

KOTGAON - A VILLAGE ON THE PLAINS



Fig. 1. Boat laden with vegetables on the Narmada

Look carefully at the sub-headings and pictures in this chapter and find out what has been discussed about villages of the plains. Discuss amongst yourselves, what you have seen and heard about the plains.

Riverine Plains

Hoshangabad town is situated on the banks of the river Narmada. The Tawa river flows a little distance away from this town. Yes, it is the same Tawa that you saw earlier in the picture on page 87. This river flows into the Narmada. In this way the Tawa is a tributary of the Narmada. The Tawa comes from the Satpura hills and meets the Narmada at Bandrabhan, which is to the east of Hoshangabad.

- **Have you ever seen a river or a stream meet another river or stream?**

Going towards the Tawa from Hoshangabad, we find vast stretches of level fields. There are no hills or steep slopes. Nor can we see any forests. These are the Plains of the Narmada.

After travelling nine kilometres eastwards from Hoshangabad, we come across the Tawa river. This is a very broad river, but the river bed is full of sand. We see only a thin stream running near the bank. It is only in the rainy season that the river bed is filled with water.

The fields near the river have fine soil. When a well is dug here, there is mud for the first five to six feet. The next 20 feet are filled with sand and below that there are round pebbles.

These sands, mud and pebbles have been brought down and spread on the plains by the Tawa and other rivers. The stones have been smoothed by the water so that they are round in shape. The Narmada and its tributary rivers have spread silt and sand on these plains and made them flat.

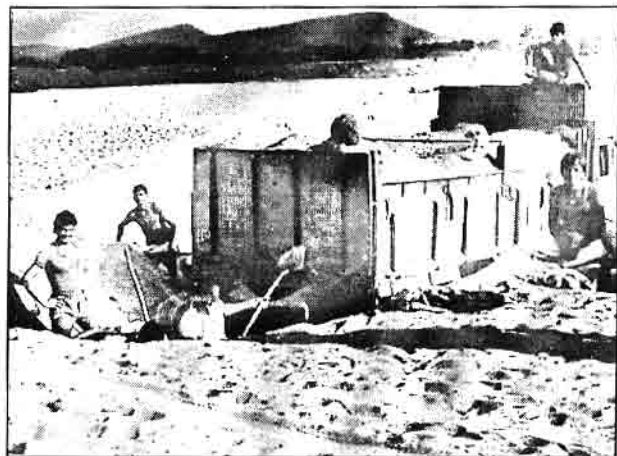


Fig. 2. Excavating sand from the bed of the Tawa

Amidst the level fields we can see a few clusters of trees. The villages are settled within these clusters. There are no forests in this region other than these clusters. The land here is so fertile that the people have cut down the forests long ago and converted them into fields.

The Plains of the Narmada extend far and wide on both sides of the Narmada.

- *Look at the extent of the Narmada Plains in the physical map of Madhya Pradesh.*
- *Which of the following towns are situated on the Plains of the Narmada: Harda, Bhopal, Dewas, Sagar, Itarsi, Piparia, Betul, Narsinghpur.*
- *What are the special features of a river plain? Pick out five sentences from the above section which illustrate the special features.*

KOTGAON

We wanted to see a village situated in the plains. So, we took a *kutchra* road leading to Kotgaon. Like all other villages of the plains, Kotgaon is also located within a cluster of trees. The Tawa flows to the west of the village. A small stream called Belia runs through the village and meets the Tawa. Like



Fig. 3. Plain, flat fields of Kotgaon

the Tawa, the Belia also has a lot of water in the rainy season. It remains dry during the rest of the year. The Belia also deposits fertile soil on the lands of Kotgaon.

- *See the map of Kotgaon on page 96 and identify the Belia stream.*

Soil

What kind of soil is available to the people of the riverine plains to cultivate crops? Let us go around Kotgaon and see for ourselves.

First of all we notice that the soil is deep. The river carries with it waste matter, rotten leaves and roots and deposits all these on the plains. They mix with the soil and make it more fertile. The soil does not contain gravel or stones. Such soils are good for the growth of crops. This advantage is not available to people everywhere. We will understand this better when we see the mountain and plateau villages.

- *Do you think the soil in the hills would be different? Explain.*

Though the soil in the plains is fertile, it is not the same everywhere. In some places, the soil is black and clayey, and in other places it is loamy, that is, it has sand and clay mixed in equal proportions.

