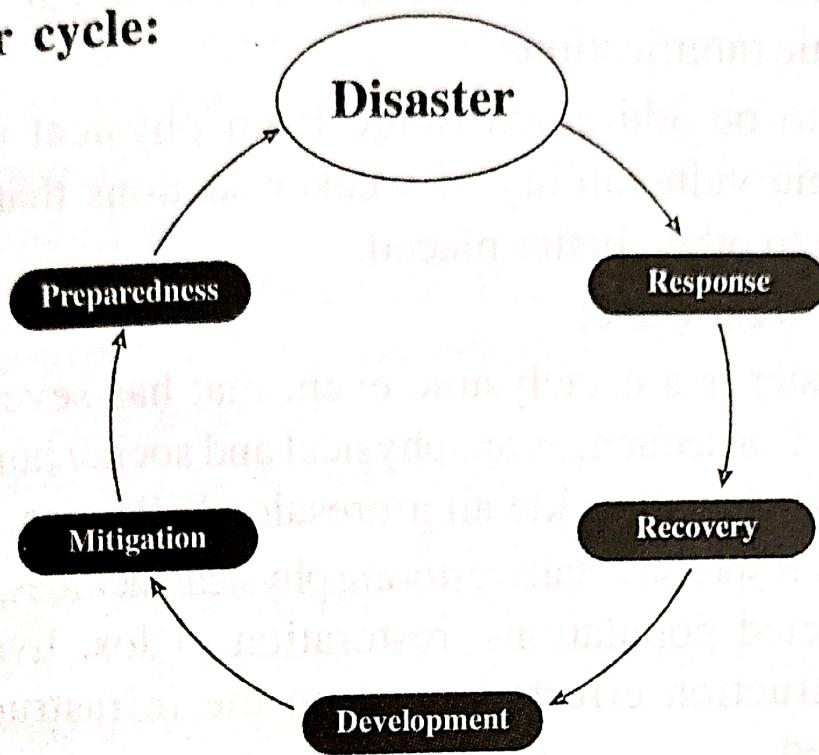


DISASTER CYCLE

Phases, Culture of safety, prevention, mitigation and preparedness
community based DRR, Structural- nonstructural measures, Roles
and responsibilities of- community, Panchayati Raj Institutions/Urban
Local Bodies (PRIs/ULBs), States, Centre, and other stakeholders

6.1. Disaster cycle:



i. The Disaster Event:

- This refers to the real-time event of a hazard occurring and affecting the 'elements at risk'. The duration of the event will depend on the type of threat, for example, ground shaking may only occur for a few seconds during an earthquake while flooding may take place over a longer period of time.
- Disasters have tremendous modifying impact on the physical landscape. Within a few minutes, an entire region is reduced to rubble in the event of an earthquake.

- The impact leads to loss of life and property in affected areas; losses being directly correlated to the vulnerability of the region, physical and socio-economic.
- Vulnerability is also socio-economic. Weaker sections of society, viz. women, children, aged and handicapped, mentally infirm, etc., suffer a lot more than their stronger counterparts. Studies have also unearthed positive correlation between poverty and vulnerability.
- The poor inhabit the most hazardous physical areas because they are easier to procure and offer added advantages, like proximity to sea for fishermen or fertile soil for farmers near flood prone areas etc. that makes them prone to losses, both of assets and life. The poor also lack the resilience to recover from shock in the aftermath of a disaster.
- This brings to light the need for multi-faceted response to disasters, which takes account of all social political and economic ramifications.
- Issues to be addressed range from physical to social and economic vulnerability of weaker sections that suffer more relative to other, better placed.

ii. Disaster Response:

- A Disaster is a cataclysmic event that has severe modifying impact. Consequences are physical and social/ human. Disaster Response has to tackle all aforesaid challenges.
- Disaster response entails restoring physical facilities, rehabilitation of affected populations, restoration of lost livelihoods and reconstruction efforts to restore the infrastructure lost or damaged.
- There are inherent important lessons to be learnt from disaster response.
- with hindsight, it brings to light flaws in efforts pertaining to policy and planning with respect to location and type of infrastructure and social schemes to improve the social positioning of the under privileged, particularly with respect to access to resources of the underprivileged.
- Disaster aftermath is evaluation time for the administrative set up in that disaster response exposes system weaknesses.

