and China's standing in the international disaster-reduction community.

III. Disaster management plan

In April 1998, the Chinese Government promulgated the National Natural Disaster Reduction Plan of the People's Republic of China (1998-2010), the first national disaster reduction plan formulated in accordance with the Ninth Five-Year National Economic and Social Development Plan and the 2010 Long-term Objective. It is based on past experiences to carry out its disaster reduction work.

The *Disaster Reduction Plan* has identified the following guiding principles:

- Disaster reduction should be deeply considered in national economic and social development;
- Prevention should be taken as the priority in combination with resistance and relief;

- The role of science, technology, and education should be incorporated in disaster reduction;
- The central and local governments as well as all social sectors should be to reduce disasters; and
- International exchange and cooperation should be strengthened.

Expected Outputs of the plan:

- Key disaster reduction projects which have a bearing on the overall interests of national economy and social progress will be built.
- Disaster-reduction technology will be widely applied.
- Public awareness and knowledge will be enhanced.
- A comprehensive working mechanism will be set up so as to alleviate impacts inflicted by disasters on the national economic and social development;
- Reduce direct economic losses and human casualties.

The *Disaster Reduction Plan* has also put forward the tasks of various key players, measures and major actions on disaster reduction. After its promulgation, it has been actively implemented while relevant departments and localities are accelerating their corresponding plans and implementation details.

IV. Budget size on national level

In 2005, The MCA has collaborated with relevant departments to earmark RMB 8.7 billion as the central budget for disaster rescue and relief initiatives, of which the MCA and the Ministry of Finance contributed RMB 4.048 billion in total to the reserve pool for devastating disaster relief programs.

V. Progress and situations of the Hyogo Framework for Action (HFA)

Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation

National Natural Disaster Reduction Plan of the People's Republic of China (1998 -2010) was formulated in accordance with the Ninth Five-Year National Economic and Social Development Plan and the 2010 Long-term Objective. It is the road map of China for a long term effort on disaster reduction.

Identify, assess and monitor disaster risks and enhance early warning

The disaster monitoring and pre-warning system has been set up and improved. Currently the disaster monitoring and pre-warning system in

China has taken shape and relevant departments are able to timely forecast disasters in line with the rules of disaster management.

Throughout the country, a weather monitoring and forecast network composed of 2,511 ground meteorological stations, 124 high-altitude monitoring stations and more than 80 new weather radars has been set up. An earthquake monitoring network has been established made up of the national digital earthquake network of 48 earthquake stations, 23 regional digital remote-monitoring stations, 25 GPS stations and 56 crust movement monitoring networks composed of 1,000 mobile observatories and 400 stations.

A hydrometric network composed of 3,130 basic hydrometric stations, 1,073 water level stations, 14,454 precipitation survey stations and 11,620 underground water observing wells has been put in place. A forest fire-fighting and pest preventing forecast network has been set up composed of 2,867 inspection and quarantine stations, 3,151 forest fire-fighting headquarters, 11,222 forests fire-fighting watch towers, 300,000 kilometers of fire-separation roads and 1.03 million kilometers of fire separation zones.

A pest monitoring network has been established composed of 400 regional forecasting stations, 15 monitoring centers and 300 regional monitoring stations. The constant improvement of monitoring and pre-warning system targeted against various natural disasters has guaranteed the timely organization of disaster reduction and relief work by governments at different levels.

Small-satellite constellations for environment and disaster monitoring were built. In 2007 two small optical satellites and a radar satellite will be launched for forming a "2+1" constellation, which will have preliminary capabilities of timely monitoring and forecasting disasters and environment developments in most of regions in China.

Before 2010, a "4+4" small satellite constellation composed of 4 small optical satellites and 4 small radar satellites will be completed, which will change the current mode of disaster monitoring in China and realize 24-hour and all-weather monitoring on environment and disasters. Currently, the research on the satellite effective load is well underway.

Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Information Management, Public Awareness

A National Disaster Reduction Center of China (NDRCC) has been set up. In April 2002 the Chinese Government approved the founding of the National Disaster Reduction Center, which serves as a center for

disaster information sharing, technical services and emergency relief decision consultancy. Its main functions are specified as follows: to assess and analyze the occurrence and development of major disasters, and provide services on forecast, assessment and supporting disaster reduction decisions and information; to collect and analyze disaster reduction information both at home and abroad for information sharing; to provide technical assistance and supporting decisions for major emergency relief work; to organize international disaster reduction exchanges and cooperation.

The Chinese Government has raised public awareness by timely reporting of disasters and relevant disaster reduction activities, holding specialized lectures, columns and programs on TV, radio as well as newspapers. Various charity shows for disaster reduction and poverty relief, disaster-reduction summer camping activities for middle school students and national quiz shows on disaster reduction were carried out throughout the country.

In line with the theme of the International Day of Disaster Reduction, multiple publicity campaigns on disaster reduction were launched. Educational departments were added into the curriculum disaster-reduction knowledge in primary and middle schools. In higher education, different levels of disaster-reduction education have been carried out in combination with disaster-reduction research.

Strengthen disaster preparedness for effective response at all levels

A national emergency-response plan system for natural disaster management has been set up. In order to improve various pre-warning and emergency-response mechanisms and governments' capabilities to handle emergencies and risks, the Chinese Government has promulgated *the national Natural Disaster Emergency-Response Plan*.

Relevant departments under the State Council have basically completed their emergency-response plans. 31 provinces and 2,347 counties have also released their plans. As a result, a national emergency-response plan management system for natural disasters has already taken shape.

Since 1998 China began to set up a central-level material reserve system for disaster relief. Central-level material reserve points for disaster relief have been built in Shenyang, Harbin, Tianjin, Zhengzhou, Hefei, Wuhan, Changsha, Nanning, Chengdu and Xian. Provincial-level material reserve warehouses for disaster relief have been set up in almost all of provinces, autonomous regions and municipalities.

VI. Projects on disaster reduction headed by Ministry

Community-based Disaster Reduction Outreach Campaign

Community-based Disaster Reduction Outreach Campaign has been launched, handbook series of *Save Yourself From Disaster* published and TV promotion of *Emergency Rescue* broadcast, all of which have gone a long way with enhancing the public awareness. Information dissemination and education programs have been carried out at the local level, focusing on “disaster reduction and the community”, “disaster reduction in classrooms” and “disaster reduction in the rural areas”. Thereby, China has been disseminating knowledge related to disaster reduction, raise public awareness for disaster reduction, strengthen vocational training for the managerial staff, build a pool of volunteers, and improve the overall knowledge base of the general public for disaster prevention, in an effort to set up a disaster prevention and disaster reduction network engaging the whole society.

International Cooperation

As part of the endeavors to bring closer and stronger international cooperation, China has been a signing party to The *SCO Agreement on Inter-governmental Mutual Assistance for Disaster Relief*, attended World Disaster Reduction Conference and sponsored the Asian Conference on Disaster Reduction, the first ever ministerial meeting of its kind in Asia. On top of that, China has provided relevant training programs for 31 officials from 11 tsunami-hit countries and organized governmental and non-governmental donation programs in the wake of the earthquake-turned tsunami in the Indian Ocean and the devastating earthquake in Pakistan.

VII. ADRC Counterpart

National Disaster Reduction Center of China

Zhongmin Plaza, 7 Baiguanglu, Xuanwu District, Beijing 100053

INDIA

INDIA

I. Natural hazards in India

1.1 Natural hazards likely to affect the country

Earthquakes, floods, cyclones, drought, tsunami, landslides, avalanches

1.2 Recent major disasters

year	dis_subset	killed	total_affected	dam (US '000s)
2005	Avalanche	250	5000	—
2005	Storm	18	7550	—
2005	Meningitis	48	405	—
2005	Heat wave	329	—	—
2005	Flood	239	405000	2300000
2005	Valley Flood	6	5000	200000
2005	Flood	15	700000	—
2005	Flood	62	49000	—
2005	Flood	12	10000	—
2005	Flood	930	340055	3500000
2005	Landslide	12	20	—
2005	Leptospirosis	66	—	—
2004	Flash Flood	900	33000000	220000

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

1. Description of recent major disaster and response activities

Gujarat Flood, 5 July 2005

Owing to unprecedented heavy rains in the state of Gujarat has been experiencing floods and inundation of low lying areas. The situation in the state is reported to be critical in the districts of Vadodara, Kheda and Anand in other parts of the state flood waters have started receding and life is slowly getting back to normal. The affected Districts are: *Surat, Valsad, Navsari, Bharuch, Vadodara, Surendranagar, Dangs, Ahmedabad, Anand, Kheda, Amreli, Bhavnagar, Junagadh, Rajkot, Narmada, Jamnagar, Gandhinagar and Sabarkantha*. The total number of taluka affected is 117 with 8000 villages.

However the severely affected districts are *Vadodara, Anand and Kheda* and 2000 villages. The cities experiencing severe inundation conditions are *Vadodara, Nadiad, Ahmedabad, Navsari, Surat and Limbdi, Dakor, Anand, Kheda, Petlad, Borsad*. Due to flooding and inundation of topography, clogging of drainage channels

Source: WCDR Report, ADRC Country Report, WBI's On-line Course on CDRMF, 2005, NDI India

topography, clogging of drainage channels

Relief Operations and Restorations

Evacuation

The state administration evacuated 500,000 affected persons to Safe locations including primary and secondary schools, community halls, 'Dharmasalas' and temples in Village Panchayat were used as temporary shelters.

Relief

At the relief/temporary camps necessary requirements such as 269678 food packets, 236000 water pouches and 300 family kits, 14100 packets of milk powder have been distributed. The drinking water arrangements are being coordinated by Gujarat Water Supply & Sewerage Board (GWSSB) through portable tankers. A team of 639 members of which 34 medical officers and 200 Para medics have been deployed in the relief camps.

Rescue Operations

The state has deployed 14 army Columns of 610 personnel and company of CRPF in Kheda, with 56 boats (OBM and Non-OBM) have been deployed for rescue operations in Vadodara, Anand, Ahmedabad while 11 Indian Air Force Helicopters have been conducting rescue operations and air dropping of relief materials. 600 trained State Police force have been deployed. The trained fire brigade rescue teams from all city municipal cooperation and Nagarpalikas (city local bodies) are carrying out emergency operations in the affected cities.

2. Activities for recovery and reconstruction after major disasters

Restoration

Power supply was restored in 5,068 villages and 52 towns with 2,022 feeders restored and 673 electricity distribution transformers restored. Water supply was restored in 3,621 villages, and 25 Towns Water was supplied through tankers in Kheda, Anand and Vadodara. Chlorination of water source was done to prevent out break of water borne diseases.

Traffic on the Express Highway was opened for limited operation. The State Express Highway and National Highway 6, 8 and 8E and 59 were operational for select vehicles. 4,690 skilled workers and 87 JCB 363 dumpers/tractors were used for restoring blocks roads. Rail transport was revived on Delhi- Mumbai route. However Railway services between Ahmedabad-Baroda-Mumbai, Ahmedabad- Bhavnagar-Rajkot had slow rail traffic movement.

II. Disaster management system

2.1 Administrative system

<i>Conventional long form:</i>	Republic of India
<i>Conventional short form:</i>	India
<i>Government type:</i>	federal republic
<i>Capital:</i>	New Delhi
<i>Administrative divisions:</i>	28 states and 7 union territories

2.2 Legal system, legal framework

2.3 Structure of disaster management

At the national level, the Ministry of Home Affairs is the nodal Ministry for all matters concerning disaster management. The Central Relief Commissioner (CRC) in the Ministry of Home Affairs shall coordinate relief operations for natural disasters. The CRC receives information relating to forecasting/warning of a natural calamity from India Meteorological Department (IMD) or from Central Water Commission of Ministry of Water Resources on a continuing basis.

The Ministries/Departments/Organizations concerned with the primary and secondary functions relating to the management of disasters include: India Meteorological Department, Central Water Commission, Ministry of Home Affairs, Ministry of Defense, Ministry of Finance, Ministry of Rural Development, Ministry of Urban Development, Department of Communications, Ministry of Health, Ministry of Water Resources, Ministry of Petroleum, Department of Agriculture & Cooperation, Ministry of Power, Department of Civil Supplies, Ministry of Railways, Ministry of Information and Broadcasting, Planning Commission, Cabinet Secretariat, Department of Surface Transport, Ministry of Social Justice, Department of Women and Child Development, Ministry of Environment and Forest, Department of Food. Each Ministry/Department/Organization nominate their nodal officer to the Crisis Management Group chaired by Central Relief Commissioner. The nodal officer is responsible for preparing sectoral Action Plan/Emergency Support Function Plan for managing disasters.

National Crisis Management Committee (NCMC): Cabinet Secretary, is the highest executive officer, heads the NCMC. Secretaries of all the concerned Ministries /Departments as well as organizations are the members of the Committee. The NCMC gives direction to the Crisis Management Group as deemed necessary. The Secretary, Ministry of Home Affairs is responsible for ensuring that all developments are brought to the notice of the NCMC promptly. The NCMC can give directions to any Ministry / Department / Organization for specific action

needed for meeting the crisis situation.

Crisis Management Group: The Central Relief Commissioner in the Ministry of Home Affairs is the Chairman of the CMG, consisting of senior officers (called nodal officers) from various concerned Ministries. The CMG's functions are to review every year contingency plans formulated by various Ministries/Departments/Organizations in their respective sectors, measures required for dealing with natural disasters, coordinate the activities of the Central Ministries and the State Governments in relation to disaster preparedness and relief and to obtain information from the nodal officers on measures relating to above.

The CMG, in the event of a natural disaster, meets frequently to review the relief operations and extend all possible assistance required by the affected States to overcome the situation effectively. The Resident Commissioner of the affected State is also associated with such meetings.

Control Room (Emergency Operation Room): An Emergency Operations Center (Control Room) exists in the nodal Ministry of Home Affairs, which functions round the clock, to assist the Central Relief Commissioner in the discharge of his duties. The activities of the Control Room include collection and transmission of information concerning natural calamity and relief, keeping close contact with governments of the affected States, interaction with other Central Ministries/Departments/Organizations in connection with relief, maintaining records containing all relevant information relating to action points and contact points in Central Ministries etc., keeping up-to-date details of all concerned officers at the Central and State levels.

At the State level, disaster management is handled by the Departments of Relief & Rehabilitation. The Government of India is working with the State Governments to convert the Departments of Relief & Rehabilitation into Departments of Disaster Management with an enhanced area of responsibility to include mitigation and preparedness apart from their present responsibilities of relief and rehabilitation. The change happened already in eight State Governments/Union Territory Administrations.

With its enhanced mandate of mitigation and prevention, the district heads and departments engaged in development are added as members to the Committee so that mitigation and prevention is mainstreamed into the district plan. The existing system of drawing up preparedness and response plans will continue. A long term mitigation plan needs to be in place. District Disaster Management Committees have been constituted in several districts and are in the process of being constituted in the remaining multi-hazard prone districts. A large number of village level Disaster Management Committees and Disaster Management

Teams have already been constituted.

2.4 Priority on disaster risk management

III. Disaster Management Plan (describe the latest on a national basis)

The tenth 5 Year Plan (2005-2007)

India is a vibrant, pluralistic and federal democratic set-up. The decision making process necessitates consensus building with extensive consultations between the Central Government, State Governments, numerous governmental and non-governmental organizations. Within this complex framework, Five Year Plans over the last fifty years have served three primary objectives:

1. To provide a common, agreed, framework of objectives, and a strategy within which compatible decisions can be evolved;
2. To analyze the rationale of these decisions;
3. To delineate the strategy for accelerated growth of the economy and enhance the welfare of all citizens.

Strive for the achievement of these objectives has sustained national unity within the complexity of daunting problems. The content and the strategy of the Five Year Plans have necessarily varied in response to the development issues being addressed and the evolution of policies represents the contemporary needs of the time. It is in this evolving context that the President of India in his address to the Joint Session of the Parliament has described that the "Tenth Five Year Plan convincingly explains why these ambitious goals are achievable. It has distinguished itself from previous Plans by underscoring that it is not merely a Resources Plan but a Reforms Plan."

The tenth plan regarding disaster management:

Although Disaster Management is not conventionally a subject for Five-Year Plans, disasters do in fact occur regularly – earthquakes, cyclones, floods, droughts - and can significantly set back the development of a region or State. It is therefore important to do what can be done in the way of advance prevention and mitigation of disasters, and prepare for post-disaster management as well.

Disaster mitigation components need to be built into all Plan projects, such as earthquake resistant structures, so as to minimize both the likelihood of damage and the cost of post-disaster restoration and rehabilitation. This will mean some additional outlay for projects coming up in disaster-prone areas, first for building a comprehensive data-base on risks and actions already taken, and secondly for undertaking a vulnerability analysis and risk assessment for the project in question. In

addition, the construction of specific disaster-prevention projects (flood defenses, cyclone shelters) needs to be considered in the context of the growing incidence of disasters worldwide.

The funding of relief is already institutionalized through the Calamity Relief Fund and the National Calamity Contingency Fund. However, while it is clearly the responsibility of the State Government concerned to manage relief, there are major gaps in the institutional arrangements and systems that should be used within a State, and by Central institutions in support of a State. There is a case for unified legislation to define responsibilities, and this will be examined during the Tenth Plan.

Community awareness and preparedness is also a major mitigation tool, and this was recognized during the Eighth Plan by the establishment of the National Centre for Disaster Management at the IIPA, creation of disaster management faculties in 23 States, as well as research, documentation and information exchange, and training. This will be extended in all 28 States during the Tenth Plan. This will help each State build the necessary teams of skilled personnel, communications equipment and control rooms as required.

IV. Budget size on national level

Financing of Relief Expenditures

The policy arrangements for meeting relief expenditure related to natural disasters are based on the recommendations of finance commissions. The two main windows for meeting such expenditures are:

(1) Calamity Relief Fund (CRF). This fund is used for providing immediate relief to victims of cyclone, drought, earthquake, fire, flood and hailstorm. Expenditure on restoration of damaged capital works ordinarily comes from the normal budgetary heads, except when it is used for providing immediate relief like restoration of drinking water sources or provision of shelters; restoration of communication links for facilitating relief operations, etc. CRF comes from the contribution of each State and varies from Calendar years 2000-01 to 2004-05, as indicated by the Finance Commission. The Government of India contributes 75 per cent of the total yearly allocation in the form of a non-plan grant, and the balance amount is contributed by the State Governments concerned. A total of Rs.11,007.59 crore was provided for the Calamity Relief Fund from 2000-05.

(2) National Calamity Contingency Fund (NCCF). This was in-forced in 2000-01, pursuant to the recommendations of the Eleventh Finance Commission, operative till the end of the financial year 2004-05. NCCF

is intended to cover natural calamities like cyclone, drought, earthquake, fire, flood and hailstorm, which are considered to be of severe nature requiring expenditure by the State Government in excess of the balances available in its own Calamity Relief Fund. The assistance from NCCF is available only for immediate relief and rehabilitation.

V. Progress and situations of the Hyogo Framework for Action (HFA)

National Disaster Management Framework--Outputs

1. Institutional Mechanisms

- level with appropriate systems
- Creation of State Departments of Disaster Management
- Setting up State Disaster Management Authorities

2. Disaster Mitigation/Prevention

- Disaster mitigation/prevention to be mainstreamed into the development process
- Techno-legal regime
- Land-use Planning and Zoning regulations
- Plan schemes for vulnerability reduction and preparedness

3. Legal/Policy Framework

- Disaster Management to be listed in the Concurrent List of Seventh Schedule to the Constitution
- State Disaster Management Acts
- National Policy on Disaster Management
- States to enunciate Policy on Disaster Management
- State Disaster Management Codes

4. Preparedness and Response

- National Emergency Response Force/ Specialist Response teams
- Specialized Response Teams at State level

5. National Network of Emergency Operation Centers (NNEOCs)

- Setting up Emergency Operations Centre[EOC] at National level
- State level EOC
- District level EOC
- Putting Incident Command System in Place
- Emergency Support Function Plan
- India Disaster Resource Network
- Communication linkages which will be functional even post-disaster
- Regional Response Centers
- Training in response to be made a part of training curriculum of CPMFs and State Police Forces

- State Disaster Management Plans
- District Disaster Management Plans
- Block Disaster Management Plans
- Community based mitigation, preparedness and response plans

6. Early Warning Systems

- State of the art sensors to be set up
- Hazard monitoring, tracking and modeling
- Warning Protocols

7. Human Resource Development & Capacity Building

Training for services /cadres/ agencies involved in mitigation, preparedness or response

- Training of IAS/IPS, State Administrative Service Officers/State Police.
- Engineers/Architects
- Health Professionals
- Youth organization
- Masons
- School curriculum
- National mass media campaign for awareness generation
- Non-government community-based organizations involved in awareness generation and community participation in disaster preparedness and mitigation planning
- Corporate sectors involved in awareness generation and disaster preparedness and mitigation planning
- Inter-state arrangements for sharing of resources during emergencies and lessons learnt

8. Research and Knowledge Management

- Institutionalize knowledge and lessons learnt in the process of working on the national roadmap
- Develop national disasters database
- Promote research in national, state and regional institutions in the areas of disaster risk reduction

VI. Projects on disaster reduction headed by Ministry

Program 1

- (1) Sectional topic-Program objectives and targeted actions
Sustainable earthquake risk reduction in India:
 - (i) Ensure seismically safer habitats by training of practicing architects.
 - (ii) Capacity building of the Colleges of Architecture at the National and State levels for ensuring effective training of

- practicing architects in earthquake safety.
- (iii) Development of Resource Materials/ training modules for sensitization/ training of architects
 - (iv) Putting in place a system of training and subsequently of certification for practicing architects.
- (2) Actor(s)
Government of India, Ministry of Home Affairs, National Disaster Management Division
- (3) Partners
Indian Institute of Architects (IIA), Council of Architecture (COA)
- (4) Title
National Programme for Capacity Building of Architects in Earthquake Risk Management (NPCBAERM)
- (5) Contents
In respect of architects who have passed out from the schools before the inclusion of earthquake resistant components in the course curriculum but not yet started independent practice, it is proposed that there will be one-week training modules. In consultation with CoA, a system will be evolved for permitting them to function as independent practicing architects after completion of the course. In case of existing practicing architects, they will be required to complete the above mentioned one week module in a staggered system within a time frame of one month and submit the certificate to CoA. A system will be devised in consultation with CoA to make it mandatory.
- (6) Means of implementation
Courses of architecture offered in Colleges, orientation programmes, workshops, training, support.
- (7) Target year
June 2004 to May 2007
- (8) Target area/place
All the States and Union Territories of the country and the country
- (9) Other info
Approval of the Home Secretary is solicited for taking up the National Programme for Capacity Building for of Architects for Earthquake Risk Reduction (NPCBAERM) over a period of three years at the cost of Rs. 4.51 crore.

Program 2

1. Name of the Scheme: Natural Disaster Management Program.
2. Type of Scheme: Central Sector
3. Year of inception: 1992-93
4. Pattern of assistance: 100 per cent by Government of India.

5. Objectives:

- To focus on disaster preparedness with emphasis on mitigation measures.
- To increase level of awareness of community about disasters, prepare them adequately to face the crisis situation

6. Activities

- i. Human Resources Development,
- ii. Research and Consultancy Services.
- iii. Documentation of major events,
- iv. Operation of Faculty on NDM in State level training States.
- v. Operation of National Centre of Disaster Management.
- vi. Public education and community awareness program

7. Achievements

- (i). Setting up of a National Centre for Disaster Management in the Indian Institute of Public Administration in 1995.
- (ii) Setting up of separate Disaster Management Faculties in State Administrative Training Institutes in 18 out of 25 States. These States are Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.
- (iii) Documentation of major events like UP. and Maharashtra earthquakes, research studies On land slides in Kerala, Sikkim and Uttar Pradesh, Research study on Drought in Rajasthan.
- (iv) Preparation of source book for use of trainees of the Lal Bahadur Shastri National Academy of Administration,
- (v) Organized/sponsored about 100 training Programs/workshops on various aspects of Natural Disaster Management
- (vi) Public education and community awareness campaign through newspapers, postal stationery, audio-visual media and observation of World Disaster Reduction Day annually.

8. Increase in activities

The occurrences of major natural disasters like Maharashtra earthquake of 1993 and cyclone of Andhra Pradesh in 1996 and Orissa in 1999 have been instrumental in generating a lot of concern among the various agencies of Government, NGOs and the public at large about the adverse impact of natural disasters. This has increased the tempo of activities under the Plan Scheme as many institutions /organizations States are

showing interest in the field of disaster reduction activities. Keeping in view the magnitude and frequencies of natural disasters visiting various parts of the country annually; there is need to provide substantial budget provision in the Annual Plan to commensurate with the requirements of a vast country like ours in order to embark upon such activities in a big way in the context of fast developing scientific and technological advancements in the world.

9. Thrust Areas

- Public education and community participation campaign,
- Information Technology, building up data base,
- involvement of NGOs, strengthening of State faculties on NDM,
- regional cooperation on sharing of experience,
- expertise and technology in various fields of natural disaster
- preparedness and mitigation.

VII. Counterpart of ADRC

Joint Secretary & Central Relief Commissioner
Ministry of Home Affairs, Government of India
Room No.194 North Block, New Delhi 110001

INDONESIA

I

11

12

13

INDONESIA

INDONESIA

I. Natural hazards in Indonesia

1.1 Natural hazards likely to affect the country

Earthquake, slides, volcanic eruption, flood, epidemic, wild fires, wind storm, epidemic, wave/surge.

1.2 Recent major disasters

year	dis_subset	no_killed	total_affected	dam(US'000s)
2005	Earthquake	1	684	—
2005	Landslide	143	—	—
2005	Earthquake	1659	267677	—
2005	Explosive Eruption	0	26000	—
2005	Flash Flood	47	768	—
2005	Epidemic	0	225	—
2005	Wild Fires	0	—	—
2004	Arbovirus	658	58301	—
2004	Explosive Eruption	0	16828	—
2004	Explosive Eruption	2	20005	—
2004	Earthquake	33	83381	—
2004	Earthquake	32	12833	55000
2004	Tsunami	165708	532898	4451600

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

Earthquake in Nias island (North Sumatera Province) on March 28, 2005, which is 8.7 Richter Scale caused 853 peoples died, 6.278 injured. Around 32.637 houses destroyed and 13.115 houses totally destroyed. This disaster caused 22.351 peoples displaced.

Flash flood that happened in Kutacane, South East Aceh District (Nanggroe Aceh Darussalam Province) on October 18, 2005 caused 21 people died, 53 people injured and 1.448 people displaced.

Flash Flood that happened in Jember, East Java Province on December 31, 2005 caused 77 people died, 55 injured and 7.605 people displaced.

II. Disaster Management system

2.1 Administrative system

<i>Conventional long form:</i>	Republic of Indonesia
<i>Conventional short form:</i>	Indonesia
<i>Type of Government:</i>	republic
<i>Capital:</i>	Jakarta
<i>Administrative divisions:</i>	30 provinces (propinsi-propinsi, singular - propinsi), 2 special regions* (daerah-daerah istimewa, singular - daerah istimewa), and 1 special capital city district** (daerah khusus ibukota);

2.2 Legal system, legal framework

The legislation of disaster management is in the process to be stipulated. In mid of 1990's the government had proposed the draft of Disaster Management Act, but the process is stuck. After the Tsunami Disaster on December 2004, the need of disaster management regulation is urgent. The DPR (House of Representatives) has initiative to formulate *Disaster Management Act*, and presently are submitted to the government.

