



**Government of the People's Republic of Bangladesh**

**National Plan for Disaster Management  
2007-2015**

**Ministry of Food and Disaster Management**

**February 2007**

## Foreword

National Plan for Disaster Management 2007-2015 is an outcome of the national and international commitments of the Government of Bangladesh (GoB) and the Ministry of Food and Disaster Management (MoFDM) for addressing the disaster risks comprehensively. The plan has been developed on the basis of the GoB Vision and MoFDM mission to reduce the vulnerability of the poor to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level by a) bringing a paradigm shift in disaster management from conventional response and relief practice to a more comprehensive risk reduction culture and b) strengthening the capacity of the Bangladesh disaster management system in improving the response and recovery management at all levels.

Bangladesh has taken a holistic approach for disaster management where emphasis has been given to work together with all the stakeholders and build strategic, scientific and implementation partnerships with all the relevant government departments and agencies, other key non-government players including NGOs, academic and technical institutions, the private sector and the donors. The role of Government is mainly to ensure that risk reduction and comprehensive disaster management is a focus of national policy and programmes.

The National Plan for Disaster Management is indicative to what the relevant regional and sectoral plans would consider to address the key issues like risk reduction, capacity building, climate change adaptation, livelihood security, gender mainstreaming, community empowerment and response and recovery management. The plan also will act as basic guideline for all relevant agencies in strengthening better working relations and enhancing mutual cooperation.

The plan reflects the country initiatives since 2003 in line with the paradigm shift in disaster management from conventional response and relief to a more comprehensive risk reduction culture having the development linkages. Inclusion of Policy Matrix on Comprehensive Disaster Management towards poverty reduction and growth in Poverty Reduction Strategy (PRS) is an indicator of mainstreaming risk reduction and consideration of disaster-development linkages.

The Government of Bangladesh is committed to the implementation of its global and national commitment for establishing risk reduction framework. Launching of MoFDM Corporate Plan, Developing Bangladesh Disaster Management Model, Establishing Disaster Management Information Centre (DMIC) and developing National Plan for Disaster Management are the major milestones in the long run of our achievement.

The strategic goals of the Plan are drawn from the SAARC Disaster Management Framework. These goals are well linked to the international and national drivers, so that the plan can articulate the long term strategic focus of disaster management in Bangladesh.

We hope that the plan will contribute towards the formulation of a road map for the development of strategic and operational plan by various entities.

I would like to congratulate the MoFDM officials and CDMP Professionals for developing this National Plan for Disaster Management, which will contribute in achieving Millennium Development Goals (MDGs) and sustainable development of the country.

(Tapan Chaudhury)

The Honourable Advisor to the Caretaker Government in charge  
of the Ministry of Food and Disaster Management

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## Acknowledgement

Ministry of Food and Disaster Management is very much pleased for launching the National Plan for Disaster Management to be implemented during 2007-2015. The Plan is the reflection of the commitments of the Government of Bangladesh for addressing disasters in a comprehensive way. The Plan will be helpful for effective intervention by the MoFDM to fulfil its mandatory role of coordinating all disaster management activities within the country. We hope that the plan will contribute towards a cohesive and well coordinated programming framework incorporating GoB, Non-Government and the private sector.

Special thanks are extended to Dr. Selina Ahsan, Director General (Additional Secretary), FPMU and her team for overseeing and guiding the development of this National Plan. I offer special thanks to the officials of relevant ministries and their agencies, NGOs, members of disaster management committees and other stakeholders for offering their views, comments and recommendations in developing the plan. I particularly offer special thanks to officials of Disaster Management Bureau (DMB) and Water Resources Planning Organization (WARPO) for their valuable contribution to the development of this document.

A team of highly dedicated and experienced professionals working with the Ministry of Food and Disaster Management and its Comprehensive Disaster Management Programme (CDMP) has worked hard to prepare this important document. I am pleased to express my appreciation for their diligence. Sincere thanks are extended to CDMP professionals Dr. Aslam Alam and Dr. Shantana Halder for their special efforts in preparing the plan.

We are most grateful to our honourable Advisor for his kind guidance provided to us for developing this plan. We also take this opportunity to put on record our deep appreciation for the excellent cooperation from our development partners and well wishers for their support in preparing the document.

(Dhiraj Malakar)  
Secretary in-charge  
Ministry of Food and Disaster Management

**LIST OF ABBREVIATION**

ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Centre
AFD	Armed Forces Division
ASEAN	Association of South East Asian Nations
BBS	Bangladesh Bureau of Statistics
BCAS	Bangladesh Centre for Advanced Studies
BDPC	Bangladesh Disaster Preparedness Centre
BDRCS	Bangladesh Red Crescent Society
BFS&CD	Bangladesh Fire Service and Civil Defence
BGD	Bangladesh
BGS	British Geological Survey
BIDMTR	Bangladesh Institute of Disaster Management Training and Research
BMD	Bangladesh Meteorological Department
BNDV	Bangladesh National Disaster Volunteers
BUET	Bangladesh University of Engineering and Technology
BWDB	Bangladesh Water Development Board
CBO	Community Based Organization
CCC	Climate Change Cell
CCDMC	City Corporation Disaster Management Committee
CDMP	Comprehensive Disaster Management Programme
CEGIS	Centre for Environmental and Geographical Information Services
CPP	Cyclone Preparedness Program
CPPIB	Cyclone Preparedness Program Implementation Board
CRA	Community Risk Assessment
CSDDWS	Committee for Speedy Dissemination of Disaster Related Warning/ Signals
DAE	Directorate of Agricultural Extension
DC	Deputy Commissioner
DDMC	District Disaster Management Committee
DDMP	District Disaster Management Plan
DESA	Dhaka Electric Supply Authority
DFID	Department for International Development
DGOF	Director General of Food
DIRA	Disaster Impact and Risk Assessment
DMB	Disaster Management Bureau
DMC	Disaster Management Committee
DMIC	Disaster Management Information Centre
DMTATF	Disaster Management Training and Public Awareness Building Task Force
DoE	Department of Environment
DPHE	Department of Public Health Engineering
DRR	Directorate of Relief and Rehabilitation
DRRO	District Relief and Rehabilitation Officer
ECNEC	Executive Committee of the National Economic Council

EIA	Environmental Impact Assessment
EOC	Emergency Operation Centre
FBCCI	Federation of Bangladesh Chamber of Commerce and Industries
FFE	Food for Education
FFW	Food for Works
FFWC	Flood Forecasting and Warning Centre
FPMU	Food Planning and Monitoring Unit
FPOCG	Focal Point Operation Coordination Group of Disaster Management
GDP	Gross Domestic Product
GIS	Geographical Information System
GOB	Government of Bangladesh
GSB	Geological Survey of Bangladesh
HFA	Hyogo Framework for Action
HIPC	Heavily Indebted Poor Countries
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
ICT	Information Communication Technology
IFRC	International Federation of Red Cross
IMDMCC	Inter-Ministerial Disaster Management Co-ordination Committee
IMF	International Monetary Fund
ISDR	International Strategy for Disaster Reduction
IWM	Institute of Water Management
JPOI	Johannesburg plan of Implementation
LGED	Local Government Engineering Department
LGRD	Local Government and Rural Development
LRP	Land Reclamation Programme
MDGs	Millennium Development Goals
MES	Meghna Estuary Study
MoEF	Ministry of Environment and Forest
MoFA	Ministry of Foreign Affairs
MoFDM	Ministry of Food and Disaster Management
MoH	Ministry of Health
MoHA	Ministry of Home affairs
MoW&CA	Ministry of Women and Children Affairs
MoWR	Ministry of Water Resources
MSL	Mean Sea Level
MPO	Master Plan Organisation
NAEM	National Academy for Educational Management
NDMAC	National Disaster Management Advisory Committee
NDMC	National Disaster Management Council
NEC	National Economic Council
NGO	Non Governmental Organization
NGOCC	NGO Coordination Committee on Disaster Management
NWMP	National Water Management Plan
NWRD	National Water Resources Database
PCP	Project Concept Paper

PDMC	Pourashava Disaster Management Committee
PDMP	Pourashava Disaster Management Plan
PIO	Project Implementation Officer
POA	Plan of Action
PP	Project Proforma
PPRR	Prevention, Preparedness, Response and Recovery
PRSP	Poverty Reduction Strategy Paper
PWD	Public Works Department
RAJUK	Rajdhani Unnayan Katripakhaya
RCC	Regional Consultative Committee
RRAP	Risk Reduction Action Plan
SAARC	South Asian Association for Regional Cooperation
SARDI	Soil and Agricultural Research and Development Institute
SDMC	SAARC Disaster Management Centre
SFA	SAARC Framework for Action
SMRC	SAARC Meteorological Research Centre
SOD	Standing Orders on Disaster
SPARRSO	Space Research and Remote Sensing Organisation
TAP	Technical Assistance Project
TAPP	Technical Assistance Project Proforma
TOT	Training of Trainers
TR	Test Relief
UDMC	Union Disaster Management Committee
UDMP	Union Disaster Management Plan
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNO	Upazila Nirbahi Officer
UZDMC	Upazila Disaster Management Committee
UZDMP	Upa-Zila Disaster Management Plan
VGD	Vulnerable Group Development
WARPO	Water Resource Planning Organization
WASA	Water and Sewerage Authority
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

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## I. INTRODUCTION

Bangladesh is a low-lying deltaic country in South Asia formed by the Ganges, the Brahmaputra and the Meghna rivers. It is a land of about 144 million people within its 147,570 sq. km territory. More than 310 rivers and tributaries have made this country a land of rivers.

Diversified cultural heritage, archaeological sites and natural beauty of the country have made this land attractive. The country has the world's longest unbroken sandy beach of 120km, sloping gently down to the blue water of the Bay of Bengal.

Around 52% percent of the civilian labour force of the country is engaged in agriculture and 14% is engaged in industry. Per capita GDP for 2002-2003 was US \$ 418 (BBS, 2006).

Since independence in 1971, Bangladesh has achieved substantial improvements in some social indicators like decrease in infant and maternal mortality, and illiteracy, increase in life expectancy, access to safe water and sanitation. However, approximately 40% of the population still continue to live below the poverty line (BBS, 2005). Economic performance of the country has been relatively strong since 1990, with an annual 5% average GDP growth rate. Although half of the GDP is generated through the service sector, nearly two thirds of Bangladeshis are employed in the agriculture sector with paddy as the single most important product.

The geophysical location, land characteristics, multiplicity of rivers and the monsoon climate render Bangladesh highly vulnerable to natural hazards. The coastal morphology of Bangladesh influences the impact of natural hazards on the area. Especially in the south eastern area, natural hazards increase the vulnerability of the coastal dwellers and slow down the process of social and economic development. Significant country features include:

- A vast network of rivers and channels
- An enormous discharge of water heavily laden with sediments
- A large number of islands in between the channels
- A shallow northern Bay of Bengal and funnelling to the coastal area of Bangladesh
- Strong tidal and wind action

Natural and human induced hazards such as floods, cyclones, droughts, tidal surges, tornadoes, earthquakes, river erosion, fire, infrastructure collapse the high arsenic contents of ground water, water logging, water and soil salinity, epidemic, and various forms of pollution are frequent occurrences.

Climate change adds a new dimension to community risk and vulnerability. Although the magnitude of these changes may appear to be small, they could substantially increase the frequency and intensity of existing climatic events

(floods, droughts, cyclones etc). Current indications are that not only will floods and cyclones become more severe, they will also start to occur outside of their “established seasons”. Events, such as drought, may not have previously occurred in some areas and may now be experienced.

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## II. HAZARDS IN BANGLADESH<sup>1</sup>

Bangladesh is exposed to natural hazards, such as, floods, river erosion, cyclones, droughts, tornadoes, cold waves, earthquakes, drainage congestion/ water logging, arsenic contamination, salinity intrusion etc. But the nature of occurrence, season and extent of effect of the hazards are not the same in all places. Figure 1 presents Bangladesh Topography.

### 2.1 Flood

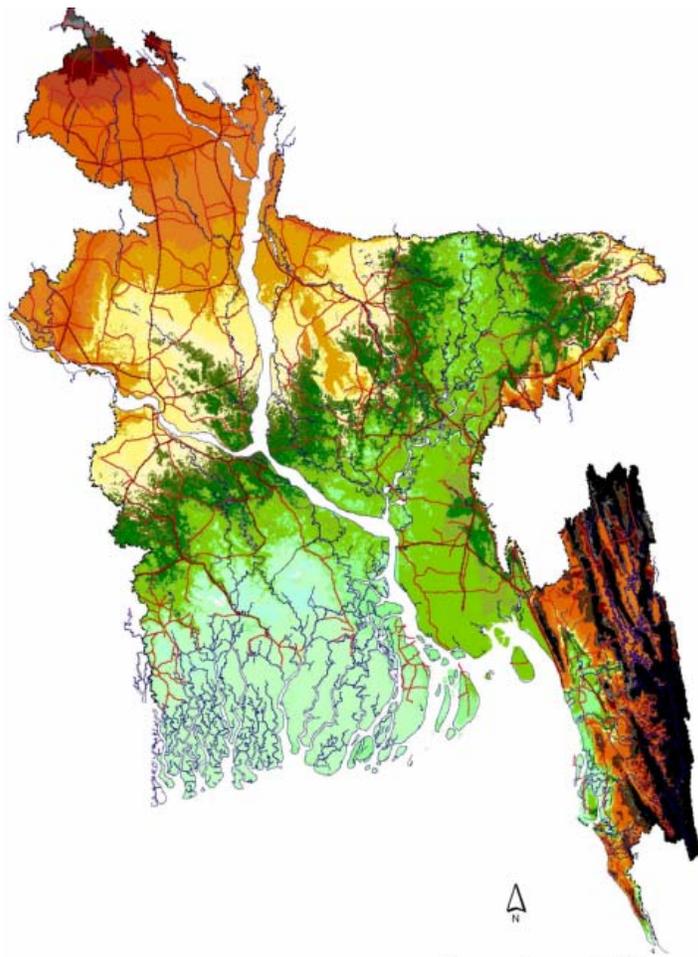
Floods are annual phenomena with the most severe occurring during the months of July and August. Regular river floods affect 20% of the country increasing up to 68% in extreme years. The floods of 1988, 1998 and 2004 were particularly catastrophic, resulting in large-scale destruction and loss of lives.

Approximately 37%, 43%, 52% and 68% of the country is inundated with floods of return periods of 10, 20, 50 and 100 years respectively (MPO, 1986). Four types of flooding occur in Bangladesh (Figure 2).

- Flash floods caused by overflowing of hilly rivers of eastern and northern Bangladesh (in April-May and September-November).
- Rain floods caused by drainage congestion and heavy rains.
- Monsoon floods caused by major rivers usually in the monsoon (during June-September).
- Coastal floods caused by storm surges.

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<sup>1</sup> Prepared by CEGIS for CDMP under the study on “Inventory of Community Risk Reduction Programme” November 2006



**Legend:**

- International Boundary
- River
- Railway
- Roads

**Elevation in meter (PWD)**

< 1 m	5 - 6 m	10 - 12 m	40 - 50 m	90 - 100 m
1 - 2 m	6 - 7 m	12 - 15 m	50 - 60 m	> 100 m
2 - 3 m	7 - 8 m	15 - 20 m	60 - 70 m	No Data
3 - 4 m	8 - 9 m	20 - 30 m	70 - 80 m	
4 - 5 m	9 - 10 m	30 - 40 m	80 - 90 m	

- About 50% of the country is within 6-7 m of MSL.
- About 68% of the country is vulnerable to flood.
- 25 to 30% of the area is inundated during normal flood

**Figure 1: Topography of Bangladesh**

Figures 3 and 4 show the percentage of total flood affected areas of the country for some selected years. The 1988 flood affected about two-third area of the country. The 1998 flood alone caused 1,100 deaths, rendered 30 million people homeless, damaged 500,000 homes and caused heavy loss to infrastructure. The 1998 flood lasted for 65 days from July 12 to September 14 and affected about 67% area of the country. This devastating flood had an enormous impact on the national economy, in addition to causing hardships for people, and disrupting livelihood systems in urban and rural areas.

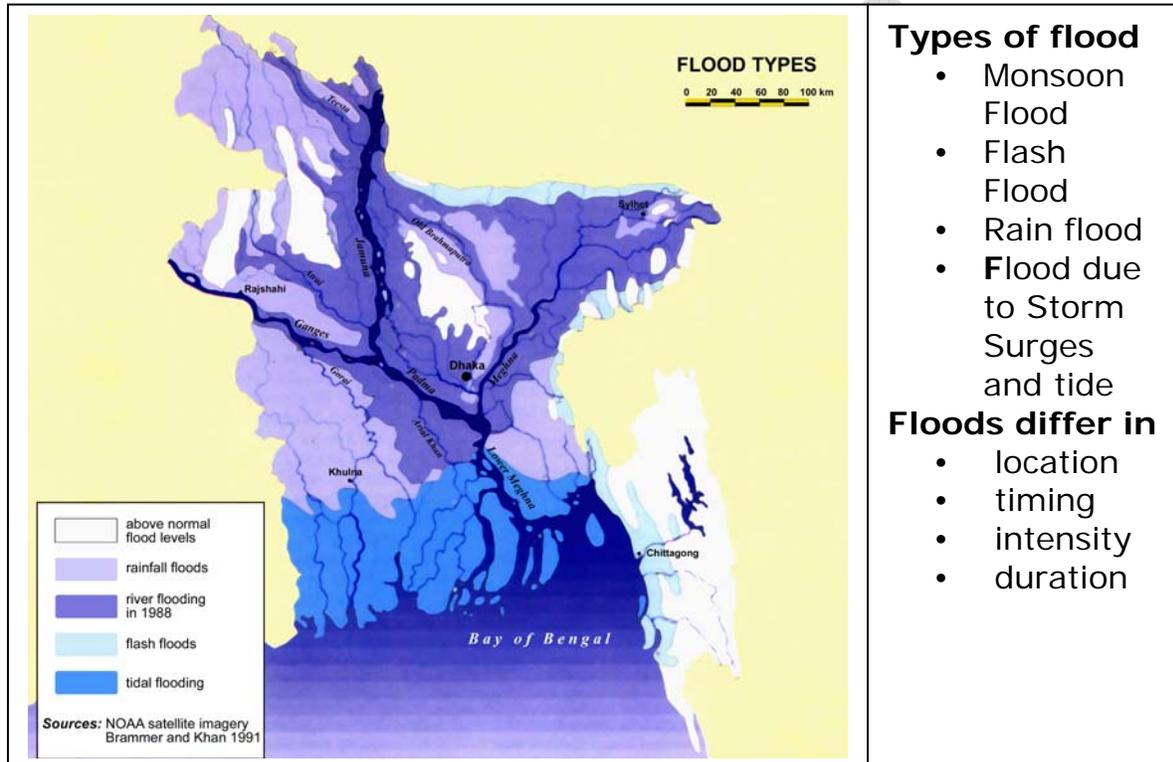


Figure 2: Flood Types in Bangladesh

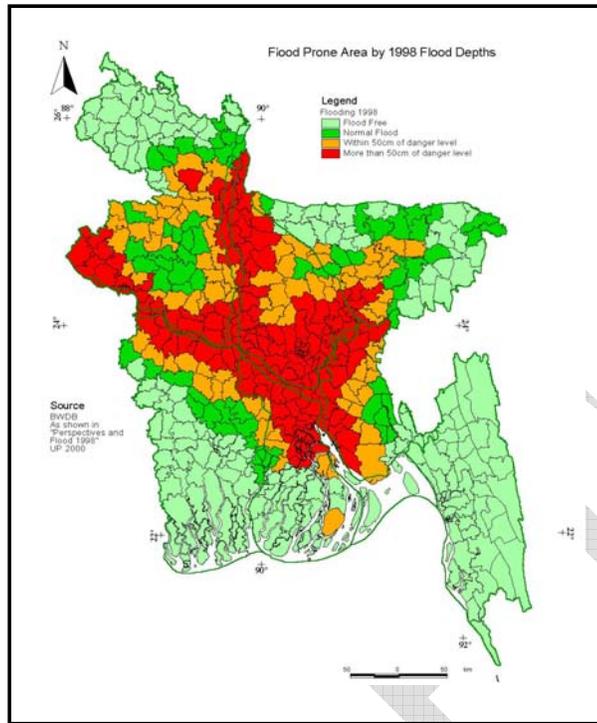


Figure 3: Flood prone areas by 1998 flood depth (Source: BWDB, 2000)

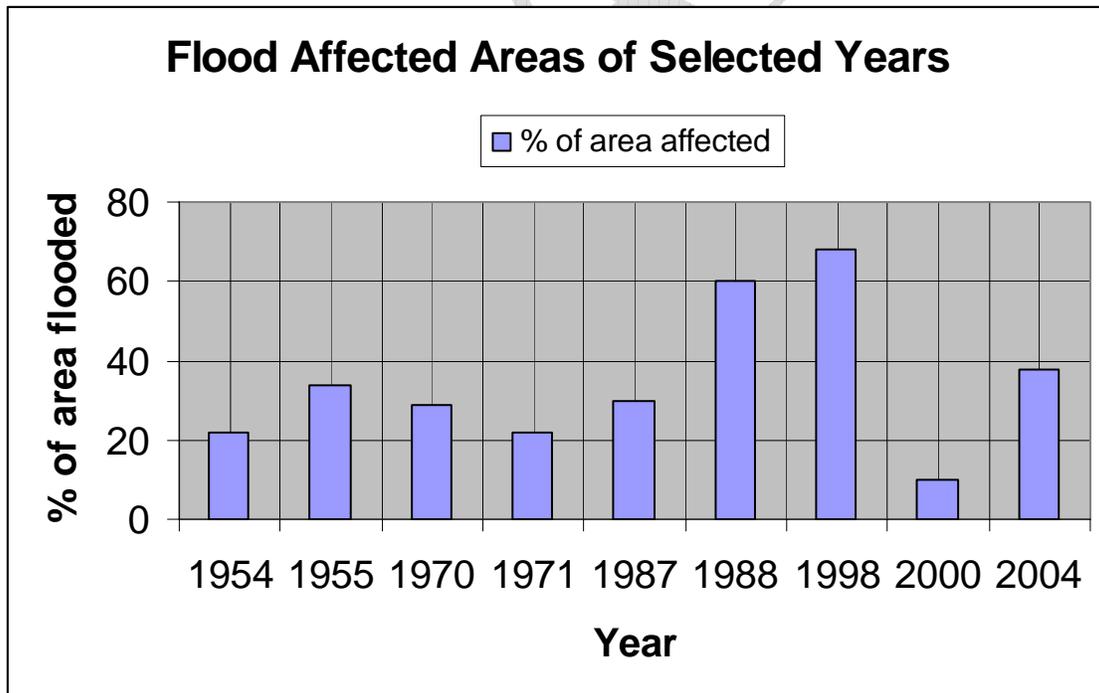


Figure 4: Flood affected area in different years (Source: State of Environment 2001(modified))

In the year 2000, Bangladesh faced an unusual flood over its usually flood-free south western plain, which also caused loss of life and massive damage to property. In 2004, floods inundated about 38% of the country (WARPO, 2005). About 747 people lost their lives. About 2500 kilometres of embankment were damaged. About 74 primary school buildings were washed away. This flood caused economic loss of about US\$ 2200 Million. Floods continue to be major hazards in Bangladesh. To mitigate the impacts of floods, the government has been developing and implementing various measures to better equip the country to deal with floods. The Ministry of Water Resources (MoWR) is leading the country on flood mitigation initiatives. Important initiatives include Flood Action Plan, Flood Hydrology Study, Flood Management Model Study, National Water Management Plan, National Water Policy, Flood Early Warning System Study, etc.

## 2.2 Cyclones and Storm Surges

Tropical cyclones from the Bay of Bengal accompanied by storm surges are one of the major disasters in Bangladesh. The country is one of the worst sufferers of all cyclonic casualties in the world. The high number of casualties is due to the fact that cyclones are always associated with storm surges. Storm surge height in excess of 9m is not uncommon in this region. For example, the 1876 cyclone had a surge height of 13.6 m and in 1970 the height was 9.11 m (WARPO, 2005). In fact, the 1970 Cyclone is the deadliest Cyclone that has hit Bangladesh coastline. With a wind-speed of about 224 km per hour and associated storm surge of 6.1 to 9.11 Metre, it was responsible for death of about 300,000 people. A list of devastating cyclones is given in Table 1.

