

# Bangladesh Country Report 1999

Md. Shamsul Islam  
Director General  
Directorate General of Relief & Rehabilitation  
Government of the Peoples' Republic of Bangladesh

## Contents

<u>I.</u>	<u>1. Country Profile</u>
<u>II.</u>	<u>1. Major Natural Disasters And Their Impacts In Bangladesh</u> <u>1) Cyclones</u> <u>2) Floods</u> <u>3) Droughts</u> <u>4) River bank erosions</u> <u>5) Tornadoes</u>
<u>III.</u>	<u>1. Disaster and Disaster Management Concepts</u>
<u>IV.</u>	<u>1. Strategy for Disaster Management In Bangladesh</u> <u>1) Internationally:</u> <u>2) Nationally:</u> <u>3) At Field Level:</u>
<u>V.</u>	<u>1. Evaluation of Past Experiences</u>
<u>VI.</u>	<u>1. Achievements In The Fields Of Disaster Management</u> <u>1) National Level:</u> <u>2) Field Level:</u>
<u>VII.</u>	<u>1. Disaster Education And Public Awareness Building</u>
<u>VIII.</u>	<u>1. Usability Of The Internet</u>
<u>IX.</u>	<u>1. Current Activities In Disaster Management</u>
<u>X.</u>	<u>1. Conclusions</u>
<u>Annex</u>	<u>Annex-I A Graphical representation of Thana Hazard Indices in Bangladesh</u> <u>Annex-II A Graphical representation of Population Density in Bangladesh</u> <u>Annex-III A Graphical representation of Catastrophic Flood 1998 in Bangladesh</u> <u>Annex-IV A List of Major Natural Disaster in Bangladesh</u> <u>Annex-v Chart Showing Institutional Arrangement for Disaster Management in Bangladesh (National Level)</u> <u>Annex-VI Chart Showing Institutional Arrangement for Disaster Management in Bangladesh (Field Level)</u> <u>Annex - VII Composition &amp; responsibilities of NDMC</u> <u>Annex - VII Composition &amp; responsibilities of NDMC</u> <u>Annex VIII Composition &amp; responsibilities of IMDMCC</u> <u>1) Responsibilities regarding Disaster Preparedness</u> <u>2) Responsibilities to meet emergency situation</u> <u>Annex -IX Composition &amp; responsibilities of CPPIB</u> <u>[RESOLUTION]</u> <u>Annex-X Composition &amp; responsibilities of DDMC</u> <u>Annex-XI Composition &amp; responsibilities of TDMC</u> <u>Annex-XII Composition &amp; responsibilities of UDMC</u>

## I .

---

### 1. Country Profile

With an area of 147,570 sq. kilometers and situated between 20° 34' degree & 26° 38' degree North latitude and between 88.01 degree and 92.41 degree East longitude, Bangladesh occupies a unique geographic location spanning a stretch of land between the mighty Himalayan mountain chain on the north and the open Ocean on the south. It is virtually the only drainage outlet of a vast river basin made up of the Ganges, the Brahmaputra and the Megna and their networks. Bangladesh has the highest population densities in the world with 847 inhabitants per sq. kilometre. The total population is estimated at 125 million with an annual growth rate of 1.67 percent.

## II .

---

### 1. Major Natural Disasters And Their Impacts In Bangladesh

Bangladesh is one of the Least Developed Countries in the world. Bangladesh is prone to many kinds of natural disasters. Of these natural disasters, the most important ones to mention are tropical cyclones with associated storm surges, floods, droughts, tornadoes and river-bank erosions. Besides these disastrous weather system the occurrences of earthquakes at times make significant impact both on social life and topography of the country.

#### 1) Cyclones

Tropical cyclones are frequent in the Bay of Bengal. Immediately pre-monsoon and immediately post-monsoon periods are the seasons when cyclones and depressions form in the Bay of Bengal. Bangladesh has the worst record of cyclones and storm surges in the world. They destroy crops, damage infrastructure, homes and vital installations, and cause widespread health hazards for the people. Storm surges create both short and long-term problems because the salt water ruins the soils. They occur frequently and in such magnitude in Bangladesh that they have multiplied the problem of poverty and seriously challenged the efforts of the country towards self-reliance. Occasionally, tropical cyclones also cause enormous numbers of casualties. The cyclone disasters in 1970 (300,000 dead) and 1991 (138,000 dead) are among the worst natural disasters in the world.

#### 2) Floods

Floods in Bangladesh are a complex phenomenon. They pose enormous threats to the population, but at the same time, moderate floods contribute to the fertility of the land. Extensive river floods cause great disruption and damage to infrastructure and loss of crops. Floods indirectly contribute to the concentration of land ownership and wealth as small landowners are forced to sell their property as a result of flooding. Bangladesh has always experienced some degree of flooding. Apart from a few small hills in the north and south-east, the country is totally flat. Very little of the country is more than 20 meters above sea level. In a normal monsoon, one third of its 22 million acres of cultivated land is flooded. Flooding is a fact of life to the people of Bangladesh and they demonstrate great resilience and skill in coping with it. Monsoon flooding, which normally affects about one third of the country, is regarded by farmers as beneficial. They have developed agricultural practices to make use of the floodwater for rice and jute as well as for fisheries. It is when flooding increases beyond the normal level when problem arises.

In August-September, 1988, Bangladesh experienced an unprecedented flood causing loss of 1657 human lives and again during July-September, 1998 Bangladesh experienced another flood which is the worst in the living memory both in respect of its long duration and water level. Almost two-third area of the country was inundated causing widespread damage to the economy of the country ever before. It took the life of 918 people.

#### 3) Droughts

Bangladesh experiences drought conditions at some intervals of time. Records show that Bangladesh had, in the recent past, drought conditions having disastrous crop failure. In 1979 Bangladesh passed through a major drought year which was termed by many, as the worst in the recent past. Droughts of 1957 and 1972 were of severe nature also. Crop failure by drought comes as a significant strain also to the socio-economic structure of Bangladesh.

#### 4) River bank erosions

Along the courses of the mighty rivers, the Jamuna, the Meghna, etc. erosion every year takes away chunks of land causing displacement of large number of people and losses of properties. Due to recurrence of such erosion displaced people are forced to come to cities for their earning. This adds to the growth of slum areas, scarcity of land in the cities and also create various social problems.

#### 5) Tornadoes

Tornadoes cause localised devastation and demand an immediate response. A severe tornado hit Tangail district of the country on 13th May 1996 causing 540 death and injuring about 34000 people. Loss of cattle heads and damages to households were also substantial.

