

SOCIAL SCIENCE

Class-9



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PREFACE

Education is the key to acquiring knowledge and skill for an individual. This is what helps one to increase our capabilities. Textbooks play an important role among other educational avenues. It provides an opportunity to learn and acquire knowledge and skills in a subject area. The present book is written with an objective to improve the content for social science.

The lessons in this book include experimental and environmental dimensions so as to Densitize the learners about the present surroundings. The book discusses some important concepts from major disciplines & encourages students to learn in a critical manner. The objective is to help them in knowledge construction and skills. Social science develops a positive attitude towards gender equity, diversity and social and human values. The book is holistically presented as a comprehensive study of social sciences and not as separate units of history, political science, geography and economics.

Subject experts from SCERT, State Resource Group, Eklavya and Azim Premji Foundation have contributed in the making of this book. University faculty from different colleges & institutes have helped the Council in many ways. They have contributed to the compilation of maps, the editing of the content in the book and perspective building for the writers' group. We acknowledge the officials of Chhattisgarh InfoTech Promotion Society (chips) who provided us with relevant maps for the book.

We appreciate and thank the dedication and hard work of all the members & associates of textbook writing teams. We hope that the book will prove to be useful for its readers towards building an understanding of our society and would be an interesting journey for them. Attempts have been made to write the book according to the expectations of the NCF, yet readers, teachers and students are requested to point out any short comings and apprise the Council about their views and suggestions.

You feedback would always be welcome

Director

State Council of Educational Research & Training
Chhattisgarh, Raipur

To the Teachers

To make the teaching and learning more effective, the teachers are requested to conduct meaningful discussions on various questions. Every student should have an opportunity to share his or her opinion and experience. Please try to motivate the learners to analyze the content, question view points and express their opinion. This book becomes complete only when their experience, opinion and questions are added or else it would remain dry.

Encourage the students to search for information beyond the textbook. Internet, libraries, newspapers and magazines, teachers, parents and others will always be sources to seek new information and relate to concepts being taught. Students should ask new questions and find answers to them on the basis of their experience and process of verification. This is essential for the understanding of social sciences as a subject.

With this objective, few changes have been made in the syllabus for class IX which have been incorporated in the text book. Attempt has been made to make the book easy, interesting and understandable with an opportunity for both the teachers and learners.

The teachers are expected to pave the right path for the students. Therefore, they would need to understand the relationship between new knowledge, teaching concepts and contemporary events. This would make it more interesting and meaningful for them and for their students.

The knowledge & skill based exercises, community visits and preparation of projects have not only been given sufficient space but have also been made so as to relate concepts to real life and seek new questions. Projects must be done by students and not adults. Use of audio-visual aids, charts, surveys, maps and photographs would prove helpful. Technology is the most enlivening aid to teaching. Hence, the success of the book would depend on the self-directed teaching skills and innovation used by teachers.

THE LETTERING ON THE MAPS ARE IN HINDI. Teachers are advised to use the English nomenclature during teaching according to the contents in the lessons. The English versions of the maps will be included in the next edition of the book.

Director
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Chhattisgarh, Raipur

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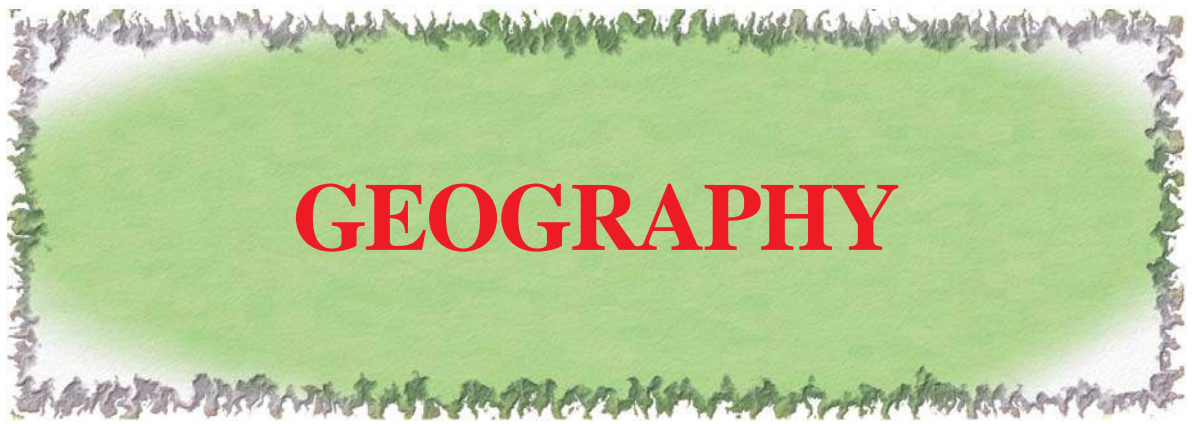
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Social Science Unit wise Distribution

S.No.	Unit	Content	Marks allocated	Allocated Periods
1	1	1. Cartography and the Study of Maps 2. The Dawn of Modern Culture in Europe and India The Early-Modern Age (1300 –1800 CE)	4 4	12 9
2	2	1. Understanding Economic Activities 2. India – An Introduction 3. The Physical Features of the Indian Subcontinent 4. The Vast Northern Plains	6 2	15 6
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4	4	1. The Nature of the Indian Economy Part 1, Part 2 2. The Reformation and the Enlightenment	6 4	15 10
5	5	1. The Peninsular Plateau, The Coastal Plains and Island Groups, The Indian Desert 2. Democratic and Nationalist Revolutions	3 4	10 10
6	6	1. Rights 2. India's Climate	5 4	12 8
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8	8	1. Gender Equality and Women's Rights 2. Natural Vegetation and Communities Dependent on Forests	5 2	12 6
9	9	Colonialism	4	10
10	10	How does Production take Place?	5	10
Total		Theory	75	182
		Project Work	7	Annual Activities
		Geography	6	
		History	6	
		Political Science	6	
		Economics	6	
		Total	25	
		Grant Total	100	

Marks : 75
Time : 3 hours**Question Paper Blue Print****SOCIAL SCIENCE 9th**

Types of Questions	Number of Questions	Marks allocated For each Question	Total Marks	Number of Questions in Geography	Marks allocated for Geography	Number of Questions in History	Marks allocated for History	Number of Questions in Political Science	Marks allocated for Political Science	Number of Questions in Economics	Marks allocated for Economics	Special
1	2	3	4	5	6	7	8	9	10	11	12	13
Questions based on Memory	9	1	9	3	3	3	3	2	2	1	1	
Questions based on the Main Concepts	2	2	4	-	-	-	-	1	2	1	2	
Questions based on Reasoning, Reason/cause, Comparison and Analysis	6	3	18	2	6	2	6	1	3	1	3	
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Questions on Independent Thinking and Linking with Experiences	8	4	32	2	8	2	8	2	8	2	8	option
Grand Total	29	-	75	8	20	8	20	7	18	6	17	



LOOKING BACK

We had learnt about some continents, countries and regions in earlier classes (Class VI to VIII). They differ from each other in many ways. Some places are cold, some are hot. It rains heavily in some places while some places are dry.

Fill in the blanks in the sentences given below. Choose the correct answer from the options given in the box below. You can take the help of your friends or your teacher. Or you can trust your own memory.

1. Six month long days and six month long nights
2. Warm and rainy throughout the year
3. Very dense, evergreen forests
4. Broad leaf deciduous forests.....
5. Tree with long needle-like leaves
6. Terrace farming
7. Light drizzles throughout the year
8. The land of reindeer, caribou, seal and walrus
9. The place with the highest rainfall in the world
10. The name of temperate grasslands
11. Gold and diamond mines
12. The continent through which the Tropic of Cancer, Equator and Tropic of Capricorn pass
.....
13. Tall grasslands where even elephants stay hidden
14. The place with the lowest rainfall in India
15. Rain during the winter and dry weather during the summer
16. The country of the Eiffel Tower
17. Forest where trees shed their leaves before summer
18. One crop stretching for miles

Equatorial region, Deodhar (Pine), Sal and Teak, Polar region, Mountainous region, Tropical forest, Tundra region, France, Africa, Mawsynram, Savannahs, Mediterranean region, North America, Deciduous forest, Thar Desert, Prairies, Monsoon forest, South Africa

Cartography and the Study of Maps

Think Over

If there was no map of our world, how different would your life be?

Dulichand and Sushila live close to each other. One day, they got into an argument over the positioning of water drain. They called the patwari to settle the dispute. How do you think the patwari resolved the issue?

Direction, scale and symbols are important in any map. So we will begin by first learning about what these terms mean.

Direction: If someone asks you in which direction the east lies, you will probably point in the direction where the sun rises. If you know one direction, it is easy to figure out the other three main directions. We all know that there are four main (cardinal) directions – north, south, east and west.

If we stand facing the sun when it rises, the direction in front of us is, behind us is....., to our left is....., and to our right is

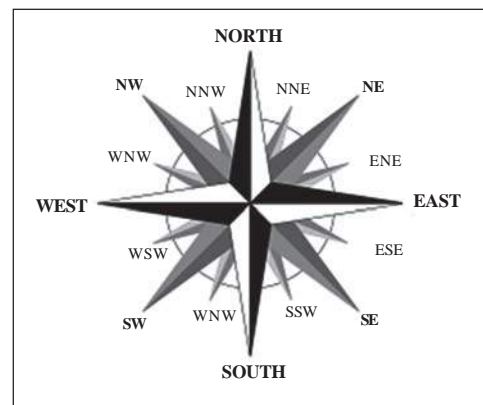


Figure 1.1: Directions

The directions between the four cardinal directions are called,,, and respectively.

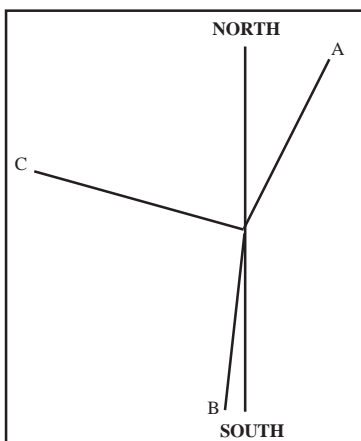


Figure 1.2: Measuring direction

In Figure 1.1, the direction between north and north-east is, between south and south-east is, between south and south-west is, between north and north-west is

Any direction can be explained by using the correct angle. A compass has 360 degrees. To know the correct direction to a place, we assume the north is zero and then calculate the angle of that place. All angles are measured in a clockwise direction beginning from the north.

In Figure 1.2, the places A, B and C are at 29° , 186° and 284° respectively from the point of reference (north).

When a pilot lands an airplane on the runway, he aligns the airplane with the centre of the landing strip with the help of the angle shown in the landing instrument (compass).

Find out from your elders:

What are the different names they use for the different directions?

When do they use these directions in their daily lives?

How do you find the direction to a new place? We use the sunrise and sunset, the Pole Star or a magnetic needle to help us find the direction. The Pole Star tells us the direction of the geographic north, because it is always at a right angle to the 90° northern latitude (North Pole). The geographic north is also called the true north. It is used to draw maps. Opposite to the geographic north is the geographic south (South Pole).



Figure 1.3: The landing strip (runway)

There is another north apart from the geographic north. It is called the magnetic north. Magnetic needles always point to the magnetic north. The earth is a powerful magnet. Its core is made mostly of nickel and iron. However, this is a little away from the geographic north. The magnetic North and South Poles keep shifting, whereas the true North and South Poles remain fixed.

Magnetic North Pole (2004) 82.3°N 113.4°W (2007) 83.9°N 120.7°W

Magnetic South Pole (2004) 63.5°S 138.0°E (2007) 64.4°S 137.6°E

Direction in Maps

If you stand facing a map, the north is at the top, the south is at the bottom, the east is to your right and the west is to your left. These directions are actually relative. Relative means seeing one thing in the context of another. For example, in which direction from Raipur does Jagdalpur lie?

Reading a map after placing it in the true direction is called 'orientation'. Place the map of India on the floor, orient it, and answer the following questions:

1. In which direction from Rajasthan does Himachal Pradesh lie?
2. In which direction from Chhattisgarh does Gujarat lie?
3. In which direction from Chhattisgarh does Nepal lie?
4. In which direction from Uttarakhand does Nepal lie?
5. In which direction from Arunachal Pradesh does Nepal lie?
6. In which direction from Gujarat does Pakistan lie?
7. In which direction from Jammu & Kashmir does China lie?
8. In which direction from Andaman & Nicobar Islands does Sri Lanka lie?
9. In which direction from Kanyakumari does Sri Lanka lie?
10. In which direction from Manipur does Bangladesh lie?



Map 1.1: India

Scale: A map shows a portion of the earth in a very small size on paper. We use scale to ensure that the actual distance between two places is proportionately maintained in the map. So a scale is the relationship or ratio of the distance between two places in a map to the actual distance between the two places on the earth's surface. We assume this ratio in a map. In India, we use the metric system so the basic unit of the scale is one centimetre. The corresponding distance of this unit on the earth's surface is also written in the metric system.

Two maps can have different scales, but the same map can't have two scales. If you draw a map of your school, you can decide how many metres on the ground 1 cm represents on the map. If you have to draw the map of a city on a sheet of paper of the same size, then the scale may become 1 cm = 1 km.

Scale is stated in three ways on maps.

1. Word statement
2. Linear scale
3. Representative fraction

1. Word statement: The scale is written in words. For example, 1 cm = 10 km. In this scale, a distance of 1 cm on the map equals a distance of 10 km on the ground.

2. Linear scale: This is a straight line scale marked in centimetres, with the corresponding actual distances on the ground also marked on the scale. If you want to use this scale to find the actual distance between two places shown in the map, you first measure the distance with a ruler, then place your ruler on the straight line scale to find out the actual distance. However, calculating the exact distance may not be easy because the ratio in this scale is not simple. You may have to go into decimal places to calculate the exact distance. For instance, if 8 cm in the scale equals 10 km, you will have to calculate how many km one cm represents to get a simple ratio.

3. Representative fraction: This scale is widely used in atlases and maps these days. It is a simple scale. If a map shows a scale written as 1:100,000, it means that a distance of 1 cm between two points on the map represents an actual distance of 1,00,000 cm on the ground. 1,00,000 cm equals 1 km. So a distance of 1 cm on the map stands for the actual distance of 1 km on the ground. In this scale, distances on the map and actual distances on the ground are written using the same unit. So the distance between two points on the map and the actual distance between the two points on ground is the ratio of the scale. If two places are situated at a distance of 20 km and the distance shown in the map is 2 cm, the scale of this map would be $2/20 = 1/10$ or 1 cm = 10 km. That means 1 cm on the map equals a distance of 10 km on the ground.

If two places are 50 km apart, what will be the distance between them in a map drawn to the scale 1 cm = 10 km?

Convert the representative fractions given below into word statements:

- 1:50,000 (1 cm represents km)
- 1:10,000 (1 cm represents km)
- 1:1,34,000 (1 cm represents km)
- 1:1,500,000 (1 cm represents km)
- 1:5,00,00,000 (1 cm represents km)
- 1:2,56,70,000 (1 cm represents km)

Symbol: We cannot show the actual size or shape of features such as houses, roads, railway tracks, trees, etc in a map. That's why we use images, colours, alphabets, lines, shadows, shades, etc to depict them. Using these symbols enables us to pack a lot of information about a place. They also make it easier to study these features. We use different symbols in different kinds of maps.

How were maps made in the days when there was no printing press?

The person who draws a map (cartographer) uses standard symbols and scales to depict various features in the map. This ensures that everyone who reads the map understands exactly what the cartographer wants to show. So standardization of symbols ensures uniformity in interpreting the map, especially when maps are printed in such large numbers. Many of these symbols have been conventionally used and are easily recognized by people. Examples would include symbols of natural and man-made landmarks. The constant attempt is to simplify the symbols used so that the common people can easily recognize and understand them.

Conventional symbols: We know that maps show different parts of the world and their features on a small sheet of paper. So everything is reduced in size and shown in two dimensions (flat). There isn't enough space on this flat surface to show all the physical details of that part of the world. That's why, as we said earlier, some basic symbols are used to represent those details. These symbols give a lot of information about the physical features of an area in a small space.

There is an international agreement that all countries in the world will use the same symbols when drawing maps. The advantage of having a standard symbol that is used worldwide is that a person can study a map with the help of these symbols even if he or she doesn't know the language of the particular country. Some of these standard international symbols are shown in Figure 1.4.

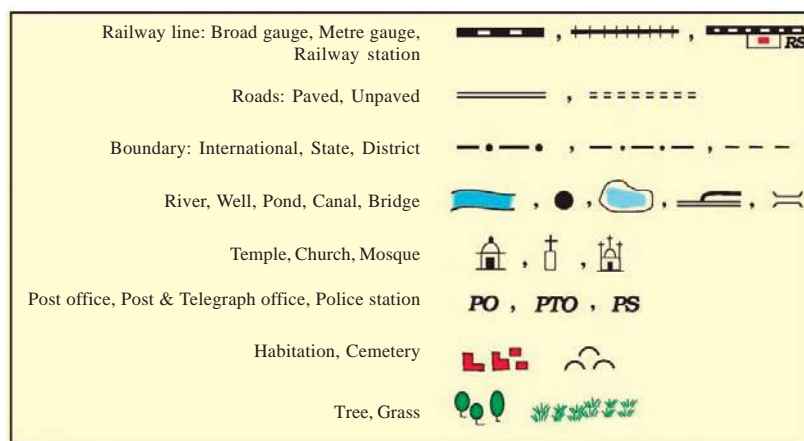


Figure 1.4: Some standard international symbols used in maps

Project Work

Draw a map of everything you see in your village or neighbourhood, using the symbols given in Figure 1.4

Your school is building a laboratory for Class 9. This requires the construction on a new room in the school campus. First, make a map of the school campus as you see it. Use this rough map to prepare a scale map of the campus.

Types of Maps

There are many different kinds of maps, such as physical maps, political maps and thematic maps. Maps that show the natural features of the earth (mountains, plateaus, plains, rivers, oceans, etc) are called physical maps. They give information about the physical features of that region of the earth. Maps that show countries, provinces, cities, villages and the boundaries between different countries and provinces are called political maps. Maps that give information about a specific topic - such as transportation, temperature, rainfall, forest, industry, population, etc - are called thematic maps.

Study the physical and political maps of India. In which map are the following features found?

Put a tick (✓) mark in the correct column:

S No	Description	Political map	Physical map
1.	Colours of seas and oceans		
2.	Colours of states		
3.	Boundaries of states		
4.	Boundaries of countries		
5.	Index of symbols (key)		
6.	Scale		
7.	Information about rivers		
8.	Mountains, plateaus and plains		

Relief (Topographic) Maps

Relief generally means the difference in elevation (high or low) between different parts of the earth's surface, which include mountains, plateaus, plains, rivers, valleys, etc. Maps are drawn on sheets of paper. How do we show these differences in elevation on a flat sheet? There are three ways of showing relief in a map: the spot height method, the contour line method and the colour shading method.

In Class VII, you learnt that all places situated at same height from the sea level (the same elevation) are connected with a single line in a map. This is called a contour line. The elevation of any place on the earth's surface is measured from the sea level. Contour lines are generally drawn at fixed distances - 20 metres, 50 metres, or 100 metres. Earlier, land surveys were conducted to measure surface elevations and draw contour lines. But with the invention of photography, land surveys are done by aerial photography and used in drawing relief or topographic maps.

Characteristics of Contour Lines

- * Contour lines join places situated at the same height from sea level.
- * Contour lines and their shapes depict the slope and height of landforms.

- * Contour lines drawn close together show steep slopes. Contour lines that are more spaced show gentler slopes.
- * Two contour lines of different heights don't cross each other. (Discuss why they do not cross.)

Study the physical map of Chhattisgarh (reference map 12) and find the approximate height of the following places:

1. Jashpur and Dantewada
2. Raipur
3. Your district headquarters
4. The source of the Mahanadi

Study reference maps 11, 14, 15, 16 and 17 (Chhattisgarh) before answering the following questions. Which map is your answer based on?

1. In which direction does Narayanpur lie from Raipur?
2. What is the distance between Korba and Kanker?
3. In which direction does Gariaband lie from Kabirdham?
4. What is the actual distance between Durg and Raigarh?
5. Which districts have dense forests?
6. Which districts have high average temperatures in summer and winter, and what are their annual average temperatures?
7. On the basis of the maps can you tell why Bijapur has more forest cover compared to Durg district.

The Story of Mapmaking

Why do you think people needed maps in the past? What were these maps like?

It took more than 3,000 years to develop the maps that we use today. Human beings have been drawing maps since ancient times. But these ancient maps were quite unlike today's maps. They were mostly line diagrams and were not drawn to scale. They pictorially depicted the earth's physical features. The maps of the modern era are more scientifically developed.

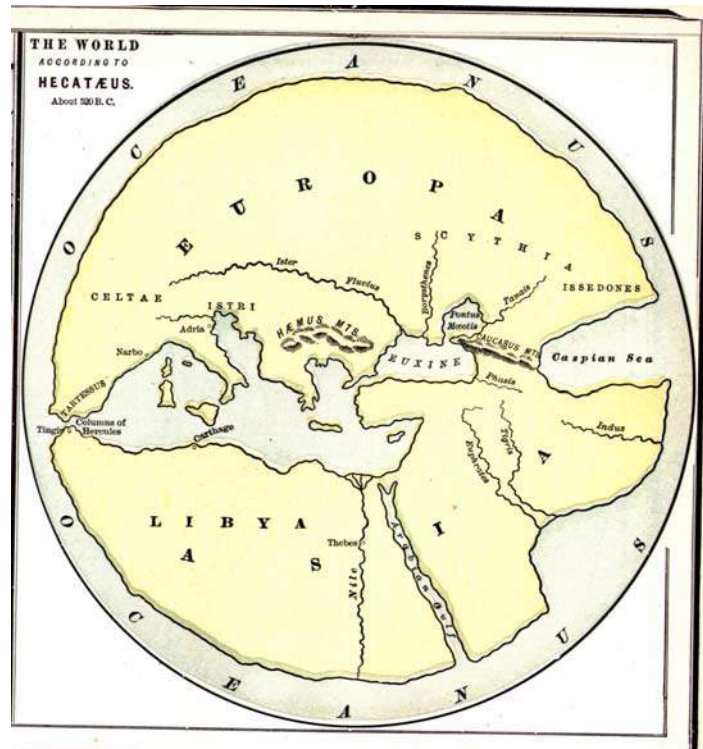
Historically human knowledge of the earth grew with travel and observation and map making too went hand in hand with this. The first maps were made by the Egyptians more than three thousand years ago. They showed the fields bordering the banks of the Nile River. So we can surmise that maps were first used to register land ownership. Nowadays, patwaris have maps that show the agricultural fields of their village. These maps show who owns which piece of land.



Figure 1.5: A map from Babylon engraved on a clay tablet

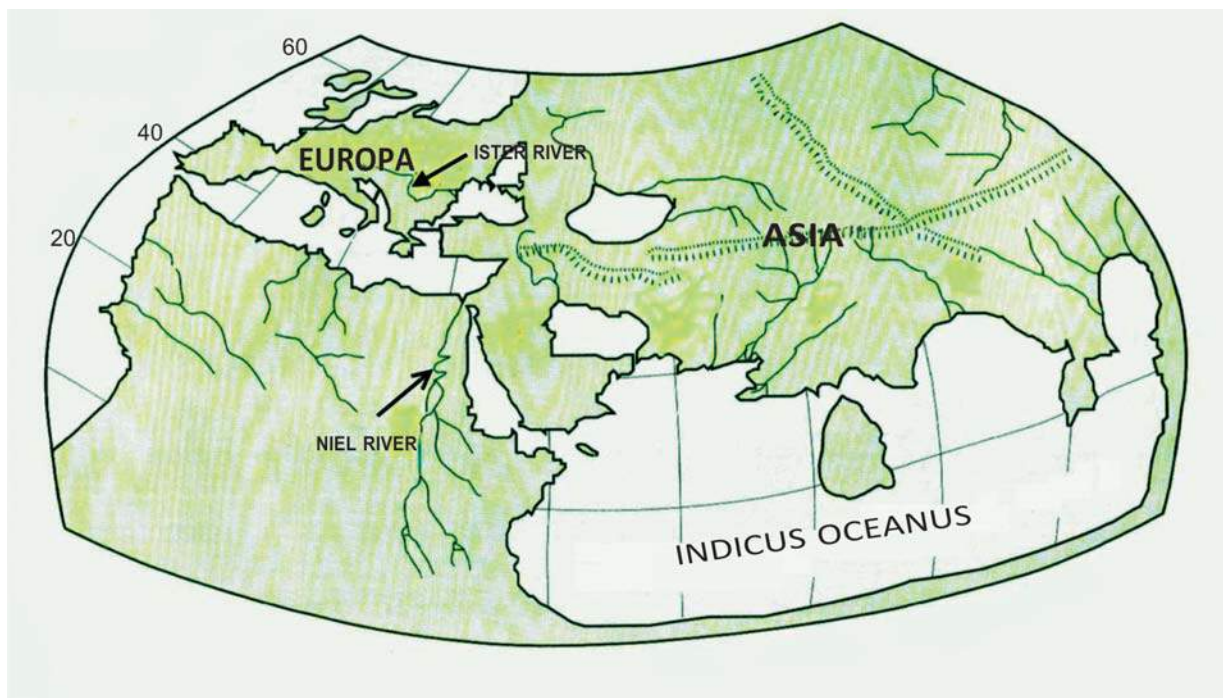
The oldest map of the world is a clay tablet from Babylon (present-day Iraq). Made around 600 BCE, it shows the city of Babylon, the Tigris and Euphrates rivers, mountains, islands and the surrounding seas. This was the world the people of that age knew. This map is currently kept in the British Museum.

How did the art of drawing maps develop? The geographers of ancient Greece were the first to develop the art of map drawing as we know it today. Hecataeus prepared a map of the world sometime during the 5th or 6th century BCE. He lived near the Mediterranean Sea. In those days, people did not believe the earth was round. They believed it was shaped like a saucer, with Greece at its centre. That world was divided into two continents – Europe and Asia.



Map 1.2: The world of Hecataeus

The Roman Empire rose to power following the decline of the Greek states. Its territory extended from Central Europe, France, Italy and Britain to Turkey. The most well-known geographer of the time was Ptolemy. He was the first to understand the importance of latitude and longitude in map making. Based on this concept, he drew a map of Europe and the world. The eastern boundary of the map was China and the western boundary was Spain and its neighbouring countries.



Map 1.3: Ptolemy's world map



Map 1.4: Marco Polo's journey

After the downfall of the Roman Empire in the 2nd century CE, Europe went through a period when scientific thinking was suppressed, which continued until the 7th century CE. The art of cartography also stagnated during this period.

The famous Arab cartographer Muhammad al-Idrisi, who made maps for his king, rose to prominence in the 11th century CE. One unusual feature of the maps of this royal cartographer was that he showed the southern direction towards the top and the northern direction towards the bottom. Also, Arabia was placed at the centre of his world.

Cartography developed rapidly after the 13th century CE when European navigators required reliable information for their ocean voyages of exploration. Marco Polo, Columbus, Vasco da Gama, Magellan and Captain Cook undertook their long voyages that expanded the existing knowledge about the continents and the oceans. The first globe was created during this time. The printing press was also invented in Europe in the 15th century CE, making it possible to print maps. So it was the navigators who widened the scope of map-making and improved the standing of the art of cartography.

Marco Polo (1254–1324 CE) set out on his journey from the city of Venice in Europe. Following a land route, he reached China, travelling through Turkey and Jerusalem. Taking a sea route from East China, he reached Vietnam, the Malay Peninsula, Sumatra, the Nicobar Islands, Sri Lanka and the western coast of the Indian subcontinent.

Vasco da Gama (1460–1524 CE)

When Columbus was busy exploring the New World, the Portuguese were also trying to find an eastern sea route to India. Starting his journey in 1497 CE, Vasco da Gama reached the island of Cape Verde. He proceeded to navigate the then unknown southern Atlantic Ocean, arriving at the south-western coast of Africa. This was the longest sea journey ever undertaken until then. His crew began to fall ill and wanted to return to Portugal. But Vasco da Gama was unswerving in his aim to reach India. Crossing the southern tip of Africa at the Cape of Good Hope, he continued northwards to reach the Zambezi River. His crew were afflicted with scurvy. The sailors' hands and feet were swollen and their teeth began to drop.

Despite these travails, Vasco da Gama kept sailing. He came across Arab traders near Mozambique who encouraged him to sail towards India. He finally succeeded, reaching Calicut on India's western coast on May 20, 1498. This discovery of a sea route from Europe to Asia opened up the possibility of European trade with the East, especially India. **The long voyages of exploration by European navigators transformed map making from an art into a science.**

A new era in cartography began in the 15th century CE. Its foundation was laid by the re-discovery of

Ptolemy's book the *Geographia*, which was translated into several languages. The book popularised maps and their significance. The enthusiasm it generated led to the opening of many new schools of cartography in Italy, France, Britain and Germany. The Arabs had blocked the land route via the Mediterranean Sea to India. **So merchants of Western Europe started looking for alternative paths to continue doing business with India.**



Map 1.5: The journey of Vasco da Gama

Holland became a prominent trading hub during the 16th century CE, establishing its domination over the seas. Its mercantile success spurred the development of cartography. Among the famous Dutch cartographers of the time, the most well-known was Father Gerardus Mercator (1512–94 CE). He spent most of his time in map making, reviewing previous work in the field. He is known today for his Mercator projection. This is the projection technique we use today to make maps of the world.

Cartographers placed their own countries at the centre of their world maps. Why?

Al-Idrisi located the south at the top of his maps while the Greeks located the north at the top. Why this difference?

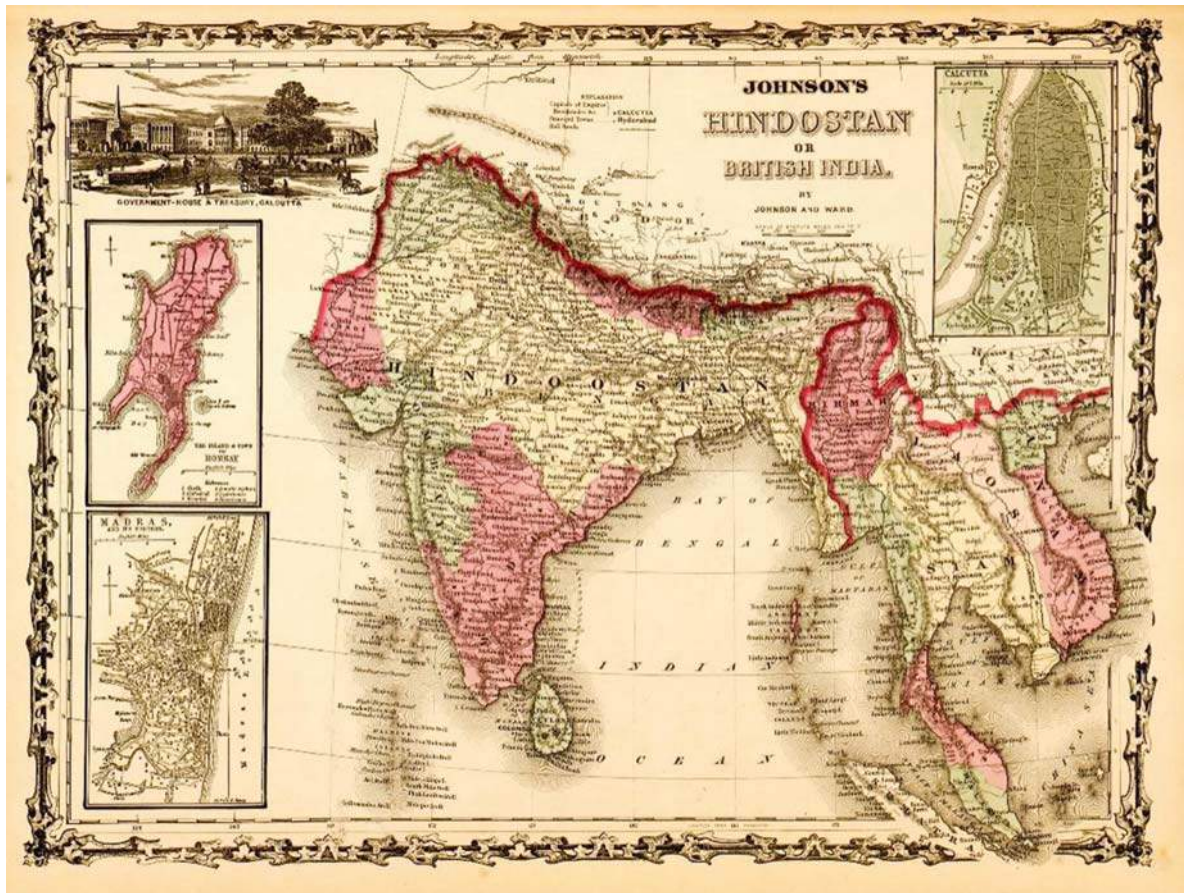
Colonisation, Discovery, Military Use and Map-making

European navigators discovered new continents and countries. They also discovered new sea routes to reach there. They found that America, Africa, Australia and Asia were rich in resources. The European kings were eager to learn more about the resources, climate and inhabitants of these places. They sent their scientists and cartographers to different parts of the world to create new maps. These people crossed continents, mountains, deserts and rivers to collect information about the interior regions of these new lands to include in their maps.

Thus, knowledge about the resources of these new regions reached the European rulers through maps. Their desire to exploit these resources led to the rise of colonialism. In the process, the European rulers established new colonies.

When the British began establishing their power in India, they started preparing maps of the interior regions of the sub-continent. They surveyed the whole country and set up the Survey of India department to oversee the map making work. James Rennell was appointed the Surveyor General. He prepared the first map based on the findings of the survey.

Map 1.6 is the map of India created during the British period. Compare it with the current map of India.



Map 1.6: A map of British India

William Lambton initiated the most comprehensive survey in the world in 1802 CE. The survey covered elevations and distances from Madras (Chennai) in the south to the Himalayas in the north. Sir George Everest completed the survey process. The highest point in the world was discovered during the survey. It was named Mount Everest. Scientific methods were used for the first time in this survey, the elevations of all places being measured from the sea level in Chennai where the survey began.

Maps are required the most during wars. They were used extensively during both the World Wars. Many governments hid the maps of their countries to prevent the enemy from taking advantage of them. In the modern age, highly detailed maps are prepared with the help of orbiting satellites and their sophisticated Global Positioning System and Geographic Information System. These maps are used for developmental planning. But governments are finding it more and more difficult to keep their maps as secrets.

Is it a good thing to utilise maps for such public purposes?

Why did colonial powers like Britain focus so much on preparing comprehensive maps?

Application of Maps

We saw how maps were prepared and used for a variety of purposes such as commerce, navigation, conquests, wars, etc. They are also used in developmental planning in our country. Maps help planners to identify the problems a region may be facing. They also help in the search for resources. For

example, some places do not have potable water. Maps can show where water resources - monsoon, groundwater and rivers – are available. A suitable system can then be worked out to make water available to such deficient areas. Sharing the water of rivers, reservoirs and aquifers in this way can ensure that everyone gets potable water.

Maps can also help us design and implement agricultural development schemes. They can help us build new industries, roads, hospitals and schools. Companies can use maps to expand their operations. For example, a mobile network operator that wants to increase its coverage can build microwave towers with the help of maps that show where the villages, towns, mountains and forests are located.

Give suggestions on how maps can be used to design a plan to build new schools, colleges and hospitals.

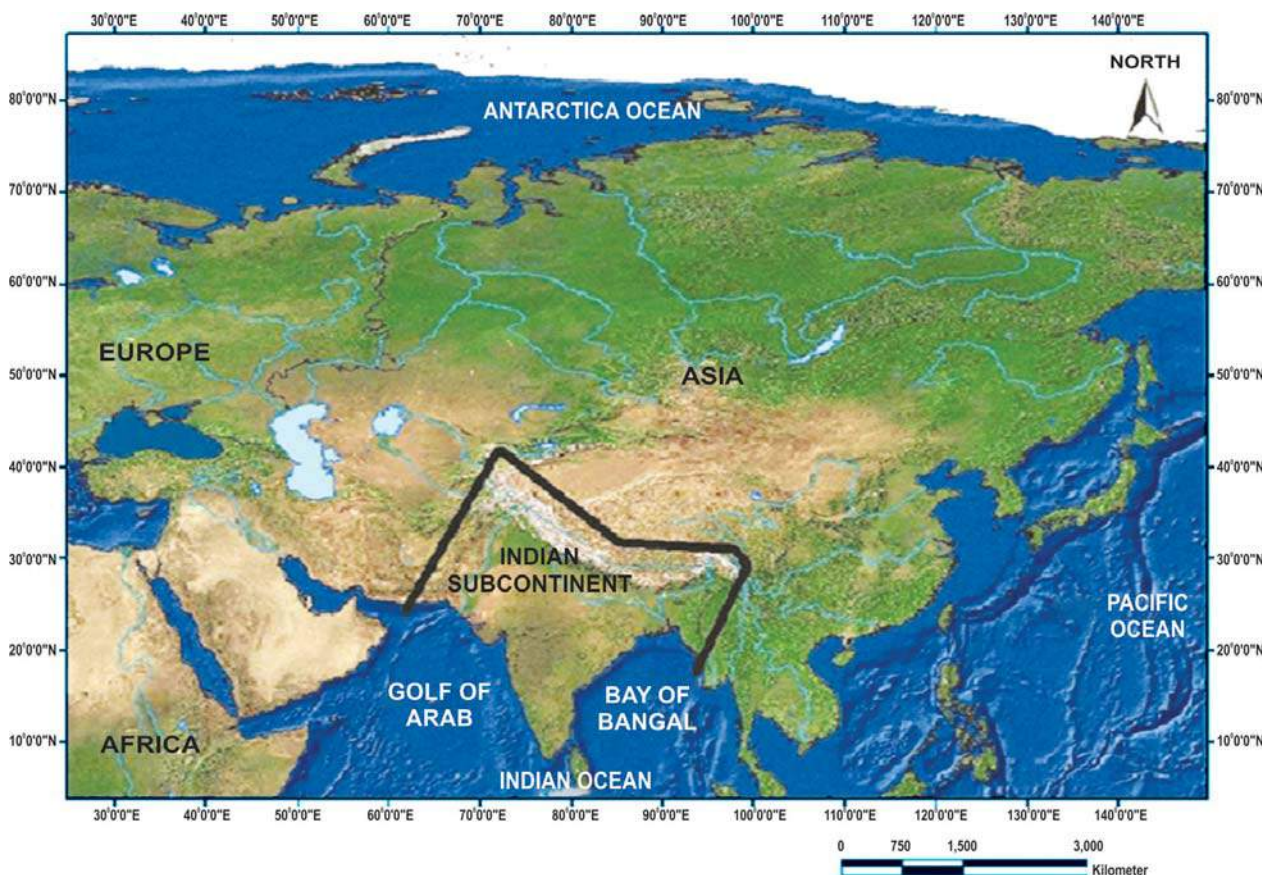
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India – An Introduction

The Structure of the Subcontinent – Unity in Diversity

India is a vast country. To the north lie the Himalayas, the world's highest and youngest mountain range. The Indus, Sutlej, Ganges and Brahmaputra rivers flow through deep canyons in these mountains. The peninsular plateau is an ancient land mass. India is a land of contrasts. You freeze in the extreme cold of Kargil in Jammu and Kashmir while you swelter in the heat of the Thar Desert in Rajasthan. Mawsynram in Meghalaya has the highest rainfall in the world. Many different kinds of trees and animals are found in the subcontinent. Different languages are spoken in different regions. People dress and eat in different ways. These differences complement each other. Every region depends on the other for its needs.

