



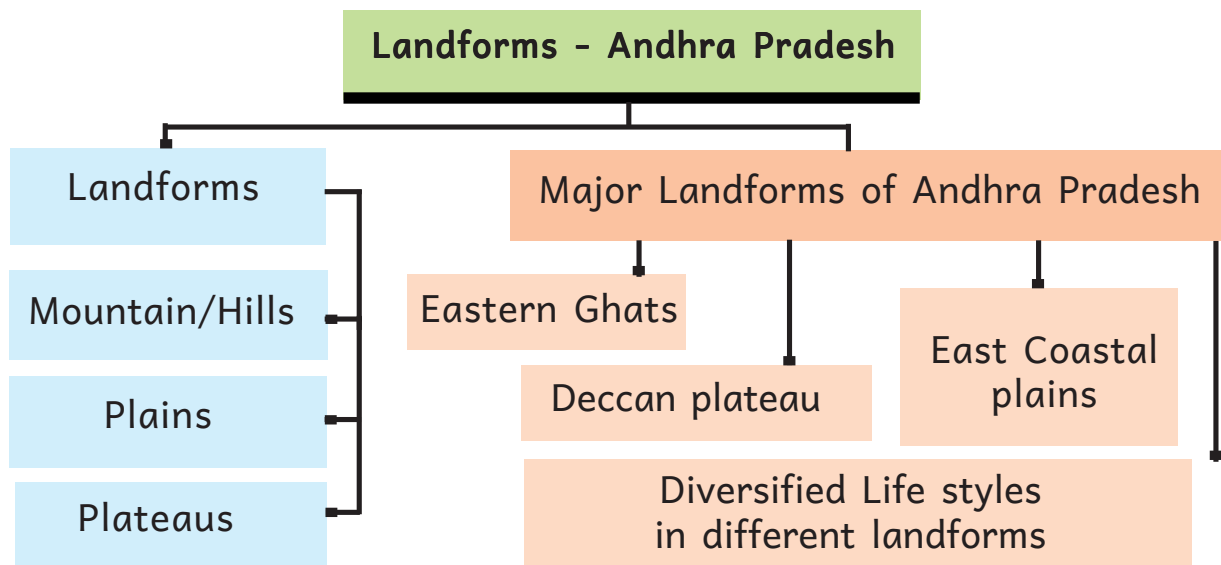
CHAPTER  
**4**

# Landforms - Andhra Pradesh

## Learning Outcomes

The students will be able to

- understand the meaning of landforms.
- understand about the different landforms where the people are living.
- understand the diversified lifestyles of the people of different landforms.



## Part A: Landforms

Teja asked his grandpa. “Today our Social Studies teacher told us about ‘Jana Gana Mana’ the national anthem of our country. What does it describe grandpa?” Grandpa answered “Yes, it describes the glory of our country. It was written by Rabindranath Tagore. When we hear the national anthem we feel proud.”

Teja’s brother Sasi also joined them and asked his grandpa. “Grandpa, do we have our state song?”

Grandpa replied, “Yes, we have state song... ‘Ma Telugu thalliki malle poodanda...’

“What does it describe?” Sasi questioned curiously.

“It describes the rivers and the rich heritage of our state and depends on the relief of the region. Children like you must learn about all these things and life styles which reflect patriotism and national integrity” grandpa replied.

“Relief of the region?” Teja repeated.

“Yes, it means the shapes of the surface of the earth. In other words we call landforms. The lifestyle, food habits and dressing patterns are different according to the region” Grandpa explained.

Sasi asked his Grandpa “How can we identify these landforms?”

He continued to describe the landforms and geographical features of Andhra Pradesh. How do you identify that where is your town or village located? Is it located on a plain land? Or elevated land? Or highly elevated land? Or nearby water body? When you answer these questions, you may recollect your area location that is located in a plain land or elevated land or highly elevated or nearby water body.