A Graphical representation of Thana Hazard Indices, Population Density, Catastrophic Flood of 1998 in Bangladesh and a List of Major Natural Disasters are enclosed as Annex I, II, III & IV with this paper.

## III .

---

### 1. Disaster and Disaster Management Concepts

Internationally, the generally accepted definition of "disaster" is: "An occurrence arising with little or no warning which causes or threatens serious disruption of life, and perhaps death or injury to large numbers of people, and requires therefore a mobilization of effort in excess of that normally provided by the statutory emergency services". To which one would add, it is "An event which afflicts a community the consequence of which are beyond the immediate, financial, material or emotional resources of the community".

"Disaster Management" includes all aspects of planning for and responding to disasters. It refers to the Management of both the risks and the consequences of disasters and includes:

The incorporation of preventive/mitigation measures into overall development plans and activities at all levels in disaster prone areas: this may include structural and non-structural measures to reduce the risks of disaster occurring and the consequences of those that cannot be prevented;

preparedness plan and related measures in disaster-prone areas and organize appropriate emergency responses, when necessary: this may include forecasting, warning dissemination systems, and standing arrangements for evacuation and the organisation of rescue, relief and short-term rehabilitation activities emergency response to disasters when they occur, including rescue, relief, short-term rehabilitation/repairs: and Post-disaster reconstruction/long-term reconstruction.

Disasters are of three types. These are -

- (i) Natural
- (ii) Anthropogenic (man-made)
- (iii) Hybrid disaster which arises from a linkage of Anthropogenic events and natural events.

Details of these are appended below in Table —1

**Table- 1**  
**Disaster Classification and Predominant Agent**

Disaster Type	Natural	Man-made	Hybrid
Avalanche/Rockfall	Yes	No	Yes
Landslide/Mudslide	Yes	Yes	Yes
Transport			
Air	No	Yes	Yes
Road	No	Yes	Yes
Marine	No	Yes	Yes
Rail	No	Yes	Yes
Climatic	Yes	No	
Drought	Yes	Yes	Yes
Famine	Yes	Yes	Yes
Epidemic	Yes	No	Yes
Plague	Yes	Yes	Yes
Earth quake	Yes	No	Yes
Fire	Yes	Yes	Yes
Explosion	No	Yes	Yes
Flooding	Yes	No	Yes
Mining	No	Yes	Yes
Volcanic Activity	Yes	No	Yes
Miscellaneous	No	Yes	Yes

Disaster and its management are a continuum of inter-linked activities. So conceptually isaster management is not a series of events, which commences and then stops with the occurrence of each disaster. In fact, when a disaster strikes, two major setbacks immediately become pronounced. These are:

- (i) direct loss of existing national assets in various forms takes place, and
- (ii) there has to be diversion of national resources and effort from on-going subsistence and development in order to achieve accelerated recovery.

To deal with these setbacks there is an obvious need to develop a comprehensive approach to disaster management. For efficiency and effectiveness, comprehensive approach needs to cover all aspects of disaster management with appropriate balance amongst prevention, mitigation, preparedness, relief & response, recovery, reconstruction rehabilitation.

In the past, disaster management used to be viewed in Bangladesh as post-disaster activities i.e. response and recovery involving relief and rehabilitation only. Consequently, little had been done for alleviation from the impact of future disasters. This old concept is fast getting replaced by modern concept of disaster management for a comprehensive approach to cope with and recover form disasters.

## IV .

### 1. Strategy for Disaster Management In Bangladesh

The management of both risks and consequences of disaster is the disaster management, which includes prevention and mitigation, preparedness, emergency response and post-disaster recovery (i.e. rehabilitation and reconstruction). The Government of Bangladesh (GOB) is convinced that disasters costing innumerable lives and millions of dollars to the national economy can be alleviated with preparedness and preventive measures such as hazard and risk analysis, land-use zoning, building codes, disaster preparedness training etc. The need for the integration of all efforts to design a total disaster management strategy is now strongly realized at all tiers of the Government machinery.

Self-reliance of the community is the keynote for preparedness, response and recovery. This requires community involvement, which is, at present, encouraged for optimum coordination, best utilization of resources and protection of lives and properties against disasters.

Previously mitigation aspect as part of disaster management tended to be considered as structural mitigation measures or engineering solutions. There is now a growing awareness at Government levels that non-structural mitigation measures such as community disaster preparedness, training and public awareness, linked to micro-income generating projects need to be given a high priority.

A number of fronts have to be tackled simultaneously for proper disaster management and administration of the aspects mentioned above. It is, therefore, important for the Government to continue its efforts in the following directions:

#### 1) Internationally:

International help and expertise have to be sought to develop appropriate programmes for preparedness involving awareness build-up, modern communication facilities, enhancement of institutional capacities, etc. International forums have to be used by the Government as platforms to draw attention of the world community for securing support of the developed countries in the fields of comprehensive disaster management and environmental protection of the country.

## 2) Nationally:

A continuous process is required to be pursued by the Government to review the existing disaster management arrangements in the country. In the process based on past experience and present changes, the needful, in phases, has to be done by the Government at national level for up-dating overall disaster management in the country so as to keep pace with time and catch-up with appropriate technological advancement.

## 3) At Field Level:

As efficient disaster management involves community participation, the Government needs to give priority on efforts for increasing awareness of the community, people and households regarding the practical ways of reducing disaster risks and losses. While formulating development programmes of the country, the Government needs to ensure that the disaster action plans are established in the most disaster prone Thanas and Unions with the aim to mobilize communities for preparing and protecting themselves, and also for increasing their own capacities to cope with and recover from disaster without looking for outside help.

# V.

---

## 1. Evaluation of Past Experiences

Bangladesh has well developed institutions and procedures for managing natural disasters and has made considerable efforts and has been fairly successful in organising disasters relief operations but, this is mostly done on an ad-hoc basis rather than on the basis of advance planning.

The Emergency Standing Orders for Flood issued in 1984 and Standing Orders for Cyclone issued in 1985 list pre-disaster responsibilities for many Ministries and Agencies, and assign specific preparedness responsibilities to the Ministry of Relief and Rehabilitation, district, thana and union level authorities. Before these orders were issued, Bengal Famine Code, 1913 and Standing Order for cyclone, 1965 and orders and instructions issued by concerned authorities from time to time were being followed in handling disasters.

