

- Some of you in the class may be familiar with a nearby forest – its trees, plants, animals, rocks, streams, birds and insects. Describe to the class the forest in detail and what you do there.
- Have you ever been to a forest to collect firewood, leaves or fruits and tubers? Tell everyone in the class about it and also make a list of all the things people in your area collect from the forests. How are they used?
- You have read about forests and people living in the forests in the previous classes. Can you recall some of them and talk about people who live in the forests?
- Can each of you draw a picture of a forest and compare them?
- Our folk tales and Puranas and stories repeatedly mention forests. Can you relate in the class some such stories about forests?
- Many forests are sacred and are worshipped by the people. Some forests are famous as the abode of some gods and goddesses. Find out about them and tell everyone in the class about them.

What is a Forest?

Forests mean many things to different people. Some people are afraid of forests thinking that it is the abode of wild animals, snakes, insects and dangerous places like deep gorges, cliffs and rocks. Others have no such fear and walk around the forests as if it were their home and even play in the forests. To some, forests are sacred places whose deities are worshipped. To yet others, it is a place from where they get raw materials like timber, bamboo or beedi leaf or hunt animals and sell them in the market.

Similarly, different people use forests differently. Some people live in simple shelters in the forests and grow a few

vegetables etc and gather fruits and tubers and hunt small animals. Some others use the forests to graze their animals – sheep, goat, cows etc. Some others cultivate by making small clearings or podu in the forests. You have read about them in Class VI in the chapter about Kunavaram Hills. Some others use the forests by cutting down trees and bamboos and selling to paper or furniture factories in the towns. Yet others look at forests as places which can be converted into fields, tourist resorts or dams for storing water.

Of course, we need to remember that human beings are not the only people who use forests. Trees, plants, grasses, birds, insects, animals, fishes - countless beings thrive in and use the forests. So when we

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- Do you think it is important to have forests? What will happen if all the forests are cleared and used up for growing crops, building factories or mines or houses for people to live? Can't we live without forests? Discuss in your class.

Location and Types of Forests

Where do forests grow? This is a difficult question to answer. Several thousand years ago forests grew almost everywhere where there was soil, sunshine and rain. Thus forests did not grow only in the Arctic regions or high up in the snow covered Himalayas or sandy or rocky deserts, or on sandy sea coasts. Leaving aside such places, forests grew almost everywhere. However, as human beings took to agriculture and living in villages and towns, forests were cut down for agriculture, mines, plantations, industries, etc. Slowly by the beginning of 20th century, forests were confined to only tracts that were not useful for agriculture. Regions that were hilly, swampy, rocky etc. or which were too cold or far away from population centres retained forest cover.

- Which is the nearest forest area from your village or town? Find out why this area still has tree cover and has not been converted into fields or habitations or mines.

Forests can be classified on the basis of different criteria. For example, we can classify them on the basis of how dense or sparse the vegetation is. We can have 'very

dense forests, open scrub forests, degraded forests etc. This classification helps us to understand where we have thick forest cover and where it is in a degraded situation. Another way of classifying forests is by looking at the type of vegetation that grows in them. Different kinds of trees grow in places which have a particular climate – combination of rainfall, temperature and cycle of dry, wet and hot months etc. For example, some trees like coniferous trees like pine will only grow in very cold climates which also have snowfall. Some trees like teak grow in regions of moderate rain and warm temperatures. The density of the trees will also depend upon the nature of rainfall and temperature.

Let us learn about some main kinds of forests.

1. Evergreen Forests: Regions which get very high rainfall and also have a very warm climate like in Equatorial regions or regions like Kerala and Andamans in India have evergreen forests. These are dense forests with a very large variety of trees, plants, creepers, etc. These forests are always green as the trees shed their old leaves but get new leaves very soon. While one kind of tree sheds its leaves another tree remains green. This is because they get moisture and warmth to grow constantly. *Jamun*, canes, bamboos, *kadam* etc are some characteristic trees of these regions. We do not have such forests in Andhra Pradesh.

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think of the forests we need to think about them too.

