

Conservation of Plants and Animals

Deforestation: Causes And Effects

Sneha read in the newspaper about a village where people protested against the cutting of trees by a big multinational company for the purpose of setting an industry. When she asked her father, he told her that trees are an important part of our lives and cutting trees can have an adverse effect on our environment. **Do you know the consequences of cutting trees on a large-scale?** Let us explore.

Another consequence of deforestation is desertification. **Do you know what it is? Desertification** is the process of conversion of a fertile land into a desert environment. Removal of vegetation leads to rapid soil erosion, where the topmost layer of soil gets blown away by wind. This gradually decreases the fertility of soil. As a result, it is unable to support any vegetation and leads to the spread of deserts.

As discussed earlier, deforestation can lead to disturbances in water cycle, which can result in droughts.

Also, when the ground is devoid of vegetation, it becomes difficult to hold rain water. As a result, the infiltration rate of water (rate at which water seeps into the ground) is reduced. This causes flooding of grounds.

Since all these consequences can have an adverse affect on our environment, it is essential that people are made aware of them. Deforestation should be discouraged for personal or professional interests.

Conservation of Forests and Wildlife

Forests

A forest is a large area of land which is covered with different kinds of plants, trees, and undergrowths. Forests also sustain a large number of microorganisms, insects, birds, reptiles, and various other animals. On the basis of their location and vegetation found, forests are classified into various types.

Type of Forests	Areas	Organisms Found
Tropical rain forests	Western coast of India, North East Himalayas	Flora: Evergreen trees, ferns, shrubs, bamboos, etc Fauna: Leopards, monkeys, jungle cats, snakes, many insects and snails, etc

Temperate deciduous forests	North China, Korea, Japan, Australia, North Eastern America, etc	Flora: Pine, oak, birch, etc Fauna: Moths, deer, beetles, wolves, foxes, etc
Coniferous forests	North America, North Eurasia, Himalayas	Flora: Pine and fir trees Fauna: Very few animals are found, include squirrels, deers, wolves, goats,, etc

Wildlife

All the species of plants, animals and other organisms living in the wild is referred to as **wildlife**. It includes the different variety of living organisms that inhabit forests, oceans or seas.

Biodiversity

The variety of plants, animals and other organisms that inhabit the earth is collectively known **biodiversity**.

Destruction of Wildlife

More and more animals are being added day by day to the list of endangered and extinct species. This is taking place because of the following reasons:

- In last few decades, animals have been mercilessly hunted for fun.
- Various body parts are illegally obtained from animals such as bones, skin, hides, and teeth of animals.
- Due to deforestation, the natural habitat of animals is being destroyed, which in turn is leading to the loss of animals also.

If the destruction of nature proceeds at the same rate, then a day will come when humans themselves will become extinct.

To avoid this from taking place, we have to protect our environment.

Each one at our individual level can contribute towards the protection of the environment.

Ways in which we can contribute to protect our environment:

- Planting a tree in our neighbourhood and taking care of it
- Avoiding plastic bags and instead using paper bags or jute bags
- Preventing noise pollution by playing music at low volume
- Avoiding wastage of water and other natural resources

- Using carpools to lessen the crowd of vehicles on roads, which lead to pollution
- Spreading awareness about the protection of environment amongst others also

You know that increased human activity in the forests is causing harm to our forests and wildlife. Also, wildlife in these forests is poached or captured mercilessly for global markets.

But how can we conserve our forests and wildlife? Let us explore the methods for conservation of forests and wildlife.

Biosphere Reserves

Do you know what biosphere reserves are?

Biosphere Reserves are large areas for conservation of biodiversity, which include both wildlife and plants. It also preserves the traditional life of tribes living in the area. For example, Nanda Devi Biosphere Reserve in Uttarakhand.

Pachmarhi biosphere reserve is another biosphere located in Madhya Pradesh. It consists of trees like *sal*, teak, *jamun*, and silver ferns. Animals like *Chinkara*, leopards, wild dogs, wolves etc. are also found here. Plants and animals which are present in a particular area are known as the **flora and fauna** of that area.

Biosphere reserves also help in the protection of endemic species. **Do you know what they are?**

Endemic species are those species which are restricted to a particular area and are unique to that area. For example, Indian giant squirrel, bison, and flying squirrel in Pachmarhi Biosphere Reserve are endemic to that area.