The Directorate of Relief and Rehabilitation was established in 1983 as an operational unit of the Ministry of Disaster Management & Relief. This Directorate has an officer known as District Relief & Rehabilitation Officer in each District and an officer known as Project Implementation Officer in each Thana. Through them effective and efficient distribution of relief goods in disaster times is being carried out. Moreover, Test Relief and Food for works, VGD activities, and rural infrastructure building are also being carried out throughout the year.

Establishment of 1835 Cyclone Shelters and 196 Flood Shelters in cyclone and flood prone Than as of the country.

Establishment of Cyclone Preparedness Programme (CPP), as a joint-venture organisation of GOB and BRCS. CPP with the help of its 33000 volunteers plays a vital role for disseminating warning signals, during impending cyclone and evacuation of vulnerable people from hazard prone areas.

# VI.

---

## 1. Achievements In The Fields Of Disaster Management

As part of disaster management for carrying out operational activities, there is a need to contain and operate a number of different components covering aspects such as warning, information management, communication, etc. The disaster management operation systems need to be capable of incorporating all these components in response to the threat. To be effective, therefore, the systems of disaster management operations need to be implemented as comprehensive and continuous activities not as periodic reactions to individual disaster circumstances. Keeping this reality in view, the GOB has given priority to improve the early warning issuing capacity of the concerned Government Organizations such as Storm Warning Centre (SWC) of Bangladesh Meteorological Department (BMD) and Flood Forecasting and Warning Centre of Bangladesh Water Development Board. As a result:

Micro-wave links between SWC in Dhaka to Radar Stations at Cox's Bazar and Khepupara have been established for real time use of radar echoes to bring about improvement of early warning system in case of cyclone.

Under bilateral agreement between the GOB and the Government of Japan replacement of radar at Agargaon, Dhaka, establishment of a new radar at Rangpur and a satellite ground receiving station at SWC, Dhaka are in the process of implementation.

There has already been a substantial progress in the expansion of flood forecasting and warning services (FAP-10) in the country under an on-going project with the Danish Hydraulic Institute as the main consultant. The project has been completed at the end of December, 1998.

Building codes, based on the analysis of seismicity in Bangladesh, have been designed for the structures in the country. The codes are under consideration at various stages of the Government for adoption as legal basis.

Based on the experience of 1998 flood, the Hon'ble Prime Minister has ordered that henceforth the planners should produce three kinds of physical plans, one for the cyclone-prone areas, another for the flood-prone areas and the other for the normal areas. She has also instructed to make the highways high enough in the flood-prone areas keeping in view the flood level.

To make people conscious about the impacts of disasters, International Decade for National Disaster Reduction and National Disaster Preparedness Day are being observed on second Wednesday of October and last working day of March every-year with befitting manner. Hon'ble President or Hon'ble Prime Minister attend these functions as Chief Guest and deliver speech highlighting the importance of the disaster preparedness, mitigation, awareness building etc.

GO-NGO relations in the field of disaster preparedness have been improved.

The GOB has taken up a number of significant steps during the last few years for building up institutional arrangement from national to the union levels for effective and systematic disaster management. These are:

Establishment of a disaster management organization under the control of MDMR named Disaster Management Bureau (DMB) in 1993.

Naming of the Ministry of Relief and Rehabilitation as the Ministry of Disaster Management & Relief.

Establishment of Council and Committees at the national, district, thana and union levels for overall disaster management.

Establishment of Emergency Operations Centre (EOC) at the MDMR for information dissemination during emergency period related to impending disaster.

The elaborate institutional arrangements in disaster management are shown as Annex V and VI.

The Council and the Committees are:

#### 1) National Level:

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.

Inter-Ministerial Disaster Management Coordination Committee (IMDMCC), headed by the Hon'ble Minister in-charge of the Ministry of Disaster Management & Relief (MDMR). This Committee is responsible for implementation of disaster management policies and decisions of NDMC/Government.

Cyclone Preparedness Programme Implementation Board (CPPIB), headed by the Secretary, Ministry of Disaster Management & Relief to review the preparedness activities of cyclone. The composition and responsibilities of NDMC, IMDMCC & CPPIB are shown as Annex - VII, VIII & IX.

Disaster Management Training and Public Awareness Building Task Force, headed by the Director General of DMB to coordinate the disaster related training and public awareness activities of the Government, Non-Government and other organizations.

Focal Point Operational Coordination Group on Disaster Management, also headed by the Director General of DMB to review and coordinate the activities of various Departments related to disaster management. Preparation of Contingency Disaster Management Plan by individual department is also reviewed.

NGO Coordination Committee on Disaster Management, headed by the Director General of DMB to review and coordinate the activities of NGOs involved in disaster management activities in the country.

Committee for Speedy Dissemination of Disaster Related Warning/ Signals, headed by the Director General of DMB to meet frequently to examine, ensure and find out the ways and means for the speedy dissemination of warning/signals among the people.

#### 2) Field Level:

District Disaster Management Committee (DDMC), headed by the Deputy Commissioner (DC) to coordinate and review the disaster management activities at the district level.

Thana Disaster Management Committee (TDMC), headed by the Thana Nirbahi Officer (TNO) to coordinate and review the disaster management activities at the thana level.

Union Parishad Disaster Management Committee (UDMC), headed by the Chairman of the Union Parishad to coordinate, review and implementation of the disaster management activities.

The composition and responsibilities of these field level Committees are shown as Annex - X, XI and XII.

## VII.

---

### 1. Disaster Education And Public Awareness Building

Of late, there is a global realization that non- structural disaster mitigation programmes must accompany the structural measures for reducing the loss and damages of disasters. Construction of cyclone shelters, embankments, dykes, etc. are no doubt necessary, but such structural measures cannot by themselves produce the desired results unless the community as a whole of a disaster- prone area is fully conscious about disaster risks and the way for disaster preparedness and mitigation.

Training and Public Awareness building are the major components of non-structural disaster prevention and mitigation programme. The objective of Public Awareness Programme is to promote an informed, alert and self-reliant community, capable of playing its full part in support of, and in co-operation with, government in all relevant disaster management matters.

The community needs to know

- What Disaster will do?
- The best immediate action to take, personally and by families and other kin groups.
- How best to help other members of the community?
- How to participate effectively in the disaster communication and warning process.
- How to improvise shelter and sustenance until assistance is available.