2.3 Structure of disaster management

Based on the Presidential Decree Number 83 year 2005, the organization structure of disaster management in Indonesia is as following:

National level:

BAKORNAS PB	Chaired by Vice President
	Vice Chairman I: Min of People Welfare
	Vice Chairman II: Min of Home Affairs
Members:	Min of Health
	Min of Social Affairs
	Min of Public Works
	Min of Energy and Minerals
	Min of Transportation
	Min of Communications
	Min of Finance
	Armed Forces Commander
	Head of National Police
	Chairman of Red Cross
Secretary:	Kalakhar (Chief Executing Officer)

BAKORNAS PB is supported by Executing Office, headed by Kalakhar.
Provincial level:

SATKORLAK PB Chaired by Governor

District or Municipal level:

SATLAK PB Chaired by Bupati (Head of District) or Mayor

2.4 Priority on disaster risk management

- Legislation and regulation
- Human Resources Development and Capacity Building
- Institution Building (Revitalization)
- Risk Mapping
- Disaster Preparedness Plan

III. Disaster management plan

(1) Sort of Plan

Disaster Management Guideline

(2) Legal Basis

- Presidential Decree Number 3 Year 2001
- Decree of Secretary of BAKORNAS PBP Number 2 Year 2001

(3) Date of Creation of the Plan

March 30, 2001

(4) Content

Part 1 Preliminary

- Background
- Basic Legislation
- Purpose
- Scope
- Definitions

Part 2 Policy and Strategy

- Policy
- Strategy

Part 3 Organization

- Position
- Task and Function
- Structure

Part 4 Mechanism

- General
- Pre Disaster
- During Disaster
- Post Disaster

Part 5 Main Activities

- Operational Activities
- Supporting Activities

Part 6 Funding

- Sources
- Planning
- Accountability

Part 7 Closure

IV. Budget size on national level

Prevention and Mitigation:

The total amount of this budget is difficult to identify because it spreads into sectoral program of development.

Contingency budget for disaster response:

US. \$. 125.800.000

Rehabilitation and reconstruction:

- a. Aceh and Nias : US\$. 210.000.000
- b. Other Region : US. \$. 109.000.000

V. Progress and situations of the Hyogo Framework for Action (HFA)

■ Action 1

Aceh Tsunami followed by other major disasters in Indonesia since 2004 to 2005 has raised our awareness that strong institution of disaster management is required. The institution should have sufficient power to coordinate the disaster management activities and clear mandate to deal with disaster. Therefore, Government of the Republic of Indonesia aims to revitalize the Disaster Management Institution in all levels (National, Provincial and district/Municipality). The institutional role will be powered by Disaster Management Bill which is being discussed by Government and House of Representatives.

■ Action 2

Government of the Republic of Indonesia has already finished a master plan or grand design of the Tsunami Early Warning System

which will be developed into multi hazards early warning system. In the early phase (first year), It has already been set up the arrangement of seismic and tidal wave gauges for earthquake and tsunami monitoring. Right now, Meteorological and Geophysical Agency (BMG) enable to calculate the magnitude and locate the epicenter within 10 minute after the incident. In the past, for calculating parameters of earthquake took at least 30 minutes. Our target, the tsunami early warning center (BMG) will able to give tsunami warning within 10 minutes.

▪ Action 3

Valuable lesson from Aceh Tsunami disaster has opened our mind that the most effective way to reduce the risk of disaster is through community capacity building. Government facilitates community, institution, organization to involve in the capacity building processes. Government supports the establishment of Centers of Disaster Management Study in Universities such as University of Gadjah Mada (Yogyakarta), Bandung Institute of Technology (Bandung) and Sepuluh November Institute of Technology. Local Non Government Organizations are also increasing activities in building capacity of the community to deal with disaster.

▪ Action 4

Hydrometeorological related disasters are the most often in Indonesia. The main cause of the disaster is environmental degradation due to excessive land cultivation and deforestation. Hence, Government stipulated The National Movement for Land Rehabilitation and Forestation. The main objective of the policy is to improve environmental condition which is becoming worse. The target of land rehabilitation and forestation program is 3 million hectares which will be completed within 5 years. The program it self has been started since 2003.

▪ Action 5

In order to raise awareness and preparedness to disaster, some activities have been taken. Those are simulation exercises to deal with disaster and training on capacity building and contingency planning for all level (National, Provincial and district/municipal). Encouraging local government to provide contingency budged to deal with unpredictable disasters.

VI. Projects on disaster reduction

(1) Sectional Topic

Capacity Building for Local Government and Community

(2) Actors

BAKORNAS PBP, SATKORLAK PBP and SATLAK PBP

(3) Partners

UN (OCHA, WFP, UNDP, WHO, UNESCO)

(4) Title

- Workshop Training on Emergency Management and Contingency Planning
- (5) Contents
 - Training for National Facilitators
 - Training for Disaster and Emergency Management,
 - Workshop on Contingency Planning for Tsunami Hazard
 - (6) Mean of Implementation
 - Training and Workshop
 - (7) Target year
 - 6 (six) months (2005/2006)
 - (8) Target area
 - Provinces of West Sumatra, Bengkulu, Lampung and East Nusa Tenggara
 - (9) Expected outcome
 - Facilitators (national, provincial and districts)
 - Contingency Plan for District/Municipal and Province Level
 - (10) Progress
 - There are 2 (two) provinces levels: West Sumatra and East Nusa Tenggara had conducted the trainings and workshops. There are 5 (five) districts in West Sumatra: Pesisir Selatan, Padang, Padang Pariaman, Pasaman Barat and Mentawai Islands. Also in the 7 (seven) districts in the Flores island (East Nusa Tenggara).
 - (11) Other Information
 - The module and material used in the training and workshop are modified from UNHCR Emergency Management and Contingency Planning, UN Disaster Management Training Program.

VII. Counterpart Organization for ADRC

National Coordinating Board for Disaster Management
(BAKORNAS PB)

Jalan Ir. H. Juanda 36, Jakarta

www.bakornasbp.or.id

JAPAN

1987

1988

1989

1990

1991

1992

JAPAN

1993

1994

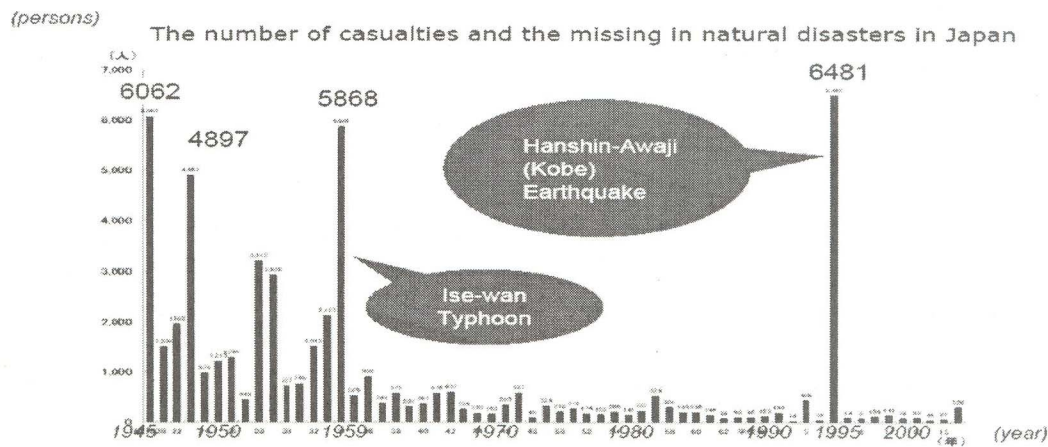
The

JAPAN

I. Natural hazards in Japan

1.1 Natural hazards likely to affect the country

Earthquakes, Tsunamis, Volcanic Eruptions, Typhoons, Torrential Rains, Floods, Landslides and Snow Avalanches



1.2 Recent major disasters

Example Niigata Chuetsu Earthquake
23 October 2004

Earthquake	People killed	People injured	People evacuated	Houses damaged (Houses collapsed)	Fire outbreaks
M 6.8 13km depth	59	4,805	103,178	121,613 (3,175)	9

(National Response)

Immediately after the occurrence of the earthquake, the Emergency Response Team comprised of designated senior officials on duty from relevant ministries and agencies met at the Crisis Management Centre in the Prime Minister's Building. The Minister of State for Disaster Management and the Emergency Response Team discussed emergency response countermeasures based on rapid disaster information collection and analysis. Based on such inter-ministerial consultations, an emergency survey team consisting of 8 ministries and agencies was immediately dispatched. Search and rescue teams were also mobilized from fire brigade, police, coast guard and defense force.

The inter-ministerial emergency response Headquarters for this disaster

(chaired by the Minister of State for Disaster Management) was established, which had 21 meetings in total from 24 Oct. to 19 Nov. The Minister led inter-governmental team to the affected areas on 24 Oct. to investigate the situation and discuss with heads of local authorities.

In the affected prefecture, an on-site operation support/coordination centre was established and Senior Vice-Minister of State for Disaster Management and government officials from relevant ministries and agencies were dispatched to the centre until 3 Dec. 2004.

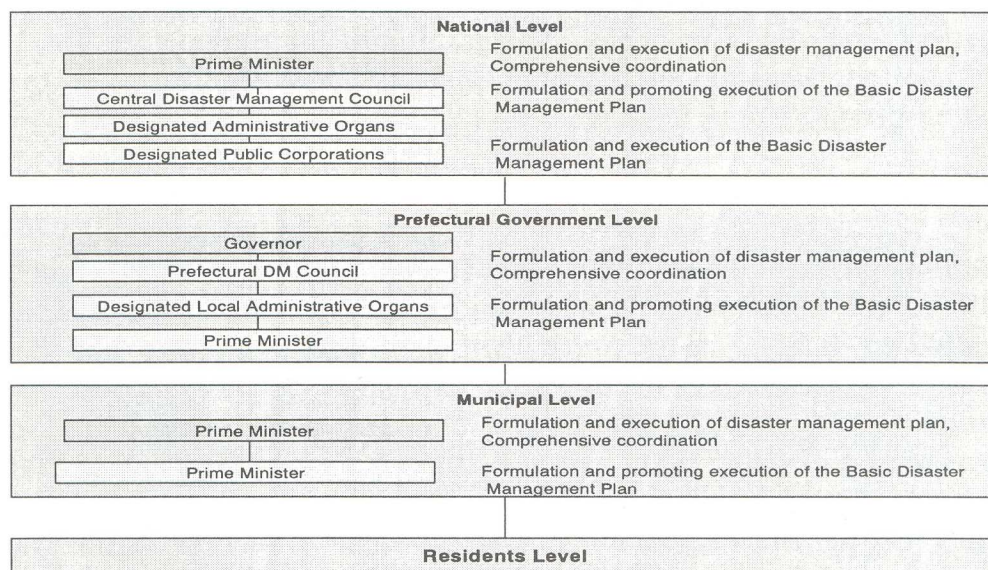
Based on needs assessments in the affected areas, the National Government has provided full-fledged support including through sending emergency goods (food, potable water, blankets, tents, etc.) as well as mobilizing S&R, medical and other expert personnel.

II. Disaster management system

1. Administrative system

Japan has three (3) administrative levels of governance: national, prefectural and municipal. Each level of governments has its own disaster management organizations, policy frameworks and budgets. When disasters occur, municipalities respond first. In case disasters are large in scale beyond their capacity, national and prefectural governments provide every possible support.

Responsibilities by Administrative Level



2. Legal system, legal framework

The cornerstone of legislation on disaster risk reduction is the Disaster Countermeasures Basic Act enacted in 1961.

Main Features of the Act

- Responsibilities of national and local governments as well as the private sector and people
- Organization of multi-sectoral coordination bodies for disaster management at the national and local levels
- Disaster management planning system
- Basic actions to be taken in each phase of the disaster management cycle: prevention/preparedness, emergency response, and recovery/rehabilitation
- Annual Government Official Report on Disaster Countermeasures

A number of laws are enacted to address all the phases of disaster reduction.

For example, Large-scale Earthquake Countermeasures Special Act and Earthquake Disaster Management Special Measures Act for building nation and communities resilient to disasters.

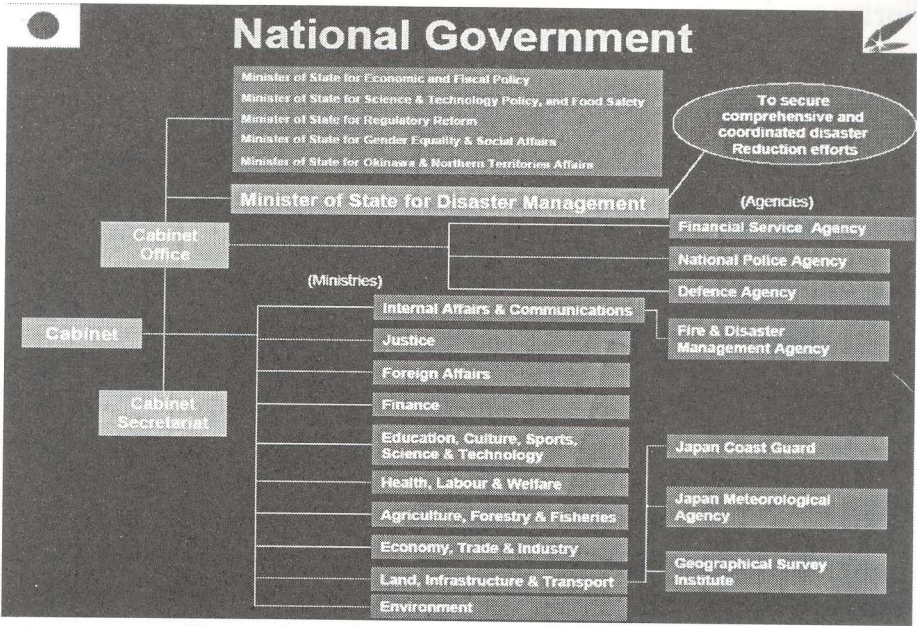
Disaster Relief Act and Act Regarding Special Measures to Weigh the Preservation of Rights and Profits of the Victims of Specified Disasters for immediate support to the affected populations and local authorities.

Act Concerning Support for Reconstructing Livelihoods of Disaster Victims and Act Concerning Special Financial Support to Deal with Designated Disasters of Extreme Severity for better recovery to safer communities.

3. Structure of disaster management

(Cabinet Office and the Minister of State for Disaster Management)

All the line ministries and agencies have responsibility to take actions related to disaster reduction within their own mandate. The Cabinet Office is responsible for formulating basic policies, strategies and guidelines for disaster reduction and for securing coordination of government disaster reduction activities. A post of Minister of State for Disaster Management was newly established in the Cabinet in 2001 who takes lead in the responsibilities for disaster reduction in the Natural Government.



Central Disaster Management Council

Under the Disaster Countermeasures Basic Act, the Central Disaster Management Council was formed to ensure multi-ministerial and multi-sectoral involvement in disaster reduction in a coordinated manner. The Prime Minister is its Chair and the Minister of State for Disaster Management supports the Chair. Not only all the Ministers but also Heads of relevant public corporations such as the Bank of Japan, the Japanese Red Cross Society, NHK (public broadcasting corporation) and NTT (telecommunication company) , and some academic experts are the member of the Council.

The Council formulates the Disaster Management Basic Plan and other basic policies, strategies and guidelines.



4. Priority on disaster risk management

Reducing damage caused by disasters, especially sudden on-set earthquakes and tsunamis, through wider involvement of all the stakeholders in disaster reduction activities is continuously required. Among others the prioritized issues are as follows:

(1) Decrease the number of casualties by earthquakes

- Retrofit/rebuild old existing houses and buildings
- Affix furniture and adhere protective films on old windows
- Encourage companies to make Business Continuity Plan (BCP)

(2) Decrease the number of casualties by tsunamis

- Distribute tsunami hazard maps
- Disseminate tsunami warnings effectively
- Ensure that people are evacuated to safe places

(3) Further decrease the number casualties by typhoons and floods

- Provide early evacuation alerts for the elderly and disabled
- Distribute flood hazard maps

III. Disaster management plan

Based on the Disaster Management Basic Act, the Central Disaster Management Council formulates and reviews the Basic Disaster Management Plan (latest amendments in July 2005). In accordance with the Basic Plan, all the government ministries and agencies as well as designated major public corporations formulate their own Disaster Management Operation Plan. All the local authorities also formulate their own Local Disaster Management Plan.

Disaster reduction perspectives are incorporated into relevant development plans such as Comprehensive National Development Plan, Social Infrastructure Development Priority Plan, Land Use Plan and urban and rural planning

IV. Budget size on national level

Disaster risk reduction is covered in the budget of national and local governments. At the national level, the annual budget for disaster risk reduction is approximately \$ 34 billion, which is about 5% of the total general-account budget expenditure.

V. Progress and situations of the Hyogo Framework for Action (HFA)

Among others the recent prioritized efforts for the implementation of the HFA in Japan are as follows:

1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation

(a) Initiated nation-wide movement for disaster reduction

A committee on the promotion of nation-wide movement for disaster reduction was established under the Central Disaster Management Council in July 2005 with members from various stakeholders to formulate basic plan of action for the nation-wide movement.

(b) Formulated Earthquake Disaster Reduction Strategy

The Central Disaster Management Council formulated Earthquake Disaster Reduction Strategy in March 2005, which set an overarching goal to halve estimated damage caused by possible large-scale earthquakes and tsunamis in the next decade.

2. Identify, assess and monitor disaster risks and enhance early warning

(c) Promoting hazard mapping for various disasters such as earthquakes, tsunamis, volcanic eruptions and floods at community level

(d) Enhancing early warning capabilities for all the possible disasters including thorough R&D for emergency earthquake alerts by using the arrival time difference of P and S waves of earthquakes

3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

(e) Promoting disaster reduction education for school children including thorough participation-oriented events to involve children in practical disaster exercises

4. Reduce the underlying risk factors

(f) Promoting rebuilding and retrofitting of old houses and buildings vulnerable to earthquakes

To accomplish a strategic goal to decrease the ratio of old houses from 25% to 10% in ten years, the Government is increasing the budget for subsidies and developing a new tax reduction policy for building safer houses.

(g) Promoting efforts of the private sector to make Business Continuity Plan (BCP)

5. Strengthen disaster preparedness for effective response at all levels

(g) Formulating emergency contingency planning in response to possible large-scale earthquakes such as Tonankai and Nankai Earthquake

VI. Projects on disaster reduction headed by your Ministry

Same as above

VII. ADRC Counterpart

Director General for Disaster Management,
Cabinet Office, Government of JAPAN
1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo 100-8969

KAZAKHSTAN

KAZAKHSTAN

I. Natural hazards in Kazakhstan

1.1 Natural hazards likely to affect the country

Wind storm, slides, flood, epidemic, extreme temperature, earthquake, wild fires

1.2 Recent major disasters

year	dis_subset	killed	total_affected	dam (US '000s)
2005	Flood	0	25000	7662
2004	Landslide	48	—	—
2003	Earthquake	3	36626	—

*Source: "EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Universite Catholique de Louvain - Brussels - Belgium"*

Description of recent major disasters and response activities

In May 2003, the Zhambyl region was hit by an earthquake with a magnitude of 5.4 on the Richter scale. The earthquake affected 43,300 people and brought devastation to housing and social infrastructure. The consequences of the earthquake showed that neither people nor the local administrative authorities, including medical centers, were prepared for such disasters. Civil society was not informed, not prepared and was actively involved in rehabilitation of the area.

One of the lessons learnt during the recent earthquake was that the scale of the disaster would have been less if the local population had been adequately informed about the potential dangers of a catastrophic earthquake and the measures needed to mitigate the possible effects. Given that, according to expert forecasts, an earthquake with significant destructive power could occur in the not-too-distant future, it is important for residents of the region to be prepared and equipped with the skills and knowledge needed to overcome the consequence of such a disaster. Currently, national disaster preparedness measures are inadequate since they fail to cover the majority of the population. In this context, early preparedness, awareness and the mobilization of non-governmental and community-based organizations - as well as local communities themselves - is indispensable for higher improved human safety and security."

Activities for recovery and reconstruction after major disasters

Flooding in east Kazakhstan in May 2001 lasted for more than one month, affecting 4,500 people and damaging roads and infrastructure in 28

settlements spread over 8 rayons in the east Kazakhstan and Semipalatinsk oblasts of the country. The National Society of Kazakhstan responded by providing immediate support to flood victims in the form of food, detergents, bedding and other essential supplies during the emergency response phase of the operation. Preliminary assessments indicate that despite efforts to save crops around 60% of the affected population failed to save any food stocks for the coming winter period. The local sanitary services managed to prevent serious outbreaks of water-borne and infectious diseases¹.

II. Disaster Management system

1. Administrative system

<i>Conventional long form:</i>	Republic of Kazakhstan
<i>Conventional short form:</i>	Kazakhstan
<i>Government type:</i>	republic; authoritarian presidential rule, with little power outside the executive branch
<i>Capital:</i>	Astana
<i>Administrative divisions:</i>	14 provinces (oblystar, singular - oblys) and 3 cities (qala, singular - qalasy)

2. Legal system, legal framework

The President's Decree enacted on August 21, 1991 created the State Commission on Extreme Situations.

In addition, the Law on Civil Defense and the Law on Emergency Situations of a Natural and Technological Character serve as the fundamental policies on protecting the people of Kazakhstan in emergency situations including threats from natural disasters.

3. Structure of disaster management

The Ministry for Emergency Situations is the prime organization at the central government, which carries out response activities for large emergencies and disasters. It controls industrial technical safety, coordinates measures on the prevention, supervises national fire service, and serves as the coordinating body for civil defense in Kazakhstan.

Patterned under the US 911, the 051 response system was established in 10 large cities.

4. Priority on disaster risk management

Considering the threats faced by the entire country, the priorities of the

¹ <http://www.ifrc.org/docs/appeals/01/170102.pdf>

government of Kazakhstan include the following:

- Creation of an Equipped Republican Rapid Rescue Group
- Establishment of an automated information management system for extreme situations
- Creation of a specialized mechanized engineering group for the development retrofitting old structures and facilities and for the construction of new ones. This group will also provide fast recovery and reconstruction works during and after a disaster strikes
- Expansion of the network on seismic monitoring to prepare for future earthquake events
- Stockpiling to prepare for drought seasons
- Capability building of experts
- Scientific research on natural disasters
- Regional cooperation for disaster reduction

III. Disaster management plan

The Comprehensive Kazakhstan Natural Disaster Preparedness Plan serves as a guide for central and local governments in the country in implementing measures on disaster reduction. It was formulated with the assistance of UNDP².

Project Director: Chairman of Emergency Agency of the Republic of Kazakhstan, Dr. of Economy - Sh. K. Kulmakhanov.

Project Coordinators: From UNDP - R. Dion, Program Officer; From Emergency Agency - A. Kravchuk, Director of Emergency Prevention Department.

The main principles of Kazakhstan Natural Disaster Preparedness Plan have been defined: to generalize to the fullest extent possible the problem of preventing and responding to natural disasters in the republic; to make the provisions of the Plan general and instructional; and to ensure that the Plan corresponds to an adequate extent to existing regulatory acts.

In accordance with this Plan, plans of all levels and directions should be

² http://www.undp.kz/library_of_publications/start.html?redir=center_view&id=90

drafted based on specific tasks and conditions.

Because Kazakhstan's territory is susceptible to natural disasters across a wide spectrum of types and scales, the Plan has been drafted to be generally applicable to all types and scales of natural disasters and is of an instructive nature.

It is proposed that the Plan be periodically revised and re-approved to ensure that it remains current.

The Plan is based on domestic and foreign management experience in the field of emergency situations, and the recommendations of international and local experts have been taken into account.

Structurally, Kazakhstan Natural Disaster Preparedness Plan consists of an introduction and five parts: General Provisions, Preparedness, Response, and Accountability for Failure to Perform or for Improper Performance of the Plan's Measures, and the Procedure for Approval and Implementation of the Plan, as well as conclusions and appendices.

IV. Budget size on national level

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by the Ministry

Title: Local Risk Management in Earthquake Zones of Kazakhstan

Brief description:

In response to an umbrella initiative of the UNDP Bureau for Crisis Prevention and Recovery, Disaster Reduction Unit (UNDP/BCPR/DRU), this project is designed to support local level risk management. The project aims to support Kazakhstan in order to strengthen the capacities of local communities to participate in early warning and preparedness to earthquakes and to equip local communities with the knowledge and skills required for effective mitigation in case of natural disasters. The project is based on the results and lessons learned from the earthquake in southern Kazakhstan of 23 May 2003 and will promote the public private partnership.

Actors:

This project will be nationally executed. The Emergency Agency of Kazakhstan will be the Implementing Partner for the project and provide overall control of the project implementation. The Red Crescent Society of Kazakhstan and UNDP Country Office, in collaboration with BCPR, will be responsible for selected project activities as described in the work plan. A Project Management Committee (PMC) will be established to oversee

the project. The PMC will be comprised of representatives of the Emergency Agency, Red Crescent Society of Kazakhstan and UNDP. PMC meetings will be organized based on project needs. The Chairman or Deputy Chairman of the Emergency Agency will be the PMC Chairman. A representative from the Emergency Agency will be appointed as the National Director of the project. UNDP Senior Manager and other relevant staff will represent UNDP on the PMC.

Programme Period:
2005-2009

Project Duration:
September 2004 - November 2005

Project Goals:

The project aims to strengthen the capacities of local communities to participate in early warning and preparedness for earthquakes; and to equip them with the knowledge and skills required for the effective mitigation of the effects of natural disasters. This project will raise the level of awareness of the local population, decision-makers and public on natural, technological and environmental disasters, so that they can better understand the benefits of prevention and preparedness. It will also promote access to information for civil society on disaster response and decision-making.

The project is built on the basis of partnerships between community-based organizations and various government bodies. These partnerships will help promote sustainable development through forging stronger linkages between disaster mitigation and broader development goals.

Intended Outputs:

Output 1. Survey of the most hazardous and vulnerable settlements; evaluation of the infrastructure, scientific and monitoring capacity and the preparedness of civil society; and elaboration of ways to predict natural disasters.

Output 2. Capable local communities and mass media in preparedness to earthquakes in the disaster zones of Kazakhstan and Almaty oblast in particular (via mass media, video recording and training) and risk management initiatives.

Output 3. Development, promotion and approval of the government's program on "Risk Reduction and Mitigation of Damages from Natural Disasters" and the allocation of government resources for preparatory measures.

Output 4. Effective administration, management and coordination of the project.

VII. ADRC Counterpart organization

First Deputy Minister
Ministry of Emergency Situations
Beybitshilik Street, 473000 Astana City

REPUBLIC OF KOREA

REPUBLIC OF KOREA

I. Natural hazards in Republic of Korea

1.1 Natural hazards likely to affect the country

Wind storm, typhoon, flood, drought, heavy snow, extreme temperature, slide, wild fire, storm surge, yellow dust, etc. (not in severity order)

1.2 Recent major disasters

Description of recent major disasters and response activities

A. Heavy Snow from March 4 to March 6, 2005

Eastern part of the Korean peninsula was damaged with agriculture and fishery facilities causing \$21.5 million property damage.

B. Torrential Rains from August 2nd to 3rd and from August 8 to 11, 2005

Localized hourly precipitation was recorded from 15 to 71 mm in the central and western part of Korea. 15 people were dead and \$456.8 million property damage was occurred. Most of the people died because of slope-stability related disasters such as landslide. Affected people were 7,340 in 2,815 households.

C. 14th Typhoon "Nabi" from Sept. 6 to 8, 2005

The accumulative precipitation was recorded as 622.5 mm causing 6 dead and \$115.4 million property damage.

