

Lesson-6

Natural Resources of Assam and its Conservation

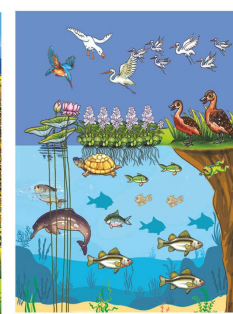
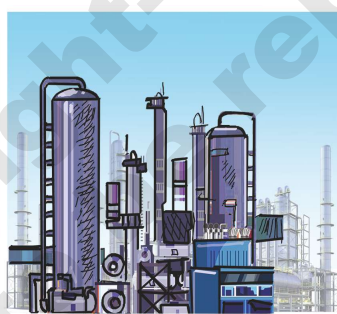


We depend on various materials for our survival. We get all these materials from the nature. For example- we need air for breathing, land for cultivation, bamboo, cane, wood, thatch, sand, stone, land, etc. for building houses, water to quench thirst, fire wood and coal for fire etc. all are obtained from nature. Although, all the materials we find in nature are not resources. **Natural Resources** are the materials which are derived from nature and are useful to us for different activities.

Natural resources such as air, soil, plants, solar energy etc. are always available even though we use them again and again. They are known as **renewable resources**. On the other hand, some resources take many more years to grow again if we use them once. For example coal, minerals, crude oil etc. They are known as **non-renewable resources**.

The natural resources found in Assam can be divided into four types. They are-

- 1) Forest Resources
- 2) Mineral Resources
- 3) Agricultural Resources
- 4) Aquatic Resources



1) Forest Resources—

The forest resources of Assam includes, plants and trees, animals and birds, insects, vegetables etc. Valuable woods like Sal, teak, titachapa, koroi, etc. are found here. Trees like holong, bonsom, titachapa are found in the hilly areas of the state and in the Barak valley. Other than that, different kinds of bamboos are found in the North Cachar hills. Trees like catechu, simolu, cotton, kadam, koroi, etc. along with nal-khagari, thatch, etc. are found on either side of the rivers and tributaries of Assam. People use these wood, cane and bamboo to make different types of furniture as well as various other objects for daily use.

The forests of Assam has many medicinal plants. Some people earn their livelihood by collecting and selling firewood, fruits, rubber, medicinal plants, thatch etc from the forests. Commercial plants such as sal, teak, etc and medicinal plants are exported by our country. Depending on these forest resources, match stick, plywood, paper and silk industries have been growing in Assam.

The forests of Assam are the habitat of many birds like- parrot, myna, vulture, owl, white winged wood duck, horn bill etc. The one horned rhino of Assam is world famous. Other valuable animals as elephant, leopard, deer, wild bear, wild cow, bear, wild buffalo, fox, hoolock gibbon, golden langur etc. are found in the forests of Assam. Tourists from India and abroad come to see these animals.



➤ Complete the list on the basis of the forest resources mentioned above—

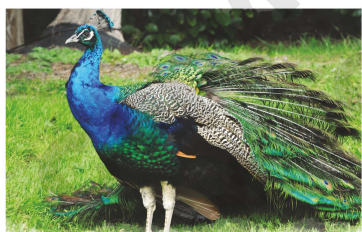
Name of plants found in forests	Name of birds living in forests	Name of wild animals

Learn from your teacher and write—

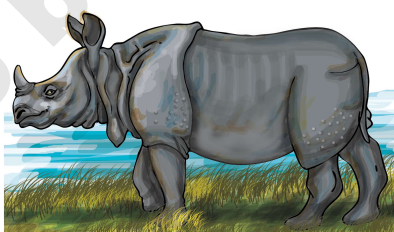
Name of the regional bird of Assam-

Name of the regional symbol of Assam-

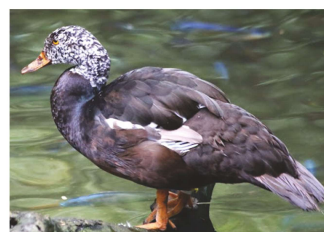
Name of the national bird of India-



Peacock



Rhino



White winged wood duck

Field visit

➤ Write the names and uses of the medicinal plants available in the surrounding area of your school or your house (Take the help of your teacher)

2) Mineral Resources

Assam is rich in mineral resources. Mainly coal, crude oil and lime stone are found in Assam.

Coal–

Millions of years ago the Earth was a wetland full of plants. Due to the natural disasters which occurred at that time these trees got buried deep underground. Sediment was deposited layer by layer over these buried plants and formed some strata. Gradually due to extreme underground heat and high pressure of earth's surface, these plants turned into coal. The coal is most valuable among the important fuels found in nature.

