





7 Human Environment–Settlement, Transport and Communication

In Chapter 1 you have learnt that early human beings depended entirely on nature for food, clothing and shelter; but with time they learnt new skills to grow food, build homes and develop better means of transport and communication. In this way they modified the environment where they lived.

Settlements are places where people build their homes. Early human beings lived on trees and in caves. When they started to grow crops it became necessary to have a permanent home. The settlements grew near the river valleys as water was available and land was fertile. With the development of trade, commerce and manufacturing, human settlements became larger. Settlement flourished and civilizations developed near river valleys. Do you recall the names of civilization that grew along the banks of rivers Indus, Tigris, Nile and Hwang-He.

Settlements can be **permanent** or **temporary**. Settlements which are occupied for a short time are called **temporary settlements**. The people living in deep forests, hot and cold deserts and mountains often dwell in such temporary settlements. They practice hunting, gathering, shifting cultivation and transhumance. However more and more settlements today are **permanent settlements**. In these settlements, people build homes to live in.



Do you know?

The place where a building or a settlement develops is called its **site**.

The natural conditions for selection of an ideal site are-

1. favourable climate
2. availability of water
3. suitable land
4. fertile soil



Fig. 7.1: Human Settlement



Glossary

Transhumance: It is a seasonal movement of people. People who rear animals move in search of new pastures according to changes in seasons.



It was Mary's birthday party. She and her friends were waiting for Gurpreet to arrive so that Mary could cut the cake. At last Gurpreet arrived- tired, coughing and wheezing. She explained that the traffic jam was terrible. Mary's mother Mrs. Thomas patted Gurpreet's back and sighed, "Oof! The pollution in our city!" Prasad had recently come from his village. He asked, "Why do we have such traffic jams and such pollution in the cities?" "The number of vehicles is increasing day by day due to the growing population in the cities", Mary's father, Mr. Thomas replied. Mary asked, "Then why are people coming to the cities?" Her mother replied, "They come looking for jobs, better education and medical facilities." Mary further enquired, "If so many people keep coming to cities, where will all the people live?" Mr. Thomas said, "That is why you see so many slums and squatter settlements where people stay in congested and unhygienic conditions. Shortage of power and water supply are common problems in the cities". Prasad said, "Our villages may not have big cinema halls, well-equipped schools and good hospitals, but we have lot of open spaces and fresh air to breathe in. When my grandfather was sick we had to rush him to the city hospital."



Fig. 7.2: Compact Settlement



Fig. 7.3: Scattered Settlement

From the above conversation we can identify two different pictures of settlements – the rural and the urban settlements. The villages are rural settlement where people are engaged in activities like agriculture, fishing, forestry, crafts work and trading etc. Rural settlements can be compact or scattered. A compact settlement is a closely built area of dwellings, wherever flat land is available (Fig. 7.2). In a scattered settlement dwellings are spaced over an extensive area. This type of settlement is mostly found in hilly tracts, thick forests, and regions of extreme climate (Fig. 7.3).

In rural areas, people build houses to suit their environment. In regions

of heavy rainfall, they have slanting roofs. Places where water accumulates in the rainy season the houses are constructed on a raised platform or stilts (Fig. 7.4).

Thick mud walled houses with thatched roofs are very common in areas of hot climate. Local materials like stones, mud, clay, straw etc are used to construct houses.

The towns are small and the cities are larger urban settlements. In urban areas the people are engaged in manufacturing, trading, and services. Name some of the villages, towns and cities of your state.



Fig. 7.4: Houses on Stilts

TRANSPORT

Transport is the means by which people and goods move. In the early days it took a great deal of time, to travel long distances. People had to walk and used animals to carry their goods. Invention of the wheel made transport easier. With the passage of time different means of transport developed but even today people use animals for transport (Fig. 7.5).



Fig. 7.5: Horse cart as a mode of transportation

In our country donkeys, mules, bullocks and camels are common. In the Andes Mountains of South America, llamas are used, as are yaks in Tibet. The early traders from other countries used to take several months to reach India. They took either the sea route or the land route. Aeroplanes have made travel faster. Now it takes only 6-8 hours to travel from India to Europe. Modern means of transport thus saves time and energy.



Where do you find dwellings made of ice? Who makes them and what are they called?



Let's do

List the different modes of transport used by the students of your class while coming to school.



Do you know?

There are several National and State highways in India. The latest development in India is the construction of Express Ways. The Golden Quadrilateral connects Delhi, Mumbai, Chennai and Kolkata.

The four major means of transport are roadways, railways, waterways and airways.

ROADWAYS

The most commonly used means of transport especially for short distances are roads. They can be **metalled** (*pucca*) and **unmetalled** (*kutchha*) (Fig. 7.6 and 7.7). The plains have a dense network of roads. Roads have also been built in terrains like deserts, forests and even high mountains. Manali-Leh highway in the Himlayan Mountains is one of the highest roadways in the world. Roads built underground are called **subways/under paths**. Flyovers are built over raised structures.



