

Modes of Wild life Conservation

Wildlife conservation is an activity in which human make conscious efforts to protect the flora and fauna and their habitats. Wildlife conservation is very important because wildlife and wilderness play an important role in maintaining the ecological balance and contribute to human quality of life.

The conservation of wild life is required for the following benefits :-

- a. The wild life helps in maintaining the balance of nature. Once the equilibrium is disturbed it leads to many problems.
- b. The wild life can be used commercially to earn money more and more. It can earn foreign exchange also, if linked with tourism.
- c. The wild life provides best means of sports and recreation.
- d. Preservation of wild life help us in scientific research and study.
- e. The wild life is the cultural heritage of society and the respective country.

Modes of conservation :-

Wild life is maintained and conserved by two methods

1. In-situ conservation
 2. Ex-situ conservation
1. In-situ conservation

This is the conservation of genetic resources through their maintenance within natural or even human made ecosystem. Natural habitats are declared as protected areas. These are protected by implementing

Some laws. This system of protected areas include different categories like-

1. Biosphere Reserves - Biosphere Reserves has been evolved by the Man and Biosphere (MAB) Programme of the UNESCO. In a biosphere Reserves, multiple land use is permitted by designating various zones. These zones are - the biosphere zone where no human activity is permitted, the buffer zone where limited human activity is permitted and the manipulated zone - where a large number of human activity is permitted. In biosphere reserves, wild population as well as traditional life styles of tribals and various domesticated flora and fauna genetic resources are protected.

National Parks - A national park is an area which is strictly reserved for the betterment of the wild life and where activities such as forestry, grazing or cultivation are not permitted. No private ownership right is allowed. There are 66 national park in the country.

Sanctuaries :- Sanctuaries are similar to national park but some controlled harvesting of timber and other minor forest products may be allowed so long as they do not interfere with the well being of animals. There are 368 sanctuaries in India amounting to 3.2% of India total geographical area.

National monuments and landmarks :- They are often smaller areas designed to preserve unique areas of special national interest.

Protected landscapes :- They allow nondestructive uses of the environment by resident people and provide opportunities for tourism and recreation.

2. Ex-situ Conservation

This is the conservation outside their habitats, which includes

a. Botanical Garden / Herbal Garden :- A botanical garden or herbal garden is a controlled and staffed institution for the maintenance of a living collection of plants along with some animals for purpose of education and research.

b. Genoplasm banks :- Genoplasm banks, also called gene banks are established for ex-situ conservation of the species. In plant species, seeds, pollen grains, vegetative propagative parts, tissues etc. are collected and stored in such genoplasm banks.

Some countries like China and U.S.A have setup research centres for endangered species. In India, research centre for the conservation of endangered species has been set up near Nehru Zoological park at Hyderabad by the centre for cellular and molecular biology in collaboration with the central Zoo Authority of India.

One of the objective of this centre is to establish gene banks and improve the reproductive capacity of endangered animals by various assisted reproductive technologies like electro-ejaculation, Intra uterine insemination (IUI) In vitro fertilization (IVF), Gamete intrafallopian tube transfer (GIFT), Zygote intrafallopian tube transfer (ZIFT) and Embryo transfer (ET).

Conservation and preservation of endangered animals using different methods in biotechnology can save undoubtly important genetic materials for future reconstruction of extinct species or even the most endangered one. DNA fingerprinting is important in identifying traits necessary for better survival of the species. Genetic resource bank could facilitate the longer storage of diverse endangered and exotic material.

All the bioinformatics information

Provides genomic insight to force monitoring, management and restoration of endangered wild life. In addition to that, cloning biobanked cell lines could help restore genetic diversity to endangered species.

Advances in biotechnology are occurring so fast that there is a strong chance for more genetic intervention to be just around the corner.

c. Restoration ecology :- It also deals with the conservation of species outside protected areas. It is defined as the process of intentionally altering a site to establish a defined indigenous historic ecosystem. The goal of this process is to emulate the structure, function, diversity and dynamics of the specified ecosystem. For e.g. Wetland replication to prevent flooding, mine site reclamation to prevent soil erosion etc.

d. Legal Protection laws :- Wild life can be conserved by formulating and implementing stringent laws by the Government. India was probably the first country to enact a wild life protection ACT. According to wild life protection Act (1972) trapping, shooting of wild animals alive or dead, their transport and export are all controlled by special staffs. This act ~~for~~ prohibits hunting of female and young ones.

These are several International agreement for the protection of the species and their habitats. The single most important treaty protecting species at international level is the convention on International Trade in endangered species (CITES). The treaty is currently endorsed by 115 countries. CITES published a list of species whose international trade is to be controlled.

There are three most important conventions regarding protection of habitats. These are the Ramsar Convention on Wetlands of International Importance (1971) especially as waterfowl habitat. The convention concerning the protection of the world cultural and Natural Heritage (1984) and the

The UNESCO Biosphere Reserves Programme (1971).

Other conservation measures:- These include -

1. Habitats of wild life should be improved by constructing waterholes, saltlicks, raising plantations.
2. Natural habitat should be carefully protected.
3. Proper census should be done to measure population size of various wild animals.
4. To take care of wild life in case of epidemics, veterinary efforts should be made.
5. To understand the biology and behaviour of wild animals research on wild life should be encouraged.
6. Active participation of people through co-operative, voluntary organisation, Nature club should be encouraged.