

Disaster Management in Administrative Response in India- A Study

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Abstract: *In this article researcher analysed the administrative rezones on Disaster Management has to be a multi-disciplinary and pro-active approach. Besides various measures for putting in place institutional and policy framework, disaster prevention, mitigation and preparedness, and initiatives being taken by the Central and State Government, the community, civil society organisations and media also have a key role to play in achieving our goal of moving together, towards a safer India. The message being put across is that, in order to move towards safer and sustainable national development, development projects should be sensitive towards disaster mitigation. The World Health Organization (WHO) defines a disaster as an event that results in enough damage, economic devastation, loss of life, or decline in health and health services to necessitate an extraordinary response from outside the impacted region or territory. Definition of a disaster is "An occurrence arising with little or no warning which causes or threatens serious disruption or life, and perhaps death or injury to large numbers of people and requires therefore a mobilization of effort in excess of that normally provided by the statutory emergency services.*

Key Words: *Disaster Management, Rehabilitation, Mitigation, Emergency Alarming.*

1. INTRODUCTION :

The disaster is an unexpected, catastrophic event that causes significant harm, loss, destruction, and devastation to both people and property. Disaster-related damage is incalculable and varies according to the earth's surface type, climate, and degree of vulnerability. This affects the impacted area's political, social, cultural, and mental health.. The word 'Disaster' is derived from the Latin 'astrum' or 'star' connoting an element of magic and the powerful disturbances caused by the movement of heavenly bodies. The dictionary defines 'Disaster' as an adverse or unfortunate event-a great and sudden misfortune or calamity; nonetheless disasters are extraordinary events that cause great disruption to life and property, physical injury and human suffering. They unusually denote overwhelming events and circumstances that test the adaption response of community or individual beyond their capability of function for community or individual, we generally think in terms or sudden and dramatic events but disaster may also be gradual and prolonged creeping on almost insignificantly as in the case or drought and famine.

The World Health Organization (WHO) defines a disaster as an event that results in enough damage, economic devastation, loss of life, or decline in health and health services to necessitate an extraordinary response from outside the impacted region or territory.

A different definition of a disaster is "An occurrence arising with little or no warning which causes or threatens serious disruption or life, and perhaps death or injury to large numbers of people and requires therefore a mobilization of effort in excess of that normally provided by the statutory emergency services." Disasters are also assessed as an event "that produce conditions whereby the community of the structure of and process of social units become problematic. Generally disaster has following effects in the concerned areas:

- I. It completely disrupts the normal day-to-day life,
- II. It negatively influences the emergency system,
- III. Normal needs and processes like food, shelter, health etc are affected and deteriorate depending on the intensity and severity of the disaster.

It is important to understand hazards before getting into the concept of disaster. There are several definitions of hazard, proposed by different scholars, agencies and governments. For the ease of understanding, let us consider a few. Hazard is an extreme geophysical event that is capable of causing a disaster. Hazards represent the potential occurrence of extreme natural events, or likelihood to cause the severe adverse effects, while disasters result from actual hazard events. Hazard is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

2. REVIEW OF LITERATURE :

Chakrabarti and Pramanik, (2017) Explained and elaborated that proper disaster planning is necessary to forestall damages against library resources. Disaster planning of a Library and Information Centre is a complex process. Protecting employees and resources of the Library and Information Centre during a disaster requires planning. They must take steps to lessen the damage done by hazards. These steps must be taken before, after or during disaster.

Disaster Management Act, (2003) it was quite expected that it would set the broad contours of disaster management in the country to be followed by all other enactments. Consequently, apart from the fine and standard provisions, the omissions of the Act are also borrowed by a few state legislations. In this context, a notable oversight of the Gujarat Act seems to be its definition of the concept of disaster management. Continuing with the colonial policy of relief centric perspective of disaster management, the Act defines disaster management as “a continuous and integrated process of planning and implementing of measures with a view to: (i) mitigating or reducing the risk of disasters; (ii) mitigating the severity or consequences of disasters; (iii) capacity-building; (iv) emergency preparedness; (v) assessing the effects of disasters; (vi) providing emergency relief and rescue; and (vii) post-disaster rehabilitation and reconstruction.