Wildlife Sanctuary

Do you know what a wildlife sanctuary is?

Wildlife Sanctuary is an area which is free from disturbances from human activities, and is devoted for the conservation and protection of wildlife. Wildlife sanctuaries are under the jurisdiction of the state government, for example, the Mudumalai wildlife sanctuary in Tamil Nadu.

Killing and poaching of animals is strictly prohibited in these areas.

National Parks

National Parks are those reserved areas where no human activity is allowed at all. The purpose of a national park is to preserve the flora, fauna, landscape, and the historic objects of that area. For example, Kaziranga National Park in Assam helps in the protection of the great one-horned Indian Rhinoceros.

Do you know that Satpura national park in Madhya Pradesh was the first forest reserve in India?

It consists of the finest Indian teak and also has a tiger reserve, which was launched under **Project Tiger** by the government of India. The main objective of Project Tiger is to ensure the survival of tigers and to maintain their population.

But why is there a need to protect tigers?

Tigers are very important to the ecosystem as they occupy the top level of the food chain. They keep the population of herbivores in control and hence ensure that overgrazing does not destroy forests. They are a source of employment to a number of people in the form of forest tourism. Being the National Animal of India, they are a source of pride for the countrymen, who associate them with values such as strength and courage.

Unfortunately their fur are used to make carpets and their claws as well as teeth are ground to powder and sold off as medicines with supposedly magical properties, due to which they are being hunted in large numbers. Combined with this is the fact that a sharp increase in human population has led to a shortage of space and forests are being cut down. Their numbers are hence dwindling so fast that they are threatened with extinction in the near future.

What is Project Tiger?

Project Tiger is an effort by the Central Government of India to revive the declining population of tigers in the country. It was started in 1973.

The main objective of the project is to ensure a sustainable population of the tiger in India for scientific, economic and cultural values and to provide total protection to its natural habitat for as long as possible to do so.

Under this scheme the Government aims to provide protection for all wildlife inhabiting a Tiger reserve and to reduce the dependency of people on the natural resources found in such a reserve. This will prevent clashes between tigers and humans for space and the tigers can stay peacefully in their habitat.

Project Tiger has been started in a number of wildlife parks that have been designated Tiger reserves. Some of the popular ones include Ranthambhore National Park and Sariska

Sanctuary in Rajasthan, Jim Corbett National Park in Uttarakhand, Bandhavgarh National Park in Madhya Pradesh and the Sunderbans in West Bengal.

What is an endangered species?

Endangered species are those species whose numbers are rapidly diminishing to a level of **extinction**.

Therefore, endangered species like *gharial*, blackbuck, Siberian crane, forest owl, rhinoceros, and tigers are being protected and preserved in Wildlife reserves.

Do you know that a record of all plants and animals, which are listed in the endangered list, is maintained in a Red Data Book? This book keeps a record of all endangered animals as well as plants and is separate for plants and animals.

Do you know what migratory birds are?

Migratory birds are those birds which travel long distances to reach other lands to escape the harsh conditions of their native place. Birds migrate in response to changes in food availability, habitat, or weather conditions. Every year at a particular time birds undertake their migratory journeys. Many species of birds like ducks, geese, cranes etc. migrate from their distant homes in Europe and Siberia to India.

Collect and gather information about various protected areas in India which conserve forests and wildlife. **Which animals do you think need protection?**

Methods To Reverse Deforestation

Deforestation has many adverse affects on the environment.

How can deforestation be prevented and how can its effects be reversed? Let us explore.

(I) Reforestation

The problem of deforestation can be solved by reforestation. **Do you know what it is?**

Reforestation is the process of replanting trees at the same place from where they have been cut. The planted trees should be of the same species that have been cut. Practising reforestation and leaving the reforested area undisturbed can help in rehabilitation of that area.

(II) Recycling paper

To prevent deforestation, one can recycle paper or try to prevent wastage of paper.

For example, try to do your rough work on used sheets. This will not only save paper, but will also help save energy and valuable trees.

Do you know that it takes 17 fully grown trees to make one ton of paper?

Do you know that dangerous chemicals which are produced at the time of paper manufacturing are directly released into rivers and lakes? Therefore, by recycling paper we not only prevent deforestation but also prevent water pollution.

Remember, protecting Mother Earth is our duty and our collective efforts can make a difference.