**Table 1: Major cyclones that hit the Bangladesh coast**

Date		Maximum Wind speed (km/hr)	Storm Surge height (Meter)	Death Toll
11 May	1965	6.1-7.6	160	19,279
15 December	1965	4.6-6.1	211	873
01 October	1966	4.6-6.1	144	850
12 November	1970	6.0-9.1	224	300,000
25 May	1985	3.0-4.6	152	11,069
29 April	1991	6.0-6.0	225	137,470
19 May	1997	3.1-4.2	232	155

*Source: Chowdhury 1987, 1991 and Bangladesh Meteorological Department 1988, BBS, 1998*

The cyclone prone areas of Bangladesh are shown in Figure 5.

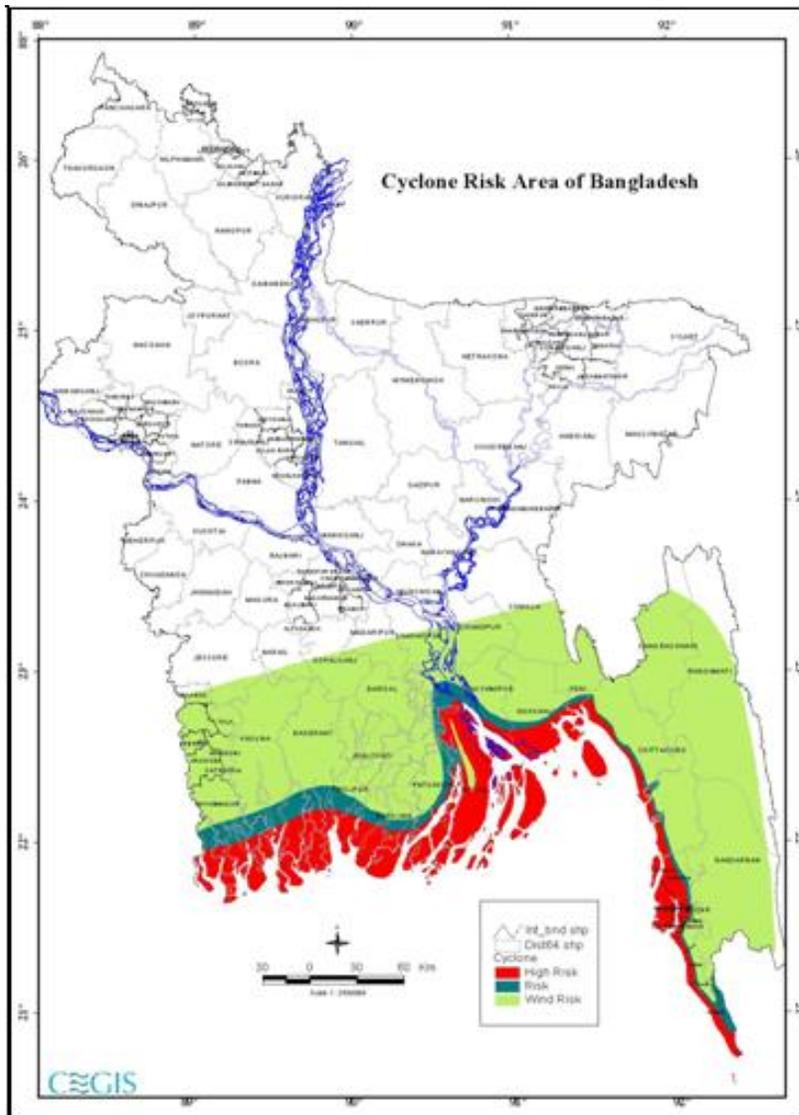


Figure 5: Cyclone prone areas of Bangladesh  
(Source: WARPO, 2005)

### 2.3 Tornado

The two transitional periods between southwest and northeast monsoons over the Indian sub-continent are characterized by local severe storms. The transitional periods are usually referred to as pre-monsoon (March-May), and post-monsoon (October- November). It is the pre-monsoon period when most of the abnormal rainfall or drought conditions frequently occur in different parts of Bangladesh. Also there are severe local seasonal storms, popularly known as nor'westers (*kalbaishakhi*). Severe nor'westers are generally associated with tornadoes. The tornado forms within the nor'wester, and moves along the direction of the squall of the mother storm. The frequency of nor'westers usually reaches the maximum in April, while a few occur in May, and the minimum in March. Nor'westers and tornadoes are more frequent in the afternoon. Table 2 shows some of the devastating nor'westers and tornadoes that hit Bangladesh. Nor'westers may occur in late February due to early withdrawal of winter from Bangladesh, Bihar, West Bengal, Assam, and adjoining areas. The occasional occurrence of nor'westers in early June is due to delay in the onset of the southwest monsoon over the region (Karmakar, 1989).

**Table 2: Some of the devastating nor'westers and tornadoes**

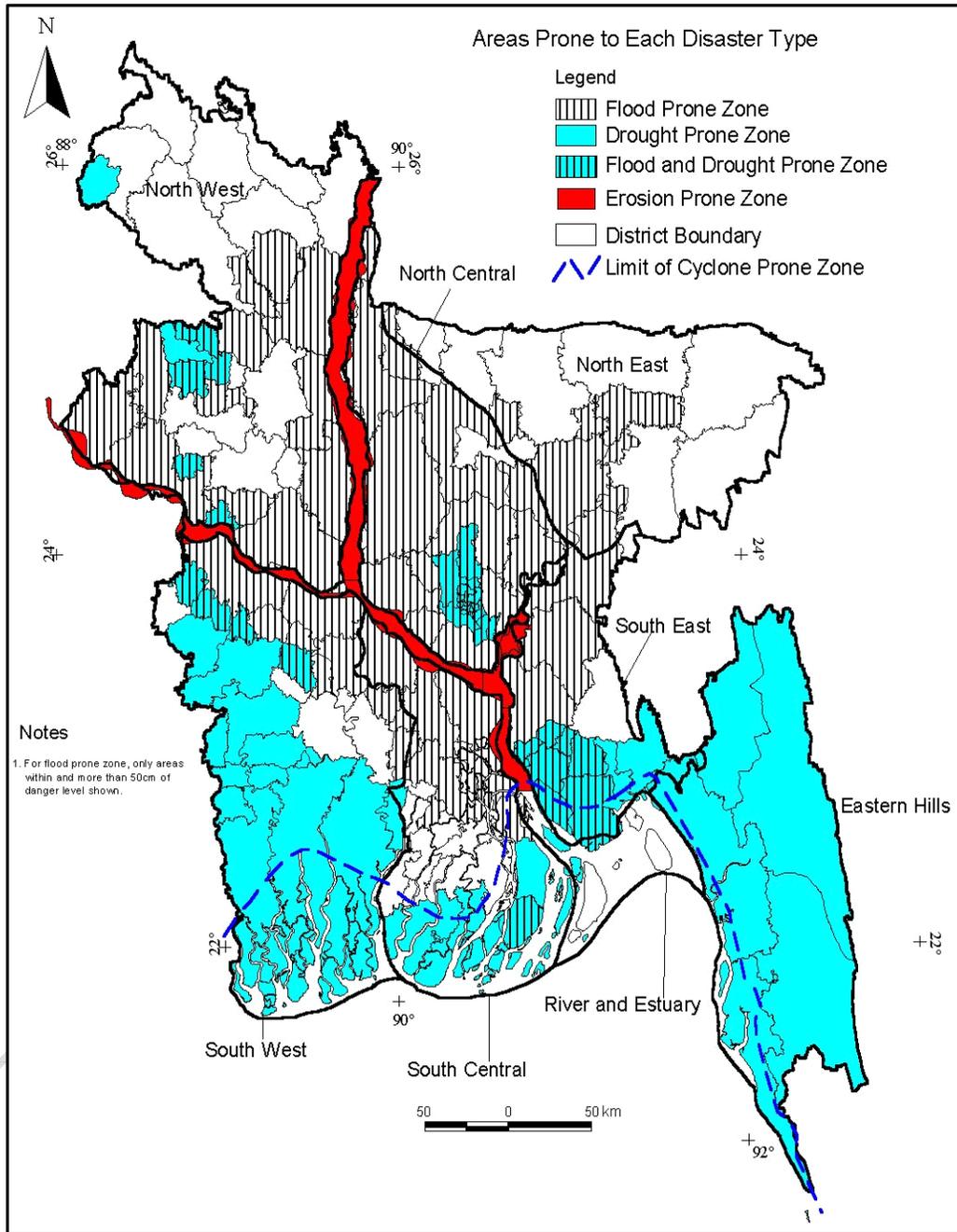
14 April 1969	Demra (Dhaka)
17 April 1973	Manikganj (Dhaka)
10 April 1974	Faridpur
11 April 1974	Bogra
09 May 1976	Narayanganj
01 April 1977	Faridpur
26 April 1989	Saturia (Manikganj)
14 May 1993	Southern Bangladesh
13 May 1996	Tangail
04 May 2003	Brahmanbaria
21 March 2005	Gaibandha

**Source: Bangladesh: State of the Environment 2001 and web sources**

Wind-speeds in nor'westers usually do not exceed 113-130 km/hr (70-80 miles/hr), though often their speeds exceed 162 km/hr (100 miles/hr). When the winds become whirling with funnel shaped clouds having a speed of several hundred kilometers or miles per hour, they are called tornados. Nor'westers bring the much needed pre-monsoon rain. They can also cause a lot of havoc and destruction. Tornados are suddenly formed and are extremely localized in nature and of brief duration. Thus, it is very difficult to locate them or forecast their occurrence with the techniques available at present. However, high-resolution satellite pictures, suitable radar, and a network of densely spaced meteorological observatories could be useful for the prediction or for issuing warnings of nor'westers and tornados.

## 2.4 River Bank Erosion

Rivers in Bangladesh are morphologically highly dynamic. The main rivers are braided, and form islands or chars between the braiding channels. These chars, of which many are inhabited, "move with the flow" and are extremely sensitive to changes in the river conditions. Erosion processes are highly unpredictable, and not compensated by accretion. These processes also have dramatic consequences in the lives of people living in those areas. A study concluded in 1991 reported that: out of the 462 administrative units in the country, 100 were subject to some form of riverbank erosion, of which 35 were serious, and affected about 1 million people on a yearly basis. Around 10,000 hectares land is eroded by river per year in Bangladesh (NWMP, 2001). The erosion prone zones of Bangladesh are shown in the Figure 6. Kurigram, Gaibandha, Jamalpur, Bogra, Sirajganj, Tangail, Pabna and Manikganj districts lie in the erosion prone area along Jamuna River. Erosion of total area and settlement is higher along the left bank than that of the right bank. Along Padma River, there are the districts of Rajbari, Faridpur, Manikganj, Dhaka, Munshiganj, Shariatpur and Chandpur. A recent study of CEGIS (2005) shows that bank erosion along Padma River during 1973 – 2004 was 29,390 hectares and along Jamuna River during 1973 – 2004, it was 87,790 hectares. As relevant to this study, loss of land, settlements, roads and embankments due to erosion in 2004 in Sirajganj and Faridpur districts is shown in Table 3.



**Figure 6: Areas Prone to Various Disasters including River Erosion (Source: NWRD)**

**Table 3: Erosion of agricultural land, roads, embankments and settlements along the banks of the Jamuna and Padma in 2004 in Sirajganj and Faridpur districts**

District	Upazila	Total Land (ha)	Eroded Infrastructures				
			Settlement (ha)	District Road (m)	Upazila Road (m)	Rural Road (m)	Embankment (m)
Sirajganj	Kazipur	177	50		176	84	1617
	Sirajganj Sadar	170	13	1		164	2107
	Belkuchi	0	0				
	Chauhali	207	45		395		
	Shahjadpur	148	31	159			
	<b>Total</b>	<b>702</b>	<b>139</b>	<b>160</b>	<b>571</b>	<b>248</b>	<b>3724</b>
Faridpur	Faridpur Sadar	200	57		1175	370	
	Char Bhadrasan	78	17	320			
	Sadarpur	3	1				
	<b>Total</b>	<b>281</b>	<b>75</b>	<b>320</b>	<b>1175</b>	<b>370</b>	

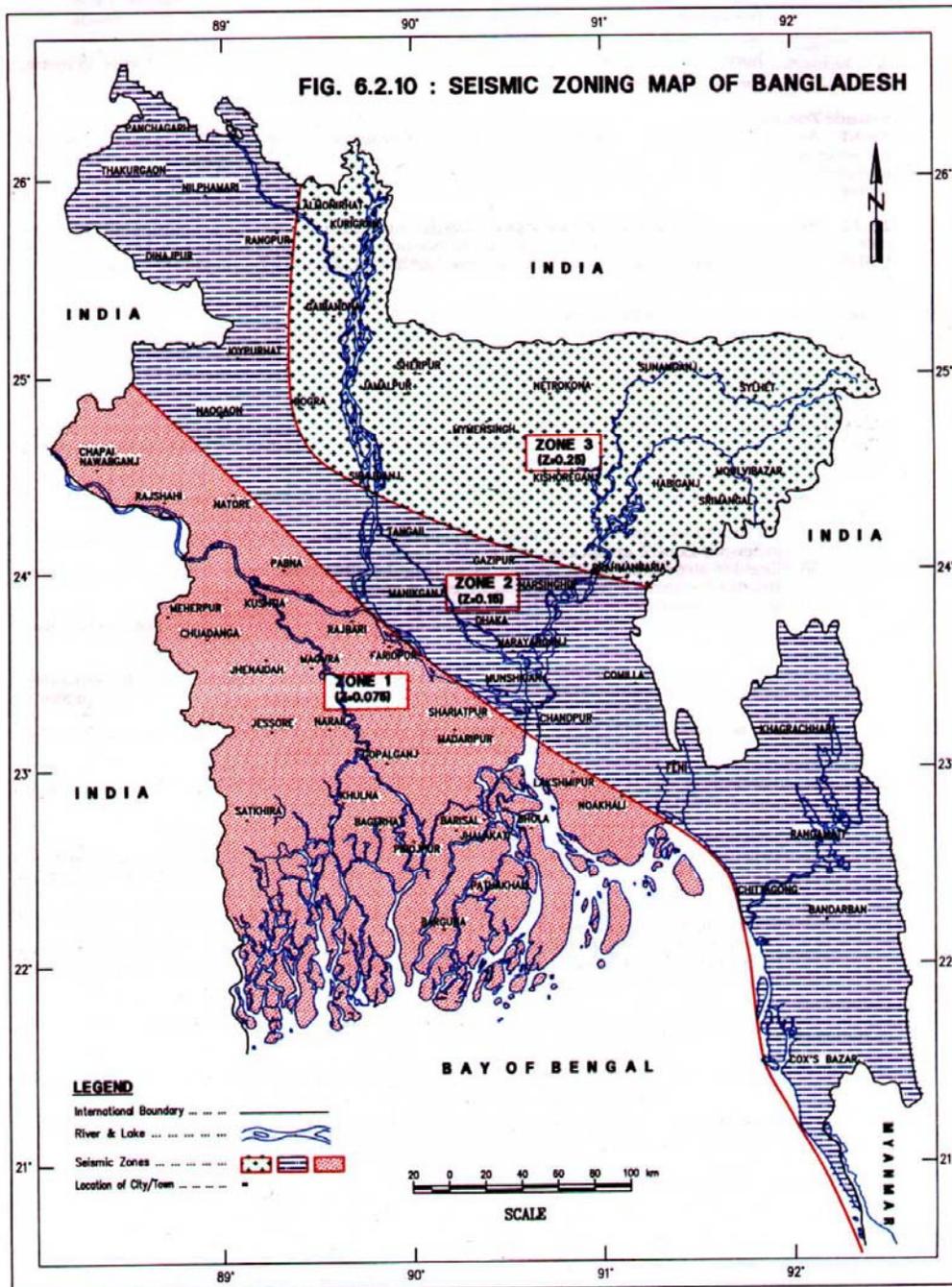
Source: CEGIS, 2005

## 2.5 Earthquake

Bangladesh and the northeastern Indian states have long been one of the seismically active regions of the world, and have experienced numerous large earthquakes during the past 200 years. The catastrophic earthquakes of 1762 and 1782 are believed to have been partially responsible for the diversion of the Old Brahmaputra River from the west of its main Arial Khan distributory to the present Padma channel. Since 1860 over 20 shallow and intermediate earthquake epicenters have been recorded in Bangladesh and the surrounding areas.

Lots of seismo-tectonic studies have been undertaken on the area comprising the Indo-Burman ranges and their western extension and in the northern India. A complete list of reference of this is provided in Haque, (1990), using data from various sources. A seismicity map of Bangladesh and its adjoining areas has also been prepared by BMD and GSB. Bangladesh has been classified into three seismic zones with zone-3 the most and zone-1 the least vulnerable to seismic risks (Fig. 7).

Figure 7: Seismic Zoning Map of Bangladesh



Source: Jamilur Reza Choudhury (JRC), 2005

**Table 4. List of Major Earthquakes Affecting Bangladesh**

Date	Name of Earthquake	Magnitude (Richter)	Epicentral Distance from Dhaka (km)	Epicentral Distance from Sylhet City (km)	Epicentral Distance from Chittagong (km)
10 January, 1869	Cachar Earthquake	7.5	250	70	280
14 July, 1885	Bengal Earthquake	7.0	170	220	350
12 June, 1897	Great Indian Earthquake	8.7	230	80	340
8 July, 1918	Srimongal Earthquake	7.6	150	60	200
2 July, 1930	Dhubri Earthquake	7.1	250	275	415
15 January, 1934	Bihar-Nepal Earthquake	8.3	510	530	580
15 August, 1950	Assam Earthquake	8.5	780	580	540

Source: JRC, 2005

The record of approximately 150 years shows that Bangladesh and the surrounding regions experienced seven major earthquakes (with  $M_b = 7$ ). In the recent past, a number of tremors of moderate to severe intensity had already taken place in and around Bangladesh. The Sylhet Earthquake ( $M_b = 5.6$ ) of May 8, 1997, the Bandarban Earthquake ( $M_b = 6.0$ ) of November 21, 1997, the Moheshkhali Earthquake ( $M_b = 5.1$ ) of July 22, 1999, and the Barkal (Rangamati) Earthquake ( $M_b = 5.5$ ) of July 27, 2003 may be cited as examples (Source: JRC, 2005).

## 2.6 Drought

Drought is an abnormal condition where there is a lack of sufficient water to meet the normal needs of agriculture, livestock, industry, or for human use. While generally associated with semi-arid or desert climates, droughts can also occur in areas that normally enjoy adequate rainfall, and moisture levels (ADB, 1991). It is the result of insufficient or no rainfall for an extended period, and causes a considerable hydrological (water) imbalance. The ensuing water shortage leads to stream flow reduction, depletion of ground water and soil moisture, and hence, crop damage. In drought conditions, evaporation and transpiration exceed normal levels. If it continues for a prolonged period, a serious threat is posed to agricultural production. In the agricultural context drought affects rice production the most. Based on drought severity, crop loss ranges between 20-60% for T. Aman and other

rice varieties (Iqbal, 2000). It is one of the most insidious causes of human misery. Basically, there are three types of droughts in Bangladesh:

- Permanent drought characterizes regions with the driest climate, having sparse vegetation that is adapted to aridity. Agriculture cannot be practiced without irrigation.
- Seasonal drought occurs due to abnormal rainfall shortage in places where there are well-defined annual rainy and dry seasons.
- Unpredictable drought involves an abnormal rainfall failure, mostly in localized areas of humid and sub-humid climates.

Bangladesh is at higher risk from droughts. Between 1949 and 1991, droughts occurred in Bangladesh 24 times. Very severe droughts hit the country in 1951, 1957, 1958, 1961, 1972, 1975, 1979, 1981, 1982, 1984 and 1989. Past droughts have typically affected about 47% area of the country and 53% of the population (WARPO, 2005). Figures 8 shows the drought prone areas of Bangladesh.

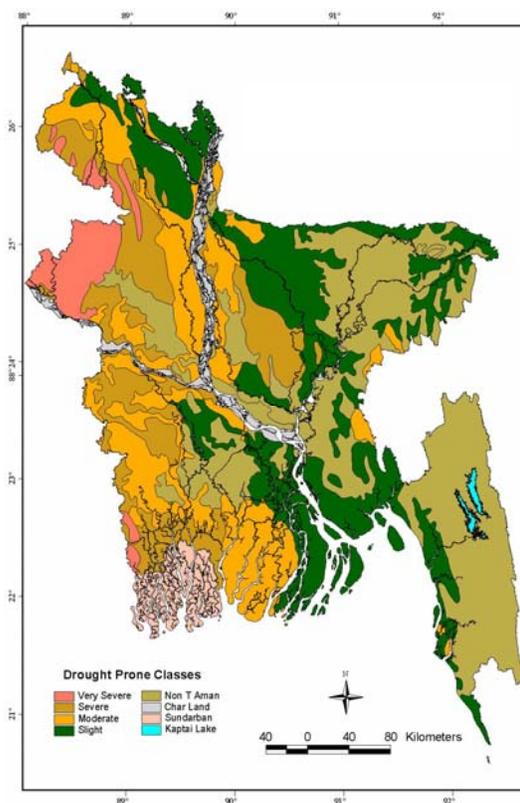


Figure 8 (a): Drought prone (Kharif) areas of Bangladesh (Source: SARDI)

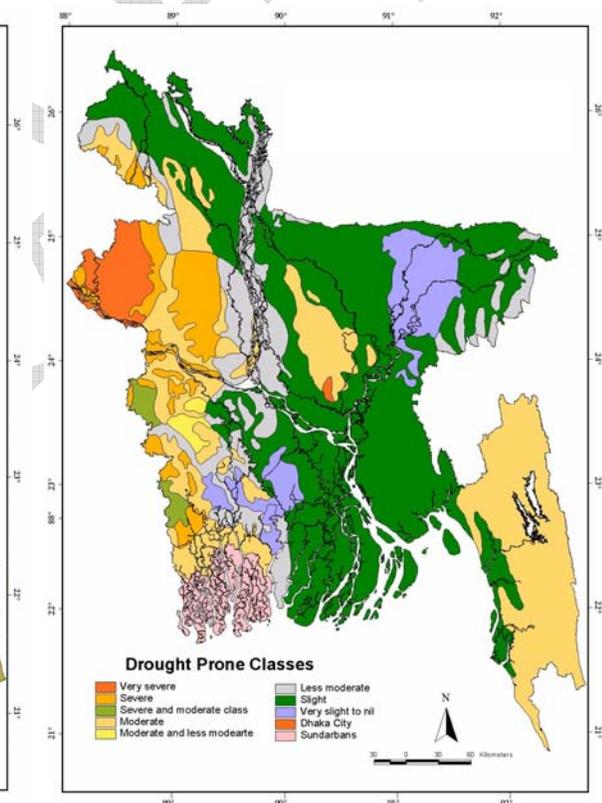
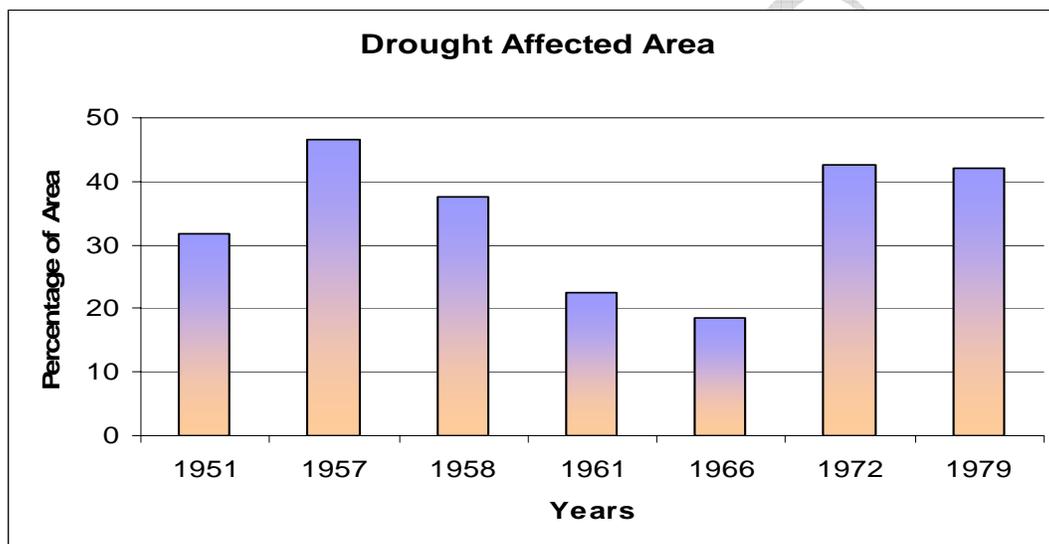


Figure 8 (b): Drought prone (Rabi and Pre Kharif) areas of Bangladesh (Source: SARDI)

Drought conditions due to deficiency in rainfall affect different parts of Bangladesh mostly during the pre-monsoon and post-monsoon periods. One study has shown (Figure 9) that from 1949 to 1979, drought conditions had never affected the entire country and total population in any drought year. The drought of 1979 was one of the severest in recent times. The percentage of drought-affected areas was 31.63 percent in 1951, 46.54 percent in 1957, 37.47 percent in 1958, 22.39 percent in 1961, 18.42 percent in 1966, 42.48 percent in 1972, and 42.04 percent in 1979. During 1981 and 1982, drought affected the production of the monsoon crop only.



