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DIGITAL LEARNING CONTENT

CHAPTER-4

Disaster Management Cycle & Framework

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CONTENTS

1. Concept of disaster management,
2. National disaster management framework,
3. Role of Central, State, District and Local administration,
4. Policies and legislation for disaster risk reduction,
5. DRR programmers in India and the activities of National Disaster Management Authority

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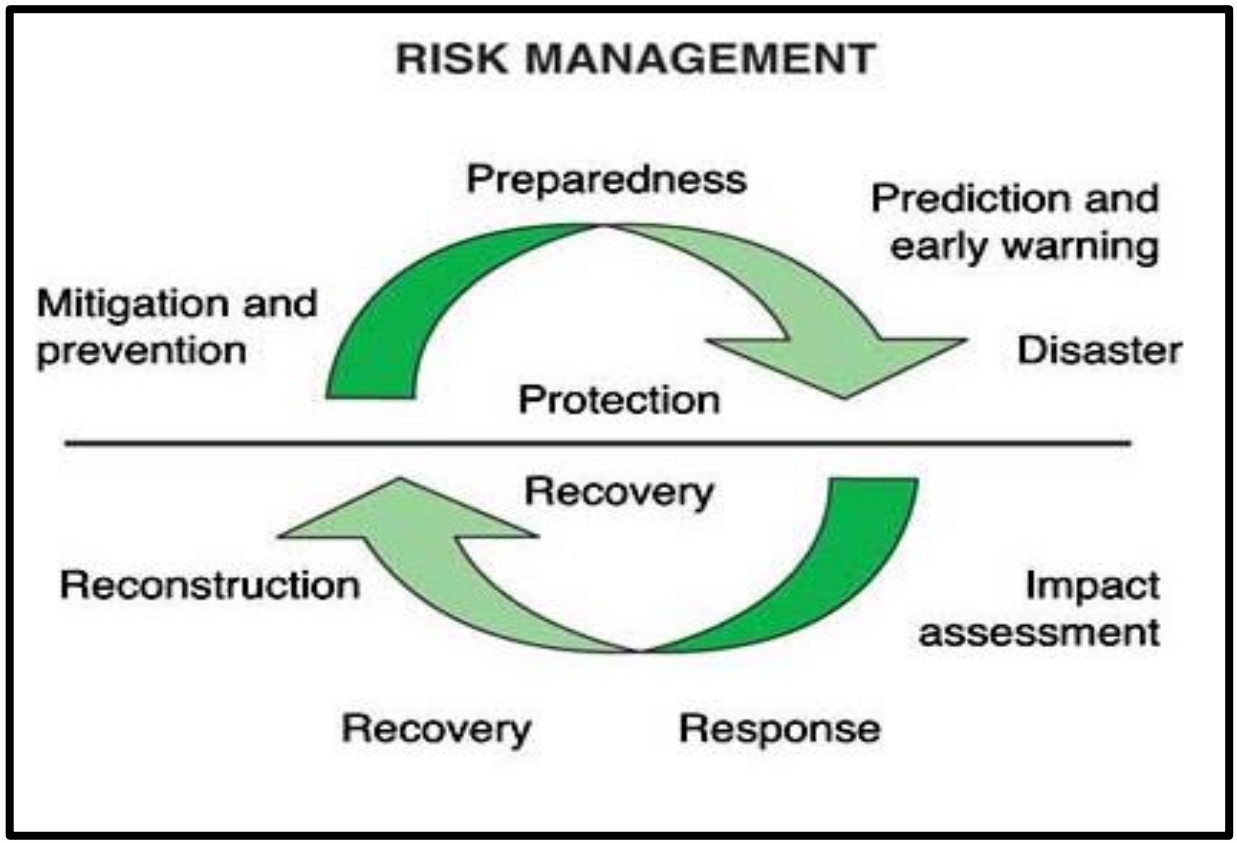
Concept of Disaster Management

- Disaster management is also known as Emergency management. It is the discipline dealing of with and avoiding risks. Emergency management is a discipline that involves arranging, supporting, and rebuilding society when natural or human-made disasters occur.
- Actions are taken depend in part on perceptions of risk of those wide-open. In effect emergency management relies on thorough addition of emergency plans at all levels of government and non-government involvement.