All these places where we live may not be having uniform landforms, it may vary from high elevated to plain land even valleys. When we travel from one place to another place we may observe different levels in land shapes like plain, plateau, hill, mountain, valley etc. These land shapes are called as landforms. Landforms can be mainly categorised into Plains, Plateaus and Mountains or Hills. These main landforms may contain several micro landforms. The height of the landforms are measured from Mean Sea Level (MSL).

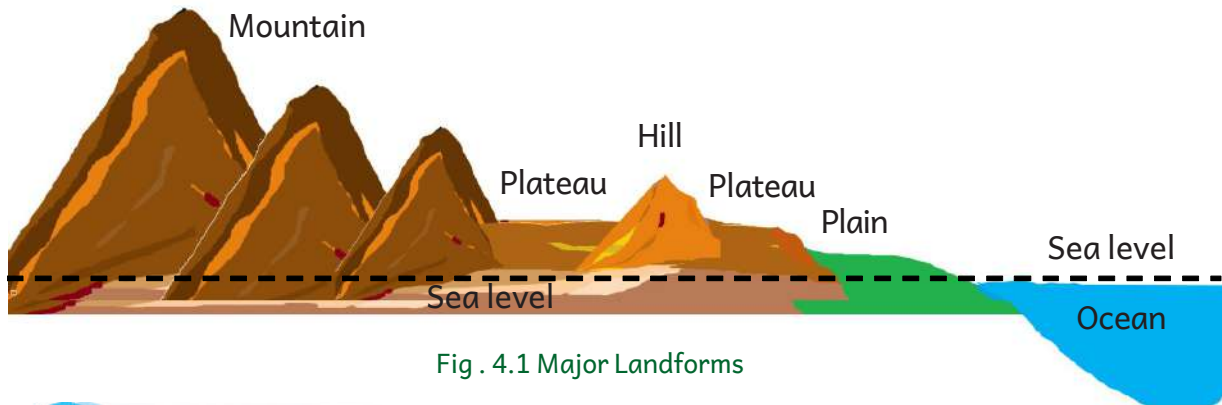


Fig . 4.1 Major Landforms



## Think & Respond

1. List out the landforms from the above picture?
2. Name the landforms around your village/town.

## Part - A : Major Landforms

### Mountain

A mountain is a natural higher elevated feature of the earth surface. The mountains may have a small summit and a broad base. It is considerably higher than the surrounding area. Some mountains are even higher than the clouds. As we go higher and higher altitudes of mountains, the climate becomes cold. India has several huge mountain ranges like Himalayas. In Andhra Pradesh state majority of high landforms are hills.



Fig 4.2 Mountains

### Plateaus

A plateau is an elevated flat land. It is a flat-topped table land standing above the surrounding area. A plateau may have one or more sides with steep and gentle slopes. Some plateaus around the world exist at such great heights that their climate is harsh and living conditions are unsuitable. Others, at much lower elevations, offer more favourable conditions.



Fig 4.3 Plateau

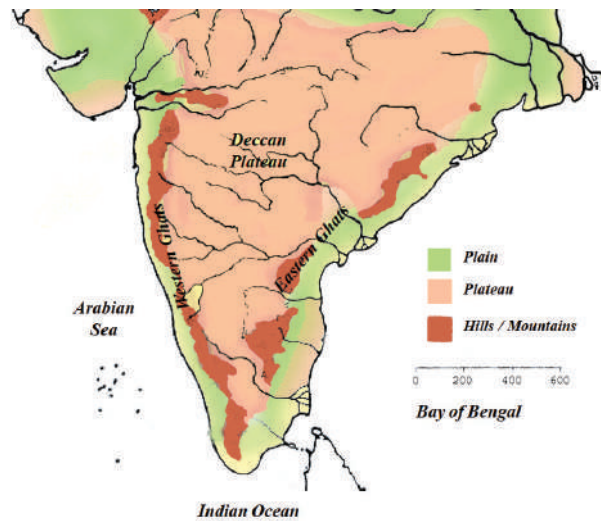
The height of plateaus often varies in a few hundred metres. The Deccan plateau in India is the oldest plateau and it is of volcanic origin. The larger part of Rayalaseema comes under Deccan plateau region.

