3. PRE-DECADE STATUS OF DISASTER MANAGEMENT IN INDIA

Government of India had formulated a Contingency Action Plan for dealing with contingencies arising in the wake of natural calamities, which had been periodically updated. The major emphasis in the plan was on providing relief in response to the occurrence of a major calamity due to any of the natural hazards which could not be coped by the States or Union Territories through their own resources. The preparedness for providing relief was ensured through Contingency Plans formulated for operations at the State levels as well as at the District levels. The primary relief functions of the Central Government include the following items:

i. forecasting and operation of warning systems;
ii. maintenance of uninterrupted communication;
iii. wide publicity to warnings of impending calamity, disaster preparedness and relief measures through TV, AIR and Newspapers;
iv. transport with particular reference to evacuation and movement of essential commodities and petroleum products;
v. ensuring availability of essential commodities at reasonable prices particularly the commodities through the Public Distribution System;
vi. ensuring availability of medicines, vaccine and drugs;
vii. preservation and restoration of physical communication links;
viii. investments in infrastructure; and
ix. mobilisation of financial resources.

Schemes for financing expenditure on relief and rehabilitation in the wake of natural calamities are governed by the recommendations of Finance Commissions appointed by Government of India after every five years. In the beginning of the current decade the system of financial response underwent a change so as to reduce the time between occurrence of a calamity and the provision of relief to the victims of the calamity. Under the existing scheme, in operation for the period 1995-2000, each State has a corpus of funds called Calamity Relief Fund (CRF), administered by a State Level Committee, headed by the Chief Secretary of the State Government. The size of the corpus is determined having regard to the vulnerability of the State to different natural calamities and the magnitude of expenditure normally incurred by the State on relief operations. The corpus is built by annual contributions of the Union Government and the State Governments concerned. At present, the aggregate accretion in the States' CRF for a period of five years from 1995-2000 amounts to Rs. 63042.70

million. The States are free to draw upon this corpus for providing relief in the event of a natural calamity. In the event of a major disaster warranting intervention at the national level, a provision exists in the form of National Fund for Calamity Relief with a corpus of Rs. 7000.00 million (for 1995-2000) for the Union Government to supplement the financial resources needed for relief operations.

Disaster prevention and mitigation were not addressed as such but many of the development programmes like construction of dams and embankments, were executed with reduction of flood hazards as one of the aims. A number of actions were being taken in the country which contributed to disaster prevention and mitigation. Some of these are described herebelow:

3.1 Hazard Evaluation

i. Mapping of the areas affected by each major hazard

The three major hazards, namely earthquake, flood and cyclone, are being monitored mainly by Geological Survey of India, the India Meteorological Department and the Central Water Commission. Macro level maps have already been prepared which classify the country into the hazard zones of various intensities.

ii. Historical and pre-historical events

The major earthquake and cyclone hazard events which have occurred in the last about one hundred years have been recorded with appreciable precision.

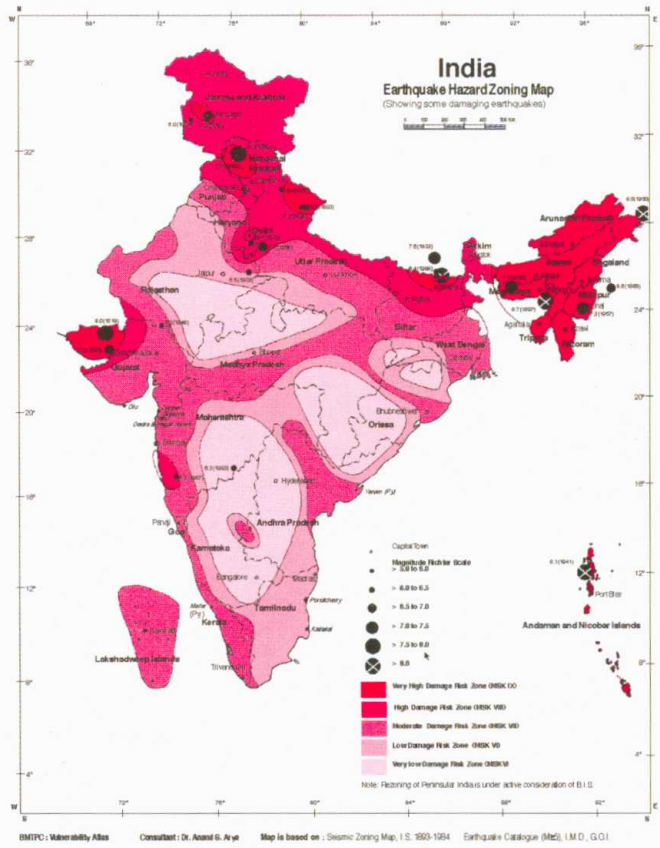
iii. Set up of early warning systems

Early warning systems have already been established for cyclones and floods in the country by IMD and CWC respectively and good progress has been made in terms of establishing the forecasting methodology, and accuracy in the prediction of likely events.

iv. Quantification of the hazards

For all engineering design purposes, the earthquake hazard has been quantified in terms of MM (or MSK) intensities and the cyclone hazard has been quantified in terms of the design wind speed and the probable maximum storm surge height on the sea coasts of India. So far as floods are concerned, the areas along the rivers which are prone to floods and still remain unprotected, and others, which are prone but protected by works like *bunds* have been demarcated. At local level leading NGOs are building community capacity to quantify hazards and conduct risk assessments. In this, useful work is done by ACTION in Andhra Pradesh, SEEDS in Uttar Pradesh, and Disaster Mitigation Institute in Gujarat.

i. India: Earthquake Hazard Zoning Map



ii. India: Wind and Cyclone Hazard Map