Disaster Management Cycle



Mitigation

- Actions that prevent or reduce the impact of disasters.
- It efforts attempt to prevent hazards from developing into disasters altogether, or to reduce the effects of disasters when they occur.
- The mitigation phase differs from the other phases because it focuses on long-term actions for reducing or eliminating risk.
- Personal mitigation is defined as mainly about knowing and avoiding excessive risks. This includes an assessment of possible risks to personal/family health and to personal property.
- Personal structural mitigation is defined as in earthquake prone areas include installation of an Earthquake Valve to rapidly shut off the natural gas supply to your property, seismic retrofits of property and the safeguarding of items inside the building to add to household seismic safety such as the mounting of furniture, refrigerators, water heaters and breakables to the walls, and the addition of cabinet latches.

Preparedness

- It is defined as Planning, training, & educational activities for things that can't be mitigated.
- There are common preparedness measures include:
- The Communication plans with easily understood terminology and chain of command.
- Expansion and practice of multi-agency coordination and incident command.
- The Proper maintenance and exercise of emergency services.
- The development and exercise of emergency population warning methods along with emergency shelters and evacuation plans.
- Stockpiling, inventory, and maintenance of supplies and equipment.

Response

1. The instant result of a disaster, when business is not as usual.
2. The response phase mainly includes the mobilization of the necessary emergency services and first responders in the disaster zone.
3. This is ready to include a first wave of core emergency services, such as fire-fighters, police and ambulance crews.
4. They are supported by a number of secondary emergency services, such as specialist rescue squads

Relief

1. The disaster relief phase involves providing direct assistance through measures to alleviate suffering and often by providing financial assistance to people who are impacted.
2. Relief is significant because it is a critical to engage with the impacted community at a time when people are most at-risk.
3. Activities in the relief phase include: evacuations, establishment of relief centres, providing temporary shelter and first aid.
4. During the relief phase, emergency services are critical and usually in the case of bushfires involves individual and community volunteers who can serve and protect people and property.
5. Key stakeholders that engage in this phase include fire services, police services etc.
6. Relief actions like providing water supplies and temporary housing often continue to be vital for months after immediate relief begins.