The Indian subcontinent can be seen as an independent geographical region in the map of the Asian continent. To the north-west lie the Kirthar and Sulaiman mountain chains. To the north is the Hindu Kush range. The Himalayas extend like a bow from north to east. The Arakan Yoma Mountains are



Map 2.1: The Indian subcontinent

Some Terms

Island: A landmass that is surrounded by water on all sides, for example, the Andaman Island.

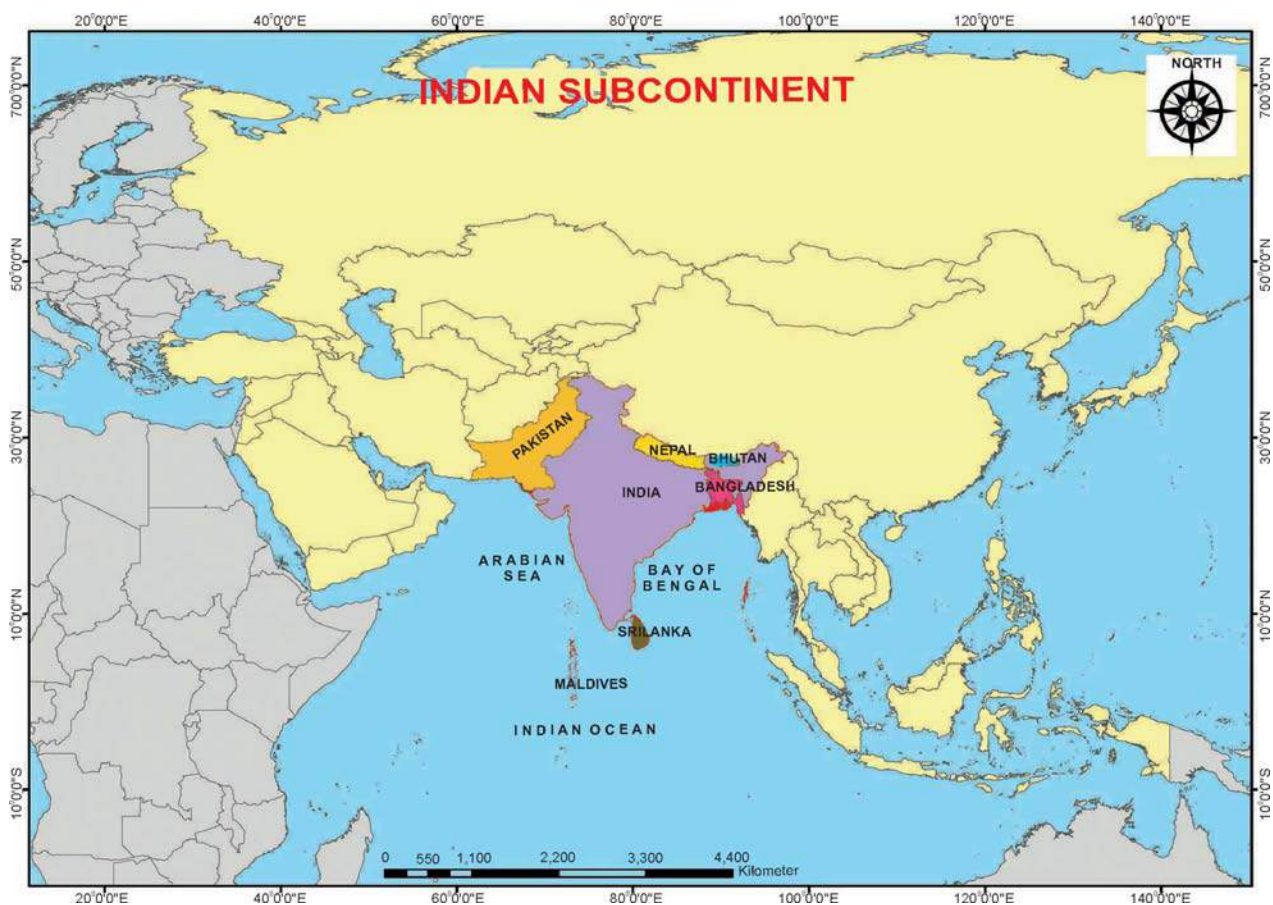
Continent: There is no universally accepted definition of a continent. But from early times, it was accepted that a continent is a huge and contiguous land mass that is surrounded by a vast expanse of water on all sides. Australia and Antarctica would qualify as continents, according to this definition. Asia and Europe would not because they are not separate. Together, they are often referred to as Eurasia. Also, if you look carefully at the world map, you will see that Asia, Europe and Africa are connected to each other. But they are not connected to North and South America. So it would be more correct to say that a continent is a vast and contiguous land mass that has been traditionally defined as a continent.

Sub-continent: A subcontinent is a land mass within a continent that is unique from a geographical, cultural or historical point of view, such as the Indian subcontinent.

Peninsula: A landmass surrounded by water on three sides is called a peninsula.

located in the north-east. They extend from western Myanmar in the south, along the coast of the Bay of Bengal, and connect with the Himalayas in the north.

Map 2.1: The geographical area of the Indian subcontinent in the Asian continent



Map 2.2: The Indian subcontinent in the map of Eurasia



Figure 2.1: The Khyber Pass

Look at the dark, black line in Map 2.1. The line runs along the high and inaccessible mountain ranges that separate India from the rest of Asia. The peninsula extends to the south. The waves of the Arabian Sea and the Bay of Bengal lap its shores on two sides. The entire region appears impregnable and inaccessible from all sides. This region of South Asia is called the Indian subcontinent.

It is clear from Map 2.1 that the Indian subcontinent is a unique region of the Asian continent. Its

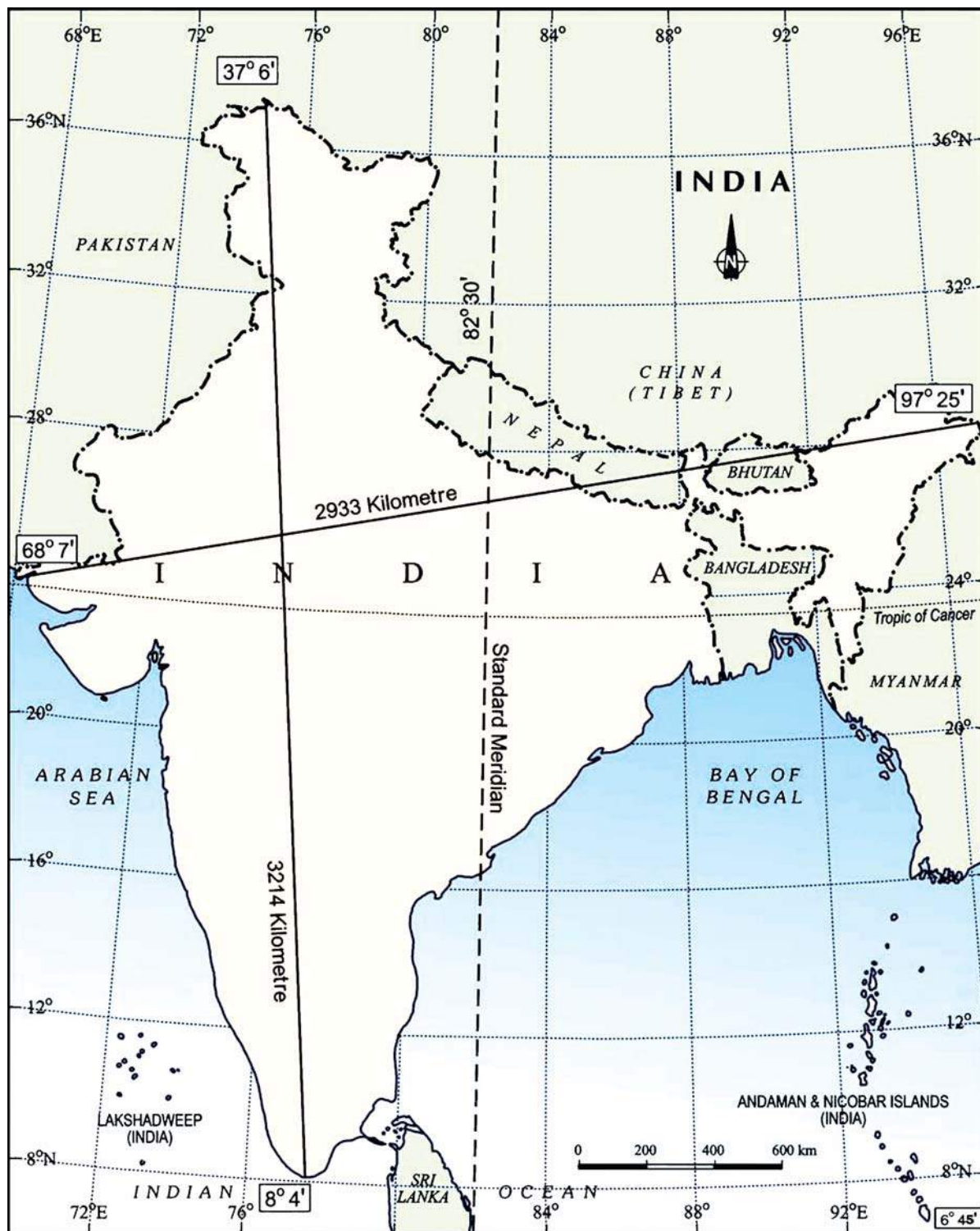
geographical location and topography give it a distinct climate that is called the monsoon climate. Imagine if there was no high and extended Himalayan mountain range to the north and no expanse of seas on both sides of the peninsula to the south, what rainfall would the subcontinent receive? What would save it from the biting cold wind blowing southwards from the North Pole? If there were no Himalayas, there would be no mighty rivers flowing (Indus, Ganges, Yamuna, etc) and no extensive plains created by these rivers, the Indian subcontinent would be transformed into a barren desert under such conditions.

The fertile Indus and Ganges river valleys gave birth to ancient civilisations. Historians say that humans left Africa 67,000 years ago in search of food and water. They travelled through West Asia to reach the Indian subcontinent. The point to ponder is how did they find a way into the subcontinent that is so naturally impregnable from all sides? They came through the mountain passes and river valleys in these high and impenetrable ranges. The most famous of these passes are the Khyber and Bolan passes (see Figure 2.1). These north-western passes opened up routes to Tibet. People also reached the north-eastern regions of the Indian subcontinent through the eastern passes and through the Shan plateau, settling in the Brahmaputra plains. Many people reached India by sea through the Makran coast to the south. The point is that wherever geographical conditions create barriers for people, they also create new opportunities.

Different kinds of people kept coming to the Indian subcontinent at different times, bringing their cultures with them. Some of them assimilated themselves into the communities already living here while others maintained their separate identities. Their diverse cultures, religious beliefs and professions inter-mixed and influenced each other over time. So cultural pluralism flourished in the Indian subcontinent even as a common cultural thread was woven by the ancient civilisations that evolved.

1.1 Location, Extent and Neighbouring Countries

India extends from 8°4' North to 37°6' North latitude and the 68°7' East to 97°25' East Longitude. It is the seventh largest country in the world by geographical extent. The total area of the country is 3.29 lakh sq km. This is 2.47 percent of the total land mass of the earth. India is the second most populous country in the world, accounting for around 17.2 percent of the total human population of the planet. The country is divided into 29 states and 7 union territories.



Map 2.3: India

Answer the following questions with the help of Map 2.3 and Reference map 1:

1. In which sea or bay are the Andaman and Nicobar Islands situated?
2. In which sea or bay is Lakshadweep situated?
3. Which other states does Chhattisgarh share its borders with?

4. Which continent is India situated in?
5. Which latitude passes through the middle of India?
6. What is India's total length from Kashmir to Kanyakumari and breadth Gujarat to Arunachal Pradesh?
7. Which states of India does the Tropic of Cancer pass through?
8. Which countries does India share its boundaries with?
9. What is the symbol used in the map to mark the boundaries between India and its neighbouring countries?
10. Which seas and oceans surround India?

The Tropic of Cancer ($23^{\circ}30'$ north latitude) passes through the middle of India and divides the country into two almost equal halves. Latitude affects the duration of the day and night. There is a 45-minute difference between the duration of day and night in South India. This difference increases as we move towards the north. Why does this happen?

The sun shines directly over the Equator for most of the year. So the length of day and night are the same near the Equator. But as we move north or south of the Equator, the angle at which the sun's rays fall on the earth's surface increases. This causes the length of the night and day to differ. The difference increases as we move closer to the poles.

Similarly, the time also changes as we move from west to east. The difference depends on the longitude. The local time in Gujarat, which is located on the western edge of India, is two hours behind the local time in Arunachal Pradesh, which is located on the eastern edge of the country. The eastern longitude $82^{\circ}30'$ passes through almost the middle of the country. This is the Prime Meridian of India. Indian standard time is calculated on the basis of the time at this meridian.

The South Asian Association of Regional Coordination (SAARC) was formed to improve ties - political, economic and cultural – between the nations of South Asia. India shares boundaries with all the SAARC countries, except for Afghanistan and the Maldives. So it is located at the centre of the SAARC nations. India has had border disputes with its neighbouring countries from the time it gained independence, especially with Pakistan and China. These disputes are about where the actual boundary lies with these countries. India also has problems with Pakistan, China and Bangladesh over sharing the water of rivers that flow to or from these countries. Such disputes over water resources need to be settled in a rational and mutually beneficial manner.

1.2 The Cultural Landscape

Culture weaves the fabric of our lifestyles, ideas, dress, food, music and dance, religious beliefs, philosophies, sculpture, arts, architecture, languages and literature. From Kashmir to Kanyakumari and Gujarat to Arunachal Pradesh, India is a unique and diverse country. This cultural pluralism is our heritage.

The Indian constitution lists 22 scheduled languages but India has around 1,600 spoken languages. These languages are spoken in different regions and by different communities within the country.

India has followers of almost all the religions and religious communities in the world. The major ones are Hindus, Muslims, Christians, Sikhs, Buddhists, Parsis, Jains and Jews. Apart from them, there are many

tribes who have their traditional belief systems. This mix of people of different faiths adds colour to India's cultural diversity.

People have been coming to the Indian subcontinent from prehistoric times. They gradually spread across the country, drawn by its geographical diversity and history. The peasant communities settled in the fertile plains to farm the land. The hunting and pastoral communities migrated to the remote mountainous regions. It is in these regions that most of India's scheduled tribes live. There are practically no tribal communities living in the plains. The country has more than 600 scheduled tribes. They include the Gonds, Bhils, Santhals, Oraons, Sahariyas, Nagas, Miris, Nishis, etc.

India's cultural diversity is unparalleled. In such a pluralistic environment, we should all learn to respect each other's culture, no matter which faith, language or community we belong to.

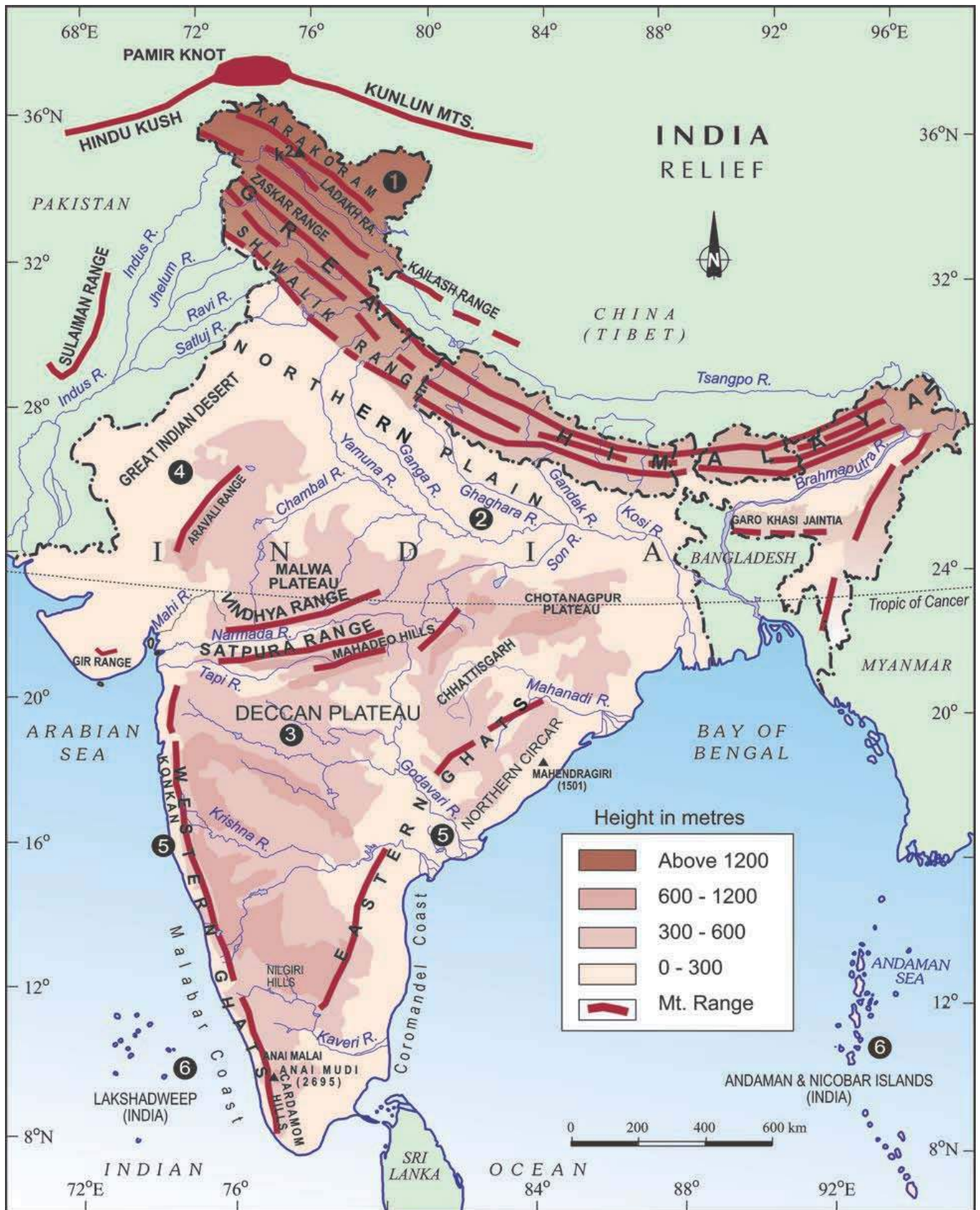
EXERCISES

1. Fill in the blanks:

1. People say that if there were no Himalayas or Hindu Kush mountain range, the Indian subcontinent would have been a vast
2. The Indian subcontinent has high, impregnable mountain chains to the west and east. But there are many narrowlike the and Bolan in this difficult mountainous terrain.
3. India's latitudinal spread is from northern latitude in the south to latitude in the north, and the spread from west to east is from eastern longitude $68^{\circ}7'$ to $97^{\circ}25'$.
4. India is the second most populous country in the world and is home to around percent of the world's population.

2. Questions with short answers:

1. What are the names of the perennial rivers originating in the Himalayas?
2. What protects us from the freezing cold winds blowing southwards from the North Pole?
3. Name the neighbouring countries that share boundaries with India.
4. What is the significance of SAARC?
5. Which is the prime meridian (longitude) of our country?
6. How many languages are spoken in your state? List them.



2.1 The Physical Features of the Indian Subcontinent

We learnt about the natural divisions of India in the previous section. We also learnt that the Indian subcontinent is a distinct landmass in the Asian continent in terms of its topography and culture. But are the surface features of the subcontinent the same everywhere? In this chapter, we shall discuss the diverse geographical features of the subcontinent and their special characteristics. We shall learn about how these features originated and how humans changed the face of the land and its environment by their activities. To understand how these activities changed the land, we need to find out how people lived and how they used natural resources for their livelihoods and needs in the different regions in which they settled. For example, they adopted agriculture as their means of livelihood in the fertile river valleys of the Indus, Ganges and Brahmaputra. In the Chota Nagpur plateau, they gathered forest produce and developed mining industries in addition to farming. In the Thar Desert and the northern hilly regions, many communities adopted a pastoral lifestyle. In the coastal regions, the main occupation was fishing.

Science and technology have contributed to changing the geographical and economic landscape of the country. The environmental impact of some of these changes is now creating roadblocks in human progress. We need to understand the social, economic and political dimensions of these problems if we wish to resolve them.

The Himalayas emerge from the Pamir Knot, located to the north of the Indian subcontinent. Many other high mountain ranges extend from this knot, including the Hindu Kush, Karakoram, Kunlun and Tien Shan ranges. The Vindhya and Satpura ranges are situated on the northern boundary of the peninsular plateau, while the Aravalli range is to the north-west. To the west lie the Sahyadri Mountains and to the east lie the low hills of the Eastern Ghats, as well as the eastern coastal plains.

Do all of these features look the same? Were they all created at the same time?

India's topography can be divided into the following five regions based on the differences in structure, types of rocks and physical features:

1. The north and north-eastern mountain ranges
2. The extensive plains of the north
3. The peninsular plateau
4. The coastal plains and island groups
5. The Indian deserts

Let us take a closer look at these geographical regions:

2.1.1 The North and North-eastern Mountain Ranges

The Birth of the Himalayas

Two kinds of natural forces play a primary role in forming the face of the earth and its features. They are internal and external forces – forces born inside the earth and forces born outside the earth. Earthquakes



Figure 2.2: A peak in the Himalayas

and volcanoes occur because of forces born inside the earth. They create different land-forms on the earth's surface. There are also many processes going on continuously on the earth's surface that are slowly changing the shape of land forms. They include the effects of wind, rain, snow, water and temperature. These are the external forces.

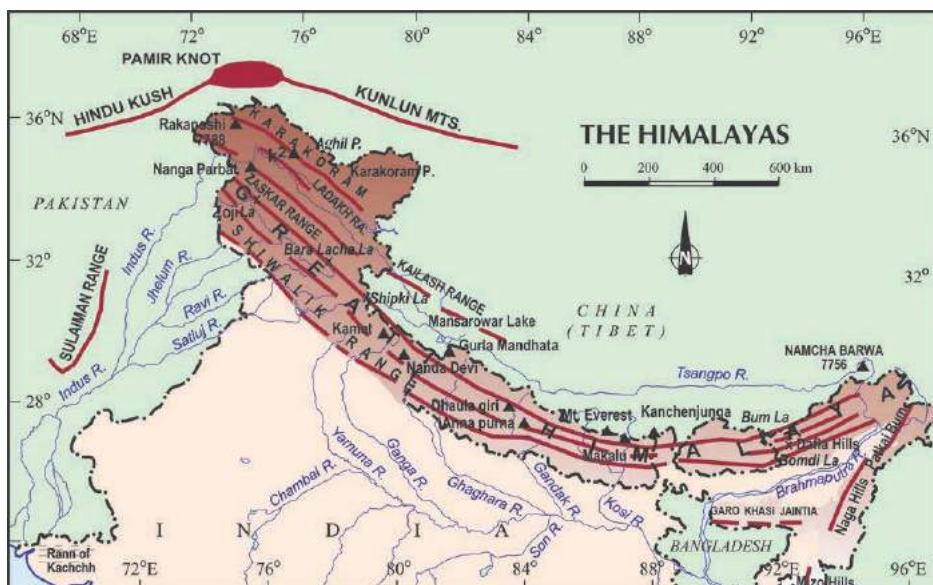
Do you know that the earth's crust (outer shell) is broken up into segments that are called plates? There are six major plates and several minor ones. One of the major plates is the Indian plate. The forces in the earth's interior cause



Map 2.5 The earth's plates

these plates to glide. This gliding motion is so gradual that we can only imagine it, not feel it, not even in a lifetime. It is said the plates move only by a few centimetres in a year.

Millions of years ago, the Indian plate was located south of the Equator. It was a huge plate. But it broke into several pieces, one large piece being the Australian plate, which moved towards the south-east. The Indian plate moved towards the north, where it encountered the Eurasian plate. A huge sea, called the Tethys Sea, was located between these two plates. The rivers of the European and Indian plates deposited their sediments in this sea. The accumulated sediments slowly began to rise due to high pressure from below. This was how the Himalayan Mountains were formed around 5.5 crore years ago. The Himalayas are said to be the world's newest mountain range. The Aravallis are an ancient range. So the peaks of the Himalayas were once lapped by the waves of the Tethys Sea. The evidence is in the fossils of marine animals that can be found in the Himalayas even today. Meanwhile, the Indian plate continues to glide.



Map 2.6 The Himalayan mountain range

The Himalayas consist of several parallel mountain ranges. The major ones are the Trans-Himalayas, Greater Himalayas, Lesser Himalayas and Sivalik Hills. The Zaskar, Ladakh and Karakoram ranges are part of the Trans-Himalayas. Spreading from west to east, the Greater Himalayas, or Himadri range, reaches



A valley that is surrounded on all sides by mountains is called an inter-montane valley or intermontane basin.

Figure 2.3: A three-dimensional view of the Kashmir Valley

its greatest heights inside Nepal, with nine of the world's 14 highest peaks situated there. These peaks, which include Dhaulagiri, Cho Oyu, Mount Everest, Makalu and Kangchenjunga, rise to an altitude exceeding 7,900m. Among them, Mount Everest rises to a height of 8,848m.

The Lesser or Middle Himalayas, also known as the Himachal Mountains, form the middle section of the Himalayan range, extending across northern Pakistan, northern India, Nepal, Sikkim, Bhutan and Arunachal Pradesh. The average height of these mountains is 3,700-4,500m. The Shivalik Hills form the lowest region of the Himalayas, the southern section sloping steeply towards the plains. The Doon Valley, a flat valley or basin, lies in the north of these hills. Dehradun is a prominent city located within this valley. The beautiful Kashmir Valley is located between the Himadri and Pir Panjal ranges. It is an inter-mountain valley (intermontane basin). The serpentine Jhelum River flows through the vast, freshwater Wular Lake in the Kashmir Valley.

We know that the north and north-eastern mountain ranges make a unique contribution to India's environment and the lives of the people. The rivers of northern India originate in these mountains and have created the extensive Indus-Ganges-Brahmaputra plains. These perennial rivers are the lifeline of the densely-populated plains of the north. It is in the Indus-Ganges plains that ancient civilisations developed. Many major rivers originate from the Himalayas. The largest among them are the Ganges, Brahmaputra and Indus. Teesta and Manas are tributaries of the Brahmaputra. The Jhelum, Chenab, Ravi, Beas and Sutlej rivers are in the Indus river system while the Yamuna, Kali, Karnali, Rapti, Gandak, Gomti and Kosi rivers belong to the Ganges river system.

Answer the following after reading the paragraph above:

- | | |
|--|-------------------------|
| 1. Which is the largest river system? | Ganges/Indus |
| 2. Which river flows in a western direction? | Rapti/Ravi |
| 3. Which river system has the least number of tributaries? | Brahmaputra/Indus |
| 4. Which of these river systems does the Mahanadi belong to? | Brahmaputra/Ganges/None |

Glaciers - Rivers of Ice

In extremely cold regions and high mountains, it doesn't rain - it snows. Snow falls like soft cotton-wool on the ground and solidifies because of air pressure, part of it turning into hard ice. This snow-mixed-with-ice flows down the slope. This shifting mass of ice is called a glacier.

Glaciers flow through valleys just like rivers, so they are rivers of ice originating from the snow-capped mountains. There are many glaciers in the Himalayas, the biggest of which is Gangotri. It is 32km long. The Khumbu glacier is located in the Everest region of Nepal. It is the most popular path to climb the world's highest mountain. The Himalayan glaciers have started to melt at a faster rate in recent times because of rising atmospheric temperatures, and they continue to shrink.



Figure 2.4: A glacier

The Kashmir Valley

The Kashmir Valley is situated at a height of 1,850m above sea level and is surrounded by mountains. It is also called the Jhelum Valley. The Jhelum River carved this 135km-long and 32km-wide plain amidst the mountains. How did it create this vast plain so high up in the mountains? This is a question scientists have been trying to answer. They say there was once a lake there. Its water flowed through a crevice into the Jhelum River when an earthquake split the mountains. The remains of this ancient lake is Kashmir's present Dal Lake. Srinagar, the capital of Jammu and Kashmir, is situated near the Dal Lake in the valley.

Famous for its natural beauty across the world, Kashmir has always been a draw for international tourists. They come to India in large numbers to visit the valley. The Dal Lake is dotted with floating houses-on-boats that are called 'house boats' or 'Shikaras'. They are a key tourist attraction and a major source of income for the local people. Apart from agriculture, the valley has several local industries, such as carpet weaving, walnut wood furniture, Kashmiri pashmina shawls, saffron, etc.

Karewa: The Kashmir Valley is surrounded by high mountains. It is a saucer-shaped plain, as we can see in Figure 2.5. Thousands of years ago, there was a very big lake here which was fed by the water of rivers



Figure 2.5: Floating houses-on-boats in Dal lake

and streams flowing down from the surrounding mountains. Over the years, these rivers and streams deposited their sediments (silt, clay etc) in the lake. When the Pir Panjal range began to rise because of internal processes within the earth, the water of the lake drained out. Plateau-like terraces or tablelands were formed on the surrounding mountains. Called *karewas*, or *vudras* in the local language, these terraces are very fertile. The priceless spice saffron

(*zafran, kesar*) is grown on these terraces. When the saffron plant flowers, the stigmas are removed. They are used to prepare many medications. They are also used as a spice to prepare delicious dishes. Kashmiri saffron is famous the world over.



Figure 2.6: Saffron flower and Saffron

Ladakh: a village in the cold, high altitude desert

To the east of Jammu and Kashmir lies Ladakh, a high altitude desert. It is not a hot desert like the Thar, but a dry and cold desert. This vast, dry plain of ice spreads far and wide over the rocky terrain between the high mountains. Very little rain falls in this region.

Let us explore a village in Ladakh where Kim lives. The village is called Phey. Situated on the banks of the Penjila River, it has 80 houses on the mountain slope of the Zaskar Valley. The small houses made of stone, gravel and bricks are built on fertile land. They are known as *khangpas*. Their roofs are flat, and are used to store fodder for the livestock. People live together in small clusters in this region because of the harsh geographical conditions.

The people in Kim's village wear warm woollen clothes called *goncha* throughout the year. The climate is dry and the village faces a shortage of water. Have you ever walked on a frozen river? The Penjila River freezes during winter so people can walk on it. The frozen river forms a path that reduces the distance to the neighbouring villages. Living conditions in Ladakh are quite different from Chhattisgarh. People here have very small farms because the terrain is rocky and uneven. They grow peas, cabbage, cauliflower, potatoes, wheat and millets. Most of what they grow is for household consumption, not to sell in the market. This kind of farming where you grow only what you need at home is called 'subsistence' farming.

Because of the low rainfall, shortage of water, plus the hard climate and soil, the land is not cultivated throughout the year. Farming is done mostly from the end of summer in May to the beginning of October. When the glaciers melt during summer, the water is channelized to irrigate the fields. In winter, the villagers bring water from a spring a kilometre away. They sometimes thaw the ice to get water for their household needs. People also keep animals such as yak, deemo, zo, zomo, horses, donkeys, sheep and goats. The zo and zomo are hybrids of cows and yaks. Deemo is a female yak.

The yak and zo are used to plough the fields. The deemo, zomo, sheep and goats provide milk, from which cheese and butter are made. Some families take the sheep and goats of the village to the higher altitude pastures during summer. They return when it becomes too cold at these altitudes during winter. This migration with livestock as the seasons change is called trans humance, when there is no farming, the sheep are sheared and women weave clothes from the wool. The people live in a harmony with nature, not letting any available material go to waste.

What are the differences between farming in Chhattisgarh and Ladakh?

Uttarakhand: a Mountain Village

The village of Barsu lies at a height of 2,500m on the way to Gangotri in Uttarkashi district of Uttarakhand. A twisting and turning road takes you to this mountain village. It has only 20-25 houses. There is very little flat land so the houses are built on the mountain slopes. So they are small and mostly made of wood and mud plaster. The roofs are inclined and have slate tiles so the rainwater and snow cannot collect. Some houses have flat roofs on which people dry maize during winter and store fodder for their livestock.



Figure 2.7: A mountain village



Figure 2.8: Terraced fields

The Himalayas have very little cultivable land. Farming is done in the wide valleys or on the gentler mountain slopes. People generally live close to wherever such land is available. That is why you find small, widely dispersed settlements in the Himalayas. The population is thin and dispersed because of the lack of cultivable land. The terrain is rocky and the climate is temperate. It snows at least once during winter. Rainfall is also average. There is considerable soil erosion when it rains. The terraced fields help to prevent soil erosion.

Where else did you learn about such terraced fields?

People in the Himalayas cultivate rice, maize, vegetables and fruits in their terraced fields. The yields of cereals is not very high but you will be surprised to know that vegetables flourish here. You may have heard of the *pahadi aloo* (potato) and capsicum (*Shimla mirch*). Similarly, apples, plums, apricots, pears and cherries are the fruits grown on the mountain slopes. These fruits are grown on an extensive scale in plantations and sent to markets far and wide.

The region is mostly covered by evergreen forests. The trees do not shed their leaves together. People feed the leaves to their livestock and burn the wood as fuel. The produce of the farms is enough for household consumption. People also work as labourers and collect herbs in the forests for their livelihood. In the absence of employment avenues, the young people go to the cities to work in factories. The women do the household work and also work in the fields.

Animal Husbandry

The villages around Barsu are mostly populated by the Jad (shepherd) community. They rear sheep and goats. The villagers say they take all their sheep to graze in the upper reaches of the Himalayas in April when the tender and sweet summer grass grows, sometimes travelling close to the Chinese border. They know exactly which mountains fall within India, and which fall on the China border. They have accumulated a lot of knowledge and experience of the Himalayan terrain, vegetation and climate during their wanderings. They often have to endure the wrath of nature, so they carry everything they need to eat and live with them.

They start descending from the mountains in July-August and return home by November. The mountain grass is suitable for grazing, especially for sheep. Sheep are raised in the western Himalayas for their meat and wool. This is why sheep rearing is a major occupation. There is no grass when the region freezes in winter. So where do the sheep graze then?

When winter sets in, the shepherds take their flocks to the lower reaches of the Himalayas. The cold is less severe here and fodder is available. Their villages are in this region. They have their homes here, where they also do farming. During the cold season, people spin wool and weave blankets in their homes.

Why is fodder available only in the lower regions of mountains during winter? Explain.



Figure 2.9: Bugyal – alpine meadows where there is enough grass for the sheep to graze

There are several tribes living in the Himalayas who migrate seasonally with their livestock. Prominent among them is the Bhotiya tribe of Garhwal and Kumaon, who graze sheep, goats and cattle. The Bakarwal tribe of Kashmir only rears goats, while the Gujjars of Jammu, Himachal Pradesh and Uttarakhand rear buffaloes. Other pastoral tribes include the Changpas of south-eastern Ladakh and the Kinnaura tribes of Kinnaur in Himachal.

Industry and Other Occupations

Snowfall is heavy in the upper reaches of the Himalayas. The melting snow flows down the mountain side in small streams and rivulets. The swiftly flowing water is carried in large pipes to run turbines to generate electricity.

Cement-manufacturing plants are also being set up to use the limestone found in the Himalayas. The limestone quarries and cement factories generate employment for the local people. The availability of cement makes it easier to build bridges, dams, houses, hydroelectric stations, etc. But the fragile Himalayan environment has not been kept in mind while developing such projects. As a result, the limestone quarries are causing landslides, with the rubble of landslides causing additional problems. The cement dust from the factories pollutes the air, damaging crops and vegetation and affecting the health of the people.

Traditional handicrafts, which include weaving garments and shawls on hand looms, embroidery, decorative wood carvings, etc provide employment to a large number of people. Beautiful decorative items are also made from papier mâché. These are all small household industries. They are on the verge of closing down because the markets are flooded with machine-manufactured products. But the government is now taking steps to encourage these industries. As a result, these hand-crafted products are reaching distant markets, generating demand. They now sell at a remunerative price. In recent years, small food-processing plants have been set up to process fruits grown in the region. The products include fruit juices, preserves, pickles, etc.

What are the possibilities of setting up new factories in the Himalayas?

Tourism

Pilgrimage and tourism have attracted a large number of people from other regions to the Himalayas. The tourism sector has been flourishing in the mountain regions for the past several years. Tourists come in large

numbers from within and outside of the country to enjoy the natural beauty of the Himalayas and to visit places of pilgrimage. Many hotels have opened and local transport has been developed to cater to the tourist traffic. Thus, tourism has also generated many job opportunities. The important pilgrimage spots in the Uttarakhand include Badrinath, Kedarnath, Gangotri, Yamunotri, Hemkund Sahib, etc.

Explain how road construction has supported the growth of the tourism industry.



Figure 2.10: A landslide

Landslides: a Serious Problem

The rocks in the Himalayas are not firm or hard. When the forests are cleared, the steep mountain slopes crumble. Deforestation is now a serious problem in the region. Very often, entire villages are submerged in the rubble of landslides, causing extensive damage to human life and property. Roads get blocked by the falling rocks, affecting transportation. Many times, landslides have even blocked rivers, causing lakes to form. But the loose rubble crumbles under the pressure of water, causing these temporary lakes to suddenly flood the lower mountain reaches. Deforestation of the mountains also causes severe flooding in the plains. Can you explain why this happens?

The Eastern Himalayas

Locate and name the states in the eastern Himalayas in the political map of India.

Which river valley do these mountainous states surround?

Which states does the Brahmaputra river valley extend into?

