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HUMAN ENVIRONMENT-
SETTLEMENT TRANSPORT
AND COMMUNICATION

GEOGRAPHY

Early humans depended entirely on their environment for food, clothing and shelter. They were wanderers or nomads. As a forest dweller, early men were hunters and food-gatherers. They lived either on tree tops or in caves. With the passage of time they began to make tools out of stone and learnt the use of fire. Fire protected them from wild animals. Gradually, they domesticated useful animals and roamed forests and grasslands with their flock of sheep and herds of cattle. As people learnt to cultivate crops, they settled down to care for their crops. They used to make houses with stones and bricks. Gradually, they learnt to make tools out of metal and cut trees to make houses. **Since they got food from the crops which they cultivated they did not need to remain wanderers.** Early settlements grew **near the river valleys** as water was available for drinking and irrigation and the land was fertile. Settlements are places where people build their homes. All the early four civilizations, the Mesopotamia, Indus Valley, Egypt and China came up along the bank of rivers, Tigris, Indus, Nile and Hwang-Ho respectively.

With time humans learnt new skills to grow food, build homes and develop better means of transport and communication. With the development of trade, commerce and manufacturing, human settlements became larger. In this way, humans modified the environment where they lived.

A settlement can be described as a unit area where a group or groups of people live an organised way of life. The people of the settlement may be engaged in agriculture, industry, trade and transport, though some of them may still be hunters and food gatherers. Even hunters and food gatherers have today some kind of links with the settlements. In the beginning the hunters-gatherers lived in groups. Their settlements were temporary settlements. 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 temporary settlements. They practise hunting, gathering, shifting cultivation and

*Mohanjodaro (Indus Valley)*



transhumance (seasonal movement in search of new pastures for the animals according to changes in seasons). However, more and more settlements today are permanent settlements.

Types of Human Settlements (based on size and occupation)

Based on size and occupation settlements can be classified into rural and urban.

Rural settlements : The villages are rural settlements where people are engaged in activities like agriculture, fishing, animal rearing, dairy farming, forestry, crafts work and trading, etc. mostly using the surrounding resources.

Urban settlements : Urban settlements include towns, cities and mega cities called metros. The towns are small and the cities are larger urban settlements. In urban areas the people are engaged in manufacturing, trading and services. In determining an urban settlement, its population should be more than 5000, 75% of working people should be engaged in occupations other than agriculture and it should have an administrative set up like a municipal board, a corporation, a notified area or a cantonment committee.

Types of Rural Settlements

Rural settlements can be compact or scattered. A **compact settlement** is a closely built area of houses wherever flat land is available. Such settlements can be seen in the northern plains of India where agriculture is the main occupation of the people, land is fertile and available to the masses. In a **scattered settlement** houses are spaced over an extensive area. This type of settlement is mostly found in hilly tracts, thick forests and regions of extreme climate where population is less because of hardships people experience. In the hills farmers build terraces to make land flat for agriculture.



Compact Settlement



Scattered Settlement

The pattern of such settlements may be :

1. **Linear pattern :** Houses come up along a road, canal, river, railway line or sea coast.

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2. **Circular pattern** : Houses come up in a flat level area round a lake, a tank or a pond.
 3. **Radial/Spiral/Star Like pattern** : houses made along the roads and railways lines which diverge from a central point.
 4. **Triangular pattern** : settlement at the confluence of two rivers.
 5. **Cross-shaped pattern** : settlement at the crossing of two roads.

Types of Urban Settlement

The urban settlements are relatively compact. Different types of urban settlements are :

1. **Administrative** : seat of government, for example, Delhi, Lucknow.
2. **Cultural** : centres of art, learning and education, for example, Allahabad, Varanasi, Pune.
3. **Industrial** : centres of industry, for example, Ahmedabad, Jamshedpur, Bhilai.
4. **Transport** : important sea ports, railway junctions, nodal centres for airways or roadways, for example, Mumbai, Chennai, Delhi.
5. **Business** : International or regional centre of business, for example, Mumbai, New Delhi.
6. **Religious** : for example, Haridwar, Amritsar.

Rural-Urban Relationship : The food, milk, vegetables, fruits, raw material and casual labour is provided by the rural settlements to the urban. On the other hand, urban area meet the needs of better education, medical facility, employment and entertainment for the rural settlements.

To Choose Site for a Settlement

The early people had to find a ground to settle where they could practice agriculture and engage tool making at the same time. The place where a settlement (village or town) is built is called its site. The natural conditions or basic requirements for selection of an ideal site are :

1. Favourable climate
2. Availability of water
3. Suitable land
4. Fertile soil

Settlements generally develop on a higher ground to avoid flooding. They usually develop on level land where the construction of buildings, roads and railway lines is easier.