Soil and Crops

What crops can be grown in the soils of the plains? The farmers of Kotgaon told us that on both kinds of soils - clayey as well as loamy - wheat, gram, jowar, masoor, tuar, paddy and soyabean can be cultivated very well. These soils are able to retain moisture.

However, because these soils retain moisture, crops like (sesame) and groundnut

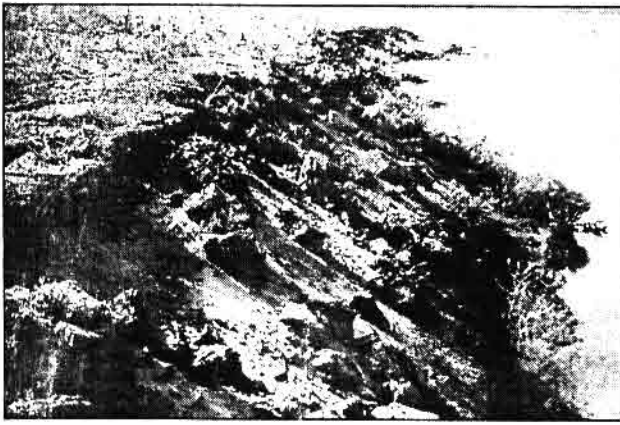


Fig. 4. This is the bank of the Tawa river. A thick layer of loamy soil can be seen on top of the high sandy banks. Some clumps of this fertile soil have fallen down on to the sandy banks.

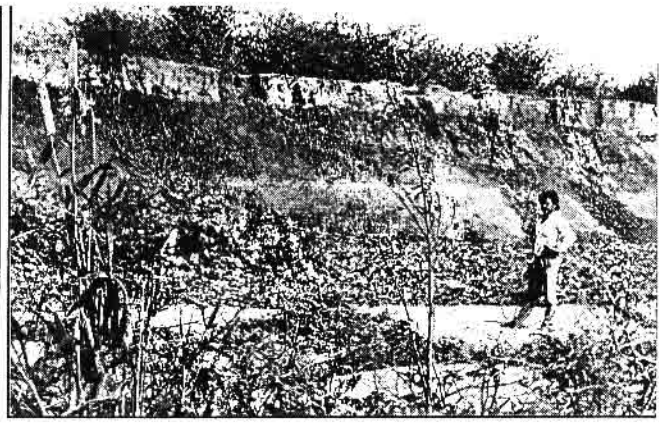


Fig. 5. This picture clearly shows how many layers of sand and silt the river has deposited. Rivers deposit sand and silt upto a long distance during floods. The river plain is formed by these layers of sand and soil. In the picture, guava trees can be seen on the banks of the river. Beds of watermelon can be seen on the sand.

cannot be grown on them. These crops need porous soil which does not retain moisture. Such crops also grow better on sloping land. Sugarcane also cannot be grown on such soil. Oil and sugar are, therefore, brought from neighbouring areas to be sold here.

Orchards on the River Banks

On the banks of the Tawa we saw several fruit trees and orchards. Lemon, mango, *ber*, guava, papaya and *jamun* were some of the trees growing on these plains. The farmers told us that soils near the river contain more sand. They are, therefore, more porous and do not retain moisture. Crops do not grow well on them. Hence, fruit trees are grown, the roots of which can penetrate the soil and draw out water from great depth. The soil close to the river is, therefore, very suitable for growing fruit trees (fig. 4 and 5).

- **What type of soil is found in your area, and what crops are grown on it? What crops are not cultivated in your area? Is the soil in your area not suitable for them?**

- **Fill in the Blanks -**

In Kotgaon, mostly _____ or _____ soil is found. _____, _____, _____ and _____ crops are grown on this, but _____, _____ and _____ cannot be grown here.

IRRIGATION

The type of crops grown and the number of crops raised in a year does not depend only on soil. Some crops require irrigation because the rains last only three to four months. Do the farmers of Kotgaon grow crops only during the rainy season? If not, how do they irrigate their crops during the other seasons?

Unirrigated Crops

Till about ten years ago there were only a few wells from which water was drawn with *moth* (leather bags) operated by a pair of bullocks. But not much land can be irrigated in this way. During most of the year, the river remains dry. So the river cannot be used to irrigate the land.

Because of these reasons, mostly kharif (monsoon) crops like maize, *bajra*, *jowar* (millets) and *tuar* were grown. Wheat used to be grown on whatever little land was irrigated in the *rabi* (winter) season. Wheat does grow without irrigation, but the yield is not very high. In the last few years things have changed very fast.

