

Threats and Conservation of Biodiversity

✓ Threats to biodiversity:

Due to

▪ **Habitat loss**

- ✚ Deforestation activities (cutting trees for timber, removal of medicinal plants)
- ✚ Production of hybrid seeds requires wild plants as raw material, farmers prefer hybrid seeds, many plant species become extinct
- ✚ Increase in the production of pharmaceutical companies made several number of medicinal plants and species on the verge of extinction.
- ✚ Removal of forest-cover for road laying and also due to soil erosion
- ✚ Illegal trade of wild life
- ✚ Population explosion, construction of dam, discharge of industrial effluents use of pesticides.

▪ **Poaching of wild life**

Due to poaching, illegal trade and smuggling activities most of our valuable fauna are under threat organised crime has moved into illegal wild life smuggling because of huge profit Eg. Tiger, Deer – for hides, Rhinoceros – for horns, Elephant – for ivory tusk, Sea Horse, Star turtle – sold to foreign market.

(Extinction, the elimination of species, is a normal process of the natural world. Species die put and are replaced by others as part of evolutionary change.

Human caused reduction: The climate change caused by our release of green house gases in the atm. could have catastrophic effects. Human disturbance of natural habitat is the largest single cause of loss of biological diversity. Woodlands and grasslands are converted now use about 10% of the world's land surface for crop production and about twice the amount for pasture and grasslands.)

Hunting: Over harvesting is responsible for depletion or extinction of many species.

Eg. The American passenger pigeon was the world's most abundant bird. In spite of this vast population, market hunting and habitat destruction caused the entire population to crash within 20 years.

▪ **Fragmentation**

Habitat fragmentation reduces the biodiversity because many animals like bears and large cats require large territories to subsist. Some forest birds reproduce only in deep forest or habitat far from human settlement. A large island for example, can support more individuals of given species and therefore less likely to suffer extinction due to genetic problems and natural catastrophes.

▪ **Commercial products:**

Smuggling of fuels, hides, horns and folk medicines also affect the biodiversity in an abrupt manner.

✓ Conservation of biodiversity

In general biodiversity is generally disturbed by human activities. To solve the problems, it is essential to protect our bio diversity by two ways.

1. In-situ or on-site conservation
2. Ex-situ conservation

In-situ conservation:

- Conservation of species in its natural habitat, in place where the species normally occurs
- The strategy involves establishing small or large protected areas, called protected areas
- Today in world, there are 9800 protected areas and 1500 national parks

Methods:

1. Nature or biosphere reserves (Eg) Nilgiri Bio reserve
2. national parks and sanctuaries (Eg) Mudumalai, vedanthangal
3. on farm and home garden conservation for plants, vegetables and fruits to maintain traditional crop varieties.

Ex- situ conservation:

- It involves maintenance and breeding of endangered plant and animal species under partially or wholly controlled conditions in zoos, gardens and laboratories
- The crucial issue for conservation is to identify those species which are more at risk of extinction.

Methods:

1. long term captive breeding
2. shortage term propagation and release
3. animal translocation and re introductions
4. seed bank
5. reproductive technology
 - (i) embryo transfer technology
 - (ii) cloning