CIVICS

CHAPTER-1 RESOURCES AND DEVELOPMENT

- **Definition of Resource-**Everything available in our environment which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable.

- **RESOURCE CLASSIFICATION:** Resources can be classified in the following ways –

  - **Based on Origin:**

    - **Biotic Resources:** These are obtained from biosphere and have life such as human beings, flora and fauna, fisheries, livestock etc.
    - **Abiotic Resources:** All those things which are composed of non-living things are called abiotic resources. For example, rocks and metals.

  - **Based on Exhaustibility:**

    - **Renewable Resources:** The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as renewable or replenish-able For example, solar and wind energy, water, forests and wildlife, etc. The renewable resource may further be divided into continuous or flow.
    - **Non-Renewable Resources:** These occur over a very long geological time. Minerals and fossil fuels are examples of such resources. These resources take millions of years in their formation. Some of the resources like metals are recyclable and some like fossil fuels cannot be recycled and get exhausted with their use.

  - **Based on Ownership:**

    - **Individual Resources:** These are also owned privately by individuals. Many farmers own land which is allotted to them by government against the payment of revenue. Plantation, pasture lands, ponds, water in wells etc. are some of the examples of resources ownership by individual
    - **Community Owned Resources:** There are resources which are accessible to all the members of the community. Village commons (grazing grounds, burial grounds, village ponds, etc.) public parks, picnic spots, playgrounds in urban areas are de facto accessible to all the people living there.
    - **National Resources:** Technically, all the resources belong to the nation. The country has legal powers to acquire even private property for public good. You might have seen roads, canals, railways being constructed on fields owned by some individuals. All the minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area up to 12 nautical miles (22.2 km) from the coast termed as territorial water and resources therein belong to the nation.
    - **International Resources:** The oceanic resources beyond 200 nautical miles of the Exclusive Economic Zone belong to open ocean and no individual country can utilize these without the concurrence of international institutions.

  - **Based on the Status of Development :**

    - **Potential Resources:** Resources which are found in a region, but have not been utilized. For example, the western parts of India particularly Rajasthan and Gujarat have enormous potential for the development of wind and solar energy, but so far these have not been developed properly.
    - **Developed Resources:** Resources which are surveyed, and their quality and quantity have been determined for utilization. The development of resources depends on technology and level of their feasibility.
    - **Stock:** Materials in the environment which have the potential to satisfy human needs, but human beings do not have the appropriate technology to access them. For example, water is a compound of hydrogen and oxygen, which can be used as a rich source of energy. But we do not have the required technology.

- **Reserves:** are the subsets of the stock, which can be put into use with the help of existing technical 'know-how', but their use has not been started. For example, water in rivers can be used for generating hydro-power but presently, it is being utilized only to a limited extent. Thus, the water in the dams, forests etc. are reserve which can be used in the future.

❖ **DEVELOPMENT OF RESOURCES:**

⇨ Human beings used resources indiscriminately and this has led to the following major problems:

- Depletion of resources for satisfying the greed of few individuals.
- Accumulation of resources in few hands divides the society into two segments i.e. rich and poor.
- Indiscriminate exploitation of resources has led to global ecological crises such as, global warming, ozone layer depletion, environmental pollution and land degradation.

❖ **Sustainable Development:** means 'development should take place without damaging the environment, and development in the present should not compromise with the needs of the future generations.'

❖ **RESOURCE PLANNING IN INDIA:**

⇨ Resource planning is a complex process which involves:

- Identification and inventory of resources of the country which involves surveying, mapping and estimations.
- Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plans.
- Matching the resource development plans with overall national development plans.

❖ **LAND UTILISATION:** - Land resources are used for the following purposes:

1. **Forests**

2. **Land not available for cultivation:**

- Barren and waste land
- Land put to non-agricultural uses, e.g. buildings, roads, factories, etc.

3. **Other uncultivated land:**

- Permanent pastures and grazing land,
- Land under miscellaneous tree crops as groves and orchards (not included in net sown area),
- Culturable waste land (left uncultivated for more than 5 years).

4. **Fallow lands:**

- Current fallow (left without cultivation for one or less than one agricultural year).
- Other than current fallow (left uncultivated for the past 1 to 5 agricultural years).

5. **Gross sown area:** Gross sown area is the total area in which crops are sown, but if there are two crops sown in a year on this area, it will be counted twice.

6. **Net sown area:** Net sown area is the total sown area but it will be counted only once irrespective of the number of crops sown in a year.

