10th Standard

Social Science-Geography

Resource and Development

'Resource':

Everything available in our environment which can be used to satisfy our needs, is called a resource. It should be technologically accessible, economically feasible and culturally acceptable. Only then, it can be termed as a 'Resource'. Examples: minerals, forests, fossil fuels etc.

Classification of Resources:

(a) On the basis of origin: Biotic and Abiotic.

(b) On the basis of exhaustibility: Renewable and Non-renewable.

(c) On the basis of ownership: Individual (Personal), Community, National and International.

(d) On the basis of status and development: Potential, Developed, Reserve and Stock.

- Biotic Resources are obtained from the biosphere. They have life or are living resources, e.g., human beings, fisheries, forests, etc.
- Abiotic Resources include all non-living things, e.g., rocks and minerals.

Renewable Resources:

The resources which can be renewed or reproduced by physical, chemical and mechanical processes are known as renewable or replenishable resources, e.g., water, wildlife, forests, solar energy, wind energy, etc.

Non-renewable Resources:

The resources which once get exhausted, cannot be remade. They take a long geological period of time, i.e., millions of years in their formation, e.g., minerals, fossil' fuels, etc.

1. **Individual resources:** Owned by individuals, e.g., own land, house;
2. **Community Owned Resources:** Resources which are accessible to all the members of the community, e.g., parks, playground;
3. **National Resources:** Resources which belong to the nation, e.g., roads, railways; and
4. **International resources:** Resources which no individual country can utilize, e.g., oceanic waters beyond 200 km.

1. **Potential resources:** Resources found in a region but not in use, e.g., solar energy in Rajasthan,
   wind in Gujarat;
2. **Stock:** Resources available but do not have appropriate technology to access, e.g., lack of technical know how to use hydrogen and oxygen as source of energy;

3. **Reserve:** Subset of stock. Can be used for future needs, e.g., water in the dams, forest resources.

Sustainable development:

Sustainable economic development means that 'development should take place without damaging the environment and development in the present should not compromise with the needs of future generation'.

Land under important relief features in India:

Plains-43%, Mountains-30%, Plateaus-27%

Land Degradation:

Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it.

Measures to solve problem of land degradation:

Afforestation, proper management of grazing to control overgrazing planting of shelter belts of plants, stabilization of sand dunes by growing thorny bushes, control of mining activities, avoid over-irrigation and overuse of fertilizers and pesticides;

Soil erosion:

The denudation of the soil cover and subsequent washing down is soil erosion. Reasons for soil erosion include—

(a) Human activities like deforestation, over grazing construction, mining defective method of fanning etc.;

(b) Natural forces like wind, glacier and water flow.

Types of erosion:

(a) Gully erosion. The running water cuts through the clayey soils and makes deep channels known as gullies. This makes the land bad land and in the Chambal basin such land is known as ravines;

(b) Sheet erosion. When top soil over large area is washed away it is known as sheet erosion.

Methods to prevent soil erosion in hilly area:

Ploughing along the contour lines-contour ploughing; terrace cultivation; strip farming and shelter belts.

Soils and its types:

- **Alluvial soils:** Entire northern plains are made of alluvial soil. Also found in the eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, the Krishna and the Kaveri rivers. Fertile soil therefore, fit for agriculture purpose. Regions of alluvial soils are intensively cultivated and densely populated. Rich in potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.
- **Black soil:** Black in colour and are also known as regur soils. Ideal for growing cotton and is also known as black cotton soil. Found in the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh also along the Godavari and the Krishna valleys. Made up of extremely fine, i.e., clayey material. Well-known for their capacity to hold moisture. Rich in calcium carbonate, magnesium, potash and lime.

- **Red and yellow soils:** Found in the areas of low rainfall in the eastern and southern parts of the Deccan plateau. Also found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats. Develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks.
- **Laterite soils:** Develops in areas with high temperature and heavy rainfall. Found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh, and the hilly areas of Odisha and Assam. Suitable for cultivation with adequate doses of manures and fertilizers. Low Humus content because decomposers, like bacteria, get destroyed due to high temperature.
- **Arid soils:** Found in the western parts of Rajasthan. After proper irrigation these soils become cultivable. Lacks humus and moisture because dry climate, high temperature make evaporation faster. Salt content is very high and common salt is obtained by evaporating the water.
- **Forest soils:** Found in the hilly and mountainous areas where sufficient rain forests are available. Feature differs based on location. Loamy and silty in valley sides and coarse grained in the upper slopes. Sil in the lower parts of the valleys particularly on the river terraces and alluvial fans are fertile.