

## CHAPTER-3

### Disaster Management

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#### **Introduction:**

The management and organisation of roles and resources for addressing diverse humanitarian aspects of calamities can be summed up as disaster management. It emphasises response, readiness, and recovery in order to limit the effects of the disaster as much as possible. In essence, it is a sequence of strategic planning for the different actions that must be done, managed, and used to protect people and property from severe losses when natural or man-made disasters occur.

A disaster is not an event that would allow you to prepare yourself for it before its arrival. Recovering from its aftermath can take weeks, months, years, and in some rare cases, decades. From a volcano to a gas chamber leak, the range of disasters lurking in the environment is more than you can count.

Disaster management can be defined as the management and organization of responsibilities and available resources for coping up with various humanitarian aspects of emergencies. It focuses on the response, preparedness, and recovery so that the impact of the disaster is lessened as much as possible. Essentially, it is a series of strategic planning of the various procedures that need to be undertaken, administered, and employed to safeguard assets and lives from severe damages when natural or man-made calamities take place.

A disaster is defined as a disruption on a massive scale, either natural or man-made, occurring in short or long periods. Disasters can lead to human, material, economic or

environmental hardships, which can be beyond the bearable capacity of the affected society. As per statistics, India as a whole is vulnerable to 30 different types of disasters that will affect the economic, social, and human development potential to such an extent that it will have long-term effects on productivity and macro-economic performance.

A Disaster is an event or series of events, which gives rise to casualties and damage or loss of properties, infrastructure, environment, essential services or means of livelihood on such a scale which is beyond the normal capacity of the affected community to cope with. Disaster is also sometimes described as a "catastrophic situation in which the normal pattern of life or ecosystem has been disrupted and extra-ordinary emergency interventions are required to save and preserve lives and or the environment"

A disaster is a serious damage or disruption of the functioning of a society or community. It involves a widespread impact on humans, the economy, and the environment to a degree that exceeds the ability of the society to recover from. It takes place when a hazard becomes so severe that it adversely impacts the lives of vulnerable people. The lethal combination of vulnerability, hazards, and the inability to decrease the potentially harmful consequences of risk results in the formation of a disaster. There are many different types of disasters, and they can endure anywhere from a few seconds to several years. Here is a list of the different categories of disasters:

### **Natural Disaster**

A natural catastrophe is a physical occurrence that is brought on by a series of events, either gradual or sudden, that have an immediate negative influence on human health and cause widespread suffering and fatalities. For instance, whereas a drought takes a long time to develop, an earthquake might occur for only a few seconds, both can have a negative impact on a wide variety of life forms. A natural disaster is a physical phenomenon that is caused by either slow or rapid succession of events that immediately impacts human health and leads to

widespread suffering and death. For instance, an earthquake can take place for a few seconds whereas a drought takes a lot of time to develop, but both can adversely affect various life forms in abundance.

**Some of the common examples of natural disasters are as follows:**

- Geophysical (such as tsunamis, earthquakes, volcanic activity, and landslides)
- Meteorological (such as storms, wave surges, and cyclones)
- Hydrological (such as floods and avalanches)
- Biological (such as disease epidemics and insect/animal plagues)
- Climatological (such as wildfire, drought, and extreme temperatures)



### **Human-Centric Disaster**

Events that are the direct result of human behaviour or error are known as man-made disasters. It sometimes happens as a direct result of human action, and other times it develops over time as the result of a chain of human transgressions. Man-made disasters are events that are the direct results of human activities or mistakes. Sometimes, it is the result of an immediate action

made by humans while sometimes it is a build-up of the culmination of human misdoings.



Following are a few of the most frequent man-made disasters:

- pollution of the groundwater
- mining mishaps
- Failures of structures
- Spills of dangerous materials
- Leaky gas chamber
- spills of oil
- vehicle collision
- environmental damage
- Pollution
- Terrorism

### **Pandemic Disasters**

The word pandemic has been derived from the Greek words 'pan' meaning 'all' and 'demos meaning 'people'. So, pandemic means a situation that affects everyone. It is the spread of an infectious disease that spreads across a large region that not only affects health but also disrupts services that lead to economical degradation.

It may be a consequence of a natural or man-made disaster or both. Some of the common examples of pandemic disasters are as follows:

- Cholera
- Spanish Flu
- Avian Flu/ Bird Flu
- Zika
- Ebola
- Malaria
- Dengue
- Yellow Fever
- Coronavirus Disease (COVID-19)



**Complex emergency disasters** are defined as those occurrences that are the result of several natural and human-made factors, including looting, assaults, breakdowns in authority, conflicts, and war. These catastrophes are frequently characterised, among other things, by enormous violence and widespread harm to both science and the economy. Complex emergency disasters refer to those events that result from a combination of both natural and man-made causes that involve looting, attacks, breakdown of authority, conflicts, and war. These disasters are often characterized by widespread damage to both economics and science, and extensive violence, among others. In order to address these tragedies, massive humanitarian help from different organisations is needed. In these situations, there is also a higher risk to the security of those providing humanitarian aid.

