

Forest and Wild Life Resources (Easy Notes for Class 10th)

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Introduction:

Our Planet Earth consists of several resources. There are huge forests which have different species of flora and a variety of animals (fauna) on Earth. In simple words, there is immense biodiversity. All the living creatures depend on each other; mainly human beings. Therefore, it is necessary to maintain [ecological balance](#). However, we humans have become the main cause for disturbance in nature.

Flora and Fauna in India

As you know, Flora is a plant species whereas the term fauna is used for animals. In India, there is extremely large biodiversity due to different geographical locations.

- India is one of the world's richest countries in terms of its vast range of particular types of biological diversity.
- It has nearly **8 percent** of the total number of species in the world.
- There are over **81,000** species of fauna and **47,000** species of flora found in our country.
- Out of **47,000** plant species, about **15,000** flowering species are endemic (Indigenous) to India.

- **10%** flora and **20%** mammals are on the threatened list.
 - 79 species of mammals, 44 of birds, 15 of reptiles and 3 of amphibians are considered endangered.
 - 50% of plants are also considered endangered.
 - Plants and vertebrate animals (animals with backbone) have recently become extinct at more than expected rate.

Vanishing Forests:

- Forests are vanishing due to human activities such as [Deforestation](#).
- In India, the forest and tree cover is estimated at 79.42 million hectares which is 24.16 % of the total geographical area.
- However, the state of Forest Report (2015) says that an increase has been observed in the forest cover due to efforts made by human beings.
 - For instance – conservation measures, management interventions and plantation, etc., by different agencies.

Classification of plants and animal species:

You can observe that different plants and animal species vary in number. Therefore, these species come under different categories based on the International Union for Conservation of Nature and Natural Resources (IUCN).

Normal Species:

- Species whose population levels are considered to be normal for their survival.
- For Example : Cattle, Sal, Pine, Rodents, etc.

Endangered Species:

- These are species which are in danger of extinction. Negative factors can affect their survival rate.
- Example: Black Buck, Crocodile, Indian wild ass, Indian rhino, lion tailed macaque, Sangai (brow antler deer in Manipur), etc.

Vulnerable Species:

- These species are prone to threat due to declining population. So, a low level of population and negative factors can put them into the category of Endangered species.
- Example: Blue sheep, Asiatic Elephant, Gangetic dolphin, etc.

Rare Species:

- Since these species are small in number, they may move into Vulnerable or Endangered categories.
- Example: Himalayan Brown Bear, Wild Asiatic Buffalo, desert fox and hornbill, etc.

Endemic Species:

- The species which are found in only some particular areas comes under the category of Endemic species.
- For Example: Andaman Teal, Nicobar pigeon, Andaman wild pig, Mithun in Arunachal Pradesh.

Extinct Species:

- These are species which are not found after searches of known or likely areas where they may occur.
- For Example: Asiatic Cheetah, pink head duck.

Asiatic Cheetah : Where did they go?

1. Asiatic Cheetah is the world's fastest land mammal.
2. It is a unique and specialized member of the cat family.
3. It can move at the speed of 112 km./hr.
4. Prior to the 20th century, cheetahs were widely distributed throughout Africa and Asia.
5. Today, the **Asian Cheetah is nearly extinct** due to decline of available habitat and prey.
6. However, the species was declared extinct in India long back in 1952.

The Himalayan Yew in trouble

1. The Himalayan Yew (*Taxus Wallichiana*) is a medicinal plant used to treat some cancers.
2. It is found in various parts of Himachal Pradesh and Arunachal Pradesh.
3. Humans extract 'Taxol' (Chemical compound) from the bark, needles, twigs and roots of this tree.
4. It has become the biggest selling anti-cancer drug in the world.
5. The species is under great threat due to over-exploitation.

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

Since we make use of resources carelessly, We ourselves are responsible for the depletion of forests and wildlife. So let us discuss why we are the main reason for creating an ecological imbalance.