Growth of Settlements

Settlements generally grow or expand if the people in them prosper in agriculture, trade, mining, industry, high education or defence. The easy movement of goods and people in plains contribute to growth

of settlements. In areas, with rugged land like in north-east India large settlements are very few. Shimla, Srinagar (Jammu and Kashmir) and Panaji (Goa) developed because their scenic beauty and climate attracted a lot of tourists to go there. Pollution, traffic congestion, poor drainage, mismanaged garbage disposal, epidemics or a natural disaster may choke a city to let it eventually die out.

Transport

Transport is the means by which people and goods move from one place to another. It facilitates trade from the areas that have surplus resources to the areas that are needy or deficient in them. In the beginning people had to walk and carry their load themselves. When they domesticated animals, they used them to carry their goods and them. Invention of the wheel made transport easier. But it took a great deal of time to travel long distances. With the invent of engine and motorcars and then airoplanes, it made travel faster and faster. Early traders from Europe used to take several months to reach India by sea route or land route. Now it takes only several hours to travel from India to Europe.

Modern means of transport saves time and energy. But they are not applicable at every place. At remote places where the ground is rugged people use donkeys and mules in the hills. They use camels in deserts and bullocks in plains. In Tibet (Himalayas) they use yaks and llamas in Andes mountains of South America.

The four major means of transport are roadways, railways, waterways and airways. All the above modes of transport are much developed today. Under a given set of conditions each of them has its own individual importance though one mode of transportation may have a comparative advantage over the other.

Roadways

Roads are the most commonly used means of transport for short and medium distances. Carts, cars,buses and truck all run on roads. The roads can be metalled (pucca) or unmetalled (kuchcha). Roads built underground are called subways. Flyovers are built over raised structures.



Fact File

Broad roads which allow six to eight vehicles to move in the same direction simultaneously are called expressways or freeways. In England such roads are called Motor ways while in Germany they are called Autobahns.



Metalled Road



Unmetalled Road



Road Network with flyovers

Metalled or surfaced roads are made of stones and tar or asphalt. They are all-weather roads. Roads which are made of mud and stones or bricks are called **unmetalled or unsurfaced** roads. Such roads are less costly and are relatively easy to build. It is difficult to travel by unmetalled roads in the rainy season. In India, plains have a dense network of roads. The government is providing metalled roads upto villages. The metalled roads which connect the capital cities of different states are called **National Highways**. **State highways** connect the important towns of a state with its capital city. The latest development in India is the construction of express ways. The **Golden Quadrilateral** connects Delhi, Mumbai, Chennai and Kolkata (Fig. 7.7).

Roads provide door-to-door service. They can be constructed in the forests, deserts and even high mountains where it is difficult to develop railways. Roads are easy to maintain. Manali-Leh highway in the Himalayas is one of the highest roadways in the world.

Railways

Rail transport is more economical than road transport once it is laid. The railways carry heavy goods and people on a large scale over long distances quickly and cheaply. Indian railway network is the largest in Asia and fourth largest in the world. It is the symbol of our national, cultural and social unity. It also influences the economic activities of the country. Diesel and electric engines have largely replaced the steam engines. In places superfast trains have been introduced to make the journey faster. Increased electrification of the rail network, conversion of rail-lines from metre gauge to broad gauge, increase in the size of the carriages and computerisation have led to the overall progress of our railways. In big cities, like Mumbai, local trains carry the passengers with ease. In Kolkata we have underground local train service called Metro. In Delhi we have partly underground and airconditioned Metro train service.

Waterways

Waterways are the cheapest for carrying heavy and bulky goods over long distance between countries as there is no need to lay roads and



Golden Quadrilateral of National Highways



Metro Train in Delh

railway lines. Only suitable ports have to be constructed where ships and steamers can call on. Waterways are mainly of two types—inland water ways and sea routes.

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

The important sea routes and oceanic routes include :