❖ **LAND DEGRADATION AND CONSERVATION MEASURES: -**

⇨ Methods to check land degradation:

- Afforestation and proper management of grazing can help to some extent.
- Planting of shelter belts of trees
- Control on over grazing.
- Stabilization of sand dunes by growing thorny bushes is some of the.
- Proper management of waste lands, control of mining activities, proper discharge and disposal of industrial wastes after treatment can reduce land and water degradation in industrial and suburban areas.

❖ **SOIL AS A RESOURCE :**

- The important factors responsible for the formation of soil are relief, parent rock or bed rock, climate, vegetation and other forms of life and time.
- Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers etc. contribute to the formation of soil.

❖ **CLASSIFICATION OF SOILS: The major soil types of India are:**

⇨ **Alluvial Soils:**

- Alluvial soil is the most widely spread and important soil for all sorts of human activities.
- The entire northern plains of India are made of alluvial soil which is mainly deposited by three important Himalayan river systems– the Indus, the Ganga and the Brahmaputra.
- Due to its high fertility, the regions of alluvial soils are intensively cultivated and densely populated such as Punjab, Haryana, Uttar Pradesh, Bihar and West Bengal.
- These soils also extend in Rajasthan and Gujarat through a narrow corridor and in the deltaic plains of the eastern coast.
- These soils contain adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

⇨ **Black Soil:**

- These soils are black in color and are also known as *'regur soils'.* It is ideal for growing cotton and is also known as 'black cotton soil'.
- Factors responsible for their formation are climatic condition and parent material (black basalt rock).
- This type of soil is typical of the Deccan trap region covering Maharashtra, Madhya Pradesh and Gujarat, and also extends in parts of Rajasthan, Chattisgarh, Telangana and Karnataka.
- They are rich in soil nutrients, such as calcium carbonate, magnesium, potash and lime, but poor in phosphoric contents.
- The black soils are made up of fine clayey material due to which they have a good moisture holding capacity and are good for cultivation of citrus fruits.

⇨ **Red and Yellow Soils:**

- Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau.
- Yellow and red soils are also found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats.
- These soils develop a reddish color due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.

⇨ **Laterite Soil:**

- The Laterite soil develops in areas with high temperature and heavy rainfall as a result of intense leaching.
- Humus content of the soil is low because most of the microorganisms, particularly the decomposers, like bacteria, get destroyed due to high temperature.
- Laterite soils are suitable for cultivation with adequate doses of manures and fertilizers.
- These soils are mainly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh, and the hilly areas of Odisha and Assam.
- This soil is very useful for growing tea and coffee. Red Laterite soils in Tamil Nadu, Andhra Pradesh and Kerala are more suitable for cashew nut plantation.

⇨ **Arid Soils**

- Arid soils range from red to brown in color. They are generally sandy in texture and saline in nature.
- The salt content is very high and common salt is obtained by evaporating the water. Due to the dry climate, high temperature, evaporation is faster, and the soil lacks humus and moisture.
- The lower horizons of the soil are occupied by Kankar because of the increasing calcium content downwards.
- The Kankar layer formations in the bottom horizons restrict the infiltration of water.

⇨ **Forest soils**

- The forest soils are also called as mountain soils because they are found in the hilly and mountainous areas.
- They are loamy and silty in valley sides and coarse grained in the upper slopes.
- In the snow-covered areas of Himalayas, these soils experience denudation and are acidic with low humus.
- In the lower valleys or inter-montane basins, these soils are fertile along the river terraces and alluvial fans.
- Forest soils are common in Jammu and Kashmir, Laddakh, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.

❖ **SOIL EROSION: -**

- The process of denudation of the soil cover and its subsequent washing down is known as **soil erosion**.
- The running water cuts through the clayey soils and makes deep channels known as '**gullies' or 'ravines**.
- Due to gully erosion the land becomes unfit for cultivation and is known as '**badland'**. For example, the badlands in the Chambal river basin.
- Sometimes water flows as a sheet over large areas down a slope. In such cases the top soil is washed away. This is known as **sheet erosion**.

❖ **SOIL CONSERVATION:** - Some measures or steps to protect or conserve soil from erosion are:

- **Terrace Cultivation:** Making terraces or steps for cultivation in slope areas restricts erosion.
- **Strip Farming:** Making strips of grasses or trees or some other crops between the main crops. This breaks up the force of the wind.
- **Shelter Belts:** Planting rows of tree along the roads, railway lines, canals, large farms etc. is helpful in protecting soils from erosion.
- **Stabilization of Sand Dunes:** Covering the sand dunes with grasses and bushes helps in checking soil erosion due to winds particularly in the deserts of Rajasthan.
- **Contour Ploughing:** Ploughing along the contour lines can decelerate the flow of water down the slopes.

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