

# CHAPTER 1

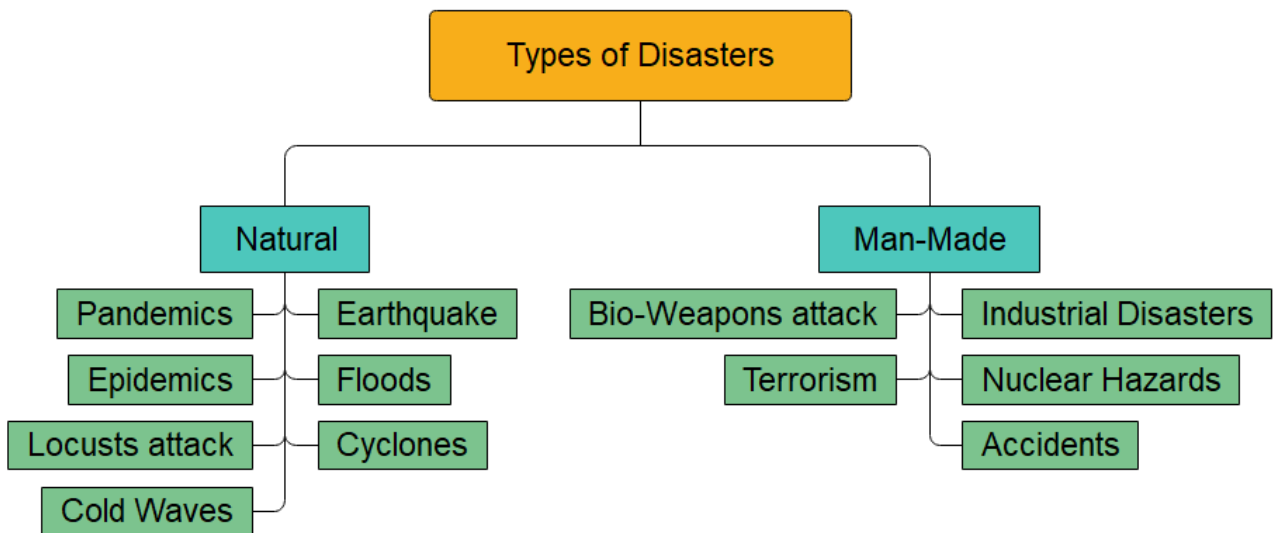
## UNDERSTANDING THE DISASTER

### Disaster:

The **United Nations Office for Disaster Risk Reduction (UNISDR)** defines disaster as "A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources"

**Disaster Management Act of India** defines disaster as, "A catastrophe, mishap, calamity or grave occurrence in any area arising from natural or man-made 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, a **disaster is** the result of the combination of **hazard, vulnerability and insufficient capacity to reduce the potential chances of risk."**



### Hazard:

Hazard is a threat having potential to cause injury, loss of life or damage to property, and environment places with less population. Generally, severity of a hazard is low compared to disaster-less critical consequences and has chances to be inevitable.

### Vulnerability:

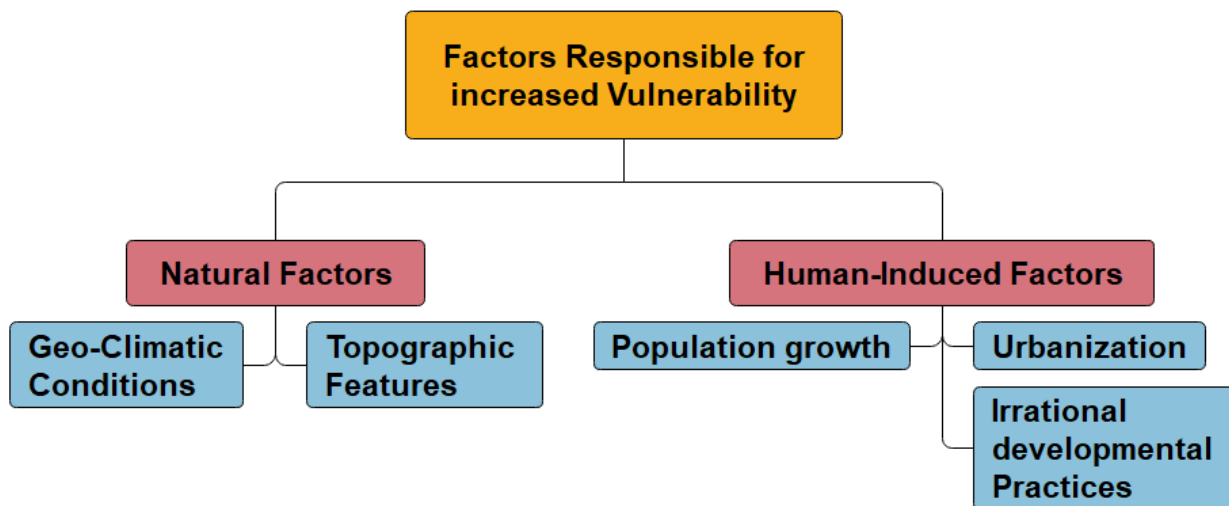
According to UNISDR," Vulnerability is a set of prevailing or consequential conditions arising from various physical, social, economic and environmental factors, which increase the susceptibility of a community to the impact of hazards."