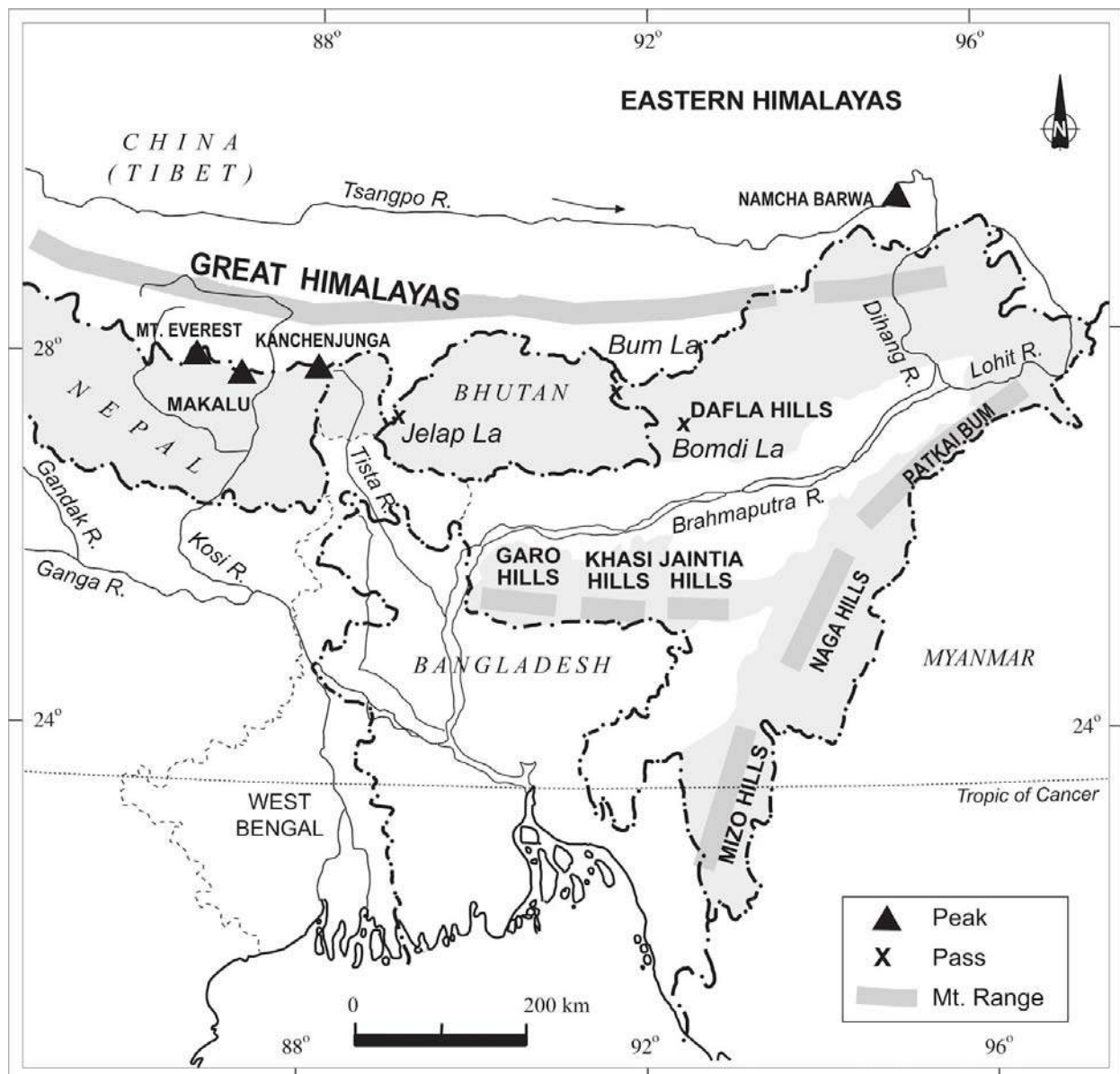
Many tribes live in the eastern Himalayan states. They include the Nagas, Mizos, Bodos, Mishmis, Monpas and Taraos. Let us take a look at how they live and the livelihoods they pursue.

Map 2.7 shows that the eastern Himalayas lie close to the Bay of Bengal. The moisture-laden winds blowing from the bay bring heavy rainfall to the region. It is among the wettest places on earth. Most areas receive more than 300 cm of rainfall annually.

The highest rainfall in the world occurs in Mawsynram in Meghalaya. The average annual rainfall here is 1187cm. We get 100-120cm of rainfall annually in the place where we live. That means Mawsynram gets more than ten times the amount of rain.



Figure 2.11: A habitation in Arunachal Pradesh



Map 2.7: The eastern Himalayas

Locate Mawsynram in Map 2.7

It may surprise you to know that, barring two to three months, it rains all year round in the eastern Himalayas. It begins to rain in the north-east when the temperature starts to climb in other parts of India in the month of March. The downpour is intense from May to September. The only months when there is a let up in the rains are December, January and February.

Due to the continuous downpour in the summer, temperatures never climb too high in the eastern Himalayas. The high altitude also ensures it never gets too hot. But in winter, it is freezing cold. Some areas even have snowfall.

The forest cover is dense in the eastern Himalayas because of the heavy rainfall. Even as trees are cut, new trees sprout rapidly. Cane and bamboo, as well as spices like bay leaf, large cardamom and cinnamon grow extensively in these forests.

What differences can you see between the climate and forests of the eastern and western Himalayas?

The steep slopes of the eastern Himalayas and the heavy rainfall make farming a difficult task. The heavy rain washes away the soil if the slopes are tilled. The problem is resolved by terrace farming in western Himalayas. Terraced fields can also be seen in the eastern Himalayas but most people there practice another kind of farming. It is called *jhum* cultivation. To find out how *jhum* cultivation is done, let us visit a village in Arunachal Pradesh.

This small habitation in Arunachal Pradesh nestles on flat land atop high mountains. It has about 20-30 houses. And what do these houses look like? Take a look at Figure 2.11. Bamboo stilts support a platform on which one long room with a verandah is built. It looks as if the bamboo stilts prop up the houses on the mountain slopes. The ground in the region is always moist because of the heavy rain so it abounds in snakes, scorpions, spiders and snails. The houses are built on stilts to keep out these insects and reptiles. Fruit trees, vegetables, tea and coffee are grown in enclosures near the homes.

This is a Nishi village. All the tribals in the village are related to each other. They belong to one clan but live in separate houses.

Going out to farm

It is December and the cold is severe. There is very little rain during this month. So water is scarce in winter. The rain water drains out swiftly down the steep slopes, leaving the upper regions facing a water shortage. Potable water is fetched from distant brooks flowing in the deep valleys.

The village of this Nishi clan has two or three mountains nearby that belong to the clan. They own the forests as well. The mountain slopes are their farms. Another clan cannot farm the land, which belongs to the village clan. Since it is owned by the clan, no individual can claim ownership of any piece of land.

Every year in December, the villagers choose a part of their land in the mountains to farm. So what happens to the land they farmed the previous year? It is left fallow for seven or eight years so the forest can regenerate. Bamboo, shrubs and other trees begin to sprout. It may again be farmed after a gap of seven-eight years.

Because the previous year's farm is left fallow, a new patch in the forest has to be cleared for farming. The villagers look for a new patch. After roaming the forests and discussing for long, they decide to farm the southern slope of the nearby mountain this year.

The next task, taken up the following day, is to clear the forest patch. This is hard work. The men fell the trees and prepare plots for each household. In this way, plots are prepared for everyone in stages. No outside labour is hired to do the job. Anyway, there is no labour available in the region. When felling the trees, the stumps are left intact. The stumps and roots prevent soil erosion.



Figure 2.12: Preparing for *jhum* cultivation

Once the trees are felled, they are left in the field to dry. The dry trees are burnt in March-April, before it begins to rain. The land is covered with ash and the remnants of half-burnt trees. The ash mixes with the soil after one or two spells of rain. This is how the field is prepared for *jhum* cultivation.

Ploughs are not used to till the steep slopes because the rain washes away the loosened topsoil. So you do not find ploughs in this region.

It is now April. There are light showers. Heavy rain comes in May. Sowing must be completed before that. Everyone, men and women, go to the fields carrying hoes and baskets full of seeds. Sowing begins from the lower slopes of the land. A small hole is made in the earth with the hoe and a few seeds are dropped in the hole and covered with soil.

When it rains heavily, weeds sprout rapidly with the crops. Weeds are a big problem because they grow fast. So the fields have to be weeded four or five times.

In *jhum* cultivation, crops consumed in the home are grown together. So rice, maize, millets, sesame, green beans, onions, tobacco, cotton, sweet potato, chilly and pumpkin are sown together in the field. Each crop is harvested as it ripens. The crops ripen in succession from August to December.

How is soil erosion prevented in *jhum* cultivation?

Where and how is this kind of farming practiced in Chhattisgarh? Try and find out.

Apart from growing a variety of crops in *jhum* cultivation, the villagers gather fruits and tubers from the forests. This work is done by the women. Generally, fruit trees are not cut when preparing the field for *jhum* cultivation, so their fruit is plucked as they ripen.

The men also hunt in the forests. Meat is an important part of their diet. But there are few animals in the forests today. That's why there are many prohibitions on hunting.

People in the eastern Himalayas mostly eat rice, vegetables, meat and fruits. They grow most of what they need in their *jhum* farms or their enclosures. They hunt and collect fruits in the forests. Oil, sugar and salt are brought from outside, so they are expensive and consumed in small quantities. Animals are reared for their meat.

Challenges of *Jhum* Cultivation

The growing demand for timber and the expanding timber trade is leading to the rapid depletion of forests. The population is also rising as the forests disappear. There is now not enough forested land to practice *jhum* cultivation. In the past a *jhum* patch would remain fallow for up to 20 years. Today, the time span is 4-5 years. So forests are getting degraded because they cannot regenerate properly. Moreover, taking up *jhum* cultivation on a patch within 3-4 years results in a poor harvest.

Many people believe that *jhum* cultivation is destroying forests and the tribals in the region should switch to terrace farming. This way, farming could stabilize in one place and new forests would not have to be cleared every year.

But it is difficult to construct terraces on the steep slopes. It is back-breaking work and very expensive. Also, the topsoil erodes when making terraces, so yields are low in the first few years of farming. And the heavy rainfall in the region erodes even the soil of the terraces. This is why people still practice *jhum* cultivation in many areas of the eastern Himalayas.

What kind of changes are taking place in *jhum* cultivation? How do they impact the forests?

Tribal Development in the North-east

Laws have been framed to restrict people from visiting the eastern Himalayan region without official permission. Buying land there is out of the question. Thus, outsiders have not been able to take over the local land, forests and other natural assets. The tribes in the region have been able to develop independently. Education has played a large role in this development. Educated tribal men and women have reached top-level posts in the region and work in different states of the country.

Because there are no heavy industries or commercial agriculture in the north-eastern states, new means of livelihood are limited. People's incomes are quite low. Farmers sell very small quantities of their produce. That's why they don't have the money to buy many things.

Tea Plantations

Tea is consumed not only in Indian cities but in its villages. Most of our tea comes from the eastern Himalayas. There are huge tea plantations in the lower hill regions of Assam. The new leaves of the tea bushes are hand plucked, then shred and dried in machines. Tea is the key commercial crop of Assam.



Figure 2.13: A tea plantation

EXERCISES

- Which of the following states do not fall within the Himalayas?
 - Madhya Pradesh
 - Uttar Pradesh
 - Sikkim
 - Haryana
 - Punjab
- Why do Himalayan rivers have water all year round?
- Why do the shepherds in the Himalayas take their flocks to the upper reaches of the mountains during summer?
- "The population in the mountain regions is sparse and widely dispersed." Explain the meaning of this sentence.
- What is grown on the mountain slopes?
- How has road construction changed farming and tourism in the Himalayas?
- Why are there landslides in the Himalayas?
- Why do mountain regions have limited means of livelihood?
- Why are the forests in the eastern Himalayas so dense? What trees grow in these forests?
- Describe in your own words how *jhum* cultivation is done - from clearing the forest patch to harvesting the crops.
- What are the problems in practicing *jhum* cultivation nowadays?
- What factors helped the tribes of the north-eastern states to progress so rapidly?

2.1.2 The Vast Northern Plains

The vast plains of the north are a prominent geographical feature of the Indian subcontinent. They spread across Pakistan, India and Bangladesh. To the west lies the Indus River valley, in the middle is the Ganges River valley and to the east is the Brahmaputra River valley. That's why it is also called the Indus-Ganges-Brahmaputra plains. They formed after the Himalayas were created. We call the plains a gift of the Himalayas. They have always been the cradles of civilisation and culture. They offer all facilities for earning a livelihood, that is why a large percentage of India's population lives here.

Topographically, the vast plains are similar, but they harbour immense diversity. Rainfall is not uniform across the region. Rice is the main crop in the eastern plains while wheat is the main crop in the western plains (western Uttar Pradesh, Haryana and Punjab).

Some interesting facts

1. The huge plain is around 2,400km long and 150-480km wide.
2. It covers a total area of 7,75,000sq km.
3. The Harappan civilisation developed in this plain.
4. Majuli Island in Assam is the biggest riverine island in the world.

The Formation of the Plain

We learnt in the previous chapter that the Himalayas were formed by geological disturbances at the bottom of the Tethys Sea. A long narrow trough between the Himalayas and the Decca plateau is all that remains

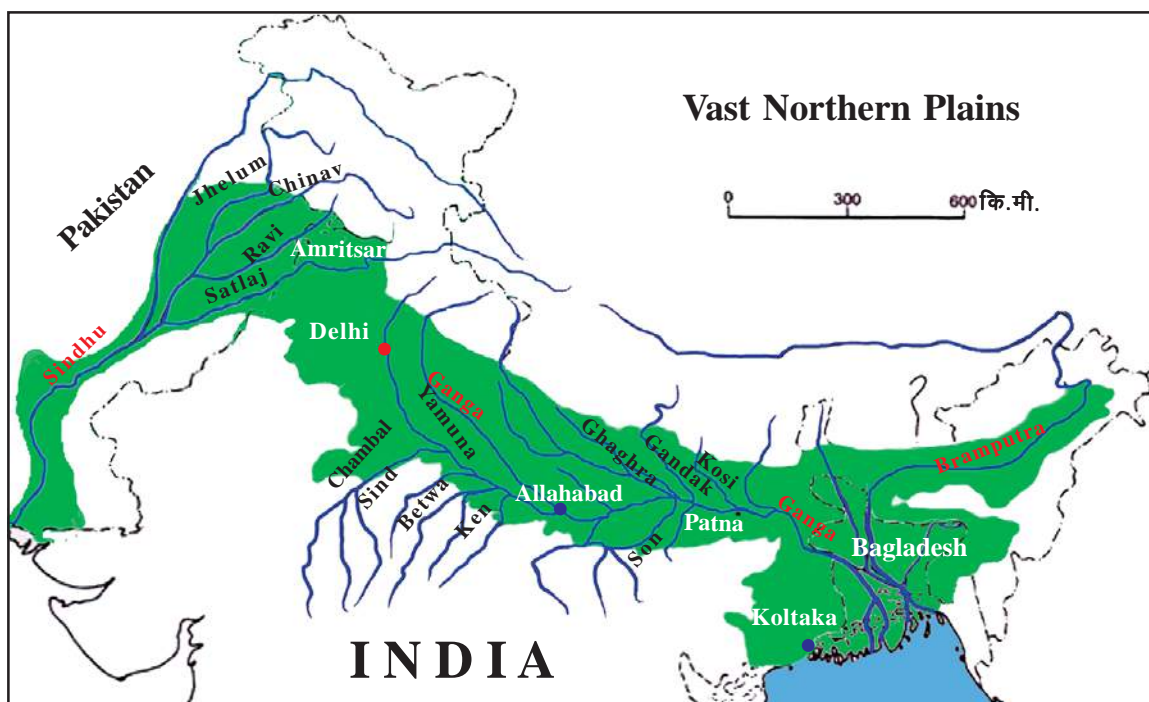


Figure 2.8: The plains of the Indus, Ganges and Brahmaputra

of the Tethys Sea. With the passage of time, the rivers flowing from the Himalayas – Indus, Ganges, Brahmaputra, etc - and the rivers flowing in the northern peninsular plateau deposited their sediments to create this vast, fertile plain. Even if you dig to a depth of a thousand feet in this plain you will only find sediment. So imagine how many years it must have taken to form this plain?

Physical Divisions of the Plain

The vast northern plain is divided into three sections:

1. The Indus-Sutlej plain
2. The Gangetic plain
3. The Brahmaputra plain

1 The Indus-Sutlej Plain

The Indus-Sutlej Plain was created by sediments deposited by the Indus and its tributaries, Sutlej, Beas, Ravi, Chenab and Jhelum. A major portion of the plain lies in Pakistan. In India, it covers the states of Punjab and Haryana, hence it is called the Punjab-Haryana plain. It is flat and fertile. The rivers of the region have created different landforms, such as *bet* and *doab* (land between two rivers). Numerous irrigation facilities have been developed here because of the perennial rivers and productive land. This network of canals and tube-wells helped usher in the Green Revolution in this region. The prominent cities include Amritsar, Chandigarh, etc.

Irrigation and the Green Revolution

After Independence, India adopted a new agricultural policy that led to the rapid development of the irrigated regions of Punjab, Haryana and western Uttar Pradesh. Agricultural production increased manifold as a result of intensive agricultural practices based on the use of short duration, HYV (high yielding variety) seeds, irrigation, fertilisers, pesticides, etc. Per hectare yields rose even on small sized farms'. The new agricultural techniques helped farmers harvest two crops a year. This increased their income and there was prosperity all round.

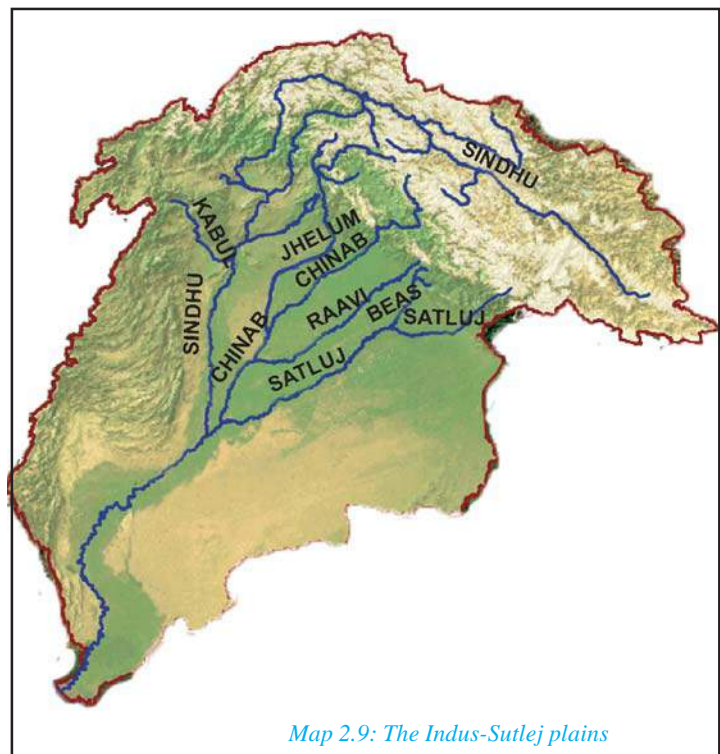
The Green Revolution helped India become self-sufficient in food-production. Besides wheat, crops like millets, maize, cotton and sugarcane are also cultivated. Nowadays, rice is grown in some parts of this region.

Local names of some land forms

Bet: Flood-affected area

Doab: Land between two rivers, such as Bist and Bari *doab*

Punjab: Land of the five rivers



Discuss:

The plains of Punjab and Haryana receive scant rainfall. Yet their agricultural production is high. What made this possible?

What is the main source of irrigation here?

Is the area where we live a plain or a plateau? Where is it easier to dig a well and why?

How do the rivers in Punjab and Haryana have water all year round when the rainfall is so low?

Canals reach the river water over a wide area. It is easy to construct canals in the plains because the rivers flow almost at the level of the surrounding fields. The banks of the river are breached to build canals. The water flows to the fields through these canals. Since the land is not undulating, canals can carry water to distant fields.

A high dam was built across the Sutlej River at a place called Nangal. It is called the Bhakra-Nangal dam. Punjab's canal network was laid after the dam was constructed. Bhakra-Nangal also produces hydroelectricity. As a result, homes were electrified and the region could also industrialise.

2. The Gangetic Plain

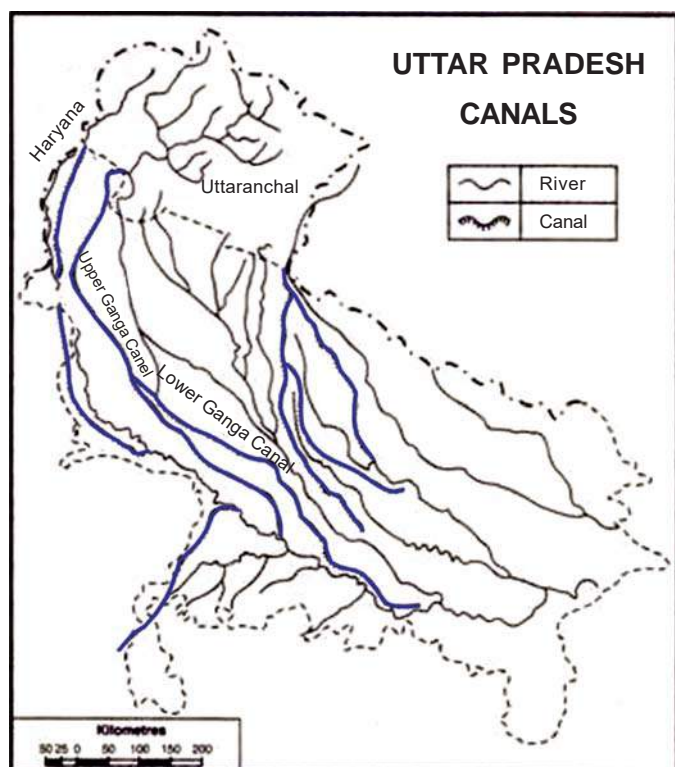
This plain was formed by sedimentary deposits of the Ganges and its tributaries (Yamuna, Gandak, Ghaggar, Kosi, etc). It spreads across a large area of Delhi, Uttar Pradesh, Bihar and West Bengal. Groundwater is found at shallow depths. The monsoon winds bring ample rainfall to the region. At times, the rivers flood, causing extensive damage. Irrigation facilities are more widespread in the western plains of the Ganges and Yamuna. This permits more than one crop to be grown in a year. This intensive agriculture is the reason why the region is densely populated. Agra, Mathura, Meerut, Delhi, Varanasi, Allahabad, Kanpur, Lucknow, Patna, Kolkata, etc are the cities that have developed on these plains.

The sediments deposited by the rivers have created different kinds of land forms. The plain can, thus, be divided into *bhabar*, *terai*, *bangar* and *khadar*.

Bhabar: The Himalayan rivers deposit coarse gravel and small rocks at the foot of the Shivalik Mountains. This layer of gravel is called *bhabar* (see Figure 2.14). The river water flows under the gravel deposits in this region.

Terai: The rivers that disappear in the *bhabar* belt resurface in the plains, their water spreading far and wide. This turns the land into a vast swamp that is called *terai*. Agriculture was developed in this region after independence.

Bangar: These areas of old river sediments form a large part of the northern plains. The flood waters do not reach up to here. Hence, they are less fertile, so coarse grains are grown. These areas are called *bangar*.



Map 2.10: The rivers and canals of Uttar Pradesh



Figure 2.14: A bhabar belt

Khadar: The rivers deposit a new layer of silt in the flood plains every year during the rainy season. These deposits are called *khadar*. They are very fertile. This soil spreads across eastern Uttar Pradesh, Bihar and West Bengal. The predominant crops grown here are sugarcane, wheat, paddy, jute, pulses and oilseeds.

Oxbow lakes: These lakes are formed in the bends of meandering rivers. When the river floods, it breaches its banks and flows straight, leaving its serpentine course. The land in the river bends is flooded to form ‘oxbow’ lakes.



Figure 2.15: An oxbow lake

3. The Brahmaputra Plain

This plain extends in a narrow strip along both banks of the Brahmaputra River from Sadiya to Dhubri in the eastern state of Assam. It was formed by the silt deposited by the Brahmaputra and its tributaries. The soil is very fertile. Since the rainfall is high in the region, jute and rice are grown extensively. The upper slopes of the plain have vast tea plantations.

The plain is surrounded by mountains on three sides to the north, east and south. Extensive flooding of the Brahmaputra and its tributaries, plus heavy sediment deposits in the river channel, cause the river to meander into many branches. Many



Map 2.10: The Brahmaputra River



Figure 2.16: A Sundari tree in the Sundarbans

islands have been formed in the river by these sediment deposits. They are called riverine islands. The main city in the Brahmaputra plain is Guwahati. The Brahmaputra joins the Ganges in West Bengal to form the world’s largest river delta, known as the Sundarbans delta. It is named after the Sundari trees that grow in abundance on this marshy land.

Delta: When a river reaches the end of its course before draining into the sea, it is called an ‘old age river’. The gradient is gentle and the river current is extremely mild. So it cannot carry the sediment load. The sediment is deposited on the river beds and banks, creating obstacles to the river’s flow. As a result, the river changes course into many smaller distributaries before draining into the sea. The triangular land mass formed by the river during this process is called a ‘delta’.

Fill in the characteristics of the features listed below for each river plain:

S No	Point	Indus-Sutlej plain	Gangetic plain	Brahmaputra plain
1	Soil			
2	Rivers			
3	Crops			
4	Prominent cities			

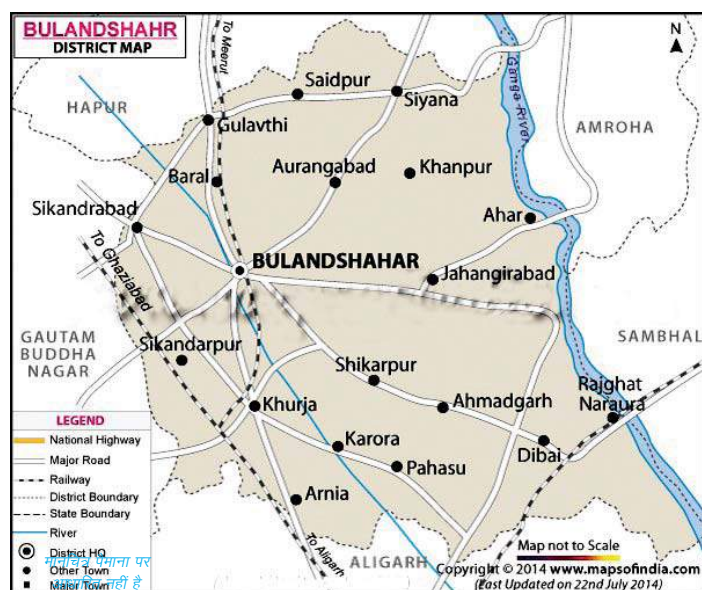
Map reading: Draw or indicate the following in a map of India:

- The rivers responsible for forming the great plains of India.**
- Ten major cities located on the banks of rivers in these plains.**
- Colour India’s great plain in green.**
- Draw the delta created by the Ganges and Brahmaputra rivers.**

The Northern Plains and its People

The plains of the Ganges and Yamuna lie in western Uttar Pradesh. An ancient village called Mirpur is located in Bulandshahr district. (The original name of this village was changed by Gilbert Etienne who wrote a book *Food and Poverty* based on a study of this village.) This village nestles on the alluvial sediment deposited by the rivers. Agriculture is the livelihood of 75% of its population. Rainfall is adequate and groundwater is available at a depth of 28-30ft.

The geographical conditions of the plains are suitable for intensive farming. The land is farmed throughout the year and three crops are grown. Most of the people living here depend on the fertile land for their livelihood.



Map 2.12: Bulandshahr district

Rice, millets like *jowar* and *bajra*, black gram (*urad dal*), etc are the chief crops grown during the kharif season. A good crop of wheat, mustard and potatoes is harvested during the rabi season.

Of these crops, *jowar* and *bajra* are fed to the livestock. Wheat is sold in the market at Bulandshahr. The key commercial crop of this area is sugarcane. In every village, farmers owning 4-5 acres of land grow sugarcane in part of their land. The cane is sold to the nearby sugar mills. It is used to produce both sugar and jaggery. Some people also own mango and guava orchards.

The local people keep livestock in addition to farming. The big farmers keep livestock for domestic consumption of milk and ghee. Those with small holdings sell the milk to dairies to augment their household income. They also sell dung to the well-off farmers for cash or fodder and work as farm labourers. The dung is used as manure.

High Population Density

The northern plains are densely populated. Let's take another look at Mirpur village to see how the face of this old community has been changing:

Table 1: Mirpur village – land and population

Year	Population	Agri. land	Total land	Irrigated land (ha)
1861	451	228	276	59
1921	731	264	276	131
1961	1,227	260	276	192
1981	1,848	250	276	250
2011	2,279	245	276	245

Source: Based on Gilbert Etienne's Food and Poverty

150 years ago in 1861, most of the land in the village was farmed. By 1921, the remaining forests were cleared for farming. Since then, there has been no increase in the cultivated area i.e. for the last 90 years. In 1921 each hectare supported nearly three people (731 people/276 hectares = 2.6 people/hectare). In 2011, the number was over eight people (2,279 people/276 hectares = 8.25 people/hectare). This shows the population density of the region went up almost three times in 90 years. How could the same acreage of land support so many more people? Let us find out.

The population of villages like Mirpur has risen considerably. It was 731 in 1921, 1,848 in 1981 and 2,279 in 2011.

The plains have productive soil and good irrigation. We had learnt about the irrigated areas of Punjab-Haryana and western Uttar Pradesh. Look at the figures of Mirpur village. It had irrigation facilities in the past. But only a fourth of the village acreage was irrigated 150 years ago. The irrigated area increased almost two-fold from 1921 to 1981. Today, all the cultivable area is irrigated. We know that two to three crops can be grown with irrigation and the production also increases. For these reasons, the northern plains are farmed intensively and are densely populated.

Cultivating more than one crop on the same land in a year is called multiple cropping. This is the easiest way to increase the productivity of the land.

The Mirpur farmers grow three crops a year because of their well-developed irrigation system. Fifty years ago, a small portion was irrigated by drawing water from a well with a Persian wheel. Now people irrigate large tracts of land with electricity-driven tube wells and diesel engine pump sets. Earlier, the government had installed some tube wells. But farmers soon began drilling their own tube wells themselves.



Figure 2.17: Irrigation from a tube well

Such irrigation facilities are not available in all the villages of India. Compared to the plains, irrigation facilities are few in the Deccan plateau. Around only 40 percent of

the total cultivated acreage in the country is irrigated today. The rest depends on rainfall. Natural resources like land and water have been utilized intensively to increase crop yields and production. But the resources have not always been judiciously used. Experience shows us that the fertility of the soil is decreasing because of excessive use of chemical fertilisers and pesticides. The groundwater level continues to drop as farmers continue to install more and more tube wells. Falling groundwater levels force them to drill deeper to get water. In such a situation, the poor and marginal farmers are being pushed to face harsher challenges.

Talk to a sugarcane juice vendor and find out where he gets the sugarcane from. How much profit does he make?

What is the reason for multiple cropping?

Identify the irrigated areas on the wall map or in your atlas. Does our region fall in the irrigated category?

Land distribution in Mirpur

We have learnt how important land is for farming. Unfortunately, there is not enough land for everyone engaged in agriculture. Mirpur has a population of 2,279 (2011 census). The village has 401 families belonging to different castes. One-third of these families (131) are landless. Around 50 families are middle to big farmers with more than two hectares each. Some of these big farmers own more than 10 hectares. As many as 220 families farm small plots of less than two hectares. They don't earn enough from these marginal holdings to sustain themselves.

Table 2: Land distribution in Mirpur

Category of farmer	Size of land	Number of families	Percentage of families
Medium and big farmers	More than 2 hectares	50	11.11%
Small farmers	Less than 2 hectares	220	48.88%
Landless labourers	No land	131	29.11%

Why do many families continue farming such marginal holdings?

The classification of Indian farmers according to size of holdings is given in the table below:

Table 3: Land distribution in India

Category of farmer	Size of holding	% of farmers	% of total land (farm area)
Medium and big farmers	More than 2 hectares	15%	55%
Small farmers	Less than 2 hectares	85%	45%

The table shows that around 85% of farmers in India are marginal farmers but they own less than half the total cultivated area.

Organisation of production

Let us now try to understand the entire agricultural production process in Mirpur. Land, water and labour are the essential factors for production. Farming demands hard physical work. Most small farmers take the help of family members to work their farms. Medium and big farmers employ labourers in their fields.

The labourers who work in the fields belong to either landless families or families owning very little land. They are paid in cash or in kind (produce). At times, they are given food, the cost of which is adjusted against their wages.

There is intense competition for wage labour among the landless families in Mirpur. So people are willing to work for low wages. With big farmers using machinery like tractors, threshers and harvesters on their farms, the scope for manual labour is getting more limited.

Modern agricultural practices need HYV seeds, irrigation, fertilisers and pesticides. This requires capital investment. Most small farmers take loans from big farmers, moneylenders or fertiliser and seed dealers to buy these inputs. The interest rates on these loans is extremely high.

Medium and big farmers usually earn a profit from farming, so they have the required capital to invest for seeds, fertilizers, pesticides, wage labour, etc.

All the big farmers in the village own tractors. They use them to plough and sow their farms and also hire them out to the small farmers. Most of them own threshers and harvesters as well. Such farmers also have several tube wells to irrigate their fields.

Dairying and other occupations

Dairying is a common occupation of many families in Mirpur. People use monsoon grasses and the straw of *bajra* and *jowar* as fodder for their buffaloes. They sell milk in the nearby town of Jahangirabad. Two businessmen have established milk collection centres in the town, from where the milk is sent to faraway locations such as Bulandshahr and Delhi. Apart from dairying, the villagers pursue many other occupations to earn their livelihood.

Around 50 people are presently engaged in building construction in Mirpur. Mishrilal has bought an electricity-driven sugarcane crushing machine to produce jaggery. He buys sugarcane from other farmers and sells the jaggery to traders in Jahangirabad. He doesn't earn a big profit from his business.

There are only a handful of traders in Mirpur. They buy goods from the wholesale markets in the city and retail them in the village. Small shopkeepers mostly sell rice, wheat, sugar, tea leaves, oil, biscuits, soap, toothpaste, batteries, candles, notebooks, pens, pencils, and even clothes.

Some families living near the bus stand have set up small shops there. They sell food items and soft drinks. Their women and children also help in running the stalls.

Some shop owners buy goods in the village and sell them in other large villages and towns. Those operating flour mills buy wheat from the farmers and sell the flour (*atta*) in the town markets. We saw that most Mirpur residents are self-employed - as farmers, shop owners, vendors, etc - while some others work as labourers. Most of the people in India are self-employed in this way.

Modes of transportation

Various modes of transport ply on the road connecting Mirpur to Jahangirabad. They include rickshaws, *tongas*, jeeps, tractors, trucks, bullock carts, etc. Many people earn their livelihood by working in the transportation sector.

EXERCISES

- Write True or False for the following statements:
 - The entire Indus-Ganges plains lie in India.
 - Some parts of India lie within the Indus-Ganges plains.
 - The Indus-Ganges plains are a part of the vast northern plains.
 - The Ganges is the most important river of the northern plains.
- Why is irrigation needed in the Punjab-Haryana plains? How do the farmers benefit from irrigation?
- Why is it easy to construct canals in western Uttar Pradesh?
- What are the differences between our region and the village of Mirpur?
- What are the similarities and differences between *terai* and delta?
- What are the differences between an ox-bow lake and the ponds in your village or town?
- Water is a natural resource needed for production. But it is being excessively used for agricultural production. Explain this statement.
- What are the differences between the occupations of people in Mirpur village and your own village?

PROJECT WORK

- The Census Department conducts a survey of India's population once every 10 years. It fills out a census form that requires the details listed below. Complete this census form with details of your own village or a neighbouring village:
 - Place
 - Total area of the village
 - Utilised land (in hectares)
 - Agricultural land
 - land that is not available for farming (area used for homes, roads, ponds, pasture.) Irrigated land
 - Unirrigated land

- d) Facilities:
- Educational
- Medical
- Market
- Electricity supply
- Communication services
- Nearest city
2. Talk to any two labourers from your locality, (either agricultural labourers or construction workers). Find out how much they earn in a day. Are they paid in cash or kind? Do they find work every day? Are they indebted?
 3. Talk to elders in your locality and find out what differences they have seen in irrigation facilities and agricultural production over the past 30 years.

2.1.3 The Peninsular Plateau

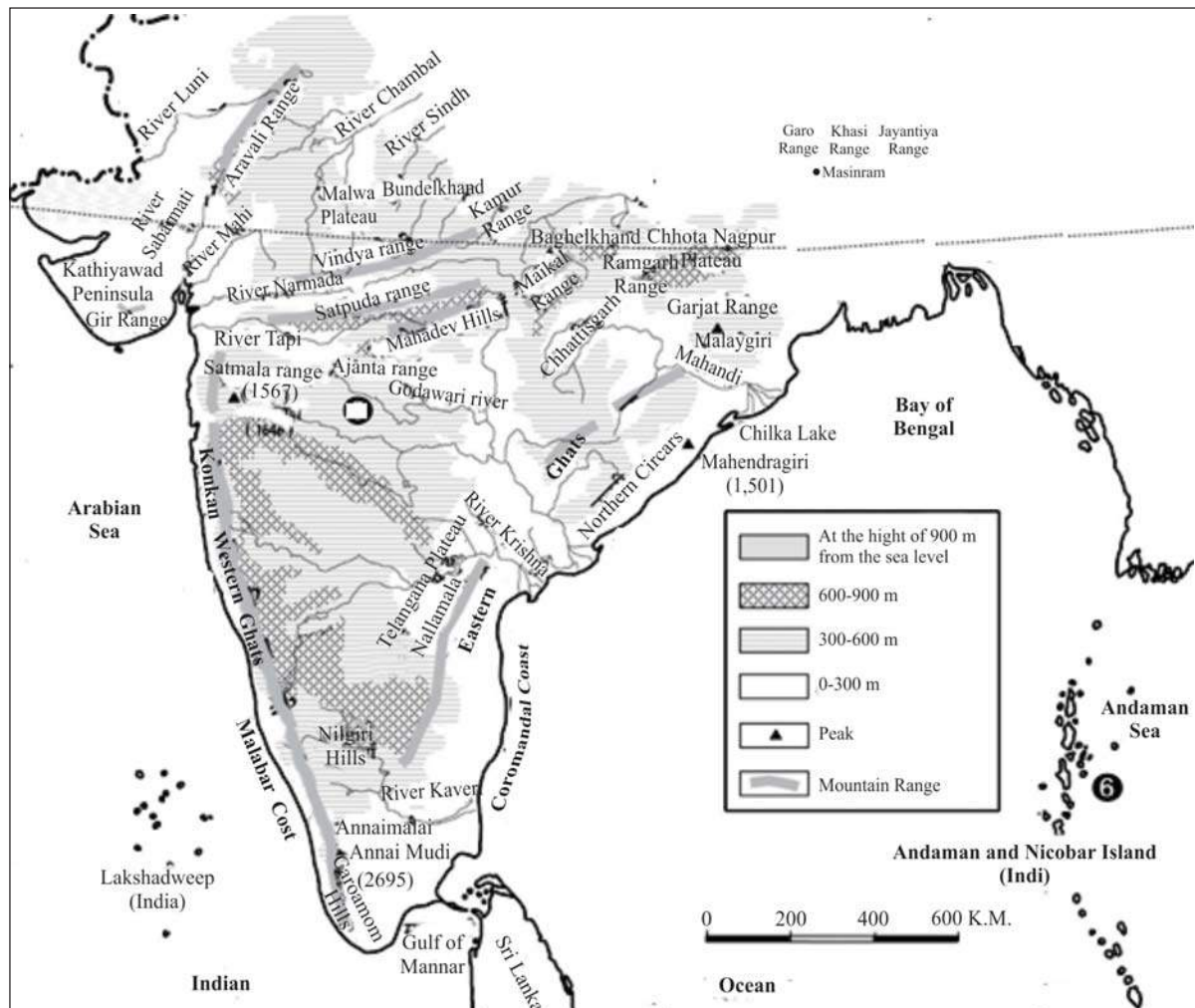
A large part of India lies on a plateau that is known as the Peninsular Plateau. It spreads from the Aravalli Mountains and Kutch in the north-west to cover the entire southern peninsula. From west to east, it runs almost parallel to the Yamuna and Ganges, extending to the Rajmahal Hills in the east and the Shillong Plateau in the north-east. The peninsula's geological structure reveals that some parts of the plateau to the north have been covered by the sediments of the Indus and Ganges. That's why we see glimpses of this ancient plateau in the plains region.