- Disaster is the ultimate test of administrative efficiency, in the sense of positive impact on the environment, preparedness, procedural simplicity, logistics, speed and expertise.

There are inherent important lessons to be learnt with regard to administrative reforms by way of policy interventions to ensure:

- Better institutional preparedness
- Countering contrary pulls such as lack of social cohesion owing to irrational differentiations that effectively impede response, in the sense of self-help and 'communitarianism'
- Long-term mitigation policy to counter vulnerabilities, structural and non-structural by enabling legal provisions and honest implementation of the same.

iii. Recovery:

- The recovery phase involves implementation of actions to promote sustainable redevelopment (reconstruction, rehabilitation) following a disaster.
- It covers long-term measures like, rebuilding of houses, assets, infrastructure, school building, hospital buildings, and other public buildings.
- It is a process undertaken by a disaster-affected community to fully restore itself to pre-disaster level. Recovery is the activity that returns infrastructure systems to minimum operating standards and guides long-term efforts designed to return life to normal or improved levels after a disaster.
- Recovery is also sometimes used to describe the activities that encompass the three overlapping phases of emergency relief, rehabilitation and reconstruction.
- **Emergency Relief**
 - Emergency relief refers to the period immediately following the disaster when steps are taken to meet the needs of survivors with regard to shelter, water, food and medical care.
 - Activities undertaken during and immediately following a disaster include immediate relief, rescue, and damage and needs assessment and debris clearance.
 - Rescue and relief are critical elements of response. This would necessitate institutional / organizational improvements by way of better delegation to field agencies, improvements in decision-

making and communication processes, incorporation of indigenous traditional knowledge on warning signs, a cartographic knowledge of safe and unsafe areas, survival methods, and traditional forms of insurance built around kinship and families.

- The most crucial aspect in relief and rescue is communication across involved agencies.
- Disaster zone is often equated with a war zone, where communication is the critical factor, often, crucial, in fact, the deciding factor between success and failure.

● **Rehabilitation**

- Rehabilitation implies activities that are undertaken to support the victims' return to temporary housing and public utilities as interim measures to assist longer-term recovery through permanent housing and infrastructure.
- Besides physical elements, rehabilitation programmes also include economic rehabilitation through livelihood recovery and support actions and finding alternate employment options for those who cannot get back to their original occupations due to irreparable damage.
- Rehabilitation also includes psycho-social rehabilitation for those who are badly traumatized and need support in terms of psychosocial counseling or even medication in some cases.

● **Reconstruction**

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

iv. **Development:**

- The inclusion of development as a phase in the disaster cycle is intended to ensure the natural disaster, societies factor hazard and vulnerability considerations into their development policies and plans in the interest of overall progress.
- The rationale behind the use of the expression 'disaster management cycle' is that disaster and its management is a continuum of inter-linked activities.

- It is sometimes also referred to as the 'disaster development cycle', implying that disasters are periodic phenomena and occur regularly in such a way that there is development, followed by a disaster, then back to development till the next disaster.
- Sustainable development is another term that is useful in this context, implying development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- It contains within it 2 key concepts of 'needs' in particular, to the essential needs of the world's poor, to which overriding priority should be given and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet the present and the future needs.

6.2. Mitigation and Preparedness Disaster Risk Reduction:

- The Risk Reduction is chronologically the latest paradigm for mitigating the impact of disasters.
- The disaster risk management process is a process for good decision-making and for ensuring the best use of limited resources.
- It applies standard principles, process and techniques of risk management to disaster management. Risk reduction can take place in 2 ways i.e. Long-term Mitigation and Short-term Preparedness.
- This protective process embraces measures, which enable governments, communities and individuals to respond rapidly to disaster situations to cope with them effectively.