Generally, plateaus are rich in mineral deposits. As a result, many of the mining areas are located in the plateaus. Limestone, manganese, asbestos, iron ore, gold, diamonds, graphite, dolomite, quartz and silica sand are the minerals available in plateaus. The Deccan plateau is a lava plateau. The lava plateaus are rich in black soil that are fertile and good for cultivation of cotton. Many plateaus have scenic spots and are of great tourist attractions.



### Do You Know

- The Tibet plateau is the highest plateau in the world with a height of 4,000 to 6,000 metres above the mean sea level.
- In India huge reserves of iron, coal and manganese are found in the Chotanagpur plateau.



Map 4.1 Deccan Plateau Region of India

## Plains

Plains are level lands with flat surfaces which have maximum height of 200 metres above the sea level. These are densely populated areas. Because of fertile soils, the plains are highly productive. Construction of transportation is also easy in plains. Plains are the most suitable areas for human habitation as these flat lands are suitable for building houses, as well as the cultivation. Indo-Gangetic plains of India are world famous. And several small delta plains are also found in other river courses of India.



Fig 4.4 Plain Region



### Think & Respond

- “The construction of a road is easy in plain areas”- Give the reason.
- Why plain areas are densely populated? Write two reasons.
- Generally the villages located in plains will have good employment and standard of living-Why?
- Which type of soils are more suitable for cultivation?
- Look at the pictures of a mountain, a plain and a plateau and identify which of them is similar to your region.

## Part B : Major Landforms of Andhra Pradesh

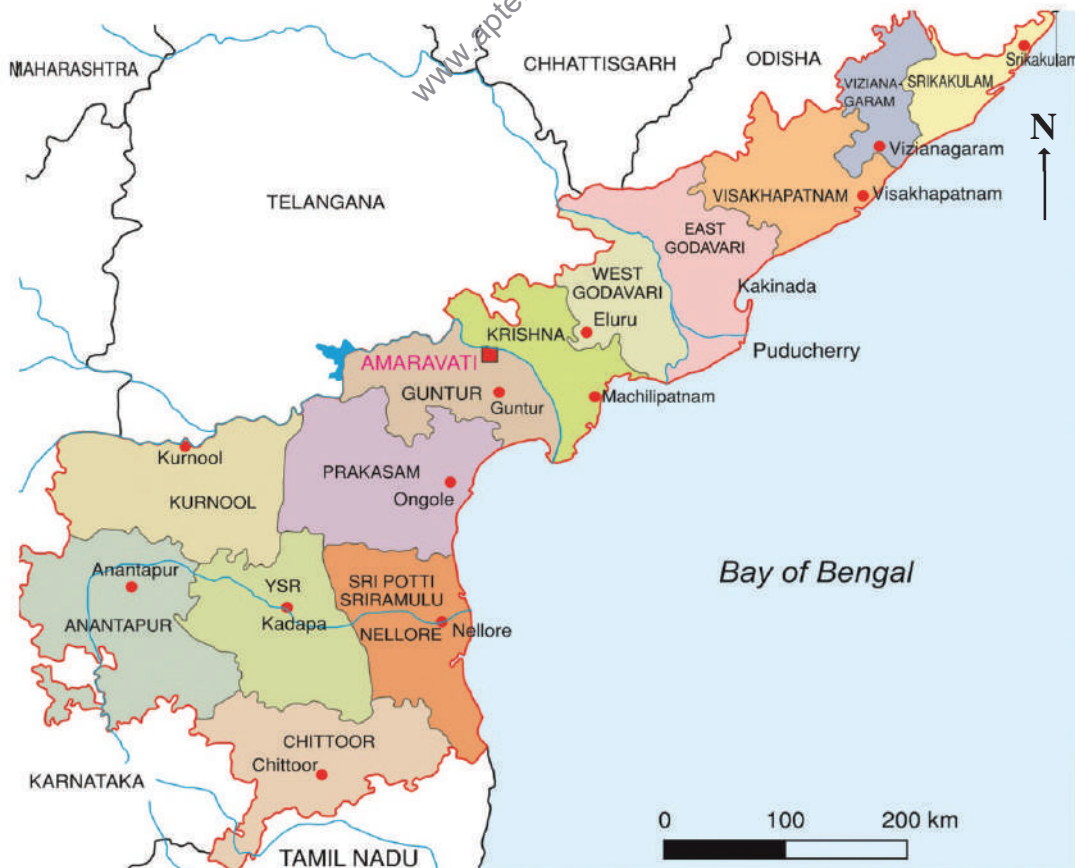
### Let us learn about the Landforms of Andhra Pradesh