We learnt about the Indian plate in the last chapter. India's huge peninsular plateau forms the Indian plate. It is also known as Gondwanaland. It is South Asia's ancient geological land-mass. It spreads over an area of 16 lakh sq km. It is composed of hard rock, which includes both igneous as well as metamorphic rocks (granite, basalt, gneiss, schist, etc). Barring some peripheral areas, the sea has not encroached on the plateau.

Scientists say that the Indian plate or Gondwanaland slowly glided northwards to encounter the Eurasian plate several lakhs of years ago. When it reached its present position, its western portion was subducted (forced down) where the Arabian Sea is seen today. The subduction caused the peninsular plateau to rise to its present height.

The surface topography of the plateau today is the result of erosion over the ages. The erosion was greater in areas where the rock was comparatively soft and less in areas where the rock was hard. This process, which continued for lakhs of years, resulted in the creation of an undulating landscape. The hilly areas are composed of hard rock which is being slowly eroded even today. That's why if you take a close look at the mountain peaks in the region, you will notice that they are rounded, not pointed like in the Himalayas.

You can see highly eroded terrain and high mountains along the boundaries of the plateau, such as the Sahyadri and Aravalli hills. The geological processes occurring in the earth's interior created faults or fissures in the plateau many lakhs of years ago. The Narmada and Tapti rivers flow in a rift valley created by a fault. The peninsular plateau was unstable at the time the Himalayas were being formed, creating these fissures and causing the land to rise in some places. The Palni and Nilgiri hills are examples of rising land masses.



Map 2.13: India's peninsular province

The lava traps of the Deccan were formed by lava from volcanoes that was deposited on the earth's surface. These lava deposits give the region the name of the black soil province. The gradient of the peninsular plateau is towards the south-east. That's why most rivers originating from here drain in the Bay of Bengal.

The peninsular plateau is a more geologically stable region than the Himalayas or the northern plains, but it does also experience earthquakes. Examples include the Latur earthquake of 1993 in Maharashtra and the Bhuj earthquake in Gujarat in 2001.

Do you know?

1. Geology, or geological science, is a branch of science that studies the earth, its internal structure, nature and materials.
2. A flat land mass (table-land) that is at a higher level compared to a plain is called a plateau.
3. Igneous rocks are formed when the lava emanating from volcanoes solidifies. They are the hardest of all rocks.
4. Rocks that have changed in appearance because of temperature and pressure are called metamorphic rocks.

Geographical features of the great Indian peninsula

This vast peninsular plateau can be divided into two regions:

1. The central highlands
2. The Deccan plateau

1. The Central Highlands

The central highlands lie to the north of the Vindhya range, with the Aravalli Hills forming its north-western border. Between the Vindhyas and Aravallis lies the Malwa plateau, to the north is the Bundelkhand plateau, to the east is the Baghelkhand plateau, while the Chota Nagpur plateau is in the far-east. The gradient of the highlands is towards the north-east as seen in the flow of its major rivers (Chambal, Betwa, Son).

Do you know?

The Western Ghats are one of the ten biodiversity hotspots in the world. They harbour 7,400 species of flowering plants, 139 species of mammals, 508 species of birds, 179 species of amphibians and 288 species of freshwater fish.

The Anaimudi peak (2,695m) in the Anaimalai Hills of the Western Ghats in Kerala is the highest mountain peak in South India. Kodaikanal is a hill station in the Palni Hills. Ooty (Udhagamandalam) is a famous hill station and tourist spot of South India situated in the Nilgiri Hills of the Western Ghats.

Each plateau of the central highlands has its own characteristics. The Malwa plateau has black soil, which is also called black cotton soil. Bundelkhand is an undulating plateau, with its western part covered by forests. The Baghelkhand region is surrounded by hills, the Vindhyas and Kaimur Hills making up a large part of the plateau. The Chota Nagpur plateau is similar, with the Rajmahal Hills to its north-east, Hazaribagh Hills to its north and Kolhan Hills to its south.

Do and learn

Look at the physical map of India. Now look at the features listed in the table. What are the differences between these features in the Himalayan mountain region and the central highlands of the peninsular plateau?

S No.	Feature	Himalayas	Central highlands
1.	Direction of slope		
2.	Rivers		
3.	Minerals		

The Chota Nagpur plateau is the richest in mineral wealth among all the regions of the central highlands. Coal, iron ore, mica, bauxite, limestone, dolomite and feldspar are found in the plateau's Damodar Valley.

2. The Deccan Plateau

This plateau lies between the Western Ghats and Eastern Ghats, extending from the southern bank of the Tapti River to the Nilgiri Hills in the south. It covers 7 lakh sq km and is triangular in shape. The states of

Maharashtra, Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Kerala fall either partly or fully in this region. One side of this triangle passes through the Eastern Ghats, connecting the Nilgiri Hills to the Rajmahal Hills. The second side is formed by the Satpura, Mahadeo and Maikal hills. The Sahyadri Hills, which are also called the Western Ghats because they are located in the west, forms the third arm. The Sahyadris have wide sections at a lower altitude that are called *ghats*. They provide a passage for transportation between the plateau and the coastal regions. From north to south, the three famous *ghats* in the Western Ghats are Thalghat, Bhorghat and Palghat.

The Eastern Ghats run parallel to the eastern coast from the Mahanadi Valley to the Nilgiri Hills, a distance of 800km. The Western and Eastern Ghats meet in the south at the Nilgiri Hills. The Mahanadi, Godavari, Krishna and Kaveri rivers flow eastwards, cutting through the Eastern Ghats and draining into the Bay of Bengal. They form fertile deltaic plains.

The north-east section of the peninsular plateau is known as the Chhattisgarh basin. The gradient of this basin is eastwards. It falls within the Mahanadi flood plains that are covered with the rich silt deposits of the rivers. Plateaus lie to its north and north-east, known locally as the Jashpur Plateau, Dharamjaigarh Plateau and Raigarh Plateau. The Chhuri Hills extend over the north-west, while the Maikal Hills lie to the west. The Bastar highland, known as Dandakaranya, lies south of this basin. The Bailadila and Dalli Rajhara regions are rich in high-quality iron ores. Limestone and dolomite are also found in abundance.

The Indravati River flows through this region, which is also well-known for its subterranean caves such as Kutumsar, Kailash and Dandak caves.

Do you know?

1. **The Kutumsar Cave is a subterranean cave. These caves have subterranean features (speleothems) like stalactites, stalagmites, columns, etc. Stalactites are columns of limestone hanging from the ceiling of the caves, while stalagmites are columns that rise from the floor of the caves. When the two meet, they join to form columns. These speleothems are found in limestone-rich areas.**
2. **The Chitrakote Falls are on the Indravati River. During the monsoon season, these falls are 1,000m wide. In summer, their span is around 350m.**
3. **Pat is a plateau with a layered (terraced) structure. Examples include Mainpat, Jarangpat, Jashpurpat, Samripat, etc.**

The peninsular plateau does not end at the Rajmahal Hills. A part extends to the north-east into what are locally known as the Shillong Plateau, Karbi Anglong Plateau and North Cachar Hills. A fault separates them from the Chota Nagpur Plateau. The rocks that connect them to the main plateau are submerged by the Gangetic alluvium. Three important hill ranges that extend from west to east across Meghalaya are the Garo, Khasi and Jaintia hills. Mawsynram, the place with the highest rainfall in the world, is situated here.

Look at the physical map of India and identify the states into which the great Indian plateau extends.

What is the meaning of ghat?

Deccan Traps

Lakhs of years ago, lava flowing out of fissures in the earth east of the Western Ghats solidified to create the region known as the Deccan lava traps. Back soil was formed in this region, which extends over 51,000sq km. Several minerals are found here that are soil nutrients and are essential for agriculture.

Do you know?

Three gold mines are located in the Deccan plateau:

1. Kolar gold fields, Karnataka
2. Hutti gold fields, Karnataka
3. Ramgiri gold fields, Andhra Pradesh

90 percent of India's minerals, 60 percent of its cotton, 70 percent of its cotton textiles, and nearly 65 percent of its sugar are produced in the peninsular plateau.

Peninsular industrial complexes:

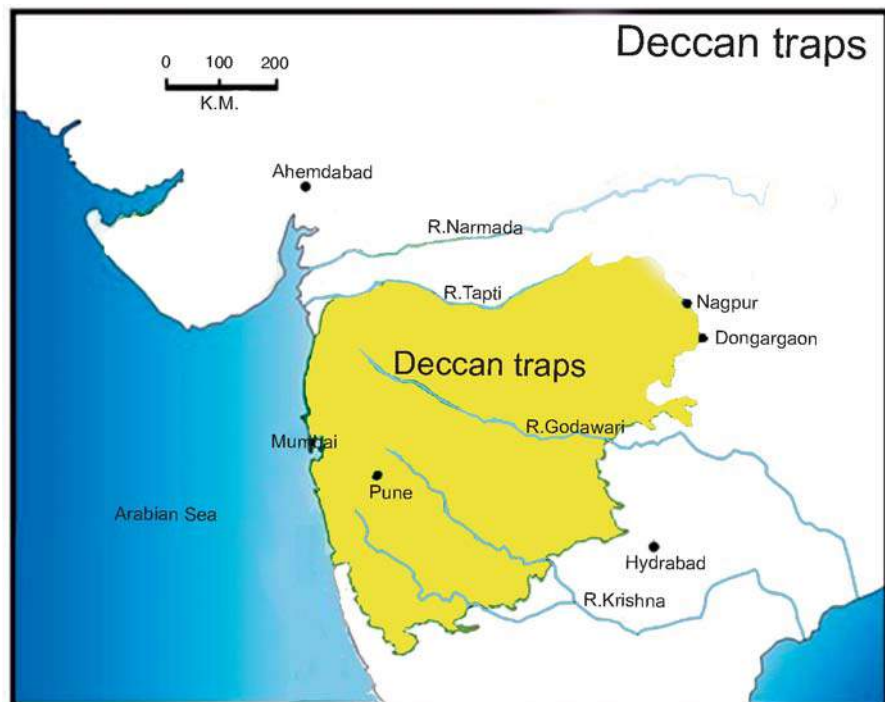
1. Damodar Valley industrial complex
2. Bengaluru-Coimbatore-Madurai industrial complex

Minerals and Mining in the Plateau

The Indian plateau is rich in mineral resources. Many minerals are found here, so mining and industry have developed in the region. It contains huge deposits of coal, iron, bauxite, manganese, etc. It can be said that most of India's minerals are sourced from the plateau.

How is mining done? How does labour work in the mines? How are the minerals extracted and how are they used? Let us tour a mining area to find out. Jharkhand's largest coal mines are in the Jharia coal fields in Dhanbad district. Jharia contains huge underground coal reserves.

Tunnels have been dug deep into the earth to extract coal. The mine manager told us that there is an extensive network of long tunnels underground. Hundreds of miners wearing steel helmets work here to extract the coal. He said it is pitch-dark in the mines so light is needed to work down below. We saw some workers carrying battery-powered lamps while others had the



Map 2.14: The Deccan traps

lamps fitted into their helmets. The helmets protect them from rocks falling from the tunnel roof while they are extracting coal. Pillars and beams made of wood and iron are used to prop up the roof and prevent it from collapsing.

Coal is hard like a rock. Explosives are used to break up the rock-like coal into smaller pieces. These pieces are filled in baskets and emptied in trolleys that run on rails. The trolley is pulled up to the surface along the mine shaft by iron chains. The coal is sent from the pit head to the washery, where it is washed.

It is dangerous working underground in a coal mine. Accidents often happen. In 1975, the walls of a mine shaft in Dhanbad's Chasnala mine collapsed. Water flooded the shaft, leading to the death by drowning of 400 miners.

During British rule and the first 20 years of independence, the mines were operated by private companies and their contractors. In this period, safety measures in the mines were inadequate. After the government took over the mines, calamities like Chasnala occur less frequently. But the miners are constantly exposed to coal dust in the shafts, which affects their lungs, causing many lung-related diseases. Miners endanger their health doing such hazardous work for low wages.

We visited the miners' tenements. We found out that almost all the miners were from the neighbouring regions, not from Jharkhand. They were mostly from Bihar, regularly returning to their villages during the holidays.

Why is it that the miners are from faraway places and not from the local region? We found out that before the mines were opened, *adivasis* lived in these forests. They had their homes and fields, which were the source of their livelihood. The *adivasis* were displaced from their homes and the forests were cleared when the contractors began opening and operating the mines. They hired migrant workers to mine the coal.

How would the development of mines and industries have affected the lives of the displaced *adivasis*? Discuss in class.

Also, find out in what ways clearing the forests to open mines has affected the environment.

Many minerals other than coal are mined in the peninsular plateau, such as iron ore, manganese, bauxite and limestone. Thus, the raw materials needed for metal-based industries are abundantly available in India's plateau. Electricity is needed to run factories. Coal is used to generate electricity. So many coal-based thermal power plants have been set up here. In addition, hydroelectricity is also generated in large dam projects.



Figure 2.18: A coal mine

EXERCISES**A) Choose the correct alternative:**

1. Which geographical region of India do you live in?
 - a) Gangetic plain
 - b) Coastal plains
 - c) Thar Desert
 - d) Southern peninsular plateau
2. From which geographical region of India are the most minerals obtained?
 - a) Gangetic plain
 - b) Himalayan region
 - c) Peninsular plateau
 - d) None of these
3. Which of these places is in the peninsular plateau?
 - a) Nainital
 - b) Kodaikanal
 - c) Mussoorie
 - d) None of these
4. What is the name of South Asia's oldest landmass?
 - a) Gondwanaland
 - b) Laurasia
 - c) Thar
 - d) Sivalik
5. Which is India's oldest landmass?
 - a) Gangetic plain
 - b) Deccan plateau
 - c) Kashmir Himalayas
 - d) Sivalik Hills
6. Which rivers flow in a rift valley?
 - a) Ganges and Yamuna
 - b) Narmada and Tapti
 - c) Mahanadi and Subaranarekha
 - d) Krishna and Kaveri

B) Match the pairs:**Group A**

1. Kolar gold fields
2. Lifeline of Chhattisgarh
3. Hillstation of Chhattisgarh
4. West-flowing river

Group B

1. Mahanadi
2. Karnataka
3. Tapti
4. Mainpat

3. What is the meaning of 'ghat'?
4. Why are the peaks of hills in the peninsular plateau not as pointed as the Himalayan mountain peaks?
5. How is the peninsular plateau different from the Gangetic plain?
6. How did the black soil of the peninsular plateau form?
7. Why don't miners wear cloth hats when extracting coal?
8. How did the Chasnala coal mine take place?

2.1.4 The Coastal Plains and Island Groups

The coast is where the sea meets the land. In this picture you can see the vast sea and a sandy beach. But in some places, there is no beach and the sea laps the rocky slopes of mountains. The coastal region attracts tourists because of its natural beauty.



Figure 2.19: The sea coast

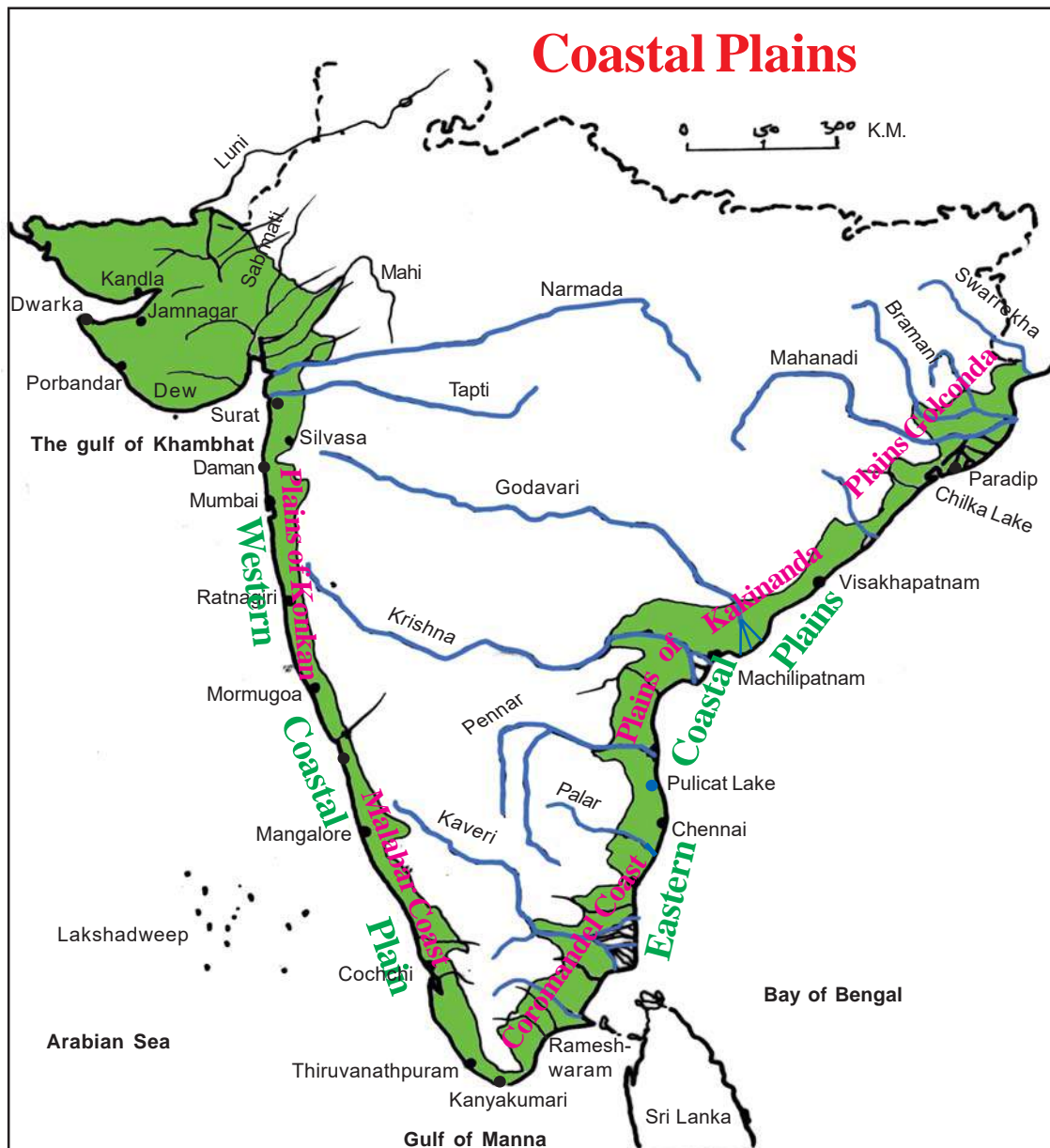
Look at Figure 2.19. There are narrow plains along the sea coast on both sides of the peninsular plateau. These are called the coastal plains. The western coastal plain lies to the west of the Sahyadri Range. It stretches from Kutch and Kathiawar in Gujarat to Mumbai and Goa, and continues till the southern tip of Kerala. The eastern coastal plain connects the Ganges-Brahmaputra delta to Mahanadi, Godavari, Krishna and Kaveri deltas and then stretches on till Kanyakumari. The two plains meet at Kanyakumari. The western plain is narrower compared to the eastern plain.

The formation of these two plains and their geographical features are different from each other. Let us find out why they differ.

Usually, a coastal plain is created by the following processes:

1. Geological activity and forces in the earth's interior cause the coastal areas to submerge under the sea or cause land beneath the sea to emerge. These processes are called submergence and emergence.
2. Rivers deposit their sediments, which accumulate over lakhs of years to form plains.
3. The sea level changes continuously.

Let us now examine the special characteristics of the western and eastern coastal plains.



Map 2.15: The coastal plains

1. The Western Coastal Plain

This plain is situated in between the Arabian Sea and the Western Ghats. It was created by submergence of land. Sedimentary deposits on this submerged land over lakhs of years gradually built up this coastal plain. That's why it is a narrow coastal strip. Its average breadth from east to west is around 64km. It has a steep gradient. So the rivers flow parallel to each other across the plain. They are short and swift so they do not carry much sediment. What sediment they carry is deposited in the deep sea, not at the mouth of the river. Thus, the mouth of these rivers, called the estuary, is open and sediment-free.

The stretch of the coastal plain from Daman to Goa is called the Konkan plain. It is quite rugged. The Mumbai harbour is on this coast. From Goa to Mangaluru, it is called the Karnataka or Mysore plain. From Mangaluru to Kanyakumari (Cape Comorin) it is called the Malabar plain.



Figure 2.20: The backwaters

A striking geographical feature of the Malabar plain is its long and narrow backwaters. They form because the sea deposits sand at the mouth of the rivers. The saline water of the sea and the fresh water of the rivers mix in the backwaters. People who live here fish and travel by boat. The Kochi harbour is located in these backwaters.

The wet tropical climate is suitable for human habitation. Plantations of rubber, cinchona, coffee, spices, coconut and cashew are found here. Sugarcane and rice are cultivated in the low-lying fields, while tea is grown on the upper slopes of the hills. This region has a long history of maritime trade with the Arab countries. Vasco da Gama sailed here with his fleet in 1498. The Portuguese established their trading post and rule in Goa.

The northern section of this plain is known as the Gujarat plain. It covers the coastal areas of the Kutch and Saurashtra peninsulas and the interior plains of Gujarat. The Banas, Mahi, Sabarmati, Narmada and Tapi rivers flow here. The Kutch-Saurashtra plain is semi-arid and its sandy soil is saline. It floods and becomes swampy during the rainy season. The region began to develop rapidly after crude oil or petroleum was discovered here.

2. The Eastern Coastal Plain

The eastern coastal plain is situated between the Eastern Ghats and the Bay of Bengal. It spreads from the Ganges-Brahmaputra delta in the north to Kanyakumari in the south. It originated from the geological process of land emergence. Its average width varies from 160km to 480km. Large rivers flowing from the peninsula deposit their sediment on the plain, which has a gentle gradient. The rivers have formed large, wide deltas at their mouth, the Mahanadi, Godavari, Krishna, Kaveri and Pennar deltas being the major ones.

Erosion by the sea has created a huge lagoon in this coastal plain known as the Chilika Lake. The waves in the deltaic areas have also created lagoons surrounded by sand dunes, Pulicat Lake being a beautiful example.

The northern section of the eastern coastal plain falls in Odisha state. The Mahanadi River has carved a vast and fertile delta where rice and jute are grown. Chilika Lake, also located here, is famous for its prawns and shrimps, which are exported to many countries.

The middle section of the eastern plain forms the Andhra Pradesh coastal region. It is called the Kakinada

plain. The Godavari and Krishna rivers have formed large deltas. Pulicat Lake and Vishakhapatnam harbour are located here.

The southern part of the eastern coastal plain spreads over coastal Tamil Nadu. It is known as the Coromandel Coast. The Kaveri and Pennar rivers flow through the plain and have formed deltas. Chennai harbour is on this coast.

Economic and Cultural Importance of the Coastal Plains

India's coastal plains have always been important from a historical, economic, cultural and strategic point of view. The plains are very fertile. In the wider stretches, rice, sugarcane and coconut are grown. The coastal areas have coconut, betel nut (*supari*), rubber, banana and spices, as well as large-scale production of salt. The hill slopes have plantations of cashew, coffee, tea and spices.

Fishing is a widespread occupation. Both freshwater and salt water fish are found in abundance where the rivers meet the sea. Related industries like fish canning, fish oil extraction, etc have grown in the region. Pearling is also done, with oysters bred along the shoreline, especially on the Gujarat coast.

The coastal plains are rich in mineral resources. Valuable minerals found in the sandy areas include monazite, ilmenite, zircon, rutile, sillimanite, etc. Some of these minerals are used to produce atomic energy. Offshore oil has also been found in sufficient quantities. India's biggest offshore oilfield Mumbai High and the onshore deltaic Kaveri oilfield are situated in the coastal region.

The coastal plain are vital for trade and commerce. India's biggest ports such as Kandla, Mumbai, Mormugao, Cochin, Thiruvananthapuram, Chennai, Vishakhapatnam, Paradip, etc are located in the coastal region. Most of our country's international trade is carried out through these ports.

The plains are historically and culturally important, the famous places and sites including Rameswaram, Kanyakumari, Kanchipuram, the temples of Madurai, Saint Francis Xavier church etc. Merchants and traders from Arabia, Portugal, the Netherlands and France established their trading posts along these coasts.

What's more, the coastal plains are rich in natural beauty and are known for their salubrious climate that promotes health and wellness. Tourists visit the region in large numbers every year. The population density is high here.

Find the following in the political and physical maps of India:

1. Which states does the western coastal plain touch?
2. Which states does the eastern coastal plain touch?
3. Name the ports - from north to south – that are located along the eastern coastal plain.
4. Name the ports – from north to south – that are located along the western coastal plain.
5. In which states are the following ports located?
 - a) Mumbai
 - b) Cochin
 - c) Paradip.....
 - d) Chennai
 - e) Thiruvananthapuram
 - f) Mormugao
 - g) Vishakhapatnam

Life on the Sea-shore

India and its island groups have a 7,500km long shoreline. Many villages are located on the coast. One of them is Dharmadam on the Malabar Coast in Kerala. This coastal village, which lies in the midst of coconut groves, has Hindu, Muslim and Christian communities. It had a flourishing sea trade with faraway countries from ancient times. So it saw a constant give-and-take of people, cultures and religions. The early influence of Islam and Christianity in India was first seen along the western coast.

Which is the cheapest mode of transport: the railways, air travel or travel by sea?

Fishing is a major occupation of people living near the sea. Besides fish, they catch oysters, mussels, crabs etc. Every part of the coconut tree, which grows in abundance here, is used in one way or the other. Food is cooked in coconut oil. The coconut husk is used to make rope. The trunk of the coconut tree is used to construct huts and buildings. Nowadays, all the houses are made of brick and mortar. Earlier, the trunks were used to support the roofing tiles.



Figure 2.21: A catamaran with a haul of fish from the sea

Apart from fishing, people cultivate rice on their farms. They also grow vegetables like pumpkin and fruits like watermelon, which are sold in the local village markets. Bananas are widely cultivated, their leaves serving as plates for eating. People also rear cows, buffaloes and goats.

Tourism flourishes in the coastal areas. People enjoy visiting the sandy beaches.

David and Sudip live in Dharmadam. They are fishermen but they are poor because they don't own fishing boats or fishing nets.

Sudip's mother wakes him up at three in the morning and serves him some *kanji* (rice gruel). Sudip drinks the *kanji* and is ready by four o'clock to go fishing. His friend David waits for him at the sea-shore. Both work for Rajan on his boat. Rajan is not rich, but he owns a boat worth Rs30,000 and a fishing net worth Rs2,000. The three of them fish in the sea on the boat, which is called a catamaran.

Catamaran

The catamaran (Tamil: Kattumaram) is made by tying five to seven long wooden planks together with ropes. The fishermen use this rudimentary sailing craft to venture out to sea. The logs are cut and shaped with an axe in the shade of a sail by the shore. Most of the small fishermen use catamarans to fish. They can't venture too far out to the sea compared to boats.

When they reach the shore, several fishermen help them to push the catamaran into the water. The sails, nets, etc are securely fastened to prevent the waves from washing them away. They unfurl the sail after some time. At night, the wind blows from the land towards the sea. The wind helps them to sail out to sea. The wind changes direction in the afternoon, blowing towards the land. It helps them to return to the shore with their catch.

It is not an easy task to take a boat out to sea. It is hard work to row the boat, align the sail in the direction of the wind, cast the heavy net and haul in the catch. Fishing at sea is not just tough but dangerous, too. There is no guarantee that fishermen who venture out to sea will return home. They can be caught in a storm or their boat could hit a submerged rock and break into a hundred pieces. Sometimes, they fall prey to carnivorous fishes that attack humans.



Figure 2.22: A catamaran

The boats are anchored when they are 2-3km out at sea. The fishermen spread their nets and cast them in the water. The nets are hauled in after one or two hours, after which the boats are ready to return. It is 12 noon or 1 o'clock by the time they return to the shore. Many fisherwomen wait on the beach for the boats to arrive.

Sudip's and David's mothers also wait with their baskets. The women run to the boats the moment the catch is unloaded. The auctioneers also arrive. Usually, the catch is auctioned on the beach itself. The auctioneers get part of the catch as their fee. The women and traders buy the fish and sell it in the market.

A trader makes a beeline to Rajan's boat. Rajan had taken a loan from him for his sister's wedding. The condition was that Rajan would sell his catch at a cheap rate to him. Rajan and his mates suffer a loss in the transaction but if they sell the catch to somebody else then the trader would either not give them the money or demand immediate repayment of the loan.

The trader packs the fish in ice and sells it in faraway cities, or even abroad, for a huge profit.



Figure 2.23: The catch being auctioned on the shore

Rajan divides the money the trader gives him into four equal parts. Sudip and David get one part each and Rajan keeps two parts. One part is for his labour and the other for his boat and net.

The catch is very lean during January-February. There is no certainty the fishermen will net anything even after a hard day's effort during these months. This situation continues until April. It is a difficult for workers like Sudip and small fishermen like Rajan. They face a lot of hardship, borrowing money from the traders to manage their household expenses.

Fish is available in plenty between May-June and September. It is during this time that the fishermen try to repay their loans.

What differences do you see between the boats that ply in rivers and the catamarans?

How is the fishermen's catch sold?

Why could Rajan not auction his catch?

Big and Small Fishermen

In the agricultural sector, we have small, medium and big farmers and farm labour. It is similar in the fishing community. Labourers like Sudip don't own catamarans, boats or fishing nets. They work for fishermen who own boats. More than half of India's fishing community are labourers. Big fishermen own several boats, catamarans and large nets. They employ 50-60 workers to operate their boats and cast their nets. They retain half the catch and share the rest between the workers.

Anthony is a big fisherman. He owns a number of catamarans, boats and different kinds of nets. He employs around 50-60 workers on his boats. Most of them have borrowed money from him so they work for lower wages. Anthony had amassed a lot of money.



Figure 2.24: Trawler

Mechanised Fishing Boats (Trawlers)

Forty years ago, the government announced that it would give loans and subsidies to anyone who

wanted to buy mechanised fishing boats or trawlers. In those days, the cost of a trawler and new nets was Rs2 lakhs. Antony invested Rs1 lakh and took a loan of Rs1 lakh to acquire a trawler. Only two other people in the village could arrange the finance to buy trawlers. Anthony profited a lot from his trawler. To begin with, he needed fewer workers. Earlier, he employed 50-60 workers. Now he needs just 6-7 workers. Most of the workers are his relatives, with his nephew being the captain. Trawlers can fish in the deep the sea so they net a bigger catch. They can venture out even in strong winds and heavy swells. When the catch is lean near the shore, they can venture far out to sea in search of a better catch.

Why do labourers work for lower wages for big fisherman like Anthony? Are there any labourers in your village or town who are compelled to work under similar conditions? What can be done to ensure they get fair wages?

Who were the people who could buy trawlers?

What are the advantages of fishing with a trawler?



Figure 2.25: Fishermen carrying a large net

Prawns are found 3-4km from the shore. The demand for prawns in foreign markets has risen sharply over the past 20-25 years – so has the price. Big businessmen buy prawns from the fishermen for their fish processing plants. The prawns are cleaned and boiled in water with salt. They are then chilled in freezing rooms and exported to fetch a good price.

Anthony's trawler used to fish 10-12km out at sea. But when the demand for prawns began rising, he, too, wanted to cash in on the profits. Prawns are found 3-4km from the shore so he ordered his trawler to begin fishing in this zone. But this is where small fishermen like Rajan cast their nets. Many other traders and industrialists bought trawlers to fish for prawns. The number of trawlers fishing in this zone rose as a result. The small fishermen found their catch was falling. Many would return empty-handed from their fishing trips. The situation began to worry them and their workers. They found that they had to borrow money every other day to manage their household expenses. They found themselves getting trapped in debt in the hands of the traders and moneylenders.

Why did the trawler owners want to fish for prawns?

Why did the small fishermen need to borrow more money because of the trawlers?

“Have you ever heard of a shortage of fish in the sea? These big boats trawl all the fish. There is nothing left for us.”

How can small fishermen curb the activities of big fishermen like Anthony? Discuss in class.

When machines were first used for fishing, many people thought the fishing industry would grow and the condition of the fishing community would improve. But what happened in reality?

- 1. Did fish production rise?**
- 2. Who were the people who suffered?**
- 3. Who were the people who profited?**
- 4. How can this situation be rectified?**

Why did the catch fall in the seas?

There are some other important reasons why the stock of fish in the seas is declining.

1. Pollution

Many large factories have been set up along India's coasts. These factories use many types of harmful

chemicals. The waste water containing these chemicals is discharged in the sea. The fish die because of these harmful chemicals that mix with the sea water.

2. Shortage of fresh water

Sea water is saline. The water of rivers reaching the sea is fresh. The river waters also carry rotting vegetation to the sea. Many different types of plants called plankton grow in this nutrient-rich water. Fish survive on plankton. Many dams have been constructed on the rivers flowing through the Deccan plateau over the past 40 years. Hence, the flow of river water with its decaying vegetation has diminished. Think about how this must be affecting the marine fish.

The Islands

India has several island groups located in the Bay of Bengal and the Arabian Sea. The two large island groups are: 1) Andaman and Nicobar Islands and 2) Lakshadweep Islands.

1. Andaman and Nicobar group of islands

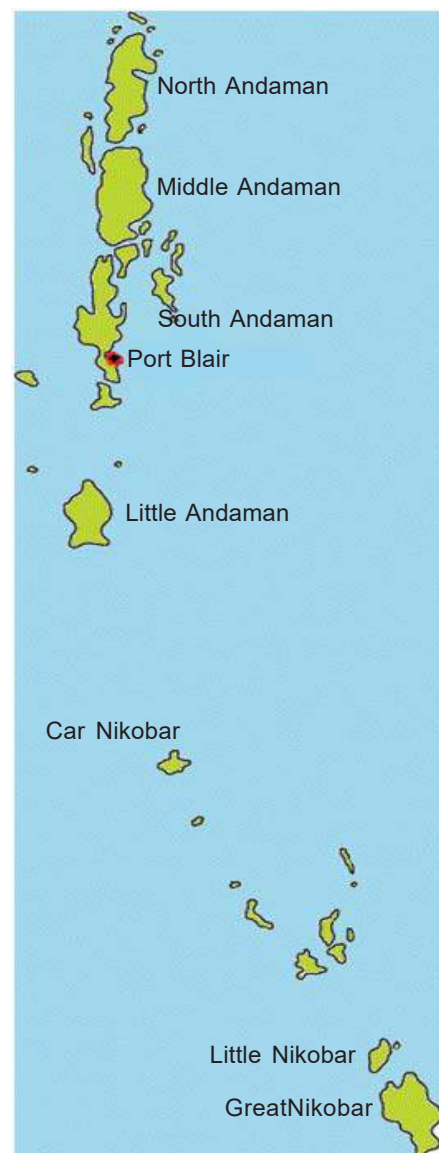
The Andaman and Nicobar Islands spread along the length of the Bay of Bengal from north to south. The islands in the group include North Andaman, Middle Andaman, South Andaman and Little Andaman. The northern part of the Nicobar group is called Car Nicobar and the southern part is Great Nicobar. There are many smaller islands in addition to these.

Check the location of the Andaman and Nicobar Islands in Reference map 1.

The Andaman and Nicobar Islands are the peaks of mountains submerged in the sea. That's why the coast of these islands is rugged and the terrain is rough. Some parts have small plains while there are hills and plateaus in other areas. Some islands have an abundance of coral along their coastline. In some locations, there are underground caves. Havelock Island is famous for its coral while Baratang Island is famous for its underground caves. Geological formations such as stalactites, stalagmites and columns can be seen in these caves.

One has to travel by ship to reach the islands. Port Blair is the capital of the Andaman and Nicobar Islands group. It has a lovely beach that is a tourist attraction. The famous 'Cellular Jail' is located here. During British rule, Indian freedom fighters were punished with banishment from India and imprisoned in this jail. Today this jail is a national monument.

Port Blair and the areas around it are densely populated. The rest of the Andaman and Nicobar islands is sparsely populated. One gets to see both prehistoric and modern civilization on the islands. The *adivasis* still live in the midst of thick jungles. The Jarawas, Onges, Great Andamanese, Nicobaris and Shompens



Map 2.16: The Andaman and Nicobar Islands group

are the prominent tribes. They live in remarkable consonance with their environment. The government is trying to protect these tribal communities and their culture.

The islands face an acute potable water problem. Although it rains heavily, most of the rain flows into the sea. The *adivasis* use natural methods to store fresh water. One method is to split bamboos to store rainwater.

The abundance of wood in the forests has seen the development of the local timber industry, with a large saw mill located in Chatham Island of the Andaman Island group. India's only active volcano is located in Barren Island. There is also a mud volcano, located 4-5km from Andaman's Rangat town, which oozes a continuous slurry of fine mud.

2. Lakshadweep Islands Group

Check the location of the Lakshadweep group in the map. It lies in the southern Arabian Sea, to the west of Kerala's Malabar Coast. The islands cover an area of 32sq km. Prior to 1973, the group was called the Laccadive, Minicoy, and Aminidivi Islands. Today, it is known as the Lakshadweep group. It consists of around 36 islands, with Lakshadweep being the biggest. The islands, part of a mountain chain, were formed by the deposition of coral fossils over lakhs of years. Sand, gravel, boulders, algae, etc were also deposited during this time. Scientists believe the island group is actually a remnant of the Aravalli range. Its capital is Kavaratti.