Ronald et al., (2008) The 14th World Conference on Earthquake Engineering October 12-17, 2008, Beijing, Chinaopines, "The Application of Remote Sensing Technologies for Disaster Management", facilitates on how these technologies may be used in terms of natural disasters. The main concern is to enhance the understanding about the environment built and the flexibility to the hazards that occur naturally. These methods would help to calculate or foresee the impact of larger disasters in urban areas. It is in order to assess the efficiency of the RS Technologies, (Remote Sensing) for disaster management. It is with reference to Marmara 1999, Turkey earthquake in the year 2003 in Bam, Iran, a similar earthquake in Indian Ocean in the year 2004 a huge Tsunami of its first kind and a no of examples are represented. A thorough discussion is carried throughout for better understanding on the future use of RS Technology in Disaster Management.

Nirmita Mehrotra (2010) in his study on "Disaster Management: Need of Revival in Policy Framework", this paper propagates that disaster safe neighbourhoods must be recognized as a basic human right and continued responsibility of local government. Emergency response is what most people associate with disasters. Timely, efficient and effective response relies on careful planning for quick action by different actors and institutions in alliance. The local bodies can be effective instruments in tackling disasters through early warning system, relief distribution, providing shelters to victims, medical assistance, etc.

3. OBJECTIVES OF THE STUDY

The following are the objectives of the present study.

- To study the disaster management in India
- The study the importance of administrative response issues.
- To study the rehabilitation responsibility of government.
- To analyse the challenges in disaster management in India
- To identify the gap in the contexts rehabilitation programmes and make suggestion to improve the same.

4. METHODOLOGY:

The present study the data has been collected through The secondary data has been collected from various publishing books, literatures, paper clippings, acts, laws, official and unofficial documents, reports, surveys and periodicals. For the purpose of the secondary source the researcher has visited various libraries and research institutes.

ADMINISTRATIVE RESPONSE IN DISASTER MANAGEMENT

Indian Meteorological Department (IMD) is mandated to monitor and give warnings regarding Tropical Cyclone (TC). Monitoring process has been revolutionized by the advent of remote sensing techniques. ATC intensity analysis and forecast scheme has been worked out using satellite image interpretation techniques which facilitate forecasting of storm surges.

Data resources are crucial to early forecasting of cyclones. Satellite based observations are being extensively utilized. Satellite integrated automated weather stations have been installed on islands, oilrigs and exposed coastal sites. Buoys for supplementing the surface data network in the tropical ocean have been deployed. The Government has also started a National Data Buoy Programme. A set of 12 moored buoys have been deployed in the northern Indian Ocean to provide meteorological and oceanographic data.

Dynamic forecasting of TCs requires knowledge of the vertical structure of both the Cyclone and the surrounding environment. The Doppler Radar wind profiler provides hourly soundings. A mesosphere, stratosphere, troposphere (MST) radar has also been installed at Tirupati. Another profiler is being developed and will be deployed at IMD Pune. Another important source of upper level data is the aircraft reports. Increasing number of commercial jet aircrafts are equipped with the Aircraft Meteorological Data Relay System. This data is also being used by the IMD for analysis and predictions.

The meteorological satellite has made a tremendous impact on the analysis of cyclones. All developing cloud clusters are routinely observed through satellite cloud imagery & those showing signs of organisation are closely monitored for signs of intensification. TC forecasters everywhere use the Dvorak technique to estimate storm location and intensity. It has been found to provide realistic estimates for TCs in the Bay of Bengal as well as Arabian Sea. INSAT data has also been used to study the structures of different TCs in the Bay of Bengal. IMD is also producing Cloud Motion Vectors (CMVs). The goal of any warning system is to maximize the number of people who take appropriate and timely action for the safety of life and property. All warning systems start with detection of the event and with people getting out of harm's way. Such warning systems encompass three equally important elements namely, Detection and Warnings, Communication, and Response.

The two stage warning system has been in existence since long in IMD. Recently it has been improved upon by introducing two more stages - the 'Pre- Cyclone Watch' and the 'Post - Landfall Scenario'. This four stage warning system meets the requirements of Public Administrators and Crisis Managers. The 'Pre-Cyclone Watch' stage contains early warning about the development of a cyclonic disturbance in the form of monsoon depression which has a potential to threaten the coast with cyclone force winds. The coastal stretch likely to be affected is identified. This early warning bulletin is issued by the IMD before the Cyclone-Alert Stage. This provides enough lead time for the crisis managers to undertake preparedness actions.

