



DISASTER MANAGEMENT IN INDIA: SOME POLICY MEASURES

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1469

ABSTRACT

India has a history of being particularly susceptible to natural disasters due to its particular geoclimatic characteristics. Landslides, earthquakes, cyclones, floods, and droughts have all been frequent occurrences. Over 40 million hectares of the continent is vulnerable to floods, over 60% of the landmass is sensitive to earthquakes of varying intensities, 8% of the landmass is vulnerable to cyclones, and 68% is vulnerable to drought. Every year between 1990 and 2000, there were around 4344 fatalities and 30 million individuals affected by disasters? The amount of individual, communal, and public assets lost has been enormous. The super cyclone in Orissa in October 1999 and the Bhuj earthquake in Gujarat in January 2001 underlined the need to adopt a multi-dimensional endeavor involving various scientific, engineering, financial, and social processes. They also highlighted the need to adopt a multi-disciplinary and multi-sectoral approach and incorporate risk reduction in the development plans and strategies. In this country's policy framework, disaster management plays a significant role because the poor and underprivileged are the ones who suffer the most from tragedies and disasters.

Key Word: natural disasters, Floods, droughts, cyclones, earthquakes, landslides, relief and rehabilitation

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1.1 Introduction

Disasters halt progress and obliterate the laboriously attained results of arduous developmental endeavors, frequently setting nations' efforts to advance back by several decades. Therefore, effective disaster management—as opposed to merely responding to their occurrence—has recently attracted more attention in both India and internationally. This is due to both the realization that catastrophes are occurring with greater frequency and intensity as well as the requirement for competent governance in a compassionate and civilized society in order to properly address the devastation caused by disasters. Natural disasters have generated a great deal of anxiety on a global scale. The number of lives and property lost as a result of

disasters has not diminished despite significant technological and material advancement. In actuality, the death toll and financial losses have increased. In 1989, the United Nations General Assembly designated the decade 1990-2000 as the International Decade for Natural Disaster Reduction with the goal of limiting socioeconomic damage and reducing loss of life via concerted international effort, particularly in developing nations.

Political, social, and economic barriers do not affect natural disasters in any way. Since they have no boundaries and affect both emerging and developed nations, they are also ruthless, and as a result, the weak are more likely to suffer when a natural disaster strikes. For instance, the developing world is far more severely impacted in terms of the number of



lives lost, the hardships endured by the populace, and the percentage of GNP lost. Just 2% of those killed in natural disasters since 1991 were citizens of highly developed countries, whereas two-thirds of those killed were from developing countries. People who reside in developing nations, particularly those with little resources, tend to be worse off. The international community is stepping up its efforts to deal with it as a result of the alarming increase in natural catastrophes and vulnerability in general. India has a history of being particularly susceptible to natural disasters due to its particular geoclimatic characteristics.

Landslides, earthquakes, cyclones, floods, and droughts have all been frequent occurrences. Over 40 million hectares of the continent is vulnerable to floods, over 60% of the landmass is sensitive to earthquakes of varying intensities, 8% of the landmass is vulnerable to cyclones, and 68% is vulnerable to drought. Every year between 1990 and 2000, there were around 4344 fatalities and 30 million individuals affected by disasters? The amount of individual, communal, and public assets lost has been enormous. The super cyclone in Orissa in October 1999 and the Bhuj earthquake in Gujarat in January 2001 underlined the need to adopt a multi-dimensional endeavor involving various scientific, engineering, financial, and social processes. They also highlighted the need to adopt a multi-disciplinary and multi-sectoral approach and incorporate risk reduction in the development plans and strategies. In this country's policy framework, disaster management plays a significant role because the poor and underprivileged are the ones who suffer the most from tragedies and disasters.

1.2 India's Disaster Risks

India is susceptible to a wide range of natural and man-made calamities, in varied degrees. Of the 7,516 km long coastline, nearly 5,700 km are vulnerable to cyclones and tsunamis; 58.6% of the landmass is susceptible to earthquakes of moderate to very high intensity; over 40 million hectares (12%) of land is vulnerable to floods and river erosion; 68% of the cultivable area is vulnerable to drought; and hilly areas are susceptible to landslides and avalanches. There is also a risk of being affected by emergencies and disasters with a CBRN (chemical, biological, radiological, and nuclear) component. Expanding populations, urbanization, industrialization, and growth in high-risk areas, environmental degradation, and climate change can all contribute to increased susceptibility to disaster risks (Maps 1-4). 1.2.2 The economically and socially disadvantaged parts of the population are the ones that are most severely impacted in terms of human susceptibility to disasters. Elderly people, women, women who have been left impoverished and children who have been left orphaned by catastrophes, as well as those with disabilities, are among the vulnerable populations who are more at risk.