In Assam coal is found in Ledo, Margherita, Makum, Jaipur etc. The coal mine of Makum is very old. High quality coal is found in small amount in Koilajan, Silbhetta of Karbi hills. Many people earn their livelihood by working in coal mines.

Crude oil–

Millions of years ago, algae like plants and small animals of seas and oceans went deep under water after their death and got buried in the sediments. Due to the action of a micro-organisms along with high pressure of earth's surface and extreme heat of earth's interior, these dead plants and animals have been transformed into crude oil and natural gas. Crude oil exists in liquid form and the natural gas exists in gaseous form. Crude oil is also found in the strata of rocks. Crude oil is also found in the sea-bed underground. Crude oil is found in Naharkatia, Hugrijan, Moran, Rudrasagar, Geleki, Lakua etc. in Assam.

In 1889, the Britishers first found crude oil in Digboi



The crude oil drawn from the underground is purified in the refineries. Petrol, diesel, kerosene, naphthalene, paraffin are separated from the crude oil. There are oil refineries in Digboi, Numaligarh, Noonmati and Bongaigaon of Assam. After purifying, it is used in Assam and a part of it is sent to places outside Assam through pipelines. Some industries are growing in Assam by using crude

oil and natural gas. Due to continuous extraction of crude oil from underground, its stock is diminishing. So there is a need for economic use of it.

Coal and crude oil are used as fuel. These are called as fossil-fuels as they are produced from remains of plants and animals.

Limestone:

Limestone is another important mineral resource of Assam. Limestone is found in Umrangsu of Dima Hasao district, Koilajan and Dilai of Karbi Anglong district. Limestone is used to produce cement. The limestone from Koilajan is used in Bokajan cement factory. Chalk, toothpaste, paint etc. are made from limestone.

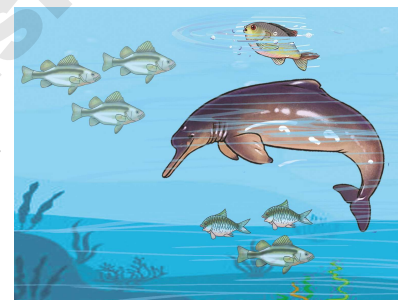
The use of these natural resources has become easy as they are available in our state. These resources help in industrialisation of our country and thus helps to uplift the standard of living. The Government collects revenue by exporting these resources as raw materials or products. As a result our state gets economic benefit. It is the responsibility of everyone to use these natural resources justifiably.

Write answers based on the details of Mineral Resources given on the previous pages-

- Names of the places of Assam where crude oil is found—
- Names of the places where coal is found—
- Names of places where limestone is found—

3) Aquatic Resources:-

The Brahmaputra and the Barak are two main rivers of Assam. These two rivers have many tributaries. Various sea-ports and ferry ghats have been growing on these rivers and tributaries. People take advantage of water transport system for communication and transportation of goods. The **river dolphin** found in Brahmaputra is a rare species of animal.



Aquatic resources



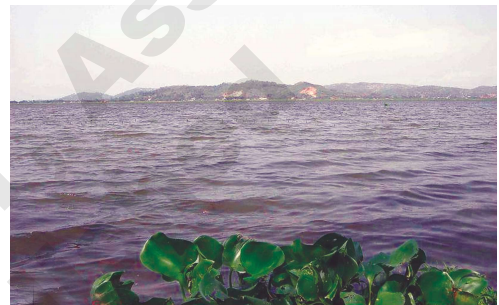
Major rivers of Assam

The main rivers of Assam and their tributaries–

Tributaries on the North bank of the Brahmaputra river	Tributaries on the South bank of the Brahmaputra river	Tributaries of the Barak river

Hydroelectricity is produced by constructing dams in suitable positions of the river. The sand found in the rivers and the tributaries are used in constructing buildings, roads etc. The banks and nearby areas of rivers become fertile for crops due to deposition of sediments and silts. The water of the Brahmaputra and some of its tributaries is supplied to the people of nearby areas through pipeline. The underground water is also a resource for us like the surface water. Some of the underground water is drawn out for use in domestic works, crop fields, factories etc.

Our state is full of ponds, canals, lakes etc. besides rivers and tributaries. Deepor Beel, Chandubi lake, Samaguri Beel, Son Beel etc. are some important water bodies of Assam. Many wild animals, birds, etc. inhabit these water bodies for food and water.



