



Disaster Management Challenges- Approach For Bangladesh

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ABSTRACT

Bangladesh is one of the most hazard prone and vulnerable parts of the world with respect to such natural disasters as floods, cyclones, earthquakes etc. These have brought loss of lives, scarce resources, reduce productivity and degrade environment. As a result, the over all growth is retarded to a large scale. In order to achieve reasonable efficiency in the management of disasters, a holistic approach including pre-disaster mitigation measures involving risk analysis, prevention and preparedness, as well as effective post disaster response has to be adopted. To do that different agencies are prepared to act together according to their charter of duties. These are not only at the national level, but also at local authorities and community level. Finally, economic development is not sustainable under conditions of vulnerability to natural disaster. Recognizing this fact, development and disaster management should go hand in hand. Development models must have in-built components of disaster reduction, mitigation and preparedness.

Keywords : Disasters, management, development, reduction, resources, evacuation.

1. Introduction

- 1.1 Disaster, whether precipitated as natural phenomenon or manmade, is the real challenge to development and thereby a threat for Bangladesh. This causes loss of life, scarce resources, reduces productivity and degrades environment to a great extent. As a result, the over all growth is retarded to a large scale. As a major natural disaster prone country in the world, Bangladesh is vulnerable to a number of natural hazards like flood, cyclone, drought- often in nature and earthquake, which seldom occurs. Though these hazards give ample time for monitoring and prior forecasting, as well as warning for timely evacuation and relief measures.
- 1.2 In Bangladesh, the colossal loss of life and property, the social and economic disruptions caused by the increasing frequencies and severity of natural disaster has increased awareness on its management at all levels including political circles. In order to achieve reasonable efficiency in this management process, a holistic approach with pre-disaster mitigation measures involving risk analysis, prevention and preparedness, as well as effective post-disaster response, has been adopted. According to the 1994 Yokohama Declaration - "disaster prevention and mitigation are better than disaster response in achieving the goals and objective.
- 1.3 The primary responsibility for the protection of lives and property against natural disasters lies with the Government of Bangladesh. The Government has undertaken the formulation and implementation of a comprehensive disaster management program for future by reducing vulnerability through long-term mitigation measures. Appreciating this, the Government has a separate Ministry of Disaster Management and Relief to deal with the issue. It includes the Directorate of Relief and Rehabilitation and the Disaster Management Bureau (DMB) with the responsibilities of post-disaster response and pre-disaster preparedness respectively.

2. Natural Hazards Of Bangladesh

- 2.1 Disaster in Bangladesh means the commonly perceived effects of sudden natural hazards- cyclone, flood and earthquake etc. These brings unprecedented miseries with loss of lives, destroyed hectares of cultivated fields, homes and infrastructures adversely affecting economy, industry and health of the country. Except earthquake, these hazards are regular events for every year.
- 2.2 Floods. Bangladesh encompass the delta plain of three great rivers - the Ganges, the Brahmaputra and the Meghna. It is crisscrossed by 230 other rivers and rivulets which drain the run-offs from catchment area of about 1.7 million square kilometer. Among these, 92.5 per cent is located outside the country. Estimated about 1500 billion cubic meter volume of water flows through these rivers could flood the entire ter-