The Disaster Management Act, 2005 (hereinafter referred to as the Act) was passed by the Government of India (GoI) on December 23, 2005. The Act provided for the establishment of the National Disaster Management Authority (NDMA), which would be led by the Prime Minister, State Disaster Management Authorities (SDMAs), which would be led by the Chief Ministers, and District Disaster Management Authorities (DDMAs), which would be led by the Collector, District Magistrate, or Deputy Commissioner as in order to preserve developmental achievements and minimize losses in life, livelihood, and property, there will be a paradigm change away from the formerly relief-centric reaction and toward a



proactive prevention, mitigation, and preparedness-driven approach.

1.2 Tsunami's effects

On December 26, 2004, at 6:28 AM, a 9.0 Richter earthquake impacted the ocean floor off the Sumatra Coast in Indonesia. The South Indian coast was devastated by the tsunami that resulted from the earthquake. On December 26, 2004, at 8.30 A.M., these enormous sea waves ferociously tore through Tamil Nadu's coastline. People in 13 Districts, including Chennai, Kancheepuram, Tiruvallur, Villuppuram, Cuddalore, Nagapattinam, Tiruvarur, Thanjavur, Pudukkottai, Ramanathapuram, Thoothukkudi, Tirunelveli, and Kanniyakumari, who live in villages and towns along the coastline, were impacted. Damages were quite severe in the coastal districts of Nagapattinam, Kanniyakumari, and Cuddalore, as well as in the districts of Chennai,

Kancheepuram, and Tiruvallur. Many fisherman who reside in coastal areas have been seriously impacted by this abrupt tsunami strike, and thousands of them lost both their lives and their means of subsistence. Many thousands of people were left homeless as a result of this calamity and lost their homes, including huts. Both the possessions and properties of the non-fisherman communities residing along Tamil Nadu's coast as well as the catamarans, vallams, motorized boats, and fishing nets suffered very serious damages as a result of this tsunami.

For immediate search, rescue, and relief efforts, the whole State apparatus has been mobilized. The affected coastal district collectors were instructed to act right once to coordinate search, rescue, and relief efforts with the departments of revenue, police, fire and rescue, medical and health services, coast guard, and army, navy, and air force. The

devastated coastal districts' whole administrative infrastructure jumped headfirst into the urgent mission of search and rescue operations despite the complete shock and suddenness of the occurrence with no forewarning at all. The remarkable effort made by the Tamil Nadu government allowed for the prompt provision of food, shelter, and medical care to all impacted families at relief camps as well as the relocation of all affected people to safer locations. On a war footing, search and rescue activities were also carried out concurrently. The Government acted swiftly to obtain information from the Collectors regarding the number of people killed, the number of homes damaged, the number of cattle lost, the number of people injured, the number of people affected, the number of people evacuated to safer locations, the number of relief centres opened, the number of families housed in these centres, and information regarding the number of affected boats, fishing nets, damages, etc. as a result of this major disaster. The Government also allocated funds to the Collectors for prompt implementation of the relief measures

Large-scale donations of relief supplies for the tsunami victims were made by nonprofit organizations, for-profit businesses, and state governments. It was decided to receive the needed supplies, store them, and dispatch them to the affected areas. As a result, the TNCSC godown in Virugambakkam was used to receive the relief supplies from donors in Chennai city and from the other States. The district collectors of the affected districts received the relief supplies that had been donated in the districts. The abrupt tsunami had the greatest impact on the fishing sector. They were saddened by losing not only their houses, belongings, and means of subsistence but also their lifeblood, such as catamarans, automated



boats, and fishing nets (both trawl and gill nets), during the tsunami's attack.

Farmers, salt pan workers, tiny traders, boat and net repair workers, and other residents of the impacted areas who are also involved in the coastal economy lost their homes, small business locations, cattle, and goods. In numerous locations, seawater infiltrated agricultural grounds, damaging crops in addition to allowing sea water to seep through the pores of the soil. Some areas saw extensive sandcast as a result of the marauding seawater's dumping of sand and debris in the agricultural grounds. Public structures and neighborhood infrastructure, such as PDS stores, hospitals, schools, etc., suffered extensive damage. 373 communities were impacted by the devastation the tsunami brought in 13 coastal districts on December 26, 2004. There were also 16519 cattle losses and 8036 human fatalities. 3136 people experienced severe injuries. 1.5 lakh homes, 35,530 catamarans, 11,118 vallams, 4,430 mechanized boats, and 2000.69 MT of fishing equipment were all damaged.