The disastrous natural events like cyclones of 12 November,1970, 29 April,1991 and unprecedented floods of 1987 and 1988 attracted the world attention to assist Bangladesh in adopting non-structural measures against disasters. Creation of Disaster Management Bureau (DMB) in 1992 under UNDP and UNICEF assistance was principally intended among other functions to build widespread public awareness against disasters through training and non- formal education. With the formation of Disaster Management Committees at national and field levels, there had been a

crying need to train up the members of these committees in disaster related matters. Incidentally, these committees not only consists of the officials of the government and semi-government departments but also NGO officials, public representatives, local leaders, teachers and other cross- sections of people. So for DMB trained about 17000 people through 225 training courses.

Besides DMB has supported holding of Disaster Management Training Workshops in other institutes as well. In a recent month, Bangladesh Public Administration Training Centre (BPATC) arranged a senior-level workshop on Disaster Management with the financial support of UNICEF of through OMB. With the approval of MDMR, DMB has been arranging financial support for in-service training programmes on disaster management in major training institutes.

Besides training on disaster management, OMB under the guidance of MDMR has preformed, inter-alia, the following public awareness activities:

Publishing booklets in Bengali on:

- Public information about cyclone/tidal bore
- Public information about flood
- Outline of Thana Disaster Action Plan
- Outline of Union/Pourashava Disaster Action Plan
- Publishing Bengali Calendar/Posters each year depicting disaster points
- Procurement and distribution of Thana coloured base maps
- Publishing Newsletters on Disaster Management.

MDMR with the assistance of OMB, Directorate of Relief and Rehabilitation, other sister organisations and concerned NGOs have been observing the following days.

- International Decade for Natural Disaster Reduction Day ( IDNORD ) each year on the second Wednesday of October as per United Nations Declaration.
- National Disaster Preparedness Day on the last working day of March from the year 1998.

Besides government efforts, some NGOs are also involved in training and Public Awareness activities relating to Disaster Management. To mention some are CARE International Bangladesh, BDPC, CCDB, CARITAS, PROSHIKA, OXFAM etc. Disaster Forum is an umbrella organization for disaster related NGOs. Some of the organizations like OXFAM prepared some beautiful film strips on Disaster Management which are published through government media. There is a regular dialogue between Govt. and NGOs and specially in the Committee for Disaster Management activities with NGOs, Disaster Management Training and Public Awareness Building Task Force and NGO Co-ordination Committee on Disaster Management both headed by the Director General, DMB. These committees discuss and co-ordinate the GO-NGO programmes on disaster management, particularly, in the field of Training and Public Awareness building. In addition to these Public Awareness activities, Govt. of Bangladesh has introduced disaster management courses in Universities, Colleges and Schools.

## VIII.

---

### 1. Usability Of The Internet

Disaster Management Bureau under the Ministry of Disaster Management and Relief will soon have a WEB page of its own. This page will provide various disaster related information to all user agencies and individuals. The information will include data on past disasters information on the most disaster prone areas of Bangladesh and risk factors, agencies involved in disaster management, DMB's role as a focal point, topics on mass awareness, particularly on warning signals and preparedness etc. The MIS/GIS system of DMB will also provide limited access to outside agencies to share the data stored in DMB's server over the network system.

DMB has a plan to facilitate the availability of Internet connection to other focal points. OMB is now maintaining liaison through Email in the Disaster Management Units of other countries to share ideas and experiences.

## IX.

---

### 1. Current Activities In Disaster Management

Many of the disaster related matters fall outside the normal pattern of life. It is, however, possible to predict many such matters with reasonable accuracy. Others may remain unforeseen. As such counter disaster measures make heavy demands as administrative legal support. The scale of logistic and administrative backing in legal form is required for response aspects, such as debris clearance, survey and assessment, distribution of relief supplies, repairs of essential services, declaring a particular District or area as calamity area. This is also required for mobilization of resources on an emergency basis and requisitioning of various essential services. Realising this basic reality, OMB as per the direction of MDMR has drafted the following Act/Plans:

- i) National Disaster Management Act
- ii) National Policy an Disaster Management
- iii) National Disaster Management Plans
- iv) Disaster Action Plans for District, Thana and Union levels

These are under examination at various levels and it is expected, will be finalized soon.

Necessary action plan for simplification of existing cyclone warning signals have been initiated. At present there exist 04 (four) warning signals for river ports and 10 (ten) warning signals for sea ports. The signals are of 200 years old and need to be made simple and understandable. So Government has set-up a committee to make appropriate recommendation for their improvements. The recommendations of the committee are under examination of the Govt.

Further expansion & Modernization of FFWC of BWDB and SWC of BMD are being carried out under specific projects.

Modernisation of CPP with latest and most updated telecommunication equipment is under consideration of the Government.

Construction of more Cyclone shelters in the cyclone prone areas are in progress.

## X.

---

### 1. Conclusions

Bangladesh has a coastal belt of about 710 km long from Raimongal river to the west and Teknaf to the Southeast. Almost the entire coastal belt is exposed to the potential danger of cyclone with associated storm-surge. While the country has a vast flood plains where flooding during SW monsoon from June to September is an annual occurrence. In extreme events (as in 1998) the flooding covers upto three-fourth of the land area. To alleviate the impacts of flooding, embankments have been constructed along certain river reaches as structural preparedness measures. Similarly to cope with cyclones, for eventual evacuation of people from risk areas, 1835 cyclone shelters have so far been constructed in the high risk areas of the coastal belt. As comprehensive control of the natural hazards most frequent to Bangladesh is not possible, the Government of Bangladesh have been continuously making endeavor to make disaster counter measures under the total Disaster Management Plan as sufficient as possible to ensure sustainable development of the country as a whole. Such efforts have proved to be effective in minimising human death toll significantly and mitigating sufferings of the people. The systems of warning for cyclone, flood and drought is in continuous process of evolution borne out of experience, research and study for further improvement.

Nevertheless, improved performance in coping with disaster under national disaster management plan is a task which is difficult without international collaboration including resource mobilisation in terms of technological and financial help. This requires a break-through in the field of technology which can be used for disaster management profitably. There have been remarkable advances in the areas of communications, remote sensing and computing capabilities in the field of sharing information. These need to be harnessed for use to help the disaster managers. Disaster managers of the developing member countries will have significant benefit if their communication services are linked with an effective early warning and response system.