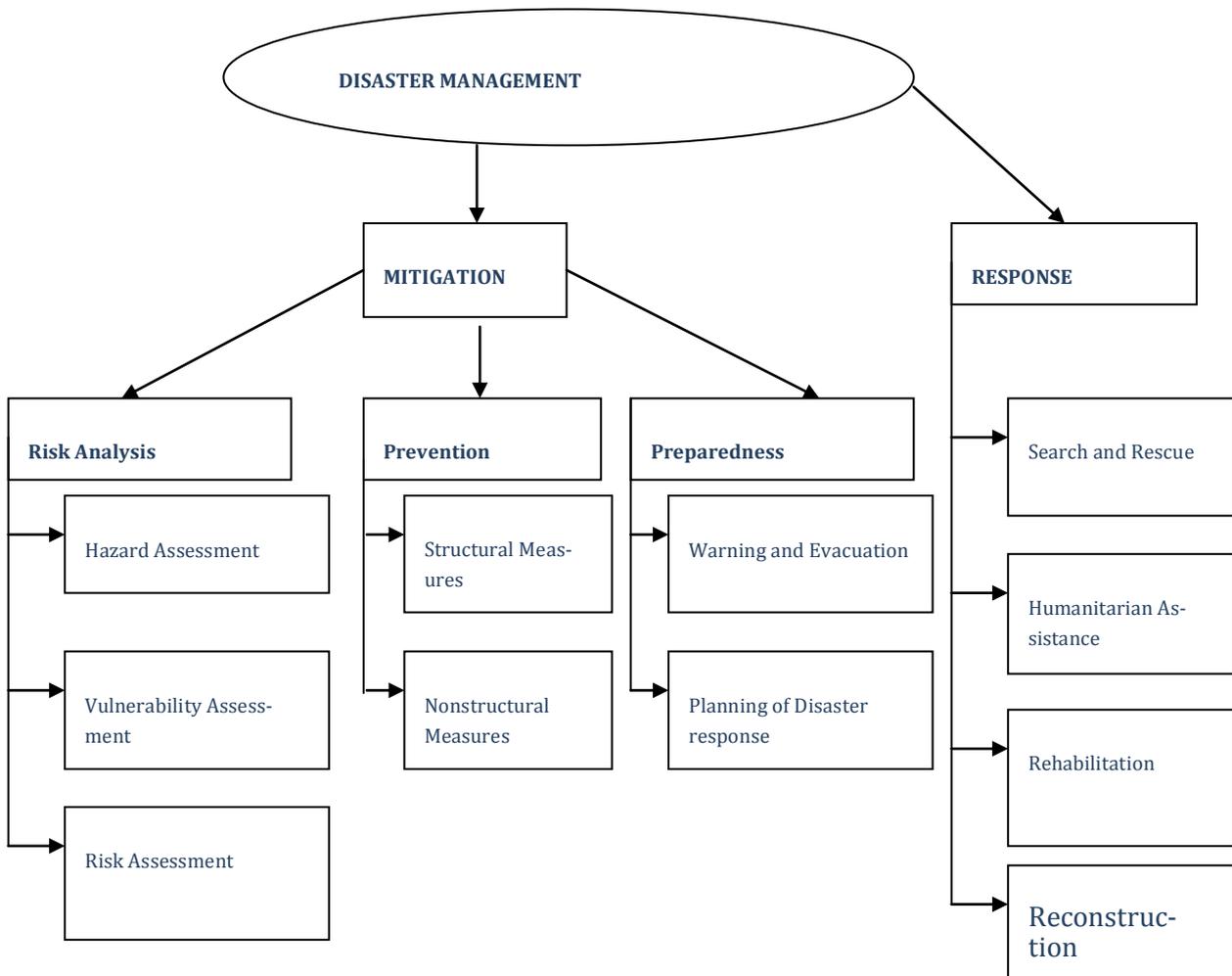
ritory to a depth of 10.25 meters.

- 2.3 Cyclones. The average annual number of tropical disturbances in the Bay of Bengal is between twelve and thirteen. Among these, five attain cyclonic strength with wind speed of more than 64 kilometers per hour. These are the deadliest in the world accounting for about 75 per cent of global losses in terms of lives and property.
- 2.4 Earthquakes. Many severe earthquakes have occurred in and around Bangladesh in the past. The country is neo-tectonically active for being located near the syntax of three Tectonic Plates and Himalayan Mountain Building System.

3 Functional Structure Of Disaster Management

- 3.1 The disaster management framework is defined as different elements of ‘the Disaster Cycle’. It is composed of actions before disaster, actions immediately after disaster and long-term recovery process following a disaster. During the process prevention and preparedness are pre-event elements; response (rescue and relief) occurs immediately after the event and rehabilitation actions as long-term recovery after the event.
- 3.2 Main Elements of Disaster Management. Disaster prevention and preparedness consist of measures both long-term and short-term. This involves a variety of different services and skills and works harmoniously. However, the system is so designed that if one element fails, the organization although weakened but continue to function.

MAIN ELEMENTS OF DISASTER MANAGEMENT

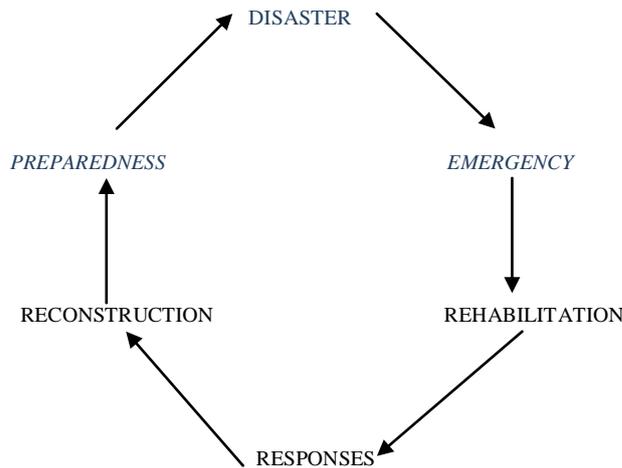


3.3 Issues of Disaster Management. The Government has already implemented pre-disaster mitigation, during disaster reduction and post-disaster management program. It aims as well to reduce the socio-economic vulnerabilities. The important issues are:

- a. Increasing frequency and severity of disasters are key issues for development and poverty reduction. It weakens natural resource base, capacity to support people and results in declining incomes from taxes, production and exports.