The following are some of the most prominent examples of complicated emergency disasters:

- Epidemics
- Armed warfare/ conflicts
- Food scarcity
- Displaced people

### **Different Phases of Disaster Management:**

The key to formulating a successful plan for managing disaster involves breaking down the whole action into different fragments since that would help in the easy execution. This is why the phases of disaster management are categorized in the following four phases. The government and society have to function as one organization here.

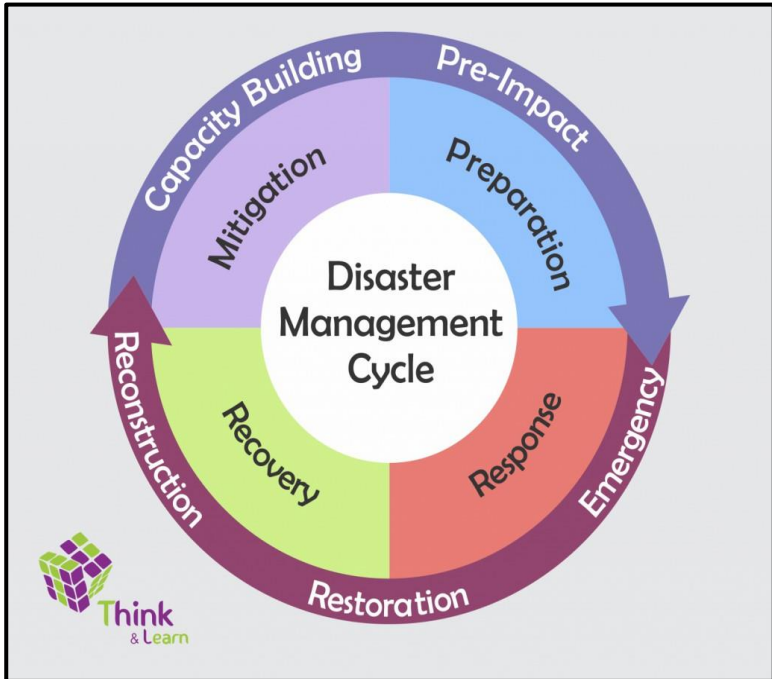
**Mitigation:** This phase takes place before the disaster takes place. Different people should be assigned to different work in different phases and each phase should be handled separately. A clear understanding of all four phases will help empower the overall disaster management plan. It will give you the best chance at survival and recovery. This is done in order to protect people and property. It involves property inspection and discovering various ways to minimize damage. The primary goal of this step is to decrease the vulnerability to disaster impacts.

**Preparedness:** This refers to the actions taken ahead of time so that one can prepare for an emergency. Herein, attempts are made to understand how a particular disaster can affect life forms and to what degree. This phase involves training, educations, and developing skills to face the disaster.

**Response:** The third phase in disaster management is response. It is primarily focused on protecting the people and property during the time of the disaster. It entails the immediate aftermath of a disaster. The attention is paid towards the immediate threats. Plans are executed to keep life forms out of harm's way.

**Recovery:** The fourth and final phase of disaster management is recovery. Immediately after the response phase, there will be a gradual shift towards conducting repairs, re-establishing

operations, restoring utilities, and overall cleaning up. This is generally conducted when some form of environmental, physical, social, and economic stability has been achieved.



Disaster management involves all levels of government. Nongovernmental and community-based organizations play a vital role in the process. Modern disaster management goes beyond post-disaster assistance. It now includes pre-disaster planning and preparedness activities, organizational planning, training, information management, public relations and many other fields. Crisis management is important, but is only a part of the responsibility of a disaster manager. The newer paradigm is the Total Risk Management (TRM) which takes a holistic approach to risk reduction.

**Disaster Management Cycle:**

The traditional approach to disaster management has been to regard it as a number of phased sequences of action or a continuum. These can be represented as a disaster management

cycle. The basic disaster management cycle consists of six main activities

**Key Phases of Disaster Management** There are three key phases of activity within disaster management:

**1. Pre – Disaster:** Before a disaster to reduce the potential for human, material or environmental losses caused by hazards and to ensure that these losses are minimized when the disaster actually strikes.

**2. During Disaster:** It is to ensure that the needs and provisions of victims are met to alleviate and minimize suffering.