Our state is a paradise of greenery and granary with economically enriched rural and agricultural background. It is situated in south-east direction and is one of the 28 states of India. Andhra Pradesh is located in the east coastal line of India. Chattisgarh, Odisha states are in the north, Tamilnadu is in the south, Telangana is in the west and north-west and Karnataka is in the south west and Bay of Bengal is in the east as boundaries of the state.

The length of coastal line of Andhra Pradesh is 972 kms. It is the seventh largest state in India in area and tenth most populous state as per 2011 census. Andhra Pradesh comprises - **Coastal Andhra Pradesh** and **Rayalaseema**.

**1. Coastal Andhra Pradesh:** There are 9 districts in coastal Andhra Pradesh along the coast. This region has the fertile soils of Godavari, Krishna and Penna Delta and the density of population is very high.

**2. Rayalaseema:** This region is a group of 4 districts in the southern region of the state and rich in minerals and horticulture crops. This has become horticulture hub now with highest per capita income.



Map 4.2 Political Map of Andhra Pradesh



## Let's Do

Observe the Map 4.2 and fill in the blanks

A) The names of coastal districts from North to South

\_\_\_\_\_

\_\_\_\_\_

B) The Names of Rayalaseema districts

\_\_\_\_\_

C) Write your village/town/city name :

Mandal : \_\_\_\_\_

District : \_\_\_\_\_

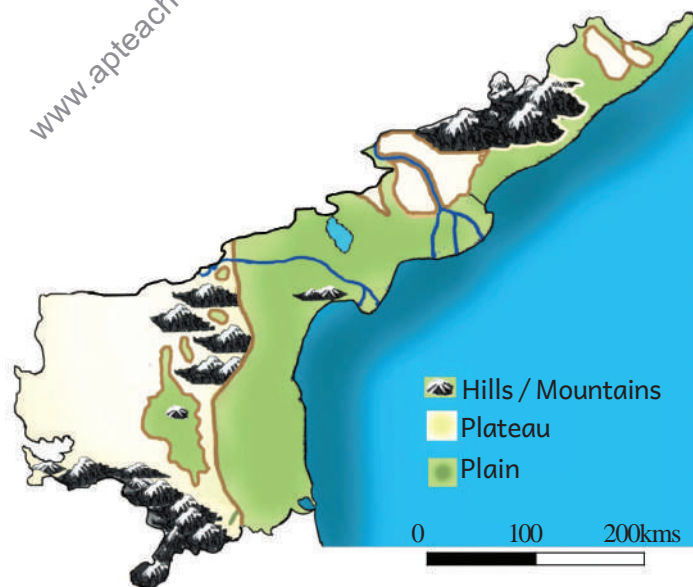
Neighbouring districts to your district : \_\_\_\_\_

Neighbouring state to your districts : \_\_\_\_\_

Andhra Pradesh State has varied relief features. They are Deccan Plateau in the South West, Eastern Ghats towards the mid-Eastern part and East coastal plains in the East where the land descends down into the Bay of Bengal. Our state has mountains or hills, plains and plateaus as major landforms .