Fig. 7.6: Metalled Road



Fig. 7.7: Unmetalled Road



Do you know?

The train from Xining to Lhasa runs at an altitude of 4,000m above sea level and the highest point is 5,072 m



RAILWAYS

The railways carry heavy goods and people over long distances quickly and cheaply. The invention of the steam engine and the Industrial Revolution helped in speedy development of rail transport. Diesel and electric engines have largely replaced the steam engines. In places **super fast trains** have been introduced to make the journey faster. The railway network is well developed over the plain areas. Advanced technological skills have enabled laying of railway lines in difficult mountain terrains also. But

these are much fewer in number. Indian railway network is well developed. It is the largest in Asia.



Do you know?

The Trans-Siberian Railway is the longest railway system connecting St. Petersburg in Western Russia to Vladivostok on the Pacific coast.



Trans - Siberian Railway

WATERWAYS

You have already learnt that since early days waterways were used for transportation. Waterways are the cheapest for carrying heavy and bulky goods over long distances. They are mainly of two types – **inland waterways** and **sea routes**.

Navigable rivers and lakes are used as inland waterways. Some of the important inland waterways are the Ganga-Brahmaputra river system, the Great Lakes in North America and the river Nile in Africa.

Sea routes and oceanic routes are mostly used for transporting merchandise and goods from one country to another. These routes are connected with the ports. Some of the important ports of the world are Singapore and Mumbai in Asia, New York, Los Angeles in North America, Rio de Janerio in South America, Durban and Cape Town in Africa, Sydney in Australia, London and Rotterdam in Europe (Fig. 7.11). Can you name some more ports of the world?



Fig. 7.8: Inland Waterways

AIRWAYS



Fig. 7.9: A Helicopter

This is the fastest way of transport developed in the early twentieth century. It is also the most expensive due to high cost of fuels. Air traffic is adversely affected by bad weather like fog and storms. It is the only mode of transport to reach the most remote and distant areas especially where there are no roads and railways. Helicopters are extremely useful in most inaccessible areas and in time of calamities for rescuing people and distributing food, water, clothes and medicines (Fig. 7.9). Some of the important airports are Delhi, Mumbai, New York, London, Paris, Frankfurt and Cairo (Fig. 7.11).



Let's do

Find out the names of some newspapers and TV news channels in English, Hindi and a regional language.

COMMUNICATION

Communication is the process of conveying messages to others. With the development of technology humans have devised new and fast modes of communication. The Fig. 7.10 explains the evolution of the communication system.

The advancement in the field of communication has brought about an information revolution in the world. Different modes of communication are used to provide information, to educate as well as to entertain. Through newspapers, radio and television we can communicate with a large number of people. They are therefore called **mass media**. The satellites have made communication even faster. Satellites have helped in oil exploration, survey of forest, underground water, mineral wealth, weather forecast and disaster warning. Now we can send electronic mails or e-mails through Internet. Wireless telephonic communications through cellular phones have become very popular today. Internet not only provides us with worldwide information and interaction but has also made our lives more comfortable. Now we can reserve tickets for railways, airways and even cinemas and hotels sitting at home. With this kind



