

EDUCATION FOR CONSERVATION OF ENVIRONMENT

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Biodiversity is not distributed uniformly over the Earth. Some areas particularly along the tropics are rich in biodiversity. This depends on the climatic conditions and area of the region.

Biodiversity :

Biodiversity is the variety of life on Earth. It includes the variability of species in different habitats, the diversity of microorganisms, plants and animals. It is an essential component of nature and it ensures the survival of human species by providing food, fuel, shelter, medicines and other resources to mankind.

Threats to Biodiversity :

Biodiversity benefits the economy, society and environment. Man is dependent on living world for his survival. Biodiversity benefits the economy, society and environment. Man is dependent on the living world for his survival. Biodiversity provides our economy and society with medicine, food, clothing and shelter.

However, due to a steady rise in the population, the demands in needs have been steadily rising resulting in the destruction of habitats, degradation of the environment leading to loss of biodiversity.

There are number of threats to biodiversity that are directly related to human behavior. These include the following:

- **Population growth and consumption of resources :**

The loss of species and ecosystems can be attributed to the growing human population. Humans depend on ecosystem for their multiple requirements. More than half of the forests have been lost with increase in human population.

- **Deforestation :**

Forests play an important role in conversation of biodiversity. They maintain a balance of gases and nutrients in nature, bind soil, maintain and recharge groundwater. They also regulate temperature and humidity. They prevent soil erosion and degradation of the physical environment and provide a habitat for innumerable plants and animals.

With increase in demand for space and wood for the growing population, large portions of

the forest are already cleared.

- **Habitat Loss :**

All species have specific food and habitat needs. The destruction of previously intact ecosystems results in a loss of habitat for many species and breaks down an ecosystem's ability to function.

- **Environmental Pollution :**

Pollution from chemical contaminants poses a further threat to species and ecosystems. The environmental pollution caused by the use of pesticides and chemicals, dumping of wastes, and emissions from factories and automobiles affecting the living population.

- **Invasion of non-native species :**

Invasion of non-native species is an important and often overlooked cause of extinctions. Exotic species are new species entering a geographical region. They cause disappearance of native species due to changed biotic interactions.

- **Climatic Changes :**

A changing global climate threatens species and ecosystems. The distribution of species is largely determined by climate, as is the distribution of ecosystems and plant vegetation zones (biomes).

- **Over-hunting :**

Over-hunting has been a significant cause of the extinction of hundreds of species and the endangerment of many more, such as whales and many African large mammals for years.

Conservation of Biodiversity :

Forests and wildlife have to be maintained, preserved and conserved. Our government implemented rules and regulations for their conservation.

Red Data Book :

The IUCN (International Union for Conservation of Nature and Natural Resources) maintains an international list published as Red Data Book. It is a group of organizations and scientific experts that work for the protection of sustainable resources. It is considered to be the best authority about the status of living things on the planet.

The Red Data Book is the state document established documenting rare and endangered species of plants and animals that exists within the territory of state or country. The IUCN has developed categories to describe threatened species. Threatened is the term used for species that are in the critically endangered.

Methods of Conservation :

Conservation of biodiversity can be achieved in number of ways-

A) In Situ conservation :

In Situ conservation involves conservation of plants and animals in the native ecosystem or even in man made ecosystems, where they naturally occur. It includes a system of protected areas of different categories .

- Protected area -

Protected area is a broad term given primarily to National Parks and Sanctuaries meant for affording protection to wild animals and their habitat.

- National Park –

National park and nature reserve is the area selected by governments or private organizations for special protection against damage or degradation with the objective of biodiversity and landscape conservation.

- Wildlife Sanctuary –

Wildlife sanctuary is similar to a national park. However, it aims only at conservation of the species.

- Forest Reserves –

Forest is the second largest land used in india, next to agriculture. The forests play a vital role in harbouring more than 45,000 floral and 81,000 faunal species.

B) Ex situ Conservation :

Exsitu conversation involves conservation of endangered species away from their field habitats. This has become particularly important for conservation of crop varieties and wild genetic resources, because of their utility in future crop improvement and afforestation programs.

- Zoological Park –

Zoological park, popularly known as zoos, in which animals are kept for public recreation, education and conservation purposes. In India, there are 169 zoos.

- Botanical Garden –

Botanical garden is a garden in which plants are grown and displayed primarily for scientific and educational purpose. A botanical garden chiefly consists of a collection of living plants, grown outdoors or under glass in greenhouses and conservatories.

Steps to Conserve Biodiversity :

Conserving biodiversity is important to all. Global concern over the unprecedented loss of living resources has brought governments together to draft the International Convention on Biodiversity. This comprehensive agreement recognizes, for the first time, that the conservation of biodiversity is a common concern of the people in entire world.

Many ways are being suggested for preserving biodiversity. Some of them are listed as follows.

- 1) No undisturbed land be used for development or urbanisation, because development of townships and shopping centres, use of forest trees for fuel and the use of swamps for paddy fields lead to loss of biodiversity.
- 2) Catalogues of genetic resources and national biological inventories be prepared, so that the threatened and endangered species may be protected against extinction.
- 3) In poor nations, birth rates should be lowered and sustainable, high yielding agricultural systems be developed, so that preservation and sustainable development of biodiversity go hand in hand. The rich countries provide massive assistance to meet this objective without any further delay, since we are already late by 50 years in starting this process.
- 4) Measures should be taken to reduce emission of greenhouse gases and ozone destroying compounds.
- 5) Effective measures for conservation of biodiversity be developed and strengthened in all countries.
- 6) An extensive reforestation/ afforestation program should be followed.
- 7) Alternative environment-friendly sources of fuel energy such as biogas other than wood should be used.
- 8) Loss of biodiversity due to forest fire is a major problem, immediate steps to prevent forest fire need to be taken.
- 9) Overgrazing by cattle can damage a forest seriously. Therefore, certain steps should be taken to prevent overgrazing by cattle.
- 10) Hunting and poaching should be banned.

Conclusion :

Environment education seeks to influence and change this attitude towards the environment and ultimately instill a stronger sense of responsibility for safeguarding the environment.

Unlike the commonly held understanding that the 'Environment' only constitutes what we fondly refer as 'Mother Nature', it also encompasses social, political and economical influences. The

admittedly ambitious, aim of bringing about change to safeguard the environment can only be achieved if different players within society actually come to understand, why should they take on such responsibility. Tomorrow's leaders need to be equipped for tomorrow's challenges and we must adequately prepare our children for future.

We can organize various activities for school and college level students such as planting trees, designing native plant gardens, restoring streams and riparian habitats, composing projects, investigating alternate sources of energy and many other projects.

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