

## **2 – FOREST AND WILDLIFE**

**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.

**Based on the International Union for Conservation of Nature and Natural Resources (IUCN), plants and animals are classified as follows –**

1. **Normal Species:** Population levels are normal for their survival, such as cattle, sal, pine, rodents, etc.
2. **Endangered Species:** Species in danger of extinction. Survival is difficult if the negative factors that have led to a decline in their population continue to operate. Examples - Black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.
3. **Vulnerable Species:** Species 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. Examples - 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. Examples - Himalayan brown bear, wild Asiatic buffalo, desert fox and hornbill, etc.
5. **Endemic Species:** Species are only found in some particular areas usually isolated by natural or geographical barriers. Examples - Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunachal Pradesh.
6. **Extinct Species:** 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 - Asiatic cheetah, pink head duck

### **Negative factors that caused depletion of the flora and fauna**

1. Obtaining resources directly and indirectly from the forests and wildlife – wood, barks, leaves, rubber, medicines, dyes, food, fuel, fodder, manure, etc.
2. Expansion of the railways, agriculture, commercial and scientific forestry and mining activities during the colonial period
3. After Independence, agricultural expansion is one of the major causes of depletion of forest resources.
4. Tribal areas, especially in the north-eastern and central India, have been deforested or degraded by shifting cultivation (jhum), a type of ‘slash and burn’ agriculture
5. Large-scale development projects have also contributed to the loss of forests. Clearing of forests is still continuing with projects like the Narmada Sagar Project in Madhya Pradesh,
6. 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.
7. Grazing and fuel-wood collection deplete the forest resources

8. Habitat destruction, hunting, poaching, over-exploitation, environmental pollution, poisoning and forest fires are factors, which have led to the decline in India's biodiversity.
9. Over-population is often cited as the cause of environmental degradation.

### **Social effect of resource depletion –**

- 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.
- Women are affected more than men, as women bear the major responsibility of collection of fuel, fodder, water and other basic subsistence needs.
- The drudgery of women increases and 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.
- Therefore, forest and wildlife, are vital to the quality of life and environment in the subcontinent.

### **Conservation of Forest and Wildlife in India**

#### **(i) Indian Wildlife Protection Act –**

- Implemented in 1972 with various provisions for protecting habitats.
- All- India list of protected species was published
- Objective is to control poaching and illegal trade in wildlife.
- Provide protection of wild animals, birds and plants by banning hunting,
- Gives legal protection to their habitats
- Restrict trade in wildlife.

(ii) Central and many state governments have established national parks and wildlife sanctuaries.

(iii) Forests can be classified as reserved forests, protected forests and unclassed forests.

(iv) **Wildlife Act of 1980** and 1986 added several hundred butterflies, moths, beetles, and one dragonfly to the list of protected species. In 1991 plants were also added to the list of protection.

(v) The central government also announced several projects for protecting specific animals, which were gravely threatened, including the tiger, the one horned rhinoceros, the Kashmir stag or *hangul*, three types of crocodiles – fresh water crocodile, saltwater crocodile and the *Gharial*, the Asiatic lion, and others.

- Most recently, the Indian elephant, black buck (chinkara), the great Indian bustard (*godawan*) and the snow leopard, etc. Have been given full or partial legal protection against hunting and trade throughout India.
- The conservation projects are now focusing on how to increase biodiversity which includes various conservation measures. To execute the same plans

#### (v) **Project Tiger** –

- “Project Tiger”, was launched in 1973.
- Aim is to save an endangered species, with equal importance as a means of preserving biotypes of sizeable magnitude.
- The major threats to tiger population are numerous, such as poaching for trade, shrinking habitat, depletion of prey base species, growing human population, etc.
- The trade of tiger skins and the use of their bones in traditional medicines
- India and Nepal provide habitat to about two-thirds of the surviving tiger population in the world, these two nations became prime targets for poaching and illegal trading.
- Corbett National Park in Uttarakhand, Sunderbans National Park in West Bengal, Bandhavgarh National Park in Madhya Pradesh, Sariska Wildlife Sanctuary in Rajasthan, Manas Tiger Reserve in Assam and Periyar Tiger Reserve in Kerala are some of the tiger reserves of India

### **Types and Distribution of Forest and Wildlife Resources**

In India, forest are classified under the following categories.

**Reserved Forests:** More than half of the total forest land in India has been declared reserved forests and regarded as the most valuable. Jammu and Kashmir, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal, and Maharashtra have large percentages of reserved forests

**Protected Forests:** Forest Department has declared one-third of the total forest area as protected forest. Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan have protected forests

**Unclassed Forests:** These are the forests and wastelands which belong 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 managed by local communities.

Reserved and protected forests are also referred to as **permanent forests**, which are maintained for the purpose of producing timber and other forest produce, and for protective reasons.

### **Community and Conservation**

Conservation of the forest and wildlife resources is very important. Here are a few steps were taken by common people:

1. In **Sariska Tiger Reserve**, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act.
2. The inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the **Bhairodev Dakav ‘Sonchuri’**. Villages came up with their own set of rules and regulations which do not allow hunting. They are also protecting the wildlife against any outside encroachments.
3. The famous **Chipko movement** in the Himalayas was one successful attempt to resist deforestation in several areas. The movement has also resulted in community afforestation.

4. 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.
5. India **joint forest management** (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded forests.