Fig. 7.10: Progress in the means of communication

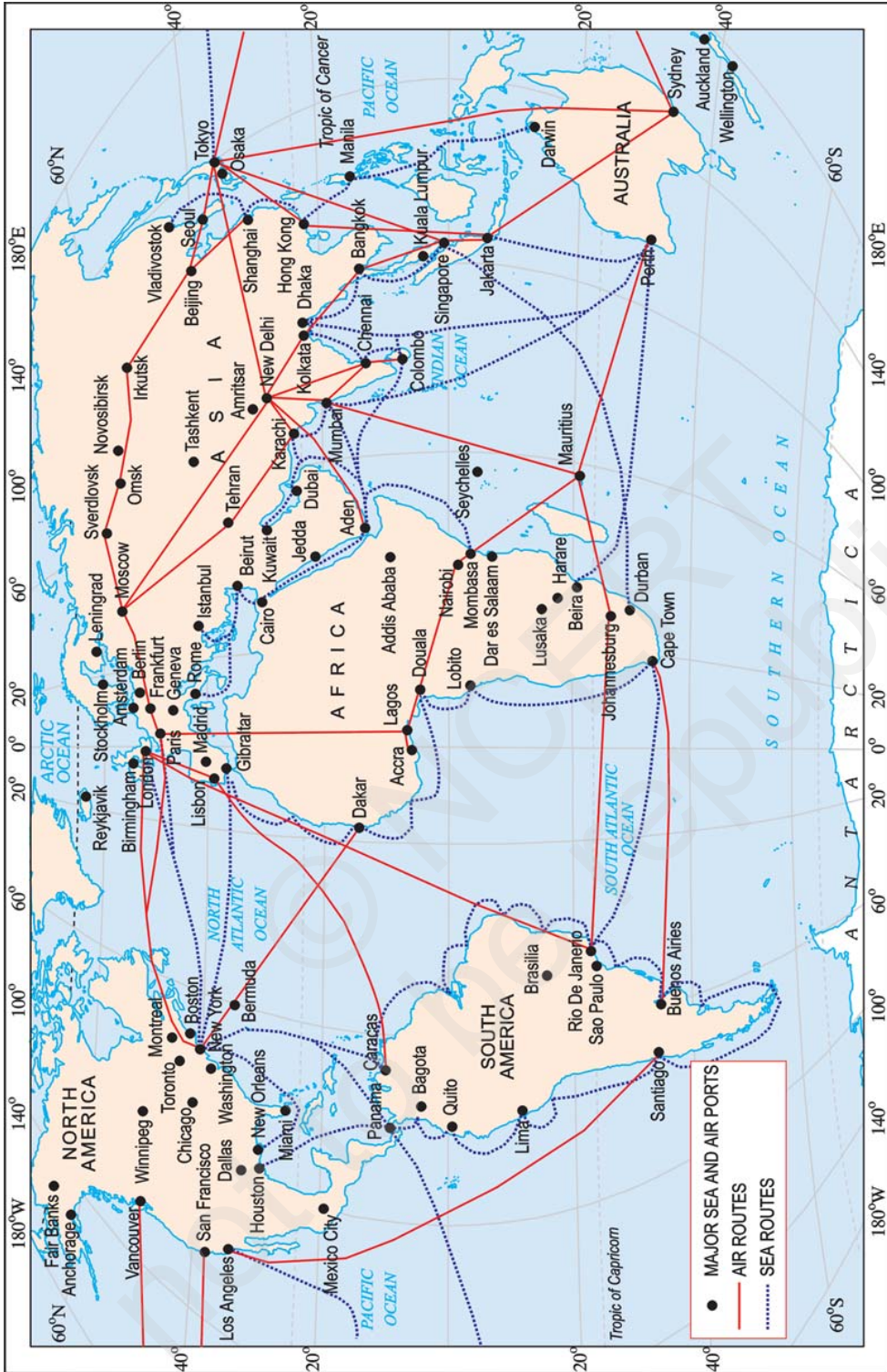


Fig. 7.11: World – Major Sea Ports and Airports

of inter connectivity of people, services and institutions – across the world, we are a large global society.



1. Answer the following questions.

- (i) What are the four means of transport?
- (ii) What do you understand by the term 'settlement'?
- (iii) Which are the activities practised by the rural people?
- (iv) Mention any two merits of railways.
- (v) What do you understand by communication?
- (vi) What is mass media?

2. Tick the correct answer.

- (i) Which is **NOT** a means of communication?
(a) telephone (b) books (c) table
- (ii) Which type of road is constructed under the ground?
(a) fly over (b) expressways (c) subways
- (iii) Which mode of transport is most suitable to reach an island?
(a) ship (b) train (c) car
- (iv) Which vehicle does not pollute the environment
(a) cycle (b) bus (c) aeroplane

3. Match the following.

- (i) Internet (a) areas where people are engaged in manufacturing, trade and services
- (ii) Canal route (b) closely built area of houses
- (iii) Urban areas (c) houses on stilts
- (iv) Compact settlement (d) inland waterway
(e) a means of communication

4. Give reasons.

- (i) Today's world is shrinking.

5. For fun.

- (i) Conduct a survey in your locality and find out how people commute to their respective workplaces using –
 - (a) more than two modes of transport
 - (b) more than three modes of transport
 - (c) stay within walking distance.
- (ii) Mention which mode of communication you will prefer most in the following situations –
 - (a) Your grandfather has suddenly fallen ill. How will you inform the doctor?
 - (b) Your mother wants to sell the old house. How will she spread this news?
 - (c) You are going to attend the marriage of your cousin for which you will be absent from the school for the next two days. How will you inform the teacher?
 - (d) Your friend has moved out with his/her family to New York. How will you keep in touch on a daily basis?



Human Environment Interactions The Tropical and the Subtropical Region

Renuka was excited. Shrikant Uncle was home after a gap of nearly four months. He was a wildlife photographer and travelled widely. Renuka's interest in wildlife and forests began at an early age, when her uncle introduced her to books on nature. Pictures of distant lands and people, who lived there, always fascinated her.



Fig. 8.1: People from various parts of the world

“In these pictures Renuka, you can see people from different parts of the world – some from dry deserts, some from frozen lands and some from hot wet rainforests.” “They look so different from me”, observed Renuka. “They may look different, but they share the same basic needs of life – food, clothing and shelter”, explained Shrikant Uncle. “Their children do the same things as you probably do, play games, quarrel sometimes and then make-up, sing, dance and help the families with various things that need to be done. They live closer to nature and very early in their lives have learnt to care for nature. They learn how to catch fish and how to collect material from the forests.”