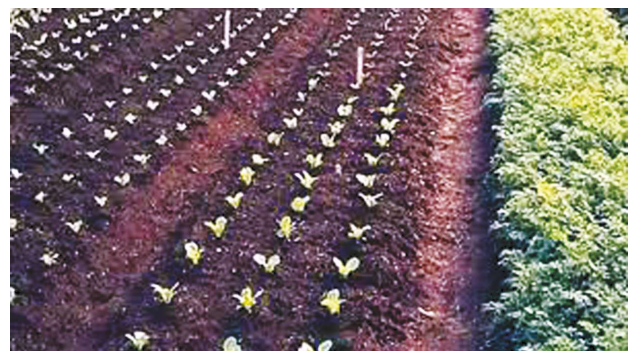
Chandubi lake



4) Agricultural Resources:-

The requirements of fish is fulfilled by the rivers, tributaries, beels, lakes etc. Some people earn their livelihood by fish-farming. Different types of vegetables are cultivated in plenty in char areas of these rivers.

Various crops are cultivated in Assam according to the quality of soil and rainfall. Assam gets heavy rainfall in summer. During this period rice, jute, gourd, ridge-gourd, sponge-gourd, white-gourd etc. are grown. On the other hand, because of the low rainfall during winter wheat, maize, mustard, potato, cauliflower, cabbage, carrot, lemon, bean etc. are grown. Different pulses, jute, leafy vegetables, betelnuts are grown in Assam along with different fruits such as pineapple, sugarcane, guava, litchi, banana, orange, coconut etc. Tea is the principal plantation crop of Assam. Coffee and rubber are also grown here.



Protection and conservation of Natural Resources:

Due to natural calamities, pollution etc. the destruction of living resource can be seen. Moreover in the present times of modernization and industrialisation, the bioresources are moving towards destruction. Trees, birds etc. have started disappearing as people have started living in the hills.

Let us know the reasons of deforestation and decrease of wild animals–

- ✧ Due to increased population, the need for food, clothes and habitat of human beings have also been increasing. As a result, people are destroying forests to grow residential and industrial areas.
- ✧ Some animals such as one-horned rhino, pygmy-hog, wild buffalo, slow loris, golden langur, white winged wood duck, turtle etc. are nearing extinction from this world due to injudicious destruction of forests.
- ✧ Jhum cultivation is done on hills by cutting forests to make it free.
- ✧ Vast grasslands are tilled for cultivation and turned into agricultural land.
- ✧ Wetlands are buried to build habitation. As a result, the habitats of aquatic organisms have been decreasing along with the extinction of many aquatic plants and animals.
- ✧ Wild animals are killed for different parts of their body such as teeth, horn, skin, feather etc. As a result animals like elephant, buffalo, rhino, tiger, lion, peacock etc. are decreasing in number.
- Many years ago huge animals known as dinosaur lived on the earth. Due to unfavourable environmental conditions they became extinct.
- There was a bird named Dodo in the island of Mauritius. These birds were killed for meat by the sailors coming to Mauritius as a result of which these birds became completely extinct.



Dinosaur



Dodo

Conservation of **Natural Resources** is the recovery of the destructed resources and ensuring protection of the natural resources in a scientific and well planned manner. The aim of conservation is to maintain the natural balance of the earth, so that human beings, birds, animals, insects, plants etc. survive in a stable way. Conservation of natural resources means conservation of land, fuel and forests.

Land conservation: Land conservation means to prevent erosion of soil or land. Its main aim is to prevent the soil from getting changed and to retain the fertility of the soil and conserve it for agricultural use. Trees can be planted to prevent erosion which in turn helps in protection of the land. Also the use of compost manure in the soil helps in making the soil fertile which in turn helps in conservation.

Forest Conservation: Forest is the habitat of many plants and animals. The earth will be suitable for humans to live only if there are trees and animals. For protection and conservation of these forest resources, the government has recognised some natural regions full of plants, wild animals and birds as reserved forests, wild life sanctuary, national park, bird sanctuary, botanical garden etc. The government has announced some of the natural regions rich in forest resources as reserved forest. The department of forest takes suitable measures for the safety of the flora and fauna of these reserved forests. Three elements are needed to consider a region as the habitat of wild animals. They are-food, water and shelter. These three elements create the biodiversity.

➤ What do you mean by biodiversity? Discuss with the help from your teacher.

