

Unit -7

- **Natural Disasters** : * It is caused by natural forces.
- Example : Tsunami, Flood etc.
- Steps can be taken to minimize the effects.
- **Man made Disaster**: * it is caused by the activities of man.
- Example : chemical attack, explosions etc.
- Can be avoided with careful planning and prevention methods.

Natural Disaster ->

- **1.Flood** :Due to heavy rainfall when excess water of the rivers inundates both the bank of the river, flood occurs.

Causes of flood :

- * intensity of rainfall in catchment area.
- * sedimentation of rivers.
- * obstruction in the river flow.
- * contraction of river section

Effects of flood:

- * Damage of property
- * waterlogging
- * loss of life & work
- * rise of price of foodgrains
- * disruption of communication

- **2.Earthquake** : The violent shaking that is perceived inside the earth for natural cause is known as earthquake.

Causes of earthquake :

- * volcanic eruption
- * Tectonic movement
- * geological faults
- * man made (nuclear bombing)

Effects of earthquake :

- * shaking & ground rupture
- * fires
- * tsunami
- * floods

*landslide

- **3.cyclone** : In meteorology a cyclone is a large scale air mass that rotates around a strong center of low atmospheric pressure.

Causes of cyclone :

- * cyclones are caused by the warm air that lies over open waters. It is heated by the sun and rises very quickly, creating points with low air pressure.
- * That warm air becomes transformed into moisture which is absorbed by thunderclouds.
- * cool air rushes to fill the empty spaces left by the warm air.

Effects of cyclone :

* the main effects of tropical cyclones include heavy rain, strong wind, large storm surges at landfall and tornadoes. The destruction from a tropical cyclone depends mainly on its intensity, its size, its location.

- 4. Tsunami: Tsunami is a Japanese word which means Harbour (tsu) & Wave (nami). A tsunami is generated when the sea floor abruptly deforms and vertically displaces the overlying water.

Causes of Tsunami :

- * tectonic movements like under sea, earthquake, volcanic eruption, faulting etc.
- * it is produced due to large scale displacement of immense volume of sea water due to sudden tectonic disturbances in the sea floor.

Effects of Tsunami :

- * Destruction of beaches, shifting of location of small islands.
- * Tsunami causes damage ranging from human casualties to loss of properties like crops, tourism & transport system.
- * Tsunami also creates social problems.

- 5. Landslide :

Causes of Landslide :

* Natural factors →

a. Gravity : it works more effectively on steeper slopes.

b. Geological factors : geology setting that places permeable sands and gravels above impermeable layers of silt and clay or bedrock

c. Earthquake

* Human factors → Mining, deforestation, irrigation project etc.

Effects of landslides :

* property damage, injury, death

* disrupt water supplies, forest, dams, railway and roadway etc.
water availability, quantity

Manmade Disaster ->

- 1. Bhopal Gas Tragedy:

The Bhopal disaster also referred to as the Bhopal gas tragedy, was a gas leak incident on the night of 2-3 December 1984 at the Union Carbide India Limited pesticides plant in Bhopal, Madhya Pradesh, India. It is considered to be the world's worst industrial disaster.

Death : At least 3787 over 16000 claimed

Cause : Methyl isocyanate leak from Union Carbide India Limited plant.

- 2. Chernobyl Disaster :

The Chernobyl disaster was a nuclear accident that occurred on Saturday 26 April 1986, at the No. 4 nuclear reactor in the Chernobyl Nuclear Power Plant, near the city of Pripyat in the north of Ukrainian SSR.

- Bishnoi movement :

Year → 1700s

Place → Khejarli, Mewar region, Rajasthan state

Leaders → Amrita Devi along with Bishnoi villagers in Khejarli and surrounding villages.

Aim → save sacred trees from being cut down by king's soldiers for a new palace.

- Chipko movement :

Started → in 1970 s

Non violent movement of organised resistance to cutting down of trees.

Indian villagers fighting to protect forest.

First chipko movement → april 1973 in U. P

Chipko literally means "to stick" and people started sticking to trees when it was being cut. Chipko movement later inspired Apikoo movement in Karnataka.

Silent valley movement : A people's Movement that saved a forest. A remarkable people's movement stopped a hydroelectric project across the Kunthipuzha River and saved a pristine evergreen forest in Kerala. In 1986 Silent Valley was declared a National park, a striking testimony to the power of people's action.

- Environmental Ethics : Application of ethical standards to relationship between human and non human entities.

Environmental education : Environmental education is a process aimed at developing world population that is aware of and concerned about the total environment and its associated problems and which has the knowledge, attitudes, commitments and skills to work individually and collectively towards the solution of the current problems and prevention of the new ones.

- Objectives of environmental education : * imparting knowledge about the environment & associated problems.

Developing an attitude of concern for the environment.

Striving to attain harmony with nature.

To develop feeling, attitude and values for improving environment.

To generate skills for the effective participation for solving problems.

- Population Explosion : A sudden, large increase in the size of a population.

- Reasons for over population →

Increase in birth rate

Decrease in death rate

Better medical facilities

Illiteracy

Increase Immigration

Decrease in Emigration

Low status of women

- Effects of population explosion →

*Overuse of natural resources

Increase in food demand

Increase in waste generation

Unemployment

Poverty

Energy crisis

Over crowding of cities