Natural Vegetation in India

Our country India is one of the 12 mega bio-diversity countries of the world. With about 47,000 plant species India occupies tenth place in the world and fourth in Asia in plant diversity. There are about 15,000 flowering plants in India, which account for 6 per cent in the world's total number of flowering plants. The country has many nonflowering plants, such as ferns, algae and fungi. India also has approximately 90,000 species of animals, as well as, a rich variety of fish in its fresh and marine waters.

Natural vegetation refers to a plant community, which has grown naturally without human aid and has been left undisturbed by humans for a long time. This is termed as virgin vegetation. Thus, cultivated crops and fruits, orchards form part of vegetation but not natural vegetation.

Factors which affect the growth of natural vegetation

Relief

Land: Nature of land influences the type of vegetation. If the land is level and fertile, it is mainly used for farming. If the land is uneven then grassland and woodlands develop over it.
Soil: Different types of soil are fit for different types of vegetation. For example; sandy soil is fit for cactus and thorny bushes, while wet and marshy soil is fit for mangrove vegetation.

Climate

Temperature and Humidity: determine the character and extent of vegetation. Area with high temperature and high humidity supports evergreen forest, area with high temperature and low humidity supports thorny bushes.

Photoperiod (Sunlight): Photoperiod depends on latitude, altitude, season and duration of the day. Trees grow faster in summer because of longer photoperiod.

Precipitation: If an area gets heavy rainfall, it is suitable for the growth of dense vegetation. On the other hand, an area with scanty rainfall is suitable for thorny bushes.

Types of Natural Vegetation in India:

(1) Tropical Evergreen Rain Forests

(2) Deciduous or Monsoon Type of Forests

(3) Dry Deciduous Forests and Scrubs

(4) Semi Desert and Desert Vegetation

(5) Tidal or Mangrove Forests

(6) Mountain Forests

Tropical Evergreen Rain Forests:

- Constitute those parts of India which have an annual rainfall of 200 cm and above
- Rainfall here occurs almost throughout the year with a short dry season.
- Wet and warm climate support luxuriant vegetation of all kinds trees, shrubs and creepers giving it a multi-layered structure.
- Trees do not shed leaves for a definite time period. So, the forests appear green all-round the year.
- Some of the commercially available trees are rosewood, rubber, cinchona Sandal Wood, ebony, mahogany etc.
- Important animals in these forests are elephants, monkey lemur, deer, one horned rhinoceros etc.
- Western coast; Western Ghats; island groups of Lakshadweep, Andaman and Nicobar, upper parts of Assam; and Tamil Nadu coast are covered with these forests.
- These are similar to Equatorial rainforests.

Tropical Deciduous or Monsoon type of Forests:

- These are the most widespread and the most extensive forests of India.
- They are also known as monsoon forests.
- These are connected with those parts of India which receive annual rainfall between 200 cm and 70 cm.
- Here rainfall is seasonal in nature.
- In this forest type, trees shed their leaves for about six to eight weeks in 1 dry summer.
- The animals found in these are: lion, tiger, pig, deer, elephant, a variety of birds, lizards, snakes, tortoise, etc.

Dry Deciduous Forests and Scrubs:

- Annual rainfall between 100 & 70 cm.
- Found in the rainier parts of the peninsular plateau and the plains of Uttar Pradesh and Bihar.
- Examples: teak, sal, peepal, neem etc.

Tropical Moist Deciduous Forests

- Annual rainfall between 200 & 100 cm.
- Found in an eastern part of India- northeastern states, along with the foothills of Himalayas, Jharkhand, West Orissa and Chhattisgarh,on the eastern slopes of the Western Ghats.
- Examples: teak, bamboos, sal, shisham, sandalwood, khair, kusum, arjun, mulberry, etc.

Semi Desert and Desert Vegetation

- These are connected with those parts which receive rainfall less than 70 cm. Here, rainfall is erratic, irregular and inconsistent.
- Xerophytes dominate regions covered with the tropical thorn.
- Found in the north-western part including semi-arid areas of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh and Haryana.
- Main plant species here are acacias (babool), palms, euphorbias, Cactus, khair, , keekar etc.
- In this vegetation type, stem, leaves and roots of plants are adapted to conserve water.
- Stem is succulent and leaves are mostly thick and small to minimize evaporation.
- Common animals here are rats, mice, rabbits, fox, wolf, tiger, lion, wild ass, horses, camels, etc.

Tropical Montane Forests

- The decrease in temperature with the rise in altitude is responsible for the corresponding change in natural vegetation.
- There exists the same hierarchy from foothills of the mountain to the top of it as is observed from tropical to tundra region.

- Mostly found in the southern slopes of Himalayas, places having high altitude in Southern and Northeastern India.
- Upto 1500 n of height, tropical moist deciduous forests exist with shesham as the main tree.
- Between 1000-2000m of height, wet temperate type of climate persist wherein evergreen broad-leaf trees like oaks and chestnut
- Between 1500-3000 m of height, temperate forests covering coniferous trees like Chir, pine, deodar, silver fir, spruce, cedar, etc.
- At higher altitudes above 3500m wet temperate grasslands are common like Merg (Kashmir), bugyals (Uttarakhand), etc.
- They get progressively stunted as they approach the snowline.
- Ultimately through shrubs and scrubs, they merge into Alpine grasslands.
- These grasslands are extensively used for grazing by nomadic tribes like Bakkarwals. At higher Gujjars and altitudes, some vegetation mosses and lichens form part of tundra vegetation.
- Common animals that are found in these forests are Kashmir stag, spotted deer, wild sheep, jackals, yak, snow leopard, rare red panda, sheep and goats with thich fur, etc.
- In India, there are studied under two groups: Northern Montane Forests and Southern Montane Forests.
- **Northern Montane Forests:** These are connected with Himalayan mountain ranges. Vegetation types are controlled by sunlight, temperature and rainfall which is described above.
- **Southern Montane Forests:** These are connected with hills of Nilgiris, Anaimalai and Cardamom. These are wet temperate forests which have great endemic biodiversity and these are described as Shola forests.

Mangrove Forests

- Mangrove forests are connected with deltaic regions of tropical and sub zones. These are also known as tidal forests and littoral forests as these are connected with inter tidal region.
- Their biodiversity and forest density are comparable with tropical evergreen and semi evergreen forests.
- Mangroves are salt tolerant plants with roots being adapted to become pneumatophores (these roots emerged from the ground and grow in upward direction).

- Mangrove ecosystem is a ecosystem as it has tolerance for periodic flooding and dryness; and mild salinity as well.
- India has the largest cover of Mangrove forest in the world.
- Sunderban, Mahanadi, Godaveri Krishna and Kaveri delta are most importantly covered with this forest.
- Sunderban is the largest mangrove in the world. It is famous for Sundari tree which provides durable hard timber.
- Some other examples are Rhizophora, etc.
- Palm, coconut, keora, agar Avicennia etc also grow in some parts of the delta.
- Royal Bengal Tiger is a famous animal in these forests.
- Turtles, crocodiles, gharials, snakes, are also found in these forests.
- Bhitarkanika mangrove of Mahanadi delta is also famous for its rich biodiversity.