Both the island groups have a moist tropical climate. So one finds dense, evergreen tropical forests here. The important tree species include mahogany, ebony, rosewood, palm,

bamboo, etc. Tidal vegetation is found along the shoreline. Coconut trees are also plentiful. Bananas, vegetables, some cereals and spices are cultivated here. Boats, steamers and other vessels ferry people from one island to the next. The islands are sparsely populated, with some being uninhabited. Only 10 islands in the Lakshadweep group are inhabited.

Apart from these two island groups, there are several smaller islands along the Indian coast. The major ones in the Bay of Bengal include Gangasagar Island, New Moore Island, Sriharikota and Rameswaram. In the Arabian Sea, they include Elephanta Island, and Salsette Island, on which the Mumbai metropolis spreads.



Map 2.17: The Lakshadweep

EXERCISES

1. Why do you think the traders from other countries established their trading posts on the coastal plains?
2. Compare the eastern and western coastal plains.
3. The coastal plains are important for economic and cultural reasons. Explain.
4. Why are the coastal plains so densely populated?
5. What did the fishermen living in the coastal plains require for fishing in the seas? How did they acquire these things?
6. Describe the daily routine of small fishermen in your own words.
7. What dangers do the fishermen face while fishing at sea?
8. In which months are the fish catch large? Explain with reasons.
9. What are the advantages and disadvantages of using trawlers for fishing?
10. Describe the forests of the Lakshadweep Islands in your own words.

2.1.5 The Indian Desert

We read the chapter ‘The Thar Desert of India’ in class VIII. Suppose you are sent for a year to a village in Jaisalmer. Based on what you learnt, discuss in class the differences you would see compared to your own locality. Also, discuss the reasons for these differences.

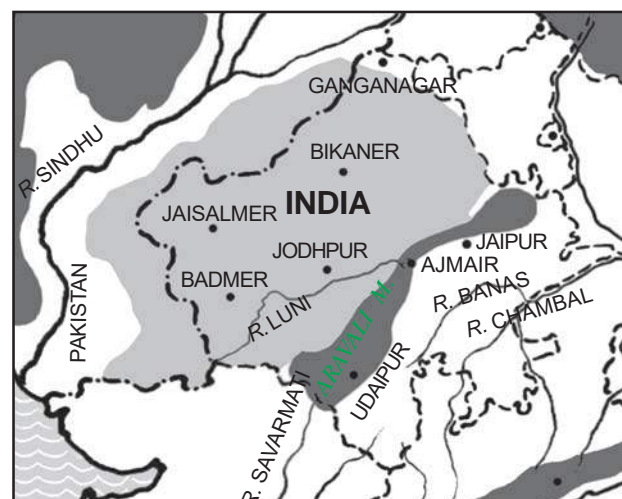
Answer the following with the help of Map 2.18:

1. The Thar Desert spreads across which Asian countries?
2. Which two rivers is the Thar Desert situated between? In which direction do these rivers flow?
3. Where is the source of the Luni River?

Resources and Economy

We know that living in the Thar Desert is difficult. You will be surprised to know that this vast desert is the most densely populated among all the world’s deserts, despite its adverse environment and shortage of resources. The traditional handicrafts of the region such as tie-and-dye designs on fabric (*bandhej*), lac bangles, stitching and dyeing of clothes, enamelled jewellery, stone engraving, etc, are widely known. The handicraft industry is presently going through a challenging phase.

The people of Marwar and Gujarat’s Kutch and Kathiawar regions have been known for centuries for their business acumen. Most people earn their livelihood from farming and animal husbandry. Thar is India’s largest wool-producing region. The wool is considered to be of the best quality for the carpet industry. Bikaner is Asia’s largest wool market.



Map 2.18: The Thar Desert

Thar is an arid region that has no forests. The government and the people have undertaken several initiatives to stop the desertification of the region. This has given a new impetus to agro-forestry over the past several years.

Khejri is an important local tree that is useful for both humans and animals. Its leaves provide nutritious green fodder for livestock. Its wood is used to construct buildings and make camel carts, ploughs etc. Its roots fix nitrogen in the soil. Another valuable tree is *rohida*, which provides fodder and also binds the soil with its roots. It is used in agro-forestry to stop the expansion of the desert. Its wood is used to make furniture, while its bark has medicinal properties.



Figure 2.26: The khejri tree

The Rajasthan canal

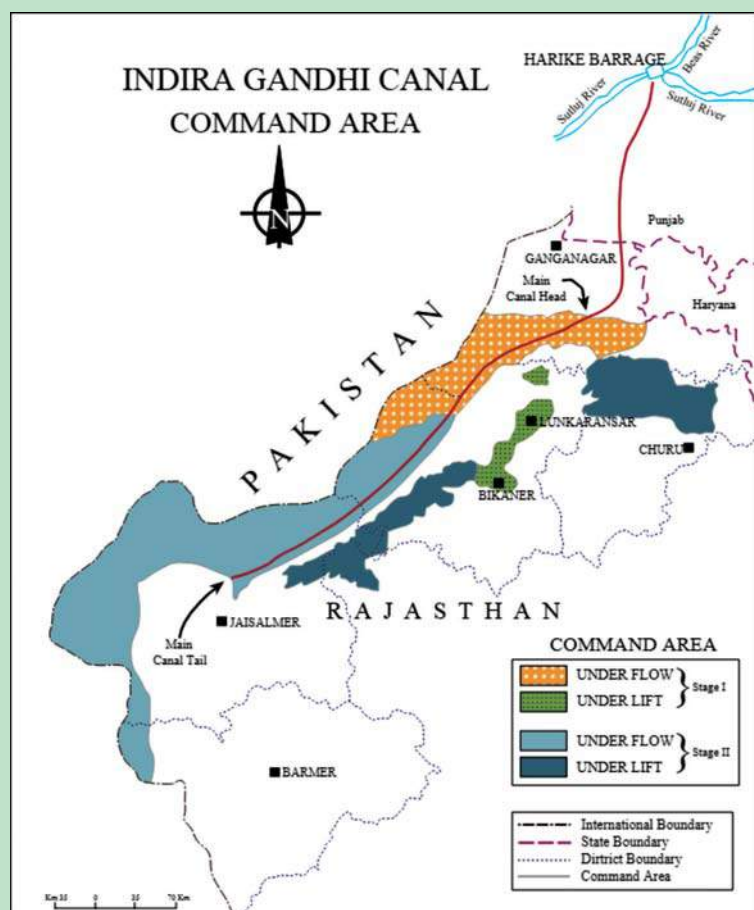
The Rajasthan canal is known as the Indira Gandhi canal. It is one of India's mega projects. It starts from the Harike barrage in Sultanpur. Sri Ganganagar district saw tremendous growth in agriculture after the canal was constructed.

The history of canal construction

The region experienced a terrible drought in 1899-1900. The Maharajah of Bikaner, Ganga Singh, prepared a plan to bring water from the Sutlej River to irrigate this drought-affected land. He also established the district of Ganganagar.

Work on digging the canal began after India gained independence. It was named the Indira Gandhi canal in 1985. It carries water to the sandy regions of Rajasthan, including

Barmer, Bikaner, Churu, Hanumangarh, Jaisalmer, Jodhpur and Ganganagar. Punjab and Haryana also get water from the canal. Farming has made this once-arid region prosperous.



Map 2.19: The Indira Gandhi canal

Many other changes have also occurred with the development of irrigated agriculture.

The construction of the canal has thus brought many beneficial changes to the region. But it has also raised numerous problems and challenges. One big challenge is cleaning the sand from the desert that is constantly blown into the canal, blocking the flow of water. Sand from the fields of the farmers also blankets the areas around, spreading desertification. Another serious problem is that the canal water seeps into the groundwater, making it more saline and creating problems for farming. These problems in farming are causing farmers to migrate to cities for employment. Cattle herds and shepherds also face a problem – farmers do not permit them to graze their flocks on their irrigated land. A scientific solution needs to be found for these problems that could benefit all the people of the region.

Different types of minerals are found in the Thar region. They include ilmenite in Bikaner and Barmer, limestone in Jaisalmer and Jodhpur, gypsum in Bikaner, granite in Barmer, and oil and natural gas in Jaisalmer and Bikaner. Do you know that the white marble quarried at Makrana in Nagaur district was used to construct the Taj Mahal? Jodhpur is famous for its sandstone and Jalore for its granite.

The oil struck in Jaisalmer and Barmer is the biggest oilfield discovered in India in the last 25 years. The unprecedented opportunity to produce electricity from oil and gas, windmills and solar energy is opening up new vistas of economic development in Rajasthan. The state, and especially Thar, is a popular international tourism destination. This has spurred the growth of the hotel and transportation sectors as well.



Map 2.20: Map of Rajasthan

A Village in the Thar Desert

Jaisalmer is located to the far west of Rajasthan. Raju's village Luna is 90km from here, close to the international border between India and Pakistan. There is no other village after it, save for a small hamlet called 'Ratan Singh ki dhani'. All you can see are a few small houses and nothing else but sand all around. The climate is extremely dry and there are occasional sand storms. Thar is a hot desert. The temperature soars high during the day but one begins to shiver when night falls. Why do you think this happens? There are no permanent water sources here and the rainfall is too low for forests to grow. The sandy landscape is dotted with just one or two *khejri* trees here and there.

Locate Luna village in Map 2.20. Ensnared in Thar, this village of 200 houses is like a poem written in the desert sands. It is the largest village in the area and just a little distance from the border. Meghwal, Sodha Rajput and Muslim families live here. Almost all the homes are round earthen huts (see Figure 2.27). Some modern houses made of stone have come up in the last few years. All three communities have their own settlements that are called *vaas*. They are situated far from each other and are known by the names of their

community elders. Each *mohalla* (neighbourhood) has its own common meeting place or *baithak*. There are 15 *mohallas* in the village so there are 15 *baithaks* as well.

There are not many sources of livelihood for the villagers. Ground water is available at a depth of 350-425m but the water is saline. People depend on the government tube-wells for potable water. The houses built these days have rainwater harvesting systems. Water is the most precious resource in the desert. People are more careful protecting water than even their lives.



Figure 2.27: A village in the Thar Desert

The clouds arrive in July, August and September but float away without bringing rain. Sometimes it rains, but the raindrops evaporate before they touch the earth. Also, it doesn't usually rain over the whole region. There could be showers in one village, while the neighbouring village is completely dry. It rains for only 10-15 days in a year, and the average annual precipitation never exceeds 25cm.

A few years back, water was piped 45km from Keriya village to Dhabri village for distribution. Some people conserve water in small wells even today. You can see in Figure 2.28 how people keep their wells locked. It shows how precious water is in the desert.

Most people earn their livelihood by manual labour or animal husbandry. It isn't possible to do much farming. Just a handful of families engage in rain-fed farming for 5-6 months in the year. The main crops are *jowar* and *bajra*, which require little water for growth. People also sell *matire* seeds (a fruit similar to melon) from which oil is extracted.

Sheep, goat, cattle and camel are the livestock. The animals are usually bred for sale. Milk and ghee are used only for household purposes. People have now started selling milk. The dairy van comes daily to the village to collect milk. Until a few years ago, people used to take their livestock to the annual cattle fair held at Balotra in Barmer district.

The herders take their livestock up to 10-15km from the village to graze. Cows and camels graze on their own, but sheep and goat have to be tended. Apart from their houses in the village, people have their own *dhanis* where they go with their livestock. If you roam the desert, you will see these *dhanis* spread out far apart across the desert.

Water conservation and management

Water is a natural resource that is necessary not just for humans but for plants and animals. In today's industrial and economic environment, with its consumerist culture, population explosion, and irrigated agriculture, we are seeing water being exploited at a rapid rate. It is now becoming crucial to conserve water on a local and global scale.

Methods of water conservation

Every citizen, society and government needs to come together to take steps to conserve water. We need to protect our water sources from being despoiled by domestic and industrial waste. People should not bathe or wash clothes near drinking water sources, idols containing poisonous chemicals should not be immersed in water bodies, and weeds growing in water should be removed.



Figure 2.28: Wells for storing water in the Thar Desert

Water can be redistributed from high rainfall areas to low rainfall

areas via canals to reduce water disparity between regions. At the same time, measures like water storage, population control, improved irrigation techniques, expansion of forest cover, judicious use of ground water and water recycling can help augment our water reserves.

Traditional water conservation methods

Since ancient times, lakes, ponds, tanks, wells, etc have been built by the combined efforts of the state and the public to alleviate the problem of water scarcity. Examples include constructing lakes periodically, repairing existing ones, diverting the course of rivers and linking lakes to conserve water.



Figure 2.29: Rajasthan's famous cultural and architectural world heritage site Chand Baori (step-well) is an exceptional example of water storage

population and dwindling water resources. These water sources are being ignored at present. Many old water tanks and stepped wells (*bawadias*) and lakes have been encroached or filled over. These could have served to solve our present water crisis.

Have any lakes been constructed in your village? If yes, then collect information about them.

Make a list of water sources in villages/cities and in your neighbourhood that were used in the past and are still being used.

Today, traditional water conservation methods can help us face the challenges of growing



Figure 2.30: Small cylindrical underground well (tanka)

Tanka is a traditional water storage method of the Thar region. *Tankas* are small underground wells into which rainwater from the rooftops of buildings and other locations constructed to collect water is directed. They are usually 6m deep and 2-3m wide. The outer walls of the *tanka* have filters to clean the inflowing rainwater. Many houses in desert cities like Barmer, Jaisalmer and Bikaner have *tankas*.

March 22 is celebrated every year as Water Conservation Day. Many techniques to conserve water are

being adopted in view of the growing water crisis in modern societies. These include constructing dams and canals, implementing drip and sprinkler irrigation, treating polluted water and recycling waste water, spreading public awareness about water conservation, etc.

Roof-top rainwater harvesting is a recently developed method that is especially useful in low rainfall regions. In this method, a hose pipe carries the rainwater that collects on the roof of a building to an underground tank. This water is later used for household needs.

There is a local folk song:

ek ek [; k (e/k) fD [k; k) QnykaL; wjl l s, d&, d d.k p q j 'kgn jks <j yxk l ds g\$ rks ds Egs
ek.kl cknk j\$ cjl r\$jl u\$ uha l gst l dk?

(Bees suck every drop of nectar from the flowers to build a hive, so can we humans not secure the nectar raining down from the clouds?)

EXERCISES

- Water Conservation Day is celebrated on:
 - March 22
 - June 15
 - January 26
 - The day it rains
- By growing which tree do Thar farmers stand to gain the most economically?
 - Khejri*
 - Babul*
 - Plum
 - Teak
- Where did the marble to build the Taj Mahal come from?
 - Tajpur
 - Makrana
 - Mughal Gardens
 - Agra
- Why is livestock taken 10-15km into the desert to graze?

5. Which trees are found in Thar?
6. Which traditional industry is the Thar Desert famous for?
7. Explain what is meant by water crisis. What methods can help to resolve it?
8. What is the roof-top rainwater harvesting method?

Answer the following questions based on the information contained in the table:

Deserts of the world

Hot deserts			Cold deserts		
Name	Location	Area in km ²	Name	Location	Area in km ²
Sahara	North Africa	90,00,000	Antarctica	Antarctica	1,40,00,000
Arab	West Asia	23,30,000	Gobi	East Asia	10,00,000
Kalahari	South Africa	9,00,000	Patagonia	South America	6,20,000
Great Victoria	South Africa	6,47,000	Great Basin	North America	4,92,000
Syria	West Asia	5,20,000	Karakoram	Asia	3,50,000
Chihuahua	North America	4,50,000	Colorado	North America	3,37,000
Great Sandy	Australia	4,00,000	Kyzylkum	Central Asia	3,00,000
Sonoran	North America	3,10,000	Takla Makan	East Asia	2,70,000
Thar	South Asia	2,00,000	Atacama	South America	1,40,000
Gibson	Australia	1,56,000	Namib	South Africa	81,000

Source: : http://en.wikipedia.org/wiki/List_of_deserts_by_area

9. Which is the world's largest hot desert?
10. Where does the Thar Desert stand among the world's deserts?
11. Which continent has no hot deserts?
12. Which continent has the most number of hot deserts?
13. Add the areas given in the table to find out which cover a greater area - cold deserts or hot deserts.
14. Formulate two additional questions based on the information contained in the table that are not covered in the questionnaire.
15. Locate the deserts listed in the table in the world map.

**

3

India's Climate

You learnt how to find the average daily and monthly temperature and rainfall in class VIII. Based on what you learnt, fill in the information about the weather in your area for the entire year in the following table. If needed, you can ask your teacher to help you.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Temperature (in °C)												
Rainfall (in mm)												

In which months do we receive the highest rainfall and why?

What changes do we see in our surroundings when it rains?

The diversity of the weather makes our country distinctive. The main seasons in India are winter, summer and monsoon. Of these, the monsoon season is very important for us because our economy is agriculture-based and agriculture depends on the rains.

Many people die every year in the Gangetic plains because of the extreme heat and 'loo' (hot, dry wind) during summer and the cold wave during winter. Do such deaths occur in other parts of India (south, north-east and western regions)? The rainfall in a day in the north-eastern state of Meghalaya is equal to the rainfall in 10 years in Jaisalmer district of Rajasthan. The temperature drops to -45°C (45 degrees below 0) at night in December in the town of Dras in Jammu and Kashmir. During this month in Chennai in Tamil Nadu, the night temperature is $22-25^{\circ}\text{C}$.

Have you noticed that the direction of the wind in the area where you live changes in different months of the year? Sometimes, the wind blows from the north or north-east and sometimes from the south or south-west. When there are floods in one part of India, there is drought in another part. Why does this happen? To understand why this happens, we need to first understand the processes that happen in our atmosphere.

Weather and Climate

The changes that occur in atmospheric conditions (temperature, atmospheric pressure, wind, humidity, clouds, and rainfall) in any place in a short span of a few minutes, days or month is known as the weather. The weather changes constantly. It can change many times in a day, so the morning can be very different from the afternoon.

Climate is the weather conditions over a long duration of time. Long duration means the average weather conditions over 'more than 30 years'. We can understand the climate of a place by looking at the weather statistics of that place. For example, if we add the maximum and minimum temperature during a day in that place and divide it by two, we get the average day temperature of that place. In the same way, we can calculate the average monthly temperature by adding the daily average temperature during the month and dividing the total by 30 or 31 (the number of days in that month). If we now add the average temperature of each month of the year and divide the total by 12, we get the average annual temperature. If we then add the average annual temperature of 31 years and divide the total by 31, we get the average temperature for 31 years.

Temperature is one component of climate. Other components include air pressure, wind, humidity, cloud cover, and rainfall. We can find out the climate of a place by studying all these components together. Temperature and rainfall directly impact agriculture, industry, transportation, construction, etc.

Write the formula to find the average daily, monthly and annual temperature.

Factors that Control the Climate

The earth's surface is very vast and varied. There are continents and oceans. The surface of the continents is not the same everywhere. Some places have high mountains, some have plains. Some places have dense forests, some have vast deserts. The oceans are also not evenly spread across the earth's surface. Water covers 39% of the northern hemisphere and 81% of the southern hemisphere. These surface differences influence the process of heating and cooling of the atmosphere. This uneven heating and cooling of the atmosphere is what controls the climate. The main causes of climatic variation in the Indian subcontinent are the following:

- | | | |
|-------------------------|------------------------|--------------------------|
| 1. Latitudinal position | 2. Altitude | 3. Distance from the sea |
| 4. Air pressure | 5. The Himalayan range | 6. Human factors |

1. Latitudinal Position

The sun's rays fall vertically on the Equator throughout the year. As we move from the Equator to the Poles, the sun's rays spread over a larger area of the earth's surface because the earth is spherical (see Figure 3.1). So the heat energy received per unit area becomes lesser as we move away from the Equator. As a result, the temperature is lower. Thus, the distribution of the sun's heat depends on the latitude. The temperature is highest near the Equator and lowest near the Poles.

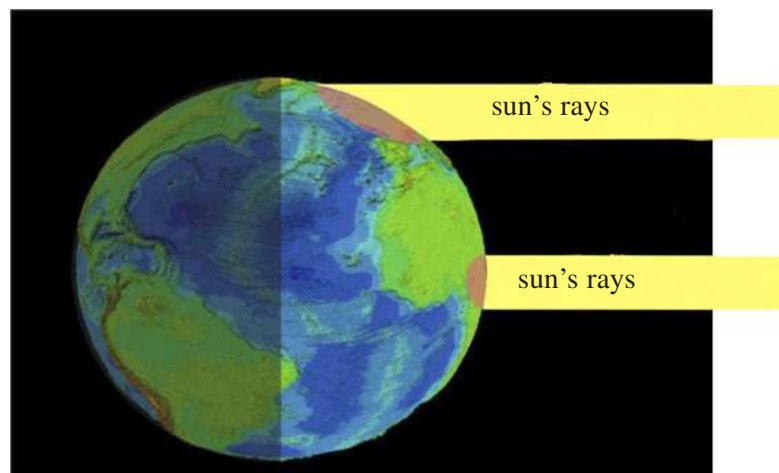


Figure 3.1: The spread of the sun's rays on the earth's surface according to the latitude

The Tropic of Cancer passes through the middle of India and divides the country into two parts. The southern part (South India) is closest to the Equator while the northern part (North India) is further

away from the Equator. This is why South India experiences tropical heat throughout the year while North India is very hot during summer and very cold during winter.

2. Altitude

As we move higher from the earth's surface, the temperature falls. The atmosphere is heated by the earth's radiation (the heat of the sun's rays reflected from the earth's surface). The lower part of the atmosphere closer to the earth's surface is heated more by this radiation than the upper part. The water vapour, dust particles, and gases present in the lower layer of the atmosphere absorb the earth's radiated heat. So the temperature near the surface of the earth is higher. Because the upper layer does not have these particles, its temperature is much lower. The temperature falls by one degree centigrade on average for every 165 metres of height.

As we climb to higher altitudes, the air becomes more rarefied (less dense). The air near the earth's surface is heated more by the earth's radiation than by the direct rays of the sun. That is why people visit places like Leh, Shimla, Mussoorie and Mainpat in summer because the temperature is lower in the hills.

Radiation is the heat waves that are emitted by a hot object. The earth gets the most heat from the sun at 12 noon but we feel the maximum heat at around 2pm because the heat waves radiate from the surface of the earth at that time.

3. Distance from the Sea

The temperature does not change much in coastal areas throughout the year, so the climate is even, or less variable. But in areas that are far from the sea the climate is more variable. We learnt in class VIII that an even (less variable) climate means there is very little difference between the average temperature in summer and winter. In a variable climate, however, there is a significant difference between the average temperature in summer and winter. Why does this happen? Water takes a long time to heat and also cools down very slowly. But land heats up quickly and also cools quickly. So in coastal regions, the sea breeze keeps the temperature constant both in winter and summer. But the sea breeze has no effect on land far from the coast. So the temperature difference between summer and winter is higher in these places.

4. The Himalayan Mountain Range

The Himalayas and other mountain ranges spread across the northern, north-western and north-eastern parts of India. These high mountain ranges form a barrier that blocks the cool winds blowing towards India from across Central Asia. They also prevent the monsoon winds from the south-west from blowing out of India. In this way, the location of the Himalayan mountain range in the Indian subcontinent gives India a special kind of climate which is known as the 'tropical monsoon climate'.

5. Air Pressure

Air pressure is related to temperature. When the temperature is high the air pressure is low and when the temperature is low, the air pressure is high. Winds always blow from high pressure to low pressure areas. Why does this happen? Low air pressure means the air is less dense (rarefied). The air over any land area rises when it is heated. So the area has less air; it is less dense. Suppose a cubic meter of air in one area contains 1,00,000 molecules and a cubic meter of air in another place contains

1,10,000 molecules. We will then say the air pressure in the first area is lower than the air pressure in the second area.

Human Factors

Human economic activities, industrialization, urbanization, changes in land use, deforestation, etc cause the atmospheric temperature to rise. This impacts the climate and leads to climate change.

The average temperature of different places ($^{\circ}\text{C}$)

Place	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Mumbai	25	24	26	28	30	29	27	27	27	28	27	25
Jagdalpur	20	23	27	29	31	29	25	25	26	25	21	19
Shimla	5	5	10	15	18	20	18	18	16	10	10	11
Delhi	14	17	23	29	34	34	31	30	29	26	20	16

Answer the following questions on the basis of the data contained in the table:

1. Which are the coldest and hottest months in Delhi?
2. Which of the above mentioned places have even or less variable climate?
3. Calculate the average annual temperature of Jagdalpur.
4. Which of these cities has the lowest average temperature?
5. Compare the temperature of Mumbai and Jagdalpur.

Seasons

The weather department of India has divided the year into four seasons:

1. Summer
2. Rains (Monsoon)
3. Autumn
4. Winter

1. Summer

The summer falls between March and May in India. The sun shines directly on the Equator on March 21st. The temperature keeps rising in the northern hemisphere from March until May. On June 21st, the sun is directly over the Tropic of Cancer. The temperature is at its peak in North India at this time. Because of the high temperature, a low pressure belt is created from the Thar Desert in the west to the Gangetic plains in the east. From March to May, the hot and dry westerly winds blow across North India during the day. They slow down at night and blow in different directions. These winds are called 'loo'. These winds blow across Punjab, Haryana, Uttar Pradesh, Bihar and other parts of the northern plains. During these months, these areas experience fierce dust storms accompanied by showers that help to lower the temperature. These dust storms have different names in different places. They are called 'kalboishakhi' in West Bengal and they are called 'amravrishti' in South India. Sometimes, the hot winds encounter the cool breeze from the sea to cause cyclones accompanied by strong winds and rain (see Reference map 4).

2. Rains (Monsoon)

The rainy season falls between June and September in India. About 85-90% of the rainfall across India is experienced during these months. Along with India, Sri Lanka, Bangladesh, Myanmar, Nepal and Pakistan also get rainfall during these months. At this time, the temperature, air pressure, wind direction and the rainfall pattern is different from the other seasons. The temperature falls because of the moisture in the air. Agricultural work begins at this time (see Reference map 5).

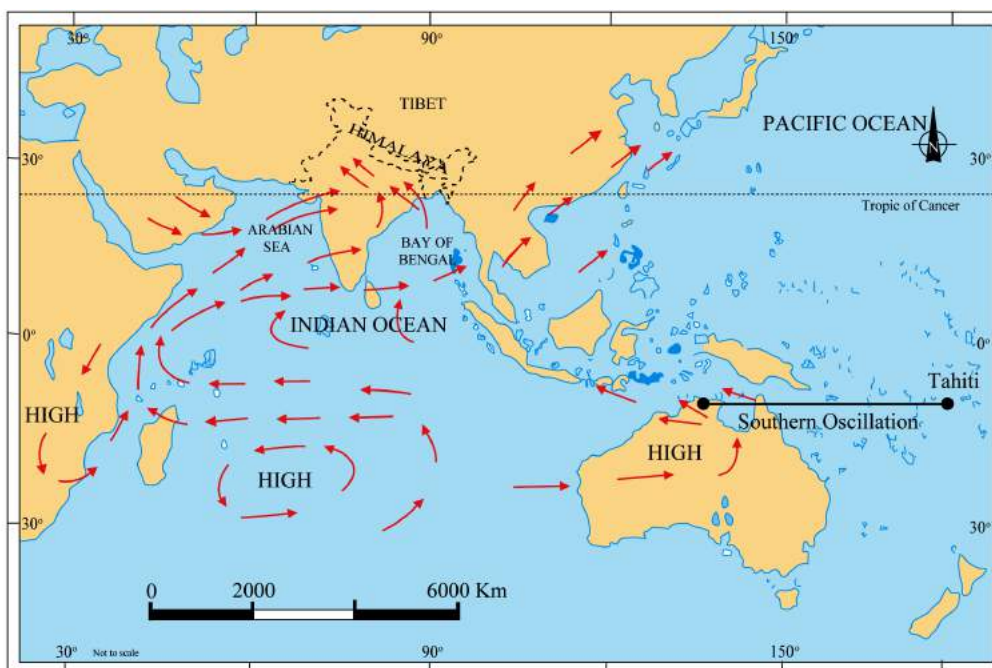
South-west Monsoon: The rainfall between June and September in India is known as the monsoon. The word monsoon was first used in India. In earlier centuries, Arab traders sailed by ship with the help of the winds that blew across the Arabian Sea. They called these winds 'mausim', after the Arabic word for season. So the winds that brought rain to India every year came to be known as the monsoon. These winds blow from the south-west direction so the monsoon is called the 'south-west monsoon'. The monsoon spreads across India from the south-west direction. When the monsoon winds reach the north-east, they turn and blow in a north-westerly direction.

The question to be answered is: what causes the south-west monsoon? There are several causative factors which we shall now discuss:

1. Due to the excessive summer heat in May-June, a low pressure area is created in the atmosphere stretching across Peshawar (Pakistan), Afghanistan and Rajasthan. At this same time, a high pressure

Ferrel's Law

According to Ferrel's Law, if we face the direction in which the wind blows (or with our back in the direction from which the wind blows), then the wind will turn towards the right in northern hemisphere and towards the left in the southern hemisphere. This rule applies to all objects in motion.



Map 3.1: Monsoon winds



Map 3.2: ITCZ

area forms in the southern hemisphere, stretching from the island of Madagascar up to the coast of Western Australia. The Arabian Sea is also a comparatively high pressure area at this time. As a result, the south-east trade winds cannot blow northwards. After May, air pressure declines over the Arabian Sea. Once this happens, the south-east trade winds blow rapidly towards the low pressure area in the north-west. They blow across the ocean at 30 km per hour. So they are moisture-laden. As they cross the Equator from the southern hemisphere, they change direction according to Ferrel's law (see box), turning right and blowing in a south-westerly direction. These winds are now called the south-west monsoon winds. The moisture-laden winds bring heavy rainfall to India.

2. When the earth's surface heats up, the air around the Equator heats up. Due to this, a low pressure zone is created in the atmosphere near the Equator. The winds blowing from the northern and southern hemispheres converge at this low pressure tropical zone. Hence, this zone is known as Inter-Tropical Convergence Zone (ITCZ).

The sun's rays fall directly on different places between the Tropic of Cancer and Tropic of Capricorn throughout the year. The low pressure zone around the Equator also keeps changing its position. In June, the sun's rays fall directly on the Tropic of Cancer, so the low pressure zone shifts to the north from the Equator. In December, the sun's rays fall directly on the Tropic of Capricorn, so the low pressure zone shifts to the southern hemisphere. This shift attracts the trade winds from the southern hemisphere.

3. At this same time, in a higher layer of the atmosphere – at a height of 10-16km above sea level – winds begin to blow at a very high speed in a direction from east to west. These high-speed, high-altitude winds help the flow of the surface monsoon winds in the opposite direction from west to east. The monsoon does not arrive all over India at the same time. Its onset is different in different places. It first arrives in Kerala on June 1st, then Mumbai on June 7th, and reaches Chhattisgarh around June 15th. When it reaches the southern peninsula of India, the south west monsoon divides into two branches. One branch moves towards the Arabian Sea and the other branch moves towards the Bay of Bengal.

Arabian Sea Monsoon: In the branch that moves towards the Arabian Sea, the monsoon winds blow from south-west to the north-east. Kerala, Karnataka, Maharashtra, Tamil Nadu and Chhattisgarh get rainfall from this branch. The monsoon winds first hit the Western Ghats, causing heavy rain along the western coastal plain. By the time they cross the Western Ghats, they lose their moisture, becoming dry and hot as they move towards the east. This region, called a rain shadow region, receives scanty rainfall. Mumbai gets around 200cm of rainfall between June and September while Pune gets only 50cm.

The Arabian Sea monsoon now divides into two branches, one branch moving eastwards along the Narmada Valley to the Chota Nagpur Plateau, where it meets the Bay of Bengal monsoon branch, causing heavy rainfall in the region. The other northern branch goes through Kathiawar in Kutch to the deserts of Rajasthan. The Aravalli Hills run parallel to the monsoon winds so they cannot stop them, the average rainfall in this area being only 20cm. The winds thus blow unhindered through Gujarat and Rajasthan to the Himalayas. The air at this high altitude is hot and dry, so the monsoon loses its moisture. Hence, rainfall in the Himalayan region is low from this northern branch.

Bay of Bengal: This branch of monsoon also divides further into two branches. The first branch of monsoon winds blow to the Myanmar coast where they encounter the Arakan Yoma Mountains. The rainfall is heavy in the western range of the mountains. The other branch moves towards Bengal and Assam, with heavy rainfall in the Khasi and Garo hills. Mawsynram in Meghalaya receives the highest rainfall in the world. The winds of both branches then blow towards the west after encountering the Himalayas and the Arakan Yoma Mountains, but the rainfall is scant. Thus, Guwahati, Patna, Allahabad, Bharatpur and Jaisalmer receive scanty rainfall from the Bay of Bengal monsoon.

3. Autumn or Retreating Monsoon

In the second half of October, the temperature starts falling rapidly in north India. By the beginning of November, the low pressure zone over north-west India shifts to the Bay of Bengal. This shift gives rise to low pressure cyclonic conditions that develop into cyclones in the Andaman Sea. These cyclones generally cross the eastern coast of India. They are sometimes very destructive and cause heavy rainfall. The densely populated delta areas of Krishna, Kaveri and Godavari rivers are often hit by cyclones. They sometimes also reach the coastal areas of Odisha, West Bengal and Bangladesh. Most of the rainfall on the Coromandel Coast is caused by these cyclones. In October, the average temperature in most parts of India is 25-26°C. The average temperature in Rajasthan, Gujarat and Eastern coastal plains is over 27°C and in Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Madhya Pradesh, and Karnataka is below 25°C (see Reference map 6).

4. Winter

The winter season extends from December to February. It is marked by a steep fall in temperature in North India. In January and February, the temperature falls below freezing point in Punjab and Kashmir. But in South India, the average temperature is 14-15°C. Thus, wheat is grown in Punjab, Haryana and Uttar Pradesh during this season while rice is cultivated in Kerala and Tamil Nadu. Cyclonic storms bring heavy rainfall to Tamil Nadu and the Andaman and Nicobar Islands during this period. In winter, Kashmir and the north-western parts of India experience winter rainfall and snowfall caused by the Mediterranean Sea cyclones. North India is covered in dense fog during these months (see Reference map 3 for winter temperatures).

occur very slowly but they can lead to many problems. These problems include unpredictability of rainfall, shrinking of glaciers and rising sea levels. We need to seriously think about how a change in the date of arrival of the rainy season could affect crop cycles and land use in agriculture.

Collect news related to the weather from newspapers.

EXERCISES

1. Choose the correct option:

- i. Which of the following does not impact the climate?
 - a. Latitude
 - b. Climatologist
 - c. Distance from the sea
 - d. Air pressure
 - ii. In which month does Chhattisgarh experience the highest temperature?
 - a. January
 - b. March
 - c. May
 - d. November
 - iii. When does the monsoon arrive in India?
 - a. June
 - b. August
 - c. December
 - d. None of the above
 - iv. Usually, temperature with height.
 - a. Increases
 - b. Decreases
 - c. Doesn't change
 - d. None of the above
 - v. Which country has the place which receives the highest rainfall in the world?
 - a. Brazil
 - b. Indonesia
 - c. Kenya
 - d. India
2. Explain what is climate. How is climate different from weather?
 3. Name the elements associated with weather and climate.
 4. What are the reasons for the changes we see in the weather where we live? Write about the changes you have experienced.
 5. Which countries get rainfall during the south-west monsoon? Find out from the map and from your teacher.
 6. Temperature and rainfall are the important elements of climate. How do they affect us?
 7. How many main seasons do you think there are? Describe the natural and human activities that take place during these seasons.
 8. Explain the arrival and departure of the monsoon.
 9. Suppose the earth was flat and there were no mountains, what would happen?
 10. What would happen if:
 - a. It is summer all year round.
 - b. It rains all year round.
 - c. It is autumn all year round.
 - d. It is winter all year round.

11. The average monthly temperature (in °C) and rainfall (in mm) of Bilaspur is given below. Draw a graph of these figures.

Name of the month	Average temperature (°C)	Rainfall (mm)
January	17	20
February	19	30
March	23	20
April	28	20
May	35	20
June	32	200
July	25	370
August	25	380
September	25	200
October	23	70
November	19	10
December	17	0

**

4

The Rivers of India and their Drainage System

Look at the following picture. What does it show? Discuss in class.



Figure 4.1: The course of a river

Rivers originate in mountains, lakes, springs and glaciers. When it rains, some of the rainwater seeps into the earth, but most of it flows on the surface of the earth in small streams. You may have seen that rivers flow downhill along the slope. The flow is in a narrow channel in the beginning but the river widens as more and more tributaries (small streams) flow into it.

Water flows in streams on the earth's surface. The rainwater that seeps into the earth also flows below the surface. In some places, this sub-surface water or aquifer emerges on the surface as springs. These springs feed the rivers and their tributaries. Rivers usually originate in the mountains. The point where the river originates is called the source and the point where the river ends is called the mouth. The flow of a river from its source to its mouth can be divided into three stages: 1) the upper course or youthful river, 2) the middle course or mature river, and 3) the lower course or old river.



Figure 4.2: A 'v' shaped river valley

1) The Upper Course or Youthful River: When the river emerges from its source in the mountains, it flows very swiftly. This fast-flowing stream cuts a narrow channel in the mountain. The erosion is less along the river banks and more in the river bed. As a result, the river forms a 'v'-shaped valley. The valley is steep and narrow. The river carries along pebbles, stones and large pieces of rock in its swift current.



Figure 4.3: A river meandering through the plains

2) The Middle Course or Mature River: When the river reaches the plains, the gradient becomes gentle and its flow slows down. The current doesn't have enough force to carry

sand and pebbles along. In this stage, there is more erosion along the banks of the river and less erosion of the river bed. As a result, the river widens. Because of the slower current, the sand, gravel and soil are deposited to form an alluvial fan.

In the plains, the river can erode soft rocks but cannot erode hard rocks. So wherever it encounters hard rock, it changes its course. The river meanders.

When there is heavy rain, the river overflows its banks and floods the plains. The floodwaters deposit the sediment (silt) they carry over a large area. This area is called the flood plain. The flood plain is very fertile because of the rich, silt deposit.

