Chapter 3

National Disaster Preparedness

Disaster preparedness is recognised as a crucial management strategy to reduce the loss of lives, livelihoods, and economic activities. Disaster preparedness refers to both structural and non-structural preparedness measures.

Historically, public measures have been limited to early warning and structural mitigation. Over the years there has been a greater shift towards the non-structural measures as well as mainstreaming and multi-sectoral approaches.

The Disaster Management Bureau (DMB) is the lead coordinating agency for disaster preparedness, and it receives support from warning issuance centres (Bangladesh Meteorological Department [BMD], Flood Forecasting Warning Centre [FFWC]); warning dissemination hubs (such as the Disaster Management and Information Centre, Emergency Operation Centre, National Electronic and Print Media, Cyclone Preparedness Programme, and others); and emergency management coordination [Directorate of Relief and Rehabilitation [DRR], Director General of Food, Emergency Operation Centre, Armed Forces' Division, Directorate of Health, Department of Public Health Engineering, and others).

This section provides an analysis of the evolution of disaster preparedness approaches in Bangladesh; instruments that direct, guide, and help in developing preparedness plans; and the institutional arrangements for developing and implementing disaster preparedness plans at different levels.

Evolution of approaches to disaster preparedness

Very limited research was carried out on institutional preparedness for disasters before 1950, but some reports state that disaster response was the key strategy during the British era. In the post-colonial period, major disasters have been the turning point in the search for knowledge and new approaches to mitigate disasters. Although people developed different strategies for coping with disasters, the formal institutional

preparedness that commenced in 1950 has been a milestone. Disaster preparedness in Bangladesh has evolved throughout a number of phases, each triggered by a major disaster. For example, the 1988 flood prompted the formulation of the Flood Action Plan (FAP), whereas an institutional arrangement like the Disaster Management Bureau (DMB) is one of the products of the 1991 cyclone. Each phase has made its own contribution and left gaps, and these are given below.

- In the early phase before the 1950s disaster response was based on social networks rather than on formal institutional arrangements.
- From the 1950s-1980s structural mitigation was led by engineering technology.
- In the post-1990s vulnerability reduction, early warning, and effective response were promoted.
- From 2000 and beyond comprehensive approaches mainstreaming risk were undertaken under the influence of the Hyogo protocol.

Before the 1950s, in earlier times when forecasting was not available, people used to exercise indigenous wisdom in forecasting by observing the behaviour of animals and changes in the natural environment. With the advent of the monsoon rains, people - mostly farmer communities - would start making preparations to minimise losses in the event of flooding. Certain tasks, such as collection of firewood and erection of small earthen embankments ('bandh') around fish ponds to prevent fish from escaping into the flood plains during floods, were routine activities in flood preparedness irrespective of the intensity of flooding. Other activities, such as elevating homestead plinths and tubewell platforms, identifying suitable spots to which to shift cattle and other valuables, and storage of dry food and potable water, were carried out only when a major flood was forecast. All these chores were carried out by members of individual households under the leadership of elected representatives of the people in the lowest tier of local government institution (LGI) called the Union Council/Parishad (UP). Thus, from within living memory, people living in flood-prone areas have practised disaster preparedness measures as a monsoon activity.

People in the coastal areas were one step ahead. Under the leadership of the 'zamindars' (landlords), who owned most of the arable land, local farmers would encircle the paddy fields with small earthen dykes and install wooden sluice gates for drainage in order to save the rice. These steps were undertaken in addition to normal preparedness activities to face the ensuing flood. During high intensity floods, the dykes and sluice boxes would be washed away, only to be built again the next year. In all these activities the government hardly played any role. The budget of the LGI did not cover such activities and the UP Chairman or members who led and coordinated the activities participated mainly out of self interest as potential victims.

The government would appear on the scene only after a disaster and its efforts were concentrated on post-disaster relief, recovery, and rehabilitation. In the case of cyclones, the picture was even bleaker for two reasons. Firstly, floods were more regular phenomena than cyclones, people were more prepared and had a checklist of what to do in the event of floods. Secondly, even if a cyclone was forecast well in advance, there was hardly anything people could do if there were no shelters available for them to take refuge.