Based on these realities and also on the existing facilities in Bangladesh for Disaster Management, the following proposals deserve consideration by the ADRC:

- ADRC should have a satellite based internet and internet facilities having two way easy communications with shared nominal charge like GTS of WMO for use by the Member States in handling disasters.
- Satellite based radio/television broadcast may be undertaken by ADRC for use in coping with disaster situations and awareness build-up.
- The strength of ADRC will be as good as the weakest links in the net work that exists. These weaknesses are the big gaps that hinder quick communications between developed and developing member states. The issue of bridging these gaps has to be addressed by the ADRC with priority.
- The ADRC should have a built-in concept of helping the vulnerable people at a cost that they themselves or their Government can easily bear and at the same time making them self-reliant in their efforts and objectives.
- The ADRC should help the developing Member states in their efforts to systematically promoting and developing preparedness at all levels including a massive efforts at:
  - Public education and training;
  - building local level community capacities;
  - developing specific expertise and management systems; and (exchange of information and resource persons.)

The ADRC may establish a policy forum of the Asian Countries at which consultation on programmatic issues on disasters can be discussed and action plans worked out.

The ADRC may also take initiative in -

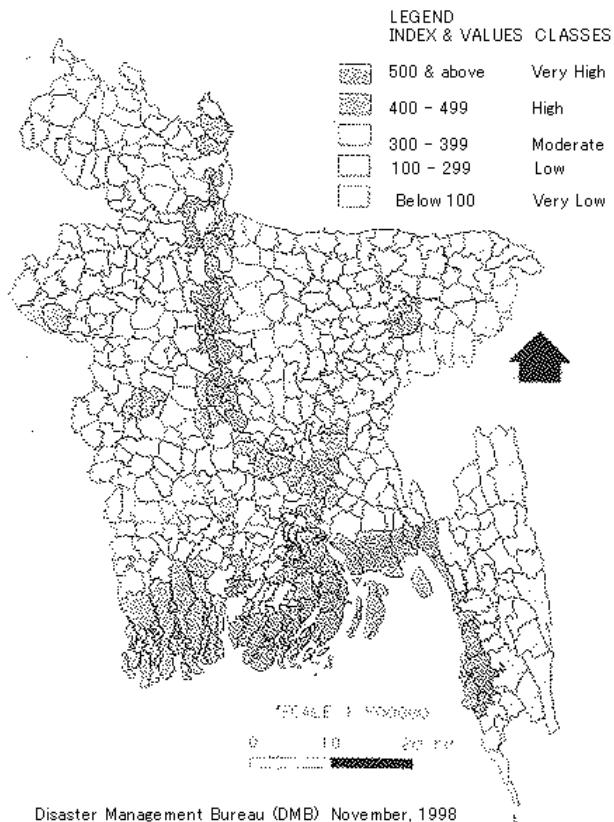
- development of basic institutional arrangements for disaster management;
- community disaster preparedness;
- disaster vulnerability reduction strategies for sustainable development amongst its member countries; and
- Improve technological data-base.

## Annex

---

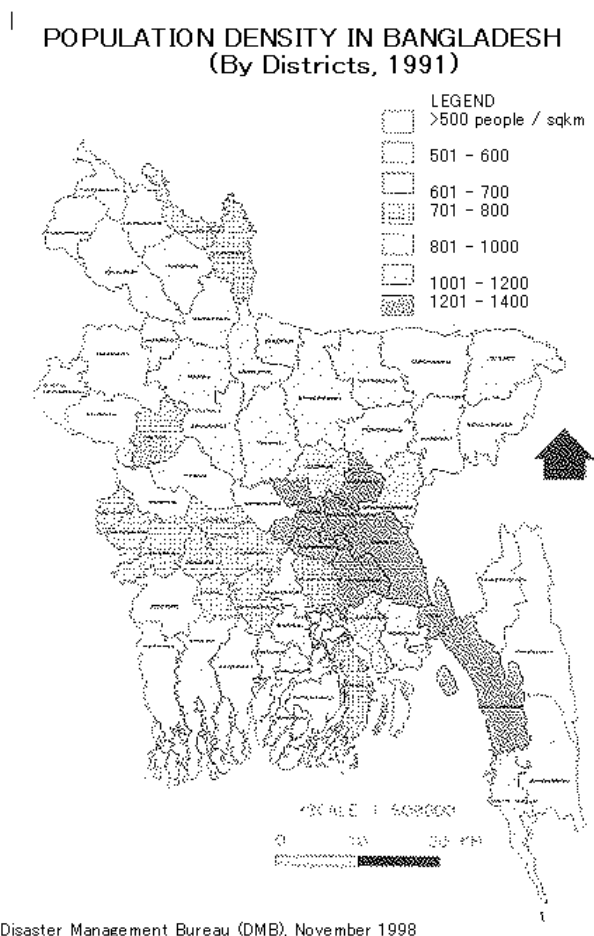
### Annex-I A Graphical representation of Thana Hazard Indices in Bangladesh

Figure : IHANA HAZARD INDICES IN BANGLADESH



Annex-II A Graphical representation of Population Density in Bangladesh

Figure : POPULATION DENSITY IN BANGLADESH

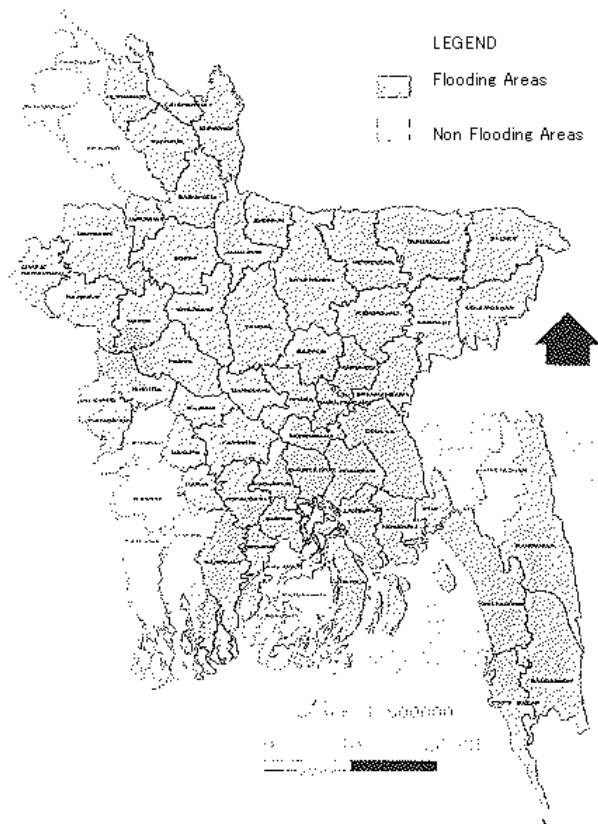




Annex-III A Graphical representation of Catastrophic Flood 1998 in Bangladesh

Figure : CATASTROPHIC FLOOD 1998 IN BANGLADESH

CATASTROPHIC FLOOD 1998 IN BANGLADESH  
(By Districts)