- **Expansion of Agriculture:** One of the major causes of depletion of forest resources is agricultural expansion. It has converted forest areas into cropland. (Mainly slash and burn agriculture – type of *shifting cultivation*)

- **Promotion of a few favored species:** The second reason is *enrichment plantation* in which only a few species are grown and other species are eliminated. (Commercially valuable species)
- **Large scale development projects:** They have also contributed significantly to the loss of forests.
 - Since 1951, over 5000 sq. km of forest has been cleared for river valley projects.
 - Another project is Narmada Sagar Project in Madhya Pradesh
- **Mining:** It is another important factor behind deforestation.
 - For Example: Dolomite mining. It has seriously threatened Buxa Tiger Reserve in West Bengal.
- **Grazing:** Many foresters and environmentalists hold the view that the greatest degrading factors behind the depletion of forest resources are grazing and fuel-wood collection.
- **Other Factors:**
 - Habitat destruction, hunting, poaching, over-exploitation, environmental pollution, poisoning and forest fires.
 - Unequal access, inequitable consumption of resources and differential sharing of responsibility.
 - For Example: Developed countries are more responsible than Developing countries, Richest consume more than poorest.

Impact of Depletion

1. **Loss of Cultural diversity:** Due to biological loss we have been losing cultural diversity as well. It has caused impoverishment for those who were fully dependent on forest resources. Indigenous people and forest dependent communities have been marginalized.
2. **Serious Social Implications:** In some societies, women bear the major responsibility of collection of fuel and fodder, water and other basic subsistence needs. As these resources are depleted, the drudgery of women increases. This affects her health, creates negligence of home and children.
3. **Deforestation-induced floods:** The indirect impact of degradation such as severe drought.
4. **Causes poverty:** Poverty is the direct outcome of environmental destruction. Since natural calamity such as floods hits the poor the hardest, the poor become the main sufferer of depletion.

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**.

Why do we need to conserve our forests and wildlife?

- Conservation preserves ecological diversity and our life support systems- water, air and soil.
- It also preserves the genetic diversity of plants and animals for better growth of species and breeding. For Example: Agriculture and Fisheries.

Conservation of Forest and Wildlife in India

In the 1960's and 1970's, conservationists demanded a national wildlife protection program. Finally in 1972, **Indian Wildlife (Protection) Act was implemented with various provisions** for protecting

habitats. An all-India list of protected species was also published.

- The main focus was on protecting the remaining population of certain endangered species by *banning hunting, giving legal protection to their habitats, and restricting trade* in wildlife.
- Central and many state governments established *national parks and wildlife sanctuaries*.
- Central Government also announced *several projects for protecting specific animals*, which are gravely threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag, three types of crocodiles- freshwater crocodile, saltwater crocodile and the Gharial, the Asiatic lion, and others.
- Most recently, *some animals have been given full or partial legal protection against hunting and trade* throughout India.
 - For Example: the Indian elephant, black buck (chinkara), the great Indian bustard (godawan) and the snow leopard, etc.
- Addition of Insects: In the notification under Wildlife Act of 1980 and 1986, added *several hundred butterflies, moths, beetles and one dragonfly* to the list of protected species.
- Addition of Plants: Government also added Six species of plants in the list.

