

Chapter – I: Introduction

What is a disaster?

A disaster is an event or series of events, which gives rise to casualties and damage or loss of property, infrastructure, environment, essential services or means of livelihood on a scale that is beyond the normal coping capacity of the affected community.

1.1 Introduction

Disasters disrupt progress and destroy the developmental efforts, often pushing nations, in their quest for progress, back by several decades. Thus, efficient management of disasters, rather than mere response to their occurrence, has received increased attention both within India and abroad.

The Disaster Management Act, 2005 defined disaster as a “catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.”

Thus, Disaster Management¹ (DM) is a continuous and integrated process of

- planning, organising, coordinating and implementing measures which are necessary or expedient for prevention of any disaster;

- mitigation or reduction of any disaster or its severity or consequences;
- capacity building to deal with any disaster;
- prompt response to any threatening disaster situation or disaster;
- assessing the severity or magnitude of any disaster;
- evacuation, rescue and relief; and,
- rehabilitation and reconstruction.

¹ National Disaster Management Authority's National Disaster Management Guidelines on Management of Earthquakes issued in April 2007

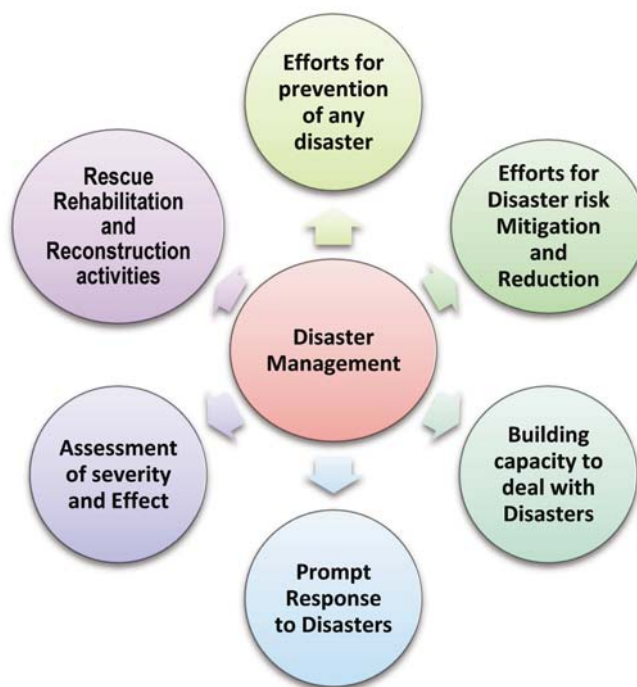


Chart 1.1: Components of Disaster Management

Disaster Preparedness includes organizational activities which ensure that the systems, procedures and resources required to confront a natural disaster are available in order to provide timely assistance to those affected, using existing mechanisms wherever possible e.g. training, creation of awareness, establishment of disaster plans, evacuation plans, pre-positioning of stocks, early warning mechanisms, strengthening indigenous knowledge, etc.

In recent years, the concept of Disaster Preparedness has emerged as an umbrella concept including risk assessment, disaster prevention and disaster mitigation. It also involves analysis of disaster response as it provides a useful testing of preparedness.

1.2 How disaster prone is India?

India is one of the most disaster prone countries in the world. This is largely due to its geo-climatic conditions combined with high population density and other socio economic factors. India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. The risk of excessive damage of lives and property in the event of disaster is high due to spread of population and tendency of

people to go back to areas prone to such disasters.

Increased vulnerability to disaster risks can be related to expanding population, urbanization and industrialization, development within high-risk zones, environmental degradation and climatic changes. Increase in terrorism around the globe has also contributed to higher risks.