1.3 A few legislative actions

The families of those who lost family members and those who were left homeless both received immediate assistance. 304 relief centres were established the very **same day the accident occurred, and 2, 37,000 displaced persons were housed there. Every** day, there were more and more people affected, eventually reaching 6.90 lakhs, of whom 5 lakh were relocated to safer areas. In 412 relief centres, 3.09 lakh impacted persons were housed. 547 doctors make up the medical teams, which are led by the government. In order to care for the injured, stop the spread of epidemic diseases, maintain public hygiene, etc. in the afflicted areas and relief centres, medical teams were organised and sent to the disaster

zones. The government has authorised cash for relief and restoration efforts in response to the tsunami-related harm. Following are the details of relief on the various items of assistance: 1.3.1 Fishing Industry

A total of Rs. 65 crores from the Calamity Relief Fund were approved by the Tamil Nadu government as an emergency package of support for the fishermen.

- [1] The cost of replacing the gill nets for 10,000 units of Vallams, at a cost of Rs. 20,000 each, came to Rs. 20 crores.
- [2] Replace 20,000 units of the catamaran's gill nets for Rs. 10,000 each, for a total of Rs. 20crores.
- [3] At a cost of Rs. 15 crores, 10,000 boats will have their Vallams repaired or rebuilt.
- [4] Repairing or repairing 20,000 catamarans at a cost of Rs. 10 crores (now risen to Rs. 10,000 per unit) (Rs.20 crores now).

In order to repair the 1560 outboard motors and inboard engines that were destroyed after the tsunami, the government approved a budget of Rs. 78 lakhs, or Rs. 5,000 each engine. The following aid has also received government approval for a total of Rs. 395.56 crores:

- [1] Replace fully damaged or lost wooden catamarans with wooden catamarans inclusive of net, at a full subsidy of Rs. 32,000 per catamaran (or) Replace fully damaged or lost wooden catamarans with FRP catamarans, at a 35 percent subsidy of the total cost up to a maximum of Rs. 52,500/- at a unit cost of Rs. 1.5 lakhs (inclusive of engine and net)



[2] The subsidy is 50% of the overall cost up to a maximum subsidy of Rs. 75,000/- computed at a unit cost of Rs. 1.5 lakhs inclusive of engine and net for the replacement of fully damaged or lost FRP catamarans.

[3] FRP Vallam replacement that is entirely damaged would receive a subsidy of 50% of the cost up to a maximum of Rs. 75,000/- computed at a unit cost of Rs. 1.5 lakhs (inclusive of engine and net)

[4] For repairs of mechanised boats, the subsidy is limited to a maximum of Rs. 3 lakhs per boat and is based on 60% of the assessed worth of the losses.

[5] A 35 percent subsidy of the whole cost, up to a maximum subsidy of Rs. 5 lakhs per boat, is available for the replacement of fully damaged or lost mechanised boats.

Additionally, the following has been requested:

[1] Amount of Rs. 10 lakhs for each of the proprietors of prawn or crab farms, fish seeding farms, fish transport businesses, ice making facilities, etc. who lost assets as a result of the tsunami in Cuddalore District.

[2] 6.64 crores of rupees in aid for the restart of fishing activities, dredging operations, and fishing harbour and launching centre repairs.

[3] An amount of Rs. 430.50 lakhs would be provided as aid for repairs, dredging operations, and other relevant activities to resume fishing operations and restore damages to Chennai I and II fishing harbours.

[4] The Fisheries Department will receive Rs. 2.70 lakhs for the purchase of new printers and Rs. 3.46 lakhs to cover unforeseen expenses.

[5] A lump sum of Rs. 50 lakhs to cover unforeseen costs, such as the creation of the evaluation report and accommodations for the Director of Fisheries' staff members working in relief efforts.

[6] Rs. 55 lakhs was spent renovating the jetty in Mallipatnam in the Thanjavur District.

[7] To expedite the process of repairing boats, funds in the amount of Rs. 5 lakhs were allocated for the Chinnamuttom boat yard and Rs. 1.89 lakhs were allocated for the Kanniyakumari boat yard.

The government has mandated that sales tax be waived on the purchase of new FRP catamaran, new FRP/wooden vallams, and products like wood meant for mending damaged automated boats, including fibreglass boats fitted with OBM.