Project Tiger

- Tiger is one of the key wildlife species in the faunal web.
- In 1973, authorities observed a sharp fall in the population of tigers (from 55,000 to 1,827).
- The major threats to the tiger population are :- poaching for trade, shrinking habitat, depletion of prey base species, growing human population, etc.
- There are uses of tigers' skin (for trade) and bones (for medicine). Due to this, the tiger population is on the verge of extinction.
- India and Nepal provide habitat to about two-third population of tigers out of the total number of tigers in the world.
- And these (India and Nepal) are the nations which have become prime targets for poaching and illegal trading.
- **In order to solve this problem, the Govt of India launched the "Project Tiger" in 1973.**
 - **Initially, this project was successful (4,002 in 1985 & 4,334 in 1989) but later on it declined so much. (3,600 in 1993).**
 - **There were 39 tiger reserves in India covering an area of 32137.14 sq. km. (Now 53 tiger reserves)**
 - **For Example: Manas Tiger Reserve in Assam, Periyar Tiger Reserve in Kerala.**
 - **There are many National Parks also.**
 - **For Example: Corbett National Park in Uttarakhand, Sundarbans National Park in West Bengal, Bandhavgarh National Park in Madhya Pradesh.**
 - **Wildlife is also there.**
 - **For Example: Sariska Wildlife Sanctuary in Rajasthan.**

Types and Distribution of Forest and Wildlife Resources

Do you know that the Government manages Forest and Wildlife Resources but how?

To conserve our vast forest and wildlife resources, the Forest Department and other government departments are there.

Division of Forest into three types: Reserved Forests, Protected Forests and Unclassed Forests.

(i) Reserved Forests:

- These forests constitute more than half of the total forest land.
- These are most valuable for the conservation of forest and Wildlife.
- These are open to the public however enjoy judicial protection based on the legal system.
 - For Example: Hunting is not allowed unless specific orders are issued.
- Jammu and Kashmir, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal and Maharashtra have the largest percentage of reserved forests.

(ii) Protected Forests:

- Almost one-third of the total forest area comes under protected forests.
- Government has full property rights on these forests.
 - For Example: Wildlife Sanctuaries and National Parks.
- Protected forests are forests with some amount of legal and constitutional protection in certain countries
- Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan have a bulk of it under protected forests.

(iii) Unclassed Forests:

- These are other forests and wastelands belonging to both government and private individuals and communities.
- All North-eastern states and parts of Gujarat have a very high percentage of their forests as unclassified forests. (Local communities manage it)

Note: *Reserved and protected forests are also referred to as permanent forest estates maintained for the purpose of producing timber and other forest produce and for protective reasons. Madhya Pradesh has the largest area under permanent forests, constituting 75 percent of its total forest area.*

Community and Conservation

Since forests are the home to some of the **traditional communities**, They have also played a **role in conservation**.

- In some areas of India, local communities are struggling to conserve these habitats along with Government officials.
 - For Example: In Sariska Tiger Reserve, Rajasthan, Villagers have fought against mining by

citing the Wildlife Protection Act.

- In many areas, villagers themselves are protecting habitats and explicitly rejecting government involvement.
- In some villages, there are some sets of rules and regulations regarding protection of wildlife.
- Local community involvement through the programme of **Joint forest management (JFM)**: Partnership of state forest department and local communities for management and restoration of degraded forest.

Sacred groves – a wealth of diverse and rare species

- Since ancient times, people have worshiped nature. Such beliefs have preserved several virgin forests in their original condition.
 - For Example: The Mundas and the Santhal of Chota Nagpur region worship mahua and Kadamba trees.
 - The tribal people of Odisha and Bihar worship the tamarind and mango trees during weddings.
 - Peepal and banyan trees are some other examples.
- Animals (like macaques and langurs) around many temples are fed daily. People treat them as a part of temple devotees.
 - For Example: Nobody harms herds of blackbuck, (chinkara), nilgai and peacocks around Bishnoi villages in Rajasthan.

Chipko Movement

1. **Chipko Movement** was a nonviolent social and ecological movement by rural villagers in order to prevent forests from rampant cutting of trees.
2. It resisted deforestation. And encouraged people for community **afforestation by planting indigenous species**.
3. They tried to revive traditional conservation methods or develop new methods of ecological farming.
4. **Beej Bachao Andolan** and **Navdanya** proved that adequate levels of diversified crop production is possible without the use of synthetic chemicals. And it is economically viable also.

Category

1. Class 10th

Date

2025/04/25