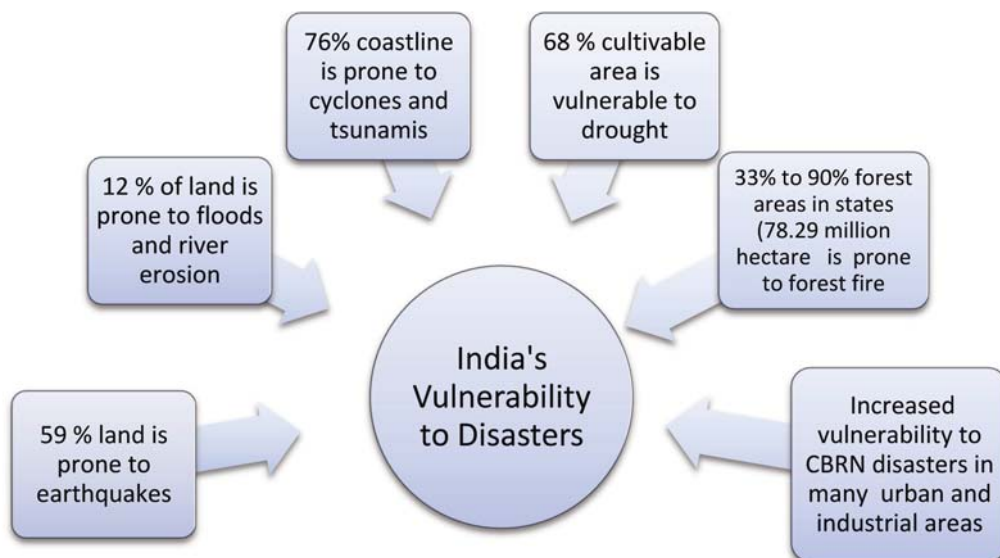


Chart 1.2: India's Vulnerability Profile

The details of India’s major disasters during the last decade are given below:

Table 1.1: Major Disasters in last 10 years

Name of disaster	Year	State and area	Effect on human life
Gujarat earthquake	2001	Bhuj, Bhachau, Anjar, Ahmedabad and Surat in Gujarat state	25,000 deaths and 6.3 million people affected
Tsunami	2004	Coastline of Tamil Nadu, Kerala, Andhra Pradesh, Puducherry and Andaman and Nicobar Islands of India	10,749 deaths, 5640 missing and 2.79 million people affected
Kashmir earthquake	2005	Kashmir and surrounding Himalayan region	86,000 deaths
Maharashtra floods	2005	Maharashtra	1094 deaths, 167 injured and 54 missing
Kosi floods	2008	North Bihar	527 deaths and 3.33 million persons affected
Cyclone Nisha	2008	Tamil Nadu	245 deaths
Drought	2009	252 districts in 10 states	-
Leh cloud burst	2010	Leh, Ladakh in Jammu & Kashmir	-
Sikkim earthquake	2011	North Eastern India with epicentre near Nepal border and Sikkim	-

1.2.1 Levels of disasters in India

The levels of disasters were categorised² as L0, L1, L2 and L3, based on the ability of various authorities to deal with them. Various colour codes relating to level of alerts were also devised.

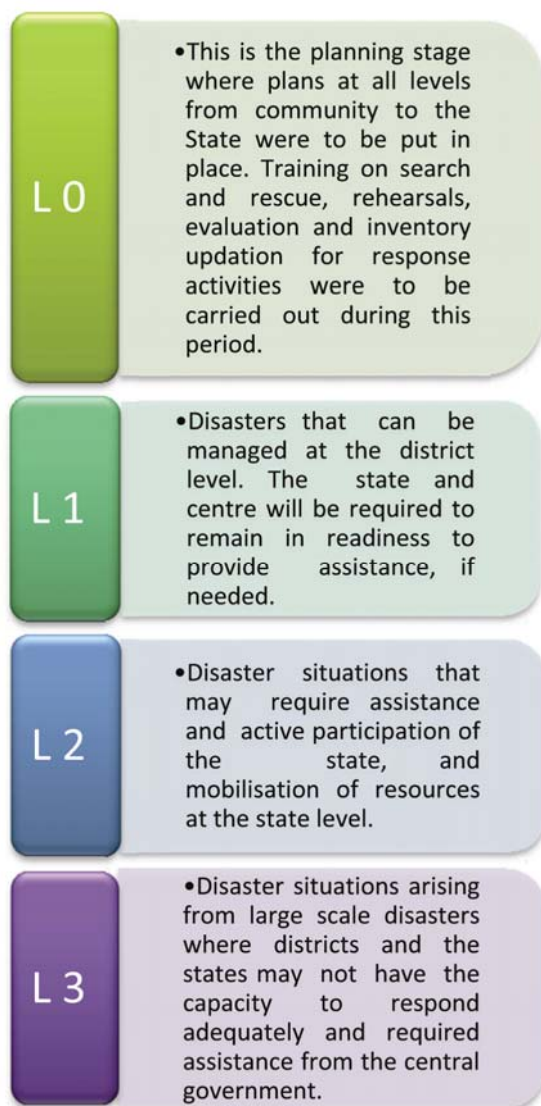


Chart 1.3: Levels of disasters

² National Disaster Management Authority categorised the levels of disasters and disseminated through Guidelines for preparation of State Disaster Management Plans (July 2007)

