

# **CHAPTER 9**

## **Conservation of Natural Resources**

### **PERFORMANCE OBJECTIVES**

***At the end of this chapter, students should be able to:***

- explain the meaning of conservation of natural resources.
- identify the needs for conserving natural resources.
- state the natural resources to be conserved.
- explain the ways of ensuring conservation.
- state the problems of conservation of natural resources.
- explain the benefits of conservation.

### **INTRODUCTION**

Conservation of natural resources is referred to as the controlled exploitation and wise use of natural resources, so as to ensure their continued availability. It could also be the preservation of the quantity and quality of the original nature of the environment. Furthermore, it is the development and wise use of natural resources. The practice of conservation protects nature from loss or damage so that they will yield the greatest sustainable benefits to present generation, while maintaining its potentials to meet the needs and aspirations of the future generation.

### **NEEDS FOR CONSERVATION OF NATURAL RESOURCES**

There are numerous needs for conservation of natural resource. These include the following:

- Prevention of wanton destruction of the natural environment.
- Promoting sensible use of natural resources.
- Preservation of rare and valuable species of animals and plants for future generations.
- Preservation of naturally beautiful sceneries and landscapes for their aesthetic values.
- Promotion of the recycling of some scarce mineral resources.

### **NEEDS TO CONSERVE PETROLEUM AND GAS**

Petroleum and gas should be conserved for the following purposes:

- Petroleum and gas contribute to the increased source of foreign exchange for the nation.
- They are conserved for their sustained use in various spheres of human

activity such as fuel for automobiles and generators.

- They serve as a source of raw material for industries in the production of automobile plastics, such dash boards, and lubricants. This creates job opportunities for youths and graduates.

## **NATURAL RESOURCES TO BE CONSERVED**

The natural resources to be conserved are as follows:

(i) Forest: These include important species of trees, shrubs, herbs, grasses and other related forest products.

(ii) Wildlife: These are mostly the wild animals found in the forest.

(iii) Soil: These include the soil texture and soil microbes (soil flora and fauna).

(iv) Water: These include the water bodies, aquatic plants and animals (mainly fishes).

(v) Air: This refers to the atmospheric gases.

(vi) Sunlight: This involves the radiant energy of the sun.

(vii) Minerals: These are important elements found in water, atmosphere and on the earth crust.

## **WAYS OR METHODS OF ENSURING CONSERVATION**

We can ensure effective conservation of natural resources through the following methods:

- Agencies responsible for conservation
- Legislation
- Education
- Erection of parks and reserves

## **AGENCIES RESPONSIBLE FOR CONSERVATION**

The government of various countries have agencies, which are responsible for conserving natural resources. In Nigeria, such agencies include the Forestry Departments of the states; Federal Ministries of Agriculture and Natural Resources; Nigerian Conservation Foundation; and Forest Reserve Authorities (established in 1982 whose function is primarily to conserve our forest and wildlife). The aim of these bodies is to care for the conservation of games and forest resources.

## **LEGISLATION**

To ensure the conservation of our natural resources, various governments

have enacted conservation laws. In Nigeria, as in many countries, such laws are those against the indiscriminate burning of bushes or forests, felling of trees, hunting of game in game reserves, fishing and the exploitation of minerals by individuals. There are international treaties to preserve many animals such as whales and seals against extinction and to protect migratory birds such as the Canadian geese.

Whaling nations such as Japan, Britain and US have legislated against the killing of whales, particularly the blue whales. Because of the refusal of some whaling nations to stop killing the blue whales since 1963, the annual yield has reduced from 6,000 whales per year to almost nothing. The blue whale is the largest of all the whales. It is hunted for its oil used for the manufacture of soap and margarine and is eaten by the Japanese as a source of protein.

The enforcement of the conservation laws is carried out strictly in many advanced countries, e.g., Britain and US. This is also true of some African countries.

## **EDUCATION**

To enable many people to be aware of the need for conservation, various governments have mounted different campaigns. In Nigeria, for example, there are advertised campaigns on the television and radio with such slogans as plant two trees where one was felled and plant a tree everyday. There are also campaigns against bush burning and poaching in many countries worldwide.

## **ERCTION OF PARKS AND RESERVES**

Game reserves are where certain rare animals are preserved, e.g., Yankari, Borgu and Kainji. Forest reserves are plantations of selected plant species such as Cassia, Heavia and Terminalia spp. Examples of forest reserves in Nigeria include Onigambari forest reserve and Olokemeji forest reserve in Oyo State, and it is managed by the Ministry of Agriculture and Natural Resources. By conserving forests, wildlife is also conserved. However, wildlife includes all kinds of animals that live in the forest, rivers and streams. In many countries, certain areas are set aside for the protection and preservation of animals and plants. Such areas are called national parks. Examples include Tsavo National Park in Nairobi, Kenya and Serengeti Park in Tanzania. Large animals like elephant, giraffe, lion and white rhinoceros are found in these parks. These animals are close to extinction.