Activities for recovery and reconstruction after major disasters

A. Heavy Snow from March 4 to March 6, 2005

National parks in the area were temporary blocked and entrance of highway was discouraged. Subway operation was extended for 30 minutes. The Central Disaster and Safety Countermeasures Headquarters decided the recovery costs and local governments and related agencies are doing recovery work after receiving the budget.

B. Torrential Rains from August 2nd to 3rd and from August 8 to 11, 2005

Mass media such as the Korean Broadcasting Service actively participated for the disaster information dissemination. Automatic verbal notification system was activated. Recovery work is being done by the process same as above.

C. 14th Typhoon "Nabi" from Sept. 6 to 8, 2005

People in the typhoon path were evacuated, especially in the coastal area. Recovery work is being done by the process same as above.

II. Disaster Management system

2.1 Administrative system

Conventional long form: Republic of Korea

Conventional short form: South Korea

Government type: republic

Capital: Seoul

Administrative divisions: 9 provinces (do, singular and plural) and 7 metropolitan cities (gwangyoksi, singular and plural)

2.2 Legal system, legal framework

Laws related with natural disasters include the Natural Disaster Countermeasures Act, Act on Countermeasures against Agricultural and Fishery Disasters, Disaster Relief Act, etc. The Natural Disaster Countermeasures Act (enacted in 1995) prescribes control of and countermeasures against natural disasters such as torrential rain and typhoons, investigations of relevant damage, rehabilitation costs, etc.

The Act on Countermeasures against Agricultural and Fishery Disasters (also enacted in 1995) stipulates measures concerning prevention of and countermeasures against disasters affecting agriculture and fishery such as damage from disease, harmful pests and drought. The Disaster Relief Act (enacted in 1962) provides for relief of victims of natural disasters or calamities, etc.

From June 1, 2004 the Disaster and Safety Management Basic Law is enacted designating disaster management competent organizations based on the disaster definition, identifying the Central Safety Management Committee, establishing rapid information dissemination system, and enhancing disaster-related research functions.

2.3 Structure of disaster management

The National Emergency Management Agency (NEMA) under the Ministry of Government Administration and Home Affairs (MOGAHA) manages overall measures to counter natural disasters in Korea. The agency is composed of four Bureaus, i.e., Planning and Management Bureau, Mitigation and Planning Bureau, Response and Management Bureau, and Recovery and Support Bureau. In addition to the Public Information Officer, Disaster Status Control Unit, and General Services Division, Innovation and Personnel Officer, Planning and Budget Officer, and Information and Communication Officer are working under Planning and Management Officer. Mitigation and Planning Bureau has Planning Coordination Division, Civil Defense Planning Division, Fire Administration Policy Division, Technological Disaster Management Division, and Public Cooperation Division.

Response and Management Bureau includes Response Planning Division, Fire Suppression Division, Rescue and Emergency Division, and Facilities and Equipment Division. Recovery and Support Bureau has Preparedness Division, Rehabilitation Division, Technical Support Division, and Assessment Division.

On September 1, 2005 NEMA restructured its previous organization, i.e., three Bureaus, one Office, and 19 Divisions to have four Headquarters, one Center, two Offices, and twenty two Teams to cope with rapidly changing disaster environment and to execute necessary measures against emerging disasters more effectively.

NEMA takes responsibility for practical affairs for regular period. When a disaster strikes, an ad hoc organization called CDSCH forms. The Central Disaster and Safety Countermeasures Headquarters (CDSCH) is in charge of prevention and status control of natural disasters, as well as recovery planning, and executes necessary measures related to such disasters. The Minister of the MOGAHA heads the CDSCH while Director of NEMA serves as its vice-chief. Twenty-three personnel from 21 government organizations serve on its council. Also, the Central Safety Management Committee serves the function of providing coordination and support for the CDSCH, and the Central Emergency

Rescue Control Squad supports CDSCH when a massive search and rescue service is required.

Water resources and land use planning are managed by the Ministry of Construction and Transportation. Health, environment, education, and finance are managed by the Ministry of Health and Welfare, Ministry of Environment, Ministry of Education and Human Resources Development, and Ministry of Finance and Economy, respectively.

2.4 Priorities on disaster risk management

- 1) It is required to strengthening close cooperation in the region. It is desirable to have several practical cooperation programs and training that can yield ready-to-use outputs. Programs provided by ADPC, ADRC and other international or regional organizations need to be more actively developed and publicized.
- 2) Even when the government prepares perfect policies or organizations to reduce disaster losses, the government cannot do it alone without active participation of citizens. More public education and participation are desired. Programs to increase public awareness should be discussed as one of the top priorities in the WCDR.
- 3) Sustainable development can be defined as development that does not increase disaster potential or vulnerability. However, it is almost impossible to develop any area without disturbance. To reduce disaster factors due to development, regulations that safeguard not only developing site but also downstream should be discussed during the WCDR. The Disaster Impact Assessment system, which is currently put in force in Korea and actually reduce disaster factors, can be a good example for implementing sustainable development.
- 4) Budget for disaster reduction project is sometimes considered as a simple cost, not an investment. Methodology or strategy that can change the concept and increase disaster reduction budget needs to be addressed.

III. Disaster management plan

To cope with disasters which are taking more diverse forms and larger in scale and to define basic guidelines for the national disaster prevention

policy, the government has formulated the sixth Basic Disaster Prevention Plan Period (2002-2006) in which "Establishment of Disaster Resistant Country" is employed as the policy concept.

From February to April each year, disaster prevention training and education programs are provided to working-level government employees in charge of disaster prevention in each province, city, county and district. With the period from the beginning of March to the end of May designated as the period of preparedness against possible disasters, disaster prevention facilities are inspected and repaired at the level of each administrative unit including province, city, county and district in a precautionary measure against disasters. During the period from March to May every year, disaster prevention training including mapping and computerized exercises along with training based on regional characteristics is carried out concurrently with civil defense drills on the basis of a simulated massive natural disaster comparable to those which actually occurred in the past.

IV. Budget size on national level

Annual regular budget for NEMA is about \$300 million. Also, several national level projects are funded. For instance, in 2003, for mountain and river control projects such as dam development, small river creeks improvement, about \$2 billion was invested in 8 projects. 13 Projects were developed in disaster prevention and countermeasures and \$1 billion was spent. For research and development in disaster risk mitigation area \$50 million was invested in 6 projects such as establishment for the National Disaster Management System, operation of Earthquake Research Center, and modernization of meteorological observation.

V. Progress and situations of the Hyogo Framework for Action (HFA)

To promote the HFA in the region the Asian Conference on Disaster Reduction (ACDR) is hosted by the Korean Government with the full support and guide by ADRC from March 15 to 16, 2006.

VI. Projects on disaster reduction headed by your Ministry

A. Introduction of the Steep Slope Safety Management and Disaster Reduction Act

- (1) Topic: To reduce slope-related disasters such as landslide in urban area
- (2) Actor: NEMA and NIDP
- (3) Partner: Korea Forest Service and Ministry of Construction and Transportation
- (4) Title: the Steep Slope Safety Management and Disaster Reduction Act
- (5) Contents: Definition of “the steep slope”, monitoring of the slope, countermeasures, responsibility of local governments, short- and long-term plans, data compilation, etc.
- (6) Means: Legislation and budget support
- (7) Target Year: 2006
- (8) Target Area: At least 17,907 sites prone to ground disasters in local governments
- (9) Expectation: Minimization of landslide damages in urban area
- (10) Progress: Draft bill is prepared and researches by stakeholders are in progress from 2005
- (11) Link: Highways, local loads, slopes, retaining structures, mountain areas, etc.
- (12) Others: N/A

B. Introduction of Disaster Management Capacity Assessment

- (1) Topic: To assess local governments' management capacity and encourage improvement of disaster management system
- (2) Actor: NEMA
- (3) Partner: Local governments
- (4) Title: Assessment of local governments' disaster management capacity
- (5) Contents: Local governments' organization, policies, funds, public relations, various countermeasures, emergency recoveries, relief, etc.
- (6) Means: Legislation and budget support
- (7) Target Year: from 2005
- (8) Target Area: Local governments nationwide
- (9) Expectation: Promote and introduction of improved management system in local governments

- (10) Progress: Provincial Government evaluated 234 local governments.
NEMA evaluated 16 Provincial and Metropolitan Governments and
64 local governments in 2005
- (11) Link: Other central government's evaluation programs
- (12) Others: N/A

VII. ADRC Counterpart

Headquarters of Recovery and Support
National Emergency Management Agency
Central Government Complex
55 Sejong-ro, Jongro-gu, Seoul 110760, Korea

National Institute for Disaster Prevention
National Emergency Management Agency
253-42, 7th Floor, Gongdeok-Dong, Mapo-Ku, Seoul, 121-719,
KOREA

KYRGYZ REPUBLIC

KYRGYZ REPUBLIC

I. Natural hazards in Kyrgyz Republic

1.1 Natural hazards likely to affect the country

Slides, earthquake, epidemic, extreme temperature, flood

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2005	Flood	3	0	2050	2660
2004	Landslide	5	0	—	—
2004	Landslide	33	16	96	—
2004	Avalanche	11	2	2	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

Natural Hazards related to slopes such as flash floods, mudflows, avalanches and landslides also represent a great threat to more than two thirds of the people living in the country. 94.6% of the territory consists of mountains, whose altitude is higher than 1,000 m above sea level, and 56% higher than 2,500m, the highest peak culminating at 7,436 above sea level. The first of the year 2005 alone, more than 100 landslides, mudflows, avalanches and localized floods have so far struck the country. In 2004 many people were killed in avalanches.

In response to natural disasters, the Ministry of Emergency Situations, in cooperation with local authorities, has made the following efforts:

- 70 yurts, 23 shepherd houses, about 8,000 tents, clothes and food were sent to the regions affected by the earthquake in 1992
- in 1997-98, about 30,000 dwellings were repaired, restored or purchased for displaced people and the construction of several thousand homes was started
- 182 schools, 40 public health units, dozens of cultural, public and domestic units have been repaired
- dozens of kilometers of roads and other communications have been repaired
- dozens of kilometers of dykes have been built to protect thousands of dwellings, several schools and farms units.¹

¹ <http://www.unece.org/env/epr/studies/kyrgyzstan/chapter03.pdf>

II. Disaster Management system

2.1 Administrative system

Conventional long form: Kyrgyz Republic

Conventional short form: Kyrgyzstan

Government type: republic

Capital: Bishkek

Administrative Divisions: 7 provinces (oblastlar, singular - oblasty) and 1 city* (shaar); *note:* administrative divisions have the same names as their administrative centers (exceptions have the administrative center name following in parentheses)

2.2 Legal system, legal framework

The Ministry of Emergency Situations has the main responsibility for developing a unified State policy for the prevention, mitigation and response to natural disasters, as well as for coordinating the activities between other ministries.

According to Government Decree No. 198 of 2 May 1996, the Prime Minister is the Chief of Civil Defense and the Minister for Emergency Situations is the First Deputy Chief. The Ministry of Emergency Situations is an independent institutional structure responsible for working out measures for the prevention of emergencies, the protection of people and national property, and for increasing the stability of economic objects in the event of a disaster. The Ministry of Emergency Situations was also responsible for coordinating and promoting activities within the framework of the International Decade for Natural Disaster Reduction (1990-2000). The Ministry has large requisitionary powers over the personnel and equipment of other government services in emergencies. The Ministry has specialized civil defense units, which consist of public agencies and institutions (militia, fire brigade, medical services, etc.) and are enlisted to accomplish special tasks in emergencies. At the *oblast* and local levels, the Ministry works through its local units and local State administrations. The Centre for Emergency Management and Coordination at the Ministry of Emergency Situations collects, analyses, processes and disseminates data related to disaster management, thereby serving as a tool for the communication of disaster information and the preparation of disaster forecasts that are used in government decision-making.

The Ministry has the following structure and consists of:

- Central office
- Division of Civil Defense

- Board for dealing with the consequences of disasters
- State reserve fund
- State mining engineering supervision
- Local MC&CD units

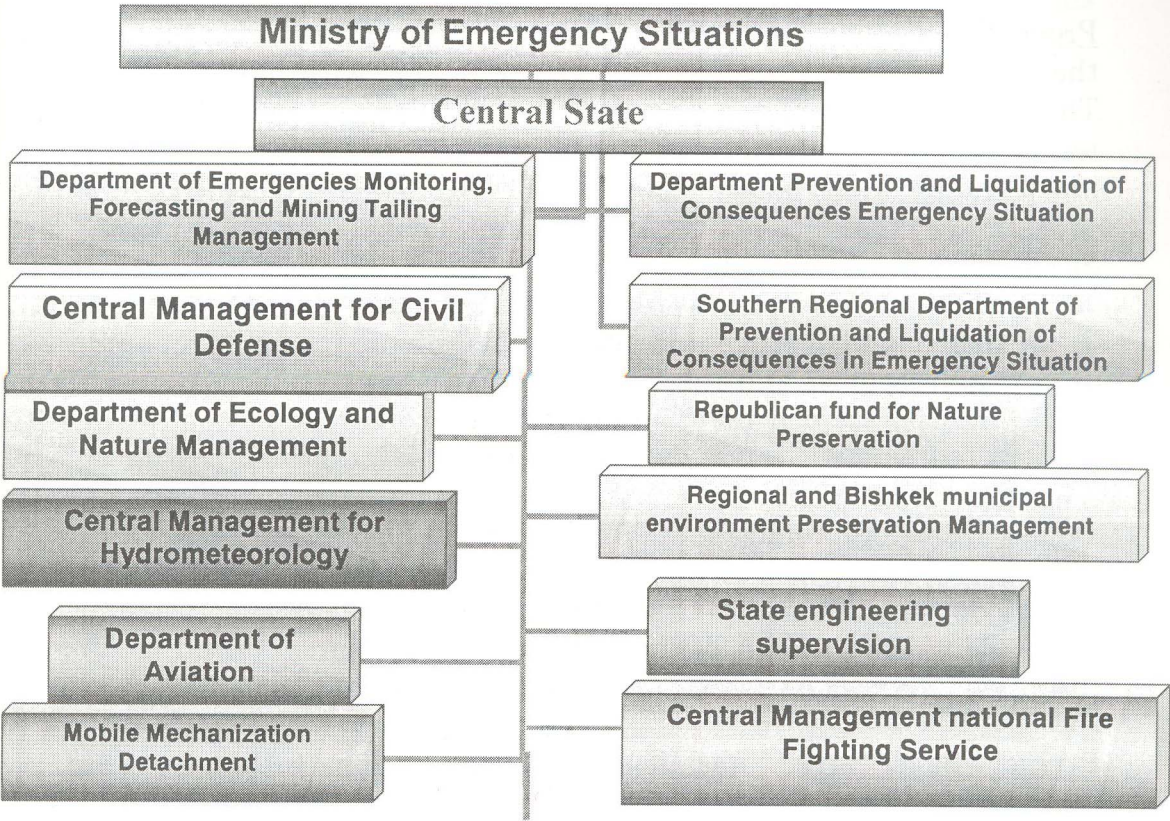
The laws and regulations governing natural disasters, which Kyrgyzstan inherited from the Soviet period, are gradually being replaced or amended by new laws and regulations. The major problem, however, lies in their implementation. Many regulations have not been fully implemented because of a lack of funds. The standard documents regulating anti-seismic measures are being worked out by the Institute for Seismic Resistant Construction (Ministry of Architecture and Construction). The Institute is also responsible for the evaluation of the seismic resistance of buildings as well as the engineering inspection of existing buildings. The first step taken by the Ministry of Architecture and Construction to reduce earthquake losses was the development of a set of seismic building codes. The codes have been revised 5 times since the 1960s, and the following building standards and regulations are currently in force:

- *Building in seismic zones*, valid since 1981 (SniP II A. 12-62)
- *Building in the zones with seismicity of more than 9 units*, valid as of 1994 (SniP 2.01.02-94 KR)
- *Building in Bishkek taking into account seismic zoning and soil-geological conditions*, valid as of 1993 (SniP 2.01-93 KR)
- *Seismic evaluation of existing buildings*, in force since 1998 (SniP 22-01-98 KR)
- *Re-profiling of existing residential buildings*, adopted 1999 (SniP KR 31-01-99)

The analysis by the Institute for Seismic Resistant Construction of the aftermath of earthquakes which have occurred during the past years in Kyrgyzstan shows that the 85 per cent degree of damage to brick buildings was twice as high as expected given the standards. This is partly due to shoddy building work and the absence of some anti-seismic measures foreseen by the standards. In 1998, the Regulation on Seismic evaluation of existing buildings empowered the Ministry of Architecture and Construction to inspect public buildings and enterprises in order to evaluate their seismic resistance and to make recommendations for their strengthening. In cases of violation, the inspectors can propose to limit or suspend the activities of the enterprise, or to cancel the permits. The Institute for Seismic Resistant Construction is currently drafting a new building code. All the designing documentation on hydraulic structures and the architecture legislation of the Republic are examined by experts from the State Expertise agencies of the Ministry of Architecture and Construction, in order to check their compliance with the standard documents in force.

2.3 Structure of disaster management

The Ministry of Emergency Situations, Kyrgyz Republic is the prime organization taking charge of disaster reduction efforts in the country.



2.4 Priority on disaster risk management

III. Disaster management plan

IV. Budget size on national level

Funds for disaster management are scarce. All enterprises allot 1.5 per cent of their turnover for disaster management. In 1999, this amount totaled 255.4 million soms. At present, as resources are limited, the most vigorous efforts are focused on post-disaster rescue and repairing the consequences of disasters; less than 1 per cent of the disaster management budget of the Ministry of Emergency Situations is allocated for preventive measures. However, a number of initiatives have been taken in cooperation with multilateral and bilateral partners to develop expertise in the area of disaster preparedness, mitigation and response.

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Project on disaster reduction headed by MME

Project Title: Capacity Building of the Population of Kyrgyz Republic in Disaster Reduction

Program Objectives: The main objective of the project is to strengthen the capacity of the people of the Kyrgyz to deal with natural disasters. The target groups of the project are: central and local official, school teachers, pupils and students, journalists, community leaders and other important actors of disaster reduction.

Specifically, the project aims to:

- 1) raise public awareness on disaster reduction
- 2) Increase knowledge and skills in disaster reduction, preparedness and response; and
- 3) Incorporate a holistic, integrated and comprehensive approach to disaster reduction in daily life of the population

Project Duration: August 1, 2005 – March 31, 2006

Implementing Agency: Department of Emergencies Monitoring, Forecasting and Mining Tailing Management, Ministry of Emergency Situations, Kyrgyz Republic

Primary Beneficiaries: Recipients of the educational/training materials and participants of the seven (7) seminars

Secondary beneficiaries: residents of the Kyrgyz Republic

Brief Description of the project: The Kyrgyz Republic is a mountainous country vulnerable to a variety of natural disasters. The common natural hazards which pose threat to the population include flash floods, mud flow, avalanches, landslides and earthquakes. The population at risk to natural hazards amounts to more than two thirds of the total population of the country. Further, the number of natural disasters is increasing due to the active seismic activities, global warming, growing population and the territory's infrastructure, thus, the need to increase the capacity of the country in disaster reduction, preparedness and response is urgently required. The Ministry of Emergency Situations of the Kyrgyz Republic, with financial and technical assistance from the Asian Disaster Reduction Center, will implement a cooperative project to raise the public awareness among the general public and to train the key stakeholders using the training and educational materials to be prepared by the project.

Strategy The project will produce information and educational /training materials such as training books, atlases and methodological manuals to

improve knowledge and enhance awareness in disaster reduction, preparedness and response. It will then disseminate them to all kinds of educational institutions, libraries, local governmental institutions and the population in general. Further, the project will conduct training seminars in different districts of the country, using the materials developed.

Institutional Arrangements The project will be implemented in the framework of Cooperative Project Program, set up by ADRC in order to strengthen the disaster reduction capacity of member countries.

The Dept of Emergencies Monitoring and Forecasting and Mining Tailing Management, Ministry of Ecology and Emergency Situations of the Kyrgyz Republic will be mainly responsible for implementing the project.

Project Outputs:

- educational and training materials developed by the project are widely disseminated among the population in general and used for their training;
- the population in general are informed properly of the existing sources of hazards and their consequences, and to enhance, through training, people's skills to protect themselves against all types of disasters including natural, man caused, ecological, biological and social disasters; and
- the population, after the completion of the project, will have increased awareness of the need to incorporate a holistic, integrated and comprehensive approach to disaster reduction and have sufficient knowledge and skill to prevent and respond to disasters.

VII. ADRC Counterpart

Head of International Cooperation Department
Ministry of Emergency Situations of the Kyrgyz Republic
2/1 Toktonaliev, 720055 Bishkek city

LAO PDR

LAO PDR

I. Natural hazards in Lao PDR

1.1 Natural hazards likely to affect the country

Drought; Earthquake; Epidemic; Extreme Temperature; Famine; Flood; Insect Infestation; Slides; Volcano; Wave / Surge; Wild Fires; Wind Storm;

1.2 Recent major disasters

year	dis_subset	killed	total_affected	dam (US '000s)
2000	Diarrhoeal/Enteric	44	—	—
2000	Diarrhoeal/Enteric	0	9685	—
2000	Flood	15	450000	—
2001	Flood	0	453000	—
2002	Flood	2	150000	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

Ex: Floods of 2002

In the rainy season, agencies whose in charge of gathering information has closely coordinated with NDMO. National Disaster Management Office has got the data of weather forecasting from Meteorology and Hydrology Department, Mekong River Commission and getting news from international mass media. While data and information collected, NDMO will be providing through network agency of provincial disaster management coordinator which located along the Mekong River where prone to flooding. NDMO will be core agency of checking up information through media for instance: National Television Broadcasting, Newspaper, National Radio and Provincials located by the side of Mekong River.

Vong Phong typhoon which came from South China Sea made of heavy rain at up stream reservoir of Mekong River in August 14th, 2002 at Houaysai, Bokeo province. Flooded August 16th, 2002 Mekong flooded Luangprabang province and August 18th, 2002 water came to Vientiane and getting higher through tributaries of Mekong River and caused of water level at warning point (12,5 m) in Vientiane Municipality and keep continuing higher, and raining can't drain out that caused water level get higher and higher. During this period, broadcasting of flood warning had been made many times and every 30 minutes through Nation and

Provincial Radio and TV to alert people who have been living the hazard prone areas particularly near by the Mekong River and its tributaries in order to evacuate and take away of things to safety place in case of water getting higher to flooding.

Paddy fields, gardens and people's cultivation product were inundated by Mekong River and Ngum River (Nam Ngum) in urban areas of Vientiane Municipality. Prime Minister was setting up the ad hoc committee for flood fighting in the year 2002 which presided by Agriculture & Forestry Minister. Role and function of the ad hoc committee is to collaborate with the National Disaster Management Committee for flood prevention and fighting in this year. The ad hoc committee for flood fighting met Vientiane authority officials and districts to make a flood prevention plan for instance: proof of embankment along Mekong River, set up teams to monitor water level and water gate and other areas which embankment are weak by encourage local security guards to collaborate with district police for watching throughout 24 hours. The ad hoc committee for flood fighting in year 2002 had delegated its responsibility to Vientiane Authority Officials and Irrigation Officials to catch up and watching regularly of flood situation. The inspection Committee was also set up in order to do daily follow up issues with consists of various government agencies. Proofing of embankment and water gate had been carried out under the Agriculture sector to provide mechanic. Transportation and communication section in charge of sand supplier and Labour & Social Sector was a sand-bag supplier. Mass media is a core point for stimulation of sand-bags and kinds contribution from NGOs and private sectors and etc... Dried food, rice, pure water and other nutriments are also donated to the flood victims by the Disaster Management Committee. Boat mobilize force which get collaborated by private sectors & village security guards to evacuate people, animals and needed things in flooded area along river bank. Beside that those force also mobilized food, pure water and medicines to distribute to flood victims at temporary sites. At the district and village level was encouraging the youth forces and volunteers to work on improving embankment and set up team to give watching through 24 hours. Chairman and members of flood relief committee distributed relief packages and medicines to flood victims in 4 districts and Ministry of Agriculture had distributed organic fertilizers, vegetable, rice and corn seeds to various villages for replanting after flood.

II. Disaster Management system

2.1 Administrative system

<i>Conventional long form:</i>	Lao People's Democratic Republic
<i>Conventional short form</i>	Laos
<i>Government type:</i>	Communist state

<i>Capital:</i>	Vientiane
<i>Administrative divisions:</i>	16 provinces (khoueng, singular and plural), 1 municipality* (kampheng nakhon, singular and plural), and 1 special zone** (khetphiset, singular and plural)

2.2 Legal system, legal framework

The Prime Minister's Decree No. 158 (1999) created the National, Provincial and District Disaster Management Committees (DMCs). It provided the basis for the development of a disaster management policy. NDMC Decree No. 097 series of 2000 assigned the roles and responsibilities of various sectors composing the NDMC.

The National Policy on Disaster Management adopts an all-hazard and people-centered approach to disaster risk management. It recognizes that disaster risk and vulnerability reduction are essential to sustainable development.

2.3 Structure of disaster management

The National Disaster Management Committee is coordinating disaster prevention and protection activities and efforts in the country. It promotes disaster reduction activities of existing Line Ministries and Provinces on natural disaster management and protection which consists of representatives of key ministries, institutions and provinces.

Macro-level disaster management is being carried out by Ministry of Labour and Social Welfare (LSW) and Science Technology and Environment Agency (STEA), while each technical ministry and province has responsibility over their respective environment relating the disaster management in close cooperation with MLSW, STEA; Lao Red Cross (LRC), the Ministry of Agriculture/Forestry and Ministry of Health etc.

2.4 Priority on disaster risk management

With recognizing that the managing the risk to disaster and reduction of vulnerability are essential elements of sustainable development. The priority for disaster management in Lao PDR is therefore:

- To develop a rational Disaster Risk Management Plan will focus on mobilization, deployment and coordination of National Resources and requests for international Assistance.
- To prepare Disaster Risk Management Plans at provincial, district and local level.
- To develop and train community level disaster response teams.

- To target the initial efforts on the risk management of floods and droughts.
- To focus on Capacity Building of Government officers and personnel of associated agencies from the community level to the national level and on community mobilization...i.e. motivating and supporting people to organize and take appropriate action to protect themselves, their property and their communities against hazards.
- To improve disaster preparedness through:
 - A clear and comprehensive policy, which addresses all elements of disaster risk management planning.
 - Effective disaster planning and linkages at national, provincial, district and local levels as a basis for coordination action with clear allocation of role and responsibilities.
 - Operational planning for all concerned government and non-government agencies for ensure effective response actions in time of emergencies.
 - Effective implementation of specialist programmes.
 - Early warning systems for floods and droughts.
 - Public awareness and training.
 - Support for the development of self-reliance and self-help at community levels.
- To focus disaster prevention and mitigation on:
 - Agricultural and related sector programmes that aim at food, income and water security and on reducing community vulnerability.
 - Protection of key economic facilities.
- To improve disaster response and recovery by improving emergency management systems such as command, control and coordination, damage and need assessment, relief distribution and "Food for work" rehabilitation and reconstruct programs.

III. Disaster management plan

The National Disaster Management Plan for the period 2001-2020 has been formulated, while provincial disaster management plans are still under development. Provincial plans are based on the specific hazards in the locality.

National Strategy Plan on DM is consisted of the works expressing in the general vision to 2020 which is broken down into periods as:

- 2001 - 2020
- 2001 - 2010
- 2001 - 2005

The General Objectives of the National Action Plan on DM to 2020 are:

Make Lao society safe and could be able to reduce the negative impacts of disaster to people lives, economy, state assets and people properties.

- To make sure that people who were affected by disaster have been assisted on time and quickly recovery.
- Having the regulations with fully insurance welfare.
- Link programme between Disaster Management and other sector programs.

