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Revised and Updated

ICSE GEOGRAPHY

Based on the latest ICSE syllabus

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10

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CONTENTS

ICSE GEOGRAPHY

Class 10

Chapter 8: Indian- Natural Vegetation

IMPORTANCE OF FORESTS

Forests are an important and valuable natural resource, which offer a number of direct and indirect advantages. Some of them are as follows:

1. Forests provide valuable timber for domestic and commercial use and a variety of raw materials for industries.

2. We get lac, gums, resins, rubber, tanning materials, herbs and medicines, honey, spices, etc., from the forests.

3. About four million people are dependent on forests and forest products for collecting wood, lumbering, sawing, furniture making, etc.

4. Grazing of cattle in the forests supports cattle rearing and dairy farming.

5. Forests provide a variety of products that are exported and earn valuable foreign exchange.

6. Many forest reserves are natural habitat for wildlife and some have been developed as tourist centres.

7. Forests can moderate climate and influence temperature, humidity and precipitation.

8. Forests absorb atmospheric carbon dioxide and help in controlling air pollution.

9. Forests help in controlling soil erosion, reclaiming land and controlling flood.

10. They help in the percolation of water and thus maintain the underground water table.

11. Decay and decomposition of leaves from forest plants provide humus to the soil and thus increase soil fertility.

TYPES OF NATURAL VEGETATION

The natural vegetation grows well in hot and humid climatic conditions. The natural vegetation in India varies greatly from one region to another due to variations in climatic conditions. On the basis of relief, climate and soils, the natural vegetation in India can be broadly divided into following five types:

1. The tropical evergreen forests
2. The tropical deciduous forests
3. The tropical thorn forests
4. The littoral forests
5. The mountain forests

TROPICAL EVERGREEN FORESTS

The tropical evergreen forests are found mostly along the western side of the Western Ghats, in the northeastern states and in Andaman and Nicobar Islands.

The semi-evergreen forests are found along the lower slopes of eastern Himalayas, coast of Odisha and western coast of India. The main species of trees found in the forests are **rosewood**, **ebony**, **mahogany**, **cinchona**, **chaplas**,**cane**, etc.

Climatic Conditions

- The tropical evergreen forests grow mainly in those areas where the average annual rainfall is more than 200 cm and the dry season is very short.
- The average relative humidity should be more than 75 per cent.
- The average annual temperature should be between 25 and 27 °C.
- The general climatic conditions should be hot and humid.

Tropical rainforest

Characteristic Features

- Due to high heat and high humidity, the trees in the tropical evergreen forests do not shed their leaves, at least not together.
- These forests are very dense and have tall trees that can attain a height of about 50 metres.
- Due to the dense growth of trees, the sunlight cannot reach the ground. Thus, the ground is mostly marshy and the undergrowth is mainly canes, bamboos, ferns, climbers, etc.

TROPICAL DECIDUOUS FORESTS

The tropical deciduous forests, also known as the **monsoon forests**, are most widespread in India. On the basis of the availability of water, the tropical deciduous forests are further divided into the moist deciduous and dry deciduous forests.

Tropical deciduous forest (teak)

The most important trees in the moist and dry tropical deciduous forests are **teak**, **sal**, **tendu**, **khair**, **sandalwood**, **mahua**, **mulberry**, **bamboo**, **pipal**, **neem**, etc.

Climatic Conditions

- The tropical deciduous forests grow mainly in those areas where the average annual rainfall is between 70 cm and 200 cm, with a distinct dry season.
- The mean annual temperature should be around 27 °C and the relative humidity should be between 50 and 80 per cent.

- The **dry deciduous forests** are found in those areas where the annual rainfall ranges between 70 cm and 100 cm.

Characteristic Features

- The trees in the tropical deciduous forests normally shed their leaves for about 6 to 8 weeks during the spring and the early summer seasons.
- During this period, lack of moisture in the subsoil forces the trees to shed the leaves. However, the new leaves grow with the onset of the rainy season.
- The trees in the deciduous forests are commercially important and provide valuable timber and many other useful products.

TROPICAL THORN FORESTS

The tropical thorn forests, also known as the tropical desert vegetation, are found in the arid and semi-arid areas of Rajasthan, Gujarat, western Haryana, southwestern Punjab and Madhya Pradesh.