**3. Post Disaster:** After a disaster to achieve rapid and durable recovery which does not reproduce the original vulnerable conditions

Traditionally people think of disaster management only in terms of the emergency relief period and post disaster rehabilitation. Instead of allocated funds before an event to ensure prevention and preparedness. A successful disaster management planning must encompass the situation that occurs before, during and after disasters.

### **Pre – Disaster Phase (Prevention and Mitigation):**

Reducing the risk of disasters involves activities, which either reduce or modify the scale and intensity of the threat faced or by improving the conditions of elements at risk. Although the term „prevention“ is often used to embrace the wide diversity of measures to protect persons and property its use is not recommended since it is misleading in its implicit suggestion that natural disasters are preventable. The use of the term reduction to describe protective or preventive actions that lessen the scale of impact is therefore preferred. Mitigation embraces all measures taken to reduce both the effects of the hazard itself and the vulnerable conditions to it in order to reduce the scale of a future disaster. In addition to these physical measures, mitigation should also be aimed at reducing the physical, economic and social vulnerability to threats and the underlying causes for this vulnerability. Therefore, mitigation may incorporate addressing issues such as land ownership, tenancy



rights, wealth distribution, implementation of earthquake resistant building codes, etc. Preparedness This brings us to the all-important issue of disaster preparedness. The process embraces measures that enables governments, communities and individuals to respond rapidly to disaster situations to cope with them effectively. Preparedness includes for example, the formulation of viable emergency plans, the development of warning systems, the maintenance of inventories, public awareness and education and the training of personnel. It may also embrace search and rescue measures as well as evacuation plans for areas that may be „at risk“ from a recurring disaster. All preparedness planning needs to be supported by appropriate rules and regulations with clear allocation of responsibilities and budgetary provision. Early Warning This is the process of monitoring the situation in communities or areas known to be vulnerable to slow onset hazards, and passing the knowledge of the pending hazard to people in harm“s way. To be effective, warnings must be related to mass education and training of the population who know what actions they must take when warned.

The Disaster impact This refers to the “real-time event of a hazard occurring and affecting elements at risk. The duration of the event will depend on the type of threat; ground shaking may only occur in a matter of seconds during an earthquake while flooding may take place over a longer sustained period.

#### **During disaster Phase (Response ):**

This refers to the first stage response to any calamity, which include for examples such as setting up control rooms, putting the contingency plan in action, issue warning, action for evacuation, taking people to safer areas, rendering medical aid to the needy etc., simultaneously rendering relief to the homeless, food, drinking water, clothing etc. to the needy, restoration of communication, disbursement of assistance in cash or kind. The emergency relief activities undertaken during and immediately following a disaster, which includes immediate relief, rescue, and the damage needs assessment and debris clearance.

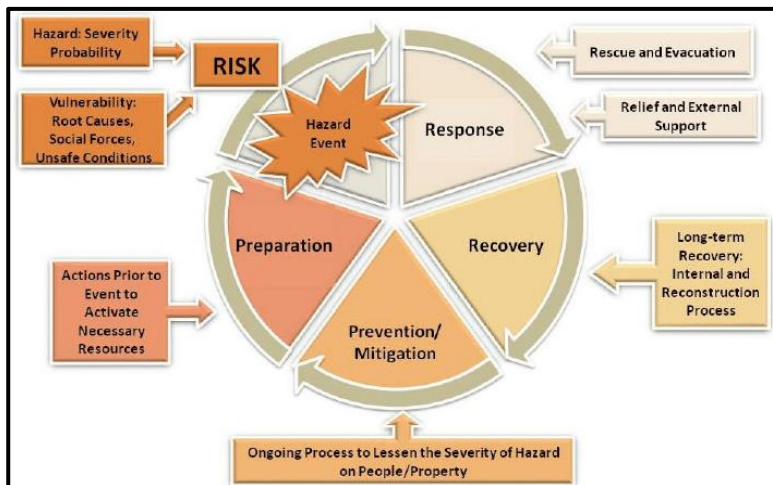
**The Post- disaster Phase (Recovery):**

Recovery is used to describe the activities that encompass the three overlapping phases of emergency relief, rehabilitation and reconstruction.

**Rehabilitation:** Rehabilitation includes the provision of temporary public utilities and housing as interim measures to assist long-term recovery.

**Reconstruction:** Reconstruction attempts to return communities to improved pre-disaster functioning. It includes such as the replacement of buildings; infrastructure and lifeline facilities so that long-term development prospects are enhanced rather than reproducing the same conditions, which made an area or population vulnerable in the first place.

