

Ch-17-Forests: Our Lifeline

Introduction to Forest

Importance of Forest

Deforestation

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The forests are the habitat for a multitude of living organisms. Animals like monkey, boar, bison, jackals, porcupine, and elephants live in the deeper areas of the forest.

The animals living in these forests vary according to the climatic conditions of the forest. These forests are a thick cover of trees. These also have various types of shrubs, trees, creepers and climbers.

The forest floor provides favourable conditions for them to germinate and develop into seedlings and saplings.



Stratification of the forest

The branches of the tall trees look like a roof over the other plants in the forest. This is called a canopy. The branchy part of a tree above the stem is known as the crown of the tree.

The different horizontal layers in the forest are known as understoreys. Sal, teak, Semal, Sheesham, Neem, Palash, fig, khair, amla, bamboo and Kachnar are some of the examples of plants in a tropical forest.

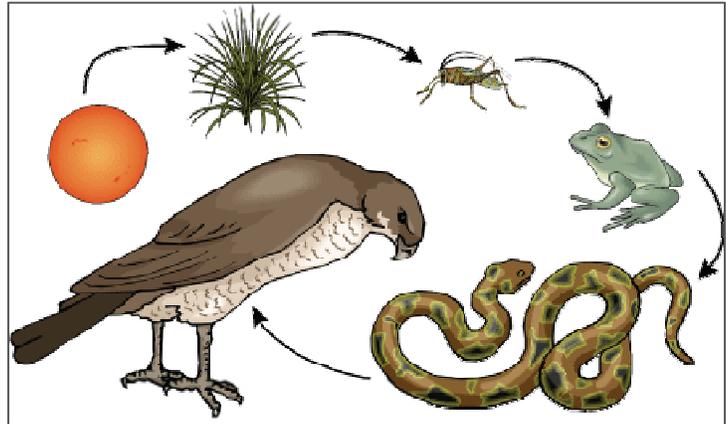
Giant and tall trees constituted the top layer followed by shrubs and tall grasses, and herbs formed the lowest layer.

Importance of Forest

Nutrition

All animals directly or indirectly depend on the plants for their survival. These plants also called as autotrophs or the producers are the source of food for all living organisms. All herbivores depend on them which are further eaten up by the carnivores. The saprotrophs eventually feed on the dead remains of these plants and animals.

A food chain is a feeding hierarchy in which organisms in an ecosystem are grouped into trophic (nutritional) levels and are shown in a succession to represent the flow of food energy and the feeding relationships between them. The interlinking of the food chains forming a network is called as a food web.



Decomposers



Mushrooms

In the soil the microorganism convert the dead remains into a dark coloured substance called **humus**. These organisms are called decomposers.

The presence of humus ensures that the nutrients of the dead plants and animals are released into the soil. From there, these nutrients are again absorbed by the roots of the living plants.

Forests: The Green Lungs

Plants release oxygen through the process of photosynthesis which is used by the animals for respiration. They also maintain the balance of oxygen and carbon dioxide in the atmosphere. That is why forests are called as lungs.

Trees take in water from their roots and release water vapour into the air through evaporation. If there were fewer trees, there would be less of evaporation!

Uses of Forests

- These provide food, shelter and water for tribals inhabiting forests.
- The dense bushes and the tall grass provide animals with the food and shelter. They also protect them from carnivores that live in the forest.
- We get several medicinal plants from the forests like turmeric and neem.
- The closed canopy and many layers of vegetation slow down the speed of raindrops.
- Transpiration and evaporation is maintained and help in bringing good rainfall in neighbouring areas.
- The root system helps water to seep down in the ground and increase water table unlike the cities where no surface area is left for percolation of rain water.
- They provide us with various products like timber, paper, fibres resins and gums.
- The forest also absorbs noise.

Deforestation

Deforestation is the clearing of virgin forests, or intentional destruction or removal of trees and other vegetation for agricultural, commercial, housing, or firewood use without replanting (reforesting) and without allowing time for the forest to regenerate itself. Deforestation can erode soils, contribute to desertification and the pollution of waterways, and decrease biodiversity through the destruction of habitat.



Causes of deforestation

- Development is essential for the country's growth. To meet the standard of urbanization the forest are cleared. These forests are the habitat for a wide range of biodiversity and gradually they also get affected due to deforestation.
- Forest fires are a natural cause of deforestation. A hot climate tips the balance towards a greater chance of a forest fire occurring.
- The forests are cleared in order to provide grazing land for the animals to meet the demand for milk and meat.
- Mining activities have left the land degraded. The trees are uprooted to make the land available for the mining process.
- The development of infrastructures like highways and railways require the clearing of the forest.

Consequences of deforestation

- If forests disappear, the amount of carbon dioxide in air will increase, resulting in the increase of earth's temperature leading to melting of glaciers and the snow cover and subsequently global warming.
- In the absence of trees and plants, the animals will not get food and shelter.
- In the absence of trees, the soil will not hold water, which will cause floods.
- Deforestation will endanger our life and environment.
- Clearing of the forests would make the land barren and would ultimately convert into a desert.