

## Lesson at a Glance

- *National parks, sanctuaries and biospheres reserves* are maintained to conserve forests and wildlife.
- **Deforestation and its causes:**
  - The variety of plants and animals existing on earth are essential for the well being and survival of mankind. Today a major threat to survival of mankind is deforestation.
  - **Deforestation** means clearing of forests and using that land for other purposes, *i.e.* for industries set up or making building for *rehabitation*. The causes of deforestation may be:
    - Procuring land for cultivation.
    - Building houses and factories.
    - Making furniture, using wood as fuel and
    - Natural causes such *forest fires* and draughts.
- **Effects of deforestation:**
  - Deforestation causes increase of atmospheric temperature due to increase in concentration of carbon dioxide leading to global warming.
  - Severe draughts and floods.
  - Deforestation changes the nature of soil, water holding capacity and soil erosion. Gradually, the fertile land gets converted into deserts. It is called *desertification*.
  - Deforestation causes the destruction of habitat of wildlife, its survival becomes difficult.
- **Biosphere:** The part of the earth in which living organisms exist or that supports life is known as *biosphere*.
- **Biodiversity or Biological diversity:** It refers to the variety of organisms existing on the earth. Their interrelationships and

their relationship with the environment. It includes variety of plants, animals and microorganisms.

- **Flora and Fauna:** The plants found in a particular area are termed as *flora* of that area.  
The animals found in a particular area are termed as *fauna* of that area.
- **Endemic Species:** Those species of plants and animals which are found exclusively in a particular area are called endemic species to a zone, a state or a country. For example, *sal* and *wild mango* endemic flora of the **Pachmarhi Biosphere Reserve**. Animals such as Bison, Indian giant squirrel and fly squirrel are endemic fauna of this area.
- **Species:** A group of population or populations whose members have common characteristics and are capable of interbreeding among themselves to produce fertile off-springs. Normally, *members of a species breed amongst themselves and not with members of other species*.
- **Biosphere Reserve:** A larger protected area meant for conservation of biodiversity and culture of that area is called Biosphere Reserve. A biosphere may consists of other protected areas such as National Parks and Sanctuaries. For example, Pachmarhi Biosphere Reserve consists of one National Park called *Satpura* and two Wildlife Sanctuaries known as *Bori* and *Pachmarhi*.
- **Wildlife Sanctuaries:** These are the protected areas which provide protection and suitable living conditions to wild animals. Sanctuaries are places where killing (poaching) or capturing of animals is strictly prohibited.  
A sanctuary may be a reserved *natural area* meant for the *preservation and development of threatened / endangered species*. For example, there is the **Kaziranga Wildlife Sanctuary** for *Rhinoceros* in Assam.
- **National Park:** A national park reserve is large and diverse enough to protect whole set of ecosystem. National Parks *preserve flora, fauna, landscape and historic objects of an area*. For example. In the Satpura National Park, Rock shelters and Rock paintings are also preserved along with flora and fauna.

• **Comparison of a Sanctuary and a National Park:**

S. No.	Sanctuary	National Park
1.	It is a reserved area meant for the preservation and development of endangered wildlife species.	It is a reserved area for preserving flora, wildlife, landscape and historic objects.
2.	A sanctuary is set up for a specific purpose.	A national park is a multi-purpose project.
3.	A sanctuary is developed in comparatively limited area.	It is developed in comparatively larger area.

- **Endangered Animals:** Animals whose numbers are diminishing to a level that they might face extinction are known as the *endangered animals*. For example, dinosaurs became extinct a long time ago.
- **Ecosystem:** All the living components, such as plants, animals and microorganisms and non-living components such as climate, soil, river, deltas etc. constitute an *ecosystem*. An ecosystem can be as small as a pond or as big as an ocean or a forest.
- **Red Data Book:** The source book which keeps a record of all the endangered animals and plants. There are different Red Data Books.
- **Migration:** The phenomenon of movement of a species from its own habitat to some other for a *particular time period every year* for a specific purpose like breeding is known as migration.
- Reuse and recycling of paper save trees, energy and water.
- Reforestation is restocking of the destroyed forests by planting new trees.

■ **TEXTBOOK QUESTIONS SOLVED** ■

**Q. 1. Fill in the blanks:**

- (a) A place where animals are protected in their natural habitat is called \_\_\_\_.
- (b) Species found only in a particular area is known as \_\_\_\_.

(c) *Migratory birds fly to far away places because of \_\_\_\_ changes.*

- Ans.** (a) Wildlife sanctuary  
(b) Endemic species  
(c) Climate.

**Q. 2. Differentiate between the following:**

- (a) *Wildlife sanctuary and biosphere reserve*  
(b) *Zoo and wildlife sanctuary*  
(c) *Endangered and extinct species*  
(d) *Flora and fauna.*

**Ans.** (a) Wildlife sanctuary is the place where wild animals are protected in their natural habitat. Here poaching or capturing the animals is prohibited.

Biosphere reserves are the area used to conserve biodiversity like plants, animals and microorganisms. It contains many wildlife sanctuaries and national parks.

(b) Zoos are the places where some animals are protected in artificial habitats for public view.

Wildlife sanctuaries are used to protect and conserve wildlife in their natural habitats.

(c) The species which are at the verge of extinction and required protection and conservation are called endangered species.

The species which exist no more on the earth are called extinct species.

(d) Flora is used for wide varieties of plants while fauna is used to refer to all the varieties of animals.