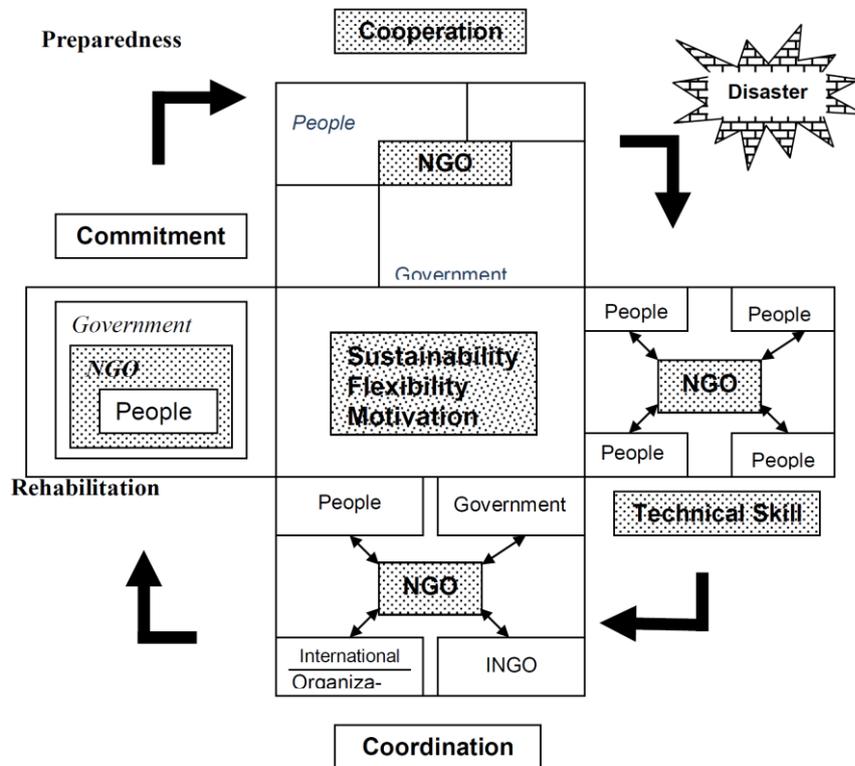
- b. There is a gap between availability of technology and it's application at grass-root level.
- c. Disasters accelerate psychological and health consequences declining standard of living, malnutrition, increasing gaps between rich and poor, unemployment, migration etc.
- d. It is found that particular communities are periodically exposed to the same hazard and also striking the areas where not expected.
- e. Like other developing countries, too much attention has been given to response, recovery and reconstruction after a disaster, not focusing on pre-event mitigation strategies for long-term disaster reduction.

DISASTER MANAGEMENT CYCLE



4 Policy For Disaster Management

MODEL SHOWING ROLES OF NGOs DURING DIFFERENT STAGES OF DISASTER CYCLE



4.1 In the past, disasters were largely considered to be acts of God. Only temporary Government responses had been recognized to distribute relief during post-disaster phase. But over the years, Government has begun to put more emphasis on ways and means of reducing human, economic and environmental costs of disasters.

4.2 Policy Ingredients. A policy is a “course of action adopted by a government, business, individual”². It has a vision guided by philosophy and easy to understand. A ‘Disaster Management Policy’ relates directly or indirectly to hazards and their impacts on humans, human activities and environments. These are:

- a. Policy is effective in a constantly changing environment relating social and economic development, welfare and security.
- b. Policy is implemented through tools of statutes, executive orders and regulations. Private entities and voluntary agencies also formulate policies and put them into practice.
- c. Focus towards the promotion of specific technical tools for reducing risk like adoption and enforcement of engineering and building codes, standards and forecasting.
- d. Policy is centered on short-term goals like improving response through search and rescue, training, enhancing communication systems, or long-term goals: such as increasing safety by building new structures to withstand erosion, earthquake or cyclones.
- e. Policy reflects attitudes. Policy related to land use and development of agriculture and forested lands into urban commercial and industrial areas are particularly sensitive. Because the present-day profits are weighed more against future loss to environment.
- f. There are both large-scale top-down policy and locally driven policy.
- g. The national framework for disaster management influences the local framework. But it needs flexibility, where there is political will.
- h. The process of decentralization leads some uncertainty about local autonomy regarding disaster management.
- j. It needs leadership and effective collaboration between officials, NGOs and communities to ensure sustainability.