- What is a forest? There can be many ways of defining a forest. Write a definition of forests.
- Then discuss jointly in the class and write down points which seem to be correct to most students.

How we define a forest will depend upon how we look at them. For example, one easy definition can be 'a large tract of land covered by trees'. While this may be a useful definition, it has several limitations. For example, we need to ask how large a tract? What do we mean by covered by trees? How thickly covered? Should we differentiate between a forest and a plantation which can also be 'covered by trees'? Can a forest be complete without its undergrowth, animals, birds and insects? There can be many more questions like this about any definition.

Nevertheless, we have to work with some common understanding of what is a forest – perhaps we can say that most forests have many of these features:

1. A large tract – stretching several kilometres in length and breadth
2. A tree cover and undergrowth (bushes, plants,

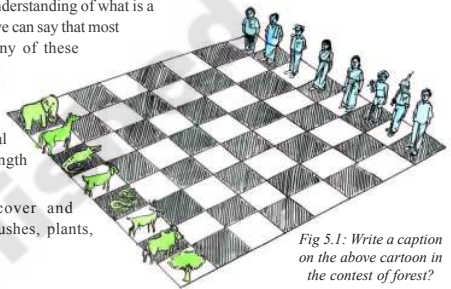


Fig 5.1: Write a caption on the above cartoon in the contest of forest?

50 Diversity on the Earth

Forests-Using and Protecting them

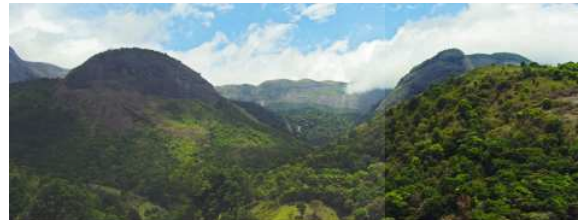


Fig 5.2: (top) Evergreen forest in Western Ghats, Anaimudi, (bottom) Snow covered Deodar forest in Gulmarg Himalayas

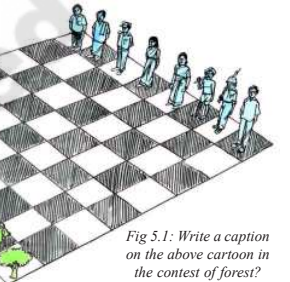
There are also different kinds of evergreen forests in the Himalayas. These are pine forests which remain green throughout the year. However, they have leaves which are very thin and in the shape of needles. These trees don't bear flowers but produce cones and hence are called coniferous trees. These trees grow in areas with snowfall. Hence these trees have the needle like leaves which do not allow the snow to rest on them. The tree itself is

shaped in such a way that the snow slips down the sides and falls on the ground (just like sloping tiled roofs of houses).

3. Considerable bio-diversity – where many kinds of plants and animals live and breed naturally without interference

4. In India at least, most forests are inhabited by people who have been living in them by adapting themselves to the conditions of the forests but without changing them too much.

People living around the forests use them for a variety of purposes for food, for wood for building cottages and making agricultural tools, fuel, grazing animals, for worship, solitude etc. People living far away from forests too have been using the forests for many things like wood, medicines etc. which they buy in the market. Thus many people earn their livelihood by collecting forest produce and selling them. Later on we shall see how these different uses of forests often come into conflict with each other and how these conflicts are handled.



Forests-Using and Protecting them

52 Diversity on the Earth

Forests-Using and Protecting them

onset of rains so that the trees can produce food for themselves. Most of the forests of Andhra Pradesh fall in this category as we get less rainfall and that too in some months and it is very hot during most of the year.

In our state we have two kinds of deciduous forests – ones which receive more rain and ones which receive less rain. The deciduous forests which receive more rain have the following kind of trees – *Vegi*, *Ageisa*, *Maddi (Arjuna)*, *Bhandaru*, *Gittegi*. In our state such forests are found in Srikakulam and Visakhapatnam districts and East Godavari agency areas.