CLIMATE

As you now know, the Amazon Basin stretches directly on the equator and is characterized by hot and wet climate throughout the year. Both day and nights are almost equally hot and humid. The skin feels sticky. It rains almost everyday, that too without much warning. The day temperatures are high with very high humidity. At night the temperature goes down but the humidity remains high.

RAINFORESTS

As it rains heavily in this region, thick forests grow (Fig. 8.3). The forests are in fact so thick that the dense “roof” created by leaves and branches does not allow the sunlight to reach the ground. The ground remains dark and damp. Only shade tolerant vegetation may grow here. Orchids, bromeliads grow as plant parasites.



Fig. 8.3 : The Amazon Forest



Fig. 8.4 : Toucans

The rainforest is rich in fauna. Birds such as toucans (Fig. 8.4), humming birds, bird of paradise with their brilliantly coloured plumage, oversized bills for eating make them different from birds we commonly see in India. These birds also make loud sounds in the forests. Animals like monkeys, sloth and ant-eating tapirs are found here (Fig. 8.5). Various species of reptiles and snakes also thrive in these jungles. Crocodiles, snakes, pythons abound. Anaconda and boa constrictor are some of the species. Besides, the basin is home to thousands of species of insects. Several species of fishes including the flesh-eating Piranha fish is also found in the river. This basin is thus extraordinarily rich in the variety of life found there.



Fig. 8.5 : Tapir

PEOPLE OF THE RAINFORESTS

People grow most of their food in small areas after clearing some trees in the forest. While men hunt and fish along the rivers, women take care of the crops. They mainly grow



Do you know?

Bromeliads are special plants that store water in their leaves. Animals like frogs use these pockets of water for laying their eggs.



Let's do

Some TV channels broadcast documentaries on the wildlife of the world. Try to watch some of the films and share your experience with the class.



Do you know?

Slash and Burn is a way of cultivating land where farmers clear a piece of land by slashing or cutting down trees and bushes. These are then burnt, which releases the nutrients into the soil. Now crops are grown in this cleared field for a few years.

After repeatedly using the patch of land, the soil loses its nutrients. So it is abandoned. Then they clear another plot of land to plant. In the mean time young trees grow in the old field. In this way soil fertility is restored. People can then return to it and start cultivating it again.

tapioca, pineapple and sweet potato. As hunting and fishing are uncertain it is the women who keep their families alive by feeding them the vegetables they grow. They practice “slash and burn agriculture”. The staple food is manioc, also known as cassava that grows under the ground like the potato. They also eat queen ants and egg sacs. Cash crops like coffee, maize and cocoa are also grown.

The rainforests provide a lot of wood for the houses. Some families live in thatched houses shaped like beehives. There are other large apartment-like houses called “Maloca” with a steeply slanting roof.

Life of the people of the Amazon basin is slowly changing. In the older days the heart of the forest, could be reached only by navigating the river. In 1970 the Trans Amazon highway made all parts of the rainforest accessible. Aircrafts and helicopters are also used for reaching various places. The indigenous population was pushed out from the area and forced to settle in new areas where they continued to practice their distinctive way of farming.

The developmental activities are leading to the gradual destruction of the biologically diverse rainforests. It is estimated that a large area of the rainforest has been disappearing annually in the Amazon basin.

You can see that this destruction of forests has a much wider implication (Fig. 8.6). The topsoil is washed away as the rains fall and the lush forest turns into a barren landscape.