Dams and Canals

A large dam has been built on the Tawa. Water coming down the river during the rains is collected in this dam. Water from this dam

is used to irrigate large parts of Hoshangabad district.

- *Can this method be used to irrigate large areas in the hills? What could be the special difficulties in building canals in the hills?*

Even now, only a few fields are irrigated by canals from Tawa dam in Kotgaon. Most of the irrigation in Kotgaon is carried out through wells.

Wells

Usually it is easier to dig wells in the plains than in the hills or plateaus. On hills and plateaus one needs to dig into rocks to reach water. This is not needed in the plains. We were hence curious to know more about the wells in Kotgaon.

As Kotgaon is very near the river, water can be found by digging for only about eight metres. A lot of water is accumulated beneath the soil between the sand and pebbles. Digging a well costs only twenty thousand rupees in Kotgaon. It will cost much more in a plateau or hilly area where rock has to be blasted with dynamite.

- *In your area, what is found while on digging a well - rocks or sand?*

Ring Wells

There is one difficulty in digging a well in Kotgaon. After digging for about five to six feet there is sand. This sand keeps caving in as the well is being dug. To solve this problem,



Fig. 6. A Ring well

a new type of well is being built in recent years in Kotgaon and other villages. This is called a ring well (see fig. 6).

First, several rings of cement and concrete are made. They are then fixed into the well as it is being dug. Such rings prevent the sand from sliding into the well, and also serve as strong walls for the well. Wherever rings are used, the width of the well can also be kept small.

- *Are there any ring wells in your area?*

Motor Pumps

Water is drawn from the wells with the help of pumps, run by electricity or diesel engines. In this way, a well irrigates around 10 to 15 acres of land.

As the land is level and plain, water flows easily through narrow channels and reaches the fields. Even though a lot of water is used for irrigation, the wells do not run short of water. In Kotgaon there are more than 50 wells used for irrigation.

- *How is land irrigated in your area? How much land is irrigated? Compare with Kotgaon and discuss.*
- *Despite there being rivers and wells, not much land was irrigated in the past in Kotgaon. Why?*
- *Why is it easy to dig wells and construct canals in the plains?*
- *In Kotgaon, why are rings used instead of bricks for the walls of wells?*
- *Can you imagine what changes have occurred in agriculture in Kotgaon due to increase in irrigation in recent years?*

Irrigated Crops

Earlier, only maize, bajra and jowar used to be grown in Kotgaon in the rainy season. These crops do not require much water. However, nowadays fields can be irrigated. It has become easier to grow crops like paddy or soyabean in the kharif (rainy) season. These crops require a lot of water at the right time. They, therefore, cannot depend entirely on

rainfall.

Earlier, very little wheat could be grown in winter. Now, with the help of irrigation, wheat is grown in plenty. New high yielding varieties of wheat are being grown, which require lots of water. The output has also increased. Apart from wheat, gram and *masoor dal* are also grown in the *rabi* (winter) season.

Availability of plenty of water even in summer has enabled the farmers of Kotgaon to grow vegetables like tomato, brinjal, ladies finger and beans. Vegetables require a lot of water and have to be grown with care. These are sold in the markets and fetch high prices.

Even in summer, when the rivers are dry, vegetables are grown near the wells. Thus, summer, winter or monsoon, agriculture is carried out throughout the year in Kotgaon.



Fig. 7 : Wheat Harvest

- *What kind of changes would have taken place in the diet of the people of Kotgaon over the last few years?*
- *In your village, have there been any changes in the crops, work patterns of the people and their diet, with the advent of irrigation?*

Fill in the Table -

<i>Crops of Kotgaon</i>		
	<i>Before Irrigation</i>	<i>After Irrigation</i>
<i>Summer</i>		
<i>Winter</i>		
<i>Rains</i>		

Cultivation on Riverbed

In the picture of Tawa in fig. 2, you must have noticed a lot of sand on the river bed. In summer, some farmers grow different varieties of gourds - *lauki*, *tinda*, *torai*, *gilki*, cucumber, watermelon, musk melon and pumpkins. They use the river to water them. These vegetables are sold in distant markets.

Shortage of Fodder

We noticed that the peasants raise crops in all the land available in the village. There is very little pasture left. Nor are there enough trees or shrubs. So there must be very little fodder available for cattle. The farmers told us that there is indeed a shortage of green fodder for animals. The people of Kotgaon, therefore, do not keep much cattle. Only a few cows, bullocks and goats are kept for milk and for working on the fields. However very little milk is produced for sale.