In areas with less rainfall we have trees like *Maddi*, *Teak*, *Velaga*, *Aegis*, *Yepi*, *Chiguru*, *Billu*, *Neem*, *Dirisena*, *Buruga* and *Moduga*. Such forests are more widespread in our state and can be found in Adilabad, Warangal, Y.S.R. Kadapa, Kurnool, Khammam, Nizamabad and Karimnagar districts.

3. Thorny Forests: These grow in very dry areas with little rainfall and high temperatures. Most of the trees are thorny. The common trees are *Babul (Thumma)*, *Bulusurega*, *Sandal*, *Neem* etc. They are located in Y.S.R. Kadapa, Chittoor, Anantapur and Nalgonda Districts.



Fig 5.4: Thorny bushes

You may recall that these are the districts with very little rainfall nearing desert conditions. Thorny trees have very tiny leaves and thorns which help to conserve water. The forests are also not dense and have open spaces and more undergrowth with fewer trees.



Fig 5.3: (top) Teak forest in summer in Chattisgarh, (bottom) Babul forest in Rayalaseema

4. Littoral (sea coast) and swamp forests: These grow mostly in the sea coasts on sandy beach and marshy lands and on lands affected by tidal waves. Here the trees are adapted to salt waters and the flow of tidal waves (tidal waves typically submerge these areas for some hours of the day and recede, thus alternating salt water flooding and drying).

These are also called mangrove forests – the trees have developed some unique features to survive in this difficult environment.

Uppu ponna, *Boddu ponna*, *Urada*, *Mada*, *Telli Mada*, *Gundu mada*, *Kadli* and *Bella* are some of the typical vegetation of this region.

Status of Forests in Andhra Pradesh

You read about some of the important kinds of forests in our state. But how large are our forests? Are they increasing or decreasing? Let us find out.

About 64,000 sq kilometres of the state are declared as forest by the government. This is about 23% of all land in the state or

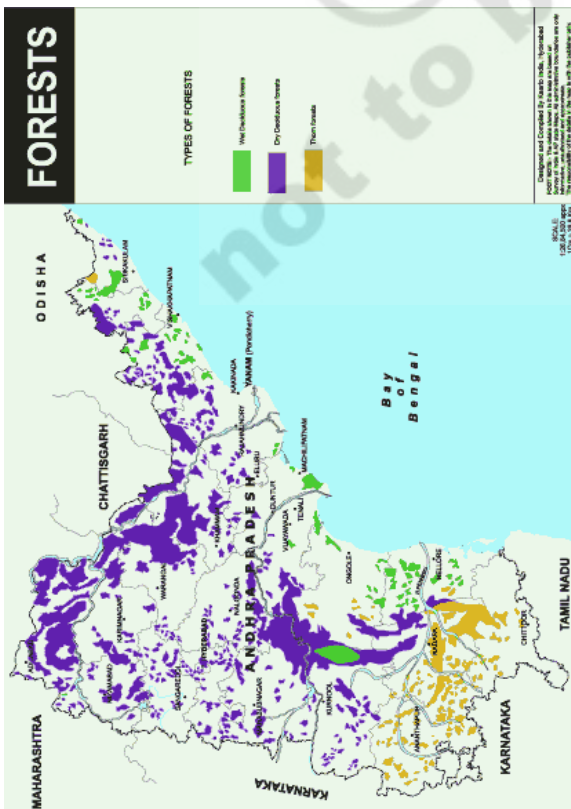


Fig 5.4: Mangroves - Koringa in East Godavari District.

- Find out how the mangrove trees adapt to the special conditions of sea coasts.
- You may remember reading about Equatorial forests in Nigeria. What are the main differences between the forests of Andhra Pradesh and the Equatorial forests?
- Look at the map of Andhra Pradesh given in the next page showing the distribution of forests. Find out if your district has any forest and if yes what kind of forest.

nearly one quarter of our state. However, all this is not really forested as only about 16% of our land has tree cover to qualify as forest. This means that is about 7% of our forest lands are open grounds and with very few trees. Even this forest cover is dwindling due to felling, encroachment, mining etc. Every year about one hundred sq kilometres of forests are lost in our state.

- Is this a satisfactory situation? Discuss in your class?