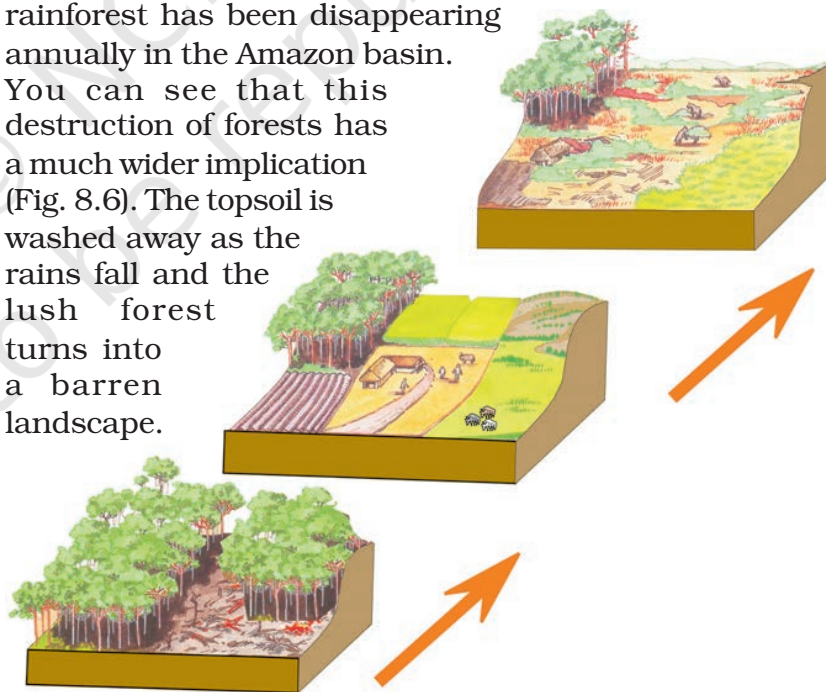


Fig. 8.6: Gradual Destruction of Forests

LIFE IN THE GANGA-BRAHMAPUTRA BASIN

The tributaries of rivers Ganga and Brahmaputra together form the Ganga-Brahmaputra basin in the Indian subcontinent (Fig. 8.8). The basin lies in the sub-tropical region that is situated between 10°N to 30°N latitudes. The tributaries of the River Ganga like the Ghaghra, the Son, the Chambal, the Gandak, the Kosi and the tributaries of Brahmaputra drain it. Look at the atlas and find names of some tributaries of the River Brahmaputra.



Fig. 8.7 Brahmaputra river

The plains of the Ganga and the Brahmaputra, the mountains and the foothills of the



Fig. 8.8: Ganga-Brahmaputra Basin



Let's do

River Brahmaputra is known by different names in different places. Find the other names of the river.



Glossary

Population density:

It means the number of persons that live in one sq. km. of area e.g. the population density of Uttarakhand is 189 while the density of West Bengal is 1029 and that of Bihar is 1102.



Activity

Collect some handicrafts made from jute, bamboo and silk. Display them in the class. Find out in which area they were made?

Himalayas and the Sundarbans delta are the main features of this basin. Ox-bow lakes dot the plain area. The area is dominated by monsoon climate. The monsoon brings rains from mid-June to mid-September. The summers are hot and the winters cool.

Look at the map of India (Fig. 8.8). Find out the states in which the Ganga-Brahmaputra basin lies.

The basin area has varied topography. The environment plays a dominant role in the distribution of the population. The mountain areas with steep slopes have inhospitable terrain. Therefore less number of people live in the mountain area of the Ganga-Brahmaputra basin. The plain area provides the most suitable land for human habitation. The soil is fertile. Agriculture is the main occupation of the people where flat land is available to grow crops. The density of population of the plains is very high. The main crop is paddy (Fig. 8.9). Since cultivation of paddy requires sufficient water, it is grown in the areas where the amount of rainfall is high.

Wheat, maize, sorghum, gram and millets are the other crops that are grown. Cash crops like sugarcane and jute are also grown. Banana plantations are seen in some areas of the plain. In West Bengal and Assam tea is grown in plantations (Fig. 8.10). Silk is produced through the cultivation of silk worms in parts of Bihar and Assam. In the mountains and hills, where the slopes are gentle, crops are grown on terraces.

The vegetation cover of the area varies according to the type of landforms. In the Ganga and Brahmaputra plain tropical deciduous trees grow, along with teak, sal and peepal. Thick bamboo groves are common in the Brahmaputra plain. The delta area is covered with the



Fig. 8.9 : Paddy Cultivation



Fig. 8.10 : Tea Garden in Assam

mangrove forests. In parts of Uttarakhand, Sikkim and Arunachal Pradesh, coniferous trees like pine, deodar and fir can be seen because the climate is cool and the slopes are steep.

There is a variety of wildlife in the basin. Elephants, tigers, deer and monkeys are common. The one-horned rhinoceros is found in the Brahmaputra plain. In the delta area, Bengal tiger, crocodiles and alligator are found. Aquatic life abounds in the fresh river waters, the lakes and the Bay of Bengal Sea. The most popular varieties of the fish are the rohu, catla and hilsa. Fish and rice is the staple diet of the people living in the area.



Fig. 8.11 : One horned rhinoceros



Fig. 8.12 : Crocodiles

Lake: A source of livelihood

(A case study)



A clean lake

Binod is a fisherman living in the Matwali Maun village of Bihar. He is a happy man today. With the efforts of the fellow fishermen – Ravindar, Kishore, Rajiv and others, he cleaned the maun or the ox-bow lake to cultivate different varieties of fish. The local weed (vallisneria, hydrilla) that grows in the lake is the food of the fish. The land around the lake is fertile. He sows crops such as paddy, maize and pulses in these fields. The buffalo is used to plough the land. The community is satisfied. There is enough fish catch from the river – enough fish to eat and enough fish



Do you know?

Terraces are built on steep slopes to create flat surfaces on which crops are grown. The slope is removed so that water does not run off rapidly.



Terrace Farming



Do you know?

In the fresh waters of River Ganga and River Brahmaputra, a variety of dolphin locally called Susu (also called blind dolphin) is found. The presence of Susu is an indication of the health of the river. The untreated industrial and urban wastes with high amount of chemicals are killing this species.



Blind Dolphin

to sell in the market. They have even begun supply to the neighbouring town. The community is living in harmony with nature. As long as the pollutants from nearby towns do not find their way into the lake waters, the fish cultivation will not face any threat.