The goals of the National Action Plan on DM from 2001 to 2010 are:

Establish the District Disaster Management Committee in all districts.

- Identify the focal point in all sectors (state and privation).
- Develop and establish early warning and information system in all of 142 districts in country.
- Set up information network in disaster prone villages.
- Construct warehouses for storing the emergency assistance materials in all provinces and some disaster prone districts.
- Continue public awareness activities with media.
- Widely organizing training on DM for all sectors and levels.
- Organize simulation exercise with the involvement of rescue team unit in sectors and community.
- Raise capacity up on cooperation with other countries in the framework of Asian, Regional and United Nations to exchange information and experiences on DM.

IV. Budget size on national level

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by Ministry

Lao PDR Urban Disaster Mitigation Project (LUDMP)

Background

The People's Democratic Republic of Laos (Lao PDR) faces a range of disasters including flood, drought, landslides, as well as unexploded ordinance, fires and other man-made hazards. An analysis of disaster impacts on urbanizing areas, however, finds that fires and traffic accidents cause the greatest loss of life and property. Dense building concentrations, narrow roads, flammable building materials, aging water and electrical supply systems, and lack of resources to upgrade preparedness and response have resulted in a growing risk of large scale, multiple structure fires.

The Lao PDR Urban Disaster Mitigation Project (LUDMP) focuses on these two major hazards (fire and traffic accidents). It generally aims at incorporating risk management and hazard mitigation into the

development planning of urban areas in Lao PDR, with the city of Vientiane as the pilot demonstration site.

Objectives

The main objective of the LUDMP is to reduce the disaster vulnerability of population, infrastructure, and economic assets in Lao urban areas to fires by establishing systems for hazard assessment and disaster mitigation to ensure fire and road safety for the city of Vientiane, and other major cities and communities in Lao PDR.

More specifically, the project aims to:

- conduct a risk assessment of Vientiane, both at the city and community levels
- build capacity for prevention and response within the city's emergency service departments
- establish a public awareness campaign
- improve the regulatory system for fire mitigation

Project Profile

- Project Title: Lao PDR Urban Disaster Mitigation Project (LUDMP)
- Project Location: Vientiane Municipality areas
- Hazard Type: Urban Fires and Road Safety
- Project Management: National Disaster Mitigation Office (NDMO)
- Project Counterparts: Municipal Disaster Management Committees, Urban Research Institute (URI) and the Fire Department
- Project Manager: Mr. Phetsavang Sounnalath, NDMO Director
- Project Concept: Ms. Jinx Parker. ADPC Project Design Consultant (Team Leader); Mr. Mark Swiney, Melbourne Fire Brigade (Technical Analysis)
- Date of Commencement: 1 July 2002¹

VII. ADRC Counterpart

Director of Department of Social Welfare National Disaster
Management
Ministry of Labour and Social Welfare
Pangkham Rd P.O.Box 347 Vientiane

¹ <http://www.adpc.net/audmp/Lao.html>

MALAYSIA

MALAYSIA

I. Natural hazards in Malaysia

1.1 Natural hazards likely to affect the country

Wind storm, epidemic, wave surge, slides, floods, drought, wild fires

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2004	Flood	13	0	15000	—
2005	Flash Flood	4	0	600	—
2004	Tsunami	80	767	5063	14600
2005	Wild Fires	0	0	0	—
2004	Storm	0	0	1000	—
2004	Storm	1	0	40000	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: none

Conventional short form: Malaysia

Government type constitutional monarchy

Capital: Kuala Lumpur

Administrative divisions: 13 states (negeri-negeri, singular - negeri) with three components, city of Kuala Lumpur, Labuan, and Putrajaya

2.2 Legal system, legal framework

National Security Council (NSC) Directive No. 20 was issued to provide guidelines on the management of disasters including the responsibilities and functions of the various agencies under an integrated emergency management system.

2.3 Structure of disaster management

The National Security Division (NSD) in the Prime Minister's Department is responsible for coordination of all activities related to disaster.

Disaster Management And Relief Committee carries out the responsibilities of the NSC in coordinating all the activities related to

responsibilities of the NSC in coordinating all the activities related to disaster management. The Disaster Management and Relief Committee was established at three different levels, i.e. at the Federal, State and District levels, whereby the NSD is the Secretariat. The main functions of the Disaster Management and Relief Committee (DMRC) are as follows:

Federal level, DMRC is responsible in the formulation of national policies and strategies regarding the alertness and the preparation of various agencies involved in the handling of disasters.

DMRCs at the State and District levels are required to implement policies and strategies as follows:

- ensure sound coordination among the agencies involved in the handling of disasters and determine the roles of the principal emergency services (Police, Medical and Fire Department) and other supporting services;
- activate the Disaster Operation Control Centre at District, State or Federal Level whenever required;
- coordinate and mobilize resources and logistics available from Government agencies and if necessary also from the private sector;
- coordinate assistance and rehabilitation to disaster victims; and
- carry out "post mortem" and report upon completion of the disaster operations for the purpose of recording and performance evaluation for future reference and planning.

Other organizational arrangements:

On-Scene Control Post (OSCP)

An On-Scene Control Post (OSCP) will be opened immediately as soon as disaster has occurred. The On-Scene Commander will be either the OCPD, CPO, or the Director, Internal Security and Public Order Royal Malaysia Police, depending on the level of disaster. The main functions of the On-Scene Commander are as follows:

- To make an early assessment at the scene of potential or actual disaster and immediately activate OSCP if deemed necessary.
- To identify the equipment and logistic requirement in handling the disaster.
- To coordinate the functions of various agencies involved in search and rescue operation.
- To report and advise the Disaster Management and Relief

Committee at their respective level.

Special Malaysia Disaster Assistance And Rescue Team (SMART) was established in 1995(NSC Directive No.19). It is responsible to the Director, Crisis and Disaster Management Unit, NSD. SMART comprises of 85 officers and personnel from the Fire and Rescue Department, Royal Malaysia Police and The Armed Forces. The Team is equipped with specialized skills and equipment's to respond to any search and rescue operation in any major disaster on land which is beyond the capabilities of the existing principal emergency services Search and Rescue (SAR) teams. The team members were trained in SAR training institutions abroad such as the USA, Sweden, Australia and Singapore. The decision on the mobilization and the deployment of the SMART team is made by the Director, General of the NSD or the Director, Crisis and Disaster Management Unit.

Malaysian Meteorological Service (MMS) provides information and warning occurrences and adverse weather phenomena to the general public through the mass media or to other government agencies directly involved in disaster mitigation. A Central Forecasting Office has been established in the Meteorological. Headquarters to monitor closely the weather and sea conditions over the Malaysian region.

Drainage And Irrigation Department Of Malaysia (DID) takes charge of : flood Control Measures, coordinate flood relief operations at federal, state and district levels in coordination with the National Disaster Management and Relief Committee in 1997, implementation of structural flood mitigation measures, provision of flood forecasting and warning services, and flood forecasting and warning services (FFW).

Social Welfare Department is the main organization in charge of disaster relief and rehabilitation works (NSC Directive No. 20 on Policy and Mechanism of Disaster Management and Relief)

2.4 Priorities on disaster risk management

1. Risk and Vulnerability Analysis

Such analysis should be mandatory in the appraisal of all development projects. Pilot risk mapping projects and hazard and vulnerability analysis should be conducted at the micro-level using where appropriate, Geographic Information System (GIS) and Remote Sensing (RS) technology.

2. Non-Structural Mitigation Measures

1) Disaster Management System

The need to strengthen national disaster management

organizational structures and support them with sound administrative, financial arrangements and assets mobilization.

2) Training

To increase in training activities in the country through international support and cooperation by multilateral and bilateral organization, NGO's and others. Also to undertake training programmes for core disasters management personnel as well as supporting personnel in order to enhance disaster coordination and response.

3) Public Awareness

The need for more sustained public awareness programs directed at local communities in disaster prone areas through international cooperation and assistance.

4) Forecasting And Warning Systems

The need to improve in the methods and technology of warning system for flood, landslides and forest fire.

5) Hazard Mapping

The need to improve hazard mapping at macro and micro level.

3. Structural Mitigation Measures

The need to implement structural mitigation measures in both engineered and non-engineered structures, such as landslide control measures, river embankments and etc. International cooperation in the transfer of knowledge and expertise in the structural measures could greatly improve disaster reduction system in the country.

III. Disaster management plan

National DM Strategy of Malaysia

Mission: To advance national disaster management through effective coordination and integrated approach in the building of a culture of prevention, protection/public safety in the community.

Vision: A safe environment for the community through disaster management and sustainable development in the 21st century.

Main Components

- A. Development. Reduce the risk of the community from disasters through continuing development of disaster management capabilities in mitigation, preparedness, response and recovery.

- B. Partnership. Establish a national approach to disaster management through coordinated and integrated system involving multi-agency and sectoral commitment in the respective level of government administration and NGOs.
 - C. Education and Training. Develop and promote disaster management education and training for officials of related agencies and community for effective enhancement of disaster handling and awareness
 - D. Community Awareness. Develop a national approach to fostering and enhancing the community's awareness of risks, and encourage involvement in prevention /mitigation, preparedness, response and recovery strategy.
 - E. Civil Protection/Public Safety. Promote and support the development of a Malaysian Civil Protection /Public Safety capability and durability that is responsive to threats of hazards and disasters.
 - F. International Cooperation. Promote and develop international cooperation networking for exchanging, sharing and training on disaster management as well as cooperating in rendering and receiving of disaster assistance.
- IV. Budget size on national level
- V. Progress and situations of the Hyogo Framework for Action (HFA)
- VI. Projects on disaster reduction headed by Ministry
- VII. ADRC Counterpart

Director of Crisis and Disaster Management Unit
National Security Division Prime Minister's Department
Level G, West Wing, Complex A, Prime Minister's Department
62502 Putrajaya, Selangor

MONGOLIA

MONGOLIA

I. Natural hazards in Mongolia

1.1 Natural hazards likely to affect the country

Drought, earthquake, epidemic, famine, flood, wild fires, wind storm

1.2 Recent Major Disasters

year	dis_type	no_killed	total_affected	total_dam Million USD
2000	EP		450,000	
2003	EP		9	
2003	FL	15	1500	270,000
2003	WS	3	665,000	
2000	WS	19	571,000	

EP-epidemic, FL-flood, WS-windstorm

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

Example: wild land fires

A total of 115 wild land fires occurred in 56 soums of 13 provinces and 5 districts of capital city Ulaanbaatar. A total of 3402,6 thousand ha area affected from these wild land fires and approximately 120 million tugrik damage occurred. In order to respond to these wild land fires, a total of 910 officers from the National Emergency Management Agency, 3195 local people, 2 helicopters, and 280 vehicles mobilized on it. We frequently broadcasted to warn the population and protect them from the wild land fires. Some remote wild land fires that occurred in Selenge, Khentii, Ovorkhangai provinces became difficult to suppress because of the impossibility to approach the terrain by vehicle. In these cases, we sent 44 parachutists from the special rescue unit by the decision of chief of National Emergency Management Agency. We used 2 helicopters to conduct surveillance on these fires and to drop the parachutists on the hotbed. We have a contract with the Meteorological institute and in the wild land fire season we have got 20 satellite maps of wild land fires. In 14 cases we detected the wild land fires from the satellite when the local people did not know about it. We informed the local authorities about these fires immediately and were able to put them out very soon. The contracted watchmen worked in those provinces where the probability of occurrences of wild land fires is high. We have taken measures to equip all the vehicles with spark suppressors during the dry wild land fire season. In result of this the number of fires has increased, but its

damage has decreased by half.

II. Disaster Management System

2.1 Administrative system

The Mongolian Government's regulatory agency – the National Emergency Management Agency – has the duty to conduct nationwide activities for disaster protection. All the 21 provinces and the capital city have its emergency management divisions and department.

<i>Conventional long form:</i>	none
<i>Conventional short form:</i>	Mongolia
<i>Government type:</i>	mixed parliamentary/presidential
<i>Capital:</i>	Ulaanbaatar
<i>Administrative divisions:</i>	21 provinces (aymguud, singular - aymag) and 1 municipality* (singular - hot)

2.2 Legal system , legal framework

- Law on Disaster protection
- Law on Fire safety
- Law on Wild land fire prevention and protection

Government resolution #1, issued on 7th January 2004. It established the National Disaster Management Agency of Mongolia (NDMA), currently named "National Emergency Management Agency". NEMA combines the State Board for Civil Defense, Fire Fighting Department and State Reserve Agency. It is responsible for implementing the State disaster protection policy and legislation and for organizing nation wide projects to reduce disaster risks and vulnerability through disaster management activities.

In addition, NEMA works to:

- Develop and implement disaster protection including strategical planning, disaster protection legislation, policy guidelines, policies, and plans;
- Develop training programmes and plans for all kind of disaster protection training;
- Provide disaster protection activities with a professional operative management
- Set up an information database and internal network for disaster protection and provide communication services;
- Prevent fire and organize fire inspections;

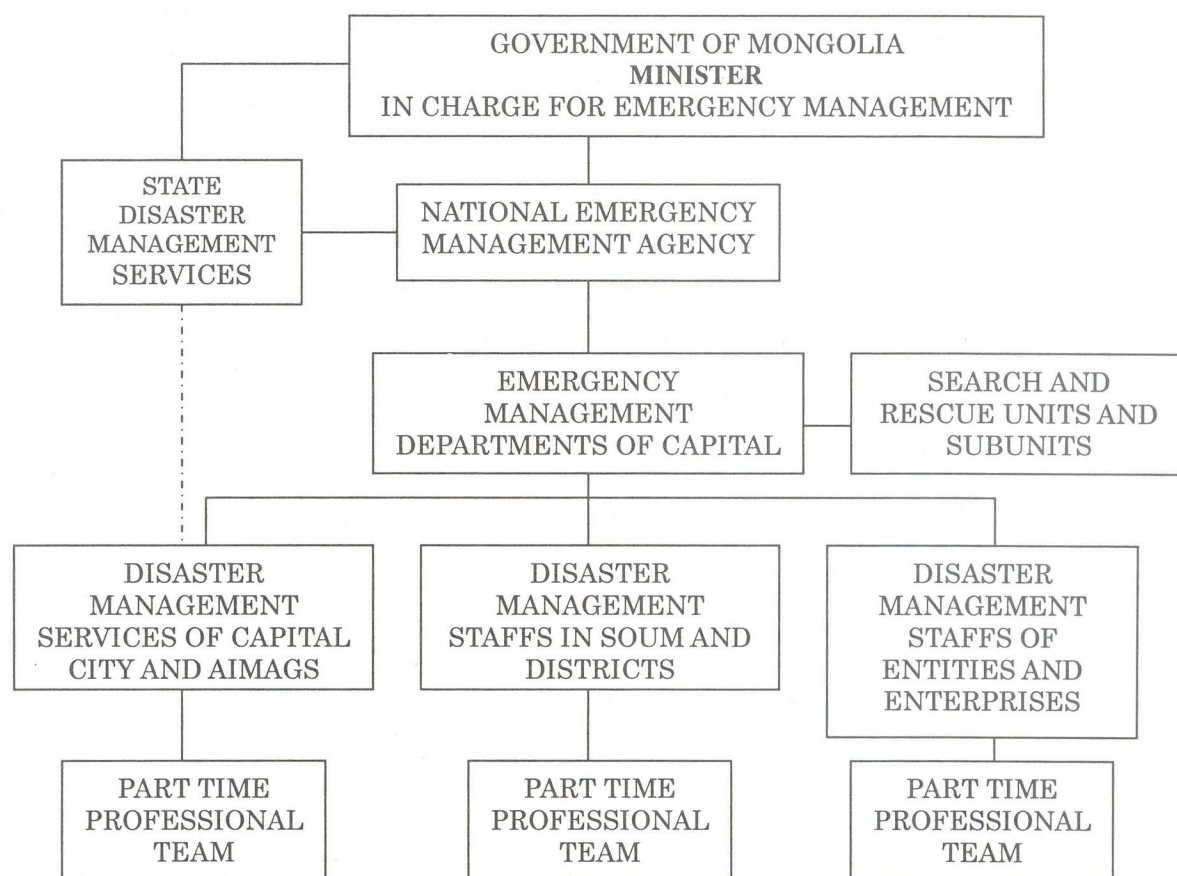
- Study disasters, to do laboratory analysis of radioactive and chemical poisons, and to repair and adjust needed equipments;
- Study fire cases and evaluate them;
- Provide a policy for and coordination of the state reserve;
- Organize the measures related to warehouse economics, quality and technology;
- Provide leadership of the public administration and human resource management;
- Monitor and evaluate the implementation of the disaster protection policy, planning, programme, project, agreements and contracts of cooperation, and to organize internal audit;
- Provide professional advice, support and service directed to developing disaster protection cooperation with foreign countries and international organizations
- Inform the public about the disaster protection policy, and to communicate and provide the public with immediate information related to disasters and forecasts;
- Manage the budget and financial policy of National Emergency Management Agency.

2.3 Structure of disaster management

Organizational structure

Disaster management services of state, aimag, capital city, soum, and districts are established with their goal to implement disaster management duties. In order to coordinate the activities of disaster prevention, rescue, response and recovery, the following disaster management state services based on related state administrative organization were created:

- Natural and chemical danger assessment and information service;
- Health protection service;
- Food and agriculture service;
- Fuel and energy service;
- Roads and transportation service;
- Construction and urban development service;
- Order service;
- Public awareness service;
- Information and communication service;
- Radiation protection service;
- Professional inspection service.



The structure of disaster management organizations is based on territorial-industrial principle regardless of the ownership in the state, aimag, capital city, soum, district, bag, khoroo, entities and enterprises (aimag, soum, bag, khoroo administrative and territorial units in Mongolia).

The Minister is in charge for emergency management and directs the disaster management activities at the state level. The Governors of the territorial units organize and manage the disaster management activities in their respective aimag, capital city, soum, district and khoroo. Heads of the entities and enterprises organize and manage the disaster management activities in their respective units and organizations.

The state administrative organization in charge of emergency management is NEMA. It is responsible for the implementation of the state disaster management policy & legislation nation-wide.

The State Disaster Management Services has the following functions:

- plan and organize the implementation of disaster management activities within the framework of the engaged section;
- ensure the execution of laws and resolutions of higher authorities related to the disaster management;
- establish the disaster management service, provide staff and a specialized unit according to the specifics of the engaged section and organize their training and preparedness;
- ensure unaltered essential services of engaged section during the disaster situation;
- keep warning information systems of the engaged section constantly ready;
- put in place reserves of machinery, equipment and tools for preventing and responding to damages caused by a disaster situation
- provide disaster management services in aimags and capital city with the professional management of engaged section;
- immediately inform the state administrative organization in charge of disaster management on disaster situations and get their professional support;
- involve the professionals and machinery, equipment and tools of the engaged section in the operational staff in dispatching to disaster site;
- dispose funds allocated for a disaster according to the purpose;
- assess the damages caused by the disaster and propose detailed measures to be taken; and
- provide information and reports on the disaster situation

Emergency management activities are carried out by emergency management departments, specialized unit and state reserve branches in 21 aimags and in the capital city. These units are responsible for disaster prevention at state and local levels; mobilizing rapidly; search and rescue; providing emergency aid to the victims; evacuating them to secure places; and protecting their properties.

2.4 Priority on disaster risk management

- to initiate and present recommendations concerning legal measures for preventing disasters in conditions of market economy system.
- to improve the system and legal grounds for preventing disasters in the interest of government organizations, local administrative entities, enterprise units and individuals.
- to make arrangements for work and activities in conformity with the laws and regulations to enhance working capacity of all organizations concerned for dealing efficiently with any phenomenon of disaster, organize emergency combat groups, rescue teams, national and country services or so-called “headquarters”,

and train people to the effect.

III. Disaster Management Plan

- (1) Sort of plan
National Disaster Plan
- (2) Legal basis
Law on Disaster protection
- (3) Date of creation of the plan
Under review
- (4) Content
Under review

IV. Budget size on national level

Total budget: 14 billion tugrik
Current expenditure: 8.58 billion tugrik
Investment expenditure: 5.45 billion tugrik

V. Progress and situations of the Hyogo Framework of Action (HFA)

VI. Projects on disaster reduction headed by NEMA

- (1) Sectional Topic
Crisis Prevention and Recovery
- (2) Partner
Government of Luxembourg
- (3) Title
Strengthening the Disaster Mitigation and Management System in Mongolia (MON/02/305)
- (4) Contents
Following on from the preparatory project, the goal of this project is to strengthen the system of disaster management in Mongolia, bringing it up to international standards. The focus will be on preventing disasters. The UNDP will assist the State Civil Defense Board and other concerned agencies to:
 - Strengthening the ability of the Government to strengthen the disaster mitigation and management system through new technologies and through the training of local disaster preparedness and response teams

- Working with the Government to change its disaster focus from military based civil defense to civilian led disaster mitigation and management.
- Creating a disaster mitigation and management partnership between government, donors, NGOs for cooperation, coordination and allocating of resources for disaster mitigation

(5) Target year
Late 2002 – 2005

(6) Other Information
Total budget: USD 725,000, UNDP Contribution: USD 160,000,
Co-financing partner: Government of Luxembourg (USD 565,000)

VII. Counterpart Organization for ADRC

Department of Strategic Planning and Foreign Relations
Department,
Emergency Management Agency Mongolia,
Partizan Street 6, Sukhbaatar district, Ulaanbaatar 210644,
Mongolia

MYANMAR

MYANMAR

I. Natural hazards in Myanmar

1.1 Natural hazards likely to affect the country

Annually Myanmar has to suffer from impacts of disaster: fire, storm, flood, and earthquake. 70% of disasters are caused by fire, 13% by storm, 10% by flood and the remaining 7% by other causes of disaster.

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2005	Landslide	17	16	16	—
2004	Tsunami	71	0	12500	—
2004	Cyclone	236	0	25000	688

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: Myanmar
Conventional short form: Myanmar
Government type: military junta
Capital: Yangon
Administrative divisions: 7 divisions (taing-myar, singular - taing) and 7 states (pyi ne-myar, singular - pyi ne).

2.2 Legal system, legal framework

2.3 Structure of disaster management

Myanmar has its own system and practice for disaster prevention and preparedness base on its own social, economical, cultural and administrative practice. In order to carry out disaster preventive measure effectively, the central committee for natural Disaster Prevention, Relief and Resettlement has been formed by the guideline of State Peace and Development Council's Security and Management Committee. The chairman of the committee is Minister for Social Welfare Relief and Resettlement and members are head of Departments concerned State, Divisional and Township level committees are also organized and disaster prevention activities are being implemented.

In order to effectively carry-out disaster preparedness and prevention measures the Government established a Central Committee for Disaster Prevention and Relief, a policy formulating body headed by the Minister of Home and Religious Affairs. A National Disaster Prevention Relief and Rehabilitation Committee was formed under the Central Committee, so as to facilitate the practical implementation of the preparedness and preventive measures, and the National Committee was headed by the Deputy Minister of the Ministry of Social Welfare with 9 members from other Ministries.

Fire Services Department under Ministry of Social Welfare Relief and Resettlement is responsible for fire precaution, fire prevention, extinction, training of fireman, relief and rescue work, educating the public for awareness of fire and disasters

In the delta regions where flooding of the river is the problem, the dykes and water barriers are maintained and reinforced as necessary by Irrigation Department. In area of Rakhine state which are vulnerable to cyclone and storm surge earthen mounds are constructed.

In case of disaster, readily and Development Association, Schools, Army, Reserved Volunteers, Myanmar National Committee for Women's Affairs and Police Force.

2.4 Priority on disaster risk management

III. Disaster management plan

Disaster Reduction Plan

Department of relief and resettlement have cooperated with the Department of Health, Department of Meteorology and Hydrology, Fire Services Department, Human Settlement and Household Development Department, Irrigation Department and Myanmar Red Cross society in the field of disaster prevention and reduction measure.

Fire prevention: The State Peace and Development Council is the authority concerned to manage a systematic resettlement of homeless who trespassed in restricted areas to new towns. On the other hand, the authority made town plans at the fire stricken areas as post disaster activities. The victims were provided rehabilitation plans, resettlement and development schemes. Reducing vulnerabilities by doing physical plan and construction, disaster mitigation will be achieved for the future.

Some of the examples are Meiktila Fire (1991) and Myangyan Fire (1993). As the main causes of fire outbreak are due to unplanned

development and use of flammable construction materials, the authorities have undertaken the task of physical planning to prevent potential disaster and have also established low cost building materials development unit to develop non-flammable building materials with indigenous raw materials. Systematic establishing of new towns on accordance with town plan is another activity to reduce Fire disaster.

Cyclonic storm and flood preparedness: Having a long coastal line along the western part of the country, Bay of Bay of Bengal is regarded as cyclone vulnerable area. Being a heavy rainfall country, Myanmar suffers from flood disaster in mid-monsoon period of August to October. Along-term prevention and preparedness plan for cyclone and storm surge, (8) earthen high-mounds (embankments) which consists of refuge shelters and drinking water ponds were constructed in Pauk-taw, Myebon and Minya Township in Rakhine state, cyclone prone areas. During the cyclone season (April, May, September, October), Local populace can take refuge in these high mounds and shelters in case of emergency to avoid from storm surge, and strong wind. Department of Meteorology and Hydrology, is responsible for improving cyclone and flood warning and forecasting system. Hence, broad disseminating of warning are being made through the mass media such as television, radio, wireless, and newspaper.

- IV. Budget size on national level
- V. Progress and situations of the Hyogo Framework for Action (HFA)
- VI. Projects on disaster reduction headed by Ministry
- VII. ADRC Counterpart

General Director of Relief and Resettlement Dept
Office of the Minister

NEPAL

NEPAL

I. Natural hazards in Nepal

1.1 Natural hazards likely to affect the country

Drought, earthquake, epidemic, extreme temperature, floods, slides, wild fires, wind storms, cold wave, and wind storms.

1.2 Recent major disasters

year	dis_subset	no_killed	total_affected	total_dam(US'000s)
2004	Flash Flood	185	800015	—
2005	Flood	0	—	—

*Source: "EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium"*

II. Disaster Management system

2.1 Administrative system

Conventional long form: Kingdom of Nepal
Conventional short form: Nepal
Government type: parliamentary democracy and constitutional monarchy
Capital: Kathmandu
Administrative divisions: 14 zones: Bagmati, Bheri, Dhawalagiri, Gandaki, Janakpur, Karnali, Kosi, Lumbini, Mahakali, Mechi, Narayani, Rapti, Sagarmatha, Seti

2.2 Legal system, legal framework

In the context of Nepal, before the advent of Natural Disaster Relief Act (NDRA), 1982 there was no well structured disaster policy. Prior to 1982 relief and rescue work was carried out either on the basis of power base or as the social work. Thus, realizing the need the Natural Disaster relief Act, 1982 was formulated which has already been amended twice in 1989 and 1992. The act is the milestone of disaster management in Nepal.

Natural Calamity (Relief) Act, 1982 being enacted earlier has focused basically on the relief/response activities. At present it requires further reforms to cover comprehensive disaster risk management, concerning preparedness and mitigation in particular.

The Ministry has already started the process to develop national

Sources: WCDR Report, ADRC country report, Duryog Nivaran, UN country report, DPNET Nepal

strategies on disaster management, which will be followed by the reviewing of the prevailing legal framework concerning pre and post disaster risk reduction and management.

2.3 Structure of disaster management

The Ministry of Home Affairs (MoHA) is the key agency in the institutional structure for disaster management. MoHA is the only agency that has the mandate for carrying out rescue and relief operations. The Central Disaster Management Committee and district and local committees are under the Ministry.