Tribal people and Forests

It is difficult to imagine forests in our country without the people who live in them and use them. Forests provide the critical resource for the very poor in our state to make a living. In North Coastal Region, for example, 20% of the people who use the forests collect head loads of fuelwood and carry them to markets for sale. On the other hand in Rayalaseema districts most people depend upon the forests for grazing sheep and goats. In contrast, nearly 75% people in Telangana collect minor forest produce (called Non-Timber Forest Produce or NTFP) and sell them in the local markets for earning a living. Even in Coastal region about 50% people depend upon such collection of forest produce. You would have made a long list of forest produce people collect, but the full list is much, much longer with about more than sixty items on it!

Of the people who depend upon forests for their livelihood, the tribal people are the most important. For thousands of years tribal people have lived in these forests, protected them and earned their livelihood from them. You have read about them in the earlier classes.

Even today more than 60% of the forests of Andhra Pradesh are in areas where tribal people live. Similarly about 60% of tribal people in our state today live in forests. How do the tribal people use the forests? You may remember how the Konda Reddys of Kunavaram hills use the forests around them – for podu cultivation, collection of forest produce like food items, (fruits, tubers etc), items for sale

like beedi leaves, medicinal plants, bamboo, tamarind, etc.

Unlike in plain villages, tribal people don't have the notion of private property in land and all clan members use the forest with the consent of the village elders. Each family has customary right over the land they cultivate and will shift to in the coming years. Since the podu keeps shifting every few years there is no fixed record of ownership of land. Also, when population increases and new families are formed, the village elders give them permission to clear new plots of land. In the days before the British rule, the tribal people treated the forests as their own. But it was a sacred land to them, which they used without causing damage to it or the animals in it. Even when they hunted animals or cleared forests for podu fields, they took care to ensure the regeneration of animals and trees. Thus they both cared for and used the forests, just as a peasant family takes care of its fields.

- Do you think it is possible for people to take care of forests and use them as well? What would they have done if someone had tempted them to cut trees and sell them in the markets?

During the last two hundred years after the establishment of the British Rule in our country, the tribal people gradually lost their control and rights over the forest. Since then, forests were rapidly cut down. This happened in two ways. Firstly, there was a great demand for wood for various purposes like building railways, ships, factories, mines, houses, furniture etc.

Similarly, many industries like paper industry as you have read in Class VII need large quantities of pulp wood. As a result of these pressures, large tracts of forest were cut down and the wood sold out. In many areas, forests were cut down to create plantations of tea, coffee or rubber and later on of quick growing trees like eucalyptus or bamboo. Thus the total area under forests got reduced greatly.

- Do you think there is any difference between a plantation of eucalyptus trees or tea shrubs and a forest? Discuss in the class.

Secondly, the British government wanted to control the felling of forests in such a way that it could benefit most from it and also help protecting the remaining forests. They made laws in 1864 and 1878 to create the Forest Department which was given control over the forests. Similar laws were also passed by the Nizam government in the areas under its control. The laws restricted the traditional/ customary rights of the tribals and forest users by classifying forests as 'reserved' and 'protected' forests. Reserved forests were forests in which no one could enter. 'Protected' forests could be used by people; they could take head-loads of wood and small forest produce for their own use and could graze their cattle. But, here too, there were many restrictions over cutting trees, grazing more than the limit set by the Forest Department etc.



Yet as we know a very large number of people lived in these forests and depended upon their use. The government at this point did not really care for them. When the government had to define the area under forest, it treated most of the land used by the tribals as forest belonging to the government. This was because unlike in the plains villages which had village land records, most of the tribals cultivated land without any ownership records. In the northern districts of Telangana, the Gonds cultivated settled agriculture, while the Kolams etc. practised podu cultivation on the hill slopes. Even the Gonds who practised a more settled type of agriculture were in the habit of leaving lands fallow and cultivating alternate lands in two-year cycle. The demarcation of Reserve Forests did not take notice of these practices and in one stroke, rendered many tribals without rights and led to forced evictions.

