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Conservation Of Plants & Animals

KEY POINTS

→ Biological diversity or biodiversity refer to the variety of organisms existing on the earth, their inter-relationships and their relationship with the environment. We need to conserve bio-diversity. There are some threats to bio-diversity.

→ Forest is an important natural resource and forest are under great threat. The trees are being cut to meet various human needs.

Deforestation

→ The cutting of trees (clearing of forest) and using the cleared land for other purposes is called deforestation.



Consequences of deforestation

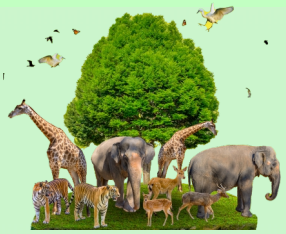
→ Increases the temperature and pollution level.

→ Floods

→ Drought

→ Reducing water table

→ Deforestation is the major cause which leads to the change in soil properties



Conservation of forest and wildlife

→ Biodiversity conservation is the practice of preserving and protecting the wealth and variety of species, habitats, ecosystems and genetic diversity on the earth.

→ The world-wide fund for nature (WWF) is one of the many international organizations that aim at conservation of nature.

Wildlife

→ Wildlife refers to all plants, animals and other microorganisms that are non-domesticated i.e. any living organism found in its natural habitat. The term refers to animals and plants that are undisturbed by human beings.

→ In 1971 the UNESCO began the Man and Biosphere programme to establish at least one biosphere reserve in each of the earth's 193 bio-geographical zones.

→ The total forest area in India is 21.71% of total geographical area but according to national forest policy it should be 33%.

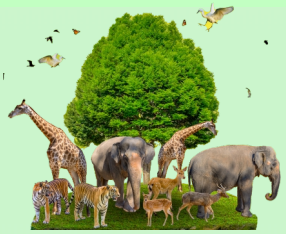
NOTE

→ The Tibetan antelope, also known as Chiru is mainly killed for its fine fleece, which is popularly known as Shahtoosh. Shahtoosh shawls are very expensive and considered a fashion statement by many people. To check the population of the Tibetan antelope, a ban has been declared in India on the sale and usage of Shahtoosh shawls.

Protected areas

→ In order to conserve wildlife, some remedial measure or strategies can be adapted. One such measure is to develop protected areas. These are the areas developed to protect and maintain biodiversity.

→ The lands are allotted by government through legal processes. They include.
(1) Biosphere reserve. (2) Wildlife Sanctuaries. (3) National park.



1. Biosphere Reserves

→ Large areas of protected land for conservation of wildlife, plant and animal resources and traditional life of the tribals living in the area. A biosphere reserve may also contain other protected areas in it.

→ Pachmarhi Biosphere Reserve (M.P.) consists of one national park named Satpura National Park and wildlife sanctuary named Bori and Pachmarhi sanctuary.

Some biosphere reserves are -

(i) Nilgiri biosphere reserve (Tamil Nadu)
(ii) Nanda Devi biosphere reserve (Uttarakhand)
(iii) Sundarbans biosphere reserve (West Bengal)
(iv) Gulf of Mannar biosphere reserve (Tamil Nadu)
(v) Great Nicobar biosphere reserve (Andaman and Nicobar)
(vi) Manas biosphere reserve (Assam)
(vii) Similipal biosphere reserve (Odisha)

Flora and fauna

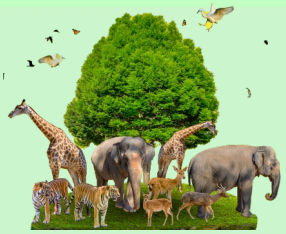
→ Plants of all the species found in a particular habitat or region are collectively referred to as 'flora' similarly the term 'fauna' refers to animals.

→ Sal, teak, mango, jamun, silver ferns, arjun, etc., are the flora and chinkara, bluebull, barking deer, cheetal, leopard, wild dog, wolf, etc. are examples of the fauna of the Pachmarhi Biosphere Reserve.

Endemic species

→ Endemic species are those species of plants and animals which are found exclusively in a particular area.

→ e.g. Nilgiris langur, Lion tailed macaque (south India), Nepenthes khasiana (Pitcher plant), Spider lily are some of the endemic species of India.



→ Sal and wild mango are the endemic flora whereas Bison, Indian giant squirrel and flying squirrel are the endemic fauna of Pachmarhi Biosphere Reserve.

→ Destruction of endemic species is due to Deforestation, Growth in human population, Introduction of new species.

NOTE

→ The Great Indian Bustard endemic to India and possibly Pakistan has been classified as endangered because of its declining population.

