Unit :3

Natural Resource: Natural resources are the naturally occuring substances which are considered valuable for the survival of all living on the earth.

Types of resources :

1.Natural resources

2.Artificial resources : The resources which have been developed by human beings during the growth of civilisation are called artificial resources.

Example : Thermal electricity, Plastic, Biogas etc.

Types of natural resources :

1.Renewable or Inexhaustible resources (sunlight)

2.Nonrenewable or Exhaustible resources (coal)

Deforestation →

Causes of Deforestation :

- Urban construction
- Agricultural activities
- Grazing land
- Fuel wood
- Forest fire
- Desertification
- Mining

Effects of Deforestation :

- Global warming
- Pollution
- Drought
- Flooding of rivers
- Erosion of soil
- Loss of biodiversity
- Disruption of the watercycle

Remedial factors:

- Reforestation
- Forest management
- Laws implementation
- Creating awarness
- Penalty

Land Degradation →

Land degradation is a global problem largely related to agricultural use, deforestation and climate change.

Causes of Land Degradation :

- Deforestation
- Excessive use of fertilizer and pesticides
- Overgrazing
- Salination
- Water logging
- Desertification
- Soil erosion
- Prevention & Control measures for Land Degradation :
- Crop Rotation
- Strip farming
- Ridge & Furrow formulation
- Construction of dams
- Contour farming

Soil Erosion →

Soil erosion is the displacement of the upper layer of soil, it is one form of soil degradation. This natural process is caused by the dynamic activity of erosive agents, that is water, ice, snow, air, plants, animals and humans.

Causes of soil erosion :

*water, wind, ice or gravity

* Running water is the leading causs of soil erosion, because water is abundant and has a lot of power.

* Deforestation

* wind is also a leading cause of soil erosion because wind can pick up soil & blow it far away.

Desertification →

The process by which fertile land becomes desert, typically as a resof drought, deforestation or inappropriate agriculture.

Causes of Desertification :

- Urbanization
- Climate change
- Deforestation
- Over drafting of ground water
- **Drought →**
- A prolonged period of abnormally low rainfall, leading to a shortage of water
- Causes of Drought :
- Land and water temperatures causes drought
- Air circulation and weather patterns also cause drought
- Soil moisture levels also contribute to drought
- Drought can also be a supply and demand of water issue
- Managing Drought :
- Understanding drought and environment
- Water conservation
- Pollution prevention

- Afforestation
- Rainwater harvesting
- Improving irrigation system

Forest Resources → Forest is an area that is set aside for the production of timber and forest produce that are maintained under woody vegetation for certain indirect benefits (climate or protective) which it provides. The word ' forest' is derived from the latin word ' foris' meaning outside. The reference being is a village boundary and it must have included all uncultivated and inhabited land.

Importance of Forest:

1.protective function : forest preserve the physical features of eart, check soil erosion, prevent floods & drought.

2.productive function : forest meet the need of timber, fuel, bamboo, gums, tans and medical drugs.

3.conservational function : forest provide sheltee to the wild life and help to maintain the ecological balance of nature.

4.Recreational function of forest is important for human being.

Use & Over Exploitation : Timber is very important from the economical point of view. For a long time timber has been used up for construction of building, body of vehicles, railways etc. Now- a- days the demand of medicinal plant is increasing. Multinational companies are engaged in production of medicines from plants. For these reasons the area of forest is decreasing day by day.

Water Resources → The most important resource of our earth is water. The main component of our body is water (92%). Water helps to keep a live the protoplasm. Water is an essential component for photosynthesis. About 73% area of our earth is marked for water land. But we can use only 0.5-1 % of total water body. The demand of water for agriculture, domestic purposes, industries, i. e. for modern civilization is increasing rapidly. About 30% of the total people of the earth is facing the water problem.

Distribution of water :

- Sea and ocean : 97.6%
- Ice: 2.07%
- Ground water: 0.207%
- Surface water: 0.80%
  Use & Over Utilization of water : The global distribution of water resources reveals that less than 3% of the total quantity of water is fresh water. Only 1/5 th of the fresh water is available in liquid form. This limited amount is replenishible. More than 90% of this scarce commodity is in the form of ground water. While only 1% is in the lakes and ponds. The total requirements of water has increased from 38Mha -m in 1974 to 54 Mha- m in 1985 & about 100 Mha-m in 2013. The projected figure for 2025 AD is 140 Mha-m as per report or NLWC.
  Over utilization of water due to the faster growth in the demand of water in different industrial sectors and urbanisation in respect of is creating many problems this scarce commodity. The earth is now facing scarcity of water and watee pollution.

Effects of excessive use of Ground Water: Ground water is the largest source of usable fresh water in the world.In many parts of the world, especially where surface water supplies are not available, water needs can only be met by using the water beneath the ground. In many regions & locals today, existing water supplies are already insufficient to meet urban, industrial, agricultural and environmental demands. The prospectus of global population growth that will lead to an increase of approximately 3 billion by 2050 & the continued deterioration of water quality suggests that, water scarcity will intensify over the coming decades.Ground water depletion is primarily caused by sustained groundwater pumping.

Major effects of ground water depletion are→

- Ground water depletion will force us to pump water from deeper of the earth.consequently we will have to use even more resources to develop alternative methods.
- Large bodies of water will become more shallow from groundwater depletion.
- Excessive pumping can lower the groundwater table.
- It reduces surface water supplies as ground water and surface water are connected.
- **Conflicts over water in India :** Through the U.N has declared the year 2008 as the International Sanitation Year.still many conflicts over water in India are going on.
- International Conflict →conflicts between Bangladesh & India regrading distribution of water of ' Ganga' through ' Farakka Barrage "
- Inter state conflict →
- * conflicts between karnataka and Tamilnadu over water of the river 'kaberi'
- * conflicts between Gujarat, Maharashtra, and M.P over ' sardar sarobar dam' on the river Narmada in Gujarat.
- * satadru – Jamuna conflict is going on between Punjab and Hariyana.

Land resources : Land resources mean the resources available from the land, thus the agricultural land which contain natural fertilizer for growth of the products sown, the underground watee, the various minerals like coal, gold and other raw materials.

Land Use Change : Land use cgange is defined as greenhouse gas emissions from human activities which either change the way land is used (e.g clearing of forests for agricultural use) or has an effect on the amount of biomass in existing biomass stocks (e.g forest, village trees etc)