Other agencies involved include the Ministry of Forest and Soil Conservation, which is engaged in stabilizing natural and man-made landslides by afforestation and construction of check dams and other low-cost structures. The Ministry of Water Resources, through the Water Induced Disaster Prevention Training Center, aims to strengthen the government's capacity to cope with water induced disaster through training and technological development.

Agencies such as the Department of Irrigation, Mines and Geology, and Department of Roads have linkages with disaster management. The Nepal Red Cross Society (NRCS) in co-operation with the government handles relief distribution for the government. It maintains warehouses of disaster relief materials in all districts. This is the primary agency for responding to any kind of disaster. Only in areas where NRCS is unable to operate does the government take over responsibility for relief distribution.

2.4 Priority on disaster risk management

- Emergency response planning and capacity enhancement,
- Strengthening policy and legal environment
- Efficient and effective reconstruction and rehabilitation.
- Institutional reform
- Human resources development in disaster preparedness

III. Disaster management plan

The tenth plan of the country made it compulsory to include environmental impact and natural disaster appraisal study for infrastructure projects.

Synopsis of the provisions on Disaster Management in the Tenth Plan (2002-2007)

Objectives

- To make development and construction works sustainable, reliable and effective
- To keep life of the common people secured.

Strategies

- Adopting suitable technology to minimize environment effects and losses due to disaster.
- Making rescue and relief reliable and effective
- Carrying out effective public awareness activities.
- Strengthening Earthquake measurement stations.
- Preparing hazard maps of vulnerable areas.
- Designating MoHA as the focal point of disaster activities.

Programme

- Develop integrated information system in coordination with national and international agencies.
- Develop reliable database.
- Prepare institutional inventory
- Operate five regional warehouses with sufficient stockpile of relief materials.
- Develop national fire code.
- Prepare landslide inventory based on hazard maps and create epicentre map.
- Provide immediate information to common people of any mode of disasters.
- Adopt disaster preventive system.
- Offer instant counselling and rehabilitation to the victims.

Working Policy

- Assessments of environmental and disaster impacts
- Enhance people's participation in watershed management and river control
- Timely reform legal and institutional frameworks.
- Effective implementation of regional programmes.
- Harness participation of stakeholders in all areas of disaster reduction.
- Increase public awareness

Expected Achievements

- Cordial relations will be established among national and international partners.
- Effective sharing of disaster information and experiences.

Sources: WCDR Report, ADRC country report, Duryog Nivaran, UN country report, DPNET Nepal

- Reduction of damages
- Hazard maps will help identify vulnerability thereby contributing to lessen the loss of lives and property.
- Strengthened rehabilitation works and immediate availability of relief materials to the victims.

IV. Budget size on national level

In the national budget, the government has not allocated separate budget line for disaster risk reduction. There are some mechanisms to respond post disaster scenario such as the provision of the Central Disaster Relief Fund and Prime Minister Relief Fund, which are used on relief, reconstruction and rehabilitation activities. Likewise, several non-governmental organizations are contributing significantly in the field of disaster risk reduction efforts through the direct implementation of activities and/or working/ supporting government initiatives.

Government has approved recently to create an Emergency Fund to deal with the earthquake risk reduction and emergency response. Moreover, Government has also allocated Rs.1 million as the initial commitment to operationalize the fund. Contributions through the governmental /non-governmental and external development partners have been expected for this fund.

V. Progress and situations of the Hyogo Framework for Action (HFA)

After participating the WCDR II Nepal has given serious attention towards the implementation of the Hyogo Framework. The following activities are initiated in the field of disaster risk reduction and mitigation:

- Preliminary works in establishing the National Council for Disaster Management.
- Prepare a strategic plan to implement the national Action Plan properly.
- Review on existing laws.
- Efforts to raise the level of public awareness.
- promote co-ordination among different stakeholders
- Establishment of a Satellite Center for an Earthquake Technology proposed at the SAARC level.

VI. Projects on disaster reduction headed by your Ministry

Community-Based Disaster Management Project (CBDMP)

Unit:

Environment, Energy and Disaster Reduction

Project:

Community-Based Disaster Management Programme (CBDMP)
(NEP/05/01)

Project period:

September 2005 to August 2007 (Financial closure 31st December 2007)

Project Cost (Total):

TRAC 1.1: US\$ 550,000/-

Project coverage:

12 VDCs and 6 Municipality in 6 districts of Nepal. 2 CDMGs per VDC and 3 CDMGs per municipality will be identified. Total beneficiaries: 12,000 families (approximately)

Execution strategy:

DEX implementation through Community-Based Disaster Management Groups (CBDMG) at the community level and national NGOs

Overall Objective:

To enhance the security of women and men vulnerable to natural disasters and protect common property and community resources in select disaster prone districts by appropriate capacity building measures at community, district and central levels and supporting and replicating community-based disaster risk reduction initiatives that preferably enhance livelihood opportunities.

Outputs:

- a. Capacities of identified key stakeholders from the community, district and central levels built on Disaster Management issues
- b. Hazard vulnerability of the communities living in the project wards reduced through community based disaster risk mitigation measures

Results:

- a. Community Based Disaster Management Groups (CDMGs) formed and trained in issues of disaster management like hazard & vulnerability analysis and execution of disaster risk mitigation works
- b. Successful implementation of disaster management action plans initiated in 5 of the project districts,

- c. Management Information System (MIS) on disasters activated in all the 6 project districts,
- d. A National disaster management strategy developed for Nepal,
- e. A study conducted on the institutionalization of the disaster risk reduction approaches in the country and on the profile and mandate of an apex body responsible for these and related analytical issues;
- f. Nepal has a representation in international forums on disaster management increased.
- g. CDMGs reduce their geo-physical vulnerability by designing and executing at least one risk mitigation work in their respective wards that is preferably livelihood enhancing
- h. Disaster / conflict affected Dalit, Disadvantaged Group (DAG), women-headed, displaced and/or poor households have increased their livelihood status, thus reducing their overall economic vulnerability to disasters.
 - i. Documentation and publication of materials related to the sector and the project Project Steering Committee
 - ii. Ministry of Home Affairs (MOHA)
 - iii. Ministry of Local Development (MoLD)
 - iv. Ministry of Finance (MoF)
 - v. Department of Water Induced Disaster Prevention (DWIDP)
 - vi. Nepal Red Cross Society
 - vii. An academic expert on disasters
 - viii. UNDP (Deputy Resident Representative, Programmes as the chairperson of the committee)

VII. ADRC Counterpart

Ministry of Home Affairs
Singh Durbar, Kathmandu

PAKISTAN

PAKISTAN

I. Natural hazards in Pakistan

1.1 Natural hazards likely to affect the country

Earthquake, flood, drought, epidemic, extreme temperature, famines, slides

1.2 Recent major disasters

year	dis_type	killed	injured	total_affected	dam (US '000s)
2004	Earthquake	24	63	13148	—
2005	Earthquake	73320	69392	3269392	5000000
2004	Epidemic	2	100	100	—
2005	Extreme Temperature	106	200	200	—
2005	Flood	520	450	7000450	—
2005	Flood	21	0	2000	—
2005	Flood	30	0	460073	—
2005	Wind Storm	11	0	—	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: Islamic Republic of Pakistan
Conventional short form: Pakistan
Government type: federal republic
Capital: Islamabad
Administrative divisions: 4 provinces, 1 territory*, and 1 capital territory**; Balochistan, Federally Administered Tribal Areas*, Islamabad Capital Territory**, North-West Frontier Province, Punjab, Sindh

2.2 Legal system, legal framework

The National Calamities (Prevention and Relief) Act, 1958: The Act provides for the maintenance and restoration of order in areas affected by certain calamities and for the prevention and control of and relief against such calamities. Provincial Relief Commissioners (who also

happen to be Senior Members Board of Revenue) have been given the responsibility of relief under section 4 of the Act.

Emergency Services Ordinance, 2002: The ordinance establishes emergency service to deal with emergencies in an effective manner and encounter threats to public from modern warfare, terrorism and disasters and defines responsibilities at each level. The National Council was established to regularly monitor the performance of this service and ensure continuity in the process of rule making in the management of emergencies / disasters during peace time.

Provincial governments have administrative powers. District emergency Officer is responsible for the functional management. The Federal government is mainly responsible for ensuring uniform standards for the service throughout the country, provide advance training to Officers through National Academy and oversee the performance of provinces.

The Ordinance includes definitions of disaster related terms. Under the Emergency Services Ordinance, the Federal, Provincial and District Governments must set-up an Emergency Service, which is responsible for preparedness and rapid response to emergencies and disasters of any scale.

The National and Provincial Crises Management Cells of the Ministry of Interior and Home Departments respectively, shall coordinate the activities of all emergency services at the national and provincial levels.

Local Government Ordinance 2001: The Local Government Ordinance (LGO) provides new avenues for an effective and context-specific disaster management.

Environmental Legislations

Pakistan Environmental Protection Act, 1997: The Act provides for the protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution, and promotion of sustainable development.

Key features of the Act:

- Establishment of the Environmental Protection Council to coordinate and supervise enforcement of the provisions of this Act
- Establishment of the Environmental Protection Agency
- Establishment of a National Environmental Coordination Committee
- Establishment of the Provincial Sustainable Development Funds to provide financial assistance to the projects designed for the protection, conservation, rehabilitation and improvement of the

environment, the prevention and control of pollution, the sustainable development of resources and for research in any aspect of environment

Karachi Port Trust (Amendment) Ordinance, 1994: The Ordinance is a federal act that amends the Karachi Port Trust Act, 1886 (Bombay Act VI of 1886). Through Article 29 of the Karachi Port Trust (Amendment) Ordinance, 1994, a new section (Section 90) has been inserted in the Karachi Port Trust Act, 1886, which has the following provisions:

- The Board of Trustees, Karachi Port Trust (KPT), is responsible for ensuring that the marine environment within the Karachi Port's limit remains free from pollution.
- Discharge of pollutants including waste, oil, radioactive material, hazardous material, bilge discharge from tankers and vessels is prohibited within the limits of the Karachi Port.
- Anyone violating the above clauses may be asked to pay a fine of up to Rs. 10 million in addition to bearing the cleaning cost.

National Fund for Cultural Heritage Act, 1994: Under this act, the National Fund for Cultural Heritage was established for "conservation and preservation of Pakistan's national heritage and its proper maintenance."

Agricultural Pesticides (Second Amendment) Ordinance, 1995: The Agricultural Pesticides (Second Amendment) Ordinance, 1995 is a federal act that amends the Agricultural Pesticides Ordinance, 1971. Under the amendment, the penalties for selling, importing, manufacturing and formulating unregistered brands of pesticides have been drastically increased.

AJK Environmental Protection Act, 1996: The AJK Environmental Protection Act, 1996 provides for "the control of pollution and preservation of living environment."

2.3 Structure of disaster management

Emergency Relief Cell (ERC) in the Cabinet Division serves as the focal point during emergencies. At the provincial level, the ERC coordinates with provincial relief departments / relief commissioners who are responsible for effective distribution of relief items in respective provinces.

The Cell is also responsible for dealing with institutional donors and receives grants / donations / funds for distribution through the Prime Minister's Disaster Relief Fund.

The Federal Flood Commission (FFC), Emergency Relief Cell (ERC) and Pakistan Meteorological Department are the key agencies for disaster management in Pakistan. However, in case of a disaster, almost all federal and provincial ministries, departments and divisions start dealing with the situation offhandedly.

Responsibilities of the ERC in connection with disaster relief are:

- a. To provide in cash as well as in kind to supplement the resources of the provincial governments in the event of major disasters
- b. To coordinate the activities of the federal Division, Provincial Governments, as well as governmental, semi governmental, international and national aid-giving agencies, in the conduct of operations for relief of disasters
- c. To maintain contact with international aid-giving agencies/ voluntary organizations and donor countries for disaster relief measures
- d. To administer Relief Funds, being maintained at the Federal Level
- e. To stockpile certain items of basic necessity and establish central inventory of resources
- f. To provide assistance to the calamity stricken friendly countries

The ERC operates an Emergency Control Room, which coordinates the situation during calamities by liaising with relevant agencies such as the Federal Flood Commission, Meteorological Department, and Provincial Governments.

The ERC maintains a warehouse in the capital, Islamabad, stocking essential non-perishable relief item such as medicines, blankets, clothing and tents. In addition, there is a Relief Goods Dispatch Organization (GDO) located in Karachi. This is responsible for receiving and dispatching all relief goods from foreign and local agencies in the event of a disaster. The ERC also maintains an Aviation Squadron with a fleet of 4 helicopters, whose task is to assist rescue operations and enable officials to visit the affected areas.

Disaster Management and Environment

The Ministry of Environment is responsible for national policy programs and plans regarding environment, pollution, ecology, housing, physical planning and human settlements.

2.4 Priority on disaster risk management

Structural and non-structural measures for flood management, which include:

Structural:

- Construction of embankments
- Construction of spurs/battery of spurs
- Construction of dikes/gabion walls/flood walls

- Construction of dispersion/diversion structures
- Diversion of flood water channels
- Construction of dams
- Construction of bypass structures

Non-structural:

Improved flood forecasting system through:

- Effective flood forecasting and dissemination system
- Real time rain fall and river flow data collection
- Weather radar prediction
- Modern system of transmission of flood forecasts
- Timely warning and evacuation arrangements by provincial relief departments and district administrations

III. Disaster management plan

Ten-Year Perspective Development Plan (2001-2011)

By adopting strategies to reach the Millennium Development Goals (MDGs), the Ten-Year Perspective Development Plan was launched into operation on 1st July, 2001. Its total size has been fixed at Rs.11,287 billion in current prices out of which Rs.8,747 billion have been envisaged as the investment of private sector and Rs.2,540 billion as Public Sector Development Program (PSDP).

Water Resources Development: The Plan recognizes the severity of drought in Sindh and Balochistan and the subsequent shortage of water that has aggravated the ongoing water crises. The major goal of policy formulation and sectoral planning in water resources sector during the Ten-Year Perspective Development Plan is to uplift the agro based economy on the national level by maximizing crop production. This will be achieved through progressively increasing surface water supplies using the latest technologies available and protecting land and infrastructure from water logging, salinity, floods and soil erosion.

The strategy to achieve these goals comprises:

1. Augmentation and conservation measures to overcome the scarcity of water
2. Drainage and reclamation program to protect the disastrous area
3. Flood Control and Protection
4. Rehabilitation of irrigation system of Punjab and Sindh and modernization of barrages in Punjab

The Plan gives high priority to the construction of medium and large dams and canals to meet water requirements in the future. The total outlay for the Federal Ten-Year Development Plan for Water Sector amounts to Rs.418 billion out of which Rs.63 billion has been proposed for the Three-Year Program (2002-05).

In addition, small irrigation schemes will be started; construction of 303 spurs and 1101 kilometers of flood embankments and improvement of flood warning systems will be carried out. During the three-year program (2002-05), 240 and 68 kilometers of flood embankments will be constructed to safeguard life and property.

Risk Mitigation Fund: A risk mitigation fund of US \$ 5 million has been established to assist the poor in case of loss of income generating assets due to unforeseen circumstances beyond their control. The Fund is to reduce the risk aversion of the poor and enable them to take advantage of potentially viable new technologies, production choices and income opportunities. As a safety net measure, a Deposit Protection Fund of US \$ 5 million has also been established to provide security to the savings of the poor with Khushhali Bank.

Environment: An allocation of Rs. 13.7 billion has been proposed in the Ten-Year Plan for environment and Rs. 1486.1 million in the Federal Three Year Program (2001-04). The key program areas include environmental protection, resource conservation, watershed management, social forestry, fuel efficiency etc. There are fourteen projects under implementation through the Ministries of Environment, Local Government & Rural Development and Water & Power and are being coordinated by the Planning & Development (P&D) Division. The Ten-Year Perspective Development Plan suggests 'fire-fighting approach' to address the problems of salinity, water logging, droughts, erosion and desertification.

National Environmental Action Plan (NEAP): In its ninth meeting (Feb.2001), the Pakistan Environmental Protection Council (PEPC) approved a National Environmental Action Plan. The NEAP reflects a commitment to the environment within government, integration of bottom-up approach into environmental strategies, greater emphasis on poverty reduction and a defined role for the government in achieving the environmental objectives of the country. The primary objective of the NEAP is to initiate actions and programs for achieving a state of environment that safeguards public health, promotes sustainable livelihood and enhances the life and quality of the people. The government of Pakistan has also made following announcements as part of its commitment to the protection and preservation of environment.

The Pakistan National Conservation Strategy: To keep the development planning within the context of a national environmental plan, Pakistan prepared its National Conservation Strategy in collaboration with IUCN – The World Conservation Union - in 1992. The Canadian International Development Agency (CIDA) supported the activity while the United Nations Development Programme (UNDP) supported its additional

sector activities. The objectives of the National Conservation Strategy are:

1. Conservation of natural resources
2. Sustainable Development
3. Improved efficiency in the use and management of resources

IV. Budget size on national level

Prime Minister's Disaster Relief Fund: The Emergency Relief Cell (ERC) maintains the PM Disaster Relief Fund, established in 2000 at the federal level. The Prime Minister approves required funds for provincial governments including Federally Administered Tribal Areas (FATA), Northern Areas and Azad Jammu Kashmir during humanitarian crises.

Risk Mitigation Fund: A risk mitigation fund of US \$ 5 million has been established to assist the poor in case of loss of income generating assets due to unforeseen circumstances beyond their control. The Fund is to reduce the risk aversion of the poor and enable them to take advantage of potentially viable new technologies, production choices and income opportunities. As a safety net measure, a Deposit Protection Fund of US \$ 5 million has also been established to provide security to the savings of the poor with Khushhali Bank.

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by your Ministry

VII. ADRC Counterpart

Emergency Relief Cell
Cabinet Division

PAPUA NEW GUINEA

PAPUA NEW GUINEA

I. Natural hazards in Malaysia

1.1 Natural hazards likely to affect the country

Earthquakes, River Floods, Landslides, landslides dam burst, Coastal Erosions, Tsunami

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2003	Landslide	13	21	21	—
2004	Flood	0	0	10000	—
2004	Explosive Eruption	0	0	9600	—
2005	Earthquake	1	0	200	—
2005	Flood	1	0	—	—
2005	Explosive Eruption	0	0	15000	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database www.em-dat.net – "Université Catholique de Louvain - Brussels - Belgium"

Example of a major disaster and response activities

Sea Level Rise Countermeasures (1999)

A number of coastal PNG villages have experienced gradual erosion of their coastal areas resulting from the effects of high waves or the effects of global warming. The Duke of York Islands in the East New Britain Province came to a stage that the sea level rise was threatening the future of the existence of the islands. Though it was not a declared national disaster, the East New Britain Provincial Disaster Committee through the Provincial Administration responsibly went ahead in planning and implementing the relocation of the islanders to the main island of New Britain as a long term counter measure to sea level rise effects.

Activities for recovery and reconstruction after major disasters

Example: Aitape -Sissano Tsunami – 1998

Due to lack of information on tsunami dangers by scientists, lack of communication establishment by the Government and lack of trained disaster managers this led to not only the slow response by the

established mechanism but also the death of most of the 2,217 citizens on 17th and 18th July 1998 respectively. International relief assistance was overwhelming particularly from Australia, Japan, Indonesia, New Zealand, USA, China including Taiwan and other Pacific island nations.

The Rehabilitation Programme and the coordination of it was activated after the recovery phase. Through this programme the following have been put in place:

- The temporary relocated victims were placed in their new and permanent villages away from the coast line.
- There have been more schools built now than before the tsunami impact. This is in preparation for future increase of population
- There have been more health facilities like aid posts and health sub center set up than before the disaster impact.
- The establishment of Trauma Counseling Training Center in the area for the victims and for PNG.
- The construction of over 45 kilometers of road linking the local town (Aitape) and most of the new villages.
- The people have adapted very well to the new environment of predominantly gardening life to that of the former, being the fishing life.

II. Disaster Management system

2.1 Administrative system

Conventional long form: Independent State of Papua New Guinea

Conventional short form: Papua New Guinea

Government type: constitutional monarchy with parliamentary democracy

Capital: Port Moresby

Administrative divisions: the country is divided into 19 provinces plus the National Capital District in Port Moresby. The Provinces are divided into districts and district sub-district into local level government (LLGS).

2.2 Legal system, legal framework

PNG National Constitution, (Part X - Emergency Powers)

This Part of the Constitution sets the basis for any disaster-related matters to be legislated or managed within Papua New Guinea.

National Disaster Management Act (Chapter 403) of 1984.

After visiting Japan and looking through its Disaster Countermeasures Basic Act, the PNG NDMO has formally written to the Legal and Policy section of Department of Provincial & Local Government Affairs to liaise

with the Attorney General for the review of the NDMO Act. This is also in line with the major activities of the National Disaster Management Project when it commences in February 2001. Among other issues the reviewed Act will address the basic concepts and principles of disaster management, making it mandatory for any NGO groups involved with disaster matters to be accredited with the National Disaster Management Office (NDMO).

Public Health Act

All health, medical and medicinal matters either during the disaster or between disasters are managed and coordinated by the Ministry and Department of Health.

RPNG Constabulary Act

All law enforcement programmes and activities either preventing or reducing of the human caused civil strifes, the Act empowers the PNG Police Department to handle that as a lead agency.

PNGDF Act

The Act provides that the PNGDF to be deployed on call out basis to answer to the calls of either human or natural caused emergencies and disasters. The Act also provides that PNGDF personnel can be deployed on civic action programmes and activities such as infrastructure construction including health and awareness. The final aim is to prevent or reduce (mitigate) adverse effects of disasters.

Internal Revenue Act

The Act empowers the Internal Revenue Commissioner to over ride certain provisions of the Act particularly in the event of national disaster or emergency when it comes to importation of special relief supplies and the exception on import duty.

Insurance Act

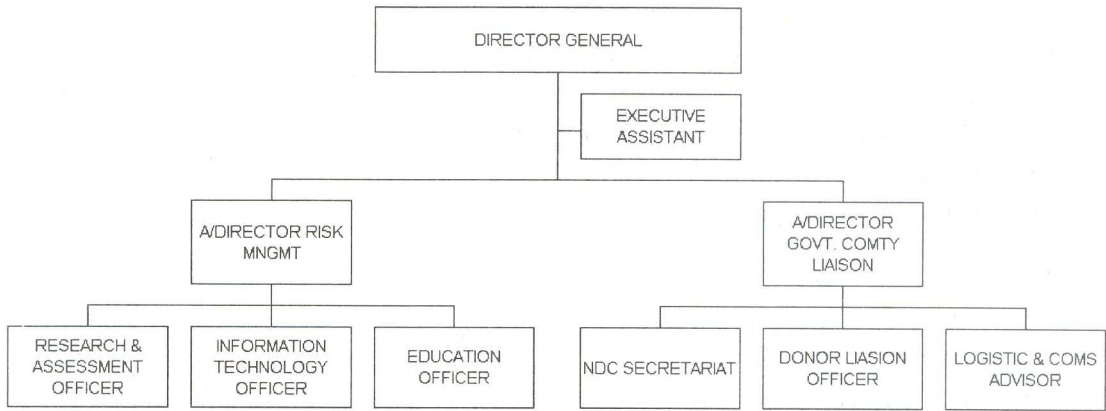
The Act provides avenue for property owners to take up insurance policies to cover their properties from losses e.g. through urban fires. This Act needs reviewing and improvement.

2.3 Structure of disaster management

National Organization for Disaster Management

The Disaster Management system in so far as the preparedness and responses are concerned is headed by a National Disaster Committee (NDC). NDC is responsible to the cabinet, the National Executive Council (NEC).

The NDC is composed of Secretaries of selected departments, chaired by the Secretary of the Department of Provincial and Local Level Government Affairs (DoLLGA). There are lower level disaster

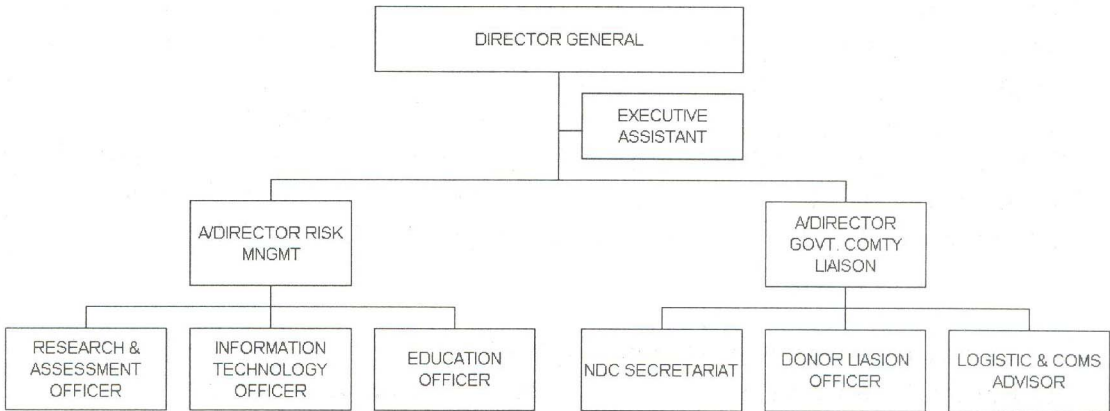


committees in Provinces.

Structure of National Disaster Committee

A permanent National Disaster and Emergency Services (NDES) a headquarters organization, constituted within the Department of Provincial & Local Level Government is responsible for the operational coordination of emergency responses including logistics and communication.

The National Disaster Management Office (NDMO) is the new title for the National Disaster & Emergency Services (NDES). The changes were necessary to be consistent with practices in the South West Pacific region.



Structure National Disaster Management Office

The core activities of the NDMO has been revised as follows:

- Promote public awareness and education.
- Provide technical support to its sub-branches in the Provinces and District.

Source: WCDR country report

- Risk Management.
- Liaison and Coordinating role with other Government agencies and NGOs.

2.4 Priorities on disaster risk management

- Community Disaster Preparedness;
- Early Warning
- Poverty reduction

III. Disaster management plan

National Disaster Management Plan

The review has been completed but waiting for approval by the National Disaster Committee before having it submitted to the National Executive Council for ratification.

National Response Action Plan

The draft plan has been circulated to key agencies for input. As soon as the National Disaster Plan (the basic plan) is formally ratified and implemented, the National Response Action Plan will be the next piece of countermeasure to be dealt with. This NRAP will spell out the time frame for the development of multi-sectoral roles and functions through their respective Contingency Plans, Operation Procedures etc.

Specific Contingency Plans for identified Hazards

Each active volcano in each province supposed to have a separate Contingency Plan drafted by each respective Provincial Disaster Committee. However, only a few have been in existence like Manam Volcano, Karkar volcano, Ulawun volcano and Rabaul volcanoes including other plans for different types of hazards or emergency & disasters like Oil Spill, Search & Rescue Plan, Aviation Accidents Plan etc. need reviewing. Some have yet to start drafting after local scientists and technical officers establish the Hazard and Risk involved.

