

Land, Soil, Water, Natural Vegetation and Wildlife Resources (Easy Notes)

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Introduction:

Resources are scattered and unevenly distributed around the world due to various geographical factors. In this lesson, we will explore how these differences influence food, clothing, and other habits. Along with differences in human activities, we will learn about the distinct features of flora, various soil types, Land and the different animals that inhabit specific regions. So, Let's read this interesting chapter.

Land:

- Our Earth has 30 % land area out of total surface.
- But, the interesting thing is humans are still confined to only some places. 90% people live on only 30 % of the land. Remaining 70% of land is either sparsely populated or uninhabited.
- This is because some areas are characterized by land and [climate](#) that are too harsh to live in.
- Varied land forms are there such as mountains, plains, valleys, deserts etc.

Land Use:

- There are several ways living being use land for.
 - **For Example:** Cultivation, plantation, forestry, mining, building houses and dams and so on.
- There are various factors which determine the use of Land.
 - Such as topography, soil, climate, minerals and availability of water.

Classification of Land:

- **Private Land:** Individuals own the land.
- **Community Land:** All the members of community has right over community land resources.
 - For example: Public Parks, government hospitals and schools.

Note: People's excessive need has exploited the resources which is leading us to facing many natural disasters. Such as Landslides, soil erosion etc.

Conservation of Land Resource:

There are several ways for the conservation of Land Resources. These are:-

- Afforestation
- Land Reclamation
- Regulated use of chemical pesticide and fertilizers.
- Checks on over grazing

Soil:

Soil is the top layer of the Earth where plants grow. It is made up of minerals, organic matter, air, and water. Soil, forming from rock breakdown and decay, supports plants, hosts organisms, filters water, stores carbon, and boosts agriculture.

Factors of Soil Formation:

There are five primary factors which help soil attain different characteristics.

1. Parent Rock
2. Climate
3. Relief
4. Flora, Fauna and Micro Organism
5. Time

Note: In India, you will find alluvial, black, laterite, arid, red & yellow and mountain soil.

Degradation of Soil:

Reasons for degradation of soil are:-

- Deforestation
- overgrazing
- overuse of chemical fertilizers or pesticides
- rain wash

- Landslides and floods

Conservation measures:

Methods for conservation of soil are:-

- **Mulching:** It covers soil with materials like straw or leaves, keeping it moist, cool, weed-free, erosion-resistant, and nutrient-rich.
- **Contour Barriers:** These are rows of stones or grass on slopes that slow water runoff, prevent erosion, and retain soil moisture.
- **Rock Dam:** Often constructed across streams, rock dams slow water, prevent erosion, and retain soil and moisture, widely used in hilly regions for conservation purposes.
- **Terrace farming:** Stepped fields on slopes manage water, prevent erosion, conserve soil, and improve farming productivity in hilly areas.
- **Inter cropping:** It involves planting different crops together in the same field to maximize space, nutrients, and yield, promoting biodiversity and efficient land use.
- **Contour Ploughing:** It is the practice of ploughing along the contours of the land, rather than up and down slopes, to reduce soil erosion and retain water.
- **Shelter belts:** These are rows of trees or shrubs planted to provide protection from wind, reduce soil erosion, and create micro-climates beneficial for agriculture or ecosystems.

Water:

- Water is a vital renewable natural resources.
- Earth has nearly 3/4 part or 71% as a water on the surface.
- This is why we call our planet Earth a [blue Planet](#) or a [water Planet](#).
- Despite Earth's abundance of water, most of it is in the oceans and is saline, making it unsuitable for direct use.
- Fresh water is only 2.7 % and only 1% out of total fresh water is consumable.
- Therefore, we need to use the water resource judiciously.

Problems of Water Availability:

- Most of Africa, West Asia, South Asia, parts of western USA, north-west Mexico, parts of South America and entire Australia face shortage of fresh water.
- In India, there is even water market in Amreli city in Saurashtra region to manage the problem of water shortage.
- This is not it, but rivers like Yamuna have become polluted due to sewage, industrial effluents and garbage.

Conservation of Water Resources:

1. **Treatment of Liquid waste:** Treatment of effluents before releasing them in water bodies can help prevent water contamination.

2. **Practice of Growing more plants and trees:** Plant trees and maintain vegetation to reduce surface runoff and increase groundwater recharge.
3. **Water Harvesting:** Collect and store rainwater for various uses, reducing dependence on groundwater.
4. **Regular Maintenance of Canals:** Ensure canals are well-maintained to minimize water loss due to leaks and cracks, thus conserving water effectively.
5. **Drip Irrigation Systems:** Implement drip irrigation in gardens to minimize water use and ensure efficient watering.

Natural Vegetation and Wildlife:

- Natural vegetation and wildlife live in the biosphere, where the Earth's crust, water bodies, and air come together.
- In the biosphere, living beings depend on each other for survival.
- This life supporting system is known as the ecosystem.

Benefits of Vegetation:

- Plants provide us with timber, give shelter to animals, produce oxygen, and also protect soils.
- Trees help in storage of underground water.
- They also provide, fruits, medicines, latex, oil, paper etc.

Benefits of Wildlife:

- Wildlife contributes to biodiversity, maintaining ecological balance and stability.
- Animals and plants provide essential ecosystem services like pollination, seed dispersal, and nutrient cycling.
- Wildlife tourism and recreation generate revenue and support local economies.

Distribution of Natural Vegetation:

- Temperature and moisture are two primary agents which influence the growth of vegetation.
- There are four main types of vegetation.
 - **Forests:** This type of Vegetation grows in heavy rainfall areas.
 - **Grasslands:** They grow where rainfall is adequate to nurture grasses but insufficient for forests to thrive.
 - **Scrubs:** It refers to areas of low, scrubby vegetation found in arid or semi-arid regions where the soil is often poor and rainfall is limited.
 - **Tundra:** It is a vast, treeless biome found in the Arctic and alpine regions of the world. It comprises of mosses and lichens.

Conservation of Natural Vegetation and Wildlife:

1. **Protected Areas:** Create and manage national parks, wildlife reserves, and sanctuaries to protect habitats and species.
2. **Habitat Restoration:** Restore damaged habitats by planting native plants, controlling invasive species, and letting nature heal.
3. **Sustainable Land Use:** Support farming and forestry that doesn't harm habitats or split them apart.
4. **Law Enforcement:** Stop poaching, illegal logging, and wildlife trade to protect animals and plants.
5. **Community Involvement:** Include local people in conservation through education, awareness, and jobs that help nature.

Initiatives taken for the conservation of Natural Vegetation and WildLife:

1. **Awareness programmes:** **Van Mahotsav** is an annual tree-planting festival celebrated in India, particularly during the first week of July. The objective is to promote the importance of trees and afforestation to combat environmental issues like deforestation and climate change.
2. **CITES:** This international agreement aims to ensure that international trade in wild animals and plants does not threaten their survival. It regulates and monitors trade in endangered species and their products through a framework of regulations and permits.

Note: CITES full form is Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Category

1. Class 8th

Date

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