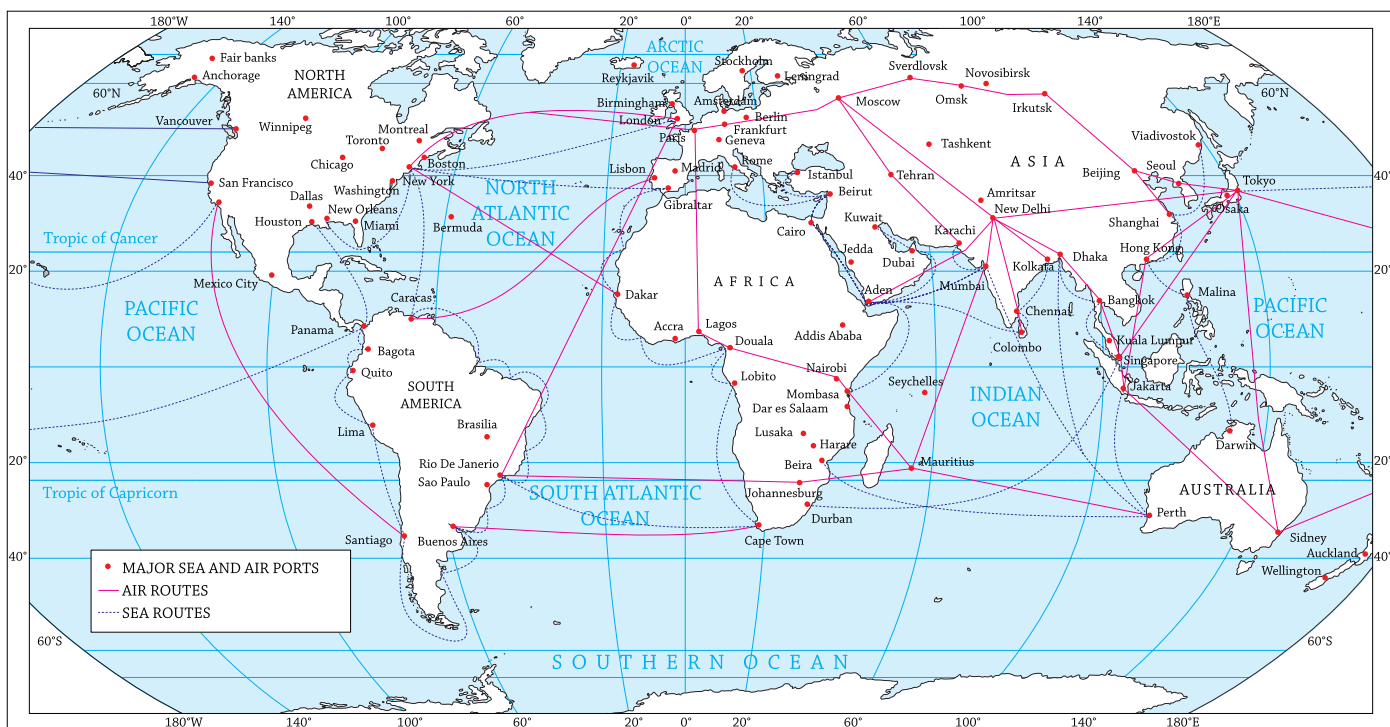


Inland Waterways

The **North Atlantic route** connects the eastern North America with Western Europe. Industrial and business towns on both the shores of the Atlantic Ocean makes it the busiest ocean route in the world. The **South Atlantic route** connects Western Europe with West Indies, Brazil and Argentina in South America. The **Panama canal route** connects the Pacific Ocean with the Atlantic Ocean. Thus, it connects Western American countries with Eastern American countries. The **Suez Canal route** connects Asia and Eastern Africa with Western Europe. It goes through the Mediterranean Sea. These routes are connected with the ports. Some important ports of the world are New York and Los Angeles in North America, Rio de Janeiro in South America, London and Rotterdam in Europe, Durban and Cape Town in Africa, Mumbai and Singapore in Asia and Sydney in Australia.

Airways

This is the fastest way of transport. Passengers who want to save time and travel in comfort prefer air travel. It is ideal for transportation of highly perishable goods. But it is the most expensive due to high cost of aircrafts, airports, runways and fuels. Air traffic is adversely



World– Major Sea Ports and Airports

affected by fog and storms. Very expensive equipments are required to guide and monitor safe take off and landing facilities in all kinds of weather conditions. Helicopter is the only mode of transport to reach the most remote and distant areas without roads and railways. In time of calamities to rescue people and distribute food, water, medicines and clothes, helicopters are extremely useful.

Although the sky is limitless, the aircrafts have to follow defined routes for safety and to save time. Most major cities of the world are connected by air routes. Some of the important airports are Delhi, Mumbai, London, Paris, Frankfurt, New York, Cairo and Singapore. Every country has two types of air services—domestic and international. Domestic services in India include Indian Airlines, Jet Airways and Air Deccan. Air India operates international services.

Communication

Communication is the exchange of thoughts, feelings and ideas between individuals. All humans need to communicate with other fellow beings to satisfy their emotional needs and for learning, cooperation and trade. Thus, **communication** is the process of conveying messages to others. We have fast modes of communication at personal and mass level. **Personal communication** includes post card, letter, telegram, telephone, cellular phone, Internet, e-mail and fax. Means of **mass media** include newspapers, magazines, books, cinema, radio, television and Internet. Different modes of communication are used to provide information, to educate as well as to entertain.