Thus disaster risk reduction strategy includes:

- i. **Legal and institutional framework-** Creating appropriate legal and organizational framework is the first step towards Disaster Risk Reduction
- ii. **Vulnerability Analysis and Risk Awareness-** Appraisal of likelihood and intensity of hazards and analysis of vulnerabilities thereto of the community with making government organizations, local bodies, communities/groups and individuals at all levels aware of the risk of potential natural and man-made hazards.
- iii. **Planning-** Building of institutional capabilities and meticulous long and short term planning with effective implementation of plans and enforcement measures.

iv. Implementation of Plan and Community Resilience- Community preparedness is the next step. Building resilience of the communities to face crises and ensuring their full participation through inputs like education, training and urban planning, infrastructure building and logistics. Crucial to all these efforts, however, is the existence of a 'safety culture' in societies.

v. Knowledge Creation and Dissemination-

- Knowledge plays an important role in disaster reduction. The traditional knowledge available with the community has to be used along with knowledge acquired through research and past experiences.
- Research in the field of disaster management has contributed in predictions with a fair degree of accuracy (earthquakes are an exception), and this has led to establishment of efficient Early Warning Systems.
- The information is growing at a rapid rate, which, calls for its processing and sharing.
- The challenge is to ensure that the community and the decision makers are empowered with this knowledge. Therefore, disseminating it to the larger population is the final element in effective Disaster Risk Reduction efforts.

6.3. Role of local Resources/government in a disaster in INDIA:

- The 73rd and 74th Constitutional Amendments enabled the local governments with the power, authority and resources to function as 'units of self government', though with varying levels of initiative, drive, interest, Intensity and diversity of operations in practice.

Role and functions of local governments during different phases of disaster management have been indicated in the following paragraphs.

A. During the Phase of Pre-Disaster:

- Initiate a 'Mapping of Resources and Facilities' in and around its functional area with special emphasis on their suitability for disaster management. For example, identifying temporary locations for keeping evacuated persons, storage of food, drinking water, medicines, etc., availability of necessary equipment and its status like tractors, trolleys, bulldozer, crane, JCB, etc., list of

professionals like doctors, engineers, nurses, electricians, plumbers, etc., and, list of emergency items to be procured and stored.

- Carry out 'Vulnerability Mapping' of the locality and update the vulnerability profile of the area at regular intervals.
- Prepare an 'Evacuation Plan' with priority for children, women, sick, aged and differently abled.
- Devise an 'Early Warning and Reporting System' with the list of 'nodal persons' across the functional area and update their presence / status at regular intervals.
- Prepare a 'Directory' of blood donors and youth volunteers, with contact address and ensure their status at regular intervals.
- Constitute a 'Disaster Management Cell (DMC)' at the local level which will act as a 'Core team' for all the activities. DMC should keep the details of resource and facilities, vulnerability mapping, evacuation plan, early warning and reporting system, and, directory of blood donors and youth volunteers. Each member of the Cell may be assigned with specific responsibilities (Main and Stand-by) to avoid overlapping and duplication of efforts. Each core team member will inform the nodal persons about the disaster plan and their expected assignments, on receipt of any early warning about disasters.
- Capacity building of different stakeholders to be organised at regular intervals. Training sessions for the specific categories of population need to be organised: At least one member from every family on preparation of emergency kit; at least one official from every local institution on documentation of vital information necessary for disaster management and evacuating the most important documents in case of disasters; every citizen on disaster-specific drills; every youth volunteer on application of first aid, carrying out CPR and safe evacuation procedures, and, operation of stand-by power and communication equipment.

B. During the Phase of Disaster:

- Opening of a 24x7 emergency control room with necessary data bank about the resources and facilities, communication equipment, back-up power and team of responsible personnel.
- Core team members are to be available in the control room round the clock, for continuous monitoring of all the activities during this phase.

- Collect the field data from the nodal persons, verify the information, collate them and communicate the same to the Block and District administration.
- All communications, both incoming and out-going, are to be channelised through a single point at the DMC.
- Convene an emergency meeting of the functionaries of all political, non-political and community based organizations to seek their support and co-operation in addressing the situation effectively.
- Start a 'community kitchen' at an appropriate place for ensuring food to all those affected.
- Ensure medical services are available to the needy at all times. Services of private hospitals and medical practitioners also can be utilized for providing round-the-clock medical services.
- Co-ordinate the efforts and activities of government institutions, NGOs, private sector and community based organizations.