Fig. 8. Vegetable farming in summer with the help of pump sets

Villages like Kotgaon situated on the plains produce much more than what is needed for domestic use by the farmers. Where do they sell their extra produce?

Due to abundance of water and fertility of the soil, the Narmada plain has a large number of villages. Many towns have also come up, like Hoshangabad, Babai, Itarsi, Bagra, Sohagpur and Piparia. Here, the population is very dense. The farmers sell their produce in these towns. There are also big *mandis* in many of these towns where traders from distant cities come to buy grain.

The farmers of Kotgaon do not have any problem in taking their produce to the market. Since the land is level, railway lines and roads are easily laid. Kotgaon is well connected by roads and the railway station is just a few kilometers away in Bagra.

Being well connected by roads, etc. is a typical feature of villages in the plains. You will see how the villages in the hills are not so fortunate in this respect.

Need for Labourers

There are several villages around Kotgaon in which agriculture is carried out. The labourers of Kotgaon, therefore, find work



Fig. 9. Growing vegetables and fruits on the riverbed

HOUSES AND SETTLEMENTS

Houses in Kotgaon are built next to each other. This is common in the villages of the plains. Here, the population is high and there is very little land available for building houses. The houses are built close together so that cultivation can be carried out on the remaining land.

- *Are the houses in the villages near you built in the same way?*

We noticed that the walls of the houses in Kotgaon were mostly made of mud, and the roofs were made of bamboo and wooden beams. Although some of the houses of the rich farmers were built of bricks, most of the houses were of mud and wattle. These are easily available in the locality.



Fig. 10. Houses built close together



Fig. 11. Adivasis from the hills harvesting crops in Kotgaon

very easily in their own and neighbouring villages. They also find work in small factories, like in the tile factory in Bagra. Here

labourers do not have to go to far away lands to find work.

This fact had come to our attention because we had heard that the adivasis living in the Satpura hills often come to the plains for "chait" (labour migration for harvesting). This means that there is so much work in the plains that the labourers from other areas come here to find work.

In recent years, harvester-combines are beginning to be hired to harvest the fields.

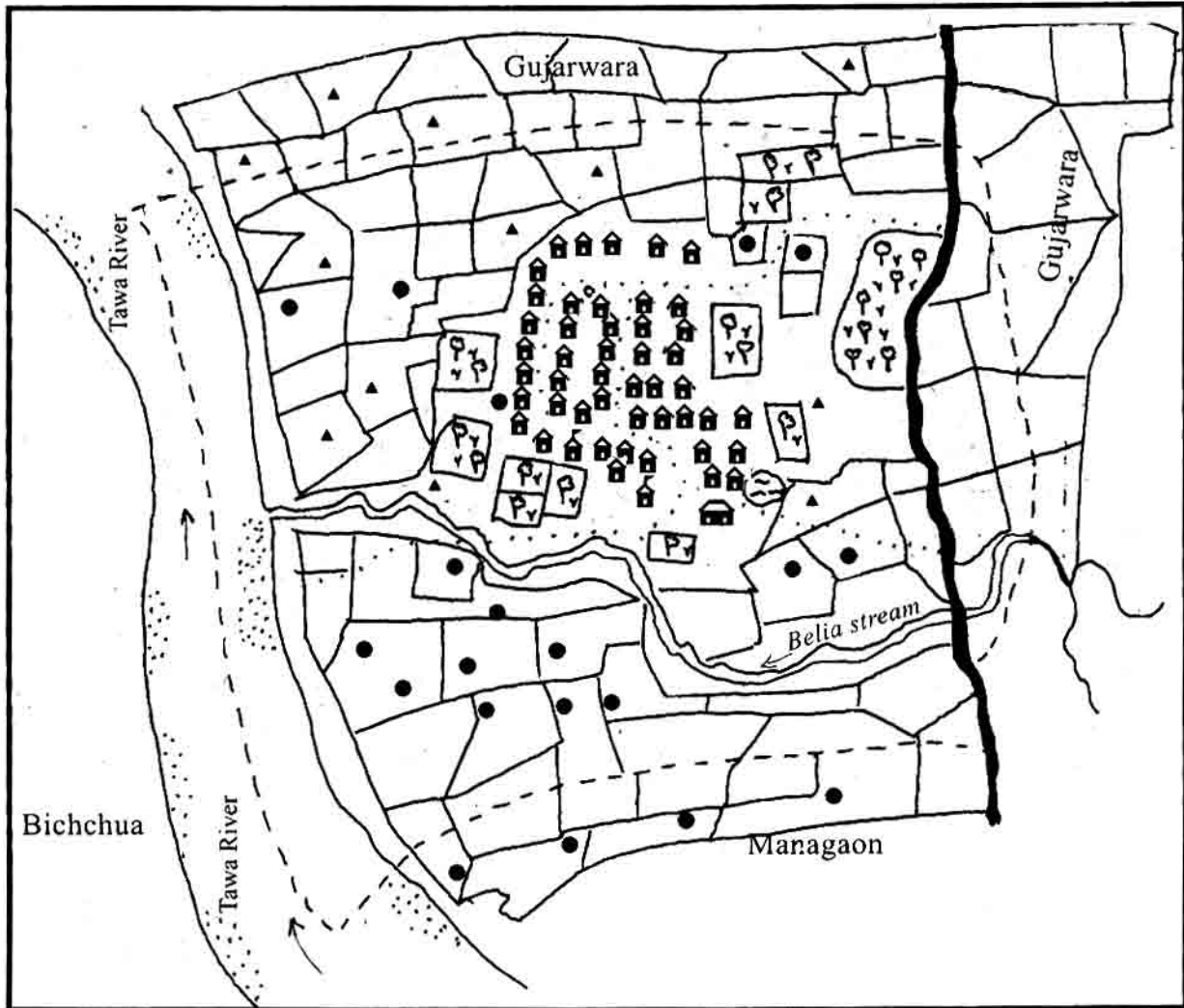
These harvesters cut the crop much faster than labourers can.