→ The existence of this bird has been threatened mainly due to poaching and destruction of habitat.

2. Wildlife Sanctuary

→ Areas where animals are protected from disturbance to them in their habitat.

→ Wildlife sanctuaries provide protection and suitable living conditions to wild animals.

→ Some of the threatened wild animals like black buck, white eyed duck, elephant, golden cat, pinkheaded duck, gharials, marsh crocodile, python, rhinoceros etc are protected in wildlife sanctuaries.

→ The sanctuaries aim at preserving animal life in their natural habitat.

→ They are allowed to breed and multiply with the basic aim of increasing their number.

→ Cutting down trees and hunting animals in these areas are strictly prohibited.

Some wildlife sanctuary in India are :

(i) Bharatpur bird sanctuary.
(ii) Sanjay Gandhi wildlife sanctuary.
(iii) Bori wildlife sanctuary.
(iv) Sultanpur lake bird sanctuary.

3. National Park

→ The National park is the area reserved for wildlife where they can freely use the habitats and natural resources. It is a reserve of land, declared and owned by a national government, it is protected from most human development and pollution.

→ It is an area which is strictly reserved for the protection of wildlife. National parks preserve flora, fauna, landscape and historic objects of an area. Human activities like grazing, cultivation, poaching, hunting, capturing of animals or collection of firewood are not allowed in national park.

→ Satpura National Park is the first Reserve Forest of India. The finest Indian teak is found in this forest. Rock shelters and rock paintings are found in this park.

Zoological parks :

→ Refer to any park, building, cage enclosure or a premise in which animals are kept for public exhibition.

→ These are the places where animals receive protection.

Botanical garden :

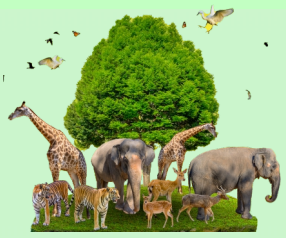
→ Garden dedicated to the collection, cultivation and display of a wide range of plants labelled with their botanical names. These can be called as the zoo of plants where rare and threatened species of plants are reared and conserved.

Project Tiger

→ Launched by Government of India to protect tiger in the country.

→ The main reasons for the extinction of tiger were hunting, deforestation and taming of rivers for human needs.

→ A project named “Project Tiger” was initiated on 1 April 1973 by the government of India during Prime minister Indira Gandhi's tenure. The project was funded by WWF.



Main tiger reserves in India :

1. Jim Corbett National Park (Uttaranchal)
2. Periyar National Park (Kerala)
3. Ranthambore National Park (Rajasthan)
4. Kanha National Park (Madhya Pradesh)
5. Sariska National Park (Rajasthan)
6. Sunderbans National Park (West Bengal)

Red data book

→ It is a source book which gives a list of all the endangered plants and animals. There are different, Red Data Book for plants, animals and other species.

→ The International Union for the Conservation of Nature and Natural resource (IUCN) Red list of threatened species also called the IUCN Red.

→ List or Red Data Book was created in 1963.

→ It is considered the world's most comprehensive inventory status of plants and animal species.

→ The head office of IUCN is in Morges (Switzerland).

Migration

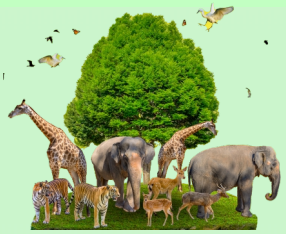
→ Migration refers to regular and systematic movement of a group of organisms in search of suitable temporary shelter till a better one is found. E.g. Humming birds, Tuna (Fish), African elephant.

→ The Siberian Crane is endemic to Siberia. They travel large distance and come to India in groups during winters to escape the cold, unfavourable conditions of Siberia.

Recycling of paper

→ Paper recycling is the process of using old paper products and turning them into new reusable paper products.

→ Recycling old paper products uses 60% less energy than manufacturing it from new material.



Reforestation

→ Reforestation is the restocking of the destroyed forest by planting new trees. The planted trees should generally be of the same species which were found in that forest.

→ Afforestation and reforestation both refer to the establishment of trees on land without trees. Reforestation refers to the establishment of forest on land that had recent tree cover whereas afforestation refers to land that has been without forest from much longer.

NOTE

→ The modern Chipko Movement was launched in 1973 by Chandi Prasad Bhatt and and Sunderlal Bahuguna as a major afforestation drive, in Gharwal Himalayas of Uttarakhand.

→ In India, we have the following acts that aim at preservation and conservation of forest.

(i) Forest (Conservation) Act - 1980

(ii) Wildlife (Protection) Act - 1972 (amended in 1991)