From the 1950s-1980s, there were brisk activities in terms of planning and implementation of water development projects, and these activities had both positive and negative impacts. The positive outcomes were that weak mud embankments and flimsy wooden sluices were replaced by well-compacted earthen dykes and concrete structures respectively. The negative outcomes were that the projects were designed by the government without participation at all from stakeholders who had been involved with the disasters, and this led to the creation of facilities that no longer belonged to the people concerned, and it was considered a criminal offence to meddle with them. Suddenly, the people found themselves to be alien in their own homes and the resulting apathy on their part led to the failure of many flood control and drainage (FCD) projects.

Notwithstanding the long spell of planning and implementation of modern water development projects, government policy did not shift from a post-disaster bias to pre-disaster preparedness. The rationale for such a post-disaster policy might have been the notion that disaster is inevitable in a disaster-prone country, and the task of the government should be to restore everything to normalcy as quickly as possible after a disaster. This trend continued until the late 1980s when the country was hit by two consecutive disastrous floods in 1987 and 1988. These two events caused a remarkable response in developed countries where the opinion was that floods that impeded development in poor countries like Bangladesh should be combated in a determined manner.

After the 1990s, and based on deliberations taking place in the late 1980s, the flood action plan (FAP), a five-year study programme (1991-1995), was introduced as the first step in the government's long-term plan to fight floods. The FAP had 26 components (11 main and 15 supporting studies). It introduced innovative ideas and brought about a paradigm shift in issues related to water planning, especially in flood control and drainage projects. For example, earlier plans aimed at eliminating floods from an area were found to be impracticable and not so desirable from an environmental perspective. The FAP introduced the concept of 'controlled flooding and drainage' to exploit the beneficial effects of flooding with least disturbance to the environment. Environmental impact assessment (EIA), social impact assessment (SIA), and people's participation from the planning phase to operation of projects were made mandatory. Multi-criteria

analysis (MCA), instead of only economic and financial analyses, was recommended for project assessment.

From 2000 onwards, the key characteristics became a greater emphasis than previously on vulnerability, a multi-stakeholder approach, and mainstreaming. There has been a lot of progress after 2000. In the National Water Management Plan (NWMP), developed by the Water Resource Planning Organisation (WARPO) in 2003, disaster preparedness with a special emphasis on floods and cyclones was an important part of the plan. In 2005, the Integrated Coastal Zone Management Plan (ICZMP) was developed by the Ministry of Water Resources. The ICZMP included disaster management plans for hazards such as floods, water logging, tsunami, salinity, river bank erosion, and earthquakes. In 2005, in the aftermath to the devastating Asian tsunami which occurred on December 26, 2004, the Ministry of Food and Disaster Management (MoFDM) developed a draft Tsunami Risk Reduction Plan of Action (TRRPA), which is now in the final stages of approval after the incorporation of recommendations and comments from all relevant agencies. The MoFDM has also developed a corporate plan – 'Framework for Action 2005-2009' - through the Comprehensive Disaster Management Programme (CDMP) which was established in 2004 under the MoFDM. In 2006, a draft National Disaster Management Plan was developed which incorporated Bangladesh's commitment to implement the Hyogo Framework of Action (HFA).

Institutional arrangements for disaster management

The Ministry of Food and Disaster Management of the Government of Bangladesh is responsible for coordinating national disaster management efforts throughout all agencies. The Disaster Management Bureau issued a Bengali version of the Standing Orders on Disaster (SOD) in 1997 and an English version in 1999 (Annex 2) to guide and monitor disaster management activities in Bangladesh. A series of inter-related institutions, at both national and sub-national levels, has been established to ensure effective planning and coordination of disaster management and emergency response events (Figure 1).

Organisational structure at national level

i. National Disaster Management Council (NDMC) – headed by the Prime Minister to formulate and review disaster management policies and issue directives to all concerned

ii. Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) – headed by the Minister for Food and Disaster Management to implement disaster management policies and the decisions of the NDMC/government.