Tropical thon forest

Climatic Conditions

- The tropical desert vegetation grows mainly in those areas where the average annual rainfall is less than 50 cm and there is a distinct long dry season.
- The average temperature should range between 25 °C and 30 °C and the relative humidity should be less than 50 per cent.

Characteristic Features

- The vegetation in the tropical hot desert is mainly thorny trees and bushes.
- There are no tall trees due to the shortage of moisture and low relative humidity.

- Most of the plants remain leafless for a major part of the year.
- There are large patches of coarse grasses and the entire region has scrub vegetation.

LITTORAL FORESTS

- The littoral forests, also known as tidal or **mangrove forests**, can grow and survive in fresh as well as in saline water.
- The dense littoral forests occur all along the coastline, in the sheltered estuaries, backwaters, salt marshes and mud flats.
- The littoral forests also occur in tidal creeks and coastal areas that are prone to tidal waves.

Littoral forest (mangrove)

Characteristic Features

- The littoral forests have mostly evergreen trees, which are associated with wetness.
- The main trunk of the tree is supported by stilt like roots that mostly remain under water.
- The roots of mangrove trees are exposed during low tide, but are submerged in water during high tide.
- The trees can be about 30 metres tall and have special breathing roots, called **pneumatophores**.

MOUNTAIN FORESTS

The natural vegetation in the mountains is influenced more by temperature than by humidity or rainfall. The temperature of the atmosphere decreases with the increase in height above the sea level. The mountain forests in India can be divided in two groups:

1.The Northern Mountain Forests
2.The Southern Mountain Forest

Mountain forest

FOREST AND ENVIRONMENT

The growth and development of various types of forests have an intimate relationship with their immediate environment. The forests not only improve the environment, but also protect it by performing the following functions:

- The forests act as the moderator of climate and influence the temperature, humidity and precipitation.
- Continuous transpiration from plants increases the relative humidity of the air, which increases the possibility of precipitation.
- The forests absorb carbon dioxide from the atmosphere and thus help in controlling the pollution in air.
- Along the hill slopes, the forests help in controlling soil erosion.
- The roots of trees and undergrowth help in flood control and reclamation of land.

FOREST CONSERVATION

The forests in India are highly mismanaged due to primitive methods of exploitation and lack of scientific planning. The methods used for lumbering and sawing are obsolete, which causes wastage and low productivity. Due to reckless cutting of trees, many species of plants are on the verge of extinction.

Van Mahotsava

Deforestation is occurring due to overgrazing, shifting agriculture, and construction and commercial activities.

NATIONAL FOREST POLICY

The Indian government prepared a policy to develop and conserve forests in 1894, which was modified and updated in 1953 and 1988. The main objectives of the National Forest Policy are as follows:

- Bringing about one-third area of India under forests.
- Checking soil erosion, extending desert land and reducing droughts and floods.
- Increasing the forest cover through social forestry, community forestry, farm forestry, etc.
- Maintaining environmental stability where the ecological balance has been disturbed due to various human activities.

SOCIAL FORESTRY IN INDIA

Social forestry is the management and protection of forests and afforestation of barren and wastelands for the development of social environment. The aim is to reduce pressure on existing forests by developing plantations for fuelwood, fodder and grasses. Actually the social forestry is described as the **forestry of the people, by the people and for the people**.

Social forestry

The main components of social forestry are as follows:

- The **agroforestry** involves the planting of trees and crops on the same land, so that farmers get food, fodder, fuel, timber and fruits from this land.
- The **community forestry** involves the planting of trees on public or community lands for the benefit of the community. The protection of trees is the responsibility of the community.
- The **commercial farm forestry** involves the planting of trees, such as poplars, eucalyptus, casuarina, etc. in the field in place of crops.
- The **non-commercial farm forestry** involves the planting of trees on the margins of farmlands, wastelands, grasslands, land around homes and cowsheds. The produce is not for sale.
- The **urban forestry** involves the planting of trees on public and private lands in the towns and cities. It includes green belts, roadside avenues, zoos, recreational parks, etc. It helps in reducing pollution, improving aesthetic values and promoting recreation.

THANK YOU