Provincial Emergency & Disaster Plans

Laid down by each respective province in Papua New Guinea

IV. Budget size on national level

There is an annual budget for risk reduction activities which are normally addressed in the work plans

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by Ministry

Papua New Guinea Disaster Management Project; 5 year term

Project Components:

1. Training
2. Review of the national DM plans
3. Disaster awareness and preparedness activities
4. Review of the DM Act
5. Strategies:
 - Institutional strengthening
 - Disaster education and community awareness
 - Disaster preparedness and
 - capability building

VII. ADRC Counterpart

Head of Department of Provincial & Local Level Government
Affairs

P.O.Box 4970 Boroko NCD

Port Moresby

PHILIPPINES

PHILIPPINES

I. Natural hazards in Philippines

1.1 Natural hazards likely to affect the country

Earthquake, wind storm, volcano, flood, drought

1.2 Recent major disasters: January – December 2005

Occurrences	Dis_Type	No_killed	No_affected	Total_dam\$
4	Tropical Cyclones (Destructive)	63	899,938	49.53
13	Tropical Cyclones (non-Destructive)			
28	Flashfloods	27	273,405	5.76
15	Landslides	11	116,747	1.08

II. Disaster Management system

2.1 Administrative system

Conventional long form: Republic of the Philippines
Conventional short form: Philippines
Government type: republic
Capital: Manila
Administrative divisions: 79 provinces, 117 cities, 1,498 municipalities, almost 42,000 barangays (the smallest political unit). The Philippines has 17 administrative regions.

2.2 Legal system, legal framework

Presidential Decree No. 1566

This Decree which was promulgated on June 11, 1978 calls for the Strengthening of the Philippine Disaster Control Capability and establishing the National Program on Community Disaster Preparedness. Salient Provisions include among others, the following:

- State policy on self-reliance among local officials and their constituents in preparing for, responding to and recovering from disasters.
- Organization of the National, Regional and Local disaster coordinating councils (DCCs)
- Preparation of the National Calamities and Disaster Preparedness Plan (NCDPP) by the Office of Civil Defense and implementing plans by the NDCC member agencies and local DCCs

- Conduct of periodic drills and exercises by concerned agencies and local DCCs
- Authority for the local government units to program funds for disaster preparedness activities such as the organization of DCCs, establishment of Disaster Operations Center (DOC) and training and equipping of DCC response teams. This is in addition to the 5% under Section 324 (d) of the Local Government Code of 1991, as amended. Under the implementing rules and regulations (IRR) of PD 1566, the disaster management activities of DCC member-agencies as well as procedures and guidelines for inter-agency coordination and dissemination of information during the three phases are defined.

A. Pre- Disaster Phase

1. Planning for Disaster – Development and formulation of Disaster Management Plan (DMP)
2. Organizing – Organization of DCCs in accordance with the DCC structure set forth in the NCDPP
3. Training – Conduct of training on disaster management for DCC members
4. Drills – Conduct of organizational and community drills/exercises periodically
5. Stockpiling – Predetermination of food, clothing, shelter, medical supplies, transportation and other emergency requirements.
6. Resource Data Canvassing – Identification of existing resources, evaluation of capability resources organization to carry out disaster-related tasks and allocation of suitable roles for resource organization
7. Public Information/awareness campaign in coping with disaster situations in accordance with the office of Civil Defense, Philippine Information Agency well as other government /or private entities with facilities for dissemination of information
8. Communications and Warning Activities – Organization of warning units in the province, establishment of warning system that must be clearly defined and written down in plans, standard operating procedures and other relevant documents, inform concerned officials and agencies in the province as well as the general public of the warning system

B. Emergency Phase

Mobilizes all emergency services of the DOC namely rescue and engineering, evacuation, first aid, medical services, emergency relief, public and fire auxiliary, transportation and survey/conduct damage assessment with the national government supporting efforts of the Council and evaluation of survey results and submission of damage report and recommendation to NDCC through the RDCC.

C. Post Emergency Phase

Cross-checking of data of damage report with pre-emergency data obtained to facilitate the location or whereabouts of persons and to assess available community resources for rehabilitation purposes. This phase will also determine the nature of extent of rehabilitation efforts to be undertaken and request of assistance from appropriate government agencies, private offices/agencies or individual, if the situation goes beyond the capability of the PDCC.

2.3 Structure of disaster management

DCC Organizational Network

- National Disaster Coordinating Council
- 17 Regional Disaster Coordinating Councils
- 79 Provincial Disaster Coordinating Councils
- 113 City Disaster Coordinating Councils
- 1,496 Municipal Disaster Coordinating Councils
- 41,956 Barangay Disaster Coordinating Councils

The National Disaster Coordinating Council (NDCC) is the policy-making and coordinating body of disaster management at the national level; it directs all disaster preparedness planning, as well as disaster response operations and rehabilitation, both in the public and private sectors. It advises the President on matters related to natural calamities and disasters, including recommendations for the declaration of State of Calamity in disaster-affected areas.

In each local government unit (province, city or municipality), the local DCC is headed by the elected chief executive, such as governor or mayor. Thus, disaster management is imbedded deeply into the democratic governance in the Philippines.

2.4 Priorities on disaster risk management

Implementation of the NDCC Four Point Action Plan

The December 2004 flashfloods that affected Quezon and Aurora Provinces of eastern Luzon Island resulted to severe flooding and landslides and led the unusually high death toll as well as extraordinary damage to both public and private properties. The OCD as the implementing arm and Secretariat of the NDCC immediately implemented the Four Point Action Plan for Disaster Preparedness to increase public awareness and involvement in measures put in place by government to minimize the impact of similar disasters in the future. The NDCC in the implementation of the above action plan has so far achieved the following:

a. Upgrading of PAGASA and PHIVOLCS Forecasting Capability

As of May 31, 2005, PAGASA reported the rehabilitation of its five (5) 5 radars located in Virac, Guian, Aparri, Baler and Baguio.

PHIVOLCS enhanced their volcano and earthquake monitoring system capabilities.

b. Public Information Campaign on Disaster Preparedness

The “Safe Ka Ba?” program has been launched nationwide. Posters, flyers, radio and TV commercials, instructional video, cinema ad formats and pastoral letters have been produced and distributed through the regional centers.

c. Capacity – Building for Local Government Units Particularly in Identified

Vulnerable Areas

Local chief Executives have to take leadership role in all phases of disaster management and they should develop a culture of preparedness versus culture of reaction.

d. Mechanism for Government and Private Sector Partnership in Relief and

Rehabilitation

One of the most important mechanisms achieved this year is the collaborative partnership program between the NDCC and the League of Municipalities through a MOA signed in February 2005.

III. Disaster management plan

The NDCC has a Calamities and Disaster Preparedness Plan which spells out the functions of each member agency in times of disasters. Under the system, various Service committees may be convened during disaster situation. These Inter-Agency Committees have the following functions:

- Early Warning Service – provides fast and adequate reliable warning system in time of impending calamity (Committee on Communication System and Emergency Broadcast System and Local Warning Service Unit)
- Communication and Transport Service – provides, operates and maintains continuous and adequate reliable communication and available transport facilities throughout the period of disaster. (DPWH, DILG, AFP, PCG, PPA, Bus Operators of the Philippines)
- Evacuation Service – evacuates the populace and properties systematically in case calamity arises (AFP, DSWD, PNP, and local DCCs)
- Rescue and Engineering Service – removes victims and casualties from areas affected by disaster and undertakes emergency repair of damaged infrastructure, utilities and facilities
- Health Service – protects life through health and medical care of the populace and minimizes casualties through proper information and mobilization of all medical resources. (DOH, PNRC and local health units)

- Relief / Rehabilitation Service – minimizes human suffering and provides adequate restoration program and services to ensure the normal functioning of individuals affected by disaster
- Public Information Service – provides the civilian population simple/accurate/relevant and timely information and instruction arising from natural or man made disasters
- Rehabilitation Service – provides rapid restoration of the morale of persons affected by disaster

IV. Budget size on national level

Annual Budget for Disaster Management

Under the General Appropriations Act for CY 2005, P 700 M was allocated as National Calamity Fund (NCF) for aid relief and rehabilitation services to communities /areas affected by man-made and natural calamities, and repair and reconstruction of permanent structures, including other capital expenditures for disaster operation and rehabilitation activities. Release from this Fund shall be made directly to the implementing agencies and or local government units in accordance with the recommendation of the National Disaster Coordinating Council and upon approval of the President of the Philippines.

V. Progress and situations of the Hyogo Framework for Action (HFA)

Development of National Platform

The NDCC Comprehensive Disaster Management Framework (Tab A)

In keeping with the vision of the NDCC to be a “Council that is responsive to the policy making requirements of emergency management that utilizes the nation’s resources as called for during emergency situations” and in pursuant to the agreements forged during the February 26, 2002 Joint NDCC Technical Working Group and National Relief and Rehabilitation Committee Meeting created are the following NDCC Committees:

A. NDCC Committee on Mitigation (NDCM)

- Formulate/develop a disaster mitigation program
- Draft presidential issuance on the adoption of the proposed program
- Prepare draft bill amending existing laws based on the policies embodied in the disaster management program for possible endorsement to congress by the president as an administration bill
- Perform other duties/tasks that may be assigned by the NDCC

B. NDCC Committee on Disaster Preparedness (NCDP)

- Formulate/develop national contingency plans on earthquake, fire, air and maritime disaster, etc.

- Review and evaluate all documented plans submitted as compliance to the pertinent instructions and/or guidelines set forth in the National Calamities and Disaster Preparedness Plan
- Formulate/update contingency plans, guidelines and SOPs
- Perform other duties/tasks that may be assigned by the NDCC

C. NDCC Committee on Disaster Response (NCDR)

- Provide the civilian populace simple/accurate/relevant and timely information arising from the natural or man-made disaster or from any impending emergencies
- Provide/make available transport facilities in the duration of disasters and during emergency operations
- Evacuate the affected populace and properties systematically and provide temporary/evacuation shelter until such time that evacuees are ready to return to their respective houses
- Provide/distribute relief goods/items
- Protect life thru health and medical care; proper medical aid; provision of medical facilities; and minimize casualties thru proper information and mobilization of medical resources
- Assist existing fire stations in fire control and prevention
- Conduct search and rescue operations when necessary
- Perform other duties/task that may be assigned by the NDCC

D. NDCC Committee on Disaster Rehabilitation (NCD Rehab)

- Formulate/develop plans for the effective implementation/prioritization of rehabilitation programs on infrastructure and recovery
- Provide information needed by NDCC on Plans for rehabilitation on infrastructure and recovery of disaster victims
- Implement rehabilitation plans/program as approved by NDCC
- Evaluate and prioritize calamity fund requests from National and Local Government Units for rehabilitation programs/projects
- Develop research and identify other funding sources to include foreign assistance for rehabilitation programs and activities
- Review policies on fund utilization for accountability and transparency
- Perform other duties/tasks that may be assigned by NDCC

VI. Projects on disaster reduction headed by the Ministry

1. Training Program on Capacity Building

1.1 Emergency/Disaster Management Training

a. In House Training

- Orientation/Reorientation of OCD personnel
- Basic and Advance Civil Defense Officers (CDO) Courses
- Computer Literacy

b. Clientele

- Disaster Preparedness Seminar

- Training of Facilitators in Contingency Planning for Regional Disaster Coordinating Council members
- Contingency Planning Formulation Workshop for local Disaster Coordinating Councils
- On-line Comprehensive Disaster Risk Management Framework Course for Professional and Practitioners in Disaster Management

1.2 Specialized Skills Training

- Collapsed Search and Rescue (CSSR) Course – 9 days
- Medical First Responders (MFR) Course – 13 days

2. Program on Dissemination of Knowledge and Promotion of Awareness
Part of the NDCC Four Point Action Plan is the Implementation of a Public Information Campaign on Disaster Preparedness dubbed as “Safe Ka Ba?” campaign slogan which all the thematic messages will be anchored on. The goal is to have an integrated strategic communications campaign that promotes and sustain a coherent and coordinated effort in disaster management through awareness, preparedness and response focusing on natural hazards like typhoons that cause flooding and landslide; earthquake that cause collapsed buildings homes and structures; volcanic eruptions that cause ash falls, pyroclastic, lahar and lava flows and tsunamis that cause widespread destruction of coastal areas.

Delivery mechanisms are as follows:

Posters, TV Commercial, Radio Commercial, Flyers, Emergency Broadcast Alert, Nationwide Simultaneous Earthquake Drill, Pastoral Letter

VII. ADRC Counterpart

Office of Civil Defense, Department of National Defense
Camp Gen. Emilio Aguinaldo, Quezon City, Philippines, 3004

RUSSIA

RUSSIA

I. Natural hazards in Russia

1.1 Natural hazards likely to affect the country

Drought, earthquake, epidemic, extreme temperature, flood, insect infestation, slides, wild fires, wind storms

1.2 Recent major disasters

year	dis_subset	killed	total_affected	dam (US '000s)
2005	Flood	3	222	—
2005	Flood	0	3685	—
2005	Flood	0	5000	21168
2005	Avalanche	9	0	—
2004	Forest	9	1000	—
2004	Storm	0	6000	—
2004	Hurricane	6	62	6000
2004	Earthquake	0	138	—
2004	Flood	18	4800	50000
2003	Drought	0	1000000	—
2003	Earthquake	3	1805	10600

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: Russian Federation

Conventional short form: Russia

Government type: federation

Capital: Moscow

Administrative Divisions:

49 oblasts (oblastey, singular - oblast), 21 republics (respublik, singular - respublika), 10 autonomous okrugs (avtonomnykh okrugov, singular - avtonomnyy okrug), 6 krays (krayev, singular - kray), 2 federal cities (singular - gorod), and 1 autonomous oblast (avtonomnaya oblast')

2.2. Legal system, legal framework

Several laws and policies were enacted by the Government of Russia to protect its people during emergency situations. These include the following (among others):

- Law of the Russian Federation On Safety (March 5, 1991)
- Presidential Decree (PD) No. 794 (December 30, 1992) "Single State System of Preventing and Eliminating Emergency Situations".
- Federal Law (FL) No. 68-ΦЗ on "Protecting the Population and Territories from Emergency Situations" (December 21, 1994)
- FL No. 3-ΦЗ on "Emergency-Rescue Services and Status of Rescue Personnel" No. 151-ΦЗ, and On Radiation Safety of the Population (January 9, 1996)
- FL No. 126-ΦЗ on Communications (July 7, 2003) provided the prioritized use of communication networks in emergency situations
- PDs No. 261 (April 18, 1992) and No. 1113 (November 5, 1995), provided for a single state system of preventing and eliminating emergency situations (RSES)
- PD No. 991 on Improving the Single State System for Prevention and Elimination of Emergency Situations (August 28, 2003), entrusted the Ministry of Emergencies functions of organizing and supervising search and rescue activities in inland waters, and supervising the anchorage and use of small-size vessels and bases (structures).
- Order of the Ministry of Emergencies of Russia No. 200 (April 21, 2003) provided for the basic roles and functions of the Ministry of Emergencies
- Federation Subjects" No. 95-ΦЗ (July 4, 2003) and On General Principles of Organizing Local Self-Management No. 131-ΦЗ (October 6, 2003) resolved problems on comprehensive target planning of measures aimed at preventing emergency situations (ES, raising the stability of enterprises, and in ensuring the preparedness of management bodies
- Code of Administrative Law Infringements of the Russian Federation (December 30, 2001) provided sanctions for non compliance to the requirements of the norms and rules on preventing and eliminating emergency situations

2.3 Structure of disaster management

The national structure for coordinating and executing disaster risk reduction is the single state system of preventing and eliminating emergency situations (RSES), which was established in 1992. It integrates management bodies, forces, federal bodies, local administrations and organizations to protect population and territories from emergency situations.

RSES also develops legal economic standards to realize target and scientific-engineering programs and ensure readiness of the forces and means to train the population.

Main activities of the RSES include the following:

- prevention of accidents, and adverse impacts of natural disasters;
- reduce losses and damage from emergency situations;
- eliminate emergency situations;
- emergency-rescue operations;
- reduce disaster risks; and
- support relief and rehabilitation activities

The RSES consists of territorial and functional subsystems. It has five levels namely federal, regional, territorial, local and one object level. Each RSES level has managerial bodies, permanent working bodies of control, forces and means; reserves of financial and material-and-equipment resources; systems of communication, notification, information supply, special educational establishments.

Government of Russia

Financial and material resources	Ministry of Emergencies	Forces of ME of Russia
	Bodies of executive power of RF subjects CES	Ministries, committees, directorates chief administrations of CDES

Federal bodies of executive power CES		Forces and means	Financial and material resources
Directorates, departments of CDES	Bodies of local administration	Directorates, departments of CDES	
		Forces and means	Financial and material resources
Forces and means	Financial and material resources	Management of economic objects CES	Departments, sectors of CDES
		Forces and means	Financial and material resources

Government Commission for prevention and elimination of Emergency Situations and Ensuring Fire Safety was also established. The

Commission is composed of the heads of ministries and departments/ deputy heads and objects, forces and means of prevention and elimination of emergency situations.

2.4 Priority on disaster risk management

- Risks assessments on various types of natural threats
- Early warning and forecasting
- Monitoring and evaluation of natural hazards and its impacts
- Hazard mapping
- Diagnosing seismic soundness of buildings and other Infrastructure
- Enhance public education and awareness on existing threats, and prevention/mitigation measures
- Conduct of capability building activities at all levels including drills
- Research and development
- Investing on disaster reduction measures

III. Disaster management plan

As specified by laws mentioned above, planning of actions for emergency situations is carried out at all levels of the RSES system as follows:

- Federal plan of actions, regional plans of actions (cooperation),
- plans of actions of federal executive bodies (functional subsystems),
- plans of actions of executive bodies of subjects of Russian Federation (territorial subsystems), as well as plans of actions of local self-management
- authorities and plans of actions of organizations (objects).

Special plans are also mandated such as:

- Plans of prevention and liquidation of spillage of oil and petroleum products;
- Operational plans of fighting forest fires, which is approved annually by state authority bodies of subjects of the Russian Federation;
- Plans of protecting personnel and population in case of emergency at a nuclear stations (nuclear power station, thermal nuclear power station);
- Plans of actions on the prevention of disasters arising from storage, transportation and liquidation of chemical weapons and eliminating their aftereffects.
- Plans of primary life-support and survival of the victims of disasters and calamities;

Basic components of the plans mentioned are as follows:

Section 1: Total estimation of probable situation with appearance of emergency situations

Section 2: Basic measures on prevention of emergency situations

- Section 3: Provision of readiness for liquidation of probable emergency situations
- Section 4: Actions in case of threat and appearance of federal transborder emergency situations
- Section 5: Provision of readiness of management system in crisis situations

Within the framework of the Federal Target-Oriented Program "Reduction of Risks and Alleviation of the Impacts of Natural and Anthropogenic Emergency Situations in the Russian Federation Till 2005" the budget material and financial reserves were created amounting to approximately 7.816 billion of rubles.

IV. Budget size on national level

Financing of program measures is carried out through the federal budget, budgets of the subjects of the RF and local budgets. For emergency situations the following resources are created and used:

- emergency fund of the government on the prevention and elimination emergency situations and consequences of natural disasters;
- reserves of inventories (part of the State material reserve) for ensuring urgent work and addressing the adverse impacts of disasters;
- reserves of material resources of the federal bodies of executive power;
- stocks of financial and material resources of the subjects of the Russian Federation, bodies of local administrations and organizations.

Procedures on the generation, use and recovery of stocks of financial and material resources are determined by the legislation of the Russian Federation and regulatory legal acts of local administration bodies.

The volume of stocks for eliminating emergency situations, and the control of their formation, storage, use and recovery are determined by the body creating these stocks.

The state function of preventing and eliminating emergency situations is financed in 2003 at the rate of 21 million rubles including the distribution by subsections "Prevention and elimination of consequences of emergency situations" – 11 billion rubles, "Civil Defense" – 67 million rubles, "State Fire-Fighting service" – 10 billion rubles.

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by your Ministry

VII. ADRC Counterpart

Director of the Department for International Cooperation, EMERCOM of Russia

109012 Moscow, Teatralny proezd, 3

SINGAPORE

SINGAPORE

I. Natural hazards in Singapore

1.1 Natural hazards likely to affect the country

Though Singapore is spared from natural disasters such as earthquakes, typhoons and volcanic eruptions, the challenges for the emergency services are in preventing and mitigating man-made disasters in a highly urbanised environment with many high-rise buildings and Hazardous Material (HazMat) industries.

The global threat of terrorism has also added a new dimension to emergency preparedness and response for Singapore. The level of recent terrorist activities in the region, coupled with the possible use of chemical, biological and radiological agents is of great concern to Singapore.

1.2 Recent major disasters

Nicoll Highway Collapse

On 20 Apr 2004 at 1535 hrs, part of Nicoll Highway, a major local road, collapsed, rendering it unusable. Steel structures supporting the tunneling of a subway line beneath the highway had given way, resulting in a massive cave-in at the construction site which also affected the road above it. The 5-day long rescue operations was made even more difficult by 2 heavy downpours that resulted in dangerous soil conditions which threatened the stability of neighbouring buildings and the safety of the rescuers. A total of 3 were injured and 4 killed.

The rescue operation saw the close cooperation and coordination amongst various government agencies as well as from the construction company handling the project. Operation Civil Emergency (Ops CE), a national response plan for local major disasters, was implemented and many aspects of the inter-agency response were tested. This high profile incident highlighted the need for SCDF as the incident manager to work closely with the media, who were hungry for information to fill up their news slots.

Pulau Merlimau Fire

On 25 Oct 1988, a fire occurred at one of the chemical storage tanks at the Singapore Refining Company (SRC) on Pulau Merlimau, an off-shore island. The fire built up rapidly and spread to the two other nearby tanks. Fortunately, there were no casualties. The fire-fighting operation lasted 5 days and many parts of Singapore were showered by soot from the fire. The fire highlighted the need to handle large tank fires swiftly, considering the large number of such tanks located in the south-western parts of the island.

Hotel New World Collapse

The Hotel New World disaster occurred on 15 Mar 1986 at 1125 hrs. The six-storey building with 1 basement car park collapsed suddenly due to structural faults. Rescue operations lasted 7 days. Out of the 50 people trapped in the rubble, 33 perished while 17 were successfully rescued.

II. Disaster Management system

2.1 Administrative system

<i>Conventional long form:</i>	Republic of Singapore
<i>Conventional short form:</i>	Singapore
<i>Government type:</i>	parliamentary republic
<i>Capital:</i>	Singapore
<i>Administrative divisions:</i>	none

Singapore is a city-state with a land surface area of 669 square kilometers. It has a population of about 4.2 million, with a multiracial mix of mainly Chinese Malay and Indians and a small minority of other races, along with about half a million expatriates and foreign workers.

Singapore's infrastructure includes one of the world's busiest airport and seaport with an extensive network of roads and mass rapid transit system. It is densely populated, with many working and living in high-rise commercial and residential buildings¹.

¹ 80% of the population resides in high-rise flats.

National, Sub-National And Local

The Singapore Civil Defence Force (SCDF) is the national emergency authority for fire and rescue. SCDF has a workforce of about 5,100 people comprising 1,700 regular uniformed staff, 200 civilian staff and 3,200 Full-time National Servicemen². In addition, another 10,000 Operationally Ready National Servicemen (ORNSmen) from the reserve service are available for activation during emergencies.

15 Fire Stations have been established island-wide, with 25 Fire Posts under the command of the various fire stations. These fire stations and fire posts are staffed by fire-fighters and emergency ambulance service teams, and form the response bases for both fire and medical emergencies. Response to an incident is targeted to be within 8 minutes for fire and 11 minutes for emergency medical services.

SCDF has also established special rescue capabilities, including the Disaster Assistance and Rescue Team (DART), a specially trained unit that can undertake high-risk fire fighting and rescue operations. Another special capability unit is the HazMat Incident Teams (HITs), which are specialised teams trained and equipped to handle hazardous material (HazMat) incidents.

2.2 Legal system, legal framework

The main legislation supporting emergency preparedness and disaster management activities in Singapore are:-

The Civil Defence Act, which provides the legal framework for, amongst other things, the declaration of a state of emergency and the mobilisation and deployment of operationally ready national service rescuers;

The Fire Safety Act, which provides the legal framework to impose fire safety requirements on commercial and industrial premises, as well as

² Full-time National Servicemen are Singaporean males who are 18 years old or older and are called to enlist and serve 2 years of National Service, either in the military, police or civil defence.

the involvement of the management and owners of such premises in emergency preparedness against fires; and

The Civil Defence Shelter Act, which provides the legal framework for buildings to be provided with civil defence shelters for use by persons to take refuge during a state of emergency.

2.3 Structure of disaster management

The Ministry of Home Affairs (MHA) is the principal policy-making government body for safety and security in Singapore. In the event of a national disaster, MHA leads at the strategic level of incident management. At the tactical level, SCDF will coordinate the planning and execution of the multi agency response to mitigate the impact of the disaster.

SCDF provides effective 24-hour fire fighting, rescue and emergency ambulance services. Other functions include educating the community as well as mobilizing the community to be more involved in safety and security. SCDF also enforces fire safety requirements and oversees the civil defence shelter construction programme and the public warning system.

SCDF operates a 3-tier command structure, with Headquarters (HQ) SCDF at the apex commanding 4 Land Divisions. These Divisions are supported by a network of Fire Stations and Fire Posts strategically located over the island. Operations are based on a multi-tier response. The Operations Centre at HQ SCDF will despatch the nearest resources to the incident (additional resources from other fire stations may provide reinforcements if needed). Further resource requirements can be met by the Special Rescue Battalion (SRB)³, the recall of off-duty fire fighters as well as Reservist units, known as Operationally Ready National Service (ORNS) units.

³ The SRB consists of Full-Time National Service Rescuers. It was formed to augment the regular fire and rescue forces when additional manpower is required.

2.4 Priorities on disaster risk management

SCDF places heavy emphasis on training to equip our personnel with the desired knowledge, competency, skills and attitudes. The opening of the Civil Defence Academy in Mar 1999 marked a significant milestone in the history of the Singapore Civil Defence Force. The Academy, with purpose-built features, meets the training needs of regulars, national service personnel, emergency response personnel of the industries, fire fighters and rescuers as well as participants from other parts of the world.

The training facilities in the Academy include the use of state-of-the-art simulators and modern communication technology to make learning simpler, more interesting and more realistic.

III. Disaster management plan

Policy Framework

The Emergency Preparedness and Disaster Management activities undertaken by Singapore in the event of a major disaster are based on the following main principles:-

- a. Prevention – The tragic consequences resulting from major incidents can be minimised through prevention, via a set of comprehensive government regulations to ensure safety.
- b. Readiness – Readiness is contingent upon preparation. Pre-planning for possible response to different forms of emergencies enhances readiness. The contingency plans are exercised regularly;
- c. Awareness – The community must be aware of the nature and scope of disasters. They have to be educated on the importance of emergency preparedness and involvement in exercises, training and physical preparations;
- d. Coordination (Internal & External) – All local agencies responding to an emergency must work within a unified framework to coordinate multi-agency efforts in emergency response and

management of disasters. This will involve swift deployment of forces to mitigate the incident at the tactical level, and to provide expert advice at the operational level, in order to minimise damage to lives and property; and

- e. Recovery – Rehabilitation of the injured and restoration work is an important component of the total disaster management programme. A speedy recovery will enable the affected population to return to near-normal conditions after a disaster.

Procedures And Mechanisms

SCDF has developed the Operations Civil Emergency (Ops CE) Plan, a national response plan for civil emergencies which outlines the work of SCDF and all the Related Agencies (RAs)⁴ in the management of a major disaster. Under this plan, SCDF is overall-in-charge of the multi-agency response. SCDF will direct and co-ordinate the agencies' responses through the Joint Planning Staff (JPS)⁵ who provide specialist advice to manage the incident. As highlighted earlier, ORNS units may also be mobilised and deployed should the additional manpower be required.

This national plan is exercised regularly on an annual basis to ensure all agencies are familiar with their roles and functions and develop their response capabilities for incident management. Through such exercises as well as recent major incidents (e.g. Nicoll Highway collapse etc), the Ops CE plan gets refined.

IV. Budget size on national level

The Budget size for SCDF on national level is about SGD\$300 million.