A Polluted Lake



Fig. 8.13: Varanasi along the River Ganga

The Ganga-Brahmaputra plain has several big towns and cities. The cities of Allahabad, Kanpur, Varanasi, Lucknow, Patna and Kolkata all with the population of more than ten lakhs are located along the River Ganga (Fig. 8.13). The wastewater from these towns

and industries is discharged into the rivers. This leads to the pollution of the rivers.

All the four ways of transport are well developed in the Ganga-Brahmaputra basin. In the plain areas the roadways and railways transport the people from one place to another. The waterways, is an effective means of transport particularly along the rivers. Kolkata is an important port on the River Hooghly. The plain area also has a large number of airports.



Fig. 8.14: Tiger in Manas Wildlife sanctuary

Tourism is another important activity of the basin. Taj Mahal on the banks of River Yamuna in Agra, Allahabad on the confluence of the Rivers Ganga and Yamuna, Buddhists stupas in Uttar Pradesh and Bihar, Lucknow with its Imambara, Assam with Kaziranga and Manas with wild life sanctuaries and Arunachal Pradesh with a distinct tribal culture are some of the places worth a visit (Fig. 8.14).



1. Answer the following questions.

- (i) Name the continent in which the Amazon Basin is located.
- (ii) What are the crops grown by the people of the Amazon Basin.
- (iii) Name the birds that you are likely to find in the rainforests of the Amazon.
- (iv) What are the major cities located on the River Ganga.
- (v) Where is the one-horned rhinoceros found?

2. Tick the correct answer.

- (i) Toucans are a type of
 - (a) birds
 - (b) animals
 - (c) crops
- (ii) Manioc is the staple food of
 - (a) Ganga Basin
 - (b) Africa
 - (c) Amazon
- (iii) Kolkata is located on the river
 - (a) Orange
 - (b) Hooghly
 - (c) Bhagirathi
- (iv) Deodars and firs are a type of
 - (a) Coniferous trees
 - (b) Deciduous trees
 - (c) shrubs
- (v) Bengal tiger is found in
 - (a) mountains
 - (b) delta area
 - (c) Amazon

3. Match the following.

- | | |
|--------------------|---------------------|
| (i) Cotton textile | (a) Assam |
| (ii) Maloca | (b) Terrace farming |
| (iii) Piranha | (c) Sericulture |
| (iv) Silk worm | (d) Slanting roof |
| (v) Kaziranga | (e) Ganga plain |
| | (f) Varanasi |
| | (g) Fish |

4. Give reasons.

- (i) The rainforests are depleting.
- (ii) Paddy is grown in the Ganga-Brahmaputra plains.

5. Map skills.

- (i) On an outline map of the Indian Sub-continent, draw the rivers Ganga and Brahmaputra from the source to the mouth. Also show the important tributaries of both the rivers.
- (ii) On the political map of South America, draw the equator. Mark the countries through which the equator passes.

6. For fun.

Make a collage to show places of attractions in India. You can divide the class in different groups to show attractions based on mountain landscapes, coastal beaches, wildlife sanctuaries and places of historical importance.

7. Activity.

Collect under mentioned material and observe how destruction of trees effect the soil cover.

Material

- (i) Three small flowerpots or food cans (e.g., cold drinks tin cans),
- (ii) one big can with holes punched in the bottom (this will act as a sprinkling can),
- (iii) twelve coins or bottle caps
- (iv) soil.

Steps

Take three small cans or pots. Fill them with soil till the top. Press the soil to make it level with the top of the can. Now put four coins or bottle caps on the soil of each can. Take the big can that has been punched with holes and fill it with water. You can also take the sprinkling can from your garden. Now, sprinkle water on the three cans. On the first can sprinkle water very slowly so that no soil splashes out. Let moderate amount of water be sprinkled on the second can. On the third can, sprinkle the water heavily. You will observe that unprotected soil splashes out. Where the 'rain' is heavy the amount of soil that splashes out is the maximum and least in case of the first can. The coins or caps represent the tree covers. It is clear that if the land is cleared completely of the vegetation, the soil cover will quickly disappear.





9 Life in the Temperate Grasslands

Just as a forest can be defined as the place where trees are the main type of vegetation, grassland can be defined as a region where grasses form the dominant type of plant life. Grasslands make up almost a quarter of the total land surface. The types of plants that grow here greatly depend on what the climate and soil are like. As climate plays an important role in the formation of grasslands, it is generally used as a basis to divide the **world's grasslands** into two broad categories: those that occur in the **temperate region** and those that occur in the **tropical regions**.

THE PRAIRIES

The temperate grasslands of North America are known as the Prairies (Fig. 9.1). It is a region of flat, gently sloping or hilly land. For the most part, prairies are treeless but, near the low lying plains, flanking river valleys, woodlands can be found. Tall grass, upto two metres high, dominates, the landscape. It is actually a "sea of grass."