**Figure 9: Drought affected areas of Bangladesh in different years (Source: State of Environment 2001).**

## 2.7 Arsenic Contamination

At present, arsenic contamination is considered to be a dangerous environmental threat and a serious health risk. It is identified as a public health emergency in Bangladesh. There is no specific treatment for chronic arsenicosis other than ceasing further intake of arsenic contaminated water and raising awareness of the population about the problem.

The value (recommended limit) for arsenic in drinking water as per the guideline of the World Health Organization (WHO) is 10 mg/L while the national standard in most countries, including Bangladesh, is 50 mg/L. With varying levels of contamination from region to region, groundwater in 61 out of the 64 districts in Bangladesh is contaminated with arsenic. According to a study conducted by the British Geological Survey and DPHE, Bangladesh, arsenic concentrations in the country range from less than 0.25 mg/L to more than 1600 mg/L. This study report estimates that out of the Bangladesh population of 125.5 million, up to 57 million drinks water that has an arsenic concentration greater than the WHO guideline value and up to

35 million drinks water that has concentrations in excess of the Bangladesh standard. The waters in the southwest and southeast parts of Bangladesh are highly contaminated with arsenic (Figure 10). Important government initiatives to mitigate risk to arsenic contamination include development of the National Policy for Arsenic Mitigation 2003 and the Implementation Plan for Arsenic Mitigation in Bangladesh

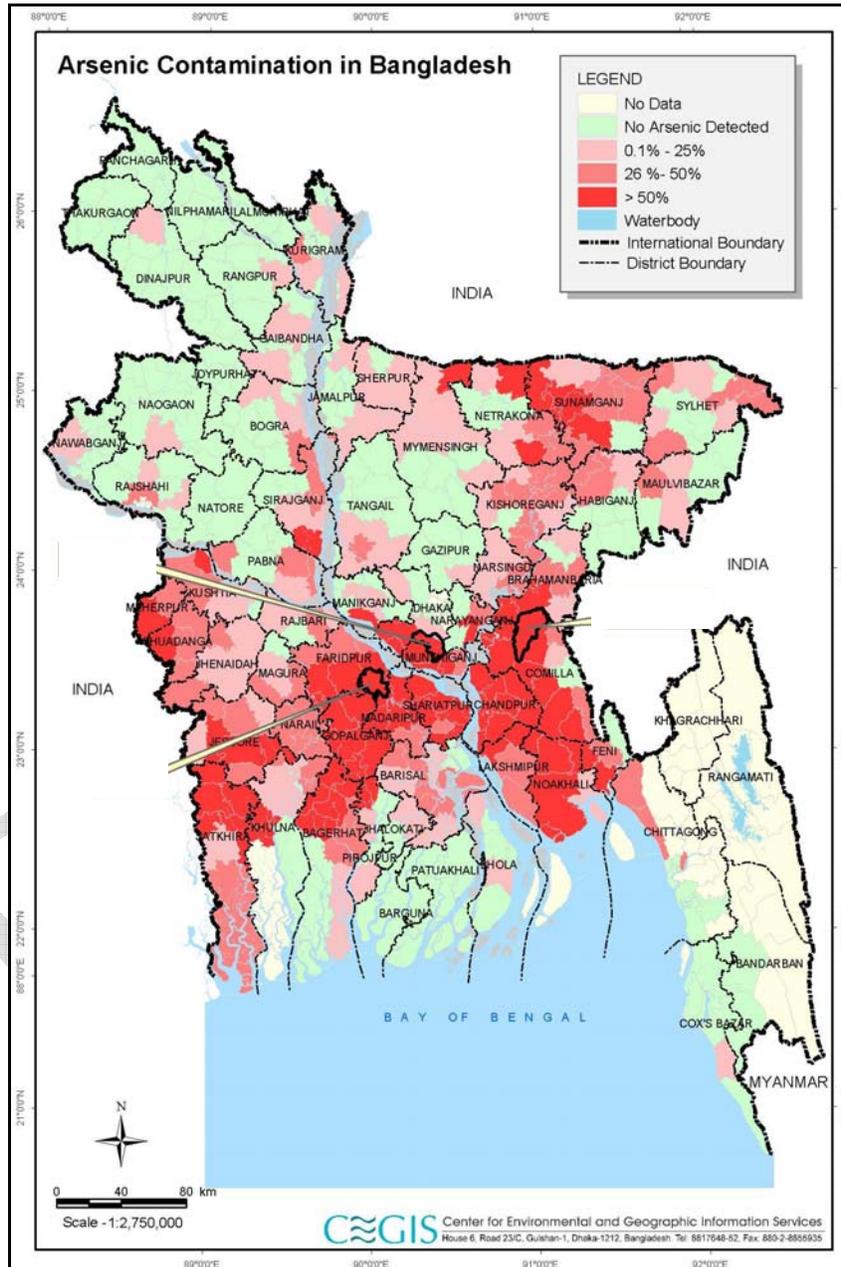
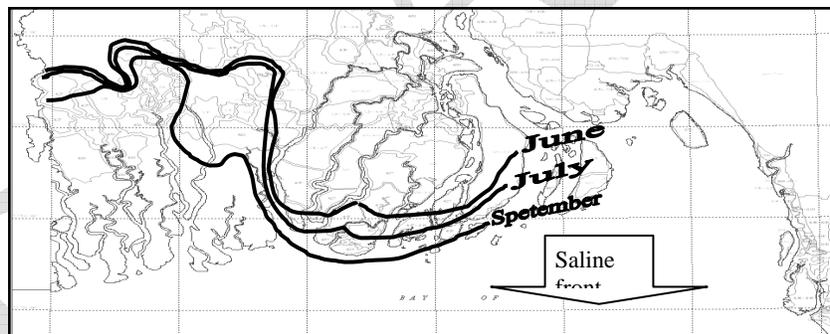


Figure 10: Arsenic contamination status in Bangladesh

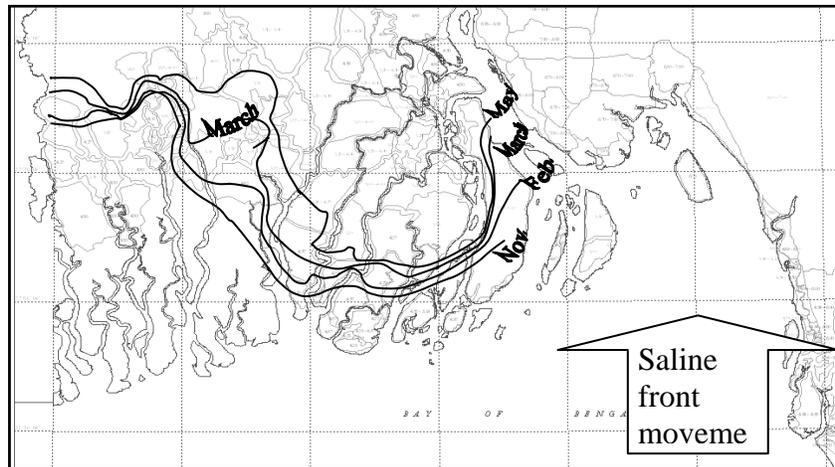
## 2.8 Salinity Intrusion

Saline water intrusion is mostly seasonal in Bangladesh; in winter months the saline front begins to penetrate inland, and the affected areas rise sharply from 10 percent in the monsoon to over 40 percent in the dry season. Coastal districts such as Satkhira, Khulna, Bagerhat, Barguna, Patuakhali, Barisal are the victims of salinity intrusion. Agricultural production, fisheries, livestock, and mangrove forests are affected by higher salinity in the dry season. It is observed that dry flow trend is being declined as a result of which sea flow (saline water) is travelling far inside the country resulting in contamination both in surface and ground water.

Salinity data from Land Reclamation Programme (LRP) and Meghna Estuary Study (MES) indicate an enormous seasonal effect due to the influence of huge fresh water discharge from the Lower Meghna River on the horizontal distribution of salinity in the estuary. This distribution is strongly influenced by the fresh water flow in the Lower Meghna River. Figures 11 and 12 present the movement of the 1 ppt salinity line during monsoon and dry season respectively. High salinity both in monsoon and dry season in the southwest corner and along the Pussur-Sibsa system of the area is associated with the decreasing upstream freshwater flow as well as silting of major channels (WARPO, 2005).



**Figure 11: Movement of saline front of 1 ppt in the monsoon season (June to September)**



**Figure 12: Movement of saline front of 1 ppt in the dry season (November to May)**

## 2.9 Tsunami

Before the Asia Tsunami 2004, a few Bangladeshis ever thought that Bangladesh was vulnerable to tsunami hazards. However, the 2004 Asia Tsunami raised the question why Bangladesh was not hit by the Tsunami. Bangladeshi scientists put together the following reasons:

1. Long distance from the Epicenter
2. Long Continental Shelf (about 200 km) at the front of Ganges- Brahmaputra active Delta System.
3. Thick sedimentation in Bengal fan
4. High density of sea-water in Bay of Bengal around / along the coast (suspended load).
5. Anti-clockwise oceanic current at Bay of Bengal (winter time)

Considering the state of tsunami vulnerability and potential seismic sources the coastal belt of Bangladesh, Geological Survey of Bangladesh has divided the Bangladesh coastal belt into three zones:

a. *Tsunami Vulnerable Zone- I* (Chittagong-Teknaf coastline) *Most vulnerable*. The intra-deltaic coastline is very close to the tectonic interface of Indian and Burmese plates. The active Andaman-Nicobar fault system is often capable of generating tsunami waves.

b. *Tsunami Vulnerable Zone- II* (Sundarban-Barisal coastline)– *Moderately vulnerable*. This old deltaic belt is extremely vulnerable to local tsunamis due to presence of Swatch of No Ground.

c. *Tsunami Vulnerable Zone- III* (Barisal-Sandwip estuarine coastline)– *Low vulnerability*. The estuarine coastal belt considered to be less vulnerable due

to presence of numerous islets and shoals in the upper regime of the continental shelf.

Bangladesh needs detailed study to scientifically assess the Tsunami vulnerability. Bangladesh also needs to develop a Tsunami early warning system and mass awareness of Tsunami threat at the coastal areas.

## 2.10 Fire



Fire hazards occur frequently in Bangladesh. Fire causes huge loss of lives and properties every year. Although termed as 'fire accident', most fire events are far from being accidental. Indeed, most fires are preventable. Industrial units, particularly garments industry, produce deadliest of the fires. For example, a fire broke out on 6 January 2005 on the fourth-floor of a building housing a factory in Narayanganj. It took fire-fighters four hours to extinguish the blaze. Dozens of workers were injured as they desperately tried to escape down the narrow smoke-engulfed stairs. About 23 people died because they were unable to escape because many of the exits were blocked, and the fire extinguishers were not working.

Tragically, factory fires are all too common in Bangladesh. Whenever a fire occurs, the authorities are usually asked to investigate the fire, pay

exemplary compensation to the survivors as well as to the families of those that died, take immediate steps to improve health and safety in the industry, as well as take legal action against those found responsible for criminal negligence in allowing the existence of such unsafe conditions. Fire incidents in the country are increasing at an alarming rate. In 2004 alone, a total of 7,140 fire incident occurred which caused damage to property worth more than Tk. 200 crore.

### 2.11 Infrastructure Collapse



A nine-storied building housing a garments factory at Palashbari, Savar, Dhaka collapsed at around 1 am on 11 April 2005. It was a total structural failure. Local administration, especially the Fire Brigade and Bangladesh Army quickly rushed to the spot just after the collapse. NGOs, construction companies and other organizations joined later. 40-50 rescued alive during that night. Rescue Operations completed on 19.04.05. Scores of people died.

Lessons learned from the operation includes the following: a) site was inaccessible to the equipments – mobilized almost all the required equipments but sitting idle due to their inaccessibility to the site, b) unfamiliarity with the understanding and practical collapse condition, c) Lack of awareness of mass people on the stages of rescue operations, and d) Insufficient /lack of appropriate modern equipments to rescue victims alive

Incidents of infrastructure collapse are on the rise. Prevention and preparedness programmes are absolute necessity of the time.

### **III. DISASTER MANAGEMENT VISION**

The Disaster Management Vision of the Government of Bangladesh is to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environmental and human induced hazards, to a manageable and acceptable humanitarian level, and to have in place an efficient emergency response system capable of handling large scale disasters.

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## **IV. DISASTER DEVELOPMENT LINKAGES: NATIONAL AND INTERNATIONAL DRIVERS FOR CHANGE**

### **4.1. Millennium Development Goals**

The Millennium Declaration of September 2000 identified, among others, the following key objectives:

Protecting the vulnerable

“We will spare no effort to ensure that children and all civilian populations that suffer disproportionately the consequences of natural disasters.....are given assistance and protection so that they can resume normal life as soon as possible.”

Protecting our common environment which resolve to “intensify cooperation to reduce the number and effects of natural and man-made disasters”.

Principal goals include the following:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

## 4.2. Poverty Reduction Strategy Paper (PRSP), Bangladesh

Poverty-disaster interface in Bangladesh is quite perplexing. Disasters have had adverse long-term impact on economic and social activities of the poor. Additionally, the poor are more vulnerable to any kind of disaster due to a) depletion of assets, b) income erosion due to loss of employment, c) increased indebtedness and d) out migration. Moreover, cost to cope with disaster is disproportionately higher for the poor.

Poverty Reduction Strategy Paper is a policy and strategy document prepared by World Bank and the IMF member countries in broad consultation with stakeholders and development partners, including the staffs of the World Bank and the IMF to be updated every three years with annual progress reports. It describes the country's macroeconomic, structural and social policies and programs in support of growth and poverty reduction, as well as associated external financing needs and major sources of financing.

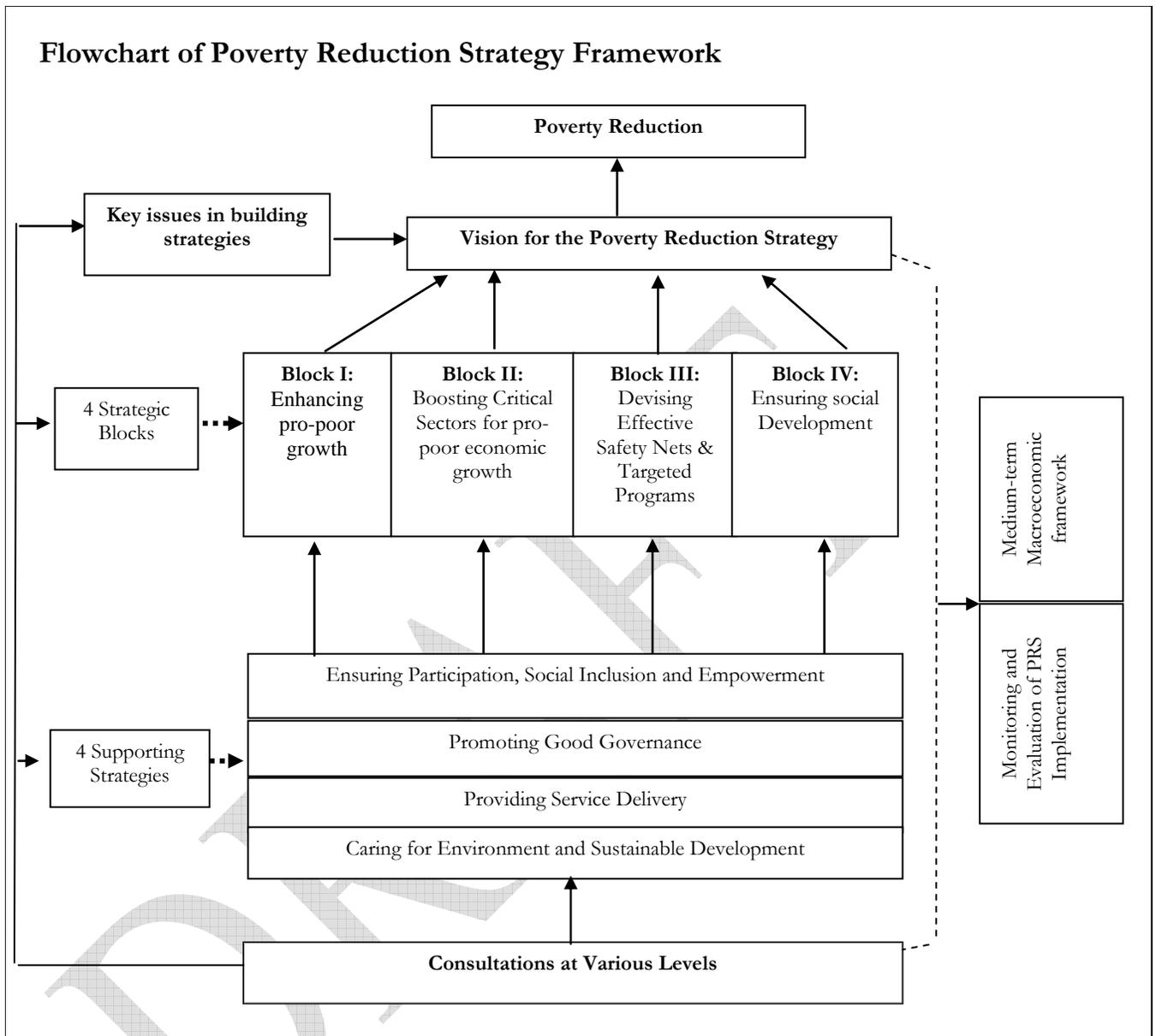
For WB and the IMF financing it is the basis for concessional lending from IMF and the WB for the low-income countries and debt relief under the WB-IMF Heavily Indebted Poor Countries (HIPC) initiatives.

The principal goal of the Bangladesh Government's economic policy is to reduce poverty so as to gradually lift the vast majority of the people above the poverty line and improve the quality of life for the average citizen. Developing home-grown poverty reduction strategies (PRSPs) along with operational plans suited to the particular circumstances and needs of Bangladesh with a focus of long-term vision was thus the objective of Bangladesh PRSP.

The core principle of the Bangladesh PRSP include the following:

- It is country-driven and promotes national ownership of strategies through broad-based participation of civil society;
- It is result-oriented and focused on outcomes that will benefit the poor;
- It is comprehensive in recognizing the multidimensional nature of poverty;
- It is partnership-oriented and involves coordinated participation of development partners (government, domestic stakeholders, and external donors); and
- It is based on a long-term perspective for poverty reduction.

The poverty reduction strategy framework in Bangladesh is as follows:



**Figure- 13: Poverty Reduction Strategy Framework**

Considering the direct poverty disaster linkages the Bangladesh PRSP included one separate policy matrix Number 07 on Comprehensive disaster management towards poverty reduction and growth. Disaster Management as a cross-cutting issue being included in the following three other policy matrices:

- a. Policy Matrix 08: Food security
- b. Policy Matrix 12: Promote use of ICT in Disaster Management

- c. Policy Matrix 15: Ensure social protection for women against vulnerability and risks

The Policy Matrix 07 envisages:

- Mainstreaming disaster management and risk reduction into national policies, institutions and development processes (introduction of Disaster Impact and Risk Assessment (DIRA))
- Strengthening disaster management and risk reduction capacity
- Ensuring knowledge management (acquiring, storing, sharing and applying) on disaster risk reduction
- Enhancing community level capacity for disaster risk reduction (community level preparedness, response, recovery and rehabilitation)

Ensuring social protection of women, children, elderly, people with disability and other vulnerable groups against vulnerability and risk

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### **4.3. Recommendations of the National Workshop on Options for Flood Risks and Damage Reduction in Bangladesh, 2004**

In 2004, Bangladesh experienced one of the most devastating floods in nearly 50 years. About 38% of the country went under water. The damage caused by the flood was to the tune of US\$ 2 billion. Millions of people were affected. The most affected were the poor- the most vulnerable in such disasters.

In the backdrop of the devastating 2004 flood, on 7-9 September a national workshop was convened with the Prime Minister's Office on 'Options for Flood Risks and Damage Reduction in Bangladesh'. The workshop was attended by about 900 participants, including scientists, academicians, engineers, government servants, social workers, NGO leaders, defence personnel, businessmen and industrialists, representatives from development partners and the private sector. The objective of the workshop was to develop/design a context based set of policy recommendations for flood management in Bangladesh and evaluate the experiences of flooding and flood management initiatives and lessons learnt from different kinds of interventions in the flood plains. The workshop also explored socio-economic aspects of the problem.

The workshop was inaugurated by the Hon'ble Prime Minister of the Peoples' Republic of Bangladesh. Hon'ble Ministers from the ministries concerned were present throughout the seminar. The Workshop started with presentation of three keynote papers from three very eminent experts on water resources, community participation and economy. Thereafter, the workshop broke up into parallel working group sessions along six broad themes. The themes included: (i) Working Group 1: Flood & Disaster Management and Mitigation Options, (ii) Working Group 2: Impact of Flood on National Transportation and Mitigation Options, (iii) Working Group 3: Impact to Flood on Agriculture, Livestock, Fisheries & industries Sector and Mitigation Options, (iv) Working Group 4: Impact of Flood on Housing, Urban Planning Utilities (Water Supply, Sanitations) & Environment and Mitigation Options, (v) Working Group 5: Impact of Flood on Social Services and Law & Order and Mitigation Options, (vi) Working Group 6: Impact of Flood on Economy Major Infrastructures and Livelihood and Mitigation Options.

The workshop came up with a total of 323 recommendations of which 87 recommendations were directly related to the Ministry of Food and Disaster Management.

As a follow-up to the workshop a detailed implementation plan of all the recommendations suggested were prepared with the direct involvement from the ministries and departments concerned. The Plan also identified the resource requirements, timeframe and the probable development partners.

#### 4.4. Hyogo Framework for Action (HFA) 2005-2015

On January 18-22, 2005 the World Conference on Disaster Reduction was held in Kobe Japan. About 4,000 participants from 168 States, 78 observer organizations from the UN and other inter-governmental organizations, 161 NGOs and 154 media organizations attended the conference.

The broad objective of the conference was building the resilience of nations and communities to substantially reduce the losses in lives and social, economic and environmental assets of communities.

The specific objectives were:

- Conclude the review of the Yokohama Strategy and Plan of Action with a view to updating the guiding framework on disaster reduction for the 21st century;
- Identify specific activities aimed at ensuring the implementation of relevant provisions of the Johannesburg Plan of Implementation (JPOI), adopted in 2002 at the World Summit on Sustainable Development (WSSD);
- Share best practices and lessons learned to support and facilitate disaster reduction within the context of attaining sustainable development, and identify gaps and challenges;
- Increase awareness of the importance of disaster reduction policies to facilitate and promote the implementation of those policies; and
- Increase the reliability and availability of appropriate disaster-related information to the public and disaster management agencies in all regions, as set out in the relevant provisions of the JPOI.

The conference produced a 10 year Framework document called “**Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities**”. The HFA commits:

- To pursue an integrated multi-hazard approach for sustainable development to reduce the incidence and severity of disasters;
- To place disaster risk at the center of our political priorities and policies;
- To integrate disaster risk reduction in all our development work;
- To strengthen the capacity of disaster prone countries to address risk;
- To invest substantively in disaster preparedness;

- To reduce the relief-development gap and thereby reduce vulnerability;
- To enable civil society actors and affected communities to strengthen their resilience to disasters
- To reduce the gap between what we know and what we do, with the critical ingredient being political commitment; and
- To build on the momentum of this World Conference to accelerate implementation of the Framework for Action.