**Development:** In an evolving economy, the development process is an ongoing activity. Longterm prevention/disaster reduction measures for examples like construction of embankments against flooding, irrigation facilities as drought proofing measures, increasing plant cover to reduce the occurrences of landslides, land use planning, construction of houses capable of withstanding the onslaught of heavy rain/wind speed and shocks of earthquakes are some of the activities that can be taken up as part of the development plan.



**The Disaster Management Act, 2005**

The Disaster Management Act was passed by the Lok Sabha on 28 November 2005, and by the Rajya Sabha on 12 December 2005. It received the assent of the President of India on 9 January 2006. The Act calls for the establishment of a National Disaster Management Authority (NDMA), with the Prime Minister of India as chairperson. The NDMA has no more than nine members at a time, including a Vice-Chairperson. The tenure of the members of the NDMA is 5 years.

The NDMA which was initially established on 30 May 2005 by an executive order, was constituted under Section-3(1) of the Disaster Management Act, on 27 September 2005. The NDMA is responsible for "laying down the policies, plans and guidelines for disaster management" and to ensure very timely and effective response to disaster". Under section 6 of the Act it is responsible for laying "down guidelines to be followed by the State Authorities in drawing up the country Plans".

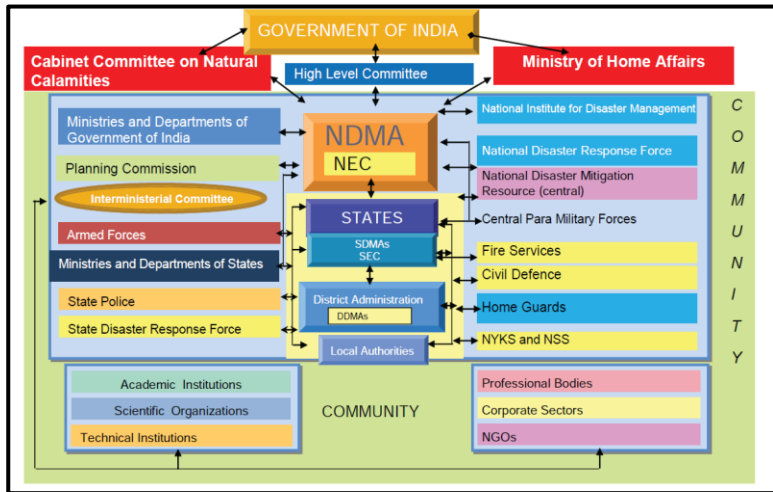
On 1 June 2016, Narendra Modi, the Prime Minister of India, launched the Disaster Management Plan of India, which seeks to provide a frame work and direction to government agencies for prevention, mitigation and management of disasters. This is the first plan nationally since the enactment of the Disaster Management Act of 2005. National Disaster Management Authority (NDMA) is an agency of the Ministry of Home Affairs whose primary purpose is to coordinate response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response. NDMA was established through the Disaster Management Act enacted by the Government of India in December 2005.

The Prime Minister is the ex-officio chairperson of NDMA. The agency is responsible for framing policies, laying down guidelines and best practices and coordinating with the State Disaster Management Authorities (SDMAs) management.

**Agencies involved in Disaster Management**

**National Disaster Management Authority (NDMA):-** The National Disaster Management Authority, or the NDMA, is an

apex body for disaster management, headed by the Prime Minister of India. It is responsible for the supervision, direction, and control of the National Disaster Response Force (NDRF).



**National Executive Committee (NEC):-** The NEC is composed of high profile ministerial members from the government of India that include the Union Home Secretary as Chairperson, and the Secretaries to the Government of India (GoI) like Ministries/Departments of Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, etc. The NEC prepares the National Plan for Disaster Management as per the National Policy on Disaster Management.

**State Disaster Management Authority (SDMA):-** The Chief Minister of the respective state is the head of the SDMA. The State Government has a State Executive Committee (SEC) which assists the State Disaster Management Authority (SDMA) on Disaster Management.

**District Disaster Management Authority (DDMA):-** The DDMA is headed by the District Collector, Deputy Commissioner or District Magistrate depending on the situation, with the elected representatives of the local authority as the Co-Chairperson. The DDMA ensures that the guidelines framed by the NDMA and the

SDMA are followed by all the departments of the State Government at the District level and the local authorities in the District.

**Local Authorities:-** Local authorities would include Panchayat Raj Institutions (PRI), Municipalities, District and Cantonment 11 Institutional and Legal Arrangements Boards, and Town Planning Authorities which control and manage civic services.

### **Conclusion**

Disaster management is based on the principle of planning hard today to safeguard the future. Even though we can get early warnings of disaster these days, no one should be complacent and take it for granted. There will be many times when we won't be warned about an upcoming disaster or there will be times when the intensity of an upcoming disaster is undermined. Therefore, planning is the only thing that will keep you safe.

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