

## **Disaster Management Policies and Classification**

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### **Abstract**

Disasters and their management generally get discussed in their aftermath but practically it should result in planning and preparing the strategy to tackle and mitigate disasters in a responsible and effective manner. Disasters, both natural and unnatural, are macro level events or processes, which induce disturbances and turmoil for a prolonged life-threatening environment for a community.

**Key Words:** Disaster Management, Hazards, Uninhabited.

### **Introduction**

A disaster is 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.

In contemporary academia, disasters are seen as the consequence of inappropriately managed risk. These risks are the product of a combination of both hazards and vulnerability. Hazards that strike in areas with low vulnerability will never become disasters, as in the case of uninhabited regions

### **Objectives**

- To study of the disaster management policies
- To study of the disaster classification

## **Disaster Management Policies**

Losses due to disasters have shown growing trend in terms of lives and property throughout the world due to urbanization, increasing population and increasing degradation of environment. The global efforts to manage disasters are not matched with the frequency and magnitude of disasters.

However, for the last 15 years or so some new thinking on disaster management has emerged at global level which pleads for a proactive and preventive approach and integrates disaster management with ongoing development activities that is sustainable development.

According to World Disaster Report 2009, hydro meteorological event, linked to climate change – floods, storms, heat waves and drought together accounted for nearly 60 percent of Disaster Relief Emergency Fund (DREF). In Myanmar alone, cyclone Nargis claimed some 1, 38,000 lives last years.

Earthquake in China's Sichuan Province killed some 88,000 people, affected 46 million people; a major US flood 11 million and a drought in Thailand 10 million. But there were fewer disasters worldwide in 2008 than in any other year of the preceding decade; 326 natural and 259 technological disasters.

## **India's Disaster Profile**

The Indian subcontinent is among the world's most disaster prone areas. Almost 85% of India's area is vulnerable to one or multiple hazard. Of the 28 states and 7 union territories, 22 are disaster-prone.

It is vulnerable to wind storms spawned in the Bay of Bengal and the Arabian Sea, earthquakes caused by active crustal movement in the Himalayan mountains, floods brought by monsoons, and droughts in the country's arid and semi-arid areas.

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Almost 57% of the land is vulnerable to earthquake (high seismic zones III-V), 68% to drought, 8% to cyclones and 12% to floods. India has also become much more vulnerable to tsunamis since the 2004 Indian Ocean tsunami.

### **Earthquakes**

Of the earthquake-prone areas, 12% is prone to very severe earthquakes, 18% to severe earthquakes and 25% to damageable earthquakes. The biggest quakes occur in the Andaman and Nicobar Islands, Kutch, Himachal and the North-East. The Himalayan regions are particularly prone to earthquakes.

The last two major earthquakes shook Gujarat in January 2001 and Jammu and Kashmir in October 2005. Many smaller-scale quakes occurred in other parts of India in 2006. All 7 North East states of India – Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya; Andaman & Nicobar Islands; and parts of 6 other states in the North/North-West (Jammu and Kashmir, Uttaranchal, and Bihar) and West (Gujarat), are in Seismic Zone V.

### **Floods**

About 30 million people are affected annually. Floods in the Indo-Gangetic-Brahmaputra plains are an annual feature. On an average, a few hundred lives are lost, millions are rendered homeless and several hectares of crops are damaged every year.

Nearly 75% of the total rainfall occurs over a short monsoon season (June – September). 40 million hectares, or 12% of Indian land, is considered prone to floods. Floods are a perennial phenomenon in at least 5 states – Assam, Bihar, Orissa, Uttar Pradesh and West Bengal.

On account of climate change, floods have also occurred in recent years in areas that are normally not flood prone. In 2006, drought prone parts of Rajasthan experienced floods.

### **Droughts**

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About 50 million people are affected annually by drought. Of approximately 90 million hectares of rain-fed areas, about 40 million hectares are prone to scanty or no rain. Rainfall is poor in nine meteorological subdivisions out of 36 subdivision (each meteorological sub division covers a geographic area of more than ten revenue districts in India).

In India annually 33% area receive rainfall less than 750 mm (low rainfall area) and 35 % area receive between 750 to 1125 mm rainfall Medium rainfall) and only 32 percent falls in the high rainfall (>1126 mm) zone.