Disaster Management Bureau (DMB), September, 1998

Annex-IV A List of Major Natural Disaster in Bangladesh

Major Natural Disaster in Bangladesh

Year	Type of Disaster	Death
1876	Cyclone	100,000
1885	Floods(Rajshahi/Dinajpur)	+
1892	Floods(Rangpur/Dinajpur)	+
1896-97	Drought	+
1897	Earthquake	+
1897	Cyclone	+
1898	Cyclone	1,75,000
1906-7	Floods in East Bengal	+
1901	Cyclone	+
1909	Cyclone (2)	+
1911	Cyclone	+
1917	Cyclone	+
1918	Earth quake	+
1918	Floods	+
1919	Cyclone	+
1922	Cyclone	+
1922	Floods	+
1923	Cyclone	+
1926	Cyclone	+
1936	Cyclone	+
1941	Cyclone	+
1942	Cyclone	+
1943-44	Drought, Irregular rain, Transport dislocation & War, Including West Bengal	3,00,000
1947	Earthquake	+

1950	Earthquake	+
1954	Earthquake	+
1955	Floods	+
1957	Earthquake	+
1960	Cyclone (2)	11,149
1961	Cyclone	11,468
1963	Cyclone	11,520
1964	Cyclone	196
1965	Cyclone	19,270
1966	Cyclone (2)	850
1969	Cyclone	75
1969	Tornado	922
1970	Cyclone	3,00,000
1972	Drought	+
1973	Cyclone (2)	103
1974	Cyclone	20
1974	Floods followed by famine	30,000
1975	Cyclone	5
1975	Floods	+
1977	Cyclone	+
1978/79	Drought	+
1981	Cyclone	2
1982	Drought	+
1983	Cyclone (2)	343
1984	Floods	+
1984	Cyclone	+
1985	Cyclone	11,069
1986	Cyclone	14
1987	Floods	1,657
1988	Floods	2,379
1988	Cyclone	5 708
1989	Drought	+
1991	Cyclone	1,38,868
1998	Flood	918

Source : BBS, 1990; Gp. Capt. Syed Ahmed 1986; CDL, 1992;

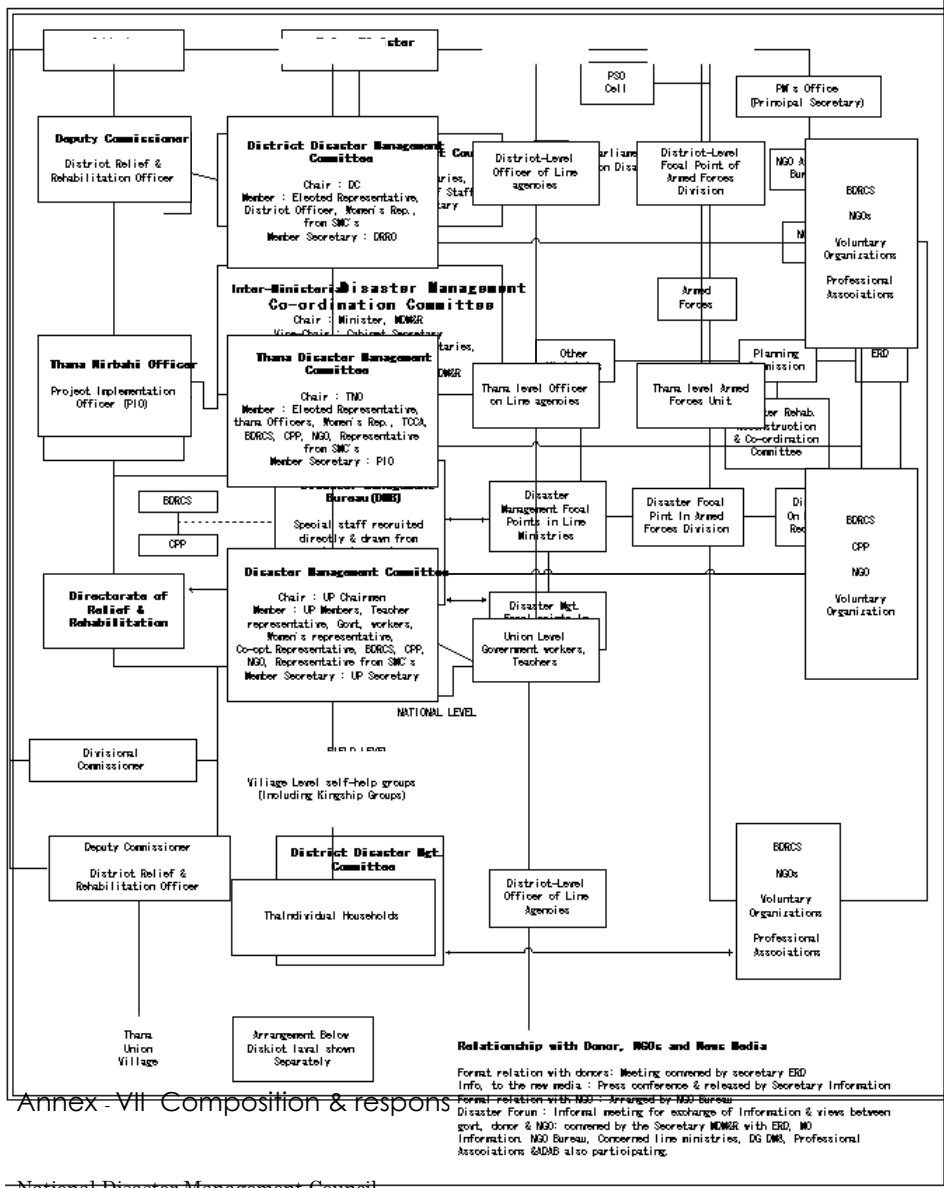
a; Kafiluddin, 1991; ADB 1991a; Mahalanobis, 1927, CR of MDMR

Note : + : No Data found

Annex-v Chart Showing Institutional Arrangement for Disaster Management in Bangladesh (National Level)

Annex-VI Chart Showing Institutional Arrangement for Disaster Management in Bangladesh (Field Level)

**Institutional Arrangement for Disaster management In Bangladesh(National Level)**  
**Institutional Arrangement for Disaster management In Bangladesh(Field Level)**