Let us learn about the birds and animals found in some National Parks and Wild Life Sanctuaries of Assam-

National Park	Important birds and animals
Kaziranga National Park	One horned rhino, leopard, elephant, different kinds of hare, deer, hoolock gibbon, bear, wild buffalo, birds of various species etc.
Manas National Park	Royal Bengal tiger, golden langur, pygmy hog, hispid hare, jungle fowl, peacock, etc.
Nameri National Park	Royal Bengal tiger, elephant, langur, white winged wood duck, hornbill, etc.
Dibru Saikhowa National Park	Wild horse, wild buffalo, white winged wood duck, etc.
Orang National Park	White winged wood duck, wild buffalo, rhino, tiger, peacock, etc.
Raimona National Park	Elephant, tiger, golden langur, different varieties of birds, butterflies etc.
Dihing Patkai National Park	Different varieties of birds, reptile, hoolock gibbon, tiger, leopard, black bear, white winged wood duck, elephant, etc.

Names of wild life sanctuaries: Garampani, Laokhowa, Bornodi, Chakrashila, Burha-chapori, Panidihing, Hollongapar Gibbon, Pobitora, Sonai-Rupai, Bherjan-Borajan-Padumoni, Pub Karbi Anglong, Nambor, Marat Longri, Nambor Doigorung, Amsang, Barail.

On the basis of bio-diversity, the Government has declared a region of great natural importance as wild life sanctuary. The flora and fauna of the region are specially protected in the sanctuaries. Strict vigilance is provided there so that no one can cut trees without proper permission and kill animals.

Generally, National Parks are divided into two areas- deep forest area and surrounding area. There is a provision of visiting the surrounding area for the tourists. The deep forest area is not allowed to be visited by public. This area is conserved completely for the wild animals. The government collects revenue from the tourists who come to see these reserved forests.

The main provision for the management of the National Parks and Wild Life Sanctuaries are—

- ✧ Protection of habitats of wild animals
- ✧ Prohibition of free movement of man and domestic animals.
- ✧ Preservation of streams, lakes, swamps and marshy areas to prevent the scarcity of water.
- ✧ Preservation of grasslands.



The wild animals and plants of the National Park and Wild Life Sanctuaries are protected by the law.



Fuel Conservation— Crude oil, natural gas, coal, lime stone etc. found underground are fuel. They are also known as power resource. These fuel are used in vehicles, industries, factories, cooking etc. Due to excessive use of fuel, the sources of these power are slowly starting to diminish. It is therefore, required, to conserve fuel and reduce wastage. For that, people have to change their life style.

Some provisions of power conservation—

- Develop solar energy, wind energy etc. and use them in day to day activities instead of mineral resource.
- Prevent wastage of fuel used for extraction of power.

Think and write-

- Why should we conserve the living resource?
- What difficulties will we face if there are no trees?
- What will happen if the water of rivers and tributaries go dry?
- What are the needs of the National Parks?

Group Activity:

- Prepare a chart on the days celebrated for conservation of environment and their significance.
- Collect data and participate in discussion
 - What type of natural resources can be found in your area?
 - In what type of works are the natural resources used?
- Write slogans on environment conservation on a poster and hang it in your school compound.

Let's know about some awareness measures taken by public to create awareness on conservation of nature:

- **World Forest day** is observed on 21st March by organising plantation programme. This helps in plantation of trees and also in increasing awareness among the people regarding taking care of the trees.
- 22nd March is observed as **World Water Day**. Meetings and programmes are held to increase awareness regarding conservation, protection and judicious use of water.
- The **International Day for Biological Diversity** (IDB) is observed on May 22nd.
- Each year 5th June is observed as **World Environment Day**. On this day meetings and plantation drives are organised to make people aware about the effects of environmental pollution and also about the provisions/precautions to be taken for conservation of environment.
- **World Wildlife Week** is observed on the first week of October to bring awareness regarding conservation of wildlife.

Exercise

1. Write the answers-
 - a) What do you understand by Natural Resources?
 - b) What do you understand by renewable and non-renewable resource?
 - c) Write the names of the National Parks of Assam.
 - d) Name the districts of Assam where limestone is found.
 - e) Name four rare species of animals found in the forests of Assam.
2. Write short notes on-
 - a) Wild life sanctuary
 - b) Reserved Forest
 - c) Botanical Garden
 - d) National Park
3. Fill in the blanks-
 - a) 21st March is observed as-----
 - b) All the materials we find in nature are not _____
 - c) The coal mine of _____ is very old.
 - d) _____ is used to produce cement.
 - e) _____ and _____ are the two main rivers of Assam.
4. Write about the necessity of conservation of Bioresource.
5. Write three measures to be taken to create environmental awareness.
6. Find out the correct answer and write-
 - (a) Which one of the following is a National Park?
 - i) Raimona ii) Gorampani iii) Pobitora iv) Chakrashila
 - (b) Which one of the following is the state bird of Assam?
 - i) Myna ii) Peacock iii) Hornbill iv) White winged wood duck

