

Disaster Planning and Management in India - A Study

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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. This paper deals about Disaster Planning and Management in India.

Key Words: Disaster, Disaster Planning, Disaster Management, Emergency Plan

Introduction

Disaster Defined

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.

Disaster Planning

Systematic procedures that clearly detail what needs to be done, how, when, and by whom before and after the time an anticipated disastrous event occurs. The part dealing with the first and immediate response to the event is called emergency plan.

Disaster Management

Disaster Management can be defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters.

Objectives of the Study

- To study about the Disaster Planning in India
- To study about the Disaster Management in India

Important Disasters in India

Kashmir Floods

- Year: 2014
- Areas affected: Srinagar, Bandipur, Rajouri etc.
- Death toll: 500 plus

Caused by continuous torrential rainfall, the Kashmir region in September 2014 suffered from massive floods, leading to the death of around 500 people. Hundreds of people were trapped in their homes for days, without food and water. According to reports, around 2600 villages were affected in Jammu and Kashmir. In Kashmir itself, 390 villages were completely submerged in water. Many parts of Srinagar were also submerged by the floods. Around 50 bridges were damaged across the state, and the damage of properties was estimated between Rs. 5000 cr and 6000 cr.

Uttarakhand Flash Floods

- Year 2013
- Areas affected: Gobindghat, Kedar Dome, Rudraprayag district, Uttarakhand, Himachal Pradesh, Western Nepal
- Death Toll: 5000 plus

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In the year 2013, Uttarakhand suffered from a major catastrophic natural disaster in the form of huge and deadly cloudbursts, causing flash floods in River Ganga. Sudden, heavy rains caused dangerous landslides in Uttarakhand, which killed thousands of people and thousands were reported missing. The death toll was estimated to be 5,700. The flash floods and landslides continued for 4 days from 14 to 17 June, 2013. More than 1,00,000 pilgrims were trapped in the valleys that led to the Kedarnath shrine. Today, Uttarakhand Flash Floods are considered the most disastrous floods in the history of India.

The Indian Ocean Tsunami

- Year: 2004
- Areas affected: Parts of southern India and Andaman Nicobar Islands, Sri Lanka, Indonesia etc.
- Death toll: 2 lakh plus

Following a major earthquake in 2004, there was a huge tsunami in the Indian Ocean, causing immense loss of life and property in India and the neighbouring countries – Sri Lanka and Indonesia. The earthquake had its epicenter in the ocean bed which led to this destructive tsunami. The magnitude was measured between 9.1 and 9.3 and it lasted for almost 10 minutes. According to reports, it was the third largest earthquake in the world ever recorded. The impact was equivalent to the energy of 23,000 Hiroshima-type atomic bombs. More than 2 lakh people were killed.

Gujarat Earthquake

- Year 2001
- Areas affected: Bhuj, Ahmedabad, Gandhinagar, Kutch, Surat, Surendranagar district, Rajkot district, Jamnagar and Jodia
- Death toll: 20,000 plus

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Gujarat was affected by a massive earthquake on the morning of 26 January, 2001, the day on which India was celebrating its 51st Republic Day. The earthquake's intensity was in the range of 7.6 to 7.9 on the Richter scale and lasted for 2 minutes. The impact was so great that almost 20,000 people lost their lives. It is estimated that around 167,000 were injured and nearly 400,000 were left homeless in this natural disaster.

Odisha Super Cyclone

- Year 1999
- Areas affected: The coastal districts of Bhadrak, Kendrapara, Balasore, Jagatsinghpur, Puri, Ganjam etc.
- Death toll: 10,000 plus

This is one of the deadliest storms that affected the state of Odhisa in 1999. Also known as the Paradip cyclone or super cyclone 05B, this cyclone caused deaths of more than 10,000 people in the state. More than 275,000 houses were destroyed. Around 1.67 million people were left homeless. When the cyclone reached its peak intensity of 912 mb, it became the strongest tropical cyclone of the North Indian basin.

Latur Earthquake

- Year: 1993
- Areas affected: Districts of Latur and Osmanabad
- Death toll: 20,000 plus

This was one of the deadliest earthquakes, which hit Latur in Maharashtra. The year was 1993. Almost 20,000 people died and around 30,000 were injured. The earthquake's intensity was measured 6.4 on the Richter scale. There was huge loss to property. Thousands of buildings were turned into rubble and more than 50 villages were destroyed.

The Great Famine

- Year: 1876-1878

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- Areas affected: Madras, Mysore, Hyderabad, and Bombay
- Death toll: 3 crore

Southern and southwestern parts of the country were affected by a major famine in 1876-78, which killed nearly 3 crore people. The famine, which first started in China, spread over to India and affected millions of people in the period between 1876 and 1878. Even today, it is considered as one of the worst natural calamities in India of all time.