⁴ There are altogether 22 Related Agencies from various ministries and statutory boards that provide ground forces for incident management, specialist advice for planning and coordination with IM.

⁵ The JPS are representatives from related agencies who come together to allow better inter-agency coordination and management of the ground situation.

V. Progress and situations of the Hyogo Framework for Action (HFA)

In line with the five priorities for action under the HFA, SCDF continues to identify and implement key activities as appropriate to our circumstances and capacities. Some of these key activities are elaborated in detail in the Section VI below.

VI. Projects on disaster reduction headed by your Ministry

Public Education

While SCDF aims to continually improve on its capabilities to respond to incidents, its ability to manage an incident in the community is inevitably limited. Hence, the emergency response capability of the general public is also enhanced to better prepare the population to handle emergencies. This is achieved via measures such as educating the public on In-Place Protection (IPP), a series of protective measures to be taken at home during a chemical release. Such education takes place via the distribution of the Civil Defence Emergency Handbook, a handbook on emergency procedures and skills required for various types of emergencies.

Other methods of educating the public include the conduct of annual Community Exercises, as well as the Home Fire Safety Visit Programme. The former familiarises the grassroots volunteers and residents on how to deal with large scale emergencies within their neighbourhood, while the latter provides personal fire safety advice from CD volunteer personnel to registered residents. To sensitise and get the community more prepared for terrorist acts, the SCDF also conducts modular-based instructional training for the public under the Community Emergency Preparedness Programme (CEPP). Through both theoretical and practical training, the programme covers First Aid, Cardio-Pulmonary Resuscitation (CPR), Fire Safety and Casualty Evacuation, Emergency Preparedness for War and dealing with unconventional threats.

Community Involvement

Besides conducting training for residents, SCDF also aims to work hand in hand with the community to be more involved in their own safety and security. To serve this purpose, SCDF constantly recruits volunteers from

the community. These Civil Defence (CD) Volunteers are trained to assist the SCDF in operational and public educational activities. Suitable volunteers have also been sent to attend Instructor Training, and will subsequently help conduct lessons to residents as auxiliary instructors.

In addition to the CD Volunteers, various community groups have also been established to assist in Civil Defence. One such group is the Civil Defence Executive Committees (CDECs). These are grassroots entities that help to promote CD messages at the community level and assist in organising various Civil Defence programmes. Also established by SCDF are the Community Emergency Response Teams (CERTs), emergency response units consisting of residents living within a particular neighbourhood's vicinity. During emergencies, the CERTs will work hand in hand with the police and SCDF to mitigate the impact of the emergencies on the community.

Aside from these groups set up to work alongside SCDF, SCDF and other MHA agencies have also established the Community Safety and Security Programme (CSSP), a framework that encourages the community to look after its own safety and security through self-help and mutual support. It serves to foster community cohesion and harmony among local grassroots leaders and residents, students and workers. In particular, SCDF actively facilitates the conduct of CSSPs that focus on fire safety, emergency preparedness, community vigilance and readiness (e.g. the Fire Safety for Market programme, Community Patrols, Emergency Preparedness for Domestic Maids etc).

VII. ADRC Counterpart

Singapore Civil Defence Force

HQ Singapore Civil Defence Force, 91 Ubi Avenue 4, Singapore 408827

SRI LANKA

SRI LANKA

I. Natural hazards in Sri Lanka

1.1 Natural hazards likely to affect the country

Drought, Earthquake, Epidemic, Extreme Temperature, Famine, Flood, Insect Infestation, Slides, Volcano, Wave / Surge, Wild Fires Wind Storm

1.2 Recent major disasters

year	dis_subset	killed	injured	total_affected	dam (US '000s)
2004	Drought	0	0	3500000	—
2003	Flash Flood	235	0	695000	29000
2004	Flood	6	0	200000	—
2005	Flood	6	0	145000	—
2004	Tsunami	35399	23176	1019306	1316500

*Source: "EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium"*

II. Disaster Management system

2.1 Administrative system

Conventional long form: Democratic Socialist Republic of Sri Lanka
Conventional short form: Sri Lanka
Government type: republic
Capital: Colombo
Administrative divisions: 8 provinces; Central, North Central, North Eastern, North Western, Sabaragamuwa, Southern, Uva, Western; note - North Eastern province may have been divided in two - Northern and Eastern

2.2 Legal system, legal framework

Forest Policy (1929)

Amended in 1951 and further amended in 1980. It gave emphasis on the preservation of environments, the need for peoples participation and for social forestry.

Constitution (1978) of Sri Lanka:

Recognized the need for environmental protection and management as a fundamental right, obligation and responsibility of both the state and the people.

National Environment Act (1980):

Established the Central Environmental Authority in 1981, the focal point for environment, coordination and implementation of environmental matters. In 1988, CEA's functions were expanded to licensing procedures and drafting of legislations on environmental impact assessment procedures for developmental activities. In addition, several new public institutions came into being in order to deal with specific environmental issues.

National Disaster Management Bill (2005):

The salient features of the Bill include setting up of a National Disaster Management Authority under the Chairmanship of the Prime Minister; State Disaster Management Authorities in the States/Union Territories under the chairmanship of Chief Minister or Lt. Governor or Administrator, as the case may be; and the District Disaster Management Authority under the District Magistrate in each district.

The National and State Authorities shall be responsible for laying down the policies, plans and guidelines for disaster management. The District Authority shall act as the district planning, coordination and implementing body for all disaster management related functions. These functions will include mitigation and preparedness measures also, besides response, relief and rehabilitation.

2.3 Structure of disaster management

The National Disaster Management Centre (1996) under the Ministry of Social Services and Housing Development is the focal point for disaster management in Sri Lanka.

NDMC serves as a secretariat to the National Disaster Management Council. The Disaster Management Centre has been set up under the Sri Lanka Disaster Counter Measures Bill. The Disaster Management Coordinating Committee is the apex body today for disaster prevention. This committee looks into the prevention, mitigation and recovery from disasters.

The Department of Social Services, Ministry of Social Services takes a lead role in disaster Management specially on emergency relief assistance for the victims of disasters, rehabilitation and reconstruction activities.

Provincial Councils, District Secretariats and Divisional Secretariats at

various levels prepare and direct recovery activities. The District and Divisional level Disaster Management Coordinating Committees monitors disaster management activities at the district and divisional levels. The department implements all prevention, relief and rehabilitation activities through the Divisional Secretariats. The Department and the Divisional Secretariats have middle officers, called the Social Service officers, to assist the Divisional Secretariats to carry out the prevention and relief work at the Divisional level. These Secretariats also have another grade of officers (Grama Niladaries), Administrative officers at the Village level, to implement the activities relating to disasters.

The grassroot level Disaster Management Committees coordinates all activities pertaining to disasters at the village level.

In addition, the Human Disaster Management Unity was created in 2001 under the Presidential Secretariat to implement preparedness measures for man-made disasters.

2.4 Priority on disaster risk management

Multi-Hazard Mitigation Project, which started in 1997 is the priority activity on disaster risk management. It is being implemented by the Centre for Housing, Planning and Building in collaboration with the National Building Research Organization (NBRO) and the Urban Development Authority. It has three components: demonstration of methodologies for risk reduction in pilot areas, networking and training.

III. Disaster management plan

In 1993, an Action Plan was formulated by the Government of Sri Lanka. The basic objectives of the Action Plan are as follows:

- a. Prevention and mitigation of disasters;
- b. Protection of life and property;
- c. Maintenance and restoration of order in areas effected by disasters; and
- c. Provision of facilities for emergency response, relief, rehabilitation and reconstruction;

The plan classified the activities under the following groups:

- a. Preparedness
- b. Relief operation
- c. Recovery, rehabilitation and reconstruction,
- d. Awareness and public education,

Implementation strategies for the plan:

- a. Introduction of improved professional practices in the areas of agriculture, land use planning, construction and maintenance;
- b. Encouraging participation of non-governmental organizations, private institutions and individuals, and soliciting and directing private donations to recipients in affected areas;
- c. Fostering scientific and engineering studies (e.g. landslide hazard mapping) as tools for sustainable development;
- d. Emphasis on pre-disaster planning and preparedness, while sustaining and improving post-disaster relief, recovery and rehabilitation capabilities; and
- e. Integration of disaster prevention and preparedness in the national as well as sub-national planning processes.

In order to coordinate the Disaster Management work at hamlet, divisional, district and provincial levels, the mandates the formation of committees at different administrative levels. These committees consist of personnel drawn from public and private sectors. The plan also spells out the functions of the National Centre for Disaster Management.

IV. Budget size on national level

The fund for disaster management activities is dependent on the annual budget of the Department of Social Services, which is very minimal compared to the activities that need to be conducted to prepare and enable people to respond effectively to any emergency.

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by your Ministry

VII. ADRC Counterpart

Secretary of Ministry of Social Services, 5th Floor, Sethsiripaya,
Battaramulla

TAJIKISTAN

1

11

Tajik

Shah

Shah

Shah

Shah

Shah

Shah

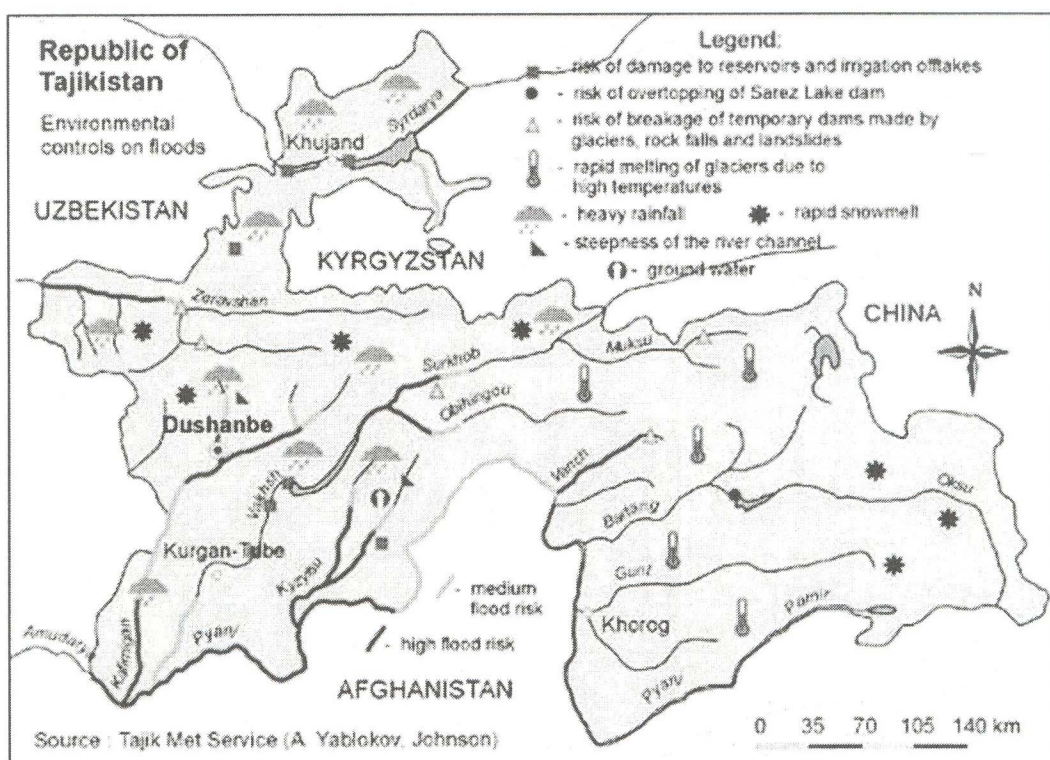
TAJIKISTAN

TAJIKISTAN

I. Natural hazards in Tajikistan

1.1 Natural hazards likely to affect the country

Tajikistan is prone to many types of natural hazards, including floods, mudflows, landslides (mudslides), epidemics, drought, earthquakes, avalanches, insect infestation and wind storm. About 93% of the country's area are mountainous, which widely vary in height from several hundred meters to 6000-7000 meters above sea level.



Earthquakes are typical for Tajikistan and represent a substantial threat in many parts of the country, specifically in urban environments like Dushanbe, where potential earthquake magnitude can be as high as 8-9 on Richter scale. Earthquakes in Tajikistan are seriously dangerous, since they cover broad areas and are able to cause a considerable damage to reservoir dams, buildings and communications. According to the Global Seismic Hazard Map (GSHAP, 1999) the whole country is located in the high to very high-risk zone.

Some 50 000 landslides have been reported by Tajik Glavgeology in the 1990s all over the republic, including both seismic and non-seismic slides. Seismic landslides triggered by strong earthquakes are much bigger than non-seismic slides and have much more serious consequences.

In Tajikistan floods occur either in spring following heavy rains, or during snowmelt in summer time. Flash floods in narrow valleys are

particularly destructive. River beds rise due to the load of silt and stones carried down from the mountains.

Mudflows are one of the consequences of heavy rainfall, being observed frequently in the foothills and mountainous areas of Tajikistan. Another reason for the occurrence of mudflows can be the damming of watercourses by landslides and glaciers, and the accumulation of loose debris on slopes and in the channels of watercourses behind a dam. Some 85% of Tajikistan's area is threatened by mudflows and 32% of the area is situated in the high mudflow risk zone. The major reason of avalanches in Tajikistan is fresh snow formation (60-70%). Most avalanches are observed in February and March.

During the last five years (2001-2005) natural disasters have killed 145 people and have caused a total damage of more than 200 million US Dollars in Tajikistan. The table below is an overview of disaster damages in Tajikistan during the past 3 years (2003-2005):

Year	# of people killed	# of houses damaged	Total financial damage
2003	20	8 896	\$22 666 667
2004	19	3 961	\$24 100 000
2005	47	4 654	\$33 133 333
Total	86	17 511	\$79 900 000

1.2 Recent major disasters

Description of recent major disasters and response activities

Avalanches of January 2006

Tajikistan has been hit again this year by heavy snowfall starting 26 January and continued for few days. Afterwards, the temperatures increased significantly, which triggered avalanches in most of the mountainous parts of the country. In Jirgatol District of Rasht Valley, in the eastern part of the country, 18 people were killed by one avalanche. Number of casualties reached 22 people. Total of 270 houses and 225 various social infrastructure (schools, medical points, etc) were destroyed or damaged all around the country.

Floods of June 2005

Heavy rainfall followed by rapid warming of temperature, caused severe flooding and mudflows around the country. Beginning of June 2005 floods caused considerable damage to the infrastructure and livelihoods of Penjikent District of Sughd Oblast, located in the northern part. Total of 110 houses were totally destroyed and 299 houses were partially damaged in 5 villages of Shing and Rudaki Jamoats of Penjikent District. 3,500 people were reported affected. Total of five casualties (including 3 children) were reported in the area.

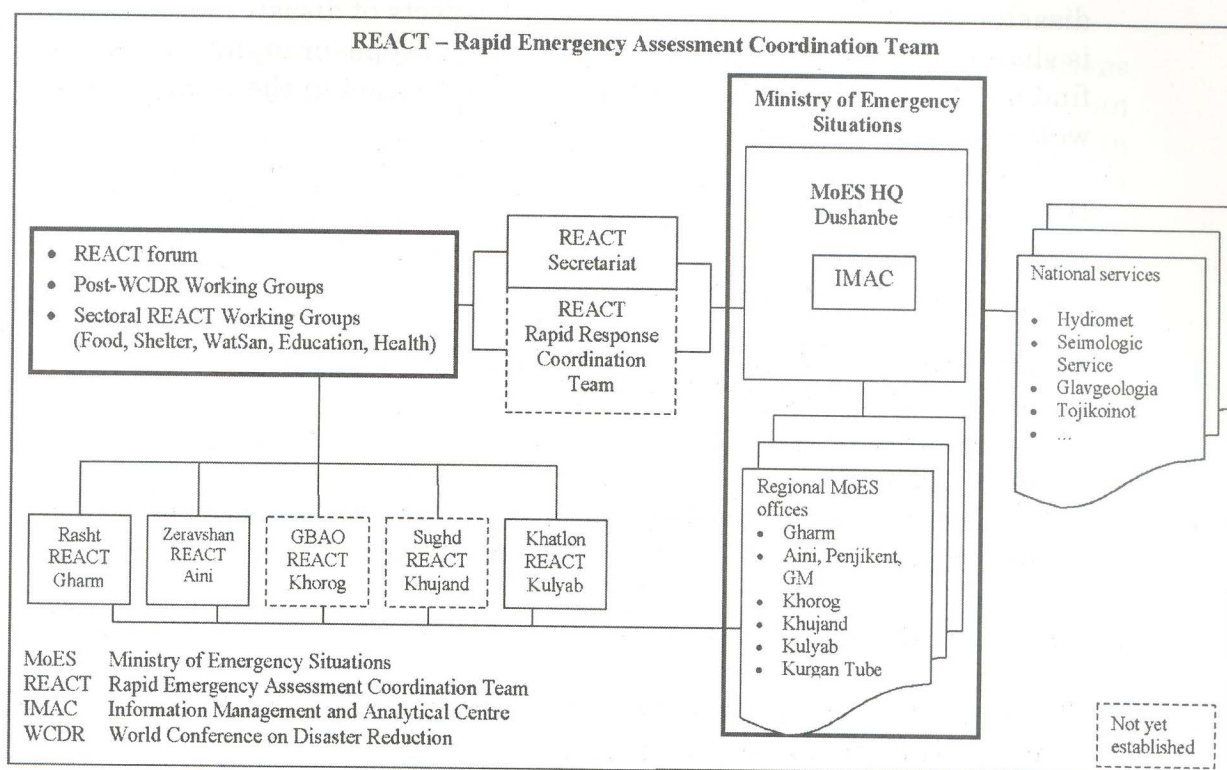
Heavy snowfall – February 2005

Tajikistan was hit by heavy snowfall starting 1 February 2005, which continued for several days. In Tavildara district of Rasht Valley 2 metres of snow had fallen in the first two days. In Rasht Valley, an important areas surrounded by steep slopes, over a hundred major avalanches had come down into populated areas. Hundreds of vehicles were trapped in the snow in Rasht Valley, alone. The heavy snow had caused roofs to collapse on hospitals, schools and private homes.

Response Activities – REACT Partnership

During any emergency, uncoordinated assistance can be a disaster in itself. In Tajikistan, since 2000, the Ministry of Emergency Situations and Civil Defense has been leading a disaster management coordination group known as the Rapid Emergency Assessment and Coordination Team (REACT). In an even of any disaster, REACT is activated by the Ministry of Emergency Situations to organize a coordinated response.

With the main coordination group based in the capital Dushanbe, regional REACT groups have been established in Rasht and Zerafshan Valleys as well as in Kulyab in order to facilitate better disaster management coordination at the field level. REACT has played an important role in meeting the acute needs of affected population in time. The chart below describes the current disaster management structure with the relations to REACT:



Disaster Management Partnership – REACT structure

REACT has proved invaluable in mitigating, preparing and responding to recent disasters nationwide. REACT has also become the national Disaster Management Partnership, whose activities have expanded over the past 2 years to include coordination efforts in broader disaster management areas, including community-based mitigation, hazard mapping and GIS. Presently REACT is constituted by 65 different organisations: 16 Government agencies, 7 donor organisations, 9 UN agencies, 28 International NGOs, and 5 local NGOs.

Activities for recovery and reconstruction after major disasters

Government plays an important role in recovery and reconstruction after disasters. People who lose their houses receive financial and material compensation and other means of assistance from the government, in order for them to build new houses and restore livelihood.

The REACT partnership is also involved in recovery and reconstruction after disaster, in order to ensure coordination. Within the REACT Partnership, 5 sectoral groups have been established to deal with: 1- Food Aid, 2- Non-food items, including shelter, 3- Health, 4- Water and Sanitation, and 5- Education. These sectoral groups are working towards developing strategies for effective preparedness, response and recovery in their specific areas. Their work feeds into updating of the Inter-Agency Contingency Plan for Tajikistan. A Rapid Response Coordination

Group has been established within the partnership to reassure efficient disaster response. All information on all aspects of disaster management is shared on www.untj.org, where interested people or organizations can find up-to-date information on the overall situation in the country as well as recent disasters.

II. Disaster Management system

2.1 Administrative system

Conventional long form: Republic of Tajikistan

Conventional short form: Tajikistan

Government type: republic

Capital: Dushanbe

Administrative Divisions: 3 provinces (viloyatho, singular - viloyat) and 1 autonomous province* (viloyati mukhtor);

2.2 Legal system, legal framework

There are several national laws and decrees, which govern the disaster management field in Tajikistan:

Government of the Republic of Tajikistan Decree #400 "On the establishment of the Committee for Emergency Situations and Civil Defense" (17 August 1994), is the first legal provision in the field of protecting the population and territories from natural and manmade emergency situations.

The Law of the Republic of Tajikistan "On Civil Defense" (November 1995) is aimed at the implementation of security tasks in wartime. This Law was reconsidered in 2004; its peculiarity was reduced to the regulation and provision of safety in peacetime.

The Law of the Republic of Tajikistan "On protection of population and territories from natural and manmade emergency situations" (2004) stipulates organizational and legal provisions in protecting the people, national territories, natural wealth of Tajikistan.

The Law "On emergency rescue services and the status of rescuers" defines the organizational, legal and ecological conditions for application of capacities and tools to prevent and mitigate emergency situations. It also regulates relations among the authorities, institutions and citizens, and determines rights and duties of rescuers in the country.

The Law "On the Fund for mitigation of emergency situations" (27 December 1993), allocated the fund for mitigation and rehabilitation activities. The fund comes from 10 percent of depreciation amounts paid by business enterprises on the territory of Tajikistan.

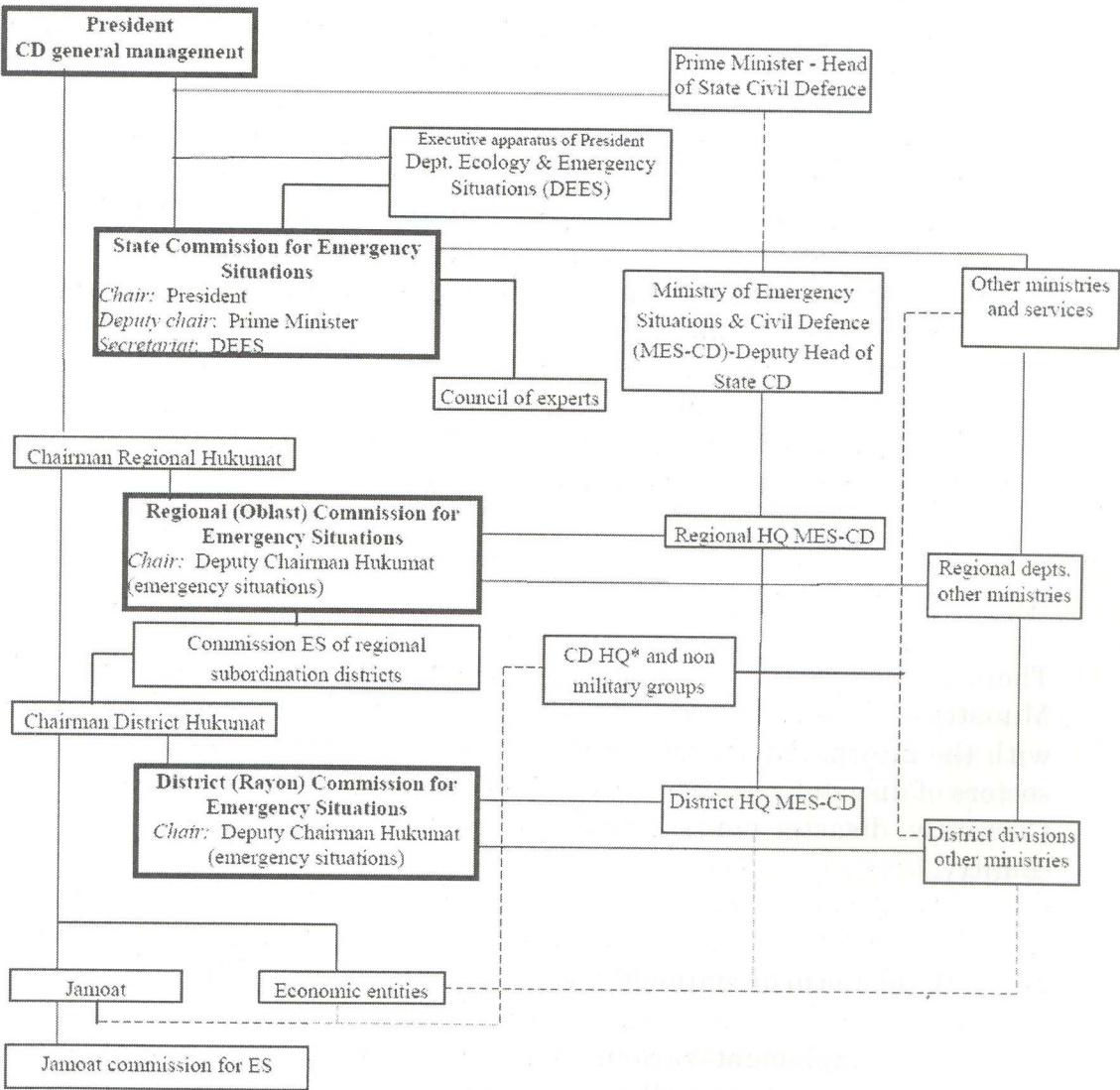
2.3 Structure of disaster management

The establishment of the State Commission on Emergency Situations under the Government of the Republic of Tajikistan has become an important step in the enhancement of the system of management in emergency situations. This Commission has obtained a status of a national coordinating body in emergency situations.

The Ministry of Emergency Situations and Civil Defense (MoES) was established to settle issues of protection of the population and territories of the country. MoES has the following functions:

- Implement a common State policy in disaster prevention and mitigation;
- Implement programs on disaster management;

Structures for Disaster Preparedness and Response in Tajikistan



* CD HQ – according to the “Law of RT on CD” all ministries, institutions, organisations and their local subdivisions (oblast, districts, jamoats) should organise Civil Defense HQ.

- Maintain preparedness of disaster management units, communication and warning systems, forces and tools acting in emergency situations, implementation of mitigation and rehabilitation activities, forecasting and assessment of socio-economic impact from emergency situations;
- Implement international cooperation for disaster reduction efforts;
- Stock piling and delivery of relief aid to the affected population.

MoES is also tasked to protect the population and national territories from hazards of military actions such as terrorist threats.

2.4 Priority on disaster risk management

- Enhancement of disaster management and information maintenance
 - establishment of a more efficient structure of management;
 - gradual integration of a common system of response to emergency situations and systems of civil defense in the integrated State system
 - establishment of early warning and forecasting systems
- Building and strengthening international cooperation in the sphere of prevention and mitigation of emergency situations
 - establishment of an international system of response to emergency situations;
 - enhancement of management of international forces in areas affected by disasters;
 - development of coordinated scientific studies on disaster prevention and mitigation

III. Disaster management plan

There is no specific Disaster Management Plan in Tajikistan yet. The Ministry of Emergency Situations and Civil Defense is working closely with the international community, in order to consolidate all the various sectors of disaster management into a Disaster Preparedness plan. Currently, disaster management is part of the Civil Defense Plan of the country.

IV. Budget size on national level

In order to implement various activities for disaster management, the central government, as well as the regional and district authorities, and the local communities allocate special funds from their budgets.

Government allocates approximately USD 5-6 mln. annually for disaster response and recovery activities.

Law of the Republic of Tajikistan "On the Fund for mitigation of emergency situations" (27 December 1993) mandates government to allocate a fund for mitigation and rehabilitation activities.

V. Progress and situations of the Hyogo Framework for Action (HFA)

The Republic of Tajikistan has undertaken the following actions in response to HFA.