C. During the Phase of Post-Disaster:

- Ensure provision of basic needs like drinking water, food, clothes, utensils, etc. to the needy.
- Regulate the availability of ration and cooking fuel and ensure their supply to every needy family.
- Construction of temporary shelters and sanitary facilities at suitable sites.
- Ensure regular supply of water purifying tablets to all houses in the locality.
- Ensure regular visits by the Health workers to all parts of the locality. Health workers may be assisted by trained youth volunteers.
- Organize medical camps at different parts of the area at regular intervals. Even the services of private medical practitioners, nursing staff and para-medical staff can be ensured by the local government to organise medical camps.
- Ensure uninterrupted supply of food and other services by the anganawadis thereby reaching up to children, adolescent girls, pregnant mothers and lactating mothers of the locality.
- Restoring livelihood assets like roads and infrastructure in the locality on priority.

- Co-ordinate the activities of government departments, non-governmental agencies and community based organisations for providing livelihood support for the affected families and ensure their optimum benefit to all beneficiaries.
- Provide psycho-social care to the needy persons, to enable them to get over the traumatic period.
- Restoring the education and other basic services to the citizens.
- Any other services depending upon the need of the situation.

6.4. Community Level Disaster Management:

At the time of disaster, various agencies such as government, NGOs and community plays an important role for disaster management. These are preparedness, response, recovery and prevention details are as follows: Disaster management has four basic components:

- i. **Preparedness:** Measure to ensure that communities and services are capable of coping with the effect of disaster. It has the following main elements:
 - Community awareness and education;
 - Preparation of disaster management plans for community, school, individual;
 - Mock drill, training and practice;
 - Inventory of resources both material resources and human skill resources;
 - Proper warning systems;
 - Mutual aid arrangement;
 - Identifying the vulnerable groups;
- ii. **Response:** Measures taken in anticipation of, during and immediately after a disaster for minimizing its adverse impact. It has following main elements:
 - Activate the emergency operation centers (control room);
 - Deployment of search and rescue teams.
 - Issuing updated warning;
 - Setting up community kitchens using local groups;
 - Set up temporary living accommodation and toilet facilities;
 - Set up medical camps
 - Mobilising resources;
- iii. **Recovery:** Measures are to be initiated to undertake reconstruction of the physical infrastructure and restoration of economic and emotional well being. The main elements are as follows:

- Community awareness on health and safety measures;
- Counseling programme for those who have lost the near and dear ones;
- Restoring the essential services -roads, communication links, electricity etc.;
- Providing shelters;
- Collecting usable materials for construction from rubble;
- Providing financial support;
- Finding employment opportunities;
- Reconstructing new buildings

iv. **Prevention:** Measures to eliminate or reduce the incidence of severity.

- Land use planning;
- Preventing habitation in risk zones;
- Disaster resistant buildings;
- Finding ways to reduce risk even before the disaster strikes;
- Community awareness and education

6.5. Government Initiatives on Disaster Management:

The Government of India has set up a National Committee on Disaster Management (NCDM) under the Chairmanship of the Prime Minister. The recommendations of this National Committee would form the basis of national disaster risk management programme and strengthening the natural disaster management and response mechanisms. United Nations Development Programmes (UNDP) has also been supporting various initiatives of the government to strengthen disaster management capacities.

- The programme components would include the following:
- Development of state and district disaster management plans.
- Development of disaster risk management and response plans at Village/Ward, Gram Panchayat, and Block/Urban Local Body levels.
- Constitutions of Disaster Management Teams and Committees at all levels with adequate representation of women in all committees and team. (Village/ Ward, Gram Panchayat, Block/ Urban local body, District and State.)
- Capacity Building of Disaster Management Teams at all levels.
- Special training for women in first aid, shelter management, water and sanitation, rescue and evacuation, etc.