To sum up: -

$$\text{Vulnerability} = \text{Exposure} + \text{Resistance} + \text{Resilience}$$

Where: -

<b>Exposure</b>	At risk property and population.
<b>Resistance</b>	Measures are taken to prevent, avoid or reduce loss.
<b>Resilience</b>	Ability to recover prior state or archive desired post- disaster state.



To sum up:

$$\text{Disaster} = \text{Vulnerability} + \text{Hazard}$$

### Risk:

It is the probability of exposure to hazard leading to negative consequences.  
i.e.

$$\text{Risk} = \text{Hazard} \times \text{Vulnerability} \times \text{Capacity to cope}$$

## **Global Climate Risk Index,2021**

The Global Climate Risk Index 2021 analyses to what extent countries and regions have been affected by impacts of weather-related loss events (storms, floods, heat waves etc.). The most recent data available — for 2019 and from 2000 to 2019 — were taken into account.

### **India's Position**

India has improved its rankings from last year. It is ranked 7th in the 2021 Index as compared to 5th in 2020 Index.

The Indian monsoon lasted a month longer than usual in the year 2019, with surplus rains causing major hardship. The rain was 110% of normal, which is the most since 1994.

The floods caused by heavy rains were responsible for 1800 deaths and led to displacement of 1.8 million people.

Overall, 11.8 million people were affected by the intense monsoon season and the economic damage caused was estimated to be US\$ 10 billion.

India was hit by a total of 8 tropical cyclones. Of which, Cyclone Fani (May, 2019) caused the maximum damage.

The Himalayan glaciers, the coastlines, and the deserts in India have been severely affected by global warming.

The Report also points to an increase in the number of heat waves, increased intensity and frequency of cyclones and an increased rate of melting of glaciers in India.



## CHAPTER 2

# DISASTER MANAGEMENT IN INDIA

## (NEED AND INSTITUTIONS)

### Indian Vulnerability Profile:

As per 2nd ARC,

Disaster	Percentage of land mass prone to
Earthquake	57%
Floods	12%
Drought	68%
Cyclone	08%

- And, the hilly areas are at risk from landslides and avalanches. Moreover, India is also vulnerable to chemical, biological, **radiological and nuclear (CBRN)** emergencies and other man-made disasters.
- Disaster risks in India are further compounded by increasing vulnerabilities related to environmental degradation, climate change, geological hazards, unplanned urbanization, epidemics and pandemics.
- All these contribute to a situation where disasters seriously threaten India's economy, its population and sustainable development.
- Investment in disaster prevention and mitigation is highly cost effective. For example, every dollar spent on mitigation saves three to five dollars on relief and rehabilitation.
- As per **World Bank**, Indian economy **suffers a loss of 2.25% of GDP due to disasters.**

Therefore, in order to cope up and reduce the risk associated with disasters, India needs a well-oiled machinery for Disaster Management.

### History of Disaster Management in India:

- The **Constitution of India does not explicitly provide for disaster management** in India.
- Therefore, it is listed under the residuary powers of the Union Government and parliament has the competence to legislate on this subject.
- Following the declaration of the **decade of 1990** as the '**International Decade for Natural Disaster Reduction**' (IDNDR) by the UN General Assembly, India set up a disaster management cell Ministry of Agriculture in the 1990s.
- In **1999**, under **J.C. Pant**, a high-powered committee was formed.
- Disaster Management division came under Home Ministry.
- A detailed chapter on Disaster Management 12th Finance Commission mandated review of the financial arrangements for Disaster Management.
- Enactment of National Disaster Management Act, 2005 and establishment of National Disaster Management Authority (NDMA).