Coringa Cyclone

- Year: 1839
- Areas affected: Coringa district
- Death toll: 3.2 lakh people

India was affected by the Coringa Cyclone, in the harbour city of Coringa in Andhra Pradesh. It killed almost 3.2 lakh people. More than 25000 vessels were ruined by this huge cyclone. One of the worst natural disasters in the history of India, the cyclone struck the tiny city Coringa in Godavari district in Andhra Pradesh. It destroyed the entire city. It was indeed one of the biggest disasters that shook India.

Calcutta Cyclone

- Year: 1737
- Areas affected: Low-lying areas of Calcutta
- Death toll: 3 lakh plus

The Hooghly River Cyclone was one of the most-dangerous natural disasters of India, which affected Calcutta in 1737. Many people were killed. A large number of ships, almost 20,000, docked on the harbour were damaged. Also referred as the Calcutta Cyclone, the low-lying areas in the Calcutta region were badly affected. This cyclone killed 300,000 to 350,000 people of the region and hence considered to be as the worst calamity that time.

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The Bengal Famine

- Year 1770, 1943
- Areas affected: Bengal, Odhisa, Bihar
- Death toll: 1 crore

A massive famine affected the pre-independence state of Bengal and some parts of Odisha and Bihar. The year was 1770 and extended for almost 3 years till 1773. One of the greatest natural disasters to have hit India ever, the famine led to the deaths of 1 crore people due to hunger, thirst and disease, reducing the population to 30 million in Bengal.

The Bengal province of pre-partition British India was affected by another famine in 1943 in which around 4 million people died due to starvation, malnutrition and disease. More than half of the population of the region died from diseases as an after effect of the famine.

Disaster Planning in India- Scope and the Nature

To the extent possible, disaster planning should incorporate formal disaster research findings. Disaster plans sometimes rely on faulty assumptions that do not prove true in actual disasters. For example, planners may logically assume that the sickest patients are transported first during a disaster, when in reality, this may not happen in many instances.

Other realities that have been noted in prior events are that the initial search and rescue begins with victims and bystanders and not trained rescue teams, the majority of patients arrive to hospitals without use of the EMS system and have not been triaged or decontaminated, and there is often lack of communication between healthcare facilities and the scene. These characteristics are likely to occur in future disasters and should be incorporated into realistic disaster plans.

A disaster plan encompassing both local and regional areas must focus on the following 3 possible scenarios:

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1. The disaster occurs within the region and is confined and controlled with area resources.
2. The disaster occurs in a neighboring region and regional assets are requested through mutual aid agreements.
3. The disaster area is the region and requires state or federal assistance for an effective response.

In developing a disaster plan, leaders should remember that it is impossible to plan for all contingencies; therefore, plans must be relatively general and expandable. Most disasters that can be contained using local or regional resources have fewer than 100 fatalities and fewer than 500 casualties. Plans developed for larger-scale disasters should focus on the first 48 hours of the disaster until state and federal assistance teams can arrive and the need to address high initial fatality rates during the first 24 hours. Mutual aid agreements or contracts with other existing area resources also are important to establish before an actual incident, as well as planning for funding and reimbursement.

Disaster Management in India

Humans have managed disasters and an overview of our past experiences shows that management of disasters is not a new concept. For example, in ancient India, droughts were effectively managed through conventional water conservation methods, which are still in use in certain parts of the country - like Rajasthan. Local communities have devised indigenous safety mechanisms and drought-oriented farming methods in many parts of the country.

The subject of disaster management is not mentioned in any of the three lists in the Seventh Schedule of the Indian constitution, where subjects under the Central and State governments are specified. In the post-independent India, a journey through the five-year plans points to the fact that the understanding of disasters was to mitigate droughts and floods; schemes such as the Drought Prone Area Program (DPAP), Desert Development Program (DDP), National Watershed Development Project for Rain fed Areas (NWDPR) and Integrated

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Water Development Project (IWDP) are examples of this conventional paradigm (Planning Commission, 2002).

Recent Changes

The late 1990s and the early part of this century marked a watershed in Disaster Management in India. The Orissa Super Cyclone and the Gujarat Earthquake taught the nation a hard lesson. The experiences of the stakeholders like the state, voluntary sector and the communities at large helped in initiating the planning process pertaining to preparedness and mitigation of disasters.