Have you ever seen a harvester? How many types of work can harvesters do at the same time? How will this affect the adivasi workers?














EXERCISES

1. On the plains of which river is Kotgaon located? What are the benefits of this river for agriculture?
2. Do you find water all the year round in the wells of Kotgaon? What crops are irrigated with well water, and in which season?
3. Why are fruit trees grown on the banks of rivers?
4. Why do the peasants of Kotgaon sell their produce?
5. Which are the markets where the peasants of Kotgaon sell their produce?
6. Write in two sentences why the labourers of Kotgaon do not have to go very far to find work.
 - a) Why is the soil fertile in the plains?
 - b) What are the advantages of plain, flat land mentioned in this chapter?
8. Compare irrigation from wells with irrigation from canals. Mention one advantage and one disadvantage of each of these methods of irrigation.
9. Correct the false sentences :
 - a) Peasants of Kotgaon are able to sell very little of their produce.
 - b) There are many villages and towns around Kotgaon.
 - c) The houses in Kotgaon are spread far apart.
 - d) It is difficult to lay down railway lines and roads in the plains.
 - e) The labourers of Kotgaon go far away in search of work.
10. Fill in the Blanks -
 - a) To prevent sandy soil from sliding into the well, _____ wells are built.
 - b) In Kotgaon, because of shortage of _____, there is very little sale of milk.

SKETCH-MAP OF KOTGAON VILLAGE



INDEX

	Village boundary		House		Pond
	Sand deposits		School		Tubewell
	Kutchra road		Temple		Well
	Metalled - pucca road		Orchard		
	River / stream		Field		

THE VILLAGE AND ITS BOUNDARY

Read the sketch-map of Kotgaon with the help of the index and answer these questions -

- * In which direction is the metalled (pucca) road from Kotgaon?
- * What is shown inside Kotgaon?
- * Are there more fields to the east of the settlement, or to the west of the settlement?
- * How many wells and tube wells are there in Kotgaon?
- * Are there more tube wells to the north of the Belia stream or to the south of it?

BOUNDARY OF THE VILLAGE

The village boundary of Kotgaon, skirting all around it, is shown on the map. Identify the symbol used to show the boundary on the map. Run your finger along the boundary of Kotgaon. Inside the boundary there are the fields of Kotgaon and outside the boundary there are the fields of neighbouring villages.

Notice that in the north the fields of Kotgaon and Gujarwara village adjoin each other.

- * The fields of which village are next to the fields of Kotgaon on the south?
- * The fields of which village are situated to the east of Kotgaon village?
- * How many wells of Managaon have been shown on the map?

These are the boundaries of three villages. Which of these three figures resembles the boundaries of Kotgaon? Write 'Kotgaon' in the correct picture.