Satellites have made communication even faster. Satellites have helped in oil exploration, survey of forest, underground water, mineral wealth, weather forecast and disaster warning. Man-made satellites have also facilitated the use of Internet, the worldwide network of computers for instantaneous communication. It makes us aware of different people, places and happenings. E-mail or electronic mail works within the internet with the help of a modem. The Internet is an inexpensive method of communication. Hence it is becoming very popular. With the help of Internet we can reserve tickets for railways, airways and even cinemas and hotels sitting at home. We can access any library in the world, and do banking, shopping and paying bills. With worldwide information and interaction—interconnectivity of people, services and institutions—across the world, we are a large global society. A **global society** describes formation of close social relationships and increased cooperation among people in education, trade, services, entertainment, etc.



Means of Communication



Key Words

- » Settlement : places where people build their homes.
- » Rural settlements : villages where people are engaged in agriculture, forestry, dairy farming, etc.
- » Urban settlements : towns and cities where people are engaged in manufacturing, trading and services.
- » Transport : a system of carrying goods and people.
- » Communication : process of conveying messages to others.
- » Highways : roads that facilitate fast-moving traffic.
- » Metalled Roads : roads made of stones and tar or asphalt.
- » Unmetalled Roads : roads made of mud and stones or bricks.
- » Rugged : not level and smooth.
- » Goods : the things that are produced to be sold.

SUMMARY

- ▶ As forest dwellers early men were hunters and food-gatherers.
- ▶ Early settlements grew in the river valleys as water was available for drinking and irrigation and the land was fertile.
- ▶ With the development of trade, commerce and manufacturing, human settlements became larger.
- ▶ A settlement is a unit area where a group or groups of people live an organised way of life.
- ▶ In rural settlements people are engaged in agriculture, forestry, animal rearing, dairy farming, etc.
- ▶ In urban settlements people are engaged in manufacturing, trading and services—occupations other than agriculture.
- ▶ Natural conditions for selection of an ideal site for a settlement are favourable climate, availability of water, suitable land and fertile soil.
- ▶ Modern means of transport saves time and energy.
- ▶ Roads are less costly and relatively easy to build than railways. They provide door to door service.

Exercise Time

A. Tick (✓) the only correct choice amongst the following :

1. In Tibet which animal people use to carry their goods ?
 a. Bullock b. Horse c. Yak d. Llama
2. Which type of road is constructed under the ground ?
 a. Flyover b. Expressway c. Subway d. Metro
3. Which mode of transport is most suitable to reach an island ?
 a. Ship b. Train c. Car d. Cycle
4. The cheapest means of travel for long distance is
 a. Train b. Bus c. Airoplane d. Ship
5. Which is not a means of communication ?
 a. Telephone b. Books c. Table d. Magazines

B. Fill in the blanks :

1. In hills and densely forested areas _____ settlements are found.
2. Newspapers, magazine and TV are all _____ media.

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3. Air transport is the fastest and most _____ means of travel.
 4. In Kolkata underground local train service called _____ operates.
 5. The _____ canal connects Asia and Eastern Africa with Western Europe.

C. Write true (T) or False (F) against the following statements in given brackets :

1. Canal route is an inland waterway.
2. The scattered settlements come up in fertile plains.
3. Compact settlement is a closely built area of houses.
4. The means of transport are used for carrying goods only.
5. The busiest ocean route in the world is the North Atlantic route.

D. Identify the following terms :

1. Areas where people are engaged in manufacturing, trade and services
2. A settlement along a road or railway track
3. Roads made of mud and stones
4. Metalled roads which connect the capital cities of different states
5. Navigable rivers, canals and lakes

E. Answer in one word or one phrase :

1. What is the pattern of a settlement around a lake ?
2. Which rivers in India are navigable ?
3. Where does a domestic air route operate ?
4. Which places does the Suez Canal connect ?
5. Which is the fastest way of transport ?

F. Answer these questions briefly :

1. What do you understand by river valley civilisation ?
2. Which are the activities practised by the rural people ?
3. What is an urban area ?
4. How did agriculture influence human settlement ?
5. What are the advantages of road transport and rail transport ?

G. Answer these questions in detail :

1. Compare the characteristics of the rural and urban settlements.
2. Describe the different means of mass communication.
3. Describe the important sea routes and oceanic routes.
4. Describe the progress of railways in India.

PROJECT WORK

1. On an outline map of India show the Golden quadrilateral.
2. Find out the names of some newspapers and TV news channels in English, Hindi and a regional language.