### Mountains or Hills

In Andhra Pradesh most of the high elevated areas are in the form of hill ranges. Here and there these hill ranges are associated with mountains having a height of more than 900 mts. In our state YSR Kadapa, East and west Godavari districts, Visakhapatnam, Chittoor, Kurnool and Vizianagaram districts have stretches of hilly terrain where we can see the pockets of scattered hills called Eastern Ghats. The rivers Godavari and Krishna divides the hills of Andhra Pradesh as northern and southern parts. They vary in size from tallest to average height. The northern portion of hill ranges of Andhra Pradesh represent more height and mountain structure with average height of 1200 metres. Arma Konda (Zindagada) in Araku valley is the highest peak in our state with 1690 metres. Even the hills in the southern part of Andhra Pradesh also have some mountain structures.



Map 4.3 Landforms of Andhra Pradesh



## Do You Know

Due to the construction of the Polavaram project, the submerged mandals of Khammam district of Telangana state were annexed in Andhra Pradesh. Vararamachandrapuram, Kunavaram, Chintoor and Bhadrachalam (except bhadrachalam village) were annexed in East Godavari district and Boorgumpadu, Kukunuru, Velerupadu mandals were annexed in West Godavari district .

S. No.	Name of the hills	Name of the district
1.	Yarada and Ananthagiri hills	Visakhapatnam
2.	Bison hills and Papikondalu	East and West Godavari
3.	Mogalrajapuram, Kondapalli hills	Krishna
4.	Berumkonda, Nagarjunakonda and Kotappakonda	Guntur
5.	Velikondalu	SPSR Nellore
6.	Nallamala, Erramala	Kurnool
7.	Velikondalu and Palakondalu	YSR Kadapa
8.	Seshachalam and Horsely hills	Chittoor
9.	Penukonda and Madakasira hills	Ananthapuram

These hills are composed of charnockites and khandalite rocks. Arakuvalley, Borra caves of Visakhapatnam district and Papikondalu of East and West Godavari districts are the famous tourist places in these landforms.



## Do You Know

- Lammasingi / Lambasingi, the interior tribal hamlet in Chintapalli mandal of Visakhapatnam agency, has recorded single digit temperature in the winter. It is also known as 'Kashmir of Andhra Pradesh'.



In hilly areas, the soils are uneven and sloped. Generally these soils are red and rocky. Owing to their high elevation and the natural downward movement of water, the soils are mostly well-drained and suitable for plantation of beverage crops like Coffee and Tea.

## Podu

Podu is an ancient tribal agricultural practice in the hilly regions. It is also called Shifting or Jhuming cultivation. In this method, the people clear a patch of forest land and use it to grow crops for a few years. And later shift to some other place due to decrease in soil fertility. They cultivate jowar, maize etc., in this method but now it is not in practice.

The huts on hilly areas are having large areas of backyards. They put up a bamboo fence around the house. They level the land for their kitchen garden and add organic matter to make it fertile. Maize, vegetables like beans, gourd, chillies etc., are grown here which is the major source of their food and livelihood.



### Think & Respond

- Why hilly areas are suitable for plantation crops?  
Discuss with your friends or teachers and write.



The produce from the podu lands or from the kitchen gardens is not enough for the families to survive throughout the year. Therefore collection of forest produce plays a vital role in their lives. There are no rivers or wells in this area. It is very difficult to dig wells in the rocky hills. They fetch water from natural springs or from small streams of downhill. Government has providing facilities for the people living in hill. Araku coffee is world famous now.



Fig 4.6 Natural Spring



### Think & Respond

- Name some forest products.
- Have you visited any forest? If so describe your experiences.



## Do You Know

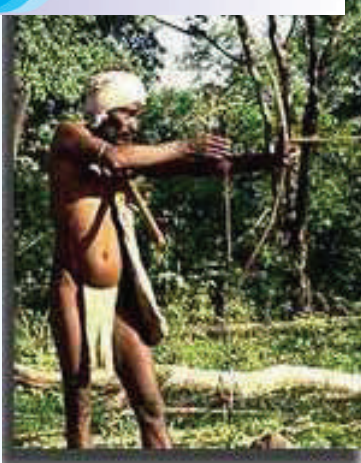


Fig 4.7 Chenchu man hunting

The Chenchus are a tribal group practising pre agricultural mode of economy. Government of India recognised them as a particular vulnerable Tribe. They have been the inhabitants of the Nallamala forest area since times immemorial. Traditionally, they are hunter-food gatherers. They spread over the districts of Kurnool, Guntur and Prakasam in Andhra Pradesh.