Annex - VII Composition & respons

**National Disaster Management Council**

I	Prime Minister	Chairman
II	Minister, Ministry of Water Resources	Member
III	Minister, Ministry of Finance	"
IV	Minister, Ministry of Local Government, Rural Development & Cooperatives	"
V	Minister, Ministry of Communications	"
VI	Minister, Ministry of Health and Family Welfare	"
VII	Minister, Ministry of Home Affairs	"
VIII	Minister, Ministry of Food	"
IX	Minister, Ministry of Disaster Management and Relief	"
X	Minister, Ministry of Agriculture	"
XI	Minister, Ministry of Shipping	"
XII	Chief of Staff, Army	"
XIII	Chief of Staff, Navy	"
XIV	Chief of Staff, Air Force	"
XV	Cabinet Secretary	Member-Secretary
XVI	Principal Secretary to the Prime Minister	Member
XVII	Secretary, Ministry of Agriculture	"
XVIII	Secretary, Ministry of Finance	"
XIX	Secretary, Ministry of Health and Family Welfare	"
XX	Secretary, Ministry of Home Affairs	"
XXI	Secretary, Ministry of Defence	"
XXII	Secretary, Ministry of Local Government	"
XXIII	Secretary, Ministry of Roads and Railways	"
XXIV	Secretary, Ministry of Shipping	"
XXV	Secretary, Jamuna Bridge Division	"
XXVI	Secretary, Ministry of Water Resources	"
XXVII	Secretary, Ministry of Food	"
XXVIII	Secretary, Ministry of Disaster Management and Relief	"
XXIX	Secretary, Ministry of Information	"

XXX	Member, Socio-Economic Infrastructure, Planning Commission	"
XXXI	Principal Staff Officer, Armed Services Division	"

The Council will 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 policy regarding Disaster 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 the Standing Orders on Disasters and National Disaster Management plans.
- Ensure coordination amongst civil administration, Defence Forces and the NGOs in the planning process of disaster management.
- Arrange framing of law for prevention, mitigation, preparedness and disaster response.
- Take necessary steps after evaluating the precautionary/preparedness measures immediately with the warning signals regarding imminent disaster.
- Frame guidelines for distribution of relief materials and assign priority of steps during pre-disaster, disaster and post-disaster periods.
- Consider other related issues and dispose them.

#### Annex VIII Composition & responsibilities of IMDMCC

##### Inter-Ministerial Disaster Management Coordination Committee

I	Minister, Ministry of Disaster Management and Relief	Chairman
II	Cabinet Secretary	Vice-Chairman
III	Principal Secretary to the Prime Minister	Member
IV	Member (Planning), Planning Commission	"
V	Secretary, Ministry of Foreign Affairs	"
VI	Secretary, Ministry of Agriculture	"
VII	Secretary, Ministry of Defence	"
VIII	Secretary, Ministry of Water Resources	"
IX	Secretary, Ministry of Education	"
X	Secretary, Ministry of Information	"
XI	Secretary, Ministry of Housing and Public Works	"
XII	Secretary, Ministry of Power, Energy and Mineral Resources	"
XIII	Secretary, Ministry of Civil Aviation and Tourism	"
XIV	Secretary, Ministry of Fisheries and Livestock	"
XV	Secretary, Ministry of Posts and Telecommunication	"
XVI	Secretary, Ministry of Environment and Forests	"
XVII	Secretary, Ministry of Disaster Management and Relief	"
XVIII	Secretary, Finance Division, Ministry of Finance	"
XIX	Secretary, Local Government Division	"
XX	Secretary, Ministry of Home Affairs	"
XXI	Secretary, Roads and Railways Division	"
XXII	Secretary, Jamuna Bridge Division	"
XXIII	Secretary, Ministry of Shipping	"
XXIV	Secretary, Ministry of Food	"
XXV	Secretary, Ministry of Health and Family Welfare -	"
XXVI	Secretary, Economic Relation Division	"
XXVII	Principal Staff Officer, Armed Forces Division	"
XXVIII	Director General, NGO Affairs Bureau	"
XXIX	Director General, Disaster Management Bureau -	"
XXX	Director General, Relief and Rehabilitation	"
XXXI	Secretary General, Bangladesh Red Crescent Society	"

The following officers shall attend the meetings on invitation: Director, Department of Meteorology, Joint Secretary, Ministry of Disaster Management and Relief, Chairman, Water Development Board, Chief Engineer, Roads and Highways Department, Chairman, T & T Board, Director General, Department of Health, Chief Engineer, Public Health-Department, Director General, Department of food, Chairman, BIWTC, Chairman, Bangladesh Railway' Director, Cyclone Preparedness Programme (CPP); Director, ADAB; president, Federation of Chamber of Commerce and industries; UN Resident Coordinator; Representatives of the UN Organizations; Chief Engineer, Public Works and Local Govt. Engineering Department and any other Expert.

#### Responsibilities of Inter-Ministerial Disaster Management Coordination Committee

- Implement the policy and decisions of the National Disaster Management Council. To monitor the disaster related plans for prevention/mitigation, preparedness, emergency assistance (Disaster Relief), and rehabilitation and to keep the Council informed of the progress.
- Coordinate the activities of the government agencies concerned with disaster management and evaluate the activities of the Disaster Management Bureau.
- Scrutinize the disaster preparedness of different Ministries and Agencies every six months.
- Take steps for coordination of relief operations in post-disaster recovery period, and
- Advise and issue guidelines for other related issues.

#### Responsibilities regarding Disaster Prevention/Mitigation

- Recommend to the National Disaster Management Council regarding the prioritization and inclusion of disaster prevention/mitigation projects in the National Development Plan.
- Determine the method of Disaster Impact Assessment (DIA) of large projects regarding their longevity against increasing disaster or damage during disaster.

- Coordinate preparation and implementation of disaster prevention/mitigation projects and to recommend framing of policy, fixing priorities and distributing assets in this respect.
- Arrange for increasing efficiency at all levels of disaster management activities.
- Monitor the disaster risks and their mitigation according to priorities in the national policy and their implementation and to keep the National Disaster Management Council informed of their progress.

#### 1) Responsibilities regarding Disaster Preparedness

- Scrutinize the disaster forecasts and warning procedure and coordinate among the different agencies.
- Review the action plan of all disaster related agencies.
- Monitor the overall disaster preparedness programmes and inform the National Disaster Management Council (NDMC).
- Review the Warning System at local level.
- Coordinate among different agencies responsible for educating people concerning their duties during disasters.
- Ensure coordination among government agencies and NGOs responsible for imparting training on disaster management.
- Ensure rapid supply of additional equipment/materials to places where telecommunication has been disrupted on account of disaster.
- Ensure quick assessment of damage due to disaster and the quality of reconstruction work.