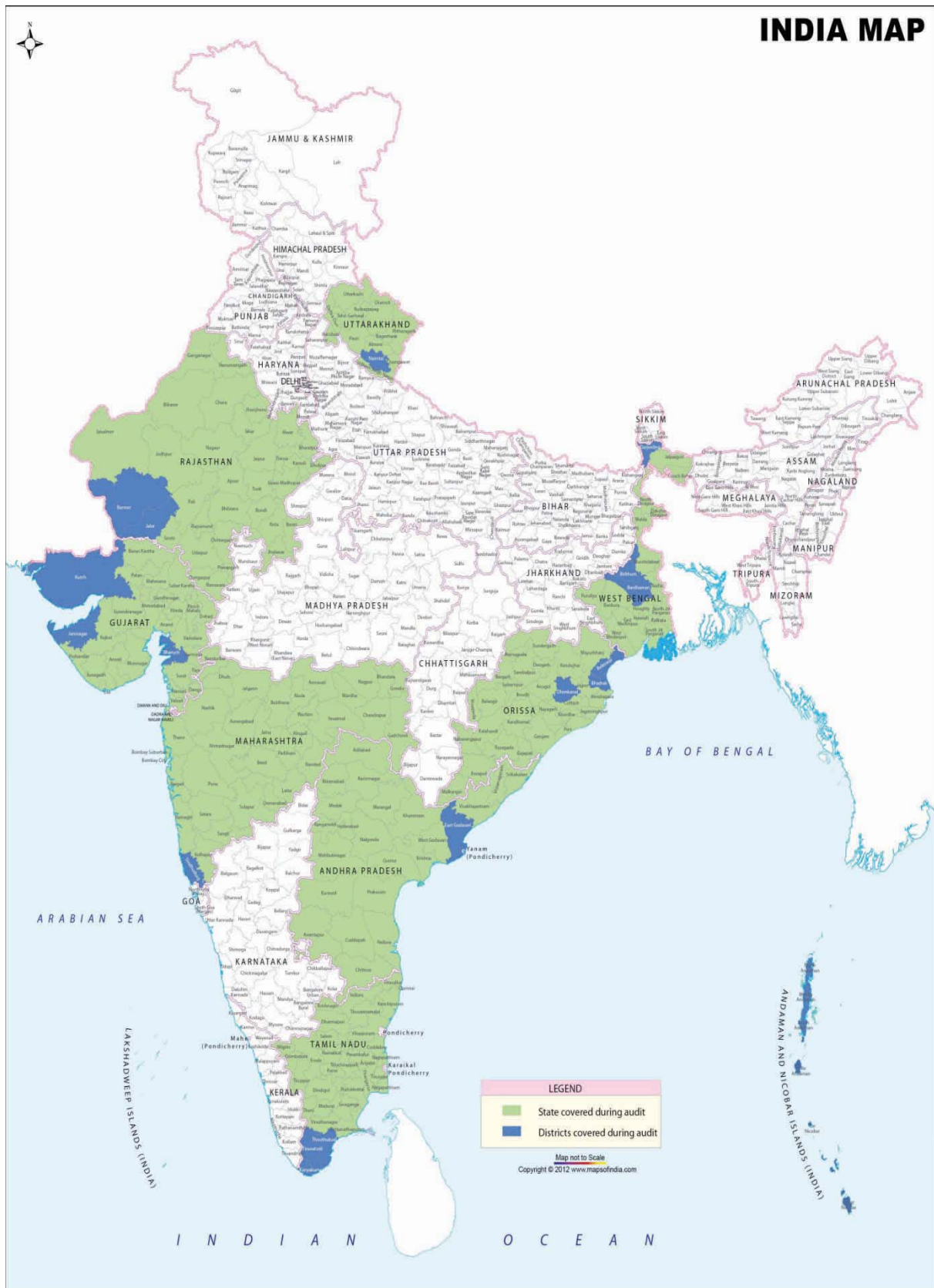
1.3 Why did we select this subject?

The world over Disaster Preparedness or Disaster risk reduction is becoming the most prominent theme for disaster management. It is not possible to eliminate the occurrence of disasters. However, with due care and proper preparation, the risk and damage from disasters can be reduced considerably. In recent years, we presented several reports³ on the subject.

More than six years have passed since the enactment of the DM Act in 2005. During this period, the government embarked upon various mitigation projects as well as internationally aided projects for disaster risk reduction. A paradigm shift had taken place from a relief-centric approach to a more proactive regime that laid greater emphasis on preparedness, prevention and mitigation. This report attempts to assess the status of disaster preparedness in the country.

In addition, International Organisation of Supreme Audit Institutions (INTOSAI), which is the global professional organization of Supreme Audit Institutions (SAIs), is in the process of developing its guidelines for the Audit of Disaster related Aid. Under its aegis, a parallel audit of “Disaster Preparedness” by nine SAIs including India was undertaken.

³ -Union Report No. 20 of 2006: Performance Audit Report on Tsunami Relief and Rehabilitation
-Audit Report (Civil), Bihar for the year 2008-2009: Integrated Audit of Disaster Management Department
-Performance Audit Report No. 8 of 2008 (Railways) Chapter-1: Disaster Management in Indian Railways



Map 1.1: Sample selection of states/districts

1.4 Scope of Audit

The performance audit covered the period from 2007-08 to 2011-12. Audit scrutiny covered major disasters, both natural and man-made⁴. At the Centre, the audit scope covered the role of Central Government i.e. Ministry of Home Affairs (MHA) and nodal Ministries & Departments⁵, National Disaster Management Authority (NDMA), National Institute of Disaster Management (NIDM) and National Disaster Response Force (NDRF) in Disaster Preparedness.