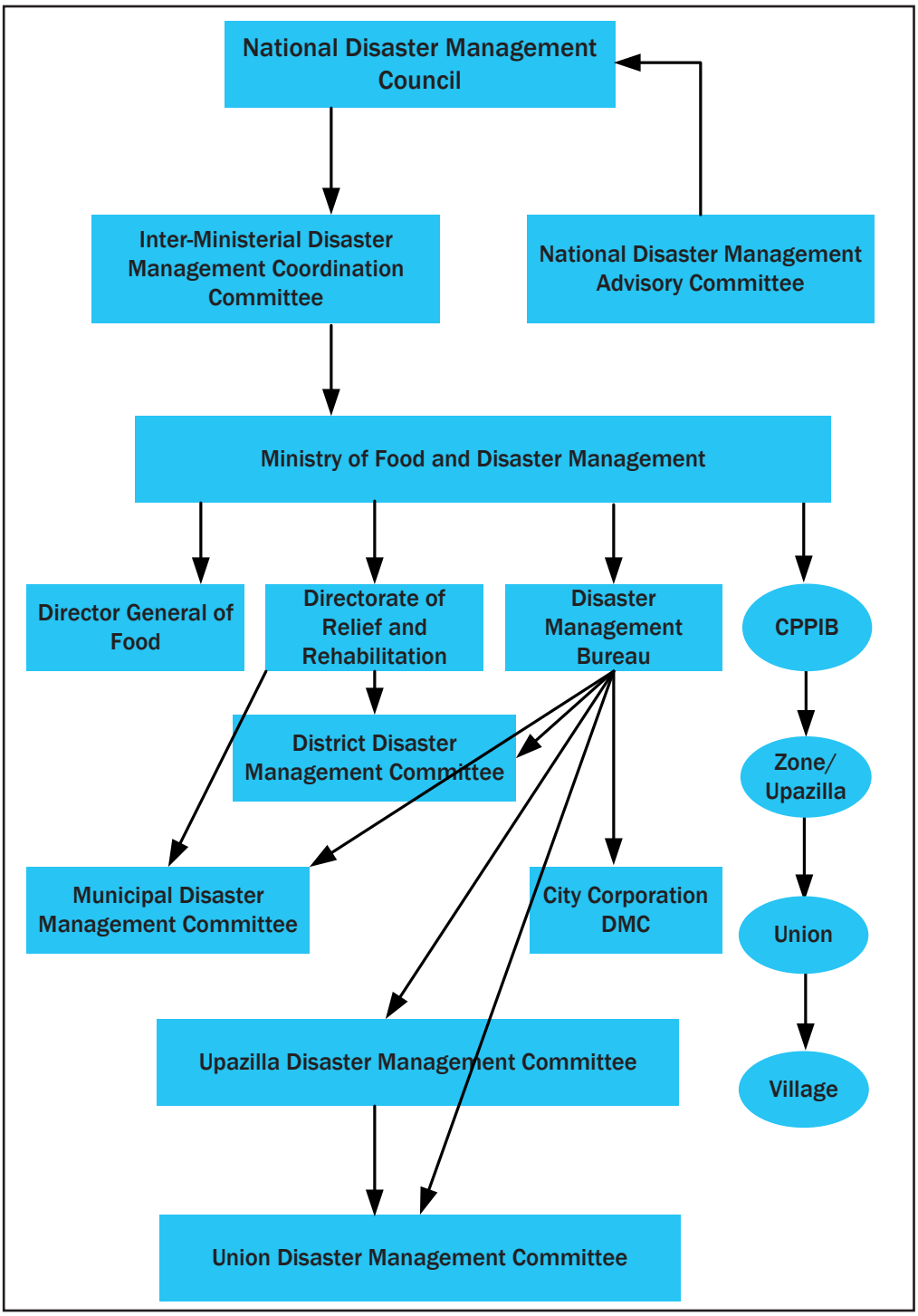

Figure I: Disaster management institutions in Bangladesh

iii. National Disaster Management Advisory Committee (NDMAC) – headed by an experienced person nominated by the Prime Minister.

iv. Disaster Management Bureau (DMB) - headed by a Director General it has three wings, each headed by a director: planning and training, monitoring and information management, and administration. The core business of the DMB is to improve the capacities of disaster management stakeholders and coordinate disaster management policy issues in favour of MoFDM.