#### 2) Responsibilities to meet emergency situation

##### Alert/Warning Stage

- Ensure that warning signals reach all concerned officials, agencies and mass media.

##### Disaster Stage

- ~- Depute additional manpower to disaster affected areas in aid of administration.
- Send members of the Defence Services with assigned duties for communications and essential services.
- “- Determine priority and issue instructions regarding relief materials, funds and transports.

### Annex –IX Composition & responsibilities of CPPIB

#### [RESOLUTION]

No. VII, F.A. 115/72/326-Relief-26th June, 1973—Whereas the League of Red Cross Societies who initiated Cyclone Preparedness Programme in 1966 and have been containing it still have decided to withdraw from the field with effect from 1st July, 1973;

Whereas It is considered by Government that the Programme is basic to human survival and development of the coastal region; and whereas it has been decided that the programme will continue to operate as Cyclone Preparedness Programme of the Bangladesh will continue to operate as Cyclone Preparedness Programme of Bangladesh Red Cross Society In collaboration with the Government of Bangladesh;

Now, therefore, for proper administration and implementation of the programme, Government is pleased to constitute a high powered committee titled “Policy Committee” with the following to work as Governing Body of the Programme:-

##### Chairmen

- (1) Minister for Relief and Rehabilitation

##### Vice-Chairmen

- (2) Minister for Local Government, Rural Development and Co-operatives,
- (3) Chairman, Bangladesh Red Cross Society,

##### Members

- (4) Member I, Planning Commission.
- (5) Two representatives to be nominated by the Chairman, Bangladesh Red Cross Society.
- (6) Secretary, Ministry of Relief and Rehabilitation—Member-Secretary.

Government is also pleased to constitute a Board to be known as “Implementation Board” with the following for effective Implementation of the Programme:-

##### Chairmen

- (1) Secretary, Ministry of Relief and Rehabilitation

##### Members

- (2) Secretary, Ministry of Local Government, Rural Development and Co-operatives.
- (3) Secretary - General, Bangladesh Red Cross Society.
- (4) Director, Integrated Rural Development Project
- (5) A representative of the Director-General, Rural Housing.
- (6) A representative of the Ministry of Finance.
- (7) Projects Co-ordinator, Cyclone Reconstruction of the Planning Commission.
- (8) Two representatives as nominated by the Chairman, Bangladesh Red Cross Society.
- (9) A representative of the League of Red Cross Societies (if applicable).
- (10) Director, Cyclone Preparedness Programme of Bangladesh Red Cross Society-Member-Secretary.

The ‘Policy Committee’ will give policy directives and guide-lines to the ‘Implementation Board’ for effective and other resources for the programme placing them at the disposal of the ‘Implementation Board’.

The function of the Implementation Board will be as follows –

- (a) To determine and recommend frame and content of the programme.
- (b) To supervise the implementation of the programme.
- (c) To administer all resources of the programme placed at the disposal of the Board by the “Policy Committee”.
- (d) To approve all expenditure incurred on behalf of the programme of coastal region.
- (e) To determine priority and consistency with other related programme of coastal region.
- (f) To fulfil all other functions necessary for the effective implementation of the Cyclone

### Annex-X Composition & responsibilities of DDMC

#### Composition of District Disaster Management Committee

I	Deputy Commissioner	Chairman
II	Representative of concerned Departmental District level.	Member

III	Thana Nirbahi Officers (all)	"
IV	Representative from Woman	"
V	Representative of Bangladesh Red Crescent Society	"
VI	Representative of Cyclone Preparedness Programme	"
VII	Representative of N.G.O.	"
VIII	Representative from Armed Forces at District level	"
IX	District Relief & Rehabilitation Officer	Member Secretary

All the honorable MP's of the district are the adviser of the committee. Chairmen of the committee may co-opt more members under local & Special circumstances.

#### Responsibilities of this committee

- Collect information regarding damage & requirement of relief from thana. Pass on information to Dhaka.
- Make allocation of food grain and cash on the basis of paper allocation received from Dhaka among affected Thanas.
- Distribution made increase of cash through cheques favouring TNO and in case of food grain through sub-allocation.
- Also allocates other materials among thanas. These are either handed over to TNO or transported to thana head quarter by road/river.
- Monitoring & supervising activities of Thana Disaster Management Committee.

## Annex-XI Composition & responsibilities of TDMC

#### Composition of Thana Disaster Management Committee

I	Thana Nirbahi Officer	Chairman
II	UP Chairman (all)	Member
III	Representative of concerned department at thana level	"
IV	Representative from Woman	"
V	Representative of Thana Central Co-operative Association	"
VI	Representative of Cyclone Preparedness Programme	"
VII	Representative of Bangladesh Red Crescent Society	"
VIII	Representative of N.G.O.	"
IX	Thana Project Implementation Officer	Member Secretary

Honorable MP of the constituency is the adviser of the committee.

Chairmen of the committee may co-opt more members under local & Special circumstances.

#### Responsibilities of this committee

- Collect information regarding damage & requirement of relief through UP Chairmen & UP Members. Sometimes thana level officers are deputed for this purpose.
- Pass on information to the district Head quarter.
- Allocation of food grain through delivery orders to UP Chairmen, or their authorized representatives take delivery of food grains directly from the food godown located thana head quarter.
- Allocation & distribution of cash through cheques favouring UP Chairmen. Other materials allocated and handed over to UP Chairmen.
- Monitoring & supervising of actual relief operation of UP Disaster Management Committee.

## Annex-XII Composition & responsibilities of UDMC

#### Composition of UP Disaster Management Committee

I	UP Chairman	Chairman
II	UP Members (all)	Member
III	Teacher Representative	"
IV	UP level Govt. Staff/Officer	"
V	Representative from Woman	"
VI	Representative of Cyclone Preparedness Programme	"
VII	Representative of Bangladesh Red Crescent Society	"
VIII	Representative of N.G.O.	"
IX	UP Secretary	Member Secretary

Chairmen of the committee may co-opt more members under local & Special circumstances.

#### Responsibilities of this committee

- Make the spot assessment of damage.
- Prepare list of affected persons.
- Pass these information to thana head quarter.
- Distribution of food grains, cash and other relief materials among the affected people in presence of thana level officer.