By one stroke the tribal people were rendered homeless in their own homes! To add to it, the government was eager to hand over the land to zamindars and cultivators

from other areas so that they could settle down and cultivate the lands and pay revenue to the government. The evicted tribal people had to work for these landlords now. On the lands which the tribal people were allowed to cultivate, they had to pay very high revenue. Often they had to borrow money from moneylenders to pay this amount. In the end they had to sell off their land to the moneylenders. Thus they again lost whatever land they had.

The Forest Department which was established in this period had the task of protecting the forests and planting new trees. It also had the responsibility of managing the 'harvesting of the forest', that is felling mature old trees and selling them to earn money for the government. The Forest Department officials usually belonged to distant rich communities who regarded the tribal people as ignorant and dangerous people and had no sympathy for them. They exploited the hapless tribal people, cheated them and constantly harassed them. In the name of forest conservation, large-scale evictions occurred in the 1920s and mopping operations continued till 1940. This created an atmosphere of unending insecurity for the tribal people.

The tribal people fought against this from the very beginning. In some regions like the North East they were able to win some protection from the government.

- List all the causes for decline of forests in the last 200 years. Do you think Podu cultivation was also responsible for this? Give your arguments.

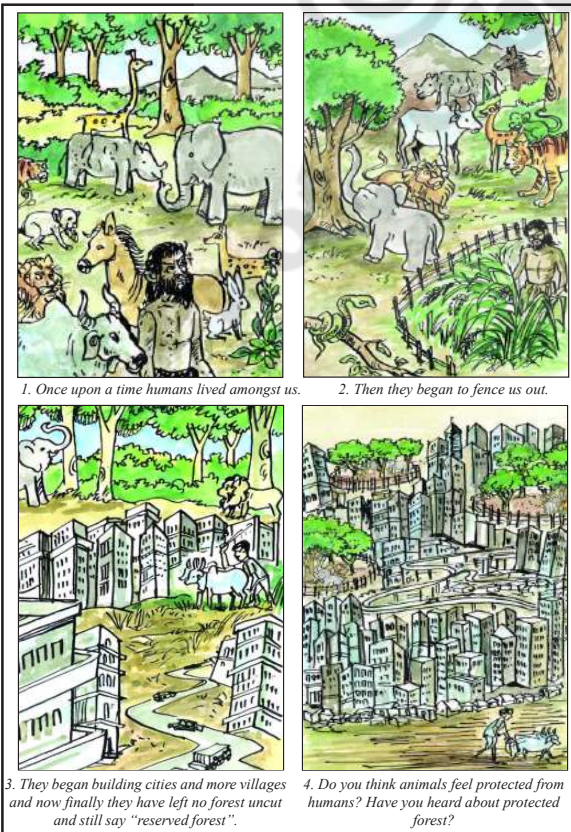
- What was the difference between protection of forests by the tribal people and by the Forest Department?
- Why do you think the tribal people were not able to pay the land revenue demanded by the government?

At the time of independence our national leaders were debating whether it was better for tribal people to be left alone to lead their traditional lives in the forests or should they be made to adopt settled agriculture, modern education and industrial work.

- Discuss in the class which way would have been better.

The change in 1988-90

By 1988 the government realised that the development of tribal people could not be thought of without giving them any rights over forests. They understood that the protection of forests was impossible without the active role of tribals. The National Forest Policy, 1988 declared that the primary task should be to associate the tribal people in the protection, regeneration and development of forests. It also wanted to provide gainful employment to the people living in and around forests. The government sought to involve village communities living close to the forests in their protection and the development of degraded forest land. It also prescribed right of use to village communities to meet their demand of forest produce and active participation in afforestation programmes. This was the beginning for an active



cooperation between the forest/ village communities and the Forest Department for the revival, restoration and development of degraded forests. Thus a new policy was put into practice in 1988 which eventually led to the Joint Forest Management. It actually meant that the Forest Department and local communities will collaborate in regenerating degraded forests, planting trees. The communities were allowed to use the grass and other minor forest produce.

In Andhra Pradesh this programme was renamed as Community Forest Management (CFM) programme. While this programme helped to bring together the Forest Department and the local communities, it only forced the tribal people to give up their earlier podu lands for forest regeneration. During the same time several Tiger Sanctuaries were established in the forests to protect wild life.