6.5.1. Union Government Response:

The effort is more in the nature of support to the state governments. Drawing from the Ministry of Home Affairs' official document, "National Policy", Union government's response could be in two ways:

Policy Response

- i. - Provided by the Prime Minister, Cabinet Committees, and the Home Affairs and/or Agriculture Minister
- Keeping in view the short and long term policy objectives of the government

Administrative Response

- ii. - Operational requirements
- Provision of Central assistance as per existing policy

The operational aspects of the administrative response could, further, be classified into:

- i. Primary relief functions, and
- ii. Secondary relief functions

i. The primary relief functions of the Central Government relate to:

- Forecasting and operation of warning system
- Maintenance of uninterrupted communication
- Wide publicity to warnings of impending calamity, disaster preparedness and relief measures through TV, AIR and Newspapers

- Transport with particular reference to evacuation and movement of essential commodities and petroleum products
- Ensuring availability of essential commodities at reasonable prices particularly the commodities through the Public Distribution System

- Ensuring availability of medicines, vaccine and drugs

- Preservation and restoration of physical communication links
- Investments in infrastructure; and
- Mobilization of financial resources

The secondary functions of the Central Government which supplement the States' relief efforts, would relate to:

- Flood/inflow forecasts from the Central Water Commission
- Relief, rehabilitation and restoration through military aid to civil authorities
- Contingency plans for crops, cattle preservation nutrition and health measures

6.5.2. State Response:

- The responsibility to cope up with natural disasters is essentially that of the State Government.
- The role of the Central Government is to support in terms of physical and financial resources.
- The Chief Minister or the Chief Secretary of the State heads a state level committee which is in overall charge of the relief operations at the State and the Relief Commissioner who is in charge of the relief and rehabilitation measures in the wake of natural disasters.
- In many of the states, Secretary, Department of Revenue is also in charge of relief operations.
- The states have the relief manual called as the 'State Relief Code' and the State Contingency Plan which guides them to manage disaster scenarios.

6.5.3. District Response:

- The district administration is the focal point for implementation of all governmental plans and activities.
- The actual day-to-day function of administering relief is the responsibility of the District Magistrate/ District Collector/ Deputy Commissioner who exercises coordinating and supervising powers over all the departments at the district level.
- The 73rd and the 74th constitutional amendments recognise Panchayati Raj Institutions as 'Institutions of self-government'.
- These local bodies can be effective instruments in tackling disasters through early warning system, relief distribution, providing shelter to the victims, medical assistance etc.
- A Disaster Management Committee has been set up at the district level headed by the District Magistrate and officials from the health department, Irrigation Department, Veterinary Department, Department of Water and Sanitation, Police, Fire Services, representatives from National and International NGOs, etc.
- The Disaster Management Committee which is basically the decision making body takes the help of the Disaster Management Teams, like the Fire Services, Police, Health practitioners etc.

6.6. The Role and Functions of a National Disaster Management Organization

The main scope of a disaster management law is to establish a national agency/organization for coordination of disaster management. The role of such an organization is to:

- Provide a coherent approach to disaster management across all phases from preparedness and mitigation to response and recovery.
- Provide a common framework
- Allocate responsibilities clearly.
- Provide a framework for coordinated response.

There are following weakness in our disaster management efforts:

Inadequate Early Warning System

- i. Though, the forecasting, monitoring and warning mechanisms are beautifully articulated on paper in practice, the warnings are not early enough and they do not reach all those likely to be affected.

Lack of Pre-disaster Preparedness

- With disasters striking India with increased regularity, there should be a plan in place to tackle the disaster and reduce its impact.
- On the contrary, people are caught unaware time and again.
- There is not planned information system as to what needs to be done when faced with a calamity.

Inadequate and Slow Relief

- Relief is an important aspect of the disaster management to provide help to the affected people.
- The relief operations are often handled in ad hoc and haphazard manner.
- How efficiently to provide food, medicine, to reduce the suffering of the affected people etc are addressed and met improperly.

Lack of Co-ordination

- Disaster management requires concerted efforts from Central Government, State Government, NGOs, International agencies and private sectors etc.
- Because of the lack of the co-ordination, relief material is not properly distributed among the people.
- Even worst happens when they are mis-utilized and are not distributed uniformly.

v. Slow Rehabilitation and Reconstruction

- While immediately after a disaster strikes, there is hectic relief and rescue mission, mainly aimed at feeding the people and stalling the outbreak of an epidemic, relief and rescue cannot go on endlessly and rehabilitation and reconstruction should be given proper attention.
- However, this is an area which is often ignored and progress is slow once the initial attention fades away.
- Restoration of infrastructure, hospitals, schools, houses, and sources of living of the people needs to be given proper attention.