### Priorities for action

Drawing on the conclusions of the review of the Yokohama Strategy, and on the basis of deliberations at the Conference and especially the agreed expected outcome and strategic goals, the World Conference on Disaster Reduction adopted the following five priorities for action:

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

Countries that develop policy, legislative and institutional frameworks for disaster risk reduction and that are able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for, engagement in and compliance with disaster risk reduction measures across all sectors of society.

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

The starting point for reducing disaster risk and for promoting a culture of disaster resilience lies in the knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters that most societies face, and of the ways in which hazards and vulnerabilities are changing in the short and long term, followed by action taken on the basis of that knowledge.

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

Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation and dissemination of relevant knowledge and information on hazards, vulnerabilities and capacities.

#### 4. Reduce the underlying risk factors

Disaster risks related to changing social, economic, environmental conditions and land use, and the impact of hazards associated with geological events, weather, water, climate variability and climate change, are addressed in sector development planning and programmes as well as in post-disaster situations.

#### 5. Strengthen disaster preparedness for effective response at all levels

At times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management.

#### **4.5. United Nations Framework Convention on Climate Change (UNFCCC)**

Climate change is rapidly emerging as one of the most serious threats that humanity may ever face. Global warming threatened the development goals for billions of the world's poorest people. We face a genuine danger that recent gains in poverty reduction will be thrown into reverse in coming decades, particularly for the poorest communities.

The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 189 countries having ratified.

Under the Convention, governments:

- gather and share information on greenhouse gas emissions, national policies and best practices
- launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries
- cooperate in preparing for adaptation to the impacts of climate change

The Convention entered into force on 21 March 1994.

#### 4.6. SAARC Framework for Action (SFA) 2006-2015

The Heads of State or Governments in the 13th Dhaka Summit called for elaboration of a Comprehensive Framework on Early Warning and Disaster Management. In view of the December 2004 Asia Tsunami and the 2005 Pakistan Earthquake, the Heads of State or Governments underscored the urgency to put in place a regional response mechanism dedicated to disaster preparedness, emergency relief and rehabilitation to ensure immediate response. They directed the concerned national authorities to coordinate their activities in the areas of disaster management such as early warning, exchange of information, training and sharing of experiences and best practices in emergency relief efforts.

Following the Dhaka Declaration, a SAARC (South Asian Association for Regional Cooperation) Expert Group was formed to formulate a regional comprehensive framework on disaster management for the SAARC region. The expert group met in Dhaka on 7-9 February 2006. As per the mandate of the Meeting and taking into account the deliberations of the Meeting, Bangladesh circulated a draft Comprehensive Framework on Disaster Management titled- 'Disaster Management in South Asia: A Comprehensive Regional Framework for Action 2006-2015', for consideration. After detailed discussions and amendments, the Framework was adopted in the Meeting.

Strategic Goals of the framework include the following:

- Professionalising the disaster management system;
- Mainstreaming disaster risk reduction;
- Strengthening of community institutional mechanisms;
- Empowering community at risk particularly women, the poor and the disadvantaged;
- Expanding risk reduction programming across a broader range of hazards (all hazards approach);
- Strengthening emergency response systems; and
- Developing and strengthening networks of relevant national, regional and international organizations.

The SFA identifies the following as the priority areas for action:

- Develop and implement risk reduction strategies
- Establish Regional and National Response Mechanisms
- Establish a Regional Information Sharing Mechanism and Develop Network of Institutions and Organizations
- Develop and implement Disaster Management training, education, research and awareness programmes
- Apply the ICT for disaster management.
- Establish an effective monitoring and evaluation mechanism.

For implementation and follow up of the SFA, it has been emphasized that:

- The strategic goals and priorities for action should be addressed by different stakeholders in a multi-sectoral approach, including the development sector.
- Member States and regional organizations will integrate disaster risk reduction considerations into their sustainable development policy, planning and programming at all levels.
- Civil society, including volunteers and community-based organizations, the scientific community and the private sector are vital stakeholders in supporting the implementation of disaster risk reduction at all levels.
- While each Member State has primary responsibility for its own economic and social development, an enabling regional environment is vital to stimulate and contribute to developing the knowledge, capacities and motivation needed to build disaster resilient nations and communities.
- All the Member States will be encouraged to apply a holistic approach and maintain consistency in programming and building multi-stakeholder partnerships at all levels, as appropriate, to contribute to the implementation of this Framework for Action.
- Member States and other actors are encouraged to promote the strengthening or establishment of volunteer corps, which can be made available during disasters.
- Member countries shall develop their own plan of action for implementation of this framework.

The draft SFA was placed before the SAARC Environment Ministers' Meeting held in Dhaka from 22-24 May 2006. The Meeting endorsed the SFA and urged the member states to prepare their own plans of actions for implementation of the SAARC framework and forward to the SAARC Secretariat by December 2006. This National Plan is an outcome of the SAARC process.

## V. METHODS OF PLAN DEVELOPMENT

After the approval of the SFA at the SAARC Council of Ministers' Meeting held in Dhaka on 01 August 2006, the Ministry of Foreign Affairs requested MoFDM to urgently prepare the National Plan. Accordingly, the MoFDM formed a committee (Annexure- 1) to recommend a draft national plan. The committee requested the Comprehensive Disaster Management Programme (CDMP) to formulate the draft plan. CDMP engaged a drafting and editing team for this purpose (Annexure-2). CDMP also formed a working group for this purpose (Annexure-3). Initially CDMP prepared a planning template and consulted both the working group and the MoFDM committee on several occasions. Several versions of the draft were prepared and consulted. Finally, version three of the draft national plan was placed before a wider group comprising government and non-government organizations and academic institutions (Annexure-4). With the feedback from this wider group, the draft national plan was finalized.

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## VI. OBJECTIVES OF THE PLAN

The objectives of this Plan are to:

- Align the strategic direction of disaster management programs with national priorities and international commitments.
- Articulate the vision and goals for disaster management
- Outline the strategic direction and priorities to guide the design and implementation of disaster management policies and programs.
- Create a cohesive and well coordinated programming framework incorporating government, non-government and private sector.
- Ensure that disaster management has a comprehensive and all-hazards focus comprising disaster risk reduction and emergency response.
- Illustrate to other ministries, NGOs, civil society and the private sector how their work can contribute to the achievements of the strategic goals and government vision on disaster management.

### 6.1. CORE PRINCIPLES

The core principles of this plan have been adopted from the PRSP.

- **Country Driven**, promoting national ownership of strategies through broad based participation of government, NGOs and civil society.
- **Result Oriented** and focused on outcomes that will benefit vulnerable communities, especially women, the poor and socially disadvantaged.
- **Comprehensive** in recognizing the multidimensional nature of risk reduction.
- **Partnership oriented**, involving coordinated participation of development partners (government, domestic stakeholders, and external donors)
- Based on a **long-term perspective** for risk reduction.

## **VII. STRATEGIC GOALS OF THE PLAN**

The strategic goals of the plan are drawn from the SAARC Disaster Management Framework

GOAL 1: PROFESSIONALISING THE DISASTER MANAGEMENT SYSTEM

GOAL 2: MAINSTREAMING RISK REDUCTION

GOAL3: STRENGTHENING INSTITUTIONAL MECHANISMS

GOAL 4: EMPOWERING AT RISK COMMUNITIES

GOAL 5: EXPANDING RISK REDUCTION PROGRAMMING

GOAL 6: STRENGTHENING EMERGENCY RESPONSE SYSTEMS

GOAL 7: DEVELOPING AND STRENGTHENING NETWORKS

The linkages of the key strategic goals to key international and national drivers for change are presented in Annexure- 5.

## VIII. CONCEPTUALIZING DISASTER MANAGEMENT IN BANGLADESH

### 8.1. Disaster Management Model

Bangladesh has created a simplistic model to guide disaster risk reduction and emergency response management efforts in Bangladesh. The model (Figure 14) has three key elements and ensures that the move to a more comprehensive risk reduction culture remains central to all efforts.



Figure 14: Disaster Management Model

### ***8.1.1. Defining and redefining 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.

To develop actions for managing risk (risk treatment options) the risk environment must first be defined. Defining the risk environment creates knowledge of the interaction of hazard and the elements at risk (community) and is conducted in a structured and analytical process. Defining the risk environment involves both the traditional and formal hazard analysis, and includes the following steps:

- Understanding the social, political and community environment (Establishing the context)
- Establishing what are the likely threats (Identifying hazards and risks)
- Understanding the likelihood and consequences (Analyse the risks)
- Rank risks in priority (Evaluate risks)
- What can be done to eliminate, reduce or manage risk (Identify risk treatment strategies).

#### ***8.1.1.1. Hazard Analysis***

Hazard Assessment is the process of identification of events that lead to harm or loss. It may be undertaken using traditional or formal methods, and should consider both primary hazards (e.g. cyclone) and secondary hazards (e.g. storm surge, wind, rain). Hazards may be represented using GIS and modern mapping methodologies, and must include details of the effects to communities of the hazard.

#### ***8.1.1.2. Vulnerability Assessment***

In order to understand the interaction of hazards on communities, it is important to conduct a vulnerability assessment. This should be completed in terms of elements within the community (e.g. women, children, and the poor), support elements to the community (e.g. lifelines (electricity) transportation links, community services) and livelihood factors within the community (e.g. food, accommodation, farm activity, industry)

#### ***8.1.1.3. Risk Treatment***

Risk Treatment options involve ranking risk in priority, and addressing vulnerability by determining actions that reduce or eliminate risk or by determining mitigation programs for communities.

### ***8.1.2. Managing the risk environment***

This element of the model 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 the 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.

Managing the risk environment involves developing programs and strategies that eliminate, or reduce the level of risk. Traditionally mitigation programs were viewed as engineering solutions to eliminate risk, but it is now accepted that all activities undertaken to eliminate or reduce risk are “mitigation” strategies (e.g. community education and awareness, planning activities, development of warning systems). This includes activities previously described as the PPRR Model- Prevention, Preparedness, Response and Recovery. Activities in developing response or recovery systems are included as legitimate mitigation activities.

### ***8.1.3. Responding to the threat environment***

This element of the model 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.

Not all hazards can be managed and not all risks can be eliminated or minimized. At times a response to an emerging threat or an event that has happened will be necessary. In this case, response and recovery systems that have been developed in managing the risk environment are activated as needed to respond to the threat. Such response may include:

- Warning Period (Alert and activation).
- Hazard Onset (Response), and.
- Post Hazard Period (Relief, early recovery and Rehabilitation).

#### **The key attributes of the model are:**

- It provides a framework to guide the achievement of the Hyogo Framework for Action commitments.
- It clearly articulates the key elements of disaster management and their interactive relationships.
- It facilitates the transition from generic hazard based to specific risk based programmes through the inclusion of technical inputs.
- It provides guidance for the design of policy, planning and training.
- It provides a mechanism to achieve consistency in process and methodology.

- It ensures preparedness and response strategies are influenced by technical and traditional considerations

## 8.2. Mainstreaming Risk Reduction – The Strategies

Mainstreaming risk reduction efforts within government, NGOs and private sector is viewed as being the key to achieving sustainable all hazards risk reduction interventions across the whole country. In Bangladesh mainstreaming is seen in much the same light as poverty reduction in that it is the outcome of many top down and bottom up interventions. These are summarized below and articulated briefly within Figure 16.

**8.2.1. Advocacy:** Awareness raising among Political, Senior Policy and Government Department Officials, Media and Academic Institutions is a priority strategy for building knowledge and understanding on the benefits of risk reduction and the roles these organizations play in implementing risk reduction programmes.

**8.2.2. Policy and Planning Reform:** A significant review of disaster management and development planning policy is being undertaken to ensure that they facilitate mainstreaming and promote a comprehensive risk reduction culture.

**8.2.3. Capacity Building:** This strategy has targeted a complete review of the roles and responsibilities of disaster management committees (DMCs) at all levels to ensure they reflect risk reduction as well as emergency response functions. A national training curriculum is being developed to ensure that committees receive capacity building training to ensure they understand and can fulfill their functions effectively.

**8.2.4. Planning Frameworks:** Disaster management planning at all levels is being significantly overhauled to ensure that DMC plans accommodate risk reduction mainstreaming at all levels.

**8.2.5. Uniform CRA Guidelines:** Uniform CRA processes are being established to ensure consistency in the conduct of community risk identification and compatibility with the risk reduction planning processes of the respective DMCs. The guidelines also have steps to ensure strong linkages with scientific analysis information.

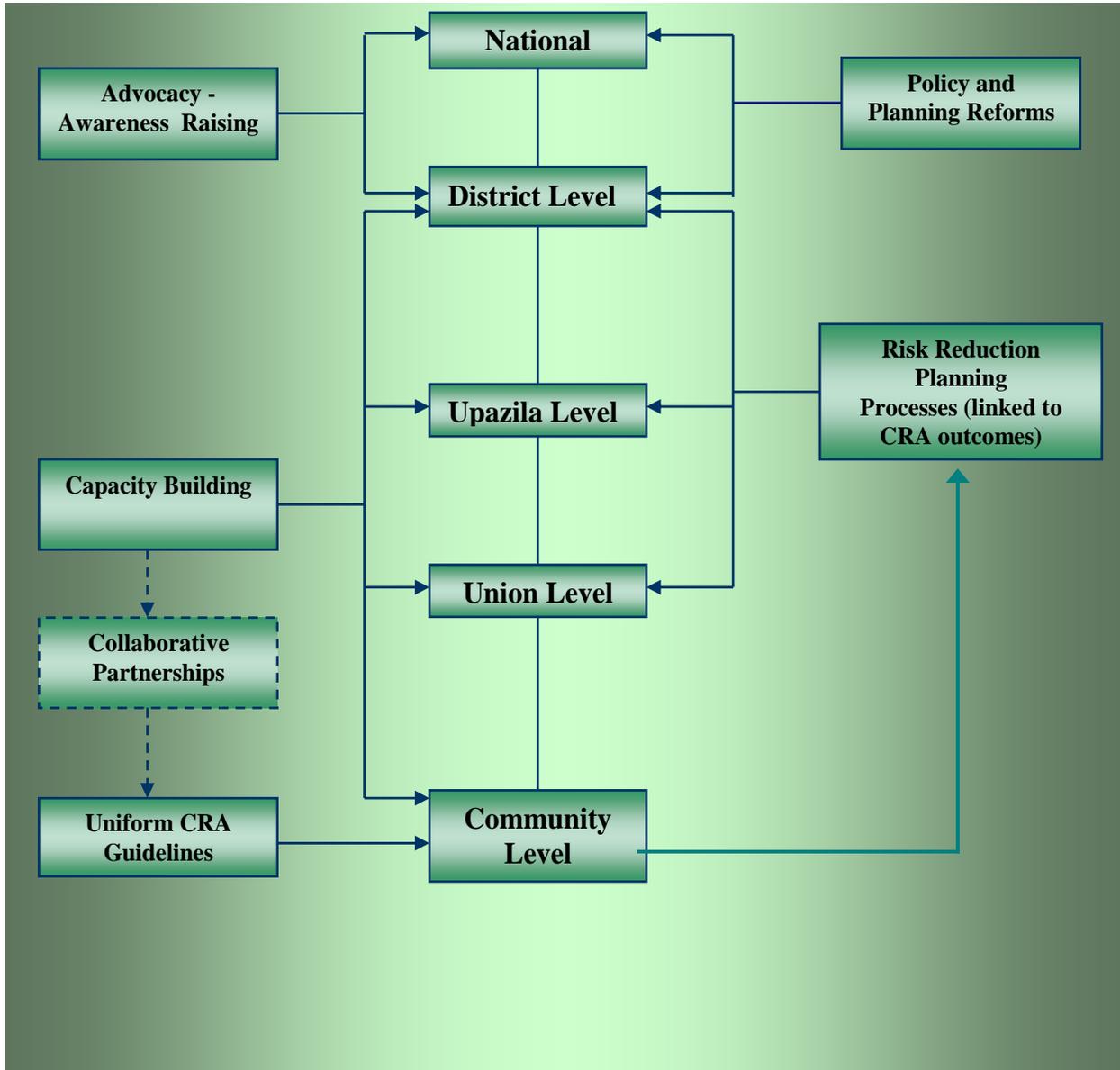


Figure 15: Mainstreaming strategies

## IX. DISASTER MANAGEMENT SYSTEM IN BANGLADESH

The Ministry of Food and Disaster Management (MoFDM) of the Government of Bangladesh has the responsibility for coordinating national disaster management efforts across all agencies. In January 1997 the Ministry issued the Standing Orders on Disaster (SOD) to guide and monitor disaster management activities in Bangladesh. A series of inter-related institutions, at both national and sub-national levels (Figure 12) have been created to ensure effective planning and coordination of disaster risk reduction and emergency response management.

### *At the national level*

- i. **National Disaster Management Council (NDMC)** 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)** 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)** headed by an experienced person having been nominated by the Hon'ble Prime Minister.
- iv. **Cyclone Preparedness Program Implementation Board (CPPIB)** 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)** 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)** 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)** 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)** 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.

### *At sub-national levels*

- i. **District Disaster Management Committee (DDMC)** 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)** 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)** 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)** 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)** headed by the Mayor of City Corporations to co-ordinate, review and implement the disaster management activities within its area of jurisdiction.

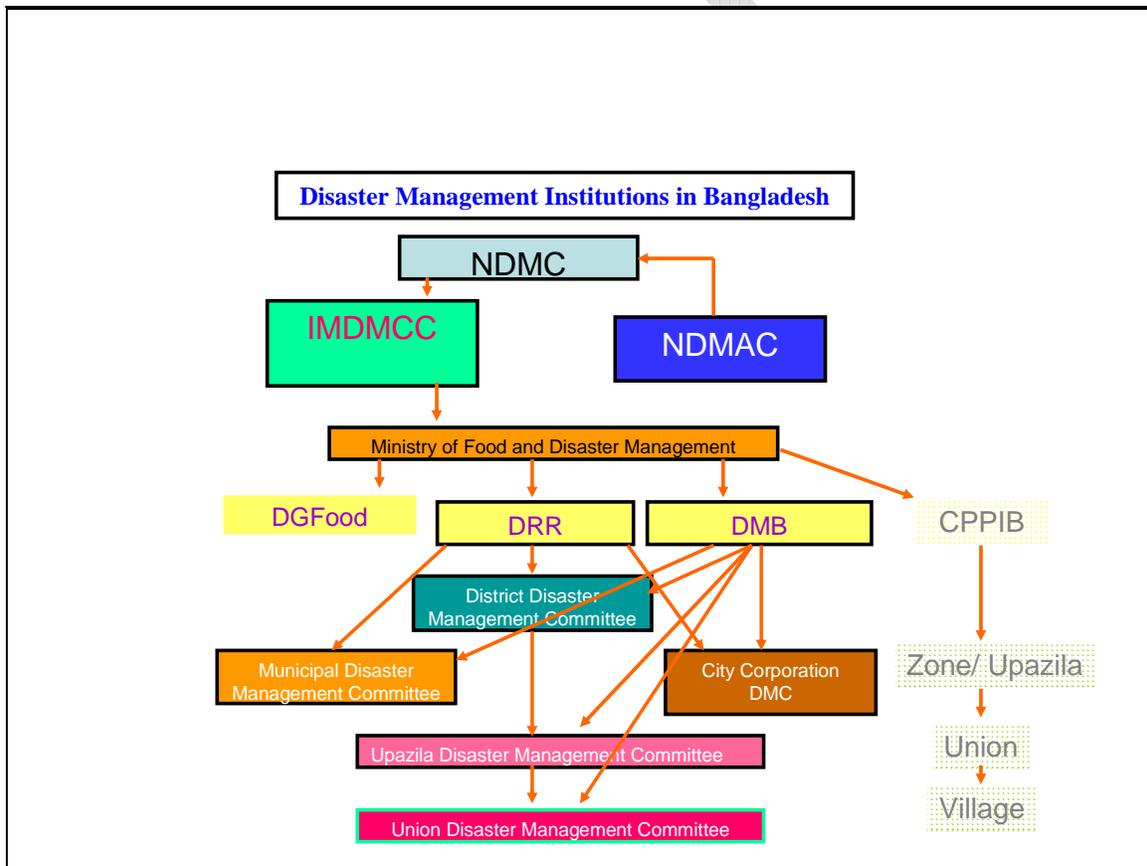


Figure 16: Disaster Management Institutions in Bangladesh

A brief summary of roles and responsibilities (an indicative list) of the Disaster Management Committees is enclosed in Annexes 6 and 7. Detailed roles and responsibilities of all entities are outlined in the Standing Orders on Disaster.

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## **X. DISASTER MANAGEMENT REGULATIVE FRAMEWORK**

Bangladesh's regulative framework for disaster management provides for the relevant legislative, policy and best practice framework under which the activity of Disaster Risk Reduction and Emergency Management in Bangladesh is managed and implemented. The framework includes:

### **10.1. Disaster Management Act**

A Disaster Management Act will be enacted with a view to create the legislative tool under which disaster risk and emergency management will be undertaken in Bangladesh, and the legal basis in which activities and actions will be managed. It will also create mandatory obligations and responsibilities on Ministries, committees and appointments. The objectives of the Act will be a) To help communities to mitigate the potential adverse effects of hazard events, prepare for managing the effects of a disaster event, effectively respond to and recover from a disaster or an emergency situation, and adapt to adverse effects of climate change; b) To provide for effective disaster management for Bangladesh; c) To establish an institutional framework for disaster management; and d) To establish risk reduction as a core element of disaster management.

### **10.2. National Disaster Management Policy**

A National Disaster Management Policy will be formulated to define the national perspective on disaster risk reduction and emergency management, and to describe the strategic framework, and national principles of disaster management in Bangladesh. It will be of strategic in nature and will describe the broad national objectives, and strategies in disaster management.

### **10.3. Disaster Management Plans**

The Bangladesh National Plan for Disaster Management is a strategic document to be effective for a certain period of time. This is an umbrella plan which provides the overall guideline for the relevant sectors and the disaster management committees at all levels to prepare and implement their area of roles specific plans. The Ministry of Food and Disaster Management (MoFDM) being the focal ministry for disaster risk reduction and emergency management will take the lead role in disaster risk reduction and emergency management planning. Additionally, there will be a few hazard specific management plans, such as Flood Management Plan, Cyclone and Storm Surge and Tsunami Management Plan, Earthquake Management Plan, Drought Management Plan, River Erosion Management Plan, etc. Moreover, there will be a detailed Disaster Management Plan for each District, Upazila, Union and Paurashava and City Corporation of the country. A District Disaster Management Plan will be the compilation of the Upa-zila Disaster Management Plans of the district. Similarly a Upa-zila Disaster Management Plan will be the compilation of the union disaster management plans of that Upazila prepared by the Union DMCs. So DMCs at Union and Paurashava levels will be mainly responsible for conducting the risk assessments and prepare the ground level plans. Once developed those will be sent to the

DMCs at one level higher – Upazila DMCs, whose role will be to verify and compile the union plans and identify the resource requirements for the Upazila.