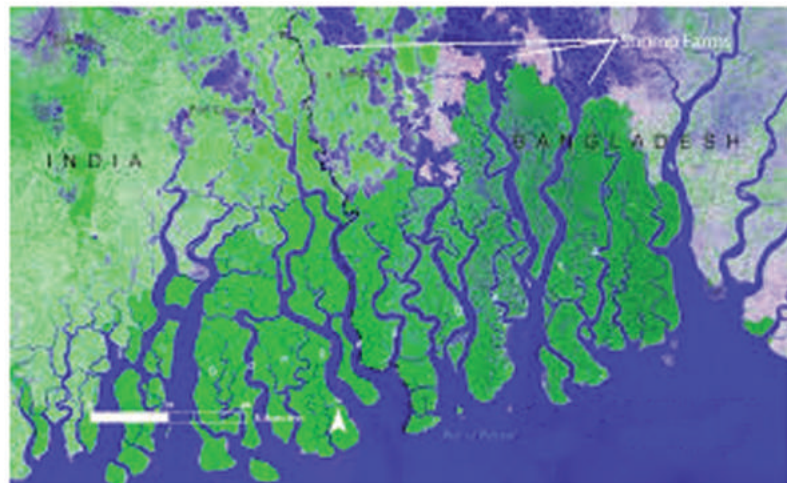


Figure 4.4: A delta

3) The Lower Course or Old River – By the time the river reaches this stage, its current is very slow. The river

carries large amounts of sediment (silt). It deposits this load before draining into the sea. The deposits obstruct the flow of the river, causing it to split into many distributary channels. The silt deposits and the distributaries form a triangular plain called the delta.

4.1 Drainage System

Drainage is the flow of water into a river from the surrounding area. It depends on the gradient (slope) of the land and the surface features (topography) of that area.

The entire area from which the water drains into a river is called the river basin. The main river and its tributaries together form a system which is called the drainage system. Figure 4.5 shows the area from which the water drains into a river.

The small streams, tributaries and the main river form a pattern in the drainage basin. The pattern depends on the topography of the river basin so it is specific for each river. Some of these drainage patterns are described below:

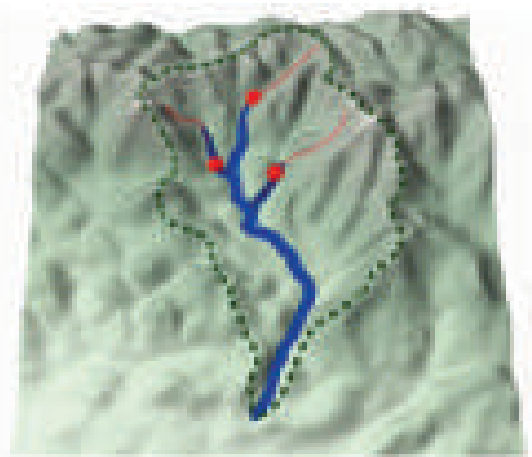


Figure 4.5: The drainage pattern

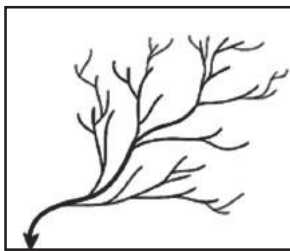


Figure 4.6: A dendritic drainage pattern

1. Dendritic drainage pattern:

This kind of drainage pattern is found in regions that have a uniform layer of sub-surface rocks. In this pattern, the streams and tributaries resemble the branches of a tree and the main river resembles the trunk. The Ganga, Indus, Mahanadi and Godavari drainage systems are examples of the dendritic pattern.

2. Trellised drainage pattern:

This drainage pattern develops in regions that have alternate bands of hard and soft rock. All the streams of water flow along the surface gradient. The streams form a trellis pattern, flowing in parallel valleys and turning at right angles. The tributaries also flow parallel and join the main river at right angles, creating the trellis-like pattern. This kind of river pattern is found in Saurashtra and the Nilgiri and Amarkantak ranges.



Figure 4.7: A trellised

3. Rectangular drainage pattern:

This drainage pattern forms in areas where the bedrock has tectonic faults and rectangular joints. These cause the streams and tributaries to flow into the main river at right angles. This kind of drainage pattern is rare in India. But it is more commonly found along the sea coast of Norway.

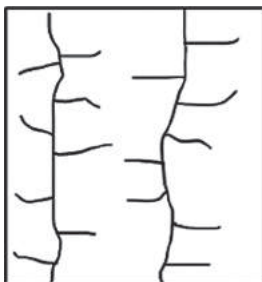


Figure 4.8: A rectangular drainage

4. The centripetal drainage pattern:

In areas where the rivers from all four sides converge at a single point at a lower gradient, we have a centripetal drainage pattern. The Sambhar Lake in Rajasthan is an example of this pattern.

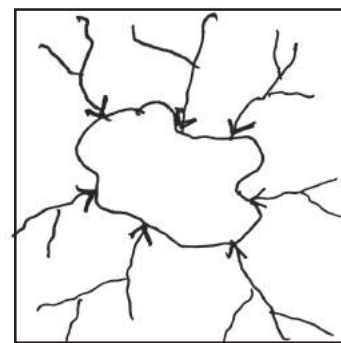


Figure 4.9: A radial drainage pattern

4.2 India's Drainage System and the Main River Basins

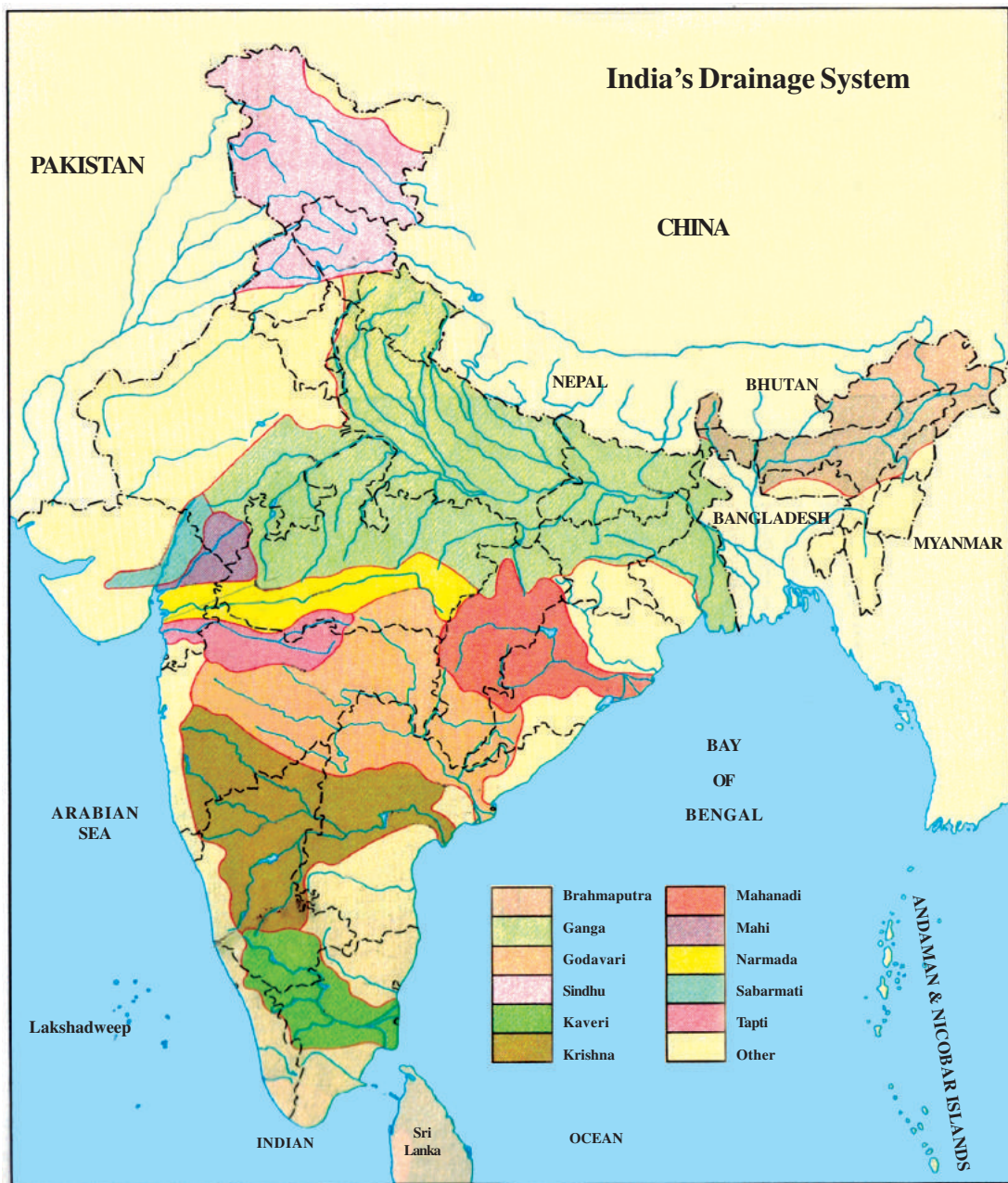
Rivers have played an important role in development of landforms in India. The country's civilizations, culture and economic development have been largely based around its rivers.

River basin: The entire area (watershed) drained by a river and its tributaries.

Activity: Look at Map 4.1, which shows India's drainage system. Identify the drainage basin of the four rivers given in the table below.

S.N.	Name of river	Origin	Length (km)	Drainage area (sq km)
1.	Narmada	Amarkantak (M.P.)	1313	98,796
2.	Tapti	Betul (Madhya Pradesh)	724	65,145
3.	Mahanadi	Sihawa (Chhattisgarh)	851	1,41,589
4.	Godavari	Nasik (Maharashtra)	1465	3,12,813

Source: india-wris.nrsc.govt.in



Map 4.1: India's drainage system and river basins

The Indus Basin

The Indus basin includes the rivers Indus, Jhelum, Chenab, Ravi, Beas, Sutlej etc. These rivers originate in the Himalayas and flow in a south-westerly direction. The Indus is the main river. It originates from the southern part of the Mansarover Lake in the Kailash Mountains. It enters India in Ladakh where it is joined by smaller tributary rivers such as the Zaskar, Shiyok, Gilgit etc. It flows through deep gorges in the Himalayan ranges. Most of the river basin falls in Pakistan. The Indus flows through Pakistan in a south-western direction and drains into the Arabian Sea. Intensive agriculture is practiced in this region. This highly fertile region, where commercial crops are grown, supports a very high density of population.

According to the 1960 Indus Water Agreement signed between India and Pakistan, India can use 20 percent of the Indus river water. The river water is used for irrigation and to generate electricity.

Ganga Basin

The Ganga and its tributaries form a vast plain in the northern part of India. This Gangetic plain is very fertile. The rivers in the basin flood every year and deposit a layer of alluvial soil that is rich in humus. The land is intensively cultivated. Several multi-purpose dams have been constructed on these rivers. They provide irrigation and electricity and support the development of industries like fishery, tourism etc.

The flat topography of the Gangetic plain facilitates the expansion of different modes of transport and the growth of industries. It is the most densely populated region of India.

Let us take a closer look at one part of this basin.

Life in the Sundarbans

Before draining into the Bay of Bengal, the Ganga splits into a number of smaller channels (distributaries). The sediment it carries is deposited to form an extensive delta called the Sundarban Delta. This delta has around 110 islands that are inhabited. Life for people living on these islands is very tough. Their main sources of livelihood are fishing, agriculture, hunting and collecting honey.

Every year, cyclones cause heavy damage in the Sundarbans. People obtain potable water with great difficulty. They fall prey to tigers when they venture out to catch fish and crabs. The brackish groundwater makes the land unsuitable for agriculture. The environment of this region is also changing. The growing population is encroaching into forests areas at an unprecedented rate. The delta is rapidly losing its green cover as its Sundari trees are felled.



Figure 4.10: The Sundarban mangroves

The mowing of elephant grass, which camouflages the stripes of the tiger, is driving the predators to attack humans. When the delta floods, the tigers and their cubs are washed ashore and enter the villages. Excessive hunting by the local people has led to a sharp decline in the deer and wild boar population. Deprived of their prey, the tigers are increasingly preying on humans.



Figure 4.11: A tiger in the Sundarbans

The Water Resources Department of the Government of West Bengal points out in its report that about 600,000 people migrated from the Sundarbans in 2004. There is no bamboo left in areas such as Pathar, Partima, Hengalganj, and Gosana. The embankments that had been constructed are collapsing, causing heavy damage to life and property.

The Brahmaputra Basin

This basin was formed by soil and gravel brought down by the mountain rivers. The Brahmaputra is the main river. It originates from a glacier near Mansarover Lake in Tibet. The river is called Tsangpo in Tibet and Dihang in Assam. Teesta, Subansiri, Bhareli, Manas and Lohit are its tributaries. The Brahmaputra is very wide in the lower reaches because of high rainfall upstream. Fertile soil is concentrated in the coastal areas. After its confluence with the Ganga in Bangladesh, the distributaries of the two rivers form the mighty Ganga delta. Jute, paddy etc, are grown on this extensive delta. Guwahati and Dibrugarh cities are located on the banks of the Brahmaputra.

The Narmada and Tapti Basin

This basin is a narrow strip of land created by the Narmada and Tapti rivers. These rivers flow parallel to each other in a western direction through a narrow rift valley. Both drain into Arabian Sea in the Gulf of Cambay. The Narmada flows through marble rocks at Bedhaghat near Jabalpur and plunges into a magnificent waterfall called Dhuandhar. Other waterfalls on the Narmada are Kapildhara and Dudh Dhara in Amarkantak.

The Godavari Basin

This basin is created by the Godavari and its tributaries Banganga, Manjira, Penganga etc. The basin is narrow in some parts and wide in others. The Godavari passes through Kandara near the Eastern Ghats at Pollavaram in Andhra Pradesh. After this, the river widens. It deposits the silt in the lower regions when it floods. Cotton and other commercial crops are grown extensively in the region's black cotton soil.

The Krishna Basin

This river originates near Mahabaleshwar in the Western Ghats and flows for 1,400km through Maharashtra, Karnataka and Andhra Pradesh before draining into the Bay of Bengal. Its main tributaries are the Tungabhadra, Koyna, Venna, Panchganga, Ghataprabha, Malaprabha and Bhima. The river water is used for irrigation and power generation. There is a dispute between Karnataka and Tamil Nadu on sharing the Krishna river water.

The Kaveri Basin

The river originates in a place called Coorg in Karnataka. Its main tributaries are the Amaravati, Bhavani, Hemawati, Shimsha, Noyyal, Kabini etc. Many multipurpose dams have been constructed on these rivers, which have stimulated agricultural and industrial development.

The Mahanadi Basin

Look at the physical map of Chhattisgarh and answer the following:

1. **The place of origin of the Mahanadi**
2. **The northern and southern tributaries of the Mahanadi**
3. **Prominent places in Chhattisgarh located on the Mahanadi**

The Mahanadi and its tributaries Sheonath, Hasdeo, Mand etc flow through this basin. In ancient times, the Mahanadi was called by different names such as Chitrotpala, Mahananda and Neelotpala. The river is the lifeline of Chhattisgarh. The fertile plains of the state were formed by the Mahanadi and its tributaries. Paddy is the dominant crop in these fertile plains, giving Chhattisgarh the name of 'rice bowl'.

The river flows across Chhattisgarh and crosses over to Orissa, where it forms a delta before draining into the Bay of Bengal. In Chhattisgarh, we have the Ravishankar Sagar Project (Gangrel Barrage), Mogra and Sikasar Multipurpose Projects on this river. India's longest dam, the Hirakud, is located on the river at the border of Chhattisgarh and Odisha. These projects have developed irrigation, power generation, fisheries etc. Most industries in Chhattisgarh are located on the banks of the Mahanadi, which traverses the entire state.

4.3 Water: a Common Resource

There are many challenges in using water resources. The primary need is water for household use. Water is also needed for agriculture and industries. There are examples when the water needs of humans and cattle are ignored and priority is given to industries.

Many times, neighbouring states through which a river flows have disputes over sharing its water. The dispute is usually about which state has the right to the river's water and how much water each state is entitled to take. Such disputes become serious and complex problems.

Over the last few decades, groundwater has become the chief source for irrigation. It is difficult to curb excessive use of water, because people do not treat it as a common resource. Ground water is treated as private property and exploited ruthlessly. But the truth is that water doesn't collect under the surface of any individual's field. It flows below the surface. So if one person uses water excessively, other people are deprived and don't get enough water. This leads to a situation where people have to bore deeper and deeper to get water for irrigation. This over-exploitation of water is causing tubewells to dry up and is lowering the water table (level of ground water).

To control this situation, we need to consider water as a common or public resource. The state government is trying to formulate laws to regulate ground water utilization. We need to build an understanding that '*flowing ground water does not belong to the person under whose land it flows; it belongs to everybody*'. Only such an understanding can help us resolve the problem.

An Example of Just Use of Water

Hivre Bazar is a village in the Ahmednagar district of Maharashtra. It is a drought-prone village. The average annual rainfall is 400mm. Soil and water conservation measures were undertaken in the village common lands and private pastures. Trenches were dug along the contours of the hills to

conserve rainwater and reduce soil erosion. These conservation activities led to more water becoming available for agriculture and grass in the pastures.

Check dams were built to store water for agriculture. Percolation tanks and loose boulder structures were also constructed. Trees were planted on both sides of the village roads and tree plantation was also done in the forests. A total ban on tree felling and open grazing was declared. Also banned was the use of bore wells and cultivation of banana and sugarcane. The bans were strictly enforced by common consent.

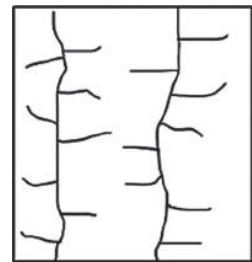
As a result of these efforts, the irrigated area in the village increased from 7 hectares to 72 hectares. The wells do not dry up for even a single day of the year. The fertility of the unirrigated land has improved. Small and marginal farmers have increased the productivity of their land. Compared to the past, more diverse crops are now cultivated. People grow potato, onion, pomegranate, flowers and wheat. The most important achievement was increasing the availability of water.

Increased production of fodder led to improvement of livestock and milch cattle. The dairy industry got a boost, with milk production increasing 20 times. The income of farmers in Hirve Bazar rose and the employment situation improved.

However, the villagers know that if the neighbouring villages continue to extract more groundwater with deep tubewells and do not enforce similar bans, they can do nothing to control their activities. They realise that the only solution is to declare water as a public resource and apply a uniform rule across the entire river basin. Only then will 'development for all' become possible.

EXERCISE

- Which drainage pattern is depicted in the diagram alongside?
 - dendritic
 - rectangular
 - trellis
 - centripetal
- The Brahmaputra basin spreads across 1) India and China, 2) India and Pakistan and 3) Bangladesh
 - Only 1 is correct
 - 1 and 3 are correct
 - 1 and 2 are correct
 - Only 2 is correct
- Which river forms the Sundarban delta?
 - Godavari
 - Ganga
 - Kaveri
 - Indus
- Hirakund is India's longest dam. On which river is it located?
 - Ganga
 - Godavari
 - Narmada
 - Mahanadi
- Explain what is meant by drainage and drainage system.
- Describe the features of the upper course of a river.
- What are the differences between the Ganga and the Godavari basins?
- What problems would you face if you live in the Sundarbans? How would you resolve these problems?
- Explain what is meant by groundwater: is the water table falling? If yes, then why?
- How did the Hirve Bazar people resolve their water-scarcity problems?



5

Natural Vegetation and Communities Dependent on Forests

Some of you may be living close to a forest. So you may know about trees, plants, bushes, hills, animals, birds and insects. Share what you know about forests and what activities people do in forests with the class.

Have you ever collected wood, leaves, fruits or flowers from the forest? Share your experience with the class. Make a list of things that people collect from the forest to use in their daily lives. How do they use these things?

We learnt about forests in several chapters in the previous classes. Try and recall what you learnt.

Forests are often mentioned in religious books and folk tales. If you know some of these stories, relate them in class.

Some people believe that forests are the abode of gods and goddesses. Find out about these gods and goddesses and tell the class.

Draw a picture of a forest and compare your drawing with that of the other students.

Forests

People have different notions about forests and attach different values to them. Some are scared of forests. For them, the forests are full of huge trees and wild animals like tigers, bears, snakes, scorpions, etc. But there are others who are not scared of forests. Their children roam around in dense forests without any fear. Some are mesmerized by the beauty of the forests or consider them sacred. Some people see forests as an economic resource that provides raw materials like timber, bamboo, tendu leaves etc – for industries.

People also use forests in different ways. Some people build huts in forests to live in. They hunt small animals and collect fruits for food. Some graze their cattle in forests. For some, forests are tourist spots. Some others want to clear the forests and establish farms, industries and mines.

We must keep in mind that it is not just we human beings who use forests. Plants, trees, grasses, birds, insects etc, too, live and grow in forests. Whenever we think about forests, we must keep in mind the interests of everyone – plant, animal, bird or human beings.

What is a forest? There are many ways to describe and define it.

Write your definition of a forest. Share your definition with others in the class and listen to their definitions. You will see many different definitions emerging.

Make a collective list of the different uses that forests have for human beings and wildlife.

There can be no single definition of a forest. Our definition depends on how we look at forests. For example, we can say that a forest is a large area of land covered by trees and bushes. The question then arises, how big a tract of land? What does being covered by trees mean? How dense? Do plantations of teak, rubber or eucalyptus make a forest? Can there be a forest without animals, birds, insects and humans? All definitions give rise to similar questions.

But we need to move ahead with some understanding of forests. We can say that most forests have the following features:

1. A large tract of land - several kilometres long and wide.
2. Many trees and other vegetation such as grass, bushes, shrubs, creepers etc that grow without human interference.
3. A wide range of bio-diversity, with numerous species existing and propagating naturally without human interference.
4. In India, the forests are home to many tribal communities that have adapted themselves to living in forests without causing damage or destruction.

Do these points define and describe the forests around us?

Are forests important? What will happen if all the forests are cleared to make farms, roads, mines, industries and homes? Can we live without forests? Discuss in class.

5.1 How many types of forests are there? Where are they found?

Where are forests found? This is a difficult question because, thousands of years back, forests covered most of the land on the earth. There were abundant forests wherever there was soil, sunlight and water. Except for the Polar region, the snowcapped mountains, sandy or rocky terrain and deserts with scanty rainfall, forests covered the entire earth. When humans started settling down in villages and towns, they began clearing forests to farm the land. The areas suitable for agriculture, plantations, mines, industries etc were rapidly cleared. By the beginning of the 20th century, the only forests remaining were in areas that were not suitable for agriculture, like hill ranges, marshes and rocky terrain. These were regions where people found it difficult to live in. Or else, they were far from human habitations.

Is it right to say the forests abound only in remote hilly and rocky regions?

Identify the forests close to where you stay. Try and find out why these forests were not cleared for farms, mines or cities.

Classification of Forests

Forests can be classified in a number of ways – based on their density, the kind of vegetation they contain, or their legal or administrative status. Based on density, forests can be classified into: very dense forests, dense forests, open forests, degraded forests (scrub), etc.

Administrative classification: The Forest Department classifies forests into three types based on its forest administration system: Reserved forests, protected forests and unclassified forests.

Reserved forests: These are government forests in which no one can cut trees, graze cattle, or collect forest produce even for household use. 54.5% of the forests in our country are reserved forests.

Protected forests: These are managed by the government but it may grant the local people limited right to graze cattle, harvest grass for fodder, and collect fuelwood and minor forest produce in these forests. 29.2% of the forests in our country are protected forests.

Unclassed forests: These are not managed by the forest department and the people have unrestricted right to graze cattle and collect wood etc. in these forests. 16.4% of the forests in our country are unclassified forests.

Forests are also classified on the basis of their vegetation. The kind of trees that grow naturally in any region depends on the temperature, rainfall and climatic conditions of that region. For example, cone bearing (coniferous) trees like pine (*cheed*) and cedar (*deodar*) are found only in very cold climates, where there is heavy snowfall and moisture is available round the year. These trees remain green throughout the year.

If there is moisture throughout the year, but the temperature is warm, then other types of trees grow. These are fruit-bearing, broad-leaved trees whose leaves stay green throughout the year. But in hot climates, where it rains only for a few months in the year, trees such as teak grow. These trees shed their leaves in summer and grow new leaves once it rains.

Therefore, forests can be classified according to the climate of the region and the species of trees that grow in them. On this basis, the forests in India can be classified as follows:

5.1.1. Tropical Evergreen Forests

These forests are found in places where the weather is warm round the year and there is rain almost every month. The annual rainfall is more than 200cm. The trees get moisture and warmth for growth all-round the year. The forests are very dense and abound in many types of trees, plants, creepers, plants that grow on trees (parasites and epiphytes), etc.



Figure 5.1: Evergreen forests of Kerala



Figure 5.2: Sal forests of Bastar - tropical moist forests

They remain green all-round the year, because as soon as a leaf is shed a new leaf replaces it. The forests abound in wildlife. In India, such forests are found in high rainfall areas of the Western Ghats, Lakshadweep, Andaman and Nicobar Islands, and the higher regions of Assam. The vegetation is mostly bamboo, cane, jamun, gurjan, semal, kadam, haldu, seesam, mango etc.

5.1.2. Monsoon Deciduous Forests

Monsoon forests are special to India. Almost 70% of India's forests belong to this category. They are found in areas where the climate is warm and rainfall is limited to a few months. Annual rainfall is in the range of 75cm to 200cm. The trees have broad leaves. In rainfall-deficient months, they shed their leaves to reduce transpiration loss and conserve moisture. New leaves grow once there is enough moisture. Because the trees shed their leaves in the dry months, these forests are also called deciduous forests. Most of the forests in Chhattisgarh fall in this category.

Monsoon forests are divided into two categories based on their rainfall. Where the rainfall is higher, these forests are called moist monsoon forests. Where the rainfall is lower, they are called dry monsoon forests.

Moist Monsoon Forests: These forests are found in areas where rainfall is between 100cm to 200cm. The trees grow very tall. Some trees are massive and evergreen. Shrubs and creepers grow beneath them. These forests are found in most parts of Chhattisgarh, eastern Uttar Pradesh, Bihar, Bengal, Odisha, etc. The predominant tree types are sal, teak, sheesham, amla, neem, mango and chandan, khair, kosum, arjun, etc. Moist monsoon forests are not as dense as the evergreen forests and the trees are also not as tall.

Make a list of the trees you see around you and try to identify whether they are evergreen or deciduous. Remember, all trees shed their leaves, but deciduous trees stay without leaves for several months in the year.

Dry Monsoon Forests: These forests are found in regions where the rainfall is lower - between 70cm to 100cm. Most of the trees shed their leaves in summer. These forests are less dense and have less undergrowth. As a result, grass grows on the land. These forests are common in Punjab, Haryana, East Rajasthan, Gujarat, west and central Madhya Pradesh, Maharashtra and Karnataka. The dominant tree types are teak, tendu, palash, khair, mahua and seesam. Large tracts of forests in these regions have been cleared for agriculture.



Figure 5.3: A Teak Forest during the summer months

5.1.3. Thorn Forests

In regions where the rainfall is less than 70cm the vegetation is mostly thorny shrubs and trees such as babul, ber, khair, etc. The forest is sparse, with grass and thorny shrubs growing in the ample spaces between trees. The space between the trees is taken up by grasses and thorny bushes. Such forests are found in Rajasthan, Haryana, and the desert areas of Gujarat. Only thorny bushes and trees grow in them because of the lack of moisture. The trees have thin trunks and are not so tall.

5.1.4. Mangrove forests

In coastal areas, sea-water constantly flows into the land with the tides. Hence, the soil and water has a high salt content. As a result, such areas have a special type of forest that is called mangrove. The roots of the vegetation in mangroves are specially adapted to deal with the ebb and flow of the tidal seawater. These forests are also called tidal forests. Sundari trees grow in the Ganga and Brahmaputra deltas. The main vegetation of these forests is sundari, kewada and mangroves.

5.1.5. Montane Forests

The vegetation in the mountains is different because of the high altitude and low temperature. At very high altitudes, there is no vegetation and the mountains are covered with snow all the year round. At a little lower, height tender grasses grow when the snow melts in the warmer months. Below this, we mostly have the evergreen, coniferous pine and cedar trees. Still lower, we have mixed forests, where broadleaf trees grow alongside the pines. The oak (banjh) and rohdendraon (buransh) are the most common broadleaf trees in these forests. The rainfall is higher in the eastern parts of the Himalayas compared to the western parts. This is why the Eastern Himalayas have denser forests and greater diversity in vegetation.

5.2 Forests of Chhattisgarh

23% of India's land mass is covered with forests. This percentage is considered to be less than optimum. The widely accepted minimum is that forests should cover at least one-third of the land.

Chhattisgarh has 44% forest cover. Of the state's forests, 43% are reserved forests. People cannot utilize these forests freely . Another 40% are protected forests. People can collect forest produce and graze their cattle in these forests. The remaining 17% are unclassed forests. People can utilize there forest without any restrictions.

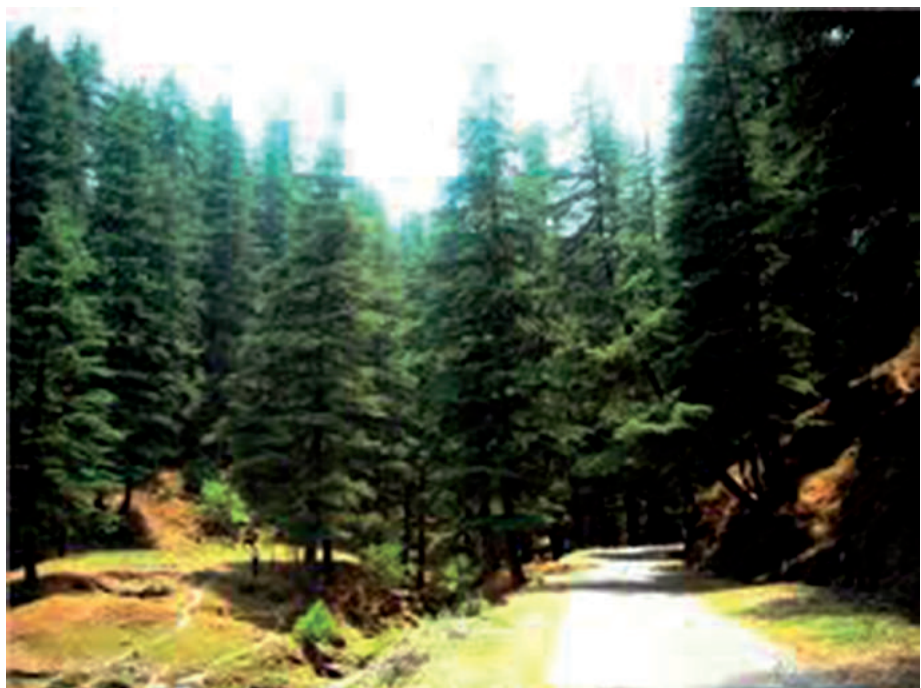


Figure 5.4: Himalayan deodar forest



Figure 5.5: People who depend on forests for a livelihood



Figure 5.6: People who depend on forests for a livelihood

Chhattisgarh abounds in monsoon deciduous forests because the state has a tropical monsoon climate. Jashpur, Samripat, East Baghelkhand and Dandakaranya are regions with moist monsoon deciduous forests. The Chhattisgarh plains and the western part of the state have dry monsoon deciduous forests. Our state has four types of forests - sal forests, teak forests, mixed forests and bamboo forests.

Sal forests: Bastar is called the island of sal forests. Sal forests are also found in Jaspur, Bilaspur, Kanker and Gariyaband.

Teak forests: The other major forest vegetation in the state is teak. Kawardha (Chilphi Ghati) and Narayanpur (Kursail Ghati) have high quality teak forests. Kanker, Sukma, Dantewada, Dongargarh, and Ambagarh also abound in teak forests.

Mixed forests: Amla, harra, baheda, saja etc are the main vegetation in mixed forests. The Mahanadi basin is home to such forests. They are found in Jashpur, Katghora, Kharsiyan, Mahasamand and the plains of Chhattisgarh.

Bamboo forests: The Sarguja forest division and Kanker forest circle are famous for their Katanga bamboos.

5.3 Utilization and Conservation of Forests

India's forests have seen such reckless and irresponsible felling of trees over the past 150 years that only 23 percent of the country's land area is forested today. The forests that remain are also not dense enough. There are many reasons for this.

The two main reasons industrialization and urbanization. Our forests are being over-exploited because of the rising demand for timber, bamboo, etc. One of the responsibilities of the forest department is to control illegal felling of trees by harvesting and selling mature trees in a scientifically planned manner. But the department is always under pressure to increase forest revenues.

In 1980, the forest departments across India earned a surplus of Rs 154,728 crores from the sale of forest produce - after deducting all their operational expenses. The forest department in undivided Madhya Pradesh alone earned a surplus of Rs 49,509 crores from the sale of forest produce.

This clearly shows that forests have been exploited for commercial reasons even in the recent past. The figures quoted are the legal earnings from forests. They do not take into account the large-scale felling of forests by private contractors.

Another important reason for the decreasing forest area is population pressure. In the 60 years of growth and development since India gained independence, we have yet to find alternative livelihoods for the country's expanding population. As a result, the rural people have no option other than agriculture. The only way to find land for farming is by felling trees and clearing forests. The people who feel the pinch the most are the poor. They do not have access to education nor do they have any other resources to earn a livelihood. Those who could not get land for agriculture began grazing livestock in the forests, degrading them further.

The development that has taken place in the country till now has also endangered our forests. Trees were cut on a large scale to lay railway tracks and roads. Large tracts of forest were sacrificed for dams and mines. Thus, forests have paid a high price for the country's development.

We saw at the beginning of the chapter that different people utilize forests in different ways. Among these people are the tribal communities that have been living in forests for generations and have used forest resources without damaging or depleting the forests. Even when they cultivated forest land, they practiced *jhum* cultivation, in which the land was left fallow after a couple of years so it could regenerate into forest. The tribals had a well developed community system to share and utilize forest resources collectively. They sold forest produce for their subsistence, not to earn profits. This saved the forest from over exploitation.

When the British established their rule in India, they began trading in timber on a large scale. Forests were also cleared to bring more land under agriculture and earn more revenue. Earning more revenue is what drove the British decisions regarding forests. This caused extensive damage to the forests. The traditional methods of the tribals to farm forest land and utilize forest produce were dismissed as impractical and uneconomic.

When the British realized how rapidly the forests were depleting, they set up a forest department to take control of all the forests under their rule. The tribals, who earlier owned and used the forest resources collectively now became offenders if they went into the forest to hunt or collect forest produce. The British claimed that it was the uneducated tribals who were the main culprits in depleting the forests and their activities needed to be controlled if the forests were to be protected.

5.4 National Forest Policy and Forest Rights Act 2006

The tribals have been fighting for their forest rights for over 150 years now. This struggle led the Indian Government to frame a National Forest Policy in 1988. This policy acknowledged the crucial role of the tribal and local communities in conserving forests. The policy states that the forests must be utilized in a manner that creates livelihoods for the communities that live near them. It also accepts that the tribals and other forest dependent communities have a right to forest produce for their personal consumption.

A Joint Forest Management Programme was established under this policy. Under this programme, the tribals got the right to collect fodder, fuel wood and minor forest produce and also the right to livelihoods as part of forestry operations. But simultaneously, those farming forest land were pressurized to give up their right to the lands so that the forest could regenerate. These days, large tracts of forests across India are being earmarked for tiger conservation. The tiger conservation activities are supported under Project Tiger and the forests are given the legal status of National Parks. This has led to the displacement of lakhs of tribals.

Worried by the constant impoverization of the tribals, the parliament enacted the Forest Rights Act 2006 after a lot of debate. This act acknowledges, for the first time, that injustice had been done to the tribals for the past 200 years by not recognizing the forest rights they had been enjoying. It also accepts that the forests cannot be conserved and developed without restoring the rights of the tribals.

Under this act, the tribals and other traditional forest-dependent communities were given their traditional forest rights and the ownership of the land they had been cultivating. If this act is properly implemented, the centuries old injustice done to the tribals and other forest dependent communities will be rectified.

While this act was being debated in parliament, many conservationists expressed concern about its possible misuse. They felt that the forest-dependent people may begin exploiting forest produce commercially instead of using it for their personal consumption. This could lead to the rapid depletion of forests. But there were many others who also felt that awarding these rights to the tribals, who had been conserving their forests for centuries, was the only way to protect the forests.

Discuss in class

- **Can the Forests Rights Act 2006 end the injustice to the tribals?**
- **How can the act help in conserving the forests?**
- **What other steps need to be taken?**

Try and understand some of the provisions of the Forest Rights Act 2006 with the help of your teacher. The act gives many rights to communities that traditionally utilize forest resources.

1. Individual and community rights of scheduled tribes and other traditional forest dwellers to homestead land and land for earning a livelihood through agriculture.
2. Right to use forest for fuel, hut building, grazing, food collection etc (Nistar Rights)
3. Ownership rights to minor forest produce and the right to collect and sell such produce by traditional methods.
4. Other community rights to fish and other products from water bodies, as well as livestock grazing rights.
5. Rights of pre-agricultural communities and primitive tribes to housing and house construction.

5.5 Community Initiative for Forest Conservation

How Damodar transformed the forests in his village

Sandh Karmari is a village on the Odisha border located about 45km from Jagdalpur. The forests of sal and other trees are dotted with paddy fields. The Karundi River marks almost the entire state border but in some areas bunds demarcate the border. The settlements of the 8 to 10 communities of the village are fairly widely dispersed.

Even though the paddy fields are extensive, there are forests within the village boundary that are criss-crossed by nallas and rivulets. If you approach the village from any side, you cross paddy fields dotted with mahua trees, which give the landscape a distinctive character. There are also scores of toddy palms that are tapped every morning by toddy vendors.

The monsoon season is also the fishing season, with the nallas abounding with fish. Farm produce such

as chunchunia, chaulai (amaranth) and kochai (colocasia) constitute an important part of the monsoon diet. Boda and mushrooms found under the sal trees are also popular seasonal food. People eat as many as five varieties of jimikand (yam) across the various seasons.

Damodar

Sandh Karmari village was surrounded by barren land 35 years back. The credit for its transformed landscape today goes to Damodar, who was the sarpanch for 35 years until 2009.

When he returned to the village after completing his studies at Jagdalpur, where he was living in a hostel, Damodar found that all the trees had been cut and people were digging roots to burn as fuel in their homes. Wherever he went, Damodar found only the stumps of trees remaining. “The people had nistar rights to the forests but they sold everything for their subsistence.”



Figure 5.7: A ritual puja offered to Mowli Dev

Damodar was upset and decided to do something to resolve the problem. He contested for sarpanch in the 1976-77 panchayat elections and won. His first priority as sarpanch was to appoint a few people to protect the forests. People contributed food grain in proportion to the land they owned to create a village fund.