vi. Proper Administration

- A quick assessment of the extent of the damage is necessary so that relief and rehabilitation work can be properly planned.
- Apart from this, poor administration frustrated the best intentions and efforts of private initiatives.

vii. Poor Management of Finances for Post-disaster Relief

- Mostly relief and rehabilitation work suffers from the lack of co-ordination, proper management, and supervision at all levels and indicated the absence of adequate planning and preparedness to meet any emergency.
- Consequently, the funds are mis-utilized and relief measures were tardy and inadequate, providing scope for pilferage of relief and rehabilitation remained unutilized and there is huge shortfall in distribution of emergency relief, shelter material cloths, house building assistance etc.
- There have also been reports of relief and rehabilitation funds being utilized for paying salary arrears of the state government employees.

viii. Symbolism Rather than Relief

- It has been a recurrent experience that rather than making a serious effort at planning and management for tackling frequent disasters, our government adopts symbolic gestures like helicopter survey of disaster affected areas.
- The politics of relief works in a manner that all claims are made by the Government other than the affected state to help the affected districts and by sending huge financial help but these claims prove hollow once the calamity recedes.

ix. No Instruction for Pre-seismic Period

- There is no instruction for the pre-seismic period. Unfortunately, in the present administrative set up, no official will visit the people during pre-seismic period to tell them about an eminent earthquake.
- But, during the post seismic period, a large number of officials will visit the affected people with food, tents, medicine, cloths and compensation funding to the relatives of the dead.

6.7. Non-profit organizations (NGO) in Disaster management:

- Non-profit organizations (NGOs) are organizations registered under various Indian laws such as the Societies Registration Act, 1860, Section 25(1) of Companies Act, 1956 meant for non-profit companies, or State-specific Public Charitable Trust Acts.
- NGOs work on a variety of areas like humanitarian assistance, sectorial development interventions and sustainable development.
- NGO are the firms that retain a tax exempted status and are registered under various country laws. These essentially work on the basis of donations received to them through the government, business or individuals. All their operation and financial data are open to the public. So, the donors are certain about their monetary contributions.
- In post-Independent India, the NGOs have been providing support in critical sectors like health, education, water supply and sanitation, shelter and infrastructure, restoration of livelihoods, food security and nutrition, environment, etc.
- NGOs have been playing a significant role in providing caring assistance to disaster-affected people in most of the severe disasters like:
 - The Latur earthquake in 1993,
 - Orissa super cyclone in 1999,
 - Bhuj earthquake in 2001,
 - Indian Ocean tsunami in 2004,
 - Kashmir earthquake in 2005,
 - Barmer floods in 2006,
 - Kosi floods in 2008,
 - Cyclones Aila and Laila and the more recent cloud burst in Leh in August 2010,

- Apart from participating in providing relief to disaster affected communities in various other localized disasters.

Functions of NGO:

The purpose of providing religious, charitable, scientific, safety, educational and/ or cruelty prevention compensation. In the recent past, the role of NGOs in disaster management (DM) has started changing from providing post-disaster relief to strengthening pre-disaster preparedness and mitigation through capacity building, public awareness campaigns, mock exercises, workshops and conferences, etc. NGOs play important roles in different stages of the Disaster Management Cycle.

- The NGOs have some important skills for rescue, coordination and for relief activities.
- They have the flexibility to respond quickly and efficiently at the local level and are often the first organizer group to reach the disaster site.
- In the immediate phase, the NGO response focused on emergency food relief, temporary shelter, emergency medical aid, debris removal and habitat restoration, trauma counseling, and raising families.
- Some NGOs also distributed temporary shelter materials among disaster-affected people soon after the disaster.
- The Non-Governmental Organizations (NGOs) have been providing support in critical sectors like health, education, water supply and sanitation, shelter and infrastructure, restoration of livelihood, food security and nutrition, environment, etc.
- To protect and assist the victims.
- NGOs help in reducing the vulnerabilities.
- They help in creating and increasing better opportunities.
- They also try and transform the lives of sufferers by redressing their issues.
- They effectively access and analyze the situation
- NGOs also try to rebuild the capabilities
- They also coordinate and partner with other such organizations
- Provide shelter, sanitation, mock drills etc.