

## Chapter X

### Disaster Management

#### A. Introduction

Natural disasters can neither be predicted nor prevented. The problem before us is how to cope with them, minimizing their impact. Tamil Nadu has witnessed havoc caused by cyclones and storm surge in the coastal regions, earthquakes, monsoon floods, landslides, and recently the Tsunami. Increase in urban population coupled with the construction of man-made structures often poorly built and maintained subject cities to greater levels of risk to life and property in the event of earthquakes and other natural hazards. One of the main objectives is to reduce the risk of loss of human life and property and to reduce costs to the society. We have to recognize that in such cases of natural disasters, we deal with phenomena of enormous magnitude that cannot be controlled by any direct means of human intervention. But what we try to do is to reduce the impact on human beings and property.

#### B. Current Scenario

10.2 Details of hazard-prone areas in Chennai Metropolitan Area are given below:

(i) Earth Quake-Prone Areas:

Chennai Metropolitan Area falls under Seismic Zone – III. The whole of Chennai Metropolitan Area falls in this zone.

(ii) Cyclone-Prone Areas:

In Chennai Metropolitan Area, it extends to a distance of 20 km. from the coast. In these areas, the risk is due to (a) cyclonic wind velocities combined with heavy storm, (b) flooding by seawater due to high waves and (c) flooding due to heavy storm.

(iii) Flood-Prone areas:

From the flood hazard map of India (mapped by meteorological department, New Delhi), it is seen that no area in Tamil Nadu falls in the risk zone. But within a local body area, particularly with reference to an area's proximity to a major drainage system like rivers, canals, and also water bodies like lakes, and further with reference to contour levels/low-lying areas, flood prone area mapping has to be done.

In Chennai Metropolitan Area, there are a few areas along the rivers and canals and low-lying areas, which are susceptible to flooding/inundation during heavy storms. Map showing the floodable areas [macro level]

identified in the Madras Metro Flood Relief / Storm Water Drainage Master plan is annexed. Existence of macro and micro drainage networks in Chennai Metropolitan Area facilitates draining of these areas within a reasonable time. Developments in such low lying areas are allowed only when a proposed development conforms to standards and after getting clearance from PWD on the measures to be taken to make it free from inundation.

(iv) Tsunami-Prone areas:

Mapping has to be done of the areas where the tsunami of December 2004 had directly hit and flooded the coastal areas in Chennai Metropolitan Area has to be done. These areas may have to be zoned as Tsunami prone areas. However this area within Chennai Metropolitan Area will fall within the CRZ area 500 metres from HTL along the coast.

10.3 Disaster Management Policy: Tamil Nadu has been having a Disaster Management policy since 2004-05. The thrust of this policy is more on pre-disaster activities of preparedness, prevention and mitigation than on post-disaster measures of relief, rehabilitation and reconstruction. The key components of this policy are the following:

- (i) Convergence of disaster management and development planning
- (ii) Formulation of disaster management plans at all levels taking into account the local conditions
- (iii) Focusing on the reduction of vulnerability of communities instead of mere disaster relief
- (iv) Fostering a culture of prevention among the community and various organs of Government through training and awareness campaigns
- (v) Involving the community at all stages in disaster management activities and
- (vi) Creating a trained and committed volunteer force on the line of home guards for disaster management.

### **C. Strategies**

10.4 Development Control Rules for CMA provide for regulating the constructions with reference to zone, location, height, number of floors, size of buildings, setback spaces to be left around, and the use of the building and land. Building rules under the Local Bodies Acts provide for regulation of location of buildings, foundations, plinths, superstructures-walls, floors, and rooms, licensing of surveyors and inspection of municipal engineers at various stages of constructions, regulations on dead and superimposed loads, wind load/pressure, reinforced cement

concrete and framed structures, construction materials, etc. Structural safety and soundness are regulated under the building rules under the Local Body Acts. Hence early action should be taken to include Special Rules for Hazard Prone Areas in the Building Rules of the Local Bodies and effectively enforce the same.

10.5 Most of the components of the GOI-UNDP Urban Earthquake Vulnerability Reduction Programme are also applicable to other natural disasters viz. cyclones, landslides, floods and Tsunami. Hence the awareness generation, development of techno-legal regime, earthquake preparedness and response plans, training and capacity building should be done covering these natural hazards also and the State Nodal Agency may take appropriate action on these.

10.6 Even after the GOI-UNDP DRM programme period, the State Nodal Agency should continue these measures. Pre-disaster preparedness and pre-disaster management plans should be periodically reviewed and up dated.

#### **D. Action Plans**

10.7 (i) Early action to amend the building bye-laws of local bodies should be taken to include special provisions for hazard prone areas and enforce the same since the whole of Chennai Metropolitan Area falls in Seismic Zone-III now and it also includes cyclone-prone areas to a major extent.

(ii) The elected representatives of local bodies and Government functionaries should be trained to promote community based disaster risk management (CBDRM) and to integrate vulnerability and risk reduction components into all development programmes.

(iii) A volunteer force for every ward / village should be raised and they should be given all encouragement to take up disaster preparedness and mitigation activities.

(iv) Disaster management teams at wards/panchayats level from out of the volunteer force may be created and they may be trained in specific areas like early warning, immediate rescue, first-aid, food management, shelter management, water supply and sanitation, damage assessment, etc.

(v) The CBDRM planning should be participatory and the public should have a say in the formulation of programmes.

(vi) The needs of vulnerable sections of society must be addressed such as persons with disabilities, people with HIV AIDS and other socially marginalized sections.

(vii) Conducting regular skill up-gradation, strengthening of local coping mechanism and conducting mock drills should be important components of preparedness strategy.

### **E. Monitoring and review**

10.8. Committee may be constituted under the Chairmanship of the Mayor of Chennai Corporation with representatives from other local bodies, representatives of community based organization and Non Governmental organizations, officials, etc. to monitor implementation of plans relating to disaster preparedness and mitigation.