**Unit 2 -Natural Resources**

Silent Valley Movement- Silent Valley is a densely forested valley that is situated in Palghat district of Kerala. The name ‘Silent Valley’ is given as the forest is very deep, dark and extremely peaceful. The state government planned to construct a dam along the slopes of the river, Kunithpara, flowing across the valley. This was for the generation of hydroelectricity.

The WWF advised against building the dam, as it would cause ecological disbalance in the region.

The popular sciences organization of Kerala(KSSP) started a movement to stop the project. A mass signature campaign was launched. Environmentalists like Salim Ali protested against the implementation of the project. Ultimately the government had toreject the project and the valley was declared a national park.

**Destruction of Forests and Desertification**

The destruction of forests leads to ecological disaster. Ruthless destruction of lands causes desertification. It is the process leading to formation of forests either due to natural phenomena or bad use of land. In a country like India forests are cut down to meet the demands of wood for the huge population. Besides the demand for fuel wood, there is a large demand of wood for the paper, board and newsprint industries.

**Dam Construction and Effects on Forests and Tribal People**

Two large dam reservoirs, ‘Sardar Sarovar’ and ‘Narmada Sagar’ were planned to be constructed over Narmada in Gujarat and Madhya Pradesh respectively. The area was inhabited by the ancient tribes of the Bhils and Gondas. It was reported that these tribes and the villagers would be badly affected and the plants and animal resources would be lost if the project was undertaken.

The displacement of tribal people is further caused by mining. Due to mining, we are destroying forests and further rendering the tribal population homeless.

**Afforestation**

Afforestation is the process of planting trees or sowing seeds in a barren land devoid of trees. A healthy eco-system is possible when equilibrium of ecology is maintained. Soil and water conservation is made possible through afforestation. It also prevents flood and protects the interest of the tribal communities.

**Water Resources**

Water is the most important resource of the earth. About 73% area of our earth is marked for water land. However, we can use only 0.5 to 1% of the total water body.

We require water for agriculture, industries and domestic purposes. In the modern age, scarcity of water is a common problem and so is water pollution.

**Drought**

Drought is a natural calamity. An unnatural dry condition in nature may be caused due to the absence of normal rainfall. Sometimes there is a continuous absence of rain for a number of years.

In general, there are three types of drought.

1. **Dry spell:** Less than 0.8 mm of rainfall during the rainy season may be termed as a dry spell.
2. **Partial drought:** Less than 0.2 mm of rainfall for a month during the rainy season is termed as partial drought.
3. **Absolute drought:** during the rainy season, if there is absolutely no rain for about a fortnight the situation is known as absolute drought.

**Causes of drought:-**

1. **Natural Causes:**
2. Drought occurs when the atmosphere becomes very hot and dry due to certain natural causes.
3. The average temperature of the globe increases causing a drought like situation due to Greenhouse Effect.
4. If there is more vapourisation than rainfall , drought may occur.
5. **Man-made Causes:**
6. Excessive and unplanned felling of trees result in lessening of atmospheric water vapour. This leads to less rainfall and chances of drought.
7. Free air circulation and ventilation in the environment are hampered when there are too many wood and concrete structures. This too may lead to drought.

**Effects of Drought on Environment:-**

1. Effects on Vegetation: - Vegetation dries up due to scarcity of water. The process of photosynthesis suffers.
2. Effects on Animals:- Animals like lions, tigers and elephants are eliminated due to severe drought.
3. Effects on Human Society:- In drought condition ponds, canals, bills, hills dry up. This results in scarcity of drinking water and water for domestic use. Irrigation suffers when water levels go down. Famines occur leading to deaths of numerous people.
4. Effects on Environment: - Ecological balance and equilibrium are disturbed. Food chain of the ecosystem is disrupted. In drought like conditions desertification may happen.

**Flood**

Floods occur when excessive rainfall inundates the banks of the river. Floods cause enormous damage to the environment.

**Effects of Flood:-**

1. Damage of property- the flow of flood water at high velocity submerges villages and towns. Houses may collapse and furniture and valuables damaged.
2. Loss of lives may result.
3. Water logging in agricultural land reduces the yield of crops.
4. Disruption of communication may be caused when roads and railways are submerged and damaged.

There are various methods of flood control. One of them is the construction of check dams across the tributaries of rivers. Flood control reservoirs are formed by constructing low dams at suitable places along the course of the river. Sometimes a diversion channel is formed to connect the river with a large lake.

There have been national and international conflicts over water in India. On the international front, has been the conflict with Bangladesh over the distribution of water of the Ganges through the Farakka Barrage.

Within the country, Karnataka and Tamil Nadu are in conflict over the distribution of water of the river, Kaveri.

The river Narmada is at the centre of conflicts between Gujarat, Maharashtra and Madhya Pradesh. The ’Sardar Sarovar Dam’ on the river Narmada in Gujarat is the cause of this conflict.

**Questions**

**Choose the correct options for the following**

1. The Silent Valley Movement was organised by
2. Medha Patkar
3. Sundarlal Bahuguna
4. Kerala Sastra Sahitya Parishad
5. Sardar Sarovar Dam is situated in
6. Madhya Pradesh
7. Gujarat
8. Rajasthan
9. Which one is not a renewable energy source
10. Geothermal Energy
11. Fossil Fuel
12. Solar Energy
13. Earthquake is measured by
14. Barometer
15. Electromyograph
16. Seismograph
17. Greenhouse Effect is caused when
18. Animals migrate due to scarcity of water
19. There is waterlogging of agricultural land
20. The average temperature of the globe rises causing drought like situation