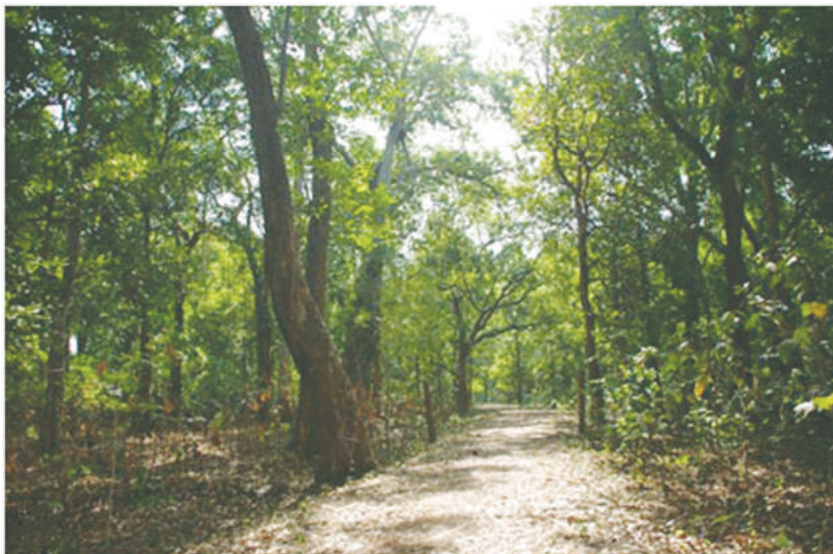


Figure 5.8: The way to the pilgrimage site in Mowli Kot

The degraded nistar forest were regenerated. It is now called ‘badla kot’ (planted forest). First, grazing in the forest was prohibited. Then, Damodar got seeds from the forest department and planted mango, chironji, mahua, beeja, sal, shatawari, jamun, amla, safed musli, kali musli etc. The 215 acres of forest today stand as proof of what people can do on their own.

Another asset of the people of Sandh Karmari is Mowli Kot - the sacred forest of Mowli Devi. The 100-acre forest is inhabited by langurs, flying squirrels, and numerous birds. It abounds in medicinal plants. We can really appreciate the diversity of an untouched, natural forest in Mowli Kot. At the time, when Damodar became the sarpanch, Mowli Kot was also shrinking. His efforts led to people protecting the sacred forest. They stopped tilling land close to Mowli Kot so that the forest could regenerate and expand. Today, this is the largest forest in Bastar.



Figure 5.9: Regenerated forest of Ghoghre

Green Cover in Rajnandgaon

Ghoghare village is located in the Churia sub-range of the Baghnadi forest range in Rajnandgaon district of Chhattisgarh. The village forest was totally degraded because of timber smuggling, mining and uncontrolled grazing. Today, the forest is lush and green thanks to the sustained efforts of the villagers. The air is clean and the fragrance of flowers is everywhere.

A decade back, the forest was highly degraded. All that was left after illegal felling was a forest of



Figure 5.10. Fodder for Cattle

stumps. The villagers couldn't get fodder for their cattle or fuel wood for their homes. Realising the gravity of the situation, they took up the challenge of regenerating the forest. They sought the support of the forest department on the advice of the village elders. A joint forest management committee was formed. Bamboo, medicinal plants and fruit bearing trees were planted.

Today, the once-barren land is populated with a variety of trees.

There is a strict community ban on felling trees. The villagers take turns to patrol the forest and protect it from outsiders. They have also appointed a watchman. The patrols report that they see many more wild boar, deer, hyenas etc these days. They now also protect the forest against poachers hunting wildlife.

The forest management committee has planted bamboo in 50 hectares of barren land adjoining the forest. Similarly, the 18–20 households of the Lodhi Bharri basti have planted and protected amla, karanj, teak, bamboo, arjun and mahua in another 50 hectares with adequate soil moisture. So the once barren land now been transformed with green cover. The char, harra, baheda and mahua trees as well as the medicinal plants are now well established and fully grown.

In this way, the hard work and dedication of the residents of forest villages have borne fruit and greenery has returned. The villagers no longer have to spend long hours foraging for fuel and fodder. Everything is available in abundance in the close vicinity of the village itself. The grass grows 4-5ft high in the forest so the cattle have abundant fodder.

Has any such afforestation effort taken place near where you live? If such efforts have taken place, find out the details and discuss them in class.

EXERCISES

1. How many types of forests are there in the administrative classification system?
2. What are the main forest categories in the classification of forests in India?
3. What are the special features of evergreen forests?
4. Where do we find deciduous forests and what are their special features?
5. What are the major tree species found in the forests of Chhattisgarh?
6. What are monsoon forests? Explain in detail?
7. Explain the Indian Forest Policy. List the various measures for forest conservation.
8. What are the main reasons for the degradation of forests in India?

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HISTORY

6

The Dawn of Modern Culture in Europe and India

The Early-Modern Age (1300 –1800 CE)

In this chapter, we shall learn about many countries besides India. Let's first recall what we have learnt about different countries. In Class VII, we learnt that the European continent is located to the north-west of India. You already know a few important countries in Europe. Locate the following countries on the map of Europe in your atlas or on the world map in your class:

1. The country that ruled India before 1947.
2. The country whose capital is Paris.
3. A country with an ancient civilisation where famous philosophers such as Socrates and Plato lived.
4. A country that is surrounded on three sides by the Mediterranean Sea.
5. A developed country in central Europe whose capital is Berlin.
6. A huge country in Eastern Europe whose capital is Moscow.
7. If we travel by land from India to Paris, which are the countries we will cross?
8. If we want to go to England by sea, trace the route we will have to take on the map with your finger.
9. Locate Iran on the map. This country has very ancient cultural ties with India.
10. Locate Iraq to the west of Iran – this country had a civilisation contemporary to Harappa.
11. Locate the Arabian Peninsula. Islam was born here and Christianity began in Palestine.

The Modern Age and Before

There are many characteristics of the modern age we live in. What do you think are the special features of the modern age? Are they different from the earlier ages? Are the main differences in the economic system, the social system, in culture and ideas, or in the political system? Discuss in your class.

Historians also debate issues like 'What are the special features of the modern age?' – just like you did in class. It is widely accepted that the two main features that distinguish the modern age from earlier eras are industrial production and democratic governments. It is more difficult to pinpoint the social and cultural changes that have taken place in the modern age but we can still make some general observations – we give less importance to a person's caste background now, everyone is

treated equally before the law, and the gap between the rich and poor is wider now than it was before. In earlier times, religion played a bigger role in people's lives – they were more influenced by their religious beliefs. Today, people have more faith in science and reason.

In this chapter we shall trace how and when the society of the middle ages moved into the modern era. The age when this process began is called the Early-Modern era.

The process of change in Asia and Europe began sometime from the 14th century (after 1300 CE) and continued till 1750 CE. Religion, politics, art, commerce and trade saw many changes during these 450 years. More and more people began to live in cities and they also began to think differently. This pre-modern age laid the ground for the industrial revolution and the French revolution.

What developments took place in the Asian countries like India, Iraq, Iran and Turkey and the European countries like Italy, Holland, France and England between the 14th and 18th century that led to the economic and political revolutions? The changes were many, but we shall discuss only the cultural, religious and intellectual changes that took place.

Three important processes occurred between the 14th and 18th century: they are called the Renaissance, the Reformation and the Enlightenment. These movements are associated with European history but similar developments took place in the Asian countries during this period. For example, in India, we had the Bhakti and Sufi movements and the new awakening in art that happened during this time. In fact, Asia and Africa contributed significantly to many of the changes that occurred in Europe. That's why, since the past few decades, historians have been saying that we must study the changes not just in the European context but on a global scale.

First, locate India, Iran, Iraq, Turkey, Spain, Italy, France, Holland, England, etc. in your atlas or on the wall map in your class.

Then, identify some of the important towns in these countries. For example, Vijaynagara, Surat, Delhi, Tehran, Isfahan, Baghdad, Istanbul, Venice, Rome, Florence, Geneva, Paris, London, etc.

Common Era: While each community or region has its own way of calculating time, today all countries the world over have adopted a common method of keeping time and dates. This is called the Common Era (or CE in short). We are living in the 21st century of the Common Era. The time before the beginning of the Common Era is called Before the Common Era (BCE in short).

6.1 The Different Facets of Change

What exactly happened between 1300 and 1750 CE? Let's find out how the modern era began.

Trade and urbanisation: During this period, trade expanded rapidly between Europe, North Africa and Asia. Commerce expanded within countries as well, with different kinds of goods being traded. The growth of trade also saw the growth of cities in the three continents. New cities were born and older cities expanded. This urbanisation brought with it many changes. A new class of wealthy merchants emerged. People travelled more between cities, leading to an exchange and spread of new ideas, inventions and technologies.

There was one striking difference between the cities of India and Europe. Many of the cities in Europe were not ruled by kings. They were independent and autonomous and were governed by

organisations formed by merchants and artisans. So, to some extent, democratic and republican ideas began to take root in these cities. These cities included Genova and Florence in Italy, Flanders in Holland, etc. Big cities like Surat, Agra and Vijayanagara also developed in India at this time, but they were still under the rule of kings or the control of feudatory lords.

What kind of goods and ideas do you think were exchanged during the 14th century?

Centralised states: This was the time when many powerful kingdoms were established. For example, in India, we had the Vijayanagara Empire and the Mughal dynasty. Iran had the Safvid Empire and Turkey the Ottomans. Many strong kingdoms were established in France, Spain and England as well, apart from several smaller kingdoms in Italy.

These kings were all very ambitious so they kept a tight control on their power over their kingdoms. As a result, power, wealth and authority gradually began to get concentrated in their hands. We call these kingdoms centralised kingdoms because economic and political power was centralised in the king. Before this time, zamindars (big landlords) and feudal lords used to rule over their lands and estates and govern their subjects. Now their powers were curtailed or completely taken over.

Many people say that the government today has more power and authority than the centralised kingdom of the Mughals. Do you agree with this viewpoint? Give reasons for your answer.

The emergence of an urban middle class: The expansion of trade, the growth of cities and the centralisation of all authority under the king led to one important change - the emergence of a new middle class in these countries. It consisted of merchants, rich artisans, accountants, clerks, lawyers, professional artists, poets, writers and so on. Urbanisation and development also saw new kinds of jobs being created (for example, book-keeping and accountancy, administration, tax collection, judicial and legal work, diplomatic contacts between kingdoms, etc). The people doing these jobs became part of the middle class. This class was always trying to earn more money and hence prepared to go to distant kingdoms in search of good jobs. So there was constant movement of people across a large geographical area.

This wide exposure made the middle class look at everything happening around them with a more critical eye. The people were not afraid of criticising their religious leaders or their rulers. Education played a big role in shaping them. To be educated was not just becoming literate. People needed to have a wide grasp of literary knowledge to perform their jobs well.

In Europe, education meant studying Greek and Latin classics, while in India it meant studying Persian and Sanskrit classics. But there was also wide exchange of knowledge. The Greek texts of Aristotle and Plato and Indian classics such as the Panchtantra and mathematical treatises were translated into different languages and widely read. During the reign of the Mughals in India, many Sanskrit classics such as the Ramayana, Mahabharatha, Upanishads etc were translated into Arabic and Persian.

Though there were many similarities between the middle class in Europe and India, some important differences need to be noted. First, this class in India was limited to a few specific caste groups, for example, Kayastha, Kshatriya and Brahmin. In Europe, people from different occupational groups were included into this class. The second significant difference was that the middle class in India showed no special interest in science and mathematics, whereas these areas of knowledge were important in Europe.

6.2 The Renaissance

6.2.1 The Study of Ancient Classics and Travel Abroad

Most of the Latin and Greek classics focused on humanity and human life. So the main areas of study and inquiry were politics, ethics, philosophy, law, civility, nature and the physical world, etc. Since this study was focused on human beings, it was known as humanism, or the humanities. It was different from religious thought. It was not based on believing any religious text or religious leader or on making sacrifices in this world for heavenly salvation. It did not talk about penance or suffering. What it emphasised was rational and critical thinking. It encouraged people to think for themselves and not blindly accept what anyone said. So even the teachings of religious leaders were examined rationally and critically.

The Middle Ages was the time when Christianity had established itself across Europe. The powerful Christian church did not like its teachings to be questioned. It said the Greek and Latin classics were written before the birth of Christ, so they could not be in harmony with the Christian scriptures. The church preached that people should not pursue worldly wealth and prosperity but should seek salvation in heaven. As a result, few people studied the Greek and Latin classics during the Middle Ages. These texts gradually disappeared from Western Europe because of the church's opposition.

However, the Islamic kingdoms of Iran, Iraq etc continued to translate and study the classics. Islamic culture flourished in the 14th century, its influence spreading from India to Spain. During this time, Islamic scholars translated the literary classics of China, India, Iran and Greece into Arabic and Persian. So the entire Islamic region From Asia to Europe was exposed to a mix of Chinese, Central Asian, Indian, Iranian, Iraqi, Egyptian, Greek and other cultures.

When interest in the Greek and Latin classics revived in Western Europe in the 14th century, the classical texts preserved in the Arabic translations came in handy. Also, ancient mathematical and astronomical knowledge from India and scientific knowledge from China found their way to European scholars.

What did the church think of the Greek and Latin classics? Why did it think this way?

What were the subjects covered in the ancient Greek classics? Make a list.

6.2.2 Humanism in Europe

European scholars began taking an interest in studying Latin and Greek texts around 1300 CE. Expanding trade, urbanisation and the rise of powerful monarchies were creating new jobs. They wanted to explore these challenges and take advantage of the new professions and jobs.

What new professions and work do you think urbanisation and the formation of powerful new monarchies could have created?



6.1: Francesco Petrarca

What do you think were the problems people faced with kings who wanted to become powerful and merchants who wanted to earn profits?

The Latin scholar Francisco Petrarch (born 1304, died 1374 CE) of Italy is considered to be the person who ushered in the humanist movement. He was distressed by the fact that people at that time were not using language properly. He began studying Latin classics to understand more about language and its usage. He found that the ancient texts not only helped him to learn how to use language correctly but also how to think critically to understand the world better.

The study of Latin and Greek began to spread rapidly under the influence of Petrarch and other scholars. The humanists believed that learning these texts could improve the ability of young people to think, write formally, address the public, argue a case in court, or talk intelligently about trade and politics. So they began to establish schools to impart classical education. They were helped in their task by the invention of the printing press in 1439 by the German artisan Johannes Gutenberg (born

1395, died 1468 CE). Hundreds of copies of books could now be easily printed. Scholars far and wide could lay their hands on printed copies of old and new books. This stimulated debate and the exchange of ideas between people.

While printing gave an impetus to the study of Greek and Latin texts, the scholars chose to write in the regional languages they knew, like Italian, German, English, Flemish and French. They wanted to write in a language that the common people could easily understand.

What was the basic difference between humanist study during the Renaissance and learning during the Middle Ages? We saw earlier that in the Middle Ages learning focused on religious themes. No scholar had the courage to write or say anything that went against what the church thought or said. But humanist study focused on the daily life of people, like the love story of a hero and heroine, the political system, or socio-economic issues.

The humanists no longer hesitated to air their views about the church and to even criticise

it, even if they depended on the church for their living. For example, the Latin scholar Lorenzo Valla studied some important church documents in 1435 and proclaimed they were forgeries. One such document with the seal of a Roman emperor granted temporal power to the Roman Catholic Church.

The well-known Dutch humanist Erasmus (born 1466, died 1536 CE) studied the writings of early



Figure 6.2: A portrait of Erasmus dated 1526 by the German artist Albrecht Dürer. This portrait was printed and widely distributed. What impression does this portrait create about Erasmus? Where and how are the names of Erasmus and Durer written? How are the numerals 1526 depicted?

Greek Christians as well as the original Greek Bible. He pointed out that the church's translation of the Bible into Latin had many errors. He also claimed that many of the beliefs of the church verged on superstition. He wrote a satirical book, 'In Praise of Folly', in which he took a critical look at many of the church's views and actions.

Did women also participate in humanist studies? In those days, only men received formal education. Women were expected to look after the household. But there were a few women who broke these barriers and studied Greek and Latin, making a name for themselves among the humanist writers. One of them was Cassandra Fedele (born 1465, died 1558 CE). She believed that women, too, should be allowed to learn the classics. In those days, Venice was a republic but women weren't allowed to participate in public life. Fedele felt this was a barrier that limited freedom and democracy and gave precedence to the needs and wishes of men. She was among the first women to criticise the male-centric system, paving the way for later feminist thinking to emerge.

Another famed humanist was the Italian Niccolo Machiavelli (born 1469, died 1527 CE). He published an important book called 'The Prince' in 1513. It was basically a study of politics. It investigated how political processes actually happen in the real world rather than some imaginary or ideal situation. It describes how a king can acquire autocratic power by freeing himself of all moral compunctions.

In this way, we see how the study of ancient classics gave rise to humanism. Humanist studies strengthened people's powers of self-expression and critical thinking. It eventually led to opposition of the church. Among the permanent changes it made, the most important were liberal classical education and intellectual freedom.

Make a list of the most prominent features of humanism.

Who is considered to be the originator of the humanist movement? What was his main concern?

Did women have a role in humanism?

What was the subject of Machiavelli's book?

How did the invention of the printing press help to spread humanism?

Do you think intellectuals should have unlimited freedom to criticise society or should the government set limits to their freedom? Explain with reasons.

Why did European intellectuals study the ancient classics in their search for new ideas?

What impact did the printing of books have on intellectual freedom?

Today, a new technique is replacing printing. What is this technique? What impact is it having on intellectual freedom?

In India

We saw earlier that even in India, Sanskrit, Persian, Arabic and other classics were widely studied and translated. The Mughal emperors and even the minor kings encouraged such initiatives. This was the age when the *munshis* and *munims* became indispensable. No ruler could administer his kingdom without these educated managers and accountants. They wrote many books about the Mughal period. Their analytical skills and descriptive powers are reflected in these treatises.

The middle class during the Mughal period had one more striking feature. It represented a mix of

Indian and Central Asian cultures. The people took inspiration from all these different sources. This influenced the way they lived and the lifestyle they adopted. That was not all. Though they depended on emperors and kings for their livelihood, they were proud of their independence, even criticising them. For example, many munshis even criticised Aurangzeb for his religious policies.

There was one other significant difference between India and Europe. In Europe, the printing press was widely used to publish books and spread ideas. In India, the use of this new invention was next to negligible, which hampered the spread of new thinking.

The *munshi* and *munim*

During Mughal times, these people worked in the rulers' courts and with merchants. They performed administrative tasks such as correspondence, preparing legal documents, maintaining the books of accounts, writing about various events, etc. They were familiar with the practices, customs and languages of several countries.

Around 1689, a writer from Chattisgarh's Ratanpur kingdom wrote a satirical poem 'Khub Tamasha' in which he poked fun at the kings and queens of Ratanpur and their diwans. His work clearly reflects mixed cultural influences - the two words in the title are of Persian origin.

6.2.3 A New Artistic Trends

One other change in India and several other countries was the flowering of the creative arts after 1300. The most visible impact of this new wave of creativity was seen in architecture. When the Turks came to India, they brought with them new building techniques, such as the use of domes and arches. This technique of using domes and arches in buildings was first developed in ancient Greece and Rome.

Figure 6.3 shows pillars supporting the weight of the roof of a Greek temple. In India too pillars and beams were used to support



Figure 6.3: A Greek temple

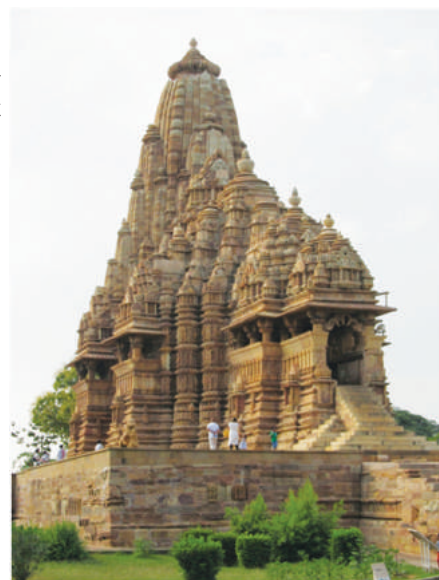


Figure 6.4: The Kandariya Mahadeva

the roofs. Massive temples were built in India using pillars and horizontal beams. You can see an example of this in figure.6.4 of Kandariya Mahadev Temple in Khajuraho which was built about a thousand years ago. This splendid example of temple architecture combined hundreds of small *shikharas* or spires to form an impressive edifice.



Figure 6.5: The Notre Dame Cathedral in Paris, France



Figure 6.6: A Roman arch

In Northern Europe, churches with similar complex structures were built during the 12th century. One excellent example is the famed Notre Dame Cathedral in Paris, which is shown in Figure 6.5. This architectural style is called the ‘Gothic’ style.

Figure 6.6 also shows arches used in the Roman Empire 2,000 years ago to support the weight of the roof of structures. Arches were used in constructing domes as well. One example is the dome of the Pantheon (Figure 6.7), built 2,000 years ago in Rome. It looks absolutely grand when seen from the inside but it isn’t as impressive when seen from outside (compare Figure 6.7 with Figure 6.8).

Domes that look impressive externally were the contribution of Islamic architecture. See Figure 6.9, which shows the ‘Dome of the Rock’ built in Jerusalem in 691 CE. We can see how grand the dome looks above an equally impressive base composed of beautifully arranged arches.

In India, the use of domes and arches made a very attractive mix with elements of temple architecture in the early modern period. As a result of this fusion, a new and transformed Indian architecture took shape during this period, which both Hindu



Figure 6.7: An inside view of the Pantheon



Figure 6.8: An external view of the Pantheon



Figure 6.9: The Dome of the Rock, Jerusalem in (691 CE)

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and Muslim rulers adopted. We can see examples of this architectural form in India in the Lotus Mahal of Vijaynagar, the palaces of Fatehpur Sikri and so on. The domes and arches of the Taj Mahal (1648 CE) beautifully incorporate Indian design and engraving - for example, the inverted lotus crowning the dome and the brass finial emanating from it in Figure 6.10. The dome is shaped beautifully, round like a teardrop.



Figure 6.10: The Taj Mahal

Thus, the architectural journey of domes and arches began in the ancient Roman Empire. They were almost forgotten by Western Europe of the Middle Ages. They then began to be used extensively in the architecture of Islamic countries and India. In the process, they took on new forms and styles.



Figure 6.11: St Peter's Cathedral in Rome designed by Michelangelo in 1547

In Europe, interest in ancient Greek and Roman culture was revived in the 14th century, beginning with Italy. Architects began using domes and arches once again. The style they adopted was developed by Islamic architecture. When Michelangelo designed the St Peter's Cathedral in 1547 CE, he took inspiration from Greek temples and Roman and Islamic domes.

Trace the Greek, Roman and Islamic influences in Figure 6.11. St Peters Cathedral is considered to be one of the finest examples of Renaissance architecture. Compare it with the Notre Dame Cathedral. What do you think are the differences in the vision behind these two structures?

This architectural style in which tall Greek columns, arches and domes are used is called the 'classical style'. It continues to be used even today.

6.2.4 Painting and Sculpture

The Renaissance is most renowned for its magnificent paintings and sculpture. In Europe of the Middle Ages, painting had limited scope – restricted to Biblical figures - as seen in Figure 6.12. Things



Figure 6.12: A 13th century painting of mother Mary, infant Jesus and saints

began changing towards the end of the 13th century, when artists began painting based on their observations of real humans. Religious figures continued to dominate but the elite and rich, successful professionals began to get their portraits painted. Even the religious figures became more life-like, depicting different emotions, forms and perspectives.

Colour, Technique and Science: With new colours being introduced from India and Iran, artists began experimenting with colour and methods. They also used new oil-based colours. They mixed colours to get innumerable shades.

Their paintings also became more realistic as they began depicting perfect replicas of what they saw. This became possible with an understanding of perspective. When we look at a scene, objects that are close look bigger while objects that are faraway look smaller. Objects in the background become smaller in geometric proportion. Calculating this proportion helped artists to separate near and distant objects in their paintings.

One famous example is seen in the painting in Figure 6.13 by the famous artist Raphael (born 1483, died 1520 CE). We can distinguish close from far by seeing small human figures in the distance while the figures in the foreground are bigger. We can see the lines linking the figure in the front and the building in the background converging. This gives an idea of geometric proportion.

Another technique emerged from science, which was developing rapidly during this period. The physician



Figure 6.13: 'The Marriage of the Virgin' – painted by Raphael around 1500

Andreas Vesalius dissected human cadavers to study the structure of bones, muscles and other internal organs and published books on his findings. Artists could now study human anatomy to perfect their human figures. Many of them even dissected human bodies to get a better idea of the internal structure. The most famous among them was Leonardo da Vinci.

Two Important Painters

Italy had many great painters during the Renaissance period but we shall discuss the two most important among them. They were Leonardo da Vinci (born 1452, died 1519 CE) and Michelangelo (born 1475, died 1564 CE).

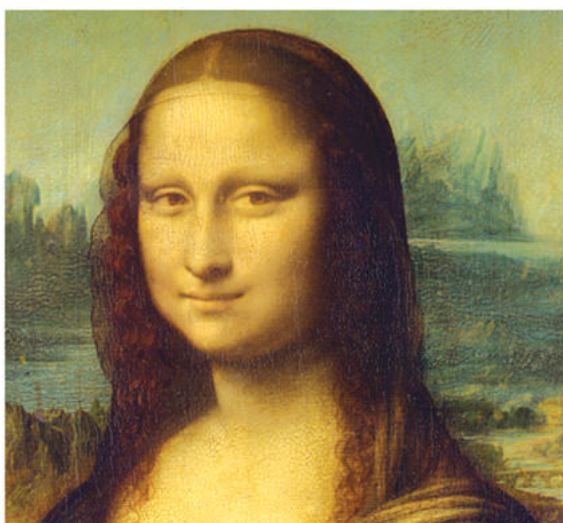


Figure 6.14: Leonardo da Vinci's 'Mona Lisa'

Da Vinci was a scientist, sculptor, architect, inventor and painter. He was the perfect example of the 'Renaissance Man', with his many-sided personality and wide range of interests. His most widely discussed painting is the 'Mona Lisa'. It depicts a woman with a captivating smile (Figure 6.14). Scholars have tried to decipher the mystery of that smile for the past 500 years. In a way, it was symbolic of that age. Never before had any artist given such prominence to a momentary and fleeting facial expression, capturing it for eternity in a painting.

Michelangelo is counted among the most prominent artists in world history. He lived in the city of Florence. He was under the patronage of the Pope for whom he undertook many creative projects. The most illustrious of these was painting scenes from the Bible on the walls and roof of the Sistine Chapel. You can see a portion of one of the paintings in Figure 6.15.

Michelangelo was as good a sculptor as he was a painter. He used Italy's white marble to sculpt extraordinary figures. Take a look at the most famous among them – 'La Pietà'. The portrayal of the human body, emotions and even clothes is spectacularly realistic. The grief of the mother with the dead body of her son in her lap is deeply and profoundly etched (Figure 6.16 and 6.17).

Much of Renaissance art was inspired by Christianity. But, at the same time, we see the marked influence of ancient Roman art. Artists like Michelangelo studied ancient paintings, sculptures and buildings in minute detail and tried to replicate their style.



Figure 6.15: 'The Creation of the Sun, Moon and Vegetation' – one of the Biblical scenes painted by Michelangelo on the roof of the Sistine Chapel. Here god is shown creating the sun. The intensity of creation is reflected in his facial expression and sharp gaze, which dazzles even the angels



Figure 6.16: 'La Pietà' – a sculpture by Michelangelo, showing Virgin Mary holding the body of her son Jesus Christ



Figure 6.17: A close-up of Mary's grief-stricken face

Early-modern Painting in India

A new chapter opened in Indian painting in the 15th century. This was the age of miniature paintings in which bright colours were used to paint pictures on paper. These miniatures had two sources of inspiration. One was the simple illustrations on palm leaf handwritten books. Using deep and bright colours, they depicted idealized – not realistic - human and animal figures (Figure 6.18).

The second source of inspiration was the miniature tradition of Iran. The country had a practice of producing books handwritten on paper with illustrations of the incidents described in them. This was around the time the Renaissance began in Europe. The most famous Iranian painter was Kamaledin



Figure 6.18: An illustration in a Gujarati Jain manuscript from the 14th century. The father of Lord Mahavira is seen talking to some person. Examine the colours used and how the human figures are depicted

Figure 6.19: 'A class in a madrasa' – a miniature painting by the Iranian artist Behzad. Despite its miniature size, the artist has depicted minute details of the people, surroundings and buildings. He has also treated the natural and architectural components of the scene in a very imaginative way. However, the figures in the foreground and background are of the same size..



Behzad (born 1450, died 1535 CE). One of his paintings is shown in Figure 6.19. When the Mughal dynasty was established in India, the emperors invited many Iranian artists to the country. Traditional Indian painters who were skilled in using a wide range of bright colours in their paintings worked with these Iranian artists and together they produced a really wonderful new tradition of painting called 'Mughal Miniature Painting'.

Figure 6.20 is a painting done by Miskin, a Mughal court painter during the reign of Emperor Akbar. This painting depicts a scene from the Mahabharata and its appendix Harivansh. Shri Krishna is seen



Figure 6.20: Miskin's miniature painting of Shri Krishna holding the Govardhana Hill.

lifting the Govardhana Hill. The cows, their herders and other people are sheltering beneath. This complex composition has many distinct individual figures. These people are not victorious warriors or rich merchants but ordinary village folk.

Now look at the painting in Figure 6.21. It was done by a painter called Bichitra around 1620, during the reign of Emperor Jahangir. It is a symbolic painting that depicts the emperor's spiritual leanings. Jahangir is shown sitting on an hour-glass throne depicting the flow of time. A sun-like halo crowns him, with European-style angels on both sides. Jahangir is presenting a book to a Sufi saint. The Ottoman Sultan, the King of England and Bichitra himself are shown standing nearby. In this painting Jahangir wants to show himself as an emperor who has mastered time and who cares for religious leaders more than emperors and kings. Despite the exaggerations and symbols used in his painting,

Bichitra still depicts human figures realistically, giving each of them a distinct and individual look.

Do you think artists and painters should always paint realistic portraits? Give reasons for your answer.

Have you seen a painting or sculpture done by a famous artist? If yes, then tell the class about it. Was the painter a realistic artist? What impact did the painting leave on you?

Why do you think the new and powerful kings and emperors, the pope, wealthy merchants and others preferred and encouraged realistic art?

6.3 The Scientific Revolution

Theism – the belief in god(s) – dominated thinking in Europe during the Middle Ages. It was also the dominant influence in the Islamic countries and India. The theists preached that god is the ultimate truth, the all-powerful who created the universe. Hence, people should forsake the pursuit of comfort and prosperity in this world and seek a place near god in heaven. There was no place for studying the

physical world in such thinking. Such study was even seen as being opposed to religious life. This is why science could not progress in the Middle Ages. But this does not mean there was no science. The Islamic world saw a flowering of science during this period.

We had seen earlier how Arab philosophers studied and translated the work of Chinese scientists and Indian mathematicians. They adopted Indian mathematics, particularly the decimal number system. They also adopted some well-known Chinese inventions such as gunpowder, block printing and magnets. Arab intellectuals built upon the work of Chinese and Indian astronomers in calculating the motion of planets, stars and other heavenly bodies. The scientific treatises from these countries found their way to European scientists. In this way, Arab scientists reached Indian and Chinese science to Europe.

When the study of Greek and Latin classics was revived in Europe, the people there began studying scientific literature from Greece as well as the works of Arab science. It was in those days that the European navigators were looking for a sea route to India and China. They had to cross unfamiliar seas and oceans. Their only method to navigate their way across the ocean was by tracking the position of stars and planets in the sky. They also used magnetic compasses to chart their path. The telescope with glass lens had just been invented so it helped them to look long distances across the sea.

Similarly, in those days cannons were used widely in war. Cannoneers had to know the angle at which the cannon should release the cannonball for it to strike the target. The estimate of the trajectory included factors like the weight of the cannonball and the bore diameter of the cannon. All this involved scientific study. That's why kings and merchants showed special interest in science and its investigations.

There were some scientists in Europe during the Middle Ages. In 13th century England, there was Roger Bacon (born 1220, died 1292 CE) who paved the way for experiment-based investigations of scientific principles. In those days, the common practice was to guess or estimate the answer to any question. The process of reaching conclusions on the basis of observations from experiments was not established. Bacon's insistence on this scientific method slowly became the accepted practice in scientific studies.



Figure 6.21: A painting of Jahangir with contemporary kings by Bichitra. The artist had never seen the kings of Turkey or England so how do you think he painted their portraits?



Figure 6.22: A portrait of Nicolas Copernicus

As we had seen earlier, the Renaissance was the age when a lot of research was being done on the anatomy of the human body. Another area of study was the geometry of perspective or projective geometry. In addition, there was the observation based astronomy. The widely accepted belief during the Middle Ages was that the earth was the centre of the universe and all the stars, sun, moon and planets orbited around it. This geocentric theory can be traced to the ancient Greek philosopher Aristotle. People in those days also believed that the earth was flat and that we will fall down if we went to its edge.

Many astronomers of the time studied the path and motion of planets in the sky. They faced a problem. They found that the motion of the planets did not tally with a geocentric universe. The most prominent among them was the Polish astronomer Nikolas Copernicus (born 1473, died 1543 CE). He published a book towards the end of his life in which he said

that this problem could be resolved if we accepted that it is the sun, not the earth, that is at the centre of the universe and that all the planets, including the earth, revolved around it.

This heliocentric theory of Copernicus was quite revolutionary for his time. People were not ready to accept that the earth, which appeared stationary to them, could actually be orbiting the sun. The church stated that god had ordained that the earth was the centre of the universe so that humans could live at the centre. So the church opposed the heliocentric theory.

However, many astronomers investigated Copernicus' theory. They made detailed and minute observations of the motion of stars and planets in the sky. Prominent among them was Tycho Brahe (born 1546, died 1601 CE), who set up an observatory in Denmark. Here, new methods were used to observe the planets and calculate their motion. Another astronomer, Johannes Kepler (born 1571, died 1630 CE), examined these findings and made his own detailed calculations and observations. He noted that the calculations made sense only if the earth and all the planets revolved around the sun, as Copernicus had said.

However, Copernicus had erred in one respect. He said the earth followed a circular path while orbiting the sun. Kepler's calculations showed the orbital path followed by the earth wasn't circular but elliptical.

It was Kepler who said we can understand the physical world only by minute observations and calculations, not by our widely held beliefs, religious texts or assumptions. The Italian scientist Galileo Galilei (born 1564, died 1642 CE) also placed the greatest emphasis on detailed observations and calculations. He established what Kepler said on firm ground. Galileo is known for asking leading questions, then looking for answers by doing experiments and studying the results. These became the guiding principles of scientific investigations.

Galileo used the telescope invented by seafarers to study the stars. He found that planets like Jupiter and Saturn had several moons orbiting around them. The question he asked was: Why do planets and moons orbit? Who or what propels them?

He did many experiments to find out why objects move and why they stop. For example, he dropped heavy and light objects together from a height to see if they fell together or if there was any difference in their motions. He also dangled an object from a thread and observed its motion as it swung to and fro. He rolled balls on the floor to see at which angle or on what kind of floor they rolled the furthest. On the basis of all these observations he concluded that Copernicus' heliocentric theory was correct. He published his findings in a book.

The church wasn't happy with the sun replacing the earth at the centre of the universe. It banned Galileo's book and put pressure on him to retract his observations.

Galileo accepted the church's condition. But he continued to perform his experiments secretly, publishing his findings in countries where the Pope's writ did not extend.

Galileo's trial by the church became a symbol of the confrontation between religious dogma and science - with the upholders of religion suppressing scientific findings. It can also be seen as a confrontation between powerful vested interests on the one hand and the investigative spirit of the human beings on the other.

The English scientist Isaac Newton (born 1642, died 1727 CE) proposed his famous theory of gravity and the motion of astronomical bodies on the basis of the discoveries of Kepler and Galileo. Newton's work ushered in a new age where science was accorded the highest esteem.

We have seen how a new science was born in the Early-Modern era after being freed from the bonds of religious misconceptions. This new science was not based on old assumptions but upon experiment and mathematical proofs. The Age of the Renaissance began with the assumption that Aristotle's beliefs and methods were the proof of scientific knowledge. But with the onset of the scientific revolution, it was established that many of Aristotle's basic theories and methods of study and investigation were wrong.

The earth revolves around the sun – what are the problems a layman would face in believing this to be true?



Figure 6.23: Galileo's portrait on the cover of one of his books. At the top are two figures, the one on the right looking through a telescope while the one on the left is using apparatus to measure

6.3.1 Maritime Expeditions and Geographical Discoveries

At the time when Copernicus, Galileo and other scientists were conducting their investigations, sailors from Europe were crossing the oceans to find new sea lanes to new worlds. Before this, their voyages were mostly along the shallow coasts from port to port. They seldom ventured into the deep oceans. The main reason was that they did not have any maps of the seas which could help them find their way. There was only one way they could resolve the problem – observe the stars and planets and use their positions to find out where they were on the earth’s surface and which path they should choose.

These mariners (sailors) set out for new lands in search of wealth. Many of them also wanted to spread Christianity in the new worlds they discovered to gain fame and salvation. The kings and emperors supported them in their search, especially because they wanted to find a new sea route to India and China. The mariners believed they could reach India if they sailed around the African continent. If the world was round and not flat as the scientists were then proposing, they could also sail across the western seas to reach the countries in the far-east. That meant they could cross the Atlantic Ocean to reach the eastern coast of China.

The Portuguese navigator (one who works out the route of ships on the sea) Vasco da Gama (born 1460, died 1524 CE) sailed around Africa to reach Calicut in the coastal Indian state of Kerala in 1498. Before him, the Italian navigator Christopher Columbus (born 1451, died 1506 CE) set out westwards to India, reaching a group of islands off the coast of a new continent. He thought he had reached India so he called the islands the ‘Indies’ and its inhabitants ‘Indians’. Later, the Portuguese navigator Amerigo Vespucci (born 1454, died 1512) established this was a new continent by sailing around it. The continent was named America after him. A few years later, the Portuguese navigator Ferdinand Magellan (born 1480, died 1521 CE) decided to sail his ships around the entire world to prove the earth was round. He could not complete his circumnavigation, dying along the way, but his crew completed the journey.

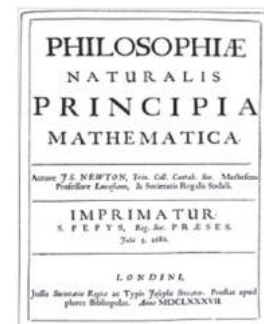


Figure 6.24: A 1741 portrait of Isaac Newton and (right) the cover of his monumental book ‘Principia Mathematica’ published in 1687

The mathematicians of Kerala (14th to 16th century)

The Indian state of Kerala had a robust mathematical tradition that flourished from the 14th to the 16th century. The major mathematicians of the time were Madhava, Neelakanta Somayaji, Parameshwara and Narayana Bhattathiri. They made several new discoveries in astronomy and mathematics. The most significant was the basic principles of calculus, which Isaac Newton later discovered in Europe and used to establish his theory of gravity. These mathematicians from Kerala were unable to develop their work and their discoveries were not propagated to the world.