The government has been putting in a lot of efforts to bring them into settled agriculture by supporting their agricultural activity. Government is also running a number of schools with residential facility for promoting education among them.

Government has also set up Integrated Tribal Development Agency (ITDA) with headquarters at Srisailam in 1989. Their oral literature is considered to be one of the most ancient records of human feelings and thoughts (The chenchus 1943-Haimendorf).

## Plateaus

The plateau area of Andhra Pradesh belongs to eastern Deccan Plateau and Rayalaseema region comes under this landform. This plateau region is located in low rainfall receiving region. Here we can observe low and uncertain rainfall and many times rain failure is a common feature. So, this area is drought - prone region.

The soils in this plateau region consists of black, laterite, red loamy sand soils. The areas of Kadapa, Kurnool have black soils. As the soils in Rayalaseema plateau region also has red soils in patches and they cannot hold much water, so many fields were left uncultivated. The saline soils of plateau areas also contain more lime and salt which are unsuitable for cultivation.

As rainfall is low, the people of the plateau region have to store rainwater and use underground water. Long ago, the people of this region dug tanks to store the rain water. Plateaus are suitable for such tanks because of natural depressions and small hills. While tanks store rain water, wells help people to use underground water. In recent years bore wells are used for irrigation instead of open wells. It is very expensive to dig bore wells in the plateau. Very few farmers can afford to invest so much money. Only 5-10% farmers with considerable land have bore wells. The rest depend on rainfall only. With the growing number of bore wells the underground water levels are decreasing day by day.

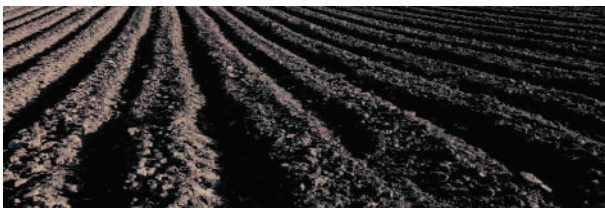


Fig 4.8 Black soil

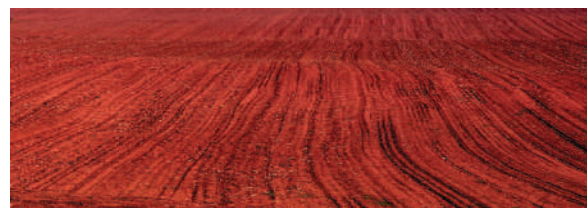


Fig 4.8 Red soil

In the plateau regions of Andhra Pradesh, the rainy season is from June to November. It rains very low and is also very unreliable. Drought is a recurring phenomenon. As rainfall is low, farmers frequently lost their crops and the government declares some mandals as 'drought hit'.

In this landform only one crop will be cultivated in the Kharif or monsoon season. Millet crops like - ragi, sama, varagu, korra, sorghum etc., pulses and groundnut. Wherever irrigation facilities are available paddy, sugarcane and fruit orchards are sown here.

Recently farmers shifted to cultivation of commercial crops like groundnuts and chillies instead of millets. Sometimes crops like sorghum, red gram and maize are cultivated in groundnut fields as mixed crops. In order to tackle the diseases and to improve the soil quality recently the farmers are changing to some new practices like contour bunding, organic farming etc. They tried to repair and restore the old tanks and spring channels to irrigate the lands. As water is scarce, some farmers started growing orchards of mango, sapota, sweet lime etc. These orchards require water only in some seasons and give regular returns every year. Wherever irrigation facilities are available plantation crops like banana, papaya, guava, pomegranate are cultivated.



### Do You Know

- Due to scanty rain fall and depletion of underground water, some parts of Ananthapuram district are facing severe water scarcity. Eg. Rayadurgam, Kalyanadurgam areas. Finally the soils of this region gets transformed to rocky soils and there is a threat of desertification.