A welcome step in this direction was setting up of a High Powered Committee on Disaster Management in 1999, which submitted its report in 2001. An important recommendation of the committee was that at least 10 percent of plan funds at the national, state and district levels be earmarked and apportioned for schemes that specifically address areas such as prevention, reduction, preparedness and mitigation of disasters. Also for the first time in the planning history of India, planners devoted a separate chapter titled ‘Disaster Management: The development perspective’ in the tenth five-year plan document (Planning Commission, 2002).

More recently, several institutions with a focused mandate on disaster management have come up in various parts of the country. The Ministry of Home Affairs (Disaster Management Division), National Institute for Disaster Management (New Delhi), Gujarat State Disaster Management Authority (GSDMA), Orissa State Disaster Management Authority (OSDMA), Disaster Mitigation Institute (Ahmedabad) can be seen as initiatives taken in the right direction.

There has also been a concerted effort on the part of the state to mainstream Disaster Mitigation initiatives in Rural Development schemes. One of its example is the coordination between the Ministry of Rural Development and the Ministry of Home Affairs, which is now the nodal ministry for coordination of relief and response and overall natural disaster management, for changing the guidelines of schemes such as Indira Awas Yojna (IAY) and Sampoorn

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Grameen Rojgar Yojna (SGRY) so that the houses constructed under IAY or school buildings/community buildings constructed under SGRY are earthquake/cyclone/flood resistant.

Role of NGOs

Since the community is the first responder in any disaster situation, there is a great need for community level initiatives in managing disasters. The initiatives taken by various agencies, including the state, need to be people-centric and the level of community participation should be gauged through the role played by the community in the process of planning and decision-making. Efforts should also be made to strengthen local economies, thereby making people independent of external assistance (Gupta, www.gisdevelopment.net).

The voluntary sector has been in the forefront of mobilizing communities, enabling them to cope with disasters in the past decades. Their initiatives and experiences have been consolidated and demonstrated on a larger scale with the help of the state. Development organizations working in communities share a good rapport with the community, which helps the state in implementing its plans more effectively; village level plans prepared after the Super Cyclone in Orissa could be seen as an example of the same.

The focus of any disaster management plan now incorporates the following:

- Community Based Disaster Preparedness
- Development of block, Gram Panchayat and Village disaster management plans

This has been made possible through continuous advocacy by development organizations like Action Aid, Oxfam, CARE- India, etc. These initiatives have been scaled up by the state, which has taken efforts to integrate disaster management plans with the larger developmental plans at all levels such as Village/Panchayat/Block/District/State.

Government has got the whole machinery in place and the relief work is carried out with the help of the following agencies- Indian Red Cross Society ,Indian Institute of Tropical

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Meteorology, UNDP India, Tata Energy Research Institute, Housing and Urban Development Corporation Ltd., Ministry of Urban Development and Council for Advancement of People's Action and Rural Technology (CAPART). All these agencies in the past responded to major disasters in the country. For example, in the state of Orissa in the aftermath of Super Cyclone in 1999, they provided immediate relief services to the affected families. Further, they collected and distributed relief material, helped in providing immediate shelter, supported voluntary organizations for implementing activities pertaining to the relief and rehabilitation work and provided training to masons for repairing damaged houses. The vast network of partner voluntary organizations provides the Government with a greater opportunity to implement Disaster Management plans at the grassroots level much more effectively.

Challenges for the Future

There is a growing need to look at disasters from a development perspective. Disasters can have devastating effect on communities and can significantly set back development efforts to a great extent. But then, it could also offer an opportunity to invest in development efforts in a post disaster scenario. Disasters are opportunities for communities to reinvent themselves.

Disaster prevention, mitigation, preparedness and relief are four elements, which contribute to and gain from the implementation of sustainable development policies. These elements, along with environmental protection and sustainable development, are closely inter-related. The Yokohama Strategy, emanating from the international decade for natural disaster reduction in May 1994, emphasizes that disaster prevention, mitigation and preparedness are better than disaster-response in achieving the goals and objectives of vulnerability reduction.