4.3 Capacity Ingredients. Capacity Building is defined as “identifying, developing and enhancing the existing capabilities and coping mechanism present in a community.” Clearly, capacity-building activities start from a conceptual framework of openness to learning (including from past) and respect for the wisdom of indigenous ways. By incorporating training and capacity building into long-term policy and implementation schemes, it can broaden both constituencies and capacity for reducing risk. There are different approaches for building capacity, including:

- a. Public awareness.
- b. Classroom education.
- c. Hands-on training.
- d. Community organizing and community-based activities.
- e. Institutional networking.
- f. Policy advocacy.
- g. Partnership and exchange.
- h. Project to increase self-sufficiency. Capacity building for risk reduction equates to the pursuit of self-sufficiency. Training equals empowerment.

4.4 Emergency Preparedness. The concept of overall preparedness becomes clearer through discussions on various complex and inter-sectoral issues. As a result, the Government has taken following significant steps for building up institutional arrangements from national to village level:

4.5 Organizational Structure at the National Level. Listed as follows:

- a. National Disaster Management Council (NDMC), headed by the Prime Minister to formulate and review policies and issue directives to all concerns.
- b. Inter-Ministerial Disaster Management CO-ordination Committee (IMDMCC), headed by the Minister in charge of MDMR to implement policies and decisions of NDMC.
- c. National Disaster Management Advisory Committee (NDMAC), headed by an experienced persons nominated by the Prime Minister.
- d. Cyclone Preparedness Program (CPP) Implementation Board, headed by the Secretary MDMR to review preparedness activities in the

initial stage of impending cyclone.

e. Disaster Management Training and Public Awareness Building Task Force, headed by the Director General of DMB to co-ordinate training and public awareness activities of the Government, NGOs and organizations.

f. Focal Point Operation Co-ordination of Disaster Management, headed by the Director General of DMB to review and co-ordinate the activities of various agencies and contingency plan prepared by concerned department.

g. NGO Coordination Committee on Disaster Management (NGOCC), headed by the Director General of DMB.

4.6 Organizational Structure at Field Level. Listed as follows:

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

b. Upazila Disaster Management Committee (UZDMC), headed by the Upazila Nirbahi Officer (UNO) to co-ordinate and review activities at Upazila level.

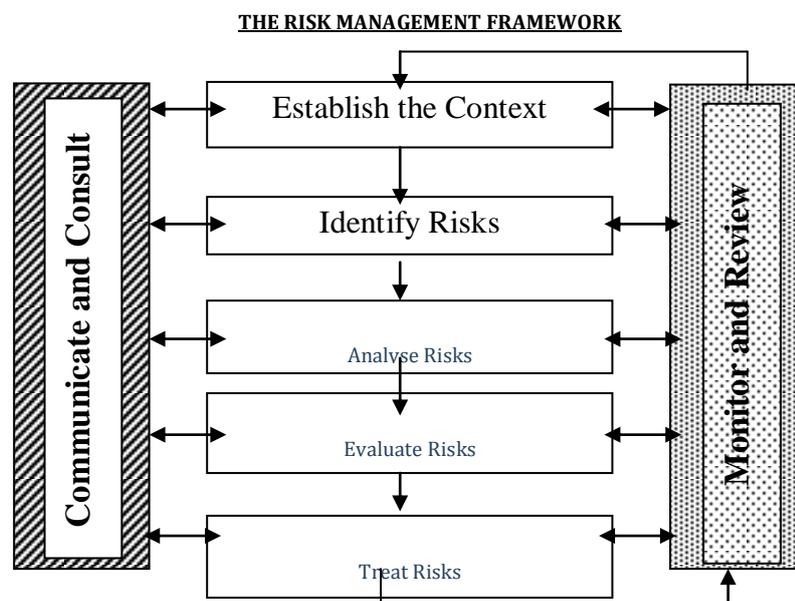
c. Union Disaster Management Committee (UDMC), headed by the Chairman of Union Parishad (UP) to co-ordinate and review activities of concerned Union.

d. The DDMCs, UZDMCs and UDMCs in the highly disaster prone 29 districts, 84 Upazilas and 776 Unions have been energized to prepare action plans for protecting and increasing capacities of the people.