▲ **FIGURE 9.1** Game reserve

## **PROBLEMS OF CONSERVATION OF NATURAL REOSURCES**

Some of the problems of conservation of natural resources are as follows:

- (i) Over population: This leads to the increased demands on the available resources, thus causing the exploitation of such resources.
- (ii) Inadequate awareness: Many people are not yet adequately aware of the need to conserve natural resource. This is due to failure on the part of government over the years to encourage conservation education.
- (iii) Poor funding: There are limited funds and related resources to enforce policies or legislation made by the government for conservation of natural resources.
- (iv) Limited land: There are limited land for the construction of game reserves, forest reserves and parks, or development and expansion of related projects.

The benefits of conservation include the following:

- (i) It helps to protect the natural environment from indiscriminate destruction and fosters wise use of natural resources.
- (ii) It helps to combat soil erosion and desert encroachment. For example, in some parts of Sokoto, Borno and Bauchi States in Nigeria, there is Sahara desert encroachment. Reafforestation projects are being undertaken by the Bauchi State Government and the Federal Government to build shelter belts to stem desertification since 1987. This project is estimated to cost about N19 million.
- (iii) It helps to protect rare and useful species of animals and plants from

extinction. Examples are the white rhinoceros of the East African National Parks, the Koala bears and pelican, the rare orchids in Australian reserves and the Giant Panda of Tibet, kept in London Kew Garden, which has faced extinction in China around 1980 (Figure 9.2).



▲ **FIGURE 9.2** Giant panda

(iv) It helps to have planned harvesting of animals and plants. For example, in Britain, game laws limit the season for hunting and fishing, specifying the kinds of animals,

minimum size of animals and maximum quantity which may be hunted and caught.

(v) It helps to prevent indiscriminate exploitation of mineral resources by individuals.

(vi) It helps to prevent the destruction of natural ecosystems by limiting agriculture and industrial activities to certain parts of the environment.

## **SUGGESTED PRACTICALS**

### **ACTIVITY 1**

Study a big map of Nigeria, identify and list the states of forest reserves and game reserves in the map.

## **CHAPTER SUMMARY**

- â- Conservation of natural resources is referred to as the controlled exploitation and wise use of the natural resources, so as to ensure their continued availability to meet the future generationâ™s needs.
- â- The need to conserve the natural resources includes prevention of important species from extinction, prevention of wanton destruction of the natural environment, preservation of beautified natural environment and promotion of recycling of certain mineral resources.
- â- The natural resources to be conserved include forest, wildlife, air, soil, water, sunlight and mineral elements.
- â- Ways of ensuring conservation could be through agencies responsible for conservation, legislation, education and erection of parks and reserves.
- â- Problems of natural resources include over population, inadequate awareness, poor funding and limited land.
- â- Benefits of conservation include combating soils erosion and desert encroachment; protecting the environment from indiscriminate destruction, instilling wise use of natural resources, protecting important plants and animal species from extinction, preventing indiscriminate exploitation of mineral elements, protecting natural environmental aesthetic values and planned harvesting of plants and animals.

## **REVISION QUESTIONS**

### ***OBJECTIVE QUESTIONS***

Choose the correct options to the following questions.

1. Which of these statements is not correct about conservation of natural resources?
  - a. It preserves the quality of the original environment.
  - b. It controls exploitation of wildlife and forests.
  - c. It protects nature from lost or damage.
  - d. It exposes the soil to erosion.
2. Which of the following is the need for conservation?
  - a. Promotion of the recycling of some scarce mineral elements
  - b. Improvement of the economy of the country
  - c. Creation of wealth
  - d. None of the above
3. Conserved natural resources are capable of the following except

- a. beautifying the environment.
  - b. protecting nature from damage.
  - c. leading to extinction of important species.
  - d. combating desert encroachment.
4. Which of these is not a natural resource that has to be conserved?
- a. Soil
  - b. Water
  - c. Forest
  - d. Stones
5. All of these are methods through which we can ensure conservation of natural resources except
- a. Hospitals
  - b. Education
  - c. Legislation
  - d. Erection of parks and reserves

### ***ESSAY QUESTIONS***

1. (a) Explain the term conservation of natural resources. (b) State any four needs for conservation.
2. Identify the natural resources to be conserved.
3. Discuss any three ways of ensuring conservation.
4. Identify and discuss any three problems of conservation of natural resources.
5. The conservation of natural resources is beneficial to the present and future generations. Discuss.