### Think & Respond

- What are the major changes in the cropping pattern of this region?
- What are the problems we may face in future by digging more number of bore wells? Find out and discuss the causes and possible solutions.
- Compare the rainfall in the coastal plains and in the interior plateau.

## Plains

In Andhra Pradesh, the plains are situated in coastal districts. These are stretching from Srikakulam district in the North to SPSR Nellore district in the South. These are known as coastal plains.

Plain areas are important for agriculture because, the alluvial soils are deposited as sediments. They are deep and fertile, and the flatness facilitates the mechanization of crop cultivation. On the other hand, they support grasslands which provide fodder for livestock.

In Andhra Pradesh, two main rivers Godavari and Krishna form a very big plain in the form of delta. This delta area has formed due to continuous deposition of sediments by the rivers the Godavari and Krishna. Widest plains are found in Krishna and Godavari districts. The plains found in Guntur, Krishna and Godavari districts are famous for rich fertility and principal crops like paddy, sugarcane, chillies, turmeric etc. In Guntur district the uplands have clayey black soils which are more suitable for cotton and chilli crops.



### Think & Respond

- Name the main rivers that flow through the plains of Andhra Pradesh.
- What are the districts that come under the Krishna and Godavari deltas?
- Name the two main cities from where the two deltas begin. Find out the names of at least two rivers that join the Krishna river.

The delta plains are treasure houses for food grains and are called rice granary of South India. The location of this delta can be observed in fig 4.9. In these plains, the underground water sources are very rich and can be found at a depth of only 15 to 25 feet. Underground water irrigation is common in uplands where canal irrigation is not possible.

The farmers of these areas particularly uplands have been changing their cropping patterns towards commercial and cash crops like vegetables, fruits, tobacco etc. However the paddy crop has been cultivated extensively. The paddy monsoon crop is called Kharif and winter crop as called Rabi.

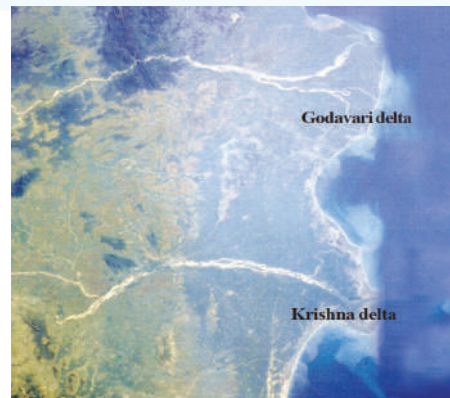


Fig 4.9 Delta



### Think & Respond

- What are the reasons for the changes in cropping pattern?
- Why coastal deltas are rich in fertility?
- Why agriculture is a main occupation in the plain areas?

The eastern coastal plain of Andhra Pradesh is narrow, except in the Krishna-Godavari delta, minor delta plains like the Vamsadhara in Srikakulam and the Penna in Nellore districts. These plains are having famous lakes like Kolleru (fresh water) and Pulicat (salt water). Kolleru lake is located in West Godavari and Pulicat lake is in SPSR Nellore district.

The entire plain area in Andhra Pradesh is a gift to agriculture and farmers. Here the main occupation is agriculture and more than one crop can be cultivated in major parts of the plain regions. Hence, this area is known for population and settlement density.



### Do You Know

#### ■ **Cash Crop**

It gives more income or profit to the farmer. It is also known as commercial crop. Ex: Groundnut, turmeric, sugarcane, tobacco etc.

#### ■ **Food Crop**

Food crop is a crop grown for consumption. Ex: Paddy, millets, vegetables etc. They are also sold for cash if they are surplus.

#### ■ **Aquaculture**

'The rearing of aquatic animals for food is known as aquaculture.' Ex: Fish, prawn, shrimp, crabs etc. Recently most of the farmers in coastal districts are shifting to aquaculture. Most of the paddy growing fields are converted into aquaculture ponds. This transformation resulted in water pollution and contamination of water ponds in paddy cultivated area.