After **the early warning** on the 'Pre-Cyclone Watch' the Collectors of coastal and few immediate interior districts and the Chief Secretary of the concerned maritime State are warned in two stages, whenever any coastal belt is expected to experience adverse weather (heavy rain/gales/tidal wave) in association with a cyclonic storm or a depression likely to intensify into a cyclonic storm.

The second stage of 'Cyclone Alert' is sounded 48 hours in advance of the expected commencement of adverse weather over the coastal areas. Forecasts of commencement of strong winds, heavy precipitation along the coast in association with arrival of cyclone are issued at the alert stage. Landfall point is usually not identified at this stage. The third stage warning known as 'Cyclone Warning' is issued 24 hours in advance. Landfall point is forecast in this stage of cyclone warning. In addition to the forecasts for heavy rains and strong winds, the storm surge forecast is also issued. Since the storm surge is the biggest killer so far as the devastating attributes of a storm are concerned, information in this regard is most critical for taking follow up action for evacuation from the low lying areas likely to be affected by the storm.

A fourth stage known as 'Post - Landfall Scenario Stage' is now identified usually as a part of the 'Cyclone Warning Stage' either at the time of landfall of the disturbance or about twelve hour in advance of it. It includes warnings of strong winds and heavy rains likely to be encountered in the interior districts.

Cyclone warnings are communicated to Crisis Managers and other concerned organizations by high priority telegrams, telex, telephones and Police wireless. Cyclone warnings are provided by the IMD from the Area Cyclone Warning Centres (ACWCs) at Kolkata, Chennai and Mumbai, and Cyclone Warning Centres (CWCs) at Vishakhapatnam, Bhubaneswar and Ahmedabad. There is also a Satellite based communication system called the Cyclone Warning Dissemination Systems (CWDS) for transmission of warnings. There are 250 such cyclone - warning sets installed in the cyclone - prone areas of east and west coast. The general public, the coastal residents and fishermen, are also warned through the Government machinery and broadcast of warnings through AIR and Television.

Flood Forecasting

Flooding is caused by the inadequate capacity within the banks of the rivers to contain the high flow brought down from the upper catchments due to heavy rainfall. It is also caused by accumulation of water resulting from heavy spells of rainfall over areas, which have got poor drainage characteristics. Flooding is accentuated by erosion and silting leading to meandering of the rivers in plains and reduction in carrying capacity of the river channel. It is also aggravated by earthquakes and landslides, leading to changes in river course and obstructions to flow. Synchronization of floods in the main rivers and tributaries and retardation of flow due to tidal effects lead to major floods. Cyclones bring in their wake considerable loss of life and property.

The flood forecasting and warning system is used for alerting the likely damage centers well in advance of the actual arrival of floods, to enable the people to move and also to remove the moveable property to safer places or to raised platforms specially constructed for the purpose.

A beginning in scientific flood forecasting was made in November, 1958 by Central Water Commission (then known as Central Water & Power Commission) when a Flood Forecasting centre was set up at its Headquarters, at Delhi, for giving timely forecasts and warnings of the incoming floods to the villages located in the river areas around the National Capital, Delhi. The network has been expanding and by now the Flood Forecasting Network of the Central Water Commission (CWC) covers all the major flood prone inter-State river basins in the country.

Emergency Medical Response

For prompt and effective emergency medical response, the Quick Reaction Medical Teams (QRMT) need to be activated so that they reach the cyclone affected site immediately along with resuscitation equipment and life-saving drugs. Cardiopulmonary resuscitation, triage and evacuation work must be done in accordance with laid down SOPs.

5. CONCLUSION :

Disaster Management has to be a multi-disciplinary and pro-active approach. Besides various measures for putting in place institutional and policy framework, disaster prevention, mitigation and preparedness, and initiatives being taken by the Central and State Government, the community, civil society organisations and media also have a key role to play in achieving our goal of moving together, towards a safer India. The message being put across is that, in order to move towards safer and sustainable national development, development projects should be sensitive towards disaster mitigation. Our mission is vulnerability reduction to all types of hazards, be it natural or man-made. This is not an easy task to achieve, keeping in view the vast population, and the multiple natural hazards to which this country is exposed. However, if we are firm in our conviction and resolve that the Government and the people of this country are not prepared to pay the price in terms of massive casualties and economic losses, the task, though difficult, is achievable and we shall achieve it.

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