### **Cyclones**

About 8% of the land is vulnerable to cyclones of which coastal areas experience two or three tropical cyclones of varying intensity each year. Cyclonic activities on the east coast are more severe than on the west coast.

The Indian subcontinent is considered to be the worst cyclone-affected part of the world, as a result of low-depth ocean bed topography and coastal configuration. The principal threats from a cyclone are in the form of gales and strong winds; torrential rain and high tidal waves/storm surges.

Most casualties are caused due to coastal inundation by tidal waves and storm surges. Cyclones typically strike the East Coast of India, along the Bay of Bengal, i.e. the states of West Bengal, Orissa, Andhra Pradesh and Tamil Nadu, but also parts of Maharashtra and Gujarat at the Arabian Sea West Coast.

### **Landslides**

Landslides occur in the hilly regions such as the Himalayas, North-East India, the Nilgiris, and Eastern and Western Ghats. Landslides in India are another recurrent phenomenon. Landslide-prone areas largely correspond to earthquake-prone areas, i.e. North-west and North-East, where the incidence of landslides is the highest.

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## **Droughts**

Drought is another recurrent phenomenon which results in widespread adverse impact on vulnerable people's livelihoods and young children's nutrition status. It typically strikes arid areas of Rajasthan (chronically) and Gujarat states.

Drought is not uncommon in certain districts of Uttar Pradesh, Madhya Pradesh, Orissa, Andhra Pradesh, etc. Although a slow onset emergency, and to an extent predictable emergency, drought has caused severe suffering in the affected areas in recent years, including effects on poverty, hunger, and unemployment.

## **Cold Waves**

Cold waves are recurrent phenomenon in North India. Hundreds, if not thousands of people, die of cold and related diseases every year, most of them from poor urban areas in northern parts of the country. According to India's Tenth Five Year Plan, natural disasters have affected nearly 6% of the population and 24% of deaths in Asia caused by disasters have occurred in India.

Between 1996 and 2001, 2% of national GDP was lost because of natural disasters, and nearly 12% of Government revenue was spent on relief, rehabilitation and reconstruction during the same period. As per a World Bank study in 2003, natural disasters pose a major impediment on the path of economic development in India.

## **Disaster Management of Classification**

The classification of disaster differs as per the criterion of classification. For example, on the basis of their origin, they are classified as natural and manmade. If we take into account their severity, they may be classified as manor and minor disasters.

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However, a high powered committee constituted in Aug. 1999 by the Government of India, under the Chairmanship of J.C. Pant adopted origin as the criterion for the classification of disaster.

The fundamental task of the committee was to prepare comprehensive model plans for disaster management at district, state and national level. The committee has identified 30 disasters and categories them in the following five groups.

- **Natural Disaster**

Such as flood, cyclones, hailstorms, cloudburst, heat and cold waves, snow avalanches, droughts, sea erosion, thunder and lightning.

- **Geological Disaster**

Such as landslides and mud flows, earthquakes, mine fires, dam failures and general fires.

- **Biological Disaster**

Such as epidemics, pest attacks, cattle epidemic and food poisoning.

- **Nuclear and Industrial Disaster**

Such as chemical and industrial disasters and nuclear accidents.

- **Accidental Disaster**

Such as urban and forest fires, oil spill, mine flooding incidents, collapse of huge building structures, bomb blasts, air, road and rail mishaps, boat capsizing and stampede during congregations.

At central level, an administrative ministry has been identified as nodal agency for each disaster to coordinate the activities of disaster management operations at different levels.

## **Conclusion**

India has been traditionally vulnerable to natural disasters on account of Its unique geo-climatic conditions. Floods, droughts, cyclones, earthquakes and Landslides have been a

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recurrent phenomenon. About 60% of the landmass is Prone to earthquakes of various intensities; over 40 million hectares is prone to Floods; about 8% of the total area is prone to cyclones and 68% of the area is Susceptible to drought. In the decade 1990-2000, an average of about 4344 People lost their lives and about 30 million people were affected by disasters every year. The loss in terms of private, community and public assets has been astronomical

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