#### **10.4. Standing Orders on Disaster**

The Standing Orders on Disaster describes the detailed roles and responsibilities of committees, Ministries and other organizations in disaster risk reduction and emergency management, and establishes the necessary actions required in implementing Bangladesh's Disaster Management Model

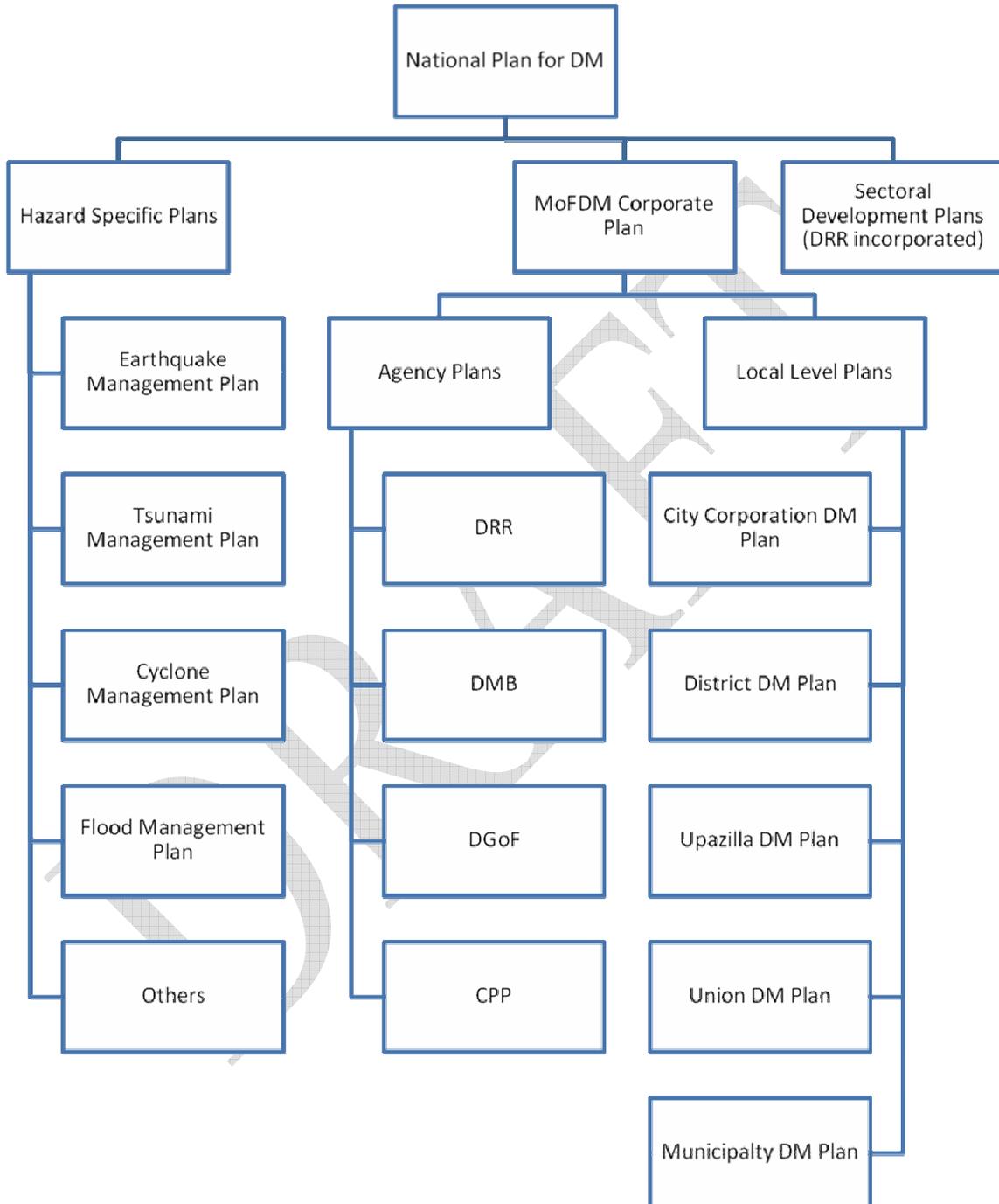
#### **10.5. Guidelines for Government at all Levels (Best Practice Models)**

Guidelines for Government at all levels are developed as best practice models, and are used to assist Ministries, NGOs, disaster management committees and civil society in implementing disaster risk management. Guidelines will include, among others:

- Disaster Impact and Risk Assessment Guideline
- Local Disaster Risk Reduction Fund Management Guidelines
- Emergency Fund Management Guidelines
- Indigenous Coping Mechanism Guidebook
- Community Risk Assessment Guidelines
- Damage and Needs Assessment Methodology
- Hazard Specific Risk Assessment Guidelines
- Emergency Response and Information Management Guideline
- Contingency Planning Template
- Sectoral Disaster Risk Reduction Planning Template
- Local Level Planning Template
- National Risk Reduction Fund Management Guideline
- National Disaster Reduction and Emergency Fund Management Guideline
- Local Disaster Management Fund Guideline
- Guideline for road and water safety
- Guideline for industrial safety
- Guideline for Disaster Shelter Management
- Monitoring and Evaluation Guideline for the Implementation of the Plan
- Guideline for international Assistance in disaster emergency

## XI. DISASTER MANAGEMENT PLANS

The disaster management planning framework in Bangladesh is presented below:



**Figure-17: Disaster Management Planning Framework**

## 11.1. National Plan for Disaster Management

The National Plan for Disaster Management is prepared by the Ministry of Food and Disaster Management. The plan includes the following as minimum:

- i. Introduction
- ii. GoB Vision for Disaster Management
- iii. Hazards profile of Bangladesh,
- iv. Disaster development linkages: national and international drivers for change
- v. Aim of the plan,
- vi. Strategic goals of the plan,
- vii. Conceptualizing disaster management in Bangladesh
- viii. Disaster management system in Bangladesh
- ix. The roles and responsibilities of entities involved in emergency operations and risk reduction
- x. Disaster management regulative framework,
- xi. Action matrix for disaster risk reduction and emergency management in Bangladesh describing the priorities and the strategies
- xii. Review and evaluation
- xiii. Implementation and follow-up
- xiv. Financing of the plan
- xv. Other matters relating to disaster management as deemed necessary by appropriate authority for inclusion in the plan.

The Plan to be used to:

- i. Articulate the long-term strategic focus of disaster management in Bangladesh.
- ii. Demonstrate a commitment to address key issues: risk reduction, capacity building, information management, climate change adaptation, livelihood security, issues of gender and the socially disadvantaged, etc.
- iii. Show the relationship between the government vision, key result areas, goals and strategies, and to align priorities and strategies with international and national drivers for change.
- iv. Detail a road-map for the development of disaster management plans by various entities.
- v. Guide the MoFDM in the development and delivery of guidelines and programmes.
- vi. Illustrate to other ministries, NGOs, civil society and the private sector how their work can contribute to the achievements of the strategic goals and government vision on disaster management.
- vii. Provide a framework within which to report performance and success in achieving goals and strategies

## 11.2. District Disaster Management Plan (DDMP)

There is a District Disaster Management Committee (DDMC) at the District level. The DDMC consists of the Deputy Commissioner of the District as the chairperson and members comprising all District level department heads, NGO leaders and civil society members. District Relief and Rehabilitation Officer (DRRO) acts as member secretary of the committee. Members of Parliament act as advisors of the committees. The committee is required to meet bi-monthly during normal period and as and when necessary during emergency situation.

There will be a plan for each District titled "District Disaster Management Plan" comprising both disaster risk reduction and emergency response to be prepared by the District Disaster Management Committee. This is a plan to be prepared by compilation of the Upa-zila and Paurashava Disaster Management Plans of the district being received from the respective Upazila and Paurashava/City Corporation DMCs. The DDMP should highlight and articulate, among others, the following:

- a. The areas in the district vulnerable to different forms of hazards and risks,
- b. Total resource requirements and the planned action for the district
  - i. to take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the district,
  - ii. capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector
  - iii. strengthening emergency response management system plans and procedures in the event of a disaster, providing for –
- c. The response plans and procedures in the event of a disaster, providing for –
  - i. Allocation of responsibilities to the departments of the government at district level and other DMC members;
  - ii. Procedure for mobilization of resources,
  - iii. Prompt response to disaster and relief thereof;
  - iv. Procurement of emergency supplies;
  - v. Operation of disaster shelters,
  - vi. Restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links,
  - vii. Provision of emergency medical services,
  - viii. Burial of dead bodies,
  - ix. Trauma counselling, and
  - x. The dissemination of information.

- d. Recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.
- e. The DDMP shall be reviewed and updated annually.
- f. The copies of the DDMP shall be made available to all district level stakeholders, Divisional Commissioners, etc.
- g. A copy of the DDMP will be sent to the Disaster Management Bureau and all relevant ministries and divisions.
- h. The DMB/ BIDMTR will provide technical advice and capacity building services to all DMCs.

### **11.3. Upa-Zila Disaster Management Plan (UZDMP)**

Upazila is an important and vital administrative unit of Bangladesh. There is a Upa-Zila Disaster Management Committee (UZDMC) at the Upa-Zila level. The UZDMC consists of the Upa-Zila Nirbahi Officer as the chairperson and members comprising all Upa-Zila level department heads, NGO leaders and civil society members. The PIO acts as the member secretary of the committee. Members of Parliament act as advisors of the committees. The committee is required to meet bi-monthly during normal period and as and when necessary during emergency situation.

There will be a plan for each Upa-Zila titled "Upa-Zila Disaster Management Plan" comprising both disaster risk reduction and emergency response to be prepared by the Upa-Zila Disaster Management Committee by compiling all the Union Disaster Management Plans of the Upa-zila being received from the respective Union DMCs of the Upazila. The UZDMP should highlight and articulate, among others, the following:

- a) The areas in the upazila vulnerable to different forms of hazards and risks
- b) Total resource requirements and the planned action for the district
  - i. to take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the district,
  - ii. capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector
  - iii. strengthening emergency response management system plans and procedures in the event of a disaster, providing for –
- c) The response plans and procedures in the event of a disaster, providing for
  - i. Allocation of responsibilities to the departments of the government at district level and other DMC members;
  - ii. Procedure for mobilization of resources,

- iii. Prompt response to disaster and relief thereof;
  - iv. Procurement of emergency supplies;
  - v. Operation of disaster shelters,
  - vi. Restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links,
  - vii. Provision of emergency medical services,
  - viii. Burial of dead bodies,
  - ix. Trauma counselling, and
  - x. The dissemination of information.
- d) Recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.
  - e) The UZDMP shall be reviewed and updated annually.
  - f) The copies of the UZDMP shall be made available to all Upazila level stakeholders and members of DDMCs.
  - g) A copy of the UZDMP will be sent to the District Disaster Management Committee and DMB.
  - h) The DMB/ BIDMTR will provide technical advice and capacity building services to all DMCs.

#### **11.4. Union Disaster Management Plan (UDMP)**

Union Parishad is the lowest administrative unit of Bangladesh. There is a Disaster Management Committee at the Union level. The UDMC is Chaired by the elected Chairman of the respective Union Parishad. The Union Disaster Management Committee consists of the Union Parishad Chairman as the Chairperson and members comprising all the Government department head at Union level, members of Union Parishad, NGO leaders working in respective union and civil society members. Secretary of the respective Union Parishad acts as the member secretary of the committee. The committee is required to meet bimonthly during normal period and as and when necessary during emergency situation.

There will be a plan for each Union titled "Union Disaster Management Plan" comprising both disaster risk reduction and emergency response to be prepared by the Union Disaster Management Committee following a proper community risk assessment procedure to be provided by MoFDM with the participation of vulnerable groups and the communities. The UDMP should highlight and articulate, among others, the following:

- a) Defining and redefining community risks to hazards utilizing both traditional and scientific knowledge,
- b) Total resource requirements and the planned action for the district

- i. to take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the district,
  - ii. capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector
  - iii. strengthening emergency response management system plans and procedures in the event of a disaster, providing for –
- c) The response plans and procedures in the event of a disaster, providing for –
  - i. Allocation of responsibilities to the departments of the government at district level and other DMC members;
  - ii. Procedure for mobilization of resources,
  - iii. Prompt response to disaster and relief thereof;
  - iv. Procurement of emergency supplies;
  - v. Operation of disaster shelters,
  - vi. Restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links,
  - vii. Provision of emergency medical services,
  - viii. Burial of dead bodies,
  - ix. Trauma counselling, and
  - x. The dissemination of information.
- d) Recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.
- e) The UDMP shall be reviewed and updated annually.
- f) The copies of the UDMP shall be made available to all Union level stakeholders, UNOs and DCs.
- g) A copy of the UDMP will be sent to the Upazila Disaster Management Committee.
- h) The DMB/ BIDMTR will provide technical advice and capacity building services to all DMCs.

### **11.5. Paurashava/City Corporation Disaster Management Plan**

Paurashava is at the bottom of the urban administrative tier of Bangladesh. There is a Disaster Management Committee at the City Corporation/Paurashava level. The Paurashava Chairman is the head of the committee. The members of the Committee are all Paurashava commissioners, representatives from all the Government departments, NGOs and CBOs. Chief Executive Officer of the Paurashava is the member secretary of the committee. The committee is required to meet monthly during normal period and as and when necessary during emergency situation. Besides, metropolitan cities in Bangladesh have City Corporation Disaster

Management Committees with the Mayor as the Chairman and comprising members as it is in case of Paurashavas.

There will be a plan for each Paurashava/City Corporation titled "Paurashava/City Corporation Disaster Management Plan" to be prepared by the "Paurashava/City Corporation Disaster Management Committee having linkages with the National Plan for Disaster Management. The PDMP/ CCDMP should highlight and articulate, among others, the following:

- a) The areas in the Paurashava/city corporation vulnerable to different forms of hazards and risks,
- b) Total resource requirements and the planned action for the district
  - i. to take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the district,
  - ii. capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector
  - iii. strengthening emergency response management system plans and procedures in the event of a disaster, providing for –
- c) The response plans and procedures in the event of a disaster, providing for –
  - i. Allocation of responsibilities to the departments of the government at district level and other DMC members;
  - ii. Procedure for mobilization of resources,
  - iii. Prompt response to disaster and relief thereof;
  - iv. Procurement of emergency supplies;
  - v. Operation of disaster shelters,
  - vi. Restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links,
  - vii. Provision of emergency medical services,
  - viii. Burial of dead bodies,
  - ix. Trauma counselling, and
  - x. The dissemination of information.
- d) Recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.
- e) The PDMP shall be reviewed and updated annually.
- f) The copies of the PDMP shall be made available to all Paurashava/city corporation level stakeholders, UNOs and DCs.
- g) A copy of the PDMP will be sent to the District Disaster Management Committee and Disaster Management Bureau.

- h) The DMB/ BIDMTR will provide technical advice and capacity building services to all DMCs.

### **11.6. Sectoral Development Plans incorporating Disaster Risk Reduction**

Every Ministry/Division of the Government of Bangladesh prepares their own Sectoral Development Plans. MoFDM with the participation of sectoral experts will prepare a general guideline to incorporate disaster risk reduction agenda for the sectors. MoFDM will also be responsible for overall monitoring and follow-up of the process to ensure that disaster risk reduction agenda are mainstreamed within the sectoral policies, plans and programmes. The development plans should address, among others, the following:

- a) Defining and redefining risk environment through hazard analysis, vulnerability assessment, risk evaluation, risk treatment options, and risk treatments.
- B) Managing the risk environment by developing programs and strategies that eliminate, or reduce the level of risk. Traditionally mitigation programs were viewed as engineering solutions to eliminate risk, but it is now accepted that all activities undertaken to eliminate or reduce risk are “mitigation” strategies (e.g. community education and awareness, planning activities, development of warning systems). This includes activities previously described as the PPRR Model- Prevention, Preparedness, Response and Recovery.
- c) Regularly review and update the plan; and
- d) Submit a copy of the plan, and of any amendment thereto, to appropriate authority including the MoFDM.
- d) Submit a copy of its disaster management plan, and of any amendment thereto, the concerned authority.

### **11.7. Hazard Specific Multi-sectoral Disaster Management Plans**

In addition to area specific disaster management plans and sector specific disaster risk reduction plans, it is envisaged that there will be a few hazard-specific management plans, such as earthquake management plan. This type of plans will be multi-sectoral and will be divided into two components: risk reduction and emergency response. This type of plans will address specific necessities to deal with a particular hazard.

## XII. DISASTER MANAGEMENT ACTION MATRIX 2007-2015

Strategic Goal	Key targets	Expected Outcomes	Action Agenda for 2007-2015	Lead Agency /dept.	Supporting Agency/ dept.
1	2	3	4	5	6
<b>1.0 Professionalizing the disaster management system</b>	<p>1.1 Develop and establish a Disaster Management Regulative Framework</p> <p>1.2 Review and revise the key disaster management policy documentation (Disaster Management Act, Policy and Plan, Standing Orders on Disasters) reflecting broader risk reduction functions</p> <p>1.3 Establish and progressively implement a learning and development strategy to facilitate the professional development of MoFDM and key personnel from government and NGOs and the private sector.</p> <p>1.4 Design and implement training and awareness programmes targeting national and district level policy officials.</p>	<p>1.1.1 A legal, policy and planning framework that makes disaster risk reduction a mandatory requirement for disaster management at all levels.</p> <p>1.1.2 A professional and competent disaster management workforce that is demonstrating effective leadership nationally and regionally</p>	<p>1.1.1.1 Enact laws and formulate rules for expansion of mandates of MoFDM</p> <p>1.1.1.2 Formal Govt. approval and gazetting of Act, Policy and Plan</p> <p>1.1.1.3 Revise Allocation of Business in relation to MoFDM Mandates</p> <p>1.1.1.4 Revise Standing Orders on Disaster Management in line with Comprehensive Disaster Risk Reduction and Emergency Management Approach</p> <p>1.1.1.5 To ensure that risk reduction is a mandated requirement for all disaster management programmes by December 2008</p> <p>1.1.1.6 Enhance professional skills and</p>	MoFDM	Ministry of Establishment /Ministry of Law, Justice and Parliamentary Affairs/ Cabinet Division/ Sectoral Ministries

			<p>knowledge of MoFDM and selected other key implementing agency staff on disaster risk reduction, preparedness, warning and forecasting system, and post-disaster activities by December 2008</p> <p>1.1.1.7 Develop a learning and development framework for disaster management professionals</p> <p>1.1.1.8 Develop and implement a skills enhancement strategy for effective disaster management</p>		
<p><b>2.0 Mainstreaming Disaster Risk Reduction</b></p>	<p>2.1 Identify relevant development policy and planning frameworks, develop and establish mechanisms to ensure risk reduction is a national and local priority.</p> <p>2.2 Develop and implement an advocacy strategy facilitating incorporation of disaster risk reduction within development and agency policy and plans.</p> <p>2.3 Design and implement</p>	<p>2.1.1 Risk reduction principles and practices are mainstreamed within all development programmes and policies</p>	<p>2.1.1.1 MoFDM is recognized as a key partner in development planning and policy making process (such as NEC, ECNEC, Economic Affairs Council etc. membership)</p> <p>2.1.1.2 Development project appraisal process includes applications of disaster and climate change risk management and supported</p>	MoFDM	<p>Ministry of Finance and Planning/ Planning Commission/ Ministry of Environment and Forest/ Ministry of Water Resources/ Ministry of Agriculture/ NGO Affairs Bureau/ / Sectoral Ministries/NGOs, Private Sector bodies Development Partners</p>

	<p>capacity building training to strengthen relevant planning capability at national and local levels.</p> <p>2.4 Incorporate disaster risk reduction approaches in all ongoing and future development plans, programs, and policies.</p> <p>Inclusion of disaster risk management within the development project validation process through Disaster Impact and Risk Assessment (DIRA) in addition to EIA</p> <p>2.5 Projecting future activities and growth targets incorporating risk scenario and reduction options.</p> <p>2.6 Establish a monitoring and support mechanism to assist relevant agencies and ensure effective transitioning of policy and plans to reflect risk reduction concepts.</p>		<p>2.1.1.3 Development of Disaster Impact and Risk Assessment (DIRA) Technique for all hazards and incorporation of DIRA into Project Proforma (PP), Technical Project Proforma (TPP) and Project Concept Paper (PCP) formats</p> <p>2.1.1.4 Inclusion of Disaster Risk Reduction Mechanism into FD-6 Form (for NGO programmes)</p> <p>2.1.1.5 Advocacy and public awareness for social mobilization</p> <p>2.1.1.6 Strengthened relevant planning capability at all levels.</p> <p>2.1.1.7 Prepare a monitoring and evaluation Guideline</p> <p>2.1.1.8 Establish Focal points within planning cell of relevant ministries and departments</p>		
<b>3.0 Strengthening</b>	3.1 Identify national, regional, sub-regional and	3.1.1 Members of DMCs at all levels	3.1.1.1 Revise Allocation of Business in relation to	MoFDM	Ministry of Establishment /Ministry of Law, Justice

<p><b>Institutional Mechanisms</b></p>	<p>local institutional mechanisms including informal systems and undertake an audit to validate roles and linkages</p> <p>3.2 Design and implement a national training strategy aimed at building knowledge and understanding of disaster management roles and responsibilities of key players at all levels as per SOD</p> <p>3.3 Create a national training capacity to sustain and progressively expand the training efforts.</p> <p>3.4 Develop a national monitoring and evaluation system to enable the effectiveness of the training strategy to be measured.</p>	<p>are aware of their roles and responsibilities</p> <p>3.1.2 DMCs at all levels are functional and carrying out their mandated jobs during both normal and emergency periods and post emergency situations</p>	<p>MoFDM Mandates;</p> <p>3.1.1.2 Revise Standing Orders on Disaster Management in line with Comprehensive Risk Management Approach</p> <p>3.1.1.3 Formal Govt. approval and gazetting of MoFDM Allocation of Business and SOD</p> <p>3.1.1.4 Prepare Plan of Action (PoA) for policy implementation with clear delineation of responsibilities;</p> <p>3.1.1.5 Enhance professional skills and knowledge of key implementing agency staff on disaster risk reduction, preparedness, warning and forecasting system, and post-disaster activities.</p> <p>3.1.1.6 Establish of Contingency Planning Framework with a block allocation for risk reduction</p> <p>3.1.1.7 Establish</p>	<p>and Parliamentary Affairs/ Cabinet Division/ Sectoral Ministries/ NGOs/ Development Partners/</p>
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			Bangladesh Institute of Disaster Management Training and Research		
<b>4.0 Empowering At Risk Communities.</b>	4.1 Establish the baseline on existing community knowledge of their all hazard risks.	4.1.1 Communities have a greater understanding of their risks and strategies for reducing or managing their all hazard risks.	4.1.1.1 Conduct a baseline study on current awareness and knowledge on disaster risk reduction among the DMC members at all levels	MoFDM	Relevant ministries/ NGOs/ Development Partners
	4.2 Develop a standard Guideline to prepare the local level risk reduction action plan based on all hazard risk analysis	4.1.2 Risk Assessment and risk reduction action planning processes are framed around gender and social exclusion frameworks.	4.1.1.2 Establish a technical working group to develop the guideline		
	4.3 Strengthen mechanisms and build community and household level capacities to prepare the local and household level risk reduction action plans	4.1.3 Government and donor funding targeting strategies identified within the local level risk reduction plans.	4.1.1.3 Develop and finalize the guideline through pilot testing and validation processes		
	4.4 Develop and implement Comprehensive risk reduction action plans (RRAPs) at Upazila, Union and household levels	4.1.4 Protect the needs of women, children, elderly, physically unable people of at risk communities against seasonality	4.1.1.4 Design and implement the skill and knowledge based training programme for the local level DMCs in high to medium risk areas		
	4.5 Reducing vulnerability through social safety nets		4.1.1.5 Develop the action plan following an all hazard risk assessment procedure		
			4.1.1.6 Design and implement the target based FFW, FFE, VGD, TR programmes		
			4.1.1.7 Establish an effective targeting		

		and risks	mechanism		
			4.1.1.8 Establish an effective monitoring and support mechanism to assist implementing agencies to avoid political influences and leakages		
	4.6 Strengthening asset base through Risk Reduction Programme	4.1.5 Livelihood support through financial assistance to withstand the disastrous situations	4.1.1.9 Implement the Risk Reduction Programme targeting the at risk communities and the households  4.1.1.10 Ensure proper execution of the guideline of the programme  4.1.1.11 Establish an effective monitoring and support mechanism to assist implementing agencies to avoid political influence and leakage.  4.1.1.12 Policy advocacy to ensure continuity of the block allocation in the annual budget		
<b>5.0 Expanding Risk Reduction Programming across hazards</b>	<b><u>Across Hazards:</u></b> 5.1 Update Hazard maps	5.1.1 Local and national development plans	5.1.1.1 Conduct Hazard Risk Analysis and produce updated hazard maps	MoFDM	Ministry of Defence/ MoWR/Ministry of Science and Technology/ NGOs /