In the states, audit was conducted in nine (9) selected states and UT viz. Andhra Pradesh, Gujarat, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, West Bengal and Andaman & Nicobar Islands for presentation to Parliament and to the respective state legislatures. In every state, multi hazard prone districts were covered to assess district level preparedness. This selection of states and districts covered the range of disasters to which India is vulnerable viz. tsunami, cyclone, earthquakes and landslides, draught, floods and the manmade disasters. The selected states and districts are shown in Map 1.1.

Table 1.2: Sample of districts selected for Audit

State/UT	20 districts covered during audit
Andaman & Nicobar Islands	South Andaman, North & Middle Andaman and Nicobar Islands
Andhra Pradesh	East Godavari
Gujarat	Bharuch, Jamnagar and Kutch
Maharashtra	Sindhudurg
Odisha	Baleswar, Bhadrak, Dhenkanal
Rajasthan	Jalore, Barmer
Tamil Nadu	Tirunelveli, Thoothukudi, Kanyakumari
Uttarakhand	Nainital
West Bengal	Darjeeling, Burdwan, Birbhum

⁴ Natural disasters include earthquake, drought, flood, cyclone, tsunami, etc. whereas man-made disasters include industrial and chemical disasters, nuclear disasters, forest fire, etc.

⁵ Ministries of Health & Family Welfare, Environment & Forests, Earth Sciences, Water Resources and Departments of Agriculture & Cooperation, Space and Atomic Energy.

1.5 Audit Approach

We first selected the areas of audit enquiry and framed audit questions based on feasibility study conducted at NDMA and the guidelines prepared by us. An audit plan outlining the scope and objectives of the audit assignment, the areas of concern to audit and time frames for various activities was then prepared.

An Entry Conference with Ministry of Home Affairs was held on 13 June 2012, where the audit objectives, scope of audit, audit criteria and audit

methodology were shared and discussed. It was also attended by the officers from NDMA, NIDM and NDRF. After completion of audit, an Exit Conference was held on 15 October 2012 with MHA to discuss the audit findings. Similarly, Entry and Exit conferences with other entities involved were also conducted.

Responses received from the audited entities have been considered while preparing this Report and these have also been included to the extent feasible.

1.6 Audit Objectives

Performance audit was undertaken to review:

- **Planning for disaster preparedness:** If national disaster preparedness strategy, actionable plans and policies had been prepared and reviewed periodically at all levels to counter the threat of disasters and mitigate their consequences.
- **Identification of disasters and early warning system:** Whether various types of disasters, their extent of damage and requisite mitigation efforts had been identified and whether efforts had been made to make urban areas/cities disaster resilient and early warning systems and mechanisms to predict the calamities are in place.
- **Institutional mechanisms:** If institutional, legal and coordination mechanism had been instituted and an

integrated approach was being followed with regard to disaster preparedness.

- **Resource utilisation and funding arrangements:** Whether the financial arrangements to govern, allocate and utilization of funds were adequate and effectively implemented and whether financial arrangements ensure timely availability of funds and their effective and economic utilization.
- **Risk assessment and mitigation efforts:** If disaster management tools for analyzing risks and planning of the disaster efforts to mitigate the impact were effective and efficient.
- **Capacity building efforts:** If training and emergency exercises for disaster preparedness had been conceived, disseminated and conducted at all levels.

1.7 What were the sources of Benchmarks and Criteria for audit

We derived our criteria from the following sources:

- a. Disaster Management Act, 2005
- b. National Policy on Disaster Management, 2009
- c. National disaster plan, guidelines and other instructions issued by Ministry of Home Affairs and NDMA
- d. Crisis management plans of different Ministries
- e. Scheme, guidelines and laws for preparedness of various types of disasters
- f. Policies, plans and guidelines on disaster management issued by different State Governments

1.8 Acknowledgement

We acknowledge the co-operation and assistance extended by the Vice Chairman NDMA, Secretary (Border Management), MHA, Director General, National Disaster Response Force & Civil Defence, Executive Director, National Institute of Disaster Management, Senior Officers and the staff of the other nodal Ministries and Departments (Ministries of Health & Family Welfare, Environment & Forest, Earth Sciences, Water Resources and Departments of Agriculture, Atomic Energy and Space) and staff at all levels for

providing assistance during the Performance Audit.

We are also thankful to the Principal Secretaries and Commissioners of Disaster Management and Relief Departments of states & UT and officers and staff of State Disaster Management Authorities and District Disaster Management Authorities who facilitated audit and provided their valuable inputs during conduct of this audit.