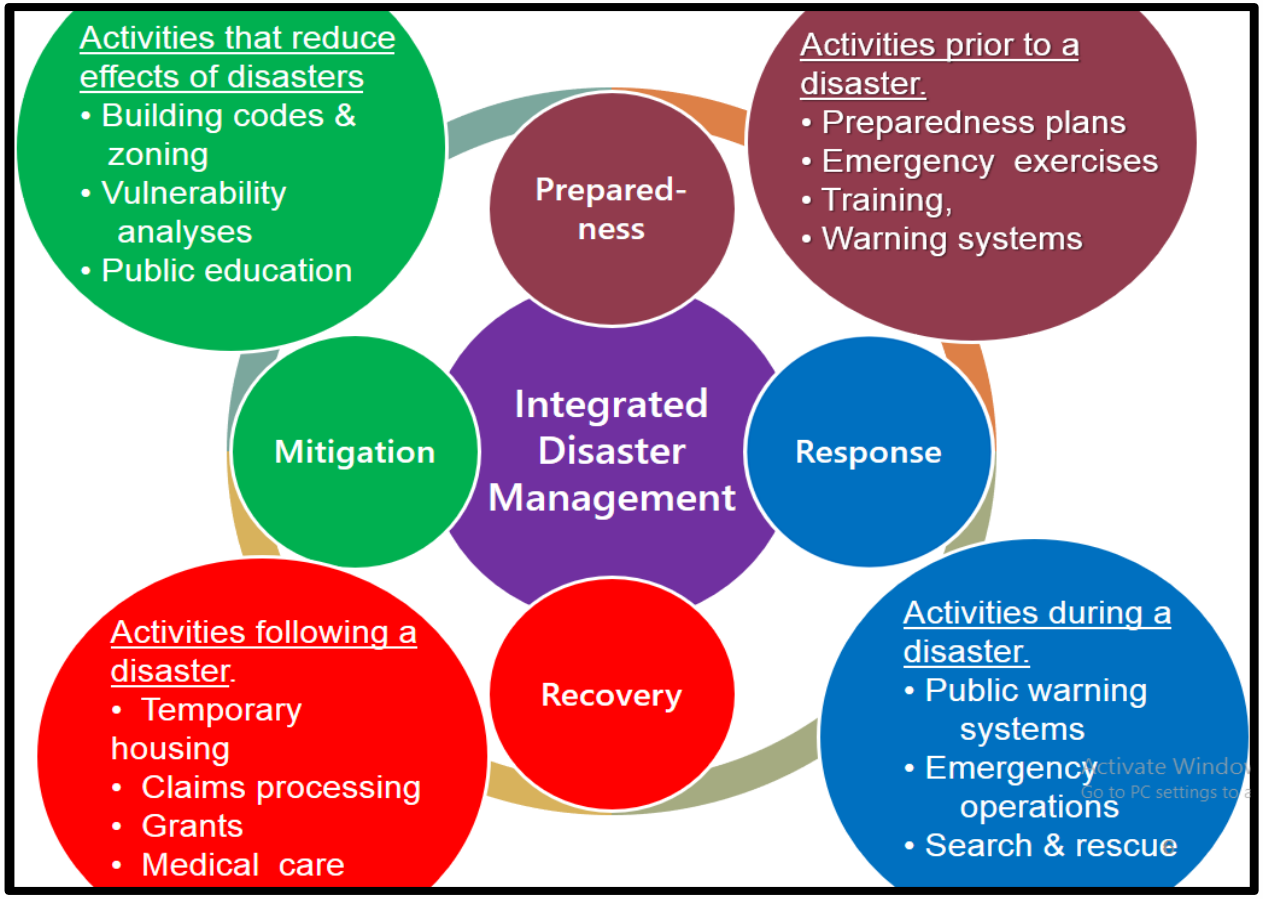
Relief Action

Recovery

1. It is defined as long-term aftermath of a disaster, when restoration efforts are in addition to regular services
2. The main motive of the recovery phase is to restore the affected area to its previous state.
3. It varies from the response phase in its focus; recovery efforts are concerned with issues and decisions that must be made after immediate needs are addressed.
4. Recovery efforts are always primarily concerned with actions that involve rebuilding destroyed property, re-employment, and the repair of other essential infrastructure.

Recovery

Recovery



Rescue and Response

National Disaster Response Force (NDRF)

- Composition: 10 battalions

Tasks:

- Well-equipped and trained in search and rescue.
- Assist in Community Training & Preparedness.
- Impart basic and operation level training to SDRF.
- Proactive Deployment during impending disaster situations.
- Liaison, Rehearsals and Mock Drills.
- Specialized Response during disasters.

Rescue and Response

- State Government : SEC & DDMA [District Disaster Management Authority]
- Police, Civil, Fire department, NCC, NYKs , PRIs
- NCMC
- Cabinet committee on management of Natural Calamities
- NEC [National Executive Committee]
- NDRF [National Disaster Response Force]
- SDRF [State Disaster Response Force]

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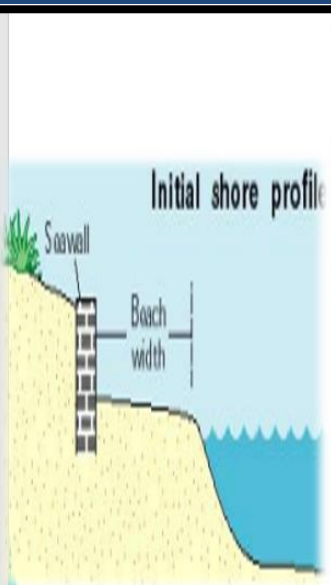
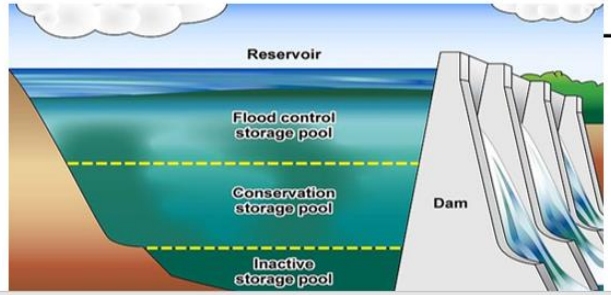
STRUCTURAL & NON- STRUCTURAL MEASURES



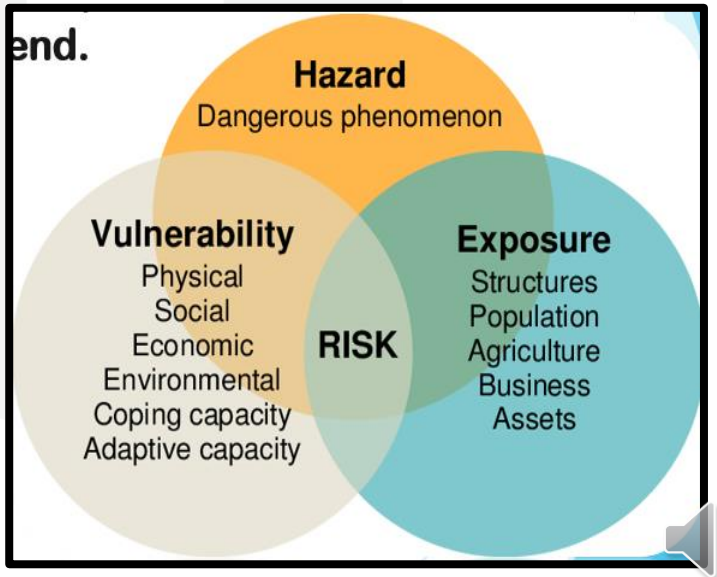
Structural Measures	Non Structural Measures
• Control over hazard • Protection of human settlement	• Hazard prevention and mitigation
• Strengthening buildings through building codes • Building shelters • Sea walls, structure of dams, flood storage reservoirs, pumps, diversions and groins	• Land use management, zoning • Infrastructure policy • Insurance • Awareness and programs • Protection of nature • Risk reduction policies