v. Directorate of Relief and Rehabilitation (DRR) - headed by a Director General, it has five wings, each headed by a director: food for work; vulnerable group development; relief, monitoring, and evaluation; and administration. The core business of the DRR is to implement disaster management programmes in the field; particularly mitigation, preparedness (evacuation routes, disaster shelters, etc.), and relief and rehabilitation activities.

vi. Director General of Food (DGoF) – headed by a Director General. The core business of the DGoF is to maintain food availability and distribution at a secure level in normal times and in emergencies. The DGoF also looks after national food policy and planning issues.

vii. Cyclone Preparedness Programme Implementation Board (CPPIB) – headed by the Secretary, Ministry of Food and Disaster Management, to review preparedness activities in the initial stages of an impending cyclone

viii. Disaster Management Training and Public Awareness Building Task Force (DMTATF) – headed by the Director General of the Disaster Management Bureau to coordinate the disaster-related training and public awareness activities of the government, NGOs, and other organisations

ix. Focal Point Operation Coordination Group of Disaster Management (FPOCG) – headed by the Director General of DMB to review and coordinate the activities of various departments or agencies involved in disaster management and to review the contingency plans prepared by relevant departments.

x. NGO Coordination Committee on Disaster Management (NGOCC) – headed by the Director General of DMB to review and coordinate the activities of NGOs working in the field of disaster management.

xi. Committee for Speedy Dissemination of Disaster Related Warning and Signals (CSDDWS) – headed by the Director General of DMB to examine, ensure, and find ways and means for rapid dissemination of warnings to the people.

Organisational structure at sub-national level

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

ii. 'Upazilla' Disaster Management Committee (UZDMC) – headed by an 'Upazilla' Nirbahi Officer' (UNO) to coordinate and review disaster management activities at ''upazilla'' level.

iii. Union Disaster Management Committee (UDMC) – headed by the Chairman of the Union Parishad to coordinate, review, and implement disaster management activities in its particular union.

iv. 'Pourashava' Disaster Management Committee (PDMC) – headed by the Chairman of the 'pourashava' (municipality) to coordinate, review, and implement disaster management activities within its area of jurisdiction.

v. City Corporation Disaster Management Committee (CCDMC) – headed by the Mayor of the city corporation to coordinate, review, and implement disaster management activities within its area of jurisdiction.

The details of the national-level committees along with brief terms of reference (ToR) for each are presented in Annexes 3 through 5. The SOD provides detailed roles and responsibilities of all disaster management committees, relevant ministries, divisions, departments, and agencies at all levels for normal period risk reduction and during emergency response periods.

The Ministry of Food and Disaster Management (MoDFM) has three implementing agencies under the policy guidance of the ministry: Directorate of Relief and Rehabilitation (DRR), Disaster Management Bureau (DMB), and Director General of Food (DGoF). The DRR and DMB look after the core business of disaster management and the DGoF looks after issues related to availability, distribution, and supply, and regulatory systems. The GoB's vision for disaster management is highly influenced by the issue of food security and therefore the integration of the DGoF is advanced in this regard. The DMB looks after training and also planning issues arising from various acts and orders related to disaster management. The DRR implements disaster management programmes in Bangladesh. Before 2004, the DRR was mainly a relief agency but, with the influence of the CDMP programme, DRR is shifting to the risk reduction business. At present, the DRR is designing its own programme based on a thorough risk assessment process supported by the CDMP. Already US$35 million have been disbursed to the extremely vulnerable to reduce the threat to their livelihoods by natural hazards. DRR programmes focus on all areas of disaster management: mitigation, preparedness, response, and recovery; whereas DMB provides technical

support to planning and capacity building. The DRR has field offices at 'upazilla' and district levels. The field offices of DRR also provide logistics' support to the DMB for field-level capacity building, planning, and workshops. The DGoF provides emergency food supplies to the field from local stocks in each 'upazilla' and district during disasters caused by natural hazards. The DRR and DGoF have good field-level coordination during disasters and also support rehabilitation work through the food for work (FFW) programme.