## Diversity in lifestyles

We find all these landforms in different parts of Andhra Pradesh and we can find diverse situations in different regions. Physical and climatic features determine the economic activities of a region. People living in the plains thrive on agriculture, while people in the coastal areas depend on fishing for their livelihood. Basket weaving, fishing, pig rearing, work in poultry and rice mills etc. are the non-farming activities in plains, whereas sheep herding, charcoal batti, making of cement bricks are in plateau regions.

In mountainous regions, rearing of animals and collection of forest produce like fruits, gum, honey etc., is undertaken. Hilly landscapes are supported by favourable climatic conditions for the cultivation of coffee and tea. Bamboo is abundant in forest and they make baskets, winnowing fans, chicken coops, etc., and sell them in the market. Paper mill agents employ them to cut Bamboo and it gives good income to these tribal people.

The tribal people follow distinct culture of their own. They do not destroy the forests they use. Their lifestyle is eco-friendly. They possess good knowledge about forest and they need freedom to live in forest.

Diversity in landforms also impacts the flora and fauna of a region, occupation and food patterns. The plant and animal wealth of a place depends upon the natural habitat and the climate that prevails in that region. Food, clothing, occupation and livelihood of the people is closely connected with the regional physical surroundings and climate.



## Glossary

<b>Landform</b> (భూస్వరూపం)	: is a natural feature on the Earth's surface
<b>Terrain</b> (భూభాగం)	: a stretch of land, especially with regard to its physical features.
<b>Agent</b> (మధ్యవర్తి)	: a person who acts on behalf of another person or group
<b>Spring</b> (నీటి ఊట)	: a spring is a point at which water flows from an aquifer to the Earth's surface.
<b>Drought</b> (కరువు)	: prolonged shortage of water due to rainfall failures
<b>Drought prone area</b> (కరువుకు గురయ్యే ప్రాంతం)	: the areas which are often likely to occur droughts
<b>Alluvial Soils</b> (ఒండ్రు మట్టి నేలలు)	: the soils formed with silt brought by rivers, very fertile lands
<b>Orchards</b> (వండ్ల తోటలు)	: fruit gardens
<b>Uplands</b> (మెరక భూములు)	: a little bit high land in the plain area



## Improve Your Learning

1. What is a landform?
2. Into how many categories landforms are divided?
3. How is delta formed?
4. Why do plain areas have dense settlements?
5. Compare the various types of soils prevailing in different land forms.
6. Why did the government declare some mandals as drought-hit ?
7. " Physical and climate features determine the economic activities of a region"- Explain ?
8. Are all the lands in your village agriculturally productive? If not give reasons.

9. Do you think it is important to preserve the lifestyle of tribals? Why?
10. Why kitchen garden is more important for the tribal people?
11. Why agriculture is a profitable trade in plains? Explain.
12. The highest peak in eastern ghats is \_\_\_\_\_.
13. Large part of \_\_\_\_\_ is located in Deccan plateau.
14. In plain areas \_\_\_\_\_ crop is extensively cultivated.
15. Hills of Eastern Ghats are composed of \_\_\_\_\_.
16. In hilly areas people fetch water from \_\_\_\_\_
17. \_\_\_\_\_ soils have high content of lime and salts
18. Plain areas receive rainfall in \_\_\_\_\_
19. Plateaus are rich in \_\_\_\_\_ ( )  
 A. Vegetables B. Minerals C. Population D. crops
20. Black soils are fertile and good for \_\_\_\_\_ cultivation ( )  
 A. Cotton B. Millets C. Vegetables D. Wheat
21. There are \_\_\_\_\_ districts in coastal Andhra Pradesh. ( )  
 A. 6 B. 4 C. 9 D. 5
22. \_\_\_\_\_ is known for droughts and famines. ( )  
 A. Rayalaseema B. Coastal Andhra  
 C. Northern Andhra D. Deccan Plateau
23. Fill this table with appropriate information



Feature	Plain	Plateau	Mountains or hills
Soils			
Crops			
Rainfall			
Occupation			



### Project Work

1. Make a poster of landforms.
2. Make the clay moulds of different landforms.