<p><b>and sectors</b></p>	<p>5.2 Establishing an Integrated Approach to disaster management including Climate Change and climate variability impacts</p> <p>5.3 Develop scenario and prediction models to determine climate change and climate variability impacts.</p> <p>5.4 Strengthening existing knowledge and information accessibility on impact prediction and adaptation to climate change</p> <p>5.5 Design and implement capacity building programme to improve understanding on climate change impacts among the DM stakeholders</p>	<p>are developed on the basis of the updated hazard maps</p> <p>5.1.2 Scientific analysis including climate change impacts is guiding all hazards risk assessment processes.</p> <p>5.1.3 Timely all hazards risk information readily available in user friendly format to key stakeholders and development planners.</p> <p>5.1.4 Research gaps are influencing government, donor and private sector priorities.</p> <p>5.1.5 DM stakeholders are updated with climate change and climate variability impact knowledge</p>	<p>5.1.1.2 Establish and capacitate the Climate Change Cell (CCC) within DoE</p> <p>5.1.1.3 Establish a Technical Advisory Group to assist the CCC</p> <p>5.1.1.4 Conduct research to determine climate change and climate variability impacts for Bangladesh</p> <p>5.1.1.5 Identify adaptation options through action research</p> <p>5.1.1.6 Establish a climate change information library, database and Knowledge information network</p> <p>5.1.1.7 Design and implement a capacity building training to improve understanding among the DM stakeholders</p>	<p>MoEF</p>	<p>Development Partners</p> <p>Ministry of Defence/ Technological Universities/ MoWR/ NGOs/ Development Partners</p>
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			5.1.1.8 Implement priorities identified by National Adaptation Programme of Action (NAPA)		
	<p>5.6 Conduct earthquake and tsunami Vulnerability assessment and prepare:</p> <ul style="list-style-type: none"> <li>• Earthquake vulnerability and risk maps for mega cities</li> <li>• Tsunami vulnerability maps for all the coastal districts</li> <li>• Map out critical vulnerable infrastructure and communities within the high risk zones</li> </ul> <p>5.7 Strengthening national capability to reduce the risks of</p> <ul style="list-style-type: none"> <li>• Chemical, technological and biological hazards</li> <li>• Infrastructure collapse</li> <li>• Fire</li> <li>• Road accidents</li> <li>• Launch capsizes</li> </ul>	<p>5.1.6 Produce earthquake vulnerability maps for cities of Dhaka, Chittagong and Sylhet</p> <p>5.1.7 Produce tsunami vulnerability maps for Chittagong, Cox's Bazar, Satkhira, Khulna, Bagerhat, Barguna, Patuakha, Bhola and Noakhali Districts</p> <p>5.1.8 Reduce the incidence of disasters in the manufacturing industry</p> <p>5.1.9 Bangladesh Fire Service and Civil Defense are better equipped</p>	<p>5.1.1.9 Develop and implement an extensive awareness programme for the earthquake and tsunami risk</p> <p>5.1.1.10 Use of earthquake risk maps in urban planning and development</p> <p>5.1.1.11 Develop guidelines for industrial safety</p> <p>5.1.1.12 Establish and regularly update a information database and network on industrial safety measures</p>	MoFDM	<p>Ministry of Local Government and Rural Development; Ministry of Home Affairs; AFD; Ministry of Housing and Works; Ministry of Science and Technology; Ministry of Power, Energy and Mineral Resources; Ministry of Defence; Ministry of Communications Academic Institutions;</p>

<p>5.8 Strengthen national capacity for erosion prediction and monitoring</p>	<p>with latest fire fighting technology including training</p> <p>Reduced the incidence of launch capsizes</p> <p>5.1.10 Erosion prediction information used in the development of Local level Risk reduction and response plans</p>	<p>5.1.1.13 Develop and implement a strategy to strengthen the BFS&amp;CD</p> <p>5.1.1.14 Develop guidelines for road and water safety</p> <p>5.1.1.15 Identify the organizations conducting the predictions</p> <p>5.1.1.16 Assess the utility of the information</p> <p>5.1.1.17 Identify the resource requirements and probable source of funding to further capacity strengthening and information generation on a continuous basis</p>		
<p><b><u>Across Sectors:</u></b></p> <p>5.9 Develop and establish policy and planning frameworks to incorporate all hazard risk reduction perspectives into sectoral development plans, such as:</p> <ul style="list-style-type: none"> <li>• Agriculture, livestock and fishery</li> </ul>	<p>5.1.11 Disaster risk reduction elements are included in sectoral policies and plans</p> <p>5.1.12 Promote Innovations in the broader agricultural sector to withstand</p>	<p>5.1.1.18 Inclusion of Disaster Risk Reduction in the policies and development plans of various relevant sectors</p> <p>5.1.1.19 Revise the education and training curriculum on disaster management</p>	<p>MoFDM</p>	<p>All relevant ministries and their agencies</p>

	<ul style="list-style-type: none"> <li>• industry</li> <li>• education curriculum (primary and secondary)</li> <li>• rural and urban housing,</li> <li>• construction of roads, bridges and culverts</li> <li>• water transportation</li> <li>• Search and rescue</li> <li>• Health</li> <li>• Water resources</li> <li>• Power, energy and mineral resources</li> <li>• Environment and forestry</li> <li>• Science and ICT</li> <li>• Tele-communication</li> <li>• Water Supply and Sanitation</li> </ul>	<p>and cope with disastrous situations.</p> <p>5.1.13 More flood and drought tolerant varieties of crops and species are introduced by the agricultural extension departments</p> <p>5.1.14 Newly constructed houses , roads, bridges and culverts can withstand with high intensity earthquakes</p>	<p>incorporating an all hazard risk reduction perspectives at primary, secondary and tertiary levels of education</p> <p>5.1.1.20 Conduct TOT and capacity building training for the teachers and instructor of different national training institutions on the revised curriculum</p> <p>5.1.1.21 Promote action research in the broader agriculture sector</p> <p>5.1.1.22 Risk based design of projects and ancillary structure</p> <p>5.1.1.23 Develop and establish guidelines to ensure incorporation of disaster risk reduction issues in all safety net programmes' design and implementation process</p>		
<p><b>6.0 Strengthening Emergency Response Systems</b></p>	<p>6.1 Strengthen and improve an all Hazard Early Warning Systems through</p> <ul style="list-style-type: none"> <li>•technical, technological and physical capacity</li> </ul>	<p>6.1.1 Ensure accuracy in the early warning information generation</p>	<p>6.1.1.1 Technical and technological capacity building of BMD, FFWC and other related organisations to</p>	<p>MoFDM/ Ministry of Defence/ MoWR</p>	<p>Ministry of Post and Telecommunication/MoHA / MoFA/ SMRC/ NGOs/ Development Partners</p>

<p>strengthening of BMD and FFWC</p> <ul style="list-style-type: none"> <li>• establishment/strengthening regional networks for real time data/information sharing</li> </ul>		<p>a) improve the accuracy of early warning information generated and b) increase the lead time for flood forecast</p> <p>6.1.1.2 Use SAARC, RCC and other available frameworks and platforms to establish regional networks for real time data/information sharing</p>		
<p>6.2 Establish a National Disaster Management Information Centre:</p> <ul style="list-style-type: none"> <li>• to establish a computer network with the all the 64 districts and high risk upazila DMCs</li> <li>• to archive and share disaster risk reduction information</li> <li>• to produce and share policy briefs</li> <li>• to receive and disseminate early warning information</li> <li>• to receive and disseminate information on emergency need assessments and management</li> </ul>	<p>6.1.2 An effective 24/7 information hub including early warning dissemination system</p> <p>6.1.3 An effective information management system that is providing on-time adequate and necessary information during emergency situations</p>	<p>6.1.1.3 Establish and operational the National Disaster Management Information Centre including emergency operation centres (EOC)</p> <p>6.1.1.4 Design the information products</p> <p>6.1.1.5 Produce and disseminate regular information products in time intervals</p>	MoFDM	Ministry of Defence/ MoWR/ MoWR/ NGOs/ Development Partners

<p>6.3 Establish an effective Community Alerting System through capacity strengthening of CPP and DMCs at District, Upazila and Union levels</p>	<p>6.1.4 An effective communication network to timely disseminate all hazard warning messages to the communities</p> <p>6.1.5 A disaster management information network is operational and demonstrated down to household level</p>	<p>6.1.1.6 Develop and establish an all hazards community alerting system and impart training to enhance its operational capability.</p> <p>6.1.1.7 Organize regular drills to improve the efficiency of the system</p>	MoFDM	MoWR/ MoD/ NGOs/ BDRCS
<p>6.4 Establish and improve Search and Rescue Mechanism by</p> <ul style="list-style-type: none"> <li>• Preparing a potential search and rescue scenario</li> <li>• Strengthening S&amp;R capability of first responding institutions by providing training and equipments support</li> <li>• Establish an all hazard volunteer groups for S&amp;R operations</li> <li>• Establish an effective command and control system</li> </ul>	<p>6.1.6 An effective search and rescue mechanism to provide timely operations</p> <p>6.1.7 First Responding Institutions are fully equipped to efficiently handle the S&amp;R operations</p> <p>6.1.8 A well-trained standby volunteer workforce to assist in S&amp;R operations</p>	<p>6.1.1.8 Identify potential rescue scenarios and determine appropriate search and rescue equipment needs</p> <p>6.1.1.9 Strengthen BFS&amp;CD with required training and equipment support</p> <p>6.1.1.10 Establish and strengthen the community based institutional mechanism for disaster volunteering , such as CPP and BNDV</p> <p>6.1.1.11 Develop and implement a training</p>	MoFDM	Local Government Bodies/MoHA/ AFD/ MoHW/MoLGRD/ MoD/ MoPE&MR/ / NGOs

		<p>programme to establish the all hazard volunteer workforce at city corporations level</p> <p>6.1.1.12 Prepare SOPs for specific hazard based disasters incorporating command, control and coordination mechanism for emergency response</p>		
<p>6.5 Develop templates and procedures to establish and operational Disasters Contingency Plans</p> <p>6.6 Establish policy and guideline to incorporate geo-hazard contingency plans in future spatial plans for city corporations and local government</p> <p>6.7 Prepare Contingency Plans on non-seasonal disaster risks for selected cities and coastal zones</p> <p>6.8 Strengthen the District and Upazila DMCs to implement contingency planning across the country</p> <p>6.9 Develop and standardize</p>	<p>6.1.9 Contingency Planning for Non Seasonal Disaster Risks is introduced by city corporations</p> <p>6.1.10 A heightened level of preparedness to the earthquake and tsunami risk</p>	<p>6.1.1.13 Establish earthquake contingency plans for Dhaka, Sylhet and Chittagong Cities based on the outcomes of risk assessments</p> <p>6.1.1.14 Review and where necessary strengthen emergency response contingency plans at all levels</p> <p>6.1.1.15 Establish Tsunami contingency plans for the coastal districts</p> <p>6.1.1.16 Review existing damage and needs assessment systems and strengthen where</p>	MoFDM	Local Government Bodies/MoHA/ AFD/ MoH&W/MoLG&RD/ MoD/ MoPE&MR/ /MoS&T NGOs/

	<p>Damage, Loss and Impact Assessment Methodologies and Relief Management Procedure</p> <p>6.10 Establish a post-disaster recovery and reconstruction mechanism</p>		necessary		
<p><b>7.0 Developing and Strengthening regional and global Networks</b></p>	<p>7.1 Identify key regional collaborating organizations and develop systems for coordination, and knowledge sharing.</p> <p>7.2 Establish public and private partnerships for disaster risk reduction.</p> <p>7.3 Negotiate on cross border information to enhance early warning.</p> <p>7.4 Support regional and global initiatives and ensure representation that is consistent with the government integrated all sector risk reduction approach at all levels</p>	<p>7.1.1 To create a working interface with and between the technical and scientific community</p> <p>7.1.2 To establish formal and informal partnerships with regional organizations for enhanced information exchange and mutual support</p> <p>7.1.3 Facilitate information sharing and more effective cross border mutual support programmes including early warning mechanisms.</p>	<p>7.1.1.1 Use SAARC, ASEAN and RCC platforms to establish regional networks for real time data/information sharing as well as sharing of new knowledge and technology.</p> <p>7.1.1.2 Prepare guideline for international assistance for disaster emergencies</p>	MoFA	MoFDM/MoD/ / MoWR/ MoP&T/NGOs/ / Regional and International Organisations

		<p>7.1.4 Timely cross border early warning.</p> <p>7.1.5 Appropriate representation at regional and international forums.</p> <p>7.1.6 Formalized public private partnerships</p>			
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### **XIII. IMPLEMENTATION AND FOLLOW-UP**

1. Disaster management which includes disaster risk reduction and emergency response management will be viewed holistically and the strategic goals and priorities for action presented in Section XII should be addressed by various stakeholders in a multi-sectoral approach, including the development sector.
2. All relevant organizations and agencies will integrate disaster risk reduction considerations into their sustainable development policy, planning and programming at all levels. MoFDM as the focal agency for disaster management will provide the guidelines to be developed with the participation of sectoral experts to ensure its compatibility.
3. Civil society, including volunteers and community-based organizations, the scientific community and the private sector are vital stakeholders in disaster management. MoFDM will ensure contribution of all actors in the development and implementation of the plan to build disaster resilient nations and communities.
4. Following the broader guideline described in the National plan and the specific guidelines to be provided by MoFDM, the district, upazila, union, City Corporation and paurashava disaster management committees will prepare their respective plans for the area of responsibility of the committee.
5. MoFDM with the assistance from sectoral experts will develop a general guideline to mainstream disaster risk reduction within their respective sectoral development plans.
6. The planning process at all levels should be completed by December 2010.

#### **XIV. MONITORING AND EVALUATION**

The National Plan is a dynamic document and will be reviewed and evaluated annually to ensure consistency with national initiatives and Government priorities. Key performance indicators will be monitored and reported annually to assess the progress of the implementation of the Framework. The key indicators will:

- Measure the expected outcomes of the Plan.
- Set benchmarks.
- Measure the effectiveness of policies, strategies and programs and inform policy development.
- Identify agency accountability and responsibility for each performance indicator.
- Identify opportunities for improvement that lead to enhancement of the Disaster Management System

The IMDMCC will be responsible for monitoring progress of implementation of this plan at the national level. The MoFDM through Disaster Management Bureau will be responsible for monitoring at the local level.

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## **XV. FINANCING OF THE PLAN**

### **15.1. National Disaster Response and Recovery Fund**

The Government will constitute a fund called the “National Disaster Response and Recovery Fund” from its own resources and donations from home and abroad. The fund shall be used for response, relief and recovery. The allocation and utilization of the fund shall be governed as per rules and guidelines laid down by the Government. Ministry of Food and Disaster Management, in consultation with Ministry of Finance, will take initiative to establish the fund by consolidating the existing relief funds.

### **15.2. National Risk Reduction Fund**

The Government will constitute a fund called the “National Risk Reduction Fund” for projects which are designed for the purpose of prevention, mitigation and preparedness. The allocation and utilization of the fund shall be governed as per rules and guidelines laid down by the Government. Ministry of Food and Disaster Management, in consultation with Ministry of Finance, will take initiative to establish the fund by consolidating the existing risk reduction funds.

### **15.3. Financing Sectoral Plans**

Relevant Ministries/ Divisions/ Directorates and departments will make provisions in its annual budget to fund the activities and programmes set out in the Disaster Risk Reduction component of its Sectoral Development Plans.

### **15.4. District/Upazila/Union/Paurashava/City Corporation Disaster Management Fund**

Disaster Management Committees at the district, upazila, union, city corporation and paurashava levels will constitute its Disaster Management Fund to implement programmes and activities as set out in Disaster Management Plans. This fund will make up of the following: a) contribution from the government, b) contribution from local government and c) local donation. The government will formulate guideline for operating the fund.

Reporting:

The authority/authorities responsible for the utilization of funds shall submit specific report(s) to the Governments regarding executions of, and expenditures of funds

along with an audit certification. The period of time not for such reports shall be as prescribed by the rules and guidelines for the use of funds.

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গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
খাদ্য পরিকল্পনা ও পরিধারণ ইউনিট  
খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়  
১৬, আব্দুল গণি রোড, ঢাকা।

## Annexure - I

নং-খাদ্যব্যম/এফপিএমইউ-১(৪৪৫)/২০০৫/ ২৯৯ (৫)

৩১/০৪/১৪১৩ বাং  
তারিখঃ -----  
১৫/০৮/২০০৬ খ্রিঃ

## কমিটি গঠন

সার্ক পরিবেশ মন্ত্রীদের ৭ম সভায় ইতোপূর্বে প্রণীত Regional Comprehensive Framework on Disaster Management & Disaster Prevention বাস্তবায়নের নিমিত্তে “National Plan of Action” প্রণয়নের সিদ্ধান্ত গৃহীত হয়। সে প্রেক্ষিতে বাংলাদেশের জন্য “National Plan of Action” প্রণয়নের নিমিত্তে নিম্নলিখিত কর্মকর্তাদের সমন্বয়ে একটি কমিটি গঠন করা হলো :

০১) মহা পরিচালক, এফপিএমইউ, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়	-	সভাপতি
০২) পরিবেশ ও বন মন্ত্রণালয়ের একজন প্রতিনিধি	-	সদস্য
০৩) পানি সম্পদ মন্ত্রণালয়ের একজন প্রতিনিধি	-	সদস্য
০৪) সিডিএমপি-এর একজন প্রতিনিধি	-	সদস্য
০৫) দুর্ভোগ ব্যবস্থাপনা ব্যুরো এর একজন প্রতিনিধি	-	সদস্য
০৬) জনাব মোঃ ফুহুল আমিন তালুকদার, অতিরিক্ত পরিচালক (খানিপু), এফপিএমইউ	-	সদস্য সচিব

## কমিটির কার্য-পরিধিঃ

- কমিটি আগামী ১৫-১১-০৬ তারিখের মধ্যে বর্ণিত National Plan of Action প্রণয়ন করে সরকারের নিকট পেশ করবে।
- এ কাজে কমিটি প্রয়োজনে সিডিএমপি হতে কারিগরী সহায়তা নিতে পারে।
- কমিটি প্রয়োজনে এক বা একাধিক সদস্য কো-অপট করতে পারবে।

২। যথাযথ কর্তৃপক্ষের নির্দেশক্রমে জনস্বার্থে এ আদেশ জারী করা হলো এবং অবিলম্বে তা কার্যকর হবে।

(এম এ খালেক)

গবেষণা পরিচালক(উপ-সচিব)

ফোন-৯৫৫৮৯৭১

## বিতরণ কার্যার্থেঃ (জ্যেষ্ঠতা অনুযায়ী নহে)

- সচিব, পরিবেশ ও বন মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- সচিব, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- মহা-পরিচালক, দুর্ভোগ ব্যবস্থাপনা ব্যুরো, ৯২-৯৩, মহাখালী বা/এ, ঢাকা।
- মহা-পরিচালক, এফপিএমইউ, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- চীফ টেকনিক্যাল এ্যাডভাইজার, সিডিএমপি, ৯২-৯৩, মহাখালী বা/এ, ঢাকা- কমিটিতে একজন উপযুক্ত প্রতিনিধি মনোনয়ন এবং বর্ণিত National Plan of Action এর একটি খসড়া প্রণয়নের জন্য অনুরোধ করা যাচ্ছে।

কমিটিতে একজন করে উপযুক্ত প্রতিনিধি  
মনোনয়নের জন্য অনুরোধ করা যাচ্ছে।

নং-খাদ্যব্যম/এফপিএমইউ-১(৪৪৫)/২০০৫/ ২৯৯/১ (৪)

## অনুলিপি :-

- মাননীয় মন্ত্রীর একান্ত সচিব, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- মাননীয় উপ-মন্ত্রীর একান্ত সচিব, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- সচিব মহোদয়ের একান্ত সচিব, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- মহা পরিচালক, এফপিএমইউ এর ব্যক্তিগত কর্মকর্তা, খাদ্য ও দুর্ভোগ ব্যবস্থাপনা মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।

(এম এ খালেক)

গবেষণা পরিচালক(উপ-সচিব)

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NPME	
FARS	
NE (Coord)	
NE (M&E)	
NE (T&P)	

## Annexure 2

### **National Plan for Disaster Management**

#### **Drafting and Editorial Team**

Dr. Aslam Alam  
National Programme Management Expert and Deputy Team Leader  
Comprehensive Disaster Management Programme

Dr. Shantana R. Halder  
National Consultant (Monitoring and Evaluation)  
Comprehensive Disaster Management Programme

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## Annex 3

**LIST OF WORKING GROUP MEMBERS FOR DEVELOPING THE NATIONAL  
PLAN FOR DISASTER MANAGEMENT**

<b>Sl. No.</b>	<b>Name &amp; Designation</b>	<b>Organization</b>	<b>Telephone/ Cell/Fax/E-mail</b>
	Ian Stanford Rector Chief Technical Adviser	Comprehensive Disaster Management Programme, MoFDM	
1	Dr. Aslam Alam National Programme Management Expert	Comprehensive Disaster Management Programme, MoFDM	9890937
2	Dr. Shantana R. Halder National Consultant (M&E)	Comprehensive Disaster Management Programme, MoFDM	9890937
3	Graeme Nicholas International Consultant	Comprehensive Disaster Management Programme, MoFDM	9890937
4	Nasimul Haque Information and Communication Expert	Comprehensive Disaster Management Programme, MoFDM	9111379-147
5	Ralf Ernst Technical Adviser	Comprehensive Disaster Management Programme, MoFDM	9111379-147
6	Abu Mostafa Kamal Uddin Climate Risk Assessment & Adaptation Adviser	Comprehensive Disaster Management Programme, MoFDM	9111379-147
7	Smail Shrestha	International Federation of Red Cross (IFRC)	0189227262
8	A.K.M. Musha Assistant Country Director	Concern Bangladesh	8112795
9	M.A. Wahed Senior Advisor	Concern Bangladesh	8112795
10	John McHarris Advisor	World Food Programme	8116344
11	BMM Mozharul Huq Alternative Director	Bangladesh Disaster Preparedness Centre (BDPC)	8815074
12	Adv. Mahbubul Islam	Society of Justice	01711452190
13	Md. Ruhul Amin Talukder Additional Director	FPMU Ministry of Food and Disaster Management	01710997960
14	Md. Sazedul Karim Chowdhury Superintending Engineer	Bangladesh Water Development Board	01711526140
15	Wahida Bashir Ahmed	ActionAid Bangladesh	9888006,

	Theme Leader		9896167 0171- 6674997
16	Sajid Raihan	ActionAid Bangladesh	9888006 0171- 8267630
17	Arjumand Habib Deputy Director	Bangladesh Meteorological Department (BMD)	9114388
18	Rownak Jahan Assistant Commissioner	D.C. Office Munshiganj	01199- 027341

DRAFT

## Annex 4

**LIST OF PARTICIPANT IN THE ROUNDTABLE MEETING ON DRAFT  
NATIONAL PLAN FOR DISASTER MANAGEMENT, 7 DECEMBER 2006**

<b>Sl. No.</b>	<b>Name &amp; Designation</b>	<b>Organization</b>	<b>Telephone/Ce II/Fax/E-mail</b>
1.	Muhammad Saidur Rahman Director	Bangladesh Disaster Preparedness Centre (BDPC)	8815074, 8816296
2.	Md. Golam Rabbani	Bangladesh Centre for Advanced Studies (BCAS)	0193458781
3.	Md. Rafiqul Islam Executive Director	The Good Earth	8121941 01711/535544
4.	Md. Obaidul Quader Chief Scientific Officer	SPARRSO	8113957 01715028742
5.	Manzu Morshed Programme Officer	World Food Programme	8119064-72 Extn. 2259
6.	Squ Ldr Abu Zahid Mohsin GSO-2 (Air), Jt. Ops. O&Dte.AFD	Armed Forces' Division	8754358 01713090376
7.	Lt Cdr Kawser Ahmed Sikder Asst. Director (Operations)	Bangladesh Coast Guard Headquarters	8854670 01715665303
8.	Md. Mahfuzul Islam AIG/PHQ	Bangladesh Police Police Headquarters	7124000/2037
9.	Fazlul Wahab Director	Bangladesh Red Crescent Society	8321773 01715527675
10.	D.L. Mallick	Bangladesh Centre for Advanced Studies	8851237
11.	Md. Nasir Ullah Director	CPP	9353816
12.	Dr. Riaz Khan Professor	North-South University	01713041581
13.	Hosne Ara Begum Deputy Chief	Ministry of Housing and Public Works	7169868
14.	Farida Shahnaz	IUCN-Bangladesh	9890395
15.	Md. Emdadul Haque Joint Director (Marine)	BIWTA, Dhaka	9557060
16.	Maj Asadul Hasan	FS&CD	9556756
17.	Abdul Halim Deputy Secretary	Ministry of Water Resources	7166240
18.	Dr. A.Q.M. Mahbub Professor	Dept. of Geography & Environment Dhaka University	9674437 01716581694
19.	Reshad Md. Ekram Ali Deputy Director	Geological Survey of Bangladesh	8314810 01712149323
20.	Enamul Kabir	Bangladesh Betar	Nil