1.3.2 Residence

For the construction of temporary housing for 50,000 families, the government approved a total of Rs. 40 crores, or Rs. 8000 per family. The provision of another 50,000 temporary homes is to be made by NGOs. Additionally, the government issued directives encouraging private and public building of long-term housing and communal assets including schools, PHCs, community shelters, etc. Many NGOs have expressed interest in taking part in these programmes. All coastal Collectors have received finalised guidelines for evaluating NGOs, a model memorandum of understanding (MOU) that must be signed by the Collector and the NGO or corporate, as well as technical information for building disaster-proof homes. The government has announced a large housing scheme to construct 1, 30,000 homes at a cost of Rs. 1.5 lakh apiece in all the affected districts. There will also be infrastructure facilities



including roads, water supply, sanitization, rainwater harvesting structures, etc. Amounts up to Rs. 75,000 will be granted toward repairs dependent on the extent of the damages. Corporations and NGO's will participate actively.

1.3.4 Relocate Orphans, Widows, and the Destitute

In the districts of Cuddalore, Nagapattinam, and Nagercoil (Kanniyakumari), three orphanages have been established for children who have been left orphaned, each having the capacity to care for one hundred children. The government approved Rs. 47.76 lakhs for this use. 29 children in Kanniyakumari, 109 children in Nagapattinam, and 73 youngsters in Cuddalore have been admitted thus far. Adolescent girls who have been abandoned are being accepted into state-run service homes. In the districts of Kanniyakumari and Nagapattinam, two new service homes have been established; 23 girls in Nagapattinam and 7 girls in Kanniyakumari have been admitted. The government approved a budget of Rs. 41.74 lakhs for this use. The State Government is making a fixed deposit investment of Rs. 5 lakhs in the names of each orphaned kid and orphaned adolescent female who has been left homeless. When they become 18, they will have access to this money for things like additional education, self-employment, etc. Over 18-year-old orphaned females are being accepted into service homes and receiving technical training to develop their vocational abilities. There have been 7 girls admitted so far in the Kanniyakumari district and 1 girl in the Nagapattinam district. A fixed deposit of Rs. 3 lakh would be opened in each of their names. All persons left impoverished by the disaster are now covered by ongoing pension plans.

For a total of 407 people, the following pensions have been approved: Old Age Pension to 103, Physically Handicapped Pension to 36, Widow Pension to 250, Agricultural Labourer Pension to 11 and Widow Pension to 7.

1.3.5 Rebuilding and repairing infrastructure related to health

By December 31, 2004, all main roads and bridges had been repaired to allow for traffic. The Highways Department has calculated that it will cost Rs. 770 crores to rebuild bridges and repair roads. Within 48 hours of the tsunami, all impacted communities had their water and power back on, and TNEB undertook repair work worth Rs. 16.93 crores.

1.4 Memorandum to Indian Government

On April 1, 2005, a memo was sent to the government of India asking for help in the amount of Rs. 4800 crores and the distribution of 54000 tonnes of food grains to the afflicted people. On January 15, 2005, the GOI was asked for further approval in the amount of Rs. 5.8225 crores in addition to the aforesaid Memorandum. The Government of India allocated Rs. 617.20 crores for relief and response based on the Memorandum and the report provided by the Central Team, along with Rs. 9.94 crores for fishing harbour grants from the Calamity Relief Fund/National Calamity Contingency Fund and Rs. 6.12 crores for 54,000 MT of rice under SGRY.

1.5 Conclusion

From the foregoing debate, it can be inferred that the declaration of this policy just marks the beginning of a new journey. It is a tool that aims to provide the overarching framework within which various institutions and people at all levels must execute particular actions. Hopefully, a direction has been given after describing a destination. The stage has



been prepared; the next step is to roll out the roadmaps. The policy document has made an effort to capture, in its entirety, the fervently enabling environment that the body politic has put in place through a Parliamentary Act that heralds the beginning of a different approach in dealing with disasters that, in the past, have taken a heavy toll on lives and property and crippled the economic foundation of communities. It also demonstrates the realisation that disasters have a significant impact on national security conditions in addition to delaying economic and developmental growth. The main idea is that the national vision may be realised by a community that is catastrophe intelligent and resilient, properly empowered by a newly established DM Structure, and working cohesively across multiple sectors. This is also a statement of the national leadership's unwavering will to allocate the funds required for prevention, preparedness, and mitigation rather than continuing to waste money on post-disaster costs year after year. Therefore, the policy will have accomplished its goals if individuals tasked with carrying out the work discover that it has given them the support and guidance they require.

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