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FOREST AND WILDLIFE RESOURCES



We share this planet with millions of other living beings, starting from micro-organisms and bacteria, lichens to banyan trees, elephants and blue whales. This entire habitat that we live in has immense biodiversity. We humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence. For example, the plants, animals and micro-organisms re-create the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive. Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend.

Biodiversity or Biological Diversity is immensely rich in wildlife and cultivated species, diverse in form and function but closely integrated in a system through multiple network of interdependencies.

Flora and Fauna in India

If you look around, you will be able to find that there are some animals and plants which are unique in your area. In fact, India is one of the world's richest countries in terms of its vast array of biological diversity. This is possibly twice or thrice the number yet to be discovered. You have already studied in detail about the extent and variety of forest and wildlife resources in India. You may have realised the importance of these resources in our daily life. These diverse flora and fauna are so well integrated in our daily life that we take these for granted. But, lately, they are under great stress mainly due to insensitivity to our environment.

Some estimates suggest that at least 10 per cent of India's recorded wild flora and 20 per cent of its mammals are on the threatened list. Many of these would now be categorised as 'critical', that is on the verge of extinction like the cheetah, pink-headed duck, mountain quail, forest spotted owlet, and plants like *madhuca insignis* (a wild variety of mahua) and *hubbardia heptaneuron*, (a species of grass). In fact, no one can say how many species may have already been lost. Today, we only talk of the larger and more visible animals and plants that have become extinct but what about smaller animals like insects and plants?

Let us now understand the different categories of existing plants and animal species. Based on the International Union for Conservation of Nature and Natural Resources (IUCN), we can classify as follows –

1. Normal Species: Species whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents, etc.

2. Endangered Species: These are species which are in danger of extinction. The survival of such species is difficult if the negative factors that have led to a decline in their population continue to operate. The examples of such species are black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.

3. Vulnerable Species: These are species whose population has declined to levels from where it is likely to move into the endangered category in the near future if the negative factors continue to operate. The examples of such species are blue sheep, Asiatic elephant, Gangetic dolphin, etc.

4. Rare Species: Species with small population may move into the endangered or vulnerable category if the negative factors affecting them continue to operate. The examples of such species are the Himalayan brown bear, wild Asiatic buffalo, desert fox and hornbill, etc.

5. Endemic Species: These are species which are only found in some particular areas usually isolated by natural or geographical barriers. Examples of such species are the Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunachal Pradesh.

6. Extinct Species: These are species which are not found after searches of known or likely areas where they may occur. A species may be extinct from a local area, region, country, continent or the entire earth. Examples of such species are the Asiatic cheetah, pink head duck.

What are the negative factors that cause such fearful depletion of the flora and fauna?

If you look around, you will be able to find out how we have transformed nature into a resource obtaining directly and indirectly from the forests and wildlife – wood, barks, leaves, rubber, medicines, dyes, food, fuel, fodder, manure, etc. So it is we ourselves who have depleted our forests and wildlife. The greatest damage inflicted on Indian forests was during the colonial period due to the **expansion of the railways, agriculture, commercial and scientific forestry and mining activities**. Even after Independence, **agricultural expansion** continues to be one of the major causes of depletion of forest resources. Between 1951 and 1980, according to the Forest Survey of India, over 26,200 sq. km. of forest area was converted into agricultural land all over India. Substantial parts of the tribal belts, especially in the northeastern and central India, have been deforested or degraded by **shifting cultivation (jhum), a type of ‘slash and burn’ agriculture**.

Large-scale development projects have also contributed significantly to the loss of forests. Since 1951, over 5,000 sq km of forest was cleared for river valley projects. Clearing of forests is still continuing with projects like the Narmada Sagar Project in Madhya Pradesh, which would inundate 40,000 hectares of forest. **Mining** is another important factor behind deforestation. The Buxa Tiger Reserve in West Bengal is seriously threatened by the ongoing dolomite mining. It has disturbed the natural habitat of many species and blocked the migration route of several others, including the great Indian elephant. Many foresters and environmentalists hold the view that the greatest degrading factors behind the depletion of forest resources are grazing and fuel-wood

collection. Though, there may be some substance in their argument, yet, the fact remains that a substantial part of the fuel-fodder demand is met by lopping rather than by felling entire trees. The forest ecosystems are repositories of some of the country's most valuable forest products, minerals and other resources that meet the demands of the rapidly expanding industrial-urban economy. These protected areas, thus mean different things to different people, and therein lies the fertile ground for conflicts. **Habitat destruction, hunting, poaching, over-exploitation, environmental pollution, poisoning and forest fires are factors**, which have led to the decline in India's biodiversity.

Other important causes of environmental destruction are **unequal access, inequitable consumption of resources and differential sharing of responsibility for environmental well-being. Over-population in third world countries is often cited as the cause of environmental degradation.** However, an average American consumes 40 times more resources than an average Somalian. Similarly, the richest five per cent of Indian society probably cause more ecological damage because of the amount they consume than the poorest 25 per cent. The former shares minimum responsibilities for environmental well-being. The question is: who is consuming what, from where and how much?

The destruction of forests and wildlife is not just a biological issue. The biological loss is strongly correlated with the loss of cultural diversity. Such losses have increasingly marginalised and impoverished many indigenous and other forest-dependent communities, who directly depend on various components of the forest and wildlife for food, drink, medicine, culture, spirituality, etc. Within the poor, women are affected more than men. In many societies, women bear the major responsibility of collection of fuel, fodder, water and other basic subsistence needs. As these resources are depleted, the drudgery of women increases and sometimes they have to walk for more than 10 km to collect these resources. This causes serious health problems for women and negligence of home and children because of the increased hours of work, which often has serious social implications. The indirect impact of degradation such as severe drought or deforestation-induced floods, etc. also hits the poor the hardest. Poverty in these cases is a direct outcome of environmental destruction. Therefore, forest and wildlife, are vital to the quality of life and environment in the subcontinent. It is imperative to adapt to sound forest and wildlife conservation strategies.