With the help of the representation of ISDR in Central Asia, two consultative meetings have been held as a follow up to HFA between Central Asian Countries.

The first regional consultative meeting on disaster risk reduction in Central Asia was held in Dushanbe, Tajikistan, 1-2 of December 2004. The meeting was jointly organized by the Government of Tajikistan, UN Disaster Risk Management Project in Tajikistan and UN/ISDR Outreach Office in Central Asia. Governmental officials from Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan, and representatives from Directorate-General for Humanitarian Aid (ECHO), Swiss Development Cooperation (SDC), Asian Development Bank (ADB) and United Nations Development Programme (UNDP) participated.

The objectives of this regional consultative meeting were to:

- Promote regional cooperation and collaboration in the field of disaster risk reduction;
- Integrate disaster risk reduction into development planning, policies and implementation, as part of the Central Asian preparatory process for the World Conference on Disaster Reduction and the outcomes from this conference;
- Discuss measures urgently needed in order to create sustainable development planning and programmes;
- Create a regional platform for disaster risk reduction, especially integrating disaster risk reduction into public policies, promotion of disaster emergency response and disaster risk reduction at the community level and professional capacity building;
- Consult with participants from Central Asian governments; aim to set regional priorities, and to create a fundament for a regional strategy for disaster risk reduction.

The participants came up with following key points;

- Work must be harmonize, taken into consideration that major threats like earthquakes can also lead to secondary effect and create human made hazards, example leakage chemical industry can become a consequence of poor building structure.

- Hydro technological facilities (HEPS) – are a major threat. Need to improve monitoring of these facilities.
- Need for disasters database for Central Asia in order to increase prevention.
- Improved early warning and monitoring.
- Major cities in Central Asia all prone to earthquake- legislation for private construction practices, a need for sustainable urban development, common problems
- Harmonization of legislations
- Earthquake is a common threat to all the countries of Central Asia. The group will focus on two concrete actions with donors' support:
 - A) Legislation for disaster risk reduction should be harmonized, starting with earthquake legislations- building codes for private constructions. Tajikistan will take a leading role to draft the legislation and then share and discuss with other countries. Countries were recommended to organize two meetings to consult with national institutions for finalisation of the legislations.
 - B) Seismic hazard mapping should be unified for Central Asia through the joint work of technical scientific research institutions.
- Information and knowledge sharing should be harmonized and enhanced among the countries through the regional website based in Iran, and extend the competence centre on disaster risk management based in Dushanbe (education and educational materials). A data bank on disaster risk reduction should be developed.
- Donor cooperation at regional level should be harmonized in the domain of disaster risk reduction.
- Assistance should be provided in improving monitoring and early warning systems in the most vulnerable constructions (large dams and reservoirs) of Central Asia. Assistance should also include assessment, prioritisation and community awareness and training, supply and installation.

The second consultative meeting was held in Almaty, Kazakhstan 24-25 May 2005, which was a follow up to the first consultative meeting. One of the concrete outcomes of the second meeting was a joint agreement on reviewing the draft Law on Earthquakes, which will be adopted and approved by each government.

Disaster risk mitigation is a national priority. Measures on risk mitigation taken by the government of the Republic of Tajikistan. The Government of Tajikistan under the support of regional and international organizations develops multilevel and multisectoral cooperation for risk mitigation, widely applying legal and other relevant

risk reduction and preventive measures, some of which are included in the country development plans.

The central government, as well as the regional and district authorities, and the local communities allocated special funds from their budgets national for disaster prevention activities.

In August 2004, the government organized a national workshop on risk management in emergency situations, which resulted in the development of a country strategy and a set of priorities on disaster reduction. The workshop helped further enhance national policy in the field of risk management. It also accelerated the implementation of activities by legal and executive authorities, local governments, enterprises, communities and citizens of Tajikistan.

Risk management and preventive measures remain the key priorities for the Government. Currently, the Government has strategic stockpiles of food and non-food commodities, and undertakes measures on the enhancement of national and regional capacities and reserves needed for risk management.

Priority activities in the country include among others, the development of a logical legal basis, mobilization of the State prevention and mitigation forces and tools, management and coordination of the State structural units, the introduction of global risk prevention and mitigation experiences, all based on the framework of the International Decade for Disaster Risk Reduction.

Several laws were enacted as mentioned above. In addition, the State Commission on Emergency Situations was created. This Commission serves as a national coordinating body for emergency situations.

The Ministry of Emergency Situations and Civil Defense of the Republic of Tajikistan was established for the settling of issues of protection of the population and territories in natural and industrial emergency situations.

Identification, assessment and monitoring of risks in emergency situations

Currently, within the Information-Analytical Center, the Ministry develops a sustainable scientific technological infrastructure at the national and local levels. This infrastructure is needed for research, monitoring, analysis, mapping, forecasting of natural disasters, development of a relevant data base, testing of innovation, scientific and technical methodologies, distant surveys, systems of geographical data, systems of disaster modeling, forecasting of weather and climate conditional, systems of risk assessment and early warning.

To prevent flood hazards, the government is constructing a diversion tunnel along the left opposite bank of the river, which will be passing the waters of Vakhsh in case of activation of the Baipaza landslide, and perform the function of an emergency spillway.

For landslides, the implementation of the international project (LSRMP) modern early warning and monitoring systems were installed at the Usoi dam; the awareness of the residents along the riverbed was enhanced, and enable them to timely evacuate in case of the breakthrough of the lake.

Application of knowledge, innovations and education in formation of safe behavior and disaster management capacities on all levels

Local data bases, information bulletins on advanced practices, feasible and accessible risk reduction technologies and lessons learned from policies, plans and loss reduction measures are being developed within the local networks of State authorities.

The Scientific Research Center under the Ministry on Emergency Situations and Civil Defense has developed a system of training and tutorials on disaster mitigation management for local governments, decision-makers, regional branches of the Ministry involved in disaster management, vulnerable communities, business enterprises and the common population of the country.

The Government of the Republic of Tajikistan considered the issue of inclusion of special risk reduction subjects in the educational curriculum for 2006-2007, and in the relevant educational programs within the systems of school, pre-school, secondary, special and higher education.

In addition, local authorities establish information services with the purpose to inform the population about perspective development planning in cities and districts, construction planning of new industrial and civil objects, activities on land reclamation and land use.

Reduction of the basic risk factors

The level of poverty is still high in Tajikistan, and the difficult conditions of living weaken the prevention and risk reduction capacities. Despite this, some activities were undertaken to address concerns on nuclear threats such as: studies on nuclear radiation due to the extraction of uranium deposits in the country.

Currently, the activities on physical reinforcement of the national radioactive waste disposal unit are under intent control of the International Atomic Energy Agency (IAEA). Tajikistan became a member of this organization since 2001.

In addition, the Ministry of Emergency Situations has been implementing activities to assess users of radioactive sources aimed at

preventing of radioactive accidents, and inventory of radioactive sources at industrial enterprise of the country.

Enhancement of disaster preparedness for effective actions

In Tajikistan, it is recognized that the development and periodical updating of plans of preparedness to natural and industrial hazards establishes a legal bases for actions in emergency situations. However, at present the Government is sourcing support from the international community to formulate a comprehensive disaster risk management plan.

International cooperation

An efficient system of coordination, interaction and cooperation between the Government, UN agencies and international humanitarian organizations has been established in the sphere of risk reduction in emergency situations.

Currently, 13 UN agencies working in Tajikistan implementing the concept “Moving the Mountains”, which represents a common strategy of actions aimed at the achievement of positive outcomes in the sphere of access of the population to basic social services, assistance in mitigation activities, and hazards related with mountainous landscape, support of communities and households in strengthening of democratic values. The significant inputs of donors, which amounted to \$380 million in 2003 and 2004, indicate the commitment of the international community.

Another significant achievement is the establishment of the REACT group in 2001. It comprises of a number of key international and national organizations that work in the sector of disaster preparedness and mitigation, and have capacities for prompt provision of skills and resources for immediate assessment of needs. This organization consists of the Ministry of Emergency Situations and Civil Defense of Tajikistan, Swiss Agency for Development and Cooperation, National Red Crescent Society of Tajikistan, Focus Humanitarian Assistance, Global Partners, International Federation of Red Cross and Red Crescent Societies, Merilin, MSF Holland, UNICEF, UNHCR, WFP and WHO.

Project implementation with UN agencies at present aimed at developing an efficient risk reduction policy, strengthening of coordination mechanisms, application of new technologies in assessment and monitoring, which significantly enhances forecasting and decreases time limits for response, improves public awareness on the issues of risk, vulnerability and mitigation of emergencies, and enhances partnership on local, national and international levels.

VI. Projects on disaster reduction headed by the Ministry

There are several programmes and initiatives covering the field of disaster reduction in Tajikistan.

European Commission Humanitarian Office has been running a Disaster Preparedness Programme in Central Asia since 2003. Most of the projects are implemented in Tajikistan. The projects are implemented jointly by international organizations and MoES.

The Swiss Agency for Development and Cooperation had started a Disaster Reduction Program for Central Asian countries, mainly in Tajikistan.

The UN is running a joint project with MoES called UN Disaster Risk Reduction Project. This project is co-funded by UNDP and SDC. The main goal of the project is to build the capacity of the MoES.

VII. ADRC Counterpart

Ministry of Emergency Situations and Civil Defense
26 Lohuti Street, Dushanbe, Tajikistan, 734025

THAILAND

THAILAND

I. Natural hazards in Thailand

1.1 Natural Hazards likely to affect the country

Drought, earthquake, epidemic, flood, slides, wave/surge, wild fires, windstorms

1.2 Recent major disasters

year	dis_subset	killed	total_affected	dam (US '000s)
2005	Drought	0	—	250000
2005	Storm	0	1500	246
2004	Flash Flood	9	500000	—
2004	Flash Flood	2	2000	—
2004	Mudflow	3	110	—
2004	Tsunami	8345	67007	405200
2004	Storm	13	5050	—
2004	Typhoon	1	4000	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

December 2004's Tsunami: the Most Catastrophic Disaster in Thai

At 07.58 a.m., of 26 December 2004, the massive earthquake magnitude of 9.0, the strongest in the world since 1964, struck deep under the Indian Ocean off the west coast of Sumatra, Indonesia, and triggered the cataclysmic tidal wave that slammed on the Andaman coastal provinces, southern Thailand. The catastrophic incident devastated 6 provinces namely, Phuket, Trang, Phang Nga, Krabi, Ranong and Satun.

Right after the tsunami waves ebbed, the relief activities were immediately and continuously activated. It is widely accepted that Thailand had led an effective relief efforts and response immediately on the day of tsunami strike. As the consequence, Thailand had achieved the rapid success in relief operation within a few months later. The key factors in the effectiveness of relief response can be delineated as follows;

- The synergy of Thai people from all walks of life to provide all kinds of assistance to their suffered countrymen.
- The close and integrated collaboration and cooperation among the civil, military, police, NGOs, charitable foundations, civil defence volunteers etc.
- The influx of endless support and humanitarian assistance from international communities, organizations, NGOs near and far.

The Royal Thai Government, private sector and NGOs, have continuously launched restoration activities to enhance livelihoods and rebuild the environments of the affected people and areas following the initial phase of rescue and humanitarian relief. Simultaneously, has conducted preparedness activities so as to reduce the vulnerability and increase the resilience in the tsunami hit communities. The international communities, NGOs and United Nations mechanisms also continue to endlessly support Thailand in these humanitarian assistance activities.

II. Disaster Management system

2.1 Administrative system

<i>Conventional long form:</i>	Kingdom of Thailand
<i>Conventional short form:</i>	Thailand
<i>Government type:</i>	constitutional monarchy
<i>Capital:</i>	Bangkok
<i>Administrative divisions:</i>	76 provinces (changwat, singular and plural)

2.2 Legal system, legal framework

The Civil Defence Act of 1997 has classified disasters into 3 categories:

- 1) Man-made and natural disasters
- 2) Disaster resulted air raid during wartime
- 3) Disaster resulted from sabotage or terrorist attack

Disaster management system in Thailand has mainly based on Civil Defence Act of 1979 and the Civil Defence Plan 2002. The National Civil Defence Committee (NCDC) is the main policy making body. Prior to October 2002, the erstwhile Civil Defence Division of Department of Provincial Administration (the then Department of Local Administration, Ministry of Interior), had been in charge of the National Civil Defence Committee Secretariat. After October 2, 2002 Thai government has enacted the Bureaucrat Reform Act 2002, Department of Disaster Prevention and Mitigation (DDPM), has come into existence under the umbrella of Ministry of Interior and has been designated to shoulder responsibility of disaster management of the country and has thus, replaced the former Civil Defence Division as the National Civil Defence Committee Secretariat.

2.3 Structure of Disaster Management

In 2002, Thailand established the Department of Disaster Prevention and Mitigation (DDPM), under the Ministry of Interior, as the principal agency for disaster management coordination among all agencies

concerned at all levels. As regards disaster risk reduction, DDPM shall conduct activities in coordination with other agencies such as: the Meteorological Department (TMD), Ministry of Information Technology, Royal Irrigation Department (RID), Ministry of Agriculture and Cooperatives, Department of Water Resources, Ministry of Natural Resource and Environment.

National Civil Defense Committee (NCDC)

It coordinates all activities relevant to civil defence and disaster management. The National Civil Defence Committee performs all functions relevant to management of disaster at national level, such as formulation of Civil Defence Master Plan, evaluation of the implementation of the above-mentioned plan by an audit mission, organizing annual or periodical training courses on civil defence and disaster management for government officials at all levels and for the general public, issuing regulations on the payment of remuneration, compensation and other expenditures relevant to civil defence and disaster management activities carried out by all agencies concerned.

National Safety Council of Thailand (NSCT)

Apart from National Civil Defence Committee, Thailand has another disaster management related mechanism which has highlighted its tasks and responsibility on man-made disaster management only... that is "The National Safety Council of Thailand" (NSCT). The NSCT has been established in 1982 on the ground of the problem of road traffic accidents in Thailand which annually resulted in the tremendous loss of lives, properties and national economy. Later on, its responsibilities have been extended to cover the prevention of chemical accident, occupational accident, accident in home and public venues, considering preventive measure of fire in high-rise building, accident prevention in subway tunnel construction, providing education of safety etc.

National Disaster Warning Center

The National Disaster Warning Center was established under the Order of the Office of the Prime Minister. It is a Prime Minister Thaksin Shinawatra's commitments to protect lives and properties of Thai people and foreign visitors by setting up the National Warning Center as soon as possible. The major task of the National Disaster Warning Center is to detect earthquake and to analyze seismic data to determine the possibility of a Tsunami generation before issuing notification messages to the public and related authorities and rescuers for evacuation of people into safe places. This is to prevent the loss of people's lives and properties as much as possible. From now on, the National Disaster Warning Center will be developed, upgraded of its early warning system and extended its telecommunication networks to be able to cope with multi-hazards disasters apart from Tsunamis

2.4 Priority on disaster reduction management

Priority on disaster risk management

Thailand urgently needs to reform disaster management systems and mechanisms as follows:

1. *Public Awareness and Education.* Improve public safety of every sector particularly those who are living with risk by enhancing people's understanding of the threats posed by various types of disasters.
2. *Materializing Early Warning Systems:* Following the catastrophic tsunami disaster in 2004, Thailand took immediate action to establish National Disaster Warning Center, which covers the warning of both natural and man-made disasters.
3. *Establishing More International Disaster Management Networks:* Thailand needs to enhance the country's disaster management capacity and efficiency through the mobilization of technical assistance from foreign countries, particularly from developed and advanced countries.
4. *Effective Damage Assessment:* Remote Survey technology must be introduced to effectively assess the damages caused by large scale disaster. The staff of the agencies concerned needs to be trained to enhance their capacity in applying satellite images to assess the damage.
5. *Application of Community-Centered Approach:* Local Authority and community are in the front line in the event of disaster occurrence, consequently, they are the most vulnerable and effected. It is indispensable to enhance their potentials in responding to disasters, and to equip them with awareness and preparedness.
6. *Highlight on Preventive Approach:* The new approach of disaster management has shifted its focus from "assistance" or "relief" to "prevention". In this regard, risk reduction to be vigorously taken into account. So as to reduce the risk, both structural and non-structural measures should be materialized, thus, the cost of risk reduction will yield invaluable rate of return when compared with the cost of disaster damage.
7. *The Focus on Prevention:* Proactive disaster management can reduce the damage and impact substantially.
8. *The Focus on Public Participation:* The past disaster management in Thailand had underlined the roles of government agencies and simply ignored private sectors, non – government organization, communities and even the public. Unfortunately, there has been a lack of cooperation

among agencies concerned. This is a real challenge for DDPM to bring these stakeholders together.

9. The Focus on Unity in Management: The application of the Incident Command System (ICS) will demonstrate unity in management.

10. The Focus on Efficient Communication: The efficient communication system consists of the major system and the reserved system, which are vital for disaster management.

11. The Focus on Human Resource Development: Human resource development is a key factor for disaster management.

12. Livelihood Rehabilitation: Livelihood rehabilitation activities such as community development, vocational training, improving the standards of living should be immediately materialized to normalize disaster victims' means of living.

III. Disaster management plan

The Civil Defence Secretariat is responsible for identifying disaster prevention measure and policies and the National Civil Defence Plan. This Plan serves as the master plan for all agencies concerned, and provides guidelines for the formulation of operational plan of agencies responsible for management of disaster. The Civil Defence Secretariat does not only implement policies, but also provides equipment, technical assistance and training courses for local agencies and the public. It also coordinates with agencies that are in charge of disaster relief and rescue operations.

According to the Civil Defence Act 1979, the functional agencies are responsible for formulating their own disaster management plan. The master disaster management plan which is regarded as a national civil defence plan is to be made by the Civil Defence Secretariat. The Plan is to be reviewed and updated every three year term, and further proposed to the National Civil Defence Committee for approval. The current national civil defence plan which was reviewed and updated in 2005 consists of two components, Disaster Prevention and Mitigation Component, and Civil Defence for Security (Rear-Area Protection) Component.

IV. Budget size at the national level

DDPM Annual Budget: The first source of disaster reduction is from Departement of Disaster Prevention and Mitigation's annual budget. The table below shows the amount of budget, which has been allocated to

DDPM during fiscal year of 2003-2006.

Fiscal Year	DDPM Annual Budget
2003	1,066 THB
2004	1,312 THB
2005	1,865 THB
2006	2,438 THB

V. Progress and situations of the Hyogo Framework of Action

VI. Projects on disaster reduction

1. One Tambon-One-Search and Rescue Team (OTOS)

This project aims to equip every tambon (sub-district) in Thailand with at least one SAR (search and rescue) team within 2008.

2. Disaster Management Training for managers, practitioners, local government officers and others through DDPM's Disaster Prevention and Mitigation Academy (DPMA)

Established by Ministry of Interior, DPMA is now a principle educational institution in disaster management field.

3. Education for Disaster-Preparedness in Primary School

This project is 4-month long (January – April 2006). The Asian Disaster Reduction Center (ADRC) has played a leading role with supports from Thailand's Ministry of Education and DDPM. Objectives of the project are: a) to strengthen disaster preparedness capacity in primary schools b) to build teacher capacity for disaster preparedness and management and c) to disseminate knowledge of tsunami and other natural disasters to the children at schools.

VII. Counterpart of ADRC

Department of Disaster Prevention and Mitigation

Ministry of Interior

U-Thong Nok Road, Dusit, Bangkok 10300 THAILAND

UZBEKISTAN

UZBEKISTAN

I. Natural hazards in Uzbekistan

1.1 Natural hazards likely to affect the country

Earthquake, drought, slides, epidemic, flood

1.2 Recent major disasters

year	dis_type	killed	injured	total_affected	dam (US '000s)
2005	Flood	0	0	1500	—
2001	Drought	0	0	600000	—
2000	Drought	0	0	500000	—
1999	Slides	24	0	—	—
1998	Epidemic	40	0	148	—

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: Republic of Uzbekistan
Conventional short form: Uzbekistan
Government type: republic; authoritarian presidential rule
Capital: Tashkent
Administrative divisions: 2 provinces (viloyatlar, singular - viloyat), 1 autonomous republic* (respublika), and 1 city** (shahar)

2.2 Legal system, legal framework

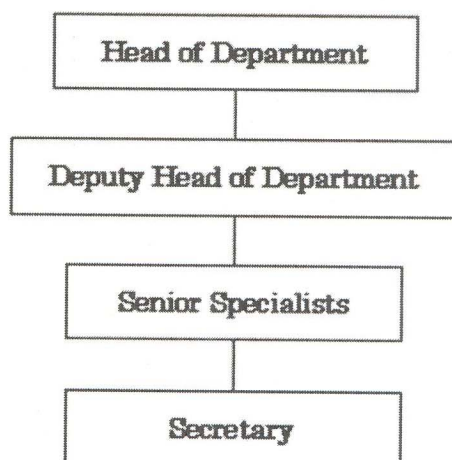
During the past years in the republic a lot has been made to create a strong legal base on protection of the population against acts of nature. Among them, we can mention the Law of Republic of Uzbekistan named "About the conception of national safety" of August 29, 1997. By this Law, the vital national interests recognize maintenance of optimum ecological conditions for ability to any man to live, protection of health of the people, creation of a stable ecological situation.

Jan.2001: Cooperation with FEMA (U.S. Federal Emergency Management Agency) and Uzbekistan Ministry of Emergency Situations: providing a framework for various programs of emergency preparedness and disaster mitigation cooperation

2.3 Structure of disaster management

The Ministry of Emergency Situations is the coordinating body. Each city has an appointed person who is a Mayor of the city responsible for disaster management. At community level - community leaders are responsible for disaster management.

Disaster Management Organization of Uzbekistan



Name of Ministry: The Cabinet of Ministry of Uzbekistan

Name of Division: The Department of Emergency Situations

Total staffing of division: 5 people

Leader: Mr. Valentin Olegovich Sosnovsky

Jurisdiction of division: Coordination of activities of the ministries and organization concern on disaster-prevention and disaster-reduction measures.

List of governmental organizations related to disaster management:

National:

- Ministry of Emergency Situations of Republic of Uzbekistan;
- Ministry of Internal Affairs;
- Ministry of Health;
- Ministry of Agriculture and Water Management;
- Hydro meteorology Department of Uzbekistan

Regional:

- Regional Agency "Natotur" under the Ministry of Internal Affairs

Provincial: Emergency Centers

District: Emergency Centers

2.4 Priorities on disaster risk management

1. Exchange of scenic-technical attainment to prevent further emergency situation, to conduct mutual research
2. Experience exchange to provide government structures, economic and people for emergency situation
3. Familiarization with foreign disaster-related experience and development of a national system to prevent emergency situation, development of mutual projects.
4. Operational share of information, especially with bordering states about the questions of how to forecast necessary assistance.
5. Training and learning specialists, conduct joint training.
6. Share of own experiences among citizens to prevent emergency situation.
7. To participate to the reduction of emergency situation abroad using our forces, the members of "International register fast reaction".

III. Disaster management plan

IV. Budget size on national level

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction by the Ministry

VII. ADRC Counterpart

Chief of Department of the International Relations
Ministry of Emergency Situations

VIET NAM

VIET NAM

I. Natural hazards in Viet Nam

1.1 Natural hazards likely to affect the country

Windstorms, floods, epidemic, drought, insect infestation, slides, wild fires

1.2 Recent major disasters

year	dis_type	killed	injured	total_affected	dam (US '000s)
2005	Drought	0	0	410000	42120
2005	Flood	19	0	30000	—
2005	Flood	67	0	33800	—
2005	Wind Storm	13	0	6500	—
2005	Wind Storm	75	28	337660	219250
2004	Epidemic	21	0	43	—
2004	Flood	53	18	18	8000
2004	Flood	34	0	30000	—
2004	Slides	23	0	—	—
2004	Wind Storm	56	0	500000	23000

Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

II. Disaster Management system

2.1 Administrative system

Conventional long form: Socialist Republic of Vietnam

Conventional short form: Vietnam

Government type: Communist state

Capital: Hanoi

Administrative divisions: 59 provinces (tinh, singular and plural) and 5 municipalities (thu do, singular and plural)

2.2 Legal system, legal framework

Decree No. 168-HDBT (May 19, 1990) of the Council of ministers established and outlined the tasks of the Central Committee of Storm and Flood Control (CCSFC), and committees and sectors at all levels (provincial, district and village).

Statutes on Dike Management, and Flood and Typhoon Mitigation sets out the responsibilities and powers of various departments, and regulates the authorities of controlling development in flood prone areas.

The tasks for disaster preparedness and mitigation were further institutionalized with the enactment of the following laws:

Ordinance on Flood and Strom Control

Ordinance on Water Resources Structures Protection

Water Law

Environment Protection Law

2.3 Structure of disaster management

At the Central level, the National Committee, an inter-ministerial institution serves as a coordinating body for disaster reduction efforts in Viet Nam. Its secretariat is provided by the Department of Dike Management and Flood Control (DDMFC) of the Ministry of Agriculture and Rural Development (MARD). The CCSFC formulates all regulations and mitigation measures related to typhoons and floods. Emphasis is on dike protection, surveillance and maintenance. Local emergency work is coordinated by the provincial CSFC.

2.4 Priorities on disaster risk management

1. Water-related mitigation measures for the Red River Delta
 - a. Strengthening of dyke systems
 - b. Dredging of river channels for quick flood water drainage
 - c. Solution of reservoir construction in upstream areas
 - d. Flood diversion solution
 - e. Afforestation and forest protection
 - f. Organization of effective management and exploration activities of flood preventing solutions for the Red river delta and midland areas
2. Water-related mitigation measures for Central Vietnam
3. Water-related mitigation measures for the Mekong River Delta of Vietnam

III. Disaster management plan

First National Strategy and Action Plan for Mitigating Water Disaster was prepared in 1994 through a national consultation process. It identified the need for a multi-sectoral and multi-disciplinary approach

to disaster management (engineering, institutional and social) measures to reduce the vulnerability of the country and improve its capacity to cope with the adverse impacts of natural threats. It serves as a basis for annual state plans. The plan has strengthened institutions for disaster mitigation and management.

Second Strategic Action Plan (2001-2020) set up several strategies in disaster mitigation and management that aim to reduce disasters and their impacts on people, property, agriculture, economic well-being, environment, and sustainable development. It lays down responsibilities of various implementing bodies.

IV. Budget size on national level

Flood and Storm Preparedness Fund was established in 1993 with counterpart shares from all government levels.

V. Progress and situations of the Hyogo Framework for Action (HFA)

VI. Projects on disaster reduction headed by your Ministry

VII. ADRC Counterpart

Director of Dept. of Dike Management for Flood and Storm Control

Ministry of Agriculture and Rural Development
2-Ngoc Ha Str. Ba Dinh District, Hanoi

ADRC Member Country Profiles

March 2006

Edited and compiled by :

Mr. Shingo Kochi, Researcher

Ms. Maria Matilde Limpahan Go, Visiting Researcher at the time of editing and compiling, currently Local Government Operations Officer V, Department of the Interior and Local Government (DILG), Government of the Philippines

Ms. Ayumi Shirasaka, Research Assistant

Mr. Fabien Clerc, Intern

Asian Disaster Reduction Center (ADRC)

1-5-2-5F Wakinohamakaigan-dori

Chuo-Ku, Kobe 651-0073, JAPAN

Tel: +81-78-262-5540

Fax: +81-78-262-5546

Website: <http://www.adrc.or.jp>

E-mail: rep@adrc.or.jp

Copyright© Asian Disaster Reduction Center (ADRC), 2006

All rights reserved.

Kobe, Japan