**Q. 3. Discuss the effects of deforestation on the following:**

- (a) *Wild animals* (b) *Environment*  
(c) *Villages (Rural areas)* (d) *Cities (Urban areas)*  
(e) *Earth* (f) *The next generation.*

**Ans.** (a) **Wild animals:** Deforestation destroys the habitats of many wild animals. They are left to die without their natural shelter.

(b) **Environment:** Deforestation affect the environment adversely due to disturbance of ecological balance. The

amount of carbon dioxide is increased in the atmosphere and causes global warming.

- (c) **Villages (Rural areas):** The villagers depend on forests. They are closely related to forests. Due to deforestation various wild animals run to nearby villages and cause danger to them. Villagers will not get fruits, fuel, wood due to deforestation.
- (d) **Cities (Urban areas):** Deforestation does not affect the life of cities directly badly but changes in climate affect cities.  
Calamities like flood and droughts do not spare cities.
- (e) **Earth:** Deforestation affects the earth. The fertile land of earth is converted into deserts and its temperature rises. It changes its climate and environment.
- (f) **The next generation:** Many beautiful fauna and flora are destroyed due to deforestation. So, next generation will not be able to see them. They will not get clean and cool environment. They will not have clean and healthy environment.

**Q. 4** What will happen if:

- (a) we go on cutting trees.  
(b) the habitat of animal is disturbed.  
(c) the top layer of soil is exposed.

**Ans.** (a) If we go on cutting trees then:

- (i) Ecological balance is disturbed.  
(ii) Earth will lose top fertile layer and will be converted into desert.  
(iii) Floods and droughts will become more frequent.  
(iv) Many animals lost their shelters.  
(v) There will be a scarcity of things like fruits, paper which we get from forests.
- (b) Animals become unprotected and unconserved when the habitat of animal is disturbed. It becomes endangered.  
(c) Top layers of soil are fertile. If they are exposed, they lose their fertility and humus. It causes desertification.

**Q. 5.** Answer in brief:

- (a) Why should we conserve biodiversity?

- (b) Protected forests are also not completely safe for wild animals. Why?  
(c) Some tribals depend on the jungle. How?  
(d) What are the causes and consequences of deforestation?  
(e) What is Red Data Book?  
(f) What do you understand by the term migration?

**Ans.** (a) Biodiversity is conserved, to save them from extinction.

(b) The protected forests are not also safe completely for wildlife because the poaching takes place at large scale in these areas. The poachers kill wild animals in those protected areas.

(c) Some tribals depend on jungle for their food, cloths, shelter and other requirements.

(d) Deforestation is caused due to urbanisation and industrialisation.

Deforestation is responsible for desertification and natural calamities. Many species of plants and animals are destroyed due to deforestation.

(e) Red Data Book is the record book and source book of all the endangered animals and plants.

(f) Periodical movement of a species of birds from their native place to other places due to changes in climate is called migration. The purpose of migration is for breeding and to enjoy long summer days.

**Q. 6.** In order to meet the ever-increasing demand in factories and for shelter, trees are being continually cut. Is it justified to cut trees for such purposes? Discuss and prepare a brief report.

**Ans.** The continuously cutting of trees is not justified for any project. We not only cut the trees, we snatch away the shelters of many animals, birds and other organisms. The ecological balance is also disturbed. It also causes many natural calamities.

**Q. 7.** How can you contribute to the maintenance of green wealth of your locality? Make a list of actions to be taken by you.

**Ans.** (i) We can grow more and more plants in our locality.  
(ii) We can protect them and provide water to them.

- (iii) All the residents should be taught about the benefits of trees.
- (iv) They should also be taught about the harms of cutting trees.

**Q. 8.** Explain how deforestation leads to reduce rainfall.

**Ans.** Plants are the main agent to maintain the water cycle in the environment. So cutting of trees reduces the rainfall of that area. If plants will not absorb water from soil they will not evaporate in the environment to form clouds. If clouds will not be formed then no rain-fall takes place. In this way deforestation reduces rainfall.

**Q. 9.** Why should paper be saved? Prepare a list of ways by which you can save paper.

**Ans.** The wood pulps and the bark of trees are used in the manufacturing of paper. If paper is not saved it causes cutting more and more trees. So we should save paper to protect our trees.

#### Ways to Save Paper:

- (i) Paper should be recycled.
- (ii) We should not throw paper here and there.
- (iii) Waste paper should be collected and sent for recycling.

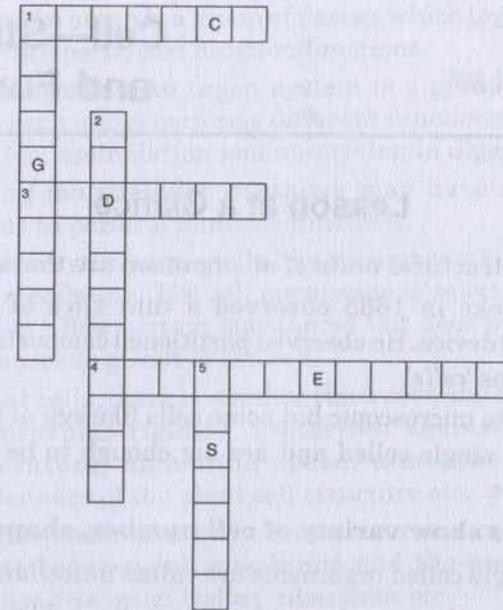
**Q. 10.** Complete the word puzzle

#### Down

1. Species on the verge of extinction.
2. A book carrying information about endangered species.
5. Consequence of deforestation.

#### Across

1. Species which have vanished.
3. Species found only in a particular habitat.
4. Variety of plants, animals and microorganisms found in an area.



**Ans.**

