

Chapter 2 Forest and Wildlife Resources

Introduction

- Our earth is home for millions of living beings, starting from micro-organisms and bacteria, lichens to banyan trees, elephants and blue whales.

Flora and Fauna in India

- India is one of the world's richest countries in terms of its vast array of biological diversity, and has nearly 8 per cent of the total number of species in the world (estimated to be 1.6 million).
- At least 10 percent of India's recorded wild flora and 20 per cent of its mammals are on the threatened list.
→ Many are categorised as 'critical', that is on the verge of extinction like the cheetah, pink-headed duck etc.

Classification of Species

- The International Union for Conservation of Nature and Natural Resources (IUCN) has classified plants and animals in order of existence:
→ Normal Species: Species whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents, etc.
→ Endangered Species: These are species which are in danger of extinction. For example, black buck, crocodile, Indian wild ass etc.
→ 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. For examples, blue sheep, Asiatic elephant, Gangetic dolphin, etc.
→ Rare Species: Species with small population may move into the endangered or vulnerable category if the negative factors affecting them continue to operate. For example, Himalayan brown bear, wild Asiatic buffalo, desert fox and hornbill, etc.
→ Endemic Species: These are species which are only found in some particular areas usually isolated by natural or geographical barriers. For example, Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunchal 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 etc.

Causes of depletion of the flora and fauna

- Human beings transformed nature into a resource obtaining directly and indirectly from the forests and wildlife such as wood, barks, leaves, rubber, medicines, dyes, food, fuel, fodder, manure, etc. which depleted our forests and wildlife.
- The various factors that cause depletion of the flora and fauna are:
 - Large-scale development projects
 - Shifting cultivation
 - Mining
 - Grazing and fuel-wood collection
 - Over-population
- Factors responsible for decline in India's biodiversity:
 - Habitat destruction
 - Hunting
 - Poaching
 - Over-exploitation
 - Environmental pollution
 - Poisoning
 - Forest fires

Conservation of Forest and Wildlife in India

- Conservation preserves the ecological diversity and our life support systems – water, air and soil.
- Due to conservationist's demand, The Indian Wildlife (Protection) Act was implemented in 1972, with various provisions for protecting habitats.
 - The aim of the programme was protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats, and restricting trade in wildlife.
 - The central and many state governments established national parks and wildlife sanctuaries.
 - The central government also announced several projects for protecting

specific animals, which were gravely threatened, including the tiger, the one-horned rhinoceros and others.

- Project Tiger was also launched by the Government of India in the year 1973 to save the endangered species of tiger in the country.
- Under Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles, and one dragonfly have been added to the list of protected species.
- In 1991, for the first time plants were also added to the list, starting with six species.

Types and Distribution of Forest and Wildlife Resources

- In India, much of its forest and wildlife resources are either owned or managed by the government through the Forest Department or other government departments.
- The forests are classified under the following categories:
 - Reserved Forests: These forests are regarded as the most valuable as far as the conservation of forest and wildlife resources are concerned. It covers half of the total forest land.
 - Protected Forests: This forest land are protected from any further depletion. Almost one-third of the total forest area is protected forest.
 - Unclassed Forests: These are other forests and wastelands belonging to both government and private individuals and communities.

Community and Conservation

- The forests are also home to some of the traditional communities.
 - Local communities are struggling to conserve these habitats along with government officials, to secure their long-term livelihood.
- In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act.
- The famous Chipko movement in the Himalayas has successfully resisted deforestation in several areas
 - Also shown that community afforestation with indigenous species can be enormously successful.

- Farmers and citizen's groups like the Beej Bachao Andolan in Tehri and Navdanya have shown that adequate levels of diversified crop production without the use of synthetic chemicals are possible and economically viable.
- Joint forest management (JFM) programme introduced in 1988 in the state of Odisha shown good example for involving local communities in the management and restoration of degraded forests.