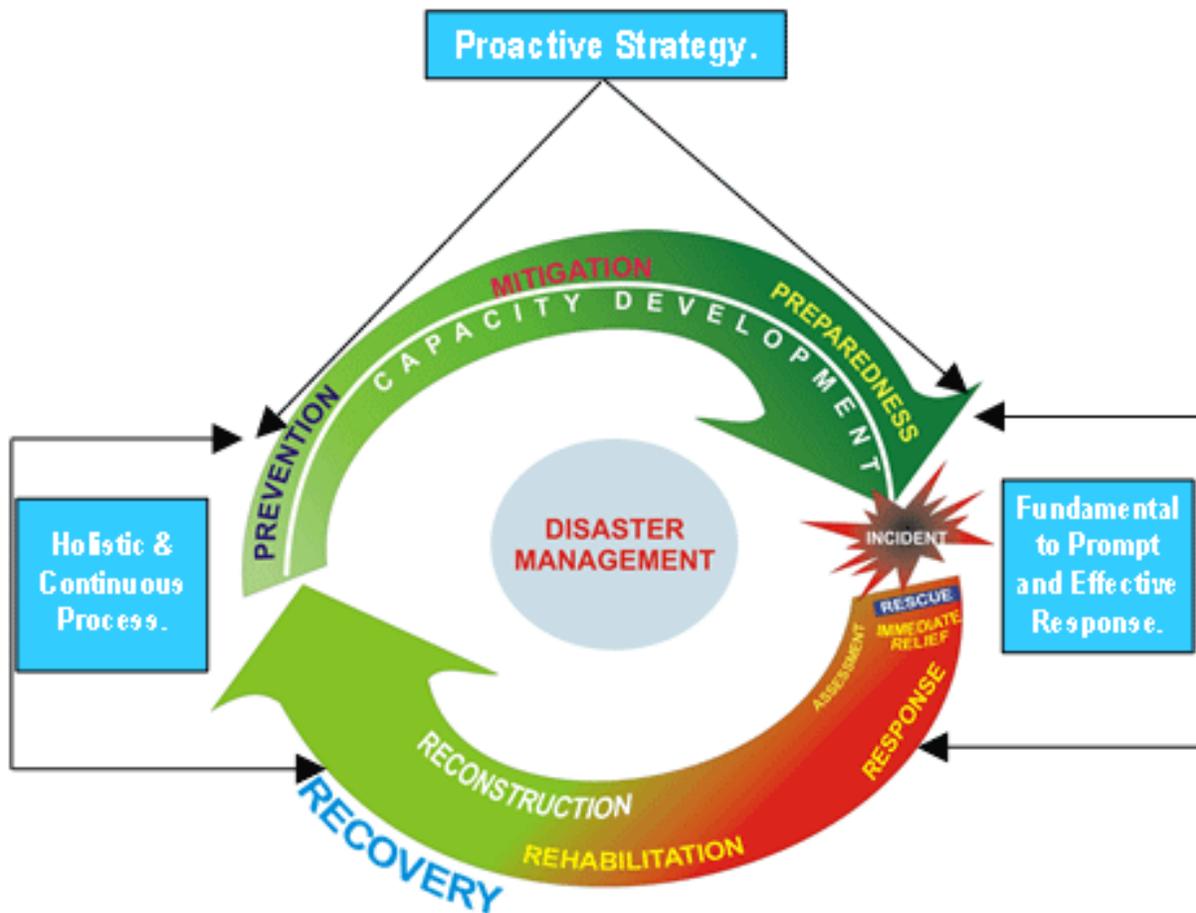
The Government of India has adopted mitigation and prevention as essential components of its development strategy. The Tenth Five Year Plan emphasizes the fact that development cannot be sustainable without mitigation being built into the development process. In brief, Disaster Management is being institutionalized into development planning. But, there are various

underlying problems in the whole process. In fact, a number of problems stem from social inequities.

In the long run, the onus is upon the local communities to handle disasters with the help of the state and other such organizations. It is a well-known fact that the community dynamics is quite complex in a country like India. There is a need to address specific local needs of vulnerable communities through local traditions and cultures. Restoration of common property resources with the participation of the local level bodies is a real challenge. The historical focus of disaster management has been on relief and rehabilitation after the event but now the focus is on planning for disaster preparedness and mitigation. Given the high frequency with which one or other part of the country suffers due to disasters, mitigating the impact of disasters must be an integral component of our development planning.

One of the glaring lacunae in the process of Disaster Management in India has been the overlooking of unnatural disasters. The recent efforts focus purely on natural disasters, whereas the current global situation also demands initiatives in managing the impact of unnatural disasters. Developments at the international level, particularly the civil wars and civil strife in Eastern Europe and Southern America culminating on 9/11 have brought the issue of unnatural disasters at the forefront of disaster management. The global community has recognized the serious consequences of Nuclear, Biological and Chemical (NBC) warfare. This remains a serious challenge for India to address in the near future.

DISASTER MANAGEMENT CONTINUUM



Conclusion

The need of the hour is to chalk out a multi-pronged strategy for total disaster management comprising prevention, preparedness, response and recovery on the one hand and initiate development efforts aimed towards risk reduction and mitigation on the other. The countries in the Asia-Pacific region should establish a regional co-ordination mechanism for space-technology based disaster mitigation and strengthen co-operation, Luan suggested, adding that they also need to set up an all-weather and all-time comprehensive space-based disaster mitigation system and share the information.

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