21.	Dr. Samarendra Karmaker Director	Bangladesh Metrological Department	8116634 8119832
22.	Sujit Kumar Debsarma Assistant Director & System Manager	Bangladesh Metrological Department	8113071 9135742
23.	O.N. Siddiqa Khanam Director	NGO Affairs Bureau (AB)	9562838
24.	Md. Abdul Khaleque Research Director	FPMU Ministry of Food and Disaster Management	9558971 0152481097
25.	Md. Ruhul Amin Talukder Addl. Director	FPMU Ministry of Food and Disaster Management	9556032
26.	Mostafa Faruq Al Banna Additional Director	FPMU Ministry of Food and Disaster Management	9556032
27.	Mohammad Abul Hashem Research Officer	FPMU Ministry of Food and Disaster Management	9556032
28.	Sajid Raihan	ActionAid Bangladesh	Nil
29.	Md. Kabirul Hassan Senior Assistant Secretary	Ministry of Environment and Forests	9570663
30.	Dr. Mohd. Shahadt Hossain Deputy Director	Directorate of Relief and Rehabilitation MoFDM	8825167
31.	M.A. Wahed Senior Advisor	Concern Bangladesh	8112795-6
32.	M. Tarik-ul-Islam Senior Programme Officer	United Nations Development Programme	8118600
33.	SK. Reazuddin Badsha Controller (Programme)	Bangladesh Television	9335636 8152278
34.	BMM Mozharul Huq Consultant	Disaster Management & Crisis Prevention Team, UNDP	8118600
35.	Ahmadul Hassan Division Head, R&D and Training	Center for Environmental and Geographic Services (CEGIS)	8821570-2
37.	S.M. Morshed National Advocacy Expert	Comprehensive Disaster Management Programme (CDMP)	9890937
38.	A.K.M. Mamunur Rashid Training and Awareness Raising Spc.	Comprehensive Disaster Management Programme (CDMP)	9890937
39.	Johny M Sarker Livelihood Adviser	Department for International Development (DFID)	8822589
40.	Dr Mustafa Alam Professor	Department of Economics University of Dhaka	9890937 01711147891

## Annex 5

## LINKAGES OF THE KEY STRATEGIC GOALS TO KEY INTERNATIONAL AND NATIONAL DRIVERS FOR CHANGE

<b>ELEMENTS OF DRIVERS</b>	<b><u>GOAL 1: PROFESSI ONALISIN G THE DISASTER MANAGEM ENT SYSTEM</u></b>	<b><u>GOAL 2: MAINSTR EAMING RISK REDUCTI ON</u></b>	<b><u>GOAL3: STRENG THENIN G INSTIT UTIONA L MECHA NISMS</u></b>	<b><u>GOAL 4: EMPOWE RING AT RISK COMMUN ITIES</u></b>	<b><u>GOAL 5: EXPAND ING RISK REDUCTI ON PROGRA MMING</u></b>	<b><u>GOAL 6: STRENGT HENING EMERGEN CY RESPONS E SYSTEMS</u></b>	<b><u>GOAL 7: DEVELO PING AND STRENG THENIN G NETWO RKS</u></b>
<b><i>United Nations Millennium Development Goals:</i></b>							
Eradicate extreme poverty and hunger			✓	✓		✓	
Promote gender equality and empower women		✓		✓		✓	
Ensure environmental sustainability		✓		✓	✓		✓
<b><i>Hyogo Framework for Action 2005-2015</i></b>							
Integration of disaster risk reduction considerations into sustainable development policies, planning and programming at all levels.	✓	✓	✓		✓		
Development and strengthening of institutions, mechanisms and capacities at			✓		✓		✓

all levels, in particular at the community level.							
Systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities					✓	✓	
<b><u>ISDR Guiding Principles: National Platforms for Disaster Risk Reduction</u></b>							
Increase public awareness to understand risk, vulnerability and disaster reduction globally				✓	✓		✓
Commitment from public authorities to implement disaster reduction policies and actions	✓	✓	✓				
Stimulate interdisciplinary and inter-sectoral partnerships; include the expansion of risk reduction networks					✓		✓
United Nations Framework Convention on Climate Change (UNFCCC)	✓	✓	✓	✓	✓		✓
Improve scientific knowledge about disaster reduction				✓	✓	✓	✓

PRSP Comprehensive Disaster Management towards Poverty Reduction and Growth: Policy Matrix key strategic goals:							
Mainstreaming Disaster Management and Risk Reduction into National Policies, Institutions and Development Processes		✓	✓		✓		✓
Strengthening disaster management and risk reduction capacity	✓				✓		✓
Ensuring knowledge management on disaster risk reduction	✓						✓
Enhancing community level capacity for disaster risk reduction				✓		✓	
Ensuring social protection of the most disadvantaged				✓		✓	

## Annex 6

**ROLES AND RESPONSIBILITIES OF DISASTER MANAGEMENT COMMITTEES**

Disaster Management committees are established at the national, and sub-national levels (City Corporation/District, Upazila/Pourashava, and Union). The roles and responsibilities of National as well local level councils and committees, within the Bangladesh Disaster Management Model have been listed below. The Following is an indicative list of responsibilities subject to approval of the revised SOD. The provisions of SOD stand valid at any point of time.

**National Disaster Management Council (NDMC)**

The National Disaster Management Council is formed with the Prime Minister in the Chair. Related ministers and Secretary of relevant ministries are the member of the Council and Cabinet Secretary will act as member Secretary.

The Council is required to meet at least twice in a year (Vide notification of the Cabinet Division No. MP Commi-1/Committee-2/93-141 dated 13th October 1993).

**Responsibilities of National Disaster Management Council**

- Formulate strategic policy regarding Disaster Risk Management and issue guidelines in this respect.
- Examine the recommendations of the Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) and National Disaster Management Advisory Committee (NDMAC) and issue directives for their implementation.
- Approve policies and guidelines under the Bangladesh regulative framework.
- Ensure whole-of-government coordination between Ministries, and with civil society, the business sector and NGOs in the process of disaster risk reduction and emergency response management.
- Develop an appropriate planning framework for the application of the Bangladesh Disaster Management model, including prevention, mitigation, preparedness, emergency response, relief and recovery.
- Frame guidelines and policies for post hazard relief and recovery including the assignment of priorities for relief.

**Inter-Ministerial Disaster Management Coordination Committee (IMDMCC)****Responsibilities of Inter-Ministerial Disaster Management Coordination Committee*****Defining the risk environment***

- Develop national and sub-national programs for risk reduction.
- Consider issues of major national development programs as they relate to disaster risk.
- Advocate and ensure disaster risk reduction is mainstreamed in development policies.

- Coordinate the activities of the government agencies concerned with disaster risk management.
- Monitor risk reduction activities and programs and keep the National Disaster Management Council informed of their progress.
- Develop policy related to whole-of-government disaster risk reduction for consideration of the NDMC.
- Develop programs for research and hazard analysis at national and sub-national levels.
- Mainstream disaster management principles and practices within national development planning processes.

### Managing the risk environment

- Implement the policy and decisions of the NDMC.
- Monitor plans for prevention/mitigation, preparedness, emergency assistance, relief, and rehabilitation and to keep the NDMC informed of the progress.
- Scrutinize the disaster preparedness of different Ministries and Agencies.
- Recommend to the NDMC regarding the prioritization and inclusion of disaster prevention/mitigation projects in the National Development Plan.
- Determine the method of Disaster Risk and Impact Assessment (DIRA) of large development projects.
- Coordinate preparation and implementation of disaster prevention/mitigation projects and to recommend framing of policy, fixing priorities and distributing assets in this respect.
- Scrutinize the disaster forecasts and warning procedure and coordinate among the different agencies.
- Review the action plans of all disaster related agencies.
- Monitor the overall disaster preparedness programmes and inform the NDMC.
- Coordinate agencies responsible for educating people concerning their duties during disasters.
- Ensure coordination among government agencies and NGOs responsible for imparting training on disaster management.

### Responding to the threat environment

- Ensure coordination in emergency response, relief and rehabilitation operations of the government at all levels.
- Ensure the effective dissemination of warning signals.
- Ensure the timely activation of the Bangladesh emergency response system.
- Ensure effective communications, information and reporting during emergency response, and recovery operations
- Coordinate relief operations in post-impact recovery period.
- Ensure the rapid supply of additional equipment/materials to places where telecommunication has been disrupted.
- Ensure the quick assessment of damage and the quality of reconstruction work.

- Coordinate the provision of additional manpower and resources to disaster affected areas, including the provision of members of the Defence Services with assigned duties for communications and essential services.
- Determine priorities and issue instructions regarding relief materials, funds and transport.

### **National Disaster Management Advisory Committee (NDMAC)**

#### Responsibilities of the National Disaster Management Advisory Committee

- Advise the National Disaster Management Council and the MoFDM on technical matters and socio-economic aspects of prevention, mitigation, preparedness, emergency response and recovery
- Alert committee members about hazards, risks and mitigation possibilities.
- Create a forum for discussion by experts on risks, opening opportunities for cooperation towards solutions to problems relating to disaster risk management.
- Recommend funding for special projects and for the introduction of special emergency relief measures, as necessary.
- Recommend solution of problems identified by the NDMC, IMDCC, MoFDM, or any other agency/person.
- Investigate and propose long term rehabilitation plans.
- Hold post-emergency response evaluations and prepare an evaluation of actions undertaken and submit a report with recommendations to the NDMC.

### **District Disaster Management Committee**

#### Responsibilities of the District Disaster Management Committee:

##### *Defining the Risk Environment*

- Ensure the constitution of Upazila Disaster Management Committees and Pourashava Disaster Management Committees (Grade 'A') with its activation, ensure receipt of directives and information and draw benefits from available training facilities.
- Arrange training and workshops on disaster related issues regularly by keeping the Disaster Management Bureau informed.
- Ensure that the risk factors of disaster and the possibilities of reduction of risks have been fully considered while preparing and implementing development programmes at district level.
- Prepare a comprehensive report on "Hazard, vulnerability and risk assessment" at district level based on the compilation of 'Hazard, vulnerability and risk assessment report' prepared by Upazila and Pourashava (grade 'A') disaster management committees and submit the same to the Disaster Management Bureau.

- Prepare a comprehensive report on the lists of vulnerable community and location map' at district level based on the compilation of 'lists of vulnerable community and location map' prepared by individual Upazila and Pourashava (grade 'A') disaster management committees and submit the same to the Disaster Management Bureau.
- Prepare comprehensive short, medium and long-term risk reduction action plans at district level based on the compilation of short, medium and long-term risk reduction action plans prepared by Upazilas and Pourashava (grade 'A') disaster management committees and submit the same to the Disaster Management Bureau.
- Regularly review the implementation status of the short, medium and long-term action plans through coordinating the programmes of development and service organizations at district level.
- Provide necessary support to union, Pourashava and Upazila disaster management committees to create local level fund appropriate for the implementation of the risk reduction action plans.
- Inform the disaster management bureau on the progress of action plan and other activities at district level.

#### Managing the Risk Environment

- Disseminate forecasts and warnings regarding disasters and make the people conscious about them.
- Prepare a district disaster action plan including the following issues with a view to keep the district authority and local organizations well prepared so as to meet the disaster effectively and efficiently in the light of warning signals about imminent disaster and the occurrence of disaster:
- Ensure speedy and effective publicity of forecasts and warnings relating to disasters (tornado, cyclone, tidal surge, earthquake, landslide, river erosion, tsunami, heavy rainfall, no rainfall, drought, flood, water logging, high tide, cold wave, etc.) among all officials of the district, relevant individuals/organizations and take measures to send the messages to the concerned individuals at the union, Pourashava and Upazila levels; and assist the implementation of the action plans prepared by the union, Pourashava and Upazila disaster management committees with the coordination efforts of district level government and non-government organizations.
- Select specific safe centre/shelters for evacuation of the people from district headquarters and to build capacity and assign responsibility to different individuals and organizations – for rendering various services and securities at the shelters. At the same time, build the capacity and instruct all the departments to provide necessary support to the union, Pourashava and Upazila disaster management committees.
- Ensure supply of safe drinking water, which can be filled in cans, ensure security and other essential services at the safe centres/shelters located in the district headquarters. And arrange similar services and facilities at union, Pourashava and Upazila levels in communication with union, Pourashava and Upazila disaster management committees.

- Take all necessary measures to activate union, Pourashava and Upazila disaster management committees; at the same time, provide necessary support to the union, Pourashava and Upazila disaster management committees in rescue work and emergency relief work and preparation of contingency plans for essential services in the interior of the district along with district headquarters, Upazila headquarters and Pourashava (grade 'A') and disaster management information centre (DMIC).
- Arrange occasional rehearsals or drills on the dissemination of warnings/forecasts, evacuation, rescue and primary relief operations with assistance from Disaster Management Bureau and Upazila/Pourashava authority.
- Monitor the progress of the activities and implementation status of the action plans of Upazila and Pourashava disaster management committees (grade 'A') and submit a comprehensive progress report to Disaster Management Bureau regularly.

### Responding to the Threat Environment

#### During Warning Period

- Disseminate warnings/forecasts, evacuate the vulnerable people as per evacuation plan, check the overall preparation for rescue operation and prepare the rescue team.
- Engage trained institutions, volunteers and people in the field for effective and speedy dissemination of early warnings/forecasts and to coordinate and monitor the whole warnings/forecasts dissemination system.
- Visit the pre-selected emergency shelters/safe centres and ensure that different organizations and individuals are alert and ready to provide essential services and security at the centres.
- Review and take alternative measures to ensure the supply of safe drinking water from the selected places nearby the safe centres/shelters.
- Conduct a mock or drill, on a small scale, with the trained students, youths, club members and volunteers on the community based water-purification techniques and ensure all the relevant preparatory measures for speedy supply of water after proper purification.
- Take emergency measures to fill up the stock of life saving drugs after carefully scrutinizing the stock of life saving drugs at Pourashava level.
- Prepare a checklist of emergency activities including the time schedule of the assigned personnel.

#### During Hazard Onset

- Operate "Emergency Operation Centre (Information Centre and Control Room)" for maintaining coordination of activities at all places in the interior of the district in respect of evacuation, rescue, relief and primary rehabilitation within the district.

- Operate emergency rescue work with the facilities locally available and coordinate mobilization of rescue teams for rescue operations in severely affected Upazilas and Pourashavas.
- Coordinate all relief activities (GO-NGO) at union, Pourashava, Upazila and district level so that relief materials are distributed impartially.
- Ensure dissemination of correct information for protecting the people from being upset by rumour related to disaster.
- Take necessary measures for ensuring the security of the local and outside relief workers during disaster.
- Ensure the overall security of women, children and persons with disability during disaster (residing in safe centres/shelters and other places).
- Take necessary measures to protect environmental degradation by arranging quick memorial services of dead bodies and quick disposal of dead domestic animals.
- Assist people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.

#### Post Hazard Period

- Collect and verify statistics relating to loss according to instructions issued by Disaster Management Bureau and other national authorities from Upazila officials and members of the Upazila/Pourashava disaster management committees regarding loss due to disaster according to directives of Disaster Management Bureau and other national authorities; to determine priority and requirements through emergency survey by officials or any other competent persons.
- Supply information relating to loss, needs, available resources and priority needs for relief and rehabilitation work to the EOC at the Ministry of Food and Disaster Management and 'Disaster Management Information Centre (DMIC)' of Disaster Management Bureau.
- Prepare contingency plans for rehabilitation work carefully based on priority measures for risk reduction at district level.
- Allocate and distribute the materials to Upazila/Pourashava, received from local source or Relief Directorate/any other sources on realistic basis according to necessity as per directives issued from Disaster Management Bureau and district authority.
- Supervise the distribution of materials under relief and rehabilitation activities and maintain their account and send the same to national authority and other relief donor organizations.
- Take necessary measures so that people can come back to their previous places after the disaster is over. In such cases, if there is any dispute regarding the legality of the land that should not be an obstacle to come back to the previous place after disaster.
- Arrange counselling for the psycho-traumatic people due to disaster with the collaborative support of experts and community elites.
- Instruct the health related personnel of the district and Upazila level to provide appropriate and adequate care to disaster affected people and if needed, request the district health authority for assistance.

- Arrange workshop with the participation of concern institutions and individuals on the lessons learned during and after the disaster.
- Perform responsibility of overall coordination among various departments at district level.
- In addition, follow the “Standing Orders on Disaster Management” and comply with instant orders of appropriate authority.

### **Paurashava/City Corporation Disaster Management Committee**

#### **Responsibilities of the City Corporation Disaster Management Committee :**

##### *Defining the Risk Environment*

- Arrange regular training and workshops on disaster issues by keeping the District Disaster Management Bureau informed.
- Hold a hazard, vulnerability and risk analysis at City Corporation level.
- Identify community at risk based on age, sex, physical fitness, social status, profession and economic condition.
- Prepare short, medium and long-term vulnerability reduction and capacity building action plan for the high-risk people with the active participation of the community at risk
- Organize regular meetings on developmental issues with organizations working at City Corporation level who have development programmes and who are providing services to take decisions for the implementation of short, medium and long term action plans and to review the progress.
- Establish local fund for the implementation of risk reduction action plans.
- Inform the Disaster Management Bureau on the progress of implementation of the action plans
- Prepare a comprehensive disaster management action plan, which will enable the local community, authority of the City Corporation and local organizations to support the poor and vulnerable community for increasing their income and other abilities for risk reduction and for taking necessary security measures against any impending warnings and disaster:

##### *Managing the Risk Environment*

- Ensure that the local people are kept informed and capable of taking practical measures for the reduction of risk at household and community levels and also disseminate widely the success stories among the local people about reducing risks at household and community levels.
- Arrange speedy and earthquake effective dissemination of forecasts relating to disasters (cyclone, tidal surge, tsunami, heavy rainfall, flood, water logging, high tide, cold wave, etc.) among individuals, volunteers and target organizations and make them able to take effective roles to save their lives and property during disaster.
- Build the capacity of local institution, volunteers, and the community to adopt disaster (cyclone, tidal surge, tsunami, earthquake, tornado, flood, water logging, salinity, high tide, cold wave) resistant housing features.

- Build the capacity of the local institution, volunteers, and the community to adapt with disaster resistant agriculture and other livelihood options.
- Determine specific safe centre/shelter where the people of particular area will go at the time of disaster and assign responsibilities to different individuals and organizations – for providing various services and securities at the shelters.
- Ensure supply of safe drinking water and if necessary, other services from specific points near the shelter/centre.
- Train the students, youth, local club members and volunteers on community based water purification techniques so that during disaster, they can supply safe drinking water in their own community during emergencies.
- Keep stock of emergency life saving drugs at City Corporation and Ward level for use during disaster.
- Prepare relevant plans for rescue, primary relief operation, and local arrangement for rehabilitation of severely affected families.
- Arrange for rehearsals or drills on the dissemination of warnings/forecasts, evacuation, rescue and primary relief operations (if necessary, committee can seek assistance from Disaster Management Bureau).

### Responding to the Threat Environment

#### Warning Period

- Disseminate warnings/forecasts, evacuate the vulnerable people as per evacuation plan, check the overall preparation for rescue operation and prepare the rescue team.
- Engage trained institutions, volunteers and people in the field for effective and speedy dissemination of early warnings/forecasts and to coordinate and monitor the whole warnings/forecasts dissemination system.
- Visit the pre-selected emergency safe centers/shelter and ensure that different organizations and individuals are alert and ready to provide essential services and security at the centres.
- Review and take alternative measures to ensure the supply of safe drinking water from the selected places nearby the shelter centre.
- Take emergency measures to fill up the stock of life saving drugs after careful scrutiny of the stock of life saving drugs at City Corporation and Ward level.
- Prepare a checklist of emergency activities during disaster including the time schedule of the assigned personnel.

#### During Hazard Onset

- Operate emergency rescue work with the facilities locally available and if directed, provide support services to other rescue teams.
- Take emergency measures to prevent diarrhoea and other water borne diseases by preparing oral-saline and water purification tablets by the trained students, youths, club members and volunteers using local resources or emergency assistance.
- Coordinate all relief activities (GO-NGO) in the City Corporation so that relief materials are distributed impartially.

- Ensure dissemination of correct information for protecting the people from being upset by rumour related to disaster.
- Take necessary measures for ensuring the security of the local and outside relief workers during disaster.
- Ensure the overall security of women, children and persons with disability during disaster residing in safe centres/shelters and other places.
- Take necessary measures to protect environmental degradation by arranging quick funeral ceremonies of dead bodies and quick disposal of dead domestic animals.
- Assist people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.

### Post Hazard Period

- Collect and submit statistics regarding loss due to disaster according to directives from Disaster Management Bureau.
- Allocate and distribute on the basis of actual needs, the materials received from local source or Relief Directorate/other sources for relief and rehabilitation work according to the directives of Disaster Management Bureau or district authority.
- Submit accounts of materials received to Disaster Management Bureau and donor agency (if the donor provided relief fund).
- Take necessary measures so that people can come back to their previous place after the disaster is over. In such cases, if there is any dispute regarding the legality of the land, which should not be an obstacle to come back to the previous place after the disaster.
- Arrange counselling for the psycho-traumatic people due to disaster with the collaborative support of experts and community elites.
- Instruct the health related personnel to provide appropriate and adequate care to disaster affected people and if needed, request the district health authority for assistance.
- Arrange workshop with the participation of concern institutions and individuals on the lessons learned during and after the disaster.
- In addition, follow Standing Orders on disaster management and comply with instant orders of appropriate authority.

### **Pourashava Disaster Management Committee**

#### **Responsibilities of the Poursava Disaster Management Committee:**

##### *Defining the Risk Environment*

- Ensure that the local people are kept informed and capable of taking practical measures for the reduction of risk at household and community levels and also disseminate widely the success stories among the local people about reducing risks at household and community levels.

- Arrange regular training and workshops on disaster issues by keeping the District Disaster Management Committee (in case of 'A' grade Pourashava) and Upazila Disaster Management Committee (in case of 'B' and "C" grade Pourashava) informed.
- Hold a hazard, vulnerability and risk analysis at Pourashava level.
- Identify community at risk based on age, sex, physical fitness, social status, profession and economic condition.
- Prepare short, medium and long-term vulnerability reduction and capacity building action plan for the high-risk people with the active participation of the community at risk
- Organize regular meetings on developmental issues with organizations working at Pourashava level who have development programmes and who are providing services to take decisions for the implementation of short, medium and long term action plans and to review the progress.
- Establish local fund for the implementation of risk reduction action plans.
- Inform the District/Upazila Disaster Management Committee on the progress of implementation of the action plans (in case of 'A' grade Pourashava to District DMCs and in case of 'B' and "C" grade Pourashava to Upazila DMCs)

#### Managing the Risk Environment

- Prepare a comprehensive disaster management action plan, which will enable the local community, authority of the Pourashava and local organizations to support the poor and vulnerable community for increasing their income and other abilities for risk reduction and for taking necessary security measures against any impending warnings and disaster:
- Arrange speedy and effective dissemination of forecasts relating to disasters (tornado, cyclone, tidal surge, earthquake, landslide, river erosion, tsunami, heavy rainfall, no rainfall, drought, flood, water logging, high tide, cold wave, etc.) among individuals, volunteers and target organizations and make them able to take effective roles to save their lives and properties during disaster.
- Build the capacity of local institutions, volunteers, and the community to adapt disaster (cyclone, tidal surge, tsunami, earthquake, tornado, flood, water logging, salinity, high tide, cold wave) resistant features.
- Build the capacity of the local institution, volunteers, and the community to adopt with disaster resistant agriculture and other livelihood options.
- Determine specific safe centre/shelter where the people of particular area will go at the time of disaster and assign responsibilities to different individuals and organizations – for providing various services and securities at the shelters.
- Ensure supply of safe drinking water and if necessary, other services from specific points near the shelter/centre with the help of district authority (in case of category A Pourashava) and Upazila authority (in case of B & C category Pourashava).
- Train the students, youth, local club members and volunteers on community based water purification techniques so that during disaster, they can supply safe drinking water in their own community during emergencies until external support reaches the area.

