



Types and Classification of Disasters

1. Hydrological and Metrological Related Disasters
2. Geologically related disasters
3. Accident related disasters/Chemical , Industrial & Nuclear related disasters
4. Biologically related disasters



Centurion
UNIVERSITY

Hydrological and Metrological Related Disasters

- Floods
- Droughts
- Tornadoes
- Hurricanes
- Cyclones
- Hailstorm
- Cloud Burst
- Heat Wave and Cold Wave
- Snow Avalanches
- Sea Erosion and Thunder and Lightning



Hydrological and Metrological Related Disasters

- A flood is an overflow of water that submerges land that is usually dry.

Natural causes	Structural causes
<ul style="list-style-type: none">• Global climate change• Change in weather pattern• Short duration and high intensity of rain.• Soil Erosion• Storm surge• High tide• Siltation of river with sand and waste.	<ul style="list-style-type: none">• Improper drainage system• Improper or no solid waste management system• Siltation of river with sand and waste



Impact of Flood

- Loss of human lives
- Scarcity of food
- Scarcity of seeds
- Emotional toil
- Distress migration
- Increase rate of dropouts
- Human trafficking
- Loss of employment
- Low income or no income
- Loss of balance ecosystem
- Sand casting leads to infertility of soil
- Farmers committing suicide
- Homeless



Drought

- Drought is a prolonged period of water scarcity affecting natural resources, environment, livelihood, livestock, thereby, the people.

Causes	Impact
<ul style="list-style-type: none">• Low rainfall• Heavy short time rainfall• Climate change• Air pollution• Deforestation• High evaporation• Low water holding• Water drinking Industries	<ul style="list-style-type: none">• Loss of agriculture• Poor Ecosystem• Low river flow• Loss of productivity• Loss of livelihood• Low sanitation and health• Migration• Loss of economy• Increasing stress on natural resources



Tornados

Tornados

- A tornado is a tube of violently spinning air that touches the ground.
- A tornado is a violently rotating column of air extending from cloud such as a thunderstorm, to the ground.

Cyclone/ Hurricane/typhoons

- Tropical **cyclones** are like giant engines that use warm, moist air as fuel.
- That is why they form only over warm ocean waters.
- The warm, moist air over the ocean rises upward from near the surface. Because this air moves up and away from the surface, there is less air left near the surface.



Centurion
UNIVERSITY

Geologically related disasters



Centurion
UNIVERSITY

Geologically related disasters

- Earthquakes
- Landslides
- Mudflows
- Dam Failures
- Dam Bursts
- Mine Fires
- TSUNAMI
- VOLCANIC ERUPTION



Centurion
UNIVERSITY

Accident related disasters



Centurion
UNIVERSITY

- Urban Fires
- Forest Fires
- Mines Flooding
- Oil Spill
- Major Building Collapse
- Serial Bomb Blasts
- Festival related disasters
- Electrical disasters and Fires
- Road, Air, and Rail Accidents
- Boat Capsizing and Village Fire have been included in



Centurion
UNIVERSITY

Biologically related disasters



Centurion
UNIVERSITY

- Epidemics
- Pest Attacks
- Cattle epidemics
- Food poisoning.



Major Factors of Disasters

- As the disasters so the causes
- The broad factors of the Natural disasters are
 - Soil erosion
 - seismic activity
 - tectonic movements
 - air pressure
 - ocean currents
 - Incessant/torrential rain
 - No drain or inadequate drain facilities



Centurion
UNIVERSITY

Root causes



Centurion
UNIVERSITY

Modernization



Centurion
UNIVERSITY

Root causes

The imbalance created in our environment due to modernization

- Rapid modernization and growth
- Man's increased knowledge
- Technology driven has served to trigger for some natural disasters.

Question

Is it true that modernization is the root cause of many of the disasters



Centurion
UNIVERSITY

Global warming



Centurion
UNIVERSITY

- It effects the ocean currents and that is due to modern man's overuse of fossil fuels.
- Poor human management in the field of land and water resources combine to the cause of natural disasters.



Centurion
UNIVERSITY

Earthquake



Centurion
UNIVERSITY

- It is a result of tectonic movements and movements of plates inside the earth's crust triggered by
 - Drilling
 - Bombing
 - Mining
 - Construction.
- Environmental bylaws are being neglected for personal gains by few businessmen



Centurion
UNIVERSITY

- The main problem is global warming which is increasing the temperatures of Earth's oceans and atmosphere, leading to more intense storms of all types, including hurricanes and floods due to melting of these oceans.



Centurion
UNIVERSITY

- Unplanned urbanization is at its peak, no one is really caring about the environmental risks and everyone is busy making money.
- There are a lot of constructions coming up in flood-prone regions which has increasing the likelihood that their towns and villages will be affected by flash floods and coastal floods



Centurion
UNIVERSITY

- the rapidly growing industrialization has led to a lot of air as well as water pollution.
- The imbalance created in our environment
 - Air pollution,
 - Noise pollution
 - Water pollution



Centurion
UNIVERSITY

- Rivers and Tributaries are more and silted with mud and sand
- Siltation of drains (urban flooding
- Breaches/ breakage of river embankments
- Un authorized Construction of buildings and roads
- Throwing of garbage with plenty of plastic materials here and there
- Movement of tectonic plates.
- longest coastlines of India which creates/generates air pressure and becomes responsible for disaster like cyclone
Flood



Centurion
UNIVERSITY

- Global warming which is increasing the temperatures of Earth's oceans and atmosphere,
 - leading to intense storms of all types, including hurricanes and floods due to melting of these oceans
- Unplanned urbanization is at its peak
- Lack of proper treatment of the waste before disposing off into environment



Centurion
UNIVERSITY

- Rapid construction has led to
 - large land areas being covered with cement,
 - which means that the flow of water becomes very strong,
 - and the runoff water can't get absorbed by the soil anymore,
 - so it keeps collecting and rushing down,
 - getting heavier and faster,
 - which may ultimately lead to much bigger floods.



THANK YOU