- Find out from your elders about their experience of CFM and also Social Forestry projects.
- Why do you think the government thought that forest was not important for tribal people's development?

Forest Rights Act, 2006

The tribal people had been protesting and fighting against these processes. Their cause was taken up by many non-governmental agencies which built a national campaign for tribal rights over

forest. After prolonged debate the Parliament passed the Forest Rights Act in 2006. For the first time it was accepted that during the last 200 years gross injustice had been done to tribal people and others by denying them traditional rights over the forests which actually belonged to them. It also recognized that it was impossible to preserve the forests without restoring the rights of the tribes etc.

The Act gave three main reasons for passing the new law:

Firstly, to conserve the forests and at the same time ensuring livelihood and food security of the forest dwellers;

Secondly, the forest rights on ancestral lands and their habitat were not adequately recognised during the colonial period as well as in independent India. This resulted in historical injustice to the forest dwellers, who are integral to the very survival and sustainability of the forests; and

Thirdly, it has become necessary to address the long standing insecurity of land rights and access rights of forest dwellers including those who were forced to relocate their dwelling due to State development interventions (like dams or tiger reserves).

The Act confers on forest dwellers and other traditional users of forests, their traditional rights over the forests and also title to lands they use. If implemented properly, this Act can be used to undo the

wrongs done to the tribal people over the generations.

- In what way do you think it makes up for the injustice done to the tribal people in the past 200 years?

Many people who are associated with the conservation of forests fear that this Act may cause further deforestation as the people may try to make use of forests for commercial purposes rather than traditional domestic purposes. On the other

hand others feel that by making the forest dwellers who have been traditionally taking care of the forests the main protectors, we will be able to save the forests better.

- Discuss this in the class – do you think it is the correct way to redress the wrongs done to the tribal people? How will it help in protecting the forests? What other steps need to be taken for this?

Try to understand the Provisions of the Forest Rights Act with the help of your teachers

- right to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood by a member or members of a forest dwelling Scheduled Tribe or other traditional forest dwellers;
- community rights such as nistar...;
- right of ownership, access to collect, use and dispose of minor forest produce which has been traditionally collected within or outside village boundaries;
- other community rights of uses or entitlements such as fish and other products of water bodies, grazing...;
- rights including community tenures of habitat and habitation for primitive tribal groups and pre-agricultural communities;
- rights for conversion of *Pattas* or leases or grants issued by any local authority or any State Government on forest lands to titles;
- rights of settlement and conversion of all forest villages, old habitation, etc...;
- right to protect, regenerate or conserve or manage any community forest resource...;
- right of access to biodiversity and community right to intellectual property and traditional knowledge related to biodiversity and cultural diversity;

Key words

- | | | |
|----------------------|-------------------|----------------------|
| 1. Afforestation | 2. Deforestation | 3. Forest management |
| 4. Forest Rights Act | 5. Reserve Forest | |

Improve your learning

- Do you agree with the following statements? Give reasons for your agreement or contradiction.
 - The notion of private property is important to protect the forest.
 - All forests need to be protected by human beings.
 - Over the centuries most people living on earth have reduced their dependence on forest for their livelihood.
- Create a timeline to show the major changes in use of forest over centuries. It may be necessary to look at your textbooks from previous classes.

Event	Changes affecting tribal life	Impact on forest
Emergence of agriculture		
Arrival of the colonial rulers		
Government rules		

- Based on the details given in the above text, or from what you already know about the forests, compare the type of forest that is closest to your area of living on the following aspects:

Density of trees	Types of trees found	Special features of trees

- Observe the map of forests in Andhra Pradesh and find out which district(s) has/have the maximum forest covered area?
- A few children in a school participated in *Vanamahotsavam* programme and they planted some saplings. How do you respond to this?
- Read the paragraph under the heading 'Forests of Andhra Pradesh' and answer the question:
What suggestions do you have for increasing the forest cover in our state?
- Locate the various places mentioned below different photographs of forests given in this chapter in an Atlas. What similarities and differences can you find among them?