4.7 Disaster Preparedness Mechanism. The Government has formulated a set of mechanism to maintain proper co-ordination amongst concerned Ministries, government organizations and line agencies. To make it operative, a guidebook titled ‘Standing Order on Disaster’ is designed as a basic tool. It outlines the activities of each Ministries, major agencies and departments. In this effort, a comprehensive national policy on disaster management has been designed for consideration of the Government. The entire preparedness mechanism also meets the requirement of integration of the Armed Forces and reflects the crucial role of DDMCs, UZDMCs and UDMCs.

5. Risk Reduction Agenda

5.1 The objectives of disaster preparedness plan are in general “reduction in loss of lives, reduction in substantial losses, secure governance and prevention of environmental degradation”⁶. But the planning methodology and implementation strategies applicable in a developed country may not be appropriate in Bangladesh context. Here large numbers of people live with constant threat of poverty in both rural and urban areas. So people in charge of mitigation argue that a phase of emergency responses and then a phase of rehabilitation immediately follow the onset of a disaster. This, in turn, is followed by recovery and reconstruction phases.



These phases from disaster management cycle automatically result a hazard-resilient capacity in disaster-prone community. It is believed that a community acquires disaster-coping capacity after every event as illustrated at annex M.

6 Community-Based Management

6.1 The poor socio-economic conditions of the people make them more vulnerable to the effects of disasters. This scenes of misery and suffering projected by international media creates sympathy among the Government of Western Worlds and generates considerable donations in cash and kind. The important question is how was the money used? Most of the aid received is spent on reconstruction projects and paying consultants. From the experience, it is observed painfully that not even 1 per cent of the donations is spent for developing awareness and capacity of the vulnerable people.

6.2 The damaging effects of disasters on human lives and property are greatly reduced by both structural and non-structural measures. The first requires billions of dollar investment for infrastructure development like construction of embankment, dikes, raising of roads, construction of shelters and private houses etc. Bangladesh have invested substantial amounts of money in these constructions. But still too little compared to huge needs. So it is better to have a combination of both hardware and software components of disaster management. This involves 'Public Awareness Program' (PAP) to enhance the capacity of the vulnerable people and to be integrated into structural measures in order to ensure active participation.

7 Conclusion

- 7.1 Bangladesh are located in a part of the world highly prone natural disasters like flood, cyclone and earthquake etc. These have brought loss of life and property and enormous public suffering. The flooding that occurred in 1988 for example caused extraordinary and widespread damage affecting a significant percentage of the population. Disaster prevention and preparedness consist of a wide range of measures, both long-term and short-term designed to save the lives and limit the amount of damage that might otherwise be caused by the event. Prevention is concerned with long-term policies and programs to prevent or eliminate the occurrence of disaster. Corresponding measures are taken in such fields as legislation, physical and urban planning, public works and buildings. Preparedness is not limited only to the short-term measures, which are taken during a warning period before the impact of a disaster.
- 7.2 Bangladesh are prepared to deal with disaster. There are well defined organizational and management structures starting from the highest Government level to the lowest administrative level. These are not only at the national level, but also at local authorities and local community level. Because the community inevitably bears the burnt of the first impact and these authorities almost certainly have to shoulder a greater share of immediate responsibility for emergency relief action than the National Government.
- 7.3 It is quite evident that in the concept of sustainable development, natural disaster and environment management is always going to dominate development programs and policies of the nation have common grounds. The linkage between them is very significant, because of their independence on each other. The economic development is not sustainable under conditions of vulnerability to natural disaster. Recognizing the facts that hazard mitigation pays high social and economic dividends, especially in a country like Bangladesh. Such measures must be seen as investment and not a luxury that may or may not be affordable. Finally, development and disaster management should go hand in hand. Development models must have in-built components of disaster reduction, mitigation and preparedness.

8. Recommendations

8.1 For an effective and efficient disaster management in Bangladesh, followings are recommended:

a. Well-balanced National Plan. Bringing all factors, the suggested plan could be evolved in three parts:

- (1) Strategic Plan. It must be based on past experiences, research and political commitment drawing a board framework of mechanism.
- (2) Local Community Plan. It should consults the community as well as the local government so that implementing strategies are culturally and environmentally complaint, acceptable to the people to and within the framework lay down by the local government.
- (3) Action Plan. It should devices specific plans for various hazards, which primarily based on local needs and capacities and finally implementing up to grass-root level.

b. Strengthening Local Institutions and community Based Management. Local institutions and community must play pivotal role in disaster management.

- C. Improving Livelihood and Empowering Individuals. Individual household should be fully aware of disaster-resistant construction.
- d. Use of Local Resources and Appropriate Technology. At every stage of implementation, the use of local resources should emphasize the material used in the process and skills of the community. Thereby it limits dependence on external agencies.

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