

13. Natural Disasters

BVES-151: Environmental Studies

Unit 4: Disaster Management: Natural and Man-Made Hazards

Topic: Natural Disasters

□ What Are Natural Disasters?

A **natural disaster** is a sudden, extreme event caused by natural forces that results in major damage to life, property, and the environment.

These disasters are **unpredictable** and can happen **anywhere**, making disaster preparedness and management very important.

□ Types of Natural Disasters

Natural disasters can be categorized into several types based on their origin:

1. Geological Disasters

Disaster Type	Description
Earthquake	Sudden shaking of the Earth's surface due to movement of tectonic plates.
Volcanic Eruption	Eruption of magma, ash, and gases from a volcano.
Landslide	Downward movement of rocks and soil, usually after heavy rain or earthquakes.

2. Hydro-Meteorological Disasters

Disaster Type	Description
Floods	Overflow of water submerging land, often caused by heavy rains or river overflow.
Cyclones / Hurricanes / Typhoons	Intense circular storms with high-speed winds and heavy rains.
Drought	Prolonged period of little or no rainfall leading to water shortages.
Heatwave / Coldwave	Periods of unusually high or low temperatures causing health problems.

3. Climatic Disasters

- **Wildfires:** Uncontrolled fires in forests or grasslands, often caused by lightning or human activity.
- **Avalanches:** Rapid flow of snow down a mountain slope, common in hilly and snowy areas.

□ Impacts of Natural Disasters

Natural disasters can have devastating consequences:

Impact Area	Effect
Human Life	Loss of life, injuries, displacement, trauma.
Property	Destruction of homes, infrastructure, and businesses.
Environment	Forest destruction, soil erosion, water contamination.



Impact Area	Effect
Economy	Loss of productivity, crop failure, high recovery costs.
Health	Spread of diseases, lack of clean water and food, mental stress.

□ Why Disaster Management is Essential

Disaster management aims to:

- Reduce the **loss of life and property**.
- Prepare communities through **early warning systems**.
- Ensure quick **response and rescue operations**.
- Help affected people recover and rebuild.
- Promote **disaster-resilient planning**.

□ Disaster Preparedness and Mitigation Strategies

□ Preparedness

- Creating emergency plans.
- Conducting disaster drills and training.
- Community awareness campaigns.

□ Mitigation

- Strengthening buildings in earthquake-prone areas.
- Constructing flood barriers and cyclone shelters.
- Afforestation to prevent landslides and drought.

□ Response

- Search and rescue operations.
- Emergency medical aid.
- Food and water supply distribution.

□ Recovery

- Rebuilding homes and infrastructure.
- Psychological support and rehabilitation.
- Economic and social development programs.

□ India and Natural Disasters

India is vulnerable to many natural disasters due to its geography:

Disaster	Affected Regions
Earthquakes	Himalayan belt, Gujarat, Northeast India
Floods	Assam, Bihar, Kerala, Uttarakhand
Cyclones	Eastern coast (Odisha, Andhra Pradesh, Tamil Nadu)
Drought	Rajasthan, Maharashtra, parts of Karnataka
Landslides	Western Ghats, Northeast states, Uttarakhand, Himachal Pradesh



□ Important Terms to Remember

Term	Definition
Hazard	A potential threat that can cause damage.
Disaster	When a hazard causes widespread destruction and disruption.
Mitigation	Steps to reduce the impact of disasters.
Preparedness	Planning and training before a disaster occurs.
Rescue and Relief	Immediate actions to help people after a disaster.

□ Quick Self-Check Questions

1. What is a natural disaster? Name two examples.
2. List any three types of geological or climatic disasters.
3. Why is disaster preparedness important?
4. What are two impacts of floods or earthquakes?
5. Name two disaster-prone regions in India and the types of disasters they face.

□ Summary of Natural Disasters

- Natural disasters are caused by natural forces like earthquakes, floods, cyclones, etc.
- They have serious effects on people, property, health, and the environment.
- Disaster management includes preparedness, response, and recovery strategies to reduce losses and ensure resilience.
- Every individual and community should be aware and prepared for natural disasters.