- Plan to prepare some high land based on government, non-government and individual donation, which can be used as shelter during the disaster period where livestock, poultry, emergency, food, kerosene, lamp, candle, matches, firewood, radio, and other important resources can be shifted along with the community people.
- Keep stock of emergency life saving drugs at Pourashava level (Pourashava health centres/dispensary) for use during disaster.
- Prepare relevant plans for rescue, primary relief operation, restoration of communication with District/Upazila headquarters and local arrangement for rehabilitation of severely affected families.
- Arrange for rehearsals or drills on the dissemination of warnings/forecasts, evacuation, rescue and primary relief operations (if necessary, committee can seek assistance from District/Upazila authority).

### Responding to the Threat Environment

#### Warning Period

- Disseminate warnings/forecasts, evacuate the vulnerable people as per evacuation plan, check the overall preparation for rescue operation and prepare the rescue team.
- Engage trained institutions, volunteers and people in the field for effective and speedy dissemination of early warnings/forecasts and to coordinate and monitor the whole warnings/forecasts dissemination system.
- Visit the pre-selected emergency safe centers/shelter and ensure that different organizations and individuals are alert and ready to provide essential services and security at the centres.
- Review and take alternative measures to ensure the supply of safe drinking water from the selected places nearby the shelter centre.
- Conduct a mock or drill, on a small scale, with the trained students, youths, club members and volunteers on the community based water-purification techniques and ensure all the relevant preparatory measures for speedy supply of water after proper purification.
- Take emergency measures to fill up the stock of life saving drugs after careful scrutiny of the stock of life saving drug at Pourashava level.
- Prepare a checklist of emergency activities during disaster including the time schedule of the assigned personnel.

#### During Hazard Onset

- Operate emergency rescue work with the facilities locally available and if directed, provide support services to other rescue teams.
- Take emergency measures to prevent diarrhea and other water borne diseases by preparing saline and water purification tablets by the trained students, youths, club members and volunteers using local resources or emergency assistance.
- Coordinate all relief activities (GO-NGO) in the Pourashava so that relief materials are distributed impartially.

- Ensure dissemination of correct information for protecting the people from being upset by rumour related to disaster.
- Take necessary measures for ensuring the security of the local and outside relief workers during disaster.
- Ensure the overall security of women, children and persons with disability during disaster residing in safe centres/shelters and other places.
- Take necessary measures to protect environmental degradation by arranging quick memorial services of dead bodies and quick disposal of dead domestic animals.
- Assist people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.

#### Post Hazard Period

- Collect and submit statistics regarding loss due to disaster according to directives from Disaster Management Bureau to district authority (in case of category A Pourashava) and Upazila authority (in case of B & C category Pourashava).
- Allocate and distribute on the basis of actual needs, the materials received from local source or Relief Directorate/other sources for relief and rehabilitation work according to the directives of Disaster Management Bureau and District/Upazila authority.
- Submit accounts of materials received to Upazila Disaster Management Committee and donor agency (if the donor provided relief fund).
- Take necessary measures so that people can come back to their previous place after the disaster is over. In such cases, if there is any dispute regarding the legality of the land, that should not be an obstacle to come back to the previous place after disaster.
- Arrange counseling for the psycho-traumatic people due to disaster with the collaborative support of experts and community elites.
- Instruct the health related personnel to provide appropriate and adequate care to disaster affected people and if needed, request the district and Upazila health authority for assistance.
- Arrange workshop with the participation of concern institutions and individuals on the lessons learned during and after the disaster.
- In addition, follow Standing Orders on disaster management and comply instant orders of appropriate authority.

#### **Upazila Disaster Management Committee**

##### **Responsibilities of Upazila Disaster Management Committee:**

##### *Defining the Risk Environment*

- Assist union and pourashava disaster management committee to form and activate a comprehensive disaster management committee at Union and Pourashava level, so that the disaster management committees can provide proper guidance, get the right and correct information and can exploit benefits from imparted training.

- Assist Union and Pourashava Disaster Management Committees to increase their efficiency in developing local warning system, risk reduction programming, rescue and recovery strategy and awareness raising strategy.
- Ensure that disaster risk reduction approaches are well considered during planning and implementation of development programmes of union, pourashava and Upazila.
- Arrange training and workshops on regular basis on disaster issues and assist union and pourashava disaster management committees to arrange training and workshop and keep the District Disaster Management Committee informed of progress and constraints.
- Assist union and pourashava disaster management committees to hold a hazard, vulnerability and risk analysis at Union and pourashava level; compile hazard, vulnerability and risk assessment of unions and pourashavas and prepare a hazard, vulnerability and risk assessment report for the Upazila.
- Assist union and pourashava disaster management committees to identify the most vulnerable area or people at high risk by sex, age, physical-ability, social status, occupation and economic status, compile the list of people at high risk at different union and pourashavas and based on the lists prepare a report and locational map of people at risk in the Upazila and to send the report to the district disaster management committees.
- Assist union and pourashava disaster management committees to prepare a short, medium and long term vulnerability reduction and capacity building action plan for the identified high-risk people with active participation of the people at risk; compile the action plans and prepare a Upazila level action plan and send a copy to district disaster management committee.

#### Managing the Risk Environment

- Facilitate coordination among the development agencies and service providers through
- Quarterly coordination meeting and take decision about implementation of the short, medium and long term action plan for risk reduction as well as review the progress of the implementation of the risk reduction action plans.
- Assist union and pourashava disaster management committees to raise fund in legal way at local level to implement the risk reduction action plan.
- Update the progress of implementation of Upazila level action plan and other related activities and report to the District Disaster Management Committee
- Prepare a Comprehensive Disaster Management Action Plan with a view to enabling local people, Union, Pourashava and Upazila authority and local organizations to increase the capacity of the poor and vulnerable people to enhance their income and other assets for risk reduction and also to take up security arrangement in the perspective of imminent danger related warnings or occurrence of disaster including the issues already mentioned under this paragraph.
- Take steps for capacity building of Upazila officers, relevant persons and institutions, union and pourashava authorities, volunteers and other people so that they can forecast and publicize warnings relating to hazards (cyclones, storms, floods, droughts, tidal surge, tsunami, over-rainfall, under-rainfall,

water logging, high tide, cold waves etc.) in the quickest possible way and also inform people about their responsibilities of saving their lives and properties from disaster.

- Building the capacity of union and pourashava disaster management committees, local institutions, volunteers and people in a way that they can help and motivate people to adopt disaster (cyclone/ tidal surge/ Tsunami/ Earthquake/ Tornado/ Flood/ Water/Logging/ Salinity/ High Tide/ Cold Wave) resistant housing features.
- Building the capacity of union and pourashava disaster management committees, local institutions, volunteers and people in a way that they can help and motivate people to adapt with disaster resistant agriculture and other livelihood options.
- Determine specific safe center/shelter where the population of certain areas will go at the time of need and assign responsibilities to different persons for various services and securities at the center/shelter. Assist union and pourashava disaster management committees to be more efficient to do the same work at union and pourashava level.
- Ensure supply of safe water and if necessary other services from specific points near the shelter/centre with the help of Upazila authority. Assist union and pourashava disaster management committees to be more efficient to do the same work at union and pourashava level.
- Assist Union and Pourashava Disaster Management Committees to train the students, youths, local clubs and volunteers on community based water purification technology, so that during disaster, they can supply water-purifying technology during emergencies in their community until external support reaches the high-risk people.
- Assist Union and Pourashava Disaster Management Committees to plan for preparing some community Based High land, which can be used as play ground in normal time and can be used as shelter place during disaster period where livestock, poultry, emergency food, kerosene, lamp, candle, matches, fuel wood, radio and other important resources could be shifted along with the people.
- Assist Union and Pourashava Disaster management Committee to stock emergency life-saving medicines at union and pourashava level for use during disaster.
- Prepare relevant plans for rescue, primary relief operation, and restoration of communication with District Headquarters and Union Authorities and local arrangement for rehabilitation of severely affected families.
- Monitor the activities and Progress of Implementation of Action Plans of Union and Pourashava Disaster management Committees and submit a progress report of Upazila Disaster Management Action Plan to the District Disaster Management Committee.
- Arrange for rehearsals or drills on the dissemination of warning signals/forecasts, evacuation, rescue and primary relief operations (if necessary committee can seek assistance from district Authority).

### Responding to the Threat Environment

#### Warning Period

- Disseminate warning and security messages, evacuate the vulnerable people as per evacuation plan, cast an eye on the last moment check of rescue team and its preparation and take effective measure to minimize gap as a high priority.
- Engage trained institutions, volunteers and people in field for effective and rapid dissemination of early warning messages to the vulnerable community and monitor the whole security and warning message dissemination activities.
- Visit the pre-determined emergency shelter center and be sure that for essential services and security different organizations and volunteers are alert and ready to provide services.
- Review the practicality of water supply sources nearby the shelter center and if necessary, fill the gaps that people can get safe water supply during disaster from these water sources.
- Conduct a mock or drill to be ensured that the trained students, youths, with club members and volunteers can prepare water-purification technology at their locality and can supply the victims during emergencies and to monitor that adequate materials are ready to prepare such water-purification technology.
- Review the stock of life saving medicines at union level and evaluate its adequacy to supply victims during disaster.
- Prepare a checklist of emergency works to-do during disaster and be sure that appropriate materials and people are available for use.

#### During Hazard Onset

- Operate "Emergency Operation Centre (EOC)" at Upazila level to coordinate evacuation, rescue and relief activities.
- Organize emergency rescue work by using locally available facilities in times of need and if directed assist others in rescue works.
- Coordinate all relief activities (GO-NGO) in the Upazila in a manner that social justice (on the basis of who needs, what is needed and how much is needed) is ensured in relief distribution;
- Protect people from upset creating rumour during hazard period by providing them correct and timely information.
- During hazard ensure security of the local and outside relief workers.
- Ensure the security of women, children and person with disability during hazard.
- Take necessary actions to protect environmental degradation by quick funeral of corpses and burying the animal dead bodies.
- Help people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.
- Enforce Union and Pourashava Disaster Management Committees to prepare water purification technology (tablet) at local level with the help of trained students, youths, clubs and volunteers; and distribute those products at emergency among the people at risk before being caught by diarrhea or other water borne diseases.

#### Post-Hazard Period

- Collect statistics of loss incurred in disaster in the light of guidelines of Disaster Management Bureau and District Disaster Management Committee and send the same to District Disaster Management Committee.
- Provide data and statement to the District Disaster Management Committee regarding damage, need, received resources and priority for relief and rehabilitation works.
- Plan the rehabilitation work in a way that essential measures for future risk reduction is well considered.
- Take steps for distribution of articles for rehabilitation received locally or from Relief and Rehabilitation Directorate and from any other source following the guidelines from Disaster Management Bureau and Upazila Disaster Management Committee.
- Supervise and keep accounts of the relief and rehabilitation materials distributed and send it to District Disaster Management Committee and donor agency (if the donor provided relief fund).
- Ensure that due to hazard the people who were displaced can come back to their previous places; in this case, dispute (if there is any) regarding the land of the displaced people should not be an obstacle to come back to the peace after disaster.
- Counsel the psycho-traumatize people due to hazard with the support of the community and experts.
- Ensure that the injured people are getting fair and just treatment from health service providers, if necessary; committee can recommend for Upazila and District level assistance.
- Arrange a lesson learning session with the participation of concern institutions and individuals on learning from during hazard and after hazard.
- Coordinate the disaster relevant activities of different departments at Upazila level.
- In addition to the above follow Standing Orders on disaster management related issues and instant orders of appropriate authority.

### **Union Disaster Management Committee**

#### **Responsibilities of Union Disaster Management Committee:**

##### *Defining the Risk Environment*

- Ensure that local people are kept informed and capable of taking practical measures for the reduction of risk at household and community level and also disseminate the success stories of reducing disaster risks at household and community level widely among the local people.
- Arrange training and workshops on regular basis on disaster issues and keep the Upazila Disaster Management Committee informed.
- Hold a hazard, vulnerability and risk analysis at Union level.
- Identify the most vulnerable or people at high risk by sex, age, physical ability, social status, occupation and economic status.

- Prepare a short, medium and long term vulnerability reduction and capacity building action plan for the identified high-risk people with active participation of the people at risk.
- Facilitate coordination among the development agencies and service providers through quarterly coordination meeting and take decision about implementation of the action plan for risk reduction as well as review the progress of the risk reduction action plan.
- Raise fund at local level to implement the risk reduction action plan.
- Update the progress of implementation of action plan and other activities and report to the Upazila Disaster Management Committee
- Prepare a Comprehensive Disaster Management Action Plan with a view to enabling local people, Union authority and local organizations to increase the capacity of poor and vulnerable people to enhance their income and other assets for risk reduction and also to take up security arrangement in the perspective of imminent danger related warnings or occurrence of disaster including the issues already mentioned under this paragraph.
- Take steps for capacity building of relevant persons and institutions, union authority, volunteers and people in a way that they can forecast and publicize warnings relating to hazards (cyclones, storms, floods, droughts, tidal surge, tsunami, over-rainfall under-rainfall, water logging, high tide, cold wave etc.) in the quickest possible manner and also inform people about their responsibilities of saving their lives and properties from disaster.
- Build the capacity of local institutions, volunteers and people in a way that they can help and motivate people to adopt disaster (cyclone/ tidal surge/ Tsunami/ Earthquake/ Tornado/ Flood/ Water Logging/ Salinity/ High Tide/ Cold Wave) resistant housing features.
- Build the capacity of local institutions, volunteers and people in a way that they can help and motivate people to adapt with disaster resistant agriculture and other livelihood options.

### Managing the Risk Environment

- Determine specific safe centre/shelter where the population of certain areas will go at the time of need and assign responsibilities to different persons for various services and securities at the shelter/centre.
- Ensure supply of safe water and if necessary other services from specific points near the shelter/centre with the help of Upazila authority.
- Train the students, youths, local club members and volunteers on community based water purification technology. So that during disaster, they can supply water-purifying technology during emergencies in their community until external support reaches the high-risk people.
- Plan for preparing some community Based High land, which can be used as play ground in normal time and can be used as shelter place during disaster period and where livestock, poultry, emergency food, kerosene, lamp, candle, matches, fuel wood, radio and other important resources could be shifted along with the people.
- Stock emergency life-saving medicines at union level (Union Health and Family Welfare Center) for use during disaster.

- Prepare relevant plans for rescue, primary relief operation, and restoration of communication with Upazila Headquarters and local arrangement for rehabilitation of severely affected families.
- Arrange for rehearsals or drills on the dissemination of warning signals/forecasts, evacuation, rescue and primary relief operations (if necessary committee can seek assistance from Upazila Authority).

### Responding to the Threat Environment

#### Warning Period

- Disseminate warning and security messages, evacuate the vulnerable people as per evacuation plan, cast an eye on the last moment check of rescue team and its preparation and take effective measure to minimize gap as a high priority.
- Engage trained institutions, volunteers and people in field for effective and rapid dissemination of early warning messages to the vulnerable community and monitor the whole security and warning message dissemination activities.
- Visit the pre-determined emergency shelter center and be sure that for essential services and security different organizations and volunteers are alert and ready to provide services.
- Review the practicality of water supply sources nearby the shelter/center and if necessary, fill the gaps that people can get safe water supply during disaster from these water sources.
- On a minimum scale, conduct a mock or drill to ensure that the trained students, youths, clubs and volunteers can prepare water-purification technology at their locality and can supply to the victims during emergencies and to monitor that adequate materials are ready to prepare such water-purification technology.
- Review the stock of life saving medicines at union level and evaluate its adequacy for supply among the victims during disaster.
- To prepare a checklist of emergency works to-do during disaster and be sure that appropriate materials and people are available for use.

#### During Hazard Onset

- Organize emergency rescue work by using locally available facilities in times of need and if directed assist others in rescue work.
- Prepare water purification technology (tablet) at local level with the help of trained students, youths, clubs and volunteers; and distribute those products at emergency among the people at risk before being caught by diarrhea or other water borne diseases.
- Coordinate all relief activities (GO-NGO) in the union in a manner that social justice (on the basis of who needs, what is needed and how much is needed) is ensured in relief distribution;
- Protect people from upset creating rumor during hazard period by providing them correct and timely information.
- During hazard ensure security of the local and outside relief workers.

- Ensure the security of women, children and person with disability during hazard.
- Take necessary actions to protect environmental degradation by quick funeral of corpses and burying the animal dead bodies.
- Help people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.

#### Post-Hazard Period

- Collect statistics of loss incurred in disaster in the light of guidelines of Disaster Management Bureau and Upazila Disaster Management Committee and send the same to Upazila Disaster Management Committee.
- Take steps for distribution of articles for rehabilitation received locally or from Relief and Rehabilitation Directorate and from any other source following the guidelines from Disaster Management Bureau and Upazila Disaster Management Committee.
- Send accounts of materials received to Upazila Disaster Management Committee and donor agency (if the donor provided relief fund).
- Ensure that due to hazard the people who were displaced can come back to their previous place; in this case, dispute (if any) regarding the land of the displaced people should not be an obstacle to come back to the place after disaster.
- Counsel the psycho traumatic people due to hazard with the support of community and experts.
- Ensure that the injured people are getting fair and just treatment from health service providers, if necessary; committee can recommend for Upazila and District level assistance.
- Arrange a lesson learning session with the participation of concern institutions and individuals on learning from during hazard and after hazard.
- In addition to the above follow Standing Orders on disaster management related issues and instant orders of appropriate authority

## Annex 7

## ROLES AND RESPONSIBILITIES OF MINISTRIES/DIVISIONS/ DIRECTORATES/ DEPARTMENTS/ AUTONOMOUS BODIES

### *General Roles and Responsibilities which are common to all Ministries, Divisions, Directorates, Departments and Autonomous Bodies*

(The Following is an indicative list of responsibilities subject to approval of the revised SOD. The provisions of SOD stand valid at any point of time)

#### **Defining the Risk Environment**

- Ensure that disaster risk reduction approaches are well considered during planning and implementation of development programmes.
- Mainstream disaster management principles and practices within national development planning processes.
- Coordinate Ministry activities to consider disaster risk reduction issues.
- Monitor risk reduction activities and programs and keep the National Disaster Management Council informed of their progress.
- Develop policy related to disaster risk reduction within the Ministry.
- Develop Ministry programs for research and hazard analysis at national and sub-national levels.
- Nominate a person to act as liaison officer for all matters related to disaster risk management.

#### **Managing the Risk Environment**

- Undertake disaster risk analysis processes to identify and assess risks which may affect Ministry services.
- Prepare disaster risk management plans, to include business continuity and operational response relief and recovery.
- Undertake risk reduction activities, consistence with identified risks and treatment options developed from formal hazard and risk analysis processes.
- Develop and maintain an EOC suitable for managing the activities of the Ministry during activation, response, recovery and rehabilitation operations.
- Establish and maintain a system of liaison officers available for contact on a 24 hour/365 day basis
- Ensure the Ministry is prepared and capable of activation for response, relief and recovery operations.
- Conduct training and awareness for staff on disaster management, and that staff have the appropriate skills and abilities to effectively participate in disaster risk management activities.
- Undertake preparation activities prior to flood/cyclone season to ensure Ministry preparedness systems and procedures are adequate and capable.
- Review Ministry contingency plans periodically but not less than once per year, to ensure adequacy and consistency with lessons learnt from previous response, relief and recovery operations.

- Establish and maintain inter-Ministry communications systems for response, relief and recovery operations, and to develop a system of information reporting and dissemination within the Ministry and to other key external stakeholders.
- Actively participate in committees at national and sub-national levels, including activities and programs related to disaster risk reduction and emergency operations planning.

### **Responding to the Threat Environment**

- Ensure intra-Ministry coordination of support during response, relief and recovery operations.
- Support inter-Ministry coordination, including active participation in committees at all levels.
- Ensure the Ministry has established and maintains communications with the Disaster Management Information Centre (DMIC).
- Activate the Ministry EOC and ensure continuous contact within the Ministry at all levels and with external stakeholders.
- Ensure warnings are disseminated within the Ministry, at all levels
- Take all necessary steps to activate Ministry resources in support of response, relief and recovery operations.
- Undertake specific responsibilities as per these standing orders.
- Ensure staff at sub-national level undertakes actions to support response, relief and recovery operations, including attending disaster management committee meetings as necessary.
- Ensure that information is properly managed, including reporting at various levels, and to the DMIC.
- Ensure the continuous delivery of Ministry services to affected areas.
- Support response, relief and recovery operations as requested.
- Prepare situations reports and ensure that reports are properly disseminated.
- Conduct damage assessment; prepare damage assessment reports including costing of repair and reconstruction of damaged infrastructure and the re-establishment of government services (as appropriate to Ministries).
- Conduct post hazard impact assessment, and where necessary prepare reports on the affects to civil society, industry or vulnerable groups.
- Where necessary, reallocate Ministry resources, including staff, from non affected areas to affected areas to support relief, recovery and rehabilitation operations or to ensure that Ministry services are maintained.

## Annex 8

## GLOSSARY OF TERMS

**Adaptation**- means the adjustment in natural or human systems in response to actual or expected climactic stimuli or their effects, which moderates harm and exploits beneficial opportunities.

**Climate Change**- means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

**Disaster** – means a serious disruption to a community caused by the impact of an event which requires a significant coordinated response by the Government and other entities to help the community to recover from the disruption. Disasters are usually associated with severe damage to infrastructure and utilities, death, injuries and homelessness, and can be widespread or contained within a particular sector or sub sector.

**Disaster Area** – means a district, city corporation, upazila, municipality, union or any part of Bangladesh declared to be a Disaster Area under this Act.

**Disaster Management** - means arrangements for managing the potential adverse risks and includes defining the risk environment, managing the risk environment and responding to the threat environment.

**Emergency Response Operations** – means activities undertaken immediately before, during or after an event which help to reduce loss of life, illness or injury to humans, property loss or damage, or damage to the environment. It may include, for example, planning, co-ordination and implementation of measures to lesson the effects of a disaster upon members of the public or to protect any property of the state.

**Hazard** – means an event which has the potential to cause a disaster, and can be either natural (e.g. flood, cyclone, tsunami), human induced (e.g. chemical spill, fire) or technological in nature (e.g. nuclear generator failure). Hazards are not by definition disasters.

- a. A cyclone, earthquake, flood, storm tide, tornado, tsunami, river erosion, drought or other natural happening.
- b. An explosion or fire, a chemical, fuel or oil spill, or a gas leak.
- c. An infestation, plague or epidemic.
- d. A failure of, or the disruption to, an essential service or infrastructure.

**Mitigation** – means the process of implementing measures that eliminate or significantly reduce the risks associated with potential hazards.

**Natural Disaster** – is a disaster (see definition of disaster) caused by the impact of a natural hazard.

**Preparedness** – means measures that are designed to ensure that communities will have the knowledge and understanding of their risk environment to enable them to better cope with potential hazard impacts.

**Prevention** – means activities undertaken to reduce or eliminate risk.

**Relief** – means money, food, medicine, shelter, clothes or any other assistance public or private provided to people and communities to overcome the effects of a disaster event.

**Reconstruction** – means the process of restoring affected infrastructure to its pre event condition.

**Recovery** - means measures that are designed to develop the systems required to support affected communities in the reconstruction of their physical infrastructure and restoration of their emotional, economic and physical well being.

**Risk** – means the measure of the likelihood of harmful consequences arising from the interaction of hazards, vulnerable elements and the environment.

**Risk Reduction** – means the systematic process of defining and re-defining risk and managing risk.

**Standing Orders on Disaster** – means standing orders issued by the National Disaster Management Council under the direction of the Government.

**Vulnerability** – means a measurement of elements at risk that are exposed to specific hazards both natural or human induced, and that have a low level of resilience to cope with the impacts of that hazard or characteristics of that hazard.

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**Comprehensive Disaster Management Programme  
Policy, Programme and Partnership Development Unit  
Disaster Management and Relief Bhaban  
92-93 Mohakhali C/A, Dhaka 1212  
Tel: 9890937, Fax: 9890854, e-mail: [info@cdmp.org.bd](mailto:info@cdmp.org.bd)**