Risk Analysis

Disaster Risk assessment is a process to determine the nature and extent of such risk, by analysing hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

- Steps for analysis
- Hazard assessment
- Vulnerability Assessment
- Capacity Assessment
- People's perception of Risk



Rescue and Response

- This step is performed to determine the elements at risk, degree of vulnerability and the causes of the elements at risk. All elements (people, building, resources etc) which are prone to the hazard are identified and an inventory is prepared. Then the degree of their vulnerability is analysed and causes of their vulnerability are determined.
- Critical facility analysis is also performed by determining the critical facilities (that play major role in daily routine life e.g. schools, hospitals, mosques, civic centres etc.) at risk, causes of their vulnerabilities and analysing historical records of hazard occurrence in the identified facilities.

Rescue and Response

- Capacity assessment means to identify the strengths and resources available to reduce the level of risk, or the effects of a disaster.
- In this step, resources of a community are evaluated by analysing the available strengths like skills, expertise, equipment, infrastructure etc.
- Then the availability of these resources is evaluated to know how soon these resources can be deployed and become available to use.
- Another important step is to find out how durable and long lasting these resources are and what is the level of their operational integrity (Ability to complete tasks without supervision).

EARLY WARNING SYSTEMS

- Through an Early Warning System (EWS) both monitoring and prediction of hazards with maximum lead time becomes possible (National Disaster Management Authority, 2007). An integrated EWS for natural, man-made and social disasters, the like of which has been adopted by Korea, whereby in case of some alarming situations, alerts are emitted via internet to the report center and through the Cell Broadcasting Service (CBS) to the probable victim's cell phone so that they can timely take evacuation measures (OECD, 2013).
- In an end-to-end EWS implementation, various stakeholders belonging from Disaster Management Authorities at national and local levels to media, fire services, police and information departments etc.

EARLY WARNING SYSTEMS

- Investing in multi-hazard EWS that provides advance warnings to both decision-makers and communities is a must to have especially in public/private buildings and offices. Effective EWS implementation depends upon risk knowledge, an effective hazard monitoring and threat assessment, warning system, dissemination and communication of warning messages and communities that respond to warnings. Ultimately EWS are only as good as the life, livelihood and property-saving action that they manage to induce (International Federation of Red Cross and Red Crescent Societies, 2012).
- Early warning system in disaster management – preparedness to action. In disaster management, warning is also sometimes referred to as the critical ‘hinge factor’, as it creates a connectivity between preparedness measures and response action.

EARLY WARNING SYSTEMS

- According to Carter (1992), having a glance at this important aspect of warning from preparedness standpoint highlights the following: "The Warning System along with related procedures must be well defined and well mentioned in plans, standard operating procedures and relevant.
- These disasters have different characteristics but all resulted in huge loss of life and damage to property. Coincidentally, Pakistan is also facing the problems such as terrorism and political uncertainty; both of these have a serious impact on the government and its institutional capacity (Allen, 1994).