The prairies are bound by the Rocky Mountains in the West and the Great Lakes in the East. Look at the map of North America (Fig. 9.2). You can see that the prairies cover parts of United States of America and parts of Canada. In the USA, the area is drained by the tributaries of Mississippi and the Canadian prairies are drained by the tributaries of Saskatchewan Rivers.



Word Origin

The word Prairie originated from Latin word priata which means meadow.



Fig. 9.1: The Prairies



Do you know?

The grasslands of Prairies were the home of native Americans often called “Red Indians”. They were the actual habitants of the continent. The Prairies were home of other tribes also like the Apache, the Crow, the Cree and the Pawnee.



Do you know?

Chinook is a hot wind that blows in winter and therefore raises the temperature within a short time. This increase in temperature results in the melting of snow, making pasture land available for grazing of animals.



Fig. 9.2: The Prairies in North America

CLIMATE

Being located in the heart of a continent, the climate is of continental type with extreme temperatures. The summers are warm with temperatures of around 20°C , while in winter -20°C has been recorded in Winnipeg, Canada. In winters a thick blanket of snow covers this region.

The annual rainfall is moderate and is ideal for the growth of grass. Due to the absence of the north-south barrier, a local wind “Chinook” blows here.

FLORA AND FAUNA

Prairies are practically tree-less. Where water is available, trees such as willows, alders and poplars grow. Places that receive rainfall of over 50 cm, are suitable for farming as the soil is fertile. Though the major crop of this area is maize, other crops including potatoes, soybean, cotton and alfa-alfa is also grown. Areas where rainfall is very little or unreliable, grasses are short and sparse. These areas are suitable for cattle rearing. Large cattle farms called **ranches** are looked after by



Fig. 9.4: A Bison

sturdy men called cowboys (Fig. 9.3). **Bison** or the American buffalo is the most important animal of this region (Fig. 9.4). It nearly got extinct due to its indiscriminate hunting and is now a protected species. The other animals found in this region are rabbits, coyotes, gophers and Prairie dog.



Fig. 9.3: A Cowboy with his horse

PEOPLE

The people of this region are very hardworking. They have successfully harnessed technology to utilise their rich natural resources. Two of the most developed countries in the world - the USA and Canada are located in this region. Scientific methods of cultivation and use of tractors, harvesters and combines has made North America a surplus food producer. The Prairies are also known as the "Granaries of the world," due to the huge surplus of wheat production.

Dairy farming is another major industry. The dairy belt extends from the Great Lakes to the Atlantic Coast in the east. Dairy farming and extensive agriculture both promote setting up of food processing industries.

Large mineral deposits particularly coal and iron and a good network of roads, railways and canals in this region have made it the most industrialised region in the world.



Glossary

Combine: A single machine which can combine the tasks of sowing, ploughing and threshing i.e. a three-in-one.



Do you know?

Important cities in the American prairies are Chicago, Minneapolis, Indianapolis, Kansas and Denver. In the Canadian prairies the important cities are Edmonton, Saskatoon, Calgary and Winnipeg.



Do you know?

The Veld name was given by the Dutch settlers before South Africa was colonised by the British.

THE VELDS

The temperate grasslands of South Africa are called the **velds** (Fig. 9.5). Velds are rolling plateaus with varying heights ranging from 600 m to 1100 m. It is bound by the Drakensburg Mountains on the east. To its west lies the Kalahari desert. On the northeastern part, “high velds” are located that attain a height of more than 1600 m, in some places. Look at the map of Africa. Name the countries that are covered by the Velds. The tributaries of rivers Orange and Limpopo drain the region.



Let's do

Some type of grass grows on almost every surface of the earth. List names of places where you have observed grass growing, e.g., lawns, cricket field, between cracks of a side walk etc.



Fig. 9.5: Veld in Africa



Let's do

Velds lie in the Southern hemisphere. When it is summers in velds, what season would it be in the prairies?

CLIMATE

The velds have a mild climate due to the influence of the Indian Ocean. Winters are cold and dry. Temperatures vary between 5°C and 10°C and July is the coldest month. Summers are short and warm. Johannesburg records about 20°C temperature in the summer.

The velds receive rainfall mainly in the summer months from November to February. This is mainly because of the warm ocean currents that wash the shores of the velds. If the rainfall is scanty in the winter months from June till August, drought may occur.

FLORA AND FAUNA

The vegetation cover is sparse. Grasses dominate the landscape. Red grass grows in bush velds. In the high velds acacia and maroola are seen to be growing. The animals of the velds are primarily lions, leopards, cheetah and kudu (Fig. 9.6).