### Institutional framework at National Level:

## **DISASTER MANAGEMENT DIVISION, MHA:**

- Responsible for response, relief and preparedness for natural calamities and manmade disasters **(except drought and epidemics)**.
- Coordinates concerned line with disaster affected State Governments, ministries/departments, National Disaster Management Authority (NDMA), National Disaster Response Force (NDRF), National Institute of Disaster Management (NIDM) and the Directorate General of Fire Services, Home Guards and Civil Defence, and Armed Forces for effective disaster risk reduction.

## **National Executive Committee (NEC)**

- It acts as the **coordinating and monitoring body for disaster management**.
- NEC is **responsible for assisting NDMA** in execution of various functions for disaster management.
- Prepare guidelines for different ministries with respect to disaster management.
- **Chaired by the Union Home Secretary** and comprises Secretary level officers from the Ministries and departments having control of agriculture, atomic energy, defence, drinking water supply, environment and forests, finance (expenditure), health, power, rural development, science and technology, space, telecommunications, urban development and water resources.
- The **Chief of Integrated Defence Staff of the Chiefs of Staff Committee, ex-officio, is also its member**.

## **National Disaster Management Authority**

- Apex body for disaster management.
- It consists of nine members with **the Prime Minister as its ex-officio chairperson** lays policies, plans, and guidelines for disaster management.
- Mandate to deal with **all types of disasters – natural or human-induced**.
- Responsible for general superintendence, direction, and control of the National Disaster Response Force (NDRF).
- Lays policies and **guidelines for National Institute of Disaster Management (NIDM)**.
- It **oversees** the provision and application of **funds for mitigation and preparedness measures**.
- It can also be **assigned** with the responsibility for the **protection of cyber critical infrastructure**.

## **National Institute of Disaster Management (NIDM):**

- Nodal agency for **human resource development and capacity building**, research, documentation and policy advocacy for disaster management as per NDMA guidelines.
- It has **built strategic partnerships** with various ministries and government departments, academic, research and technical organizations in India and abroad.
- It provides **technical support to the state governments** through the Disaster Management Centres (DMCs) in the Administrative Training Institutes (ATIS) of the States and Union Territories.

## **National Disaster Response Force (NDRF)**

- Established by the Ministry of Home Affairs to provide a specialist response to catastrophes in 2006 with 8 battalions (Presently 12) stationed based on the vulnerability profiles.
- **Chairman of NDRF / Director General (DG): usually an IPS officer**
- The 12 battalions (1149 Soldiers each):
  - Border Security Force (BSF): 3
  - Central Reserve Police Force (CRPF): 3
  - Central Industrial Security Force (CISF): 2
  - Indo-Tibetan Border Police (ITBP): 2
  - Sashastra Seema Bal (SSB): 2
- **NDRF International Operations**
  - Nepal Earthquake - April 2015.
  - Japan Tsunami - March 2011.

### **National Platform for Disaster Risk Reduction (NPDRR)**

- Multi-stakeholders and multi-sectoral National Platform for Disaster Risk Reduction, constituted by GOI on 26th February 2013.
- The **functions** of NPDRR are:
  - **Reviewing** progress made of disaster management from time to time.
  - **Appraising**
  - **Advising**

### **2nd Administrative Reform Commission's Recommendations for above bodies**

- There is no need for a separate ministry/department of disaster management at the national or the state level.
- The NEC need not be constituted, and the NCMC can continue to be the apex coordination body. At the state level, the existing coordination mechanism under the Chief Secretary may continue.
- Notwithstanding the establishment of NDRF, the role of the Armed Forces, particularly in coming to the National Centre for the Army, aid of victims of disasters should be retained and the special capabilities acquired by the Armed Forces in search and rescue and on-the-spot medical attention need to be maintained.

### **Institutional Framework at State Level:**

#### **A. State Disaster Management Authority**

- **Head-CM** (respective state).
- **Function:**
  - Lays down the policies and plans in the state.
  - Responsible to coordinate the implementation of the state Plan.
  - Recommends the provision of funds for mitigation.

#### **B. State Executive Committee**