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EARLY WARNING SYSTEMS

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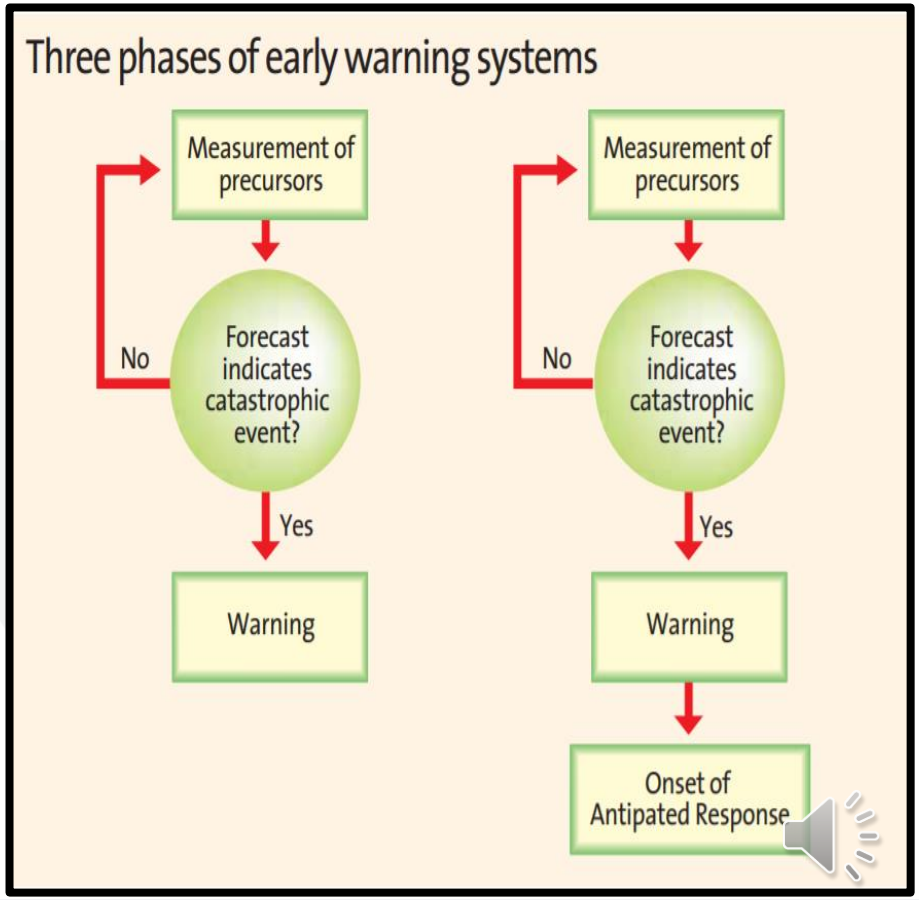

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POST DISASTER ENVIRONMENTAL RESPONSE

- After flood or prolong power outage due to other circumstances, food and water may not be edible and must be thrown away
- Food in cardboard container, with foul odour, or texture must be thrown away.
- Contaminated water can lead to various disease and thus safe water must be used.
- Maintain proper hygiene and stay in a dry area to avoid any disease.

ROLES & RESPONSIBILTIES OF GOVERNMENT

- To be ready for a coordinated and prompt response to any disaster situation.
- Implement the disaster management plans and monitor them.
- Provide financial and logistic support.
- Deployment of Armed Forces, Military and NDRF.
- Arrangement of essentials, relief materials and medical supplies.
- Restore communication network.

DRR PROGRAMMES IN INDIA & NATIONAL DISASTER MANAGEMENT FRAMEWORK

- The National Disaster Management Plan aims to make India disaster resilient and significantly reduce the loss of lives and assets.
- The plan is based on 'Sendai Framework' which includes understanding disaster risks, improving risk analysis, investing in DRR, and disaster preparedness.

- Disaster Management Structure

1. NDMA Apex Body with Prime Minister as Chairperson.
2. National Executive Committee - Secretaries of 14 Ministries and Chief of Integrated Defence Staff.

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DRR PROGRAMMES IN INDIA & NATIONAL DISASTER MANAGEMENT FRAMEWORK

- Centre Level

1. Central Ministries; National Disaster Management Authority,
2. National Institute of Disaster Management
3. National Disaster Response Force (NDRF).

- State Level

1. SDMA headed by Chief Minister.
2. State Executive Committee (SEC).

- District Level

1. DDMA headed by District Magistrate.
2. Interface between Govt. and Public.

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DRR PROGRAMMES IN INDIA & NATIONAL DISASTER MANAGEMENT FRAMEWORK

- Improve the understanding of disaster risks and vulnerabilities
- Investing in DRR through structural and non-structural measures
- Enhance disaster preparedness for effective response
- Prevent or reduce loss / damage
- Provide required essentials and medical supplies
- Strengthen scientific and technical aspects too
- Capacity development and risk analysis

DRR PROGRAMMES IN INDIA & NATIONAL DISASTER MANAGEMENT FRAMEWORK

Activities such as:

- State Level Initiation Meeting
- State Level Advocacy Workshops
- District level Hazard Risk and Vulnerability Assessment
- District level Advocacy Workshops and Consultation Meeting
- Training on NGOs, CBOs, and CBRDM
- Training of PRIs
- School safety initiatives
- Setting up coordinated agencies at state level

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DRR PROGRAMMES IN INDIA & NATIONAL DISASTER MANAGEMENT FRAMEWORK

- **Paradigm Shift** → Response centric to Holistic & Integrated Approach
- **Backed By** → Institutional Framework → Legal Authority
- **Supported By** → Financial Mechanisms → Creations of Separate Funds

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