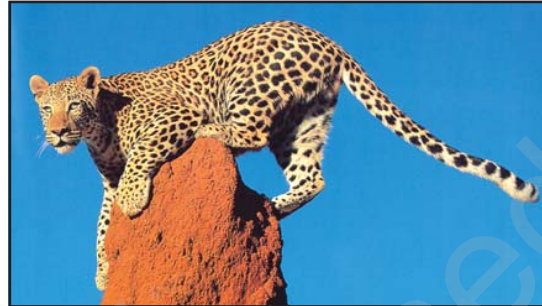


Fig. 9.6: A Leopard

PEOPLE

Velds are known for cattle rearing and mining. The soils are not very fertile in the velds due to the presence of discontinuous grasses exposing barren surface. However where the land is fertile crops are grown. The main crops are maize, wheat, barley, oats and potato. Cash crops like tobacco, sugarcane and cotton are also grown.

Sheep rearing is the most important occupation of the people. Sheep is bred mainly for wool and has given rise to the wool industry in the velds. Merino sheep is a popular species and their wool is very warm. Dairy farming is the next important occupation. Cattle are reared in the warmer and wetter regions and the dairy products like butter, cheese are produced for both domestic supply and also for export.

The velds have rich reserve of minerals. Iron and steel industry has developed where coal and iron are present. Gold and diamond mining are major occupations of people of this region. Johannesburg is known for being the gold capital of the world. Kimberley is famous for its diamond mines (Fig. 9.7). Mining of diamond and gold in South Africa led to the establishment of trade ties with Britain and gradually South Africa became a British Colony. This mineral rich area has a well-developed network of transport.



Fig. 9.7: Diamond Mine, Kimberley



1. Answer the following questions.

- (i) What are the Temperate Grasslands of North America called?
- (ii) What are the cattle farms in the North American Grasslands known as?
- (iii) Name the rivers that drain the Velds.
- (iv) When is the rainy season in the Velds?
- (v) What is the major occupation of the people of the South African grasslands?

2. Tick the correct answer.

- (i) River Mississippi drains
 - (a) Canada
 - (b) Africa
 - (c) USA
- (ii) Drakensberg Mountains are to the west of
 - (a) Prairies
 - (b) Velds
 - (c) Pampas
- (iii) Merino is a species of
 - (a) fish
 - (b) elephant
 - (c) sheep
- (iv) Kimberley is famous for
 - (a) diamonds
 - (b) silver
 - (c) platinum

3. Match the following.

- | | |
|--------------|--------------------|
| (i) Cowboys | (a) Iron and Steel |
| (ii) Gold | (b) Prairies |
| (iii) Kudu | (c) Hot wind |
| (iv) Chinook | (d) Velds |
| (v) Coal | (e) Johannesburg |
| | (f) Animal |

4. Give reasons.

- (i) The Prairies are known as the 'Granaries of the World'.
- (ii) Rise of wool industry in the Velds.

5. Map skills.

On an outline map of North America, mark the Rocky mountains, the Great Lakes, river Mississippi, river Saskatchewan, the cities – Chicago and Winnipeg.

6. For fun.

Make a grass whistle

You will require a blade of grass about 5 cm in length. Be sure to choose the grass blade longer than your thumb. The blade of grass should be fairly thick. Choose the grass that is broad and wide. Narrow blade is difficult to hold. Put your thumbs together as your nails are facing you. Stretch the blade of grass lengthwise between the thumbs and the base of the hand. Your hands should be cupped to create a hollow or a narrow opening between your palms. You should just be able to see the edge of the grass only through the narrow opening. Place your lips over the opening and blow gently into the palm. You may even feel the grass blade vibrating as you blow. As you gradually blow you will hear sound of whistle created by grass.

Social Science

Our Environment

Textbook in Geography for Class VII



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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Foreword

The National Curriculum Framework (NCF), 2005, recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required number of teaching days are actually devoted to teaching. The methods used for teaching and evaluation will also determine how effective this textbook proves for making children's life at school a happy experience, rather than a source of stress or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring and reorienting knowledge at different stages with greater consideration for child psychology and the time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups, and activities requiring hands-on experience.

The National Council of Educational Research and Training (NCERT) appreciates the hard work done by the textbook development committee responsible for this book. We wish to thank the Chairperson of the advisory committee for textbooks in Social Sciences, at the higher secondary level, Professor Hari Vasudevan and the Chief Advisor for this book, Vibha Parthasarathi for guiding

the work of this committee. Several teachers contributed to the development of this textbook; we are grateful to their principals for making this possible. We are indebted to the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution. As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

Director

New Delhi
20 November 2006

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The following are applicable to all the maps of India used in this textbook

1. © Government of India, Copyright 2006
2. The responsibility for the correctness of internal details rests with the publisher.
3. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.
4. The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh.
5. The interstate boundaries amongst Arunachal Pradesh, Assam and Meghalaya shown on this map are as interpreted from the "North-Eastern Areas (Reorganisation) Act.1971," but have yet to be verified.
6. The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India.
7. The state boundaries between Uttaranchal & Uttar Pradesh, Bihar & Jharkhand and Chhattisgarh & Madhya Pradesh have not been verified by the Governments concerned.
8. The spellings of names in this map, have been taken from various sources.



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