EXERCISES

1. What were the factors that made the changes in the Middle Ages possible?
2. Why did kings establish autocratic monarchies? What role did the middle class play in their formation?
3. How did urbanisation and trade help in the development of the middle class?
4. In what way did trade and war contribute to the exchange of scientific knowledge between countries?
5. What were the unique features of ancient European classical literature? Why didn't the study of classics flourish during the Middle Ages?
6. What impact did the caste system have on the development of intellectual thought in India?
7. How did the scholars of Islamic countries contribute to the development of science in humanist Europe?
8. What were the similarities and differences between the literary studies of Humanists in Europe and the middle class in India?
9. How did Humanism challenge the authority of the church?
10. How were Renaissance paintings and sculpture different from the art of the Middle Ages?
11. What is the meaning of realism in art? Which Hindi films do you think are realistic? Explain with reasons.
12. Do you think Mughal paintings were realistic art? Give reasons.
13. What are the special features of Mughal paintings? Identify them in a painting before answering.
14. What is the contribution of Islamic architecture to Renaissance architecture?
15. What impression did the new Renaissance architecture seek to make on observers?
16. Scientific investigations were rarely undertaken in Europe and India during the Middle Ages. What could have been the reasons?
17. What was the contribution of China, India and the Arab countries to the development of science in Europe?
18. How was the importance of experiment, observation and calculation established in science? Can scientific knowledge progress without them?
19. Why did the European navigators set out on their maritime expeditions? Why was science important for their sea voyages?

PROJECT WORK

1. Make an album of Renaissance paintings. Write a couple of sentences on the artistic creations of each of the painters.
2. How were books made in India before the invention of the printing press? What were the problems in this process? Collect background information and some sample illustrations from these books.
3. Collect biographical information on the life and work of the famous humanists Erasmus and Machiavelli.
4. Find out details of the life of Galileo and his scientific investigations. Use this information to prepare an illustrated essay.

**

7

The Reformation and the Enlightenment (1300–1800 CE)

In the previous chapter we saw how new ideas and new thinking in the creative arts spread towards the end of the Middle Ages. We also saw how the cultural exchange between countries led to the spread of scientific knowledge. How could religion stay untouched by these developments? The way people looked at religion and their way of thinking changed by the end of the Middle Ages. In India and the Islamic countries, this change was seen in the Bhakti and Sufi movements. In Europe, another major movement accompanied the Renaissance and the Scientific Revolution – the Reformation of Christianity.

At the conclusion of these transformative processes came the Enlightenment which promoted reason, critical thinking and Science. Its influence was felt in India as well. We shall try to understand these developments in this chapter.

7.1 Religious Debates and Religious Reform

People during the Middle Ages were generally god-fearing and had blind faith in their religious leaders and religious texts. But in the Modern Age, scientific thinking and logic made them question their blind faith. We shall examine these two statements in this chapter.

7.1.1 Religious Diversity in India

If we look at India after the 4th century CE, we see many religions, sects and philosophies flourishing. Even within a single region, there was religious diversity, with people following different religious beliefs. But they were willing to listen to other people's beliefs and ideas and tried to understand them. They were also willing to change their own beliefs and accept new ideas.

Every region had its tribal societies that worshipped their own gods and goddesses according to their traditional customs and practices. There were also the followers of the Vedic religion led by the Brahmins. But there were different sects in the Vedic religion. Some Brahmins accepted the Vedas but worshipped idols of gods instead of observing the Vedic rites. They worshipped Shiva, Vishnu or other gods. Some renounced the world and meditated on Brahman.

All these religious people wrote treatises (books) about their religious beliefs and debated with each other. They taught their disciples their beliefs and religious practices. The most prominent sects were Vedantins (those who based their religious philosophy on the last section of the Vedas – the Upanishads),



Figure 7.1 *Discourse between two intellectuals.*
(A sculpture in the Khajuraho temple about 1000 CE)

Vaisheshikas and Mimansakas.

The influence of Vedic religion spread. But the number of sects and branches also increased. The most influential Vedic scholar and thinker was Adi Shankaracharya, who lived in the 8th century. He preached that there was only one final truth, which he called Brahman. To attain the truth, a person had to forsake the world and live a monastic life, contemplating unity with Brahman. Shankaracharya wrote many books to explain his beliefs.

But many Vedantins did not agree with what he said. One of them was Ramanujacharya, who lived in the 12th century. He believed the ultimate truth

was god Vishnu who is the creator, protector and destroyer of the world. In addition, there were humans (*jivas*) who eagerly sought to immerse themselves in god. Bhakti was the path for them to unify with god.

The disciples of these two Vedic philosophers debated the truth of their respective beliefs even as new thinking was taking place. This was the situation with one branch of Brahmins following the Vedic tradition. There were the Shaivites or worshippers of Shiva, the Shaktas or worshippers of Shakti and the Vaishnavas or worshippers of Vishnu and so on. Debates and conflicts continued among these devotees as to whose is the supreme god and what are the paths to reach god. Each of these branches had many sects.

How and why did so many different ways of worshipping the same god develop? Discuss in class.

Tell the class about the different sects in the religion you believe in.

There were also many other religions and communities that were not part of the Vedic tradition – like the Buddhists, Jains, and Ajivikas. Christianity established itself in Kerala and Tamil Nadu in the 1st century. After the 7th century, Islam spread from Gujarat to Kerala and in North India as well. These religions did not accept the primacy of the Vedas or the Brahmanas. Some of them, like the Jains and Buddhists, didn't even believe in god. Even among these religions, there were many sects and sub-sects. For example, there were sects in Islam, such as the Sunnis and Shias, that argued and fought with each other. They wrote books in support of their own beliefs.

In the 11th century, Turkish kings established their rule in North India. They were followers of Sunni Islam. During this time, the Mongol tribes invaded the Islamic countries of Central Asia. These tribes were pastoral herdsmen who lived in the plains between China and the Islamic countries. By the 13th century, they destroyed most of the Islamic kingdoms. Many Islamic scholars and Sufi saints fled and sought refuge in India.

Many people were influenced by these Islamic saints and Islamic rulers. They accepted the Islamic faith. But many of them who accepted Islam retained the practices and rituals of their earlier faiths.

One striking example is their devotion to *pirs* (Islamic saints). In Iraq and other Arab countries, the tombs of saints did not attract the kind of crowds one sees at Indian *dargahs* (memorial shrines of *pirs*). The *dargahs* of many prominent Sufi saints such as Khwaja Moinuddin Chishti and Hazrat Nizamuddin Auliya have even become important places of pilgrimage.

Many Muslims believed that seeking the blessings of the Sufis would fulfil their wishes. Even non-Muslims came to worship at the Sufi *dargahs*. Many of them accepted the Sufi belief that god is one but who is formless and one can attain god through devotion and love.

Thus, there was vast diversity in the religious beliefs of the common people. The beliefs kept changing over time. Every community had its own gods and goddesses, and modes of worship. In communities living closely together, people would even accept each other's gods and goddesses.

We see the influence of many religions in the religious beliefs of the common people. Can you give some examples from your area?

The Middle Ages was, thus, a period of vast diversity in religion in India. There was debate, sharing and exchange between the followers of different sects. There were also controversies and even clashes. But the diversity flourished. One reason was that none of these religions or sects had a central authority – a centre, organisation or individual – to tell everyone what is right and wrong. Every individual or sect was free to decide what is right and wrong at their personal level. Individuals were free to choose their religion or sect according to their personal needs and interests.

But along with such liberalism, religions also had social conservative aspect. For example, the caste system had established itself across more or less the whole of India during the Middle Ages. Hence, entry and worship in temples as well as religious study were decided according to caste and birth. Dalits and women were usually prohibited from studying religious texts (like the Vedas), worshipping in temples, or conducting sacrificial rites. Those who attempted to cross these caste boundaries were punished.

Along with differences in caste, there were vast inequalities in the distribution of wealth and power in society during the Middle Ages. The Sultanate and Mughal administration tried to concentrate wealth and power in their hands. As a result, the *mansabdars* (royal officers) and *jagirdars* (those with authority to collect taxes from peasants) began to oppress and exploit the people.

At the same time, whether it was the Mughal emperors or the regional kings of



Figure 7.2 People seeking blessings at a dargah



Figure 7.3 Kabir and other bhaktas.
(A miniature painting by Mir Miran, 16th century)

Vijayanagara, all these rulers followed a policy of religious tolerance. They realised that they must respect the religious freedom of the people if they wished to rule a multi-religious country. They should not discriminate on the basis of religion.

It is this policy that Emperor Akbar and his advisor Abul Fazl called ‘*sulah kul*’ or universal tolerance, peace and harmony. Akbar believed that the ruler was god’s representative on earth and just as god showered his blessings on people of all religions, the ruler should not discriminate on the basis of religion. His responsibility was to ensure that all people in his realm lived in peace and prosperity. Hence, a ruler could not favour any particular religion but treat all religions equally. Akbar was a rationalist who didn’t favour traditional, superstitious religion. He wanted people to use their reason to discriminate between good and bad aspects of all religions and accept what was right in

different religions and discard what was wrong.

A similar approach can be seen in the thinking of the Bhakti saints. Kabir, Raidas, Dadu Dayal, Mira, Tulsidas, Surdas, Guru Nanak, etc. who spread their message of peace and tolerance in a society divided by conflicts, religious differences and inequality. Many of these saints forsook traditional religious practices, telling people there is only one god and it doesn’t need any temple or mosque or religious rites to reach god. All it needs is deep love and easing the pain and sufferings of fellow humans.

The new social classes emerging during those days – artisans, small traders, farmers, etc – enthusiastically embraced such ideas. They formed Kabirpanth, Nanakpanth and Dadupanth and spread these messages through songs. More people joined the *panths*, influenced by their teachings. They adopted the distinct behaviour and dress code to establish their sectarian identity.

One such panth was the Satnamis of what is Haryana state today. They tried to abolish religious rituals and the caste system that created social divisions. They also strongly resisted the oppression of the Mughal administrative officials. The panth was born in Narnaul in 1657 CE. The Satnamis believed in a universal creator and sang devotional songs (*bhajans*) together instead of worshipping idols in temples. It is said they sang Kabir and Nanak *bhajans*. Instead of forsaking their homes, they showed their devotion to god while carrying out their household duties and farming the land. The Kabirpanthis (Damakheda) and Satnamis (Guru Ghasidas, Girodhpuri) were active in reforming society in Chhattisgarh, too.

You may have read or heard about the teachings of Kabir and Guru Ghasidas. What was unique and new about their religious philosophy? Find out and discuss in class.

Three women devotees

The religious institutions of the Middle Ages were all headed by men. Women were prohibited from studying religious texts. Most religious teachers were all men and they took only males as disciples. They saw women as barriers in their religious path.

But even in those days, there were women who gave up their homes to pursue an independent religious life. There were also several communities that gave a prominent place to women saints. For example, the Veerashaivas, a religious sect in Karnataka, accepted Akkamahadevi (born 1130, died 1160 CE) as one of their prominent religious leaders. Her devotional verses are sung in homes in the state to this day.

Akkamahadevi left her husband and family and crossed the traditional boundaries of women's behaviour to live her life on her own terms. An independent thinker, she debated the god-devotee relationship with other bhaktas and composed devotional songs. She criticised idol worship, temple rituals, pomp and ostentation and swore eternal love to her god.

Similarly, in Kashmir, Lal Ded or Lalleshwari (born 1320, died 1390 CE), who belonged to the Shaivite sect, joined with the Sufi saints (called *Rishis*) to tell the world there is only one supreme god. A child bride, she left her family and home to become a *sanyasini*, going from village to village to preach. She carried her message of godly love and devotion without ritual and ceremony through her popular songs.

The most well-known of the women saints of the Middle Ages was Mira. She became a child widow after being married into a rich, royal Rajput family in Rajasthan. She devoted her love to Shri Krishna, becoming a disciple of Raidas, the bhakti saint. She danced and sang bhajans with other bhaktas. This angered the king who banished her from the palace and tried to have her killed. To this day, Mira's verses are sung across India. She was not just a bhakta but a symbol of the revolt against the paternalistic, caste-ridden, feudal social system.

7.1.2 Religious Diversity in Islamic Societies

We learned earlier that Islam was born and spread in the Arab countries. Prophet Muhammad united the warring Arab tribes under one god, preaching monotheism, brotherhood among all god's children and equality among all. He strongly opposed the worship of idols and symbols as well as the priests and their practices. Instead, he talked of reaching god through simple community prayers. These religious ideas led to the rapid spread of Islam across Central Asia, Iran, Iraq, Egypt, North Africa, Spain and Turkey. Simultaneously, these countries adopted Arabic as their literary and religious language. That's why the Islamic civilisation of that period is also called the Arab civilisation.

By 1300 CE, Islamic states spread from Bengal to Spain. Excluding India, Islam became the dominant religion in most countries of the region, with Christianity and Judaism becoming minority faiths. But there was diversity in Islam as well. All the Islamic sects accept the holy Koran as the word of god and Muhammad as the prophet who brought god's word to the people. However, many differences arose when questions such as the following were raised: What is the meaning of Islam? What is the

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Figure 7.4 Adoration of god with song and music (Iranian painting)

true meaning of the Koran? What should we do? How should we lead our lives? What is the nature of god? etc.

A fundamental difference arose between the Shias and Sunnis on the following question: After the death of the prophet, does divine grace continue to rest with his descendents? The Shias accepted Prophet Muhammad's heirs as *Imams* or religious leaders of the Muslims. The Sunnis, however, didn't accept this and were not in favour of giving special status to any individual or family. Subsequently, there were many divisions within the Shias and Sunnis as well.

Islamic intellectuals studying the Greek classics also established a separate tradition. This community, called the Mutazila, believed that humans have free will to pursue their destiny, and are not fully directed by god's will. They said if there is no free will, people cannot be rewarded or punished for what they do. They also believed that god cannot do anything that is wrong or unjust so he cannot be omnipotent. They believed god gave humans the intelligence to tell the difference between good and evil.

The Mutazilites said the holy Koran cannot be co-eternal with god because it was created by god. Hence, humans should not accept everything that is written in the religious texts but use their reason and logic to guide their actions. They also believed that miracles are not possible because every substance in nature has its innate qualities that do not change. Such arguments and logic were so controversial that they were even considered to be anti-Islamic.

The Karami sect opposed the Mutazilites while the Ashariyyah sect tried to reconcile the two opposing beliefs. But there was no *maulvi* or *khalifa* or sultan who could declare what Islam really is. Islam did not have a final authority whose word could be accepted by all its followers. People were free to air their views and argue for them to be accepted as true Islamic thought. Others could either reject or accept their views.

Two influences had an important role in the development of Islamic thought: Greek philosophical and scientific texts and the spirituality of the Sufis. The scholars who studied the Greek classics did not want to be restricted by narrow religious thought. They emphasised logical thinking, reasoning and scientific investigation. Their investigations led to many new developments in human anatomy, medical sciences, mathematics, astronomy and alchemy (early chemistry, which focused on experiments to turn iron and other substances into gold). Apart from the Greek classics, they also studied Chinese science and Indian mathematics, translating many books into Arabic.

A prominent Islamic scholar was Al Biruni (born 973, died 1048 CE). He lived in India for several years around 1,000 years ago, studying the available mathematical texts and translating them into Arabic. Another was Ibn Sina (born 980, died 1037 CE) who was a leading philosopher and physician of his age. His medical and philosophical works were translated into European languages and were used to teach medicine until the beginning of the Modern Age.

Ibn Rushd's Thoughts on Women

Ibn Rushd was among the earliest world's thinkers to plead for equal status for women. He believed women were as capable as men but men kept them in servitude because of their selfish interests. This harmed society by robbing it of women's contributions. To prove his point, he cited the examples of many women rulers who were able administrators and successful generals in war.

Other Islamic philosophers who influenced European thought included the Iranian mathematician Al Khwarizmi (born 780, died 850 CE) and Ibn Rushd (1126- 1198 CE), a Spanish physician who wrote commentaries on the books of Aristotle and Plato. Ibn Rushd believed it was not against religion for people to investigate the world around them. He said people could understand god with the help of science and rational thought. His philosophy clashed with the thinking of traditional maulvis and Sufis.

The works of these Islamic philosophers were translated into European languages and were one of the factors that sparked the intellectual transformation in Europe. However, what they said was different from what the Sufis preached. The Sufis believed that the purpose of human life is to attain god and be with Him. They believed eternal love is the only way to attain god. They saw rational thought, philosophy and investigative activities as barriers in the path to god. The Sufis believed humans could reach god with step-by-step devotions such as meditation and incantations. Some even felt there was not much distance or difference between humans and god. Many of them studied Buddhist and Yoga literature and translated these works into Persian.

Traditional Muslims were opposed to the thinking of both the Islamic philosophers and the Sufis. They strongly opposed them, even subjecting them to torture. But they could not suppress such thinking, which only kept spreading.

What were the questions that created divisions in Islam?

What differences were there in the ideas and thinking of the Islamic philosophers and the Sufis?

7.1.3 The Catholic Church and Religious Reform in Europe

We know that Christianity began in the Palestinian region of West Asia in the 1st century CE. At that time, the region was part of the Roman Empire. The new religion spread across the Roman Empire by the 3rd century and almost the entire population of Europe accepted Christianity by the 8th century. The church in Rome became the central authority of the religion by the 14th century. It declared that all Christians should become members of the church and accept what it said on all religious matters. It was called the Roman Catholic Church (catholic means universal). It had a well-defined structure from the village or neighbourhood up to the regional and world level. Every region had a bishop and cardinals were nominated above them, with the Pope being the highest authority in the church.

In the political environment of that time, the kings had to accept the religious authority and power of the Pope. So, in a way, the administration of kingdoms was run by the combined power of the state and the religious authority. There was no scope for diversity in religious thought or religious tolerance. People were not free to choose the religious path they wished to follow. They had to follow the priests and their church practices and rituals if they wished to live a good Christian life and attain salvation.

The Bible was the foundation of the church. It was written in Latin, a language the common people did not understand. This established the authority of the priests in explaining all religious matters. The

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church also acted as a court to dispense justice and resolve disputes, with the Pope as its supreme judge.

The church had acquired vast landed properties over the years that it managed like a feudal landowner. Apart from this, it collected a tenth of the income of every Christian as tithes (a religious tax). It accumulated unparalleled wealth and became very powerful, exercising control over kingdoms, religion and justice. Any one raising their voice against the church was declared a heretic and punished. All this made the priests powerful and they began living in comfort and pomp.



Figure 7.5 A pope looking at the architectural drawing of a large building

During the Renaissance, the church built many majestic buildings. The rising expenses led it to look for new ways to increase its income. It began selling certificates called ‘indulgences’ that pardoned people of their sins and saved them from punishment. What the church basically said was: if you have committed a sin, you can gain a pardon by paying an amount to the church. The Pope will then forgive you. When you stand before God in Heaven, you can present your pardon certificates for the final judgment.

We had read in the previous chapter how humanist philosophers like Erasmus criticised many of the church’s theories, actions and behaviour. They were called Christian humanists. They were not rebelling against the church but were pleading for internal reform. It was during this time that the poor, the farmers and the artisans joined the protests in large numbers. They opposed the church’s oppressive practices and called for internal faith and belief.

The kingdoms of Northern Europe began challenging the power of the Pope. The rulers of England, Germany and other countries wanted to free themselves from the Pope’s control. They also had their eyes on the church’s landed properties and wealth. In this situation, Martin Luther began a revolt against the Catholic Church.

7.1.4 Martin Luther and the Reformation

Martin Luther (born 1483, died 1543 CE) was a German priest who concluded that the external rituals could not be the path to salvation. He said only God’s grace and personal faith could lead to salvation. In 1517, he wrote ‘The 95 Theses’, which questioned the church’s claim that freedom from sin and punishment can be purchased with money or ‘indulgences’ and that external rituals could lead to salvation. His letter to the church was printed in large numbers and spread his thoughts far and wide. He found wide support from the common people and the ruling kings. The Pope declared Luther a heretic (anti-religious) and excommunicated him (banished him from the Catholic faith) in 1520.

Luther published three books that same year to spread his views about the church among the common people. His theological ideas formed the basis of the Protestant Reformation. Seeing the mass support for Luther, the kings did not dare take any action against him. Many small feudal states in Germany put pressure on their Catholic kings to protect their religious rights. In 1555, the king gave the people

the freedom to choose between Protestantism and Catholicism. At that time, the Protestants were not an organised religion but had many sects influenced by the thoughts of religious thinkers like Luther, Calvin, Zwingli etc.

Let us now examine the main features of Protestantism. Even though it contained many sects, it had some common features. First, the Protestants believed that salvation can only be achieved through personal faith in God's grace, not any rites or practices ordered by the church. This meant the people did not need a priest to perform these duties. They even believed that every Christian could become a priest to reach god.

The Protestants said people should practice their faith by reading the Bible themselves. To make this possible, they translated the Bible into the regional European languages and printed it in large numbers to distribute widely among the people. In 1522, Luther translated the Bible into German.

All this had a deep impact on the Catholic Church. It led to a reform movement within the church itself, which is called the Counter Reformation.

The Reformation did not just end some of the shortcomings of the Catholic religion. Its most epoch-changing result was to end the religious uniformity of Europe and the monopoly of the church over religious affairs. Countries like England did initially try to establish a state church but it was impossible to stop the multiplicity of sects that developed over time. Gradually, the link between the church and the state was snapped. This allowed people the freedom to choose their own religion and helped make the state more secular.



Figure 7.6 A contemporary portrait of Martin Luther

What similarities and differences can you see in the religious situation in India, the Arab countries and Europe during the Middle Ages?

Which aspects of the Catholic Church did the Protestants oppose?

St Francis of Assisi – bringing the ‘joy of poverty’ into the church

The Catholic Church was becoming a symbol of wealth, pomp and splendour during the Middle Ages. But there were also many religious friars who tried to live a life according to the teachings of Jesus Christ. St Francis (born 1181, died 1226 CE) was one such saint. He was born in a wealthy merchant's family in the town of Assisi in Italy. But, as a young man, he realised that the way to reach god was to embrace poverty. He distributed all his possessions among the poor. This angered his father, who threw him out of their home.

Francis went among the poor people in the town, begging for alms, eating whatever he received and living the life of a common labourer. That was not all. He said humans must love all god's creatures. It is said he could even talk to the birds and animals. He also tried to arrange a truce between the Christians and the Islamic sultan. With the permission of the Pope, he established orders of men and women who believed in living in poverty and serving the poor.

What similarities or differences can you see between the Bhakti and Sufi movements in India and the Reformation in Europe?

Do you think that religious texts should be in a language that is understood by the common people? Give reasons for your answer.

Do you think that every individual should define choose their religion for themselves?

7.2 The Enlightenment

The 18th century was the age when people began thinking that reason, science and enterprise could help them progress in life and take them from ignorance to knowledge. But this was only possible if science was not forced to bow before any power or authority. People could decide their actions on the basis of reason only if the social system was not dominated and controlled by a central authority. These ideas spread across Europe during what is called the Enlightenment. They were so powerful that they inspired the American and French revolutions. They influence human society even today in the Modern Age. But these ideas did face opposition from some people and were criticised. We shall also look at some of the criticisms of the Enlightenment.

The French philosophers played an important role in developing the ideas of the Enlightenment. The most prominent among them were Voltaire (born 1694, died 1778) and Diderot (born 1713, died 1784). Equally important were the Scottish philosophers David Hume (born 1711, died 1776) and Adam Smith (born 1723, died 1790) who is considered the father of Economics. In Germany, the dominant Enlightenment philosopher was Immanuel Kant (born 1724, died 1804).

The chief vehicle for spreading the Enlightenment ideas at the time was the ‘Encyclopedie’ in the French language edited by Diderot, which presented the new discoveries and thoughts in simple language. We shall now examine the main ideas of the Enlightenment.

7.2.1 The Concept of Progress

The Enlightenment thinkers believed the world progresses with the passage of time. The present is better than the past and humans will use science, reason and enterprise to ensure greater progress in the future. By progress they meant that humans would use science and technology to exercise greater control over nature. Immanuel Kant said the meaning of progress was not that humans will be more contented and happy, because contentedness and happiness are possible in any era in history. He said the true parameter of progress was growth in human freedom and the multiplicity of choices. The Modern Age is more advanced because humans enjoy more freedom than ever before and because they have more lifestyle choices.

Do you think humans today are more developed than 100 years ago? In what ways is human life better than it was 100 years ago and in what ways is it worse?

What is your understanding of progress? Wealth, happiness, comfort, freedom – which of these words do you think are closest to progress?

7.2.2 The Age of Reason

The Enlightenment thinkers believed that human decisions were gradually being based on rational thought rather than superstition, religion or the directions of a central authority. They felt reason helps humans to ask questions and investigate any authority, whether an individual or an institution. It also

helps humans to live a principled and comfortable life. It is human intelligence that reveals the true path. That is why the driving force of the Enlightenment was to awaken and strengthen people's trust in the power of reason. As the contemporary French thinker Baron Holbach observed, "We must instil courage in humans, make them trust their own intelligence, and awaken their thirst for the truth so that they can learn to take decisions on the basis of their experience and not be influenced by the false or misleading notions of others."

Why does it take courage to trust your own intelligence and reason instead of someone else's wisdom?

7.2.3 Science

The Enlightenment thinkers saw scientific knowledge as true knowledge. By science they meant the process of deriving conclusions on the basis of experiments, observations and rational thought and collecting sufficient evidence to back the conclusions. They did not accept divine or spiritual revelations. They believed the method of science was powerful enough to understand everything in the world. It did not require any religious texts or the advice of so-called experts but only experiments, observations and reason.

In ancient times and during the Middle Ages, knowledge was seen as systematically classifying things. The Enlightenment scientists said knowledge was not making lists based on certain characteristics of things. They gave greater importance to questions like why and how things were the way they were. They believed knowledge would help in developing new technologies that would make life more comfortable.

What were the main differences between science during the Enlightenment and science during earlier eras?

7.2.4 Science versus Religion

The supporters of the Enlightenment felt that religion enslaved humans and made them superstitious and scared. They said religion led to bloodshed and wars. They were mainly opposed to the monopoly of the Catholic Church. They said this authority of the church was what made humans believe in the miraculous stories told by priests and not in their own reasoning power. It made people the puppets of the priests. Most Enlightenment thinkers were not atheists. Their purpose was to find an independent and scientific basis for god. They feared that atheism would make people amoral and unethical. They said the knowledge of the world gained through science is evidence of the greatness of god, the creator. But they didn't want their god and religion to be taken over by priests or any other system or institution.

Is it possible to believe in god without accepting any religion?

In what situations does religion bring people together and in what situations does it make people fight among themselves?



Figure 7.7 Voltaire

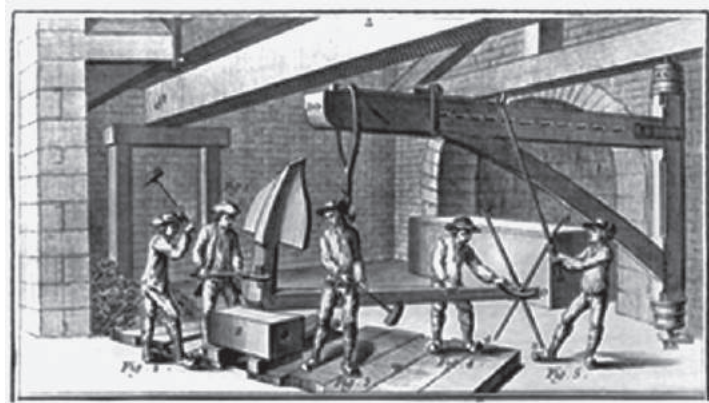


Figure 7.8 The cover page of the 'Encyclopedie' edited by Diderot (left), with the picture of a metal factory printed in it.

7.2.5 Freedom

The supporters of the Enlightenment had abiding faith in individual freedom. They said no law should be passed without the people's consent. That's why they were opposed to all kinds of slavery, undemocratic systems and anarchy. However, despite their beliefs, many Enlightenment thinkers became close friends and advisors of autocratic rulers. These rulers were influenced by their thinking and did attempt to reform their kingdoms.

Do you see any link between individual freedom and scientific progress? Explain.

7.2.6 Criticism of the Enlightenment

When the Enlightenment movement was at its peak, industrialisation in Europe was leading to the exploitation of nature, increased pollution and the exploitation of the labouring classes. The political upheavals disrupted traditional lifestyles. It was during this period that people came to know more about the tribal societies of America, Australia and India that lived a simple, communal life in tune with nature.

The people who were distressed by the impact of industrialisation began criticising the Modern Age. They raised their voice against science and reason. Prominent among them were the Romantic philosophers (Rousseau), poets (Lord Byron) and artists. In place of the modern industrial age, they lauded a idyllic rural life that would be in consonance with nature, not destroy it. They wanted to



preserve the fast-disappearing folk arts and culture.

While the Enlightenment thinkers sang the praises of the power of science to understand the world, the Romanticists drew attention to things that could be understood only through emotions and feelings. They focused on the culture

Figure 7.9 A painting by Delacroix dated 1825 depicting a horse startled by lightning. The artist attempts to show nature as an unconquerable force. Compare this painting with one from the Renaissance period

and literature of India, China and Japan as alternatives to the Enlightenment culture and began to study these societies. They translated the literary works of Sanskrit poets like Kalidasa into European languages. The Romanticists were highly impressed by Kalidasa's play 'Shakuntalam'.

Romantic artists abandoned the realism of the Renaissance period, creating indistinct and tempestuous images instead of realistic drawings. They reflected emotions like fear and wonder through their paintings. (see figure 7.9)

EXERCISES

1. How did people in India conceptualise the 'ultimate truth' during the Middle Ages?
2. What impact did religious diversity have on the life of people in India?
3. How did the caste system affect people's religious freedom?
4. Why did Akbar adopt a policy of religious tolerance?
5. Why did thinkers like Kabir reject all formal religions and what did they advocate?
6. What similarities and differences do you see in the lives of the women devotees?
7. What are the differences between traditional Muslims, the philosopher Muslims and the Sufis?
8. How did the Arabic philosophers of the Middle Ages reach the ancient Greek classics to the modern world?
9. What was the role of the church in Europe during the Middle Ages? What impact did the Reformation have on its role?
10. What aspects of the Catholic Church did Martin Luther criticise and oppose?
11. What link do you see between religious freedom and the Reformation?
12. What were the defining aspects of the Enlightenment? What relationship did it have with the Scientific Revolution?
13. What aspects the Enlightenment did the Romanticists oppose?

PROJECT WORK

1. What was the relationship between the Protestantism and the Industrial Revolution? Find out and write a short essay.
2. Read about Voltaire's life and thoughts and discuss in class.

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Democratic and Nationalist Revolutions (1600-1900 CE)



Figure 8.1: A march for democracy in Hong Kong

You must have come across words like ‘nationalism’ and ‘democracy’ in books, political speeches, newspapers, TV and radio. What do you think is the meaning of these words? What is the difference between the rule of kings and democracy? Discuss in class.

In 1600 CE, most of the regions of the world were under the rule of kings, emperors or feudal lords. These rulers very often acted on their whims - imposing taxes and duties, punishing those who opposed them, either imprisoning them or killing them, confiscating people’s property, changing laws or making new ones. The kings and feudal lords made the laws, implemented them and dispensed justice. So there was no restraint on them.

The kings managed the affairs of their kingdoms and the people played no part. There was no place for their ideas, culture, needs and feelings. They could not choose their rulers. The people had no role in the formation of the kingdoms. The kings used their armies to conquer lands and establish their kingdoms. So there were kings and kingdoms but there were no nation states. There was no democracy. That’s why people were not very emotionally attached to the kings who ruled them.

The political revolutions that took place from the 17th to the 19th centuries played a big part in changing this situation. Today, most countries in the world are governed democratically. All their adult citizens elect their representatives who make laws and govern the state. After a fixed period, the people again hold elections and choose a new set of representatives to lead them. The law protects the rights of the citizen.

We shall study this process of change, which began in England, in this chapter.

8.1 The Conflict Between the King and the Parliament in England

Locate England and its neighbouring countries on the world map in your classroom. If you know anything about any of these countries, share with the class.

England was ruled by kings at the beginning of the 17th century. In those days, there was a system for the king to consult his subjects and listen to their suggestions. It was called the Parliament. Whenever the king wished to impose a new tax or make an important decision, he convened the parliament for consultation. This became the traditional practice and no tax could be imposed without the consent of the parliament.

The parliament was divided into two houses – the House of Lords and the House of Commons. The House of Lords was composed of high-ranking priests of the church and hereditary feudal landlords. The people who owned property in the villages and towns voted to elect their representatives in the House of Commons. Women, poor peasants and labourers had no vote.

India did not have a parliamentary system in the Middle Ages. The kings and emperors consulted their close confidantes and advisors but they were not bound to take their advice. They acted on their own, using their discretion to raise or lower taxes. The people had no formal role in the process.

Do you think the parliament in England during the 17th century was democratic? Discuss, giving reasons.

The Indian kings and emperors consulted their close confidantes and advisors before making decisions. Was there any difference between the systems in England and India?

The relationship between the king and the parliament began breaking down in the 17th century. The parliament wanted a bigger role in state matters but the king didn't want to be accountable to the parliament. James I became king in 1603. He believed that kings received their power from god and were answerable only to god. So the parliament had no legal right to object to whatever he decided.

The rift between the king and the parliament widened after Charles I ascended the throne in 1625. They fought over who had the right to impose taxes. Charles I imposed a new tax without getting the consent of the parliament and began forcing the merchants and landowners to loan money. Those who refused to give the loans were imprisoned. The parliament tried to warn the king and presented him with a Petition of Right in 1628. The petition pointed out that the king had not convened a sitting of the parliament for 11 years because of the breakdown of relations.

In 1640, the royal treasury was empty because of a war against a neighbouring country. The king had to impose new taxes to pay for the war so he was compelled to convene the parliament. But the parliament wanted to control the despotic behaviour of the king and his councillors. It announced punishments



Figure 8.2: The English parliament during the reign of King James I. The king sat on a raised dais in the centre of the assembly

An Extract from the 1628 Petition of Right

... no person should be compelled to make any loans to the king against his will ... your subjects ... should not be compelled to contribute to any tax ... not set by common consent in parliament ... no free man may be taken or imprisoned or be (dispossessed) of his freehold or liberties ... or be outlawed or exiled, or in any manner destroyed, (except) by the ... law of the land.

for the ministers and officials. This sparked a civil war between the supporters of the parliament and the royalists (supporters of the king) that continued for five years. Oliver Cromwell assembled an army of the common people and led the parliamentarians to challenge the king. Charles I was defeated in 1649 and the parliament sentenced him to death.

After the execution of Charles I, England became a Republic in which the king had no place. This Republic lasted for only 11 years because Cromwell himself began behaving like a despot. After Cromwell's death, the parliament invited Charles II, the son of Charles I, to become king. Charles II and his heir James II again tried to establish their authoritarian rule independent of the parliament. The parliament, on its part, continued its efforts to curb the despotism of the king. In 1688-89, it invited Mary II, the daughter of James II, and her husband William of Orange to ascend the throne. But it placed some strict conditions on how she should rule, which Queen Mary accepted.

The conditions were that no law shall be enacted or changed and no new taxes shall be imposed without the consent of parliament. Also, the parliament would be consulted to raise the strength of the army. Other conditions included convening the parliament regularly, not interfering in parliamentary elections and not punishing any member for anything they said during the parliamentary sessions. Mary II and William became queen and king of England only after accepting these conditions.

These changes occurred without war and bloodshed. Hence, it was called the Glorious Revolution of 1688 or the Bloodless Revolution. It saw the establishment of a Constitutional Monarchy in place of the despotic and authoritarian rule of kings. In such a monarchy, a representative body of the people was elected to review the king's governance and restrain him from behaving like a despot. The people were also given several rights: freedom of expression and assembly, arrest and punishment only by legal means, etc. This attempt to look for a compromise between the king and the people did bring about a change in the political system. It can be seen as a step towards democracy.

What were the differences that arose between the king and the parliament between 1600 and 1688?

'The king shall not interfere in the election of the members of parliament' – why was this condition imposed?

What do you think may have happened if the members were not free to express their views and opinions in parliament (including opposing the king)?

Should the governance of a state be left to the whims and desires of a king or not? Discuss in class.

In India, Emperor Akbar and Jahangir were ruling the Mughal Empire at this time. If their court had a parliament, like there was in England, would the situation have changed, and how? Discuss in class.

There were two aspects to the evolution of democracy in England. The first was controlling the power of the kings and replacing authoritarianism with the rule of an elected parliament. The second was universal franchise – allowing every citizen to vote. Gradually in the 18th century, the parliament established a council of ministers that was accountable for its work. By the end of the 19th century, even the labour class got the right to vote and, going forward into the 20th century, women could also exercise their franchise. In this way, it took more than 250 years for these changes to take root.

8.2 The Middle Class and its Political Views

One interesting question is: why did it take so long to establish democracy? Equally interesting is the question: why did similar changes take place in European countries after England? Who were the leaders of these struggles and what inspired them?

The leading role in the struggle for democracy was played by the middle class, whose emergence we had discussed in the earlier chapters. In England, this class was made up of big and small merchants who earned a living by trading in different countries. There were also small landowners who tried to earn a profit by selling their farm produce. They were all distressed by the despotic behaviour of the kings and the feudal lords. They wanted a government which would safeguard the interests of the trading class and lower taxes.

Apart from these people, there were artisans, serfs, labourers and others who were fed up with the feudal system. They not only wanted to end the exploitation of the kings and feudal lords but wanted to make fundamental changes in their society to narrow the gap between the rich and the poor and promote equality among all. Many among them even wanted to establish a Republic in which the people would collectively own the productive assets like land and everyone would work for a livelihood.

We can see that there were striking differences in the thinking of the middle class and the peasants and artisans. Although both groups joined hands to defeat Charles I, the poor still had no power after the Glorious Revolution. Take a look at this illustration in a paper published in 1649 (Figure 8.3). The paper says that the people of England cannot be free as long as the poor do not have land and do not have the right to farm their land collectively.

Trade and industry gained importance in the new economic system emerging in England. This increased the clout of people who wanted change. The kings, feudal lords and large landowners in the 17th century could no longer thwart the ambitions of the emerging new socio-economic groups.

“England is not a free people, till the poor that have no land, have a free allowance to dig and labour the commons...”
Gerrard Winstanley, 1649



During those days, the European middle class was deeply influenced by the ideas of the Renaissance, Scientific Revolution, Reformation and Enlightenment. There were many political thinkers who opposed authoritarian rule and enthusiastically supported democracy. Prominent among them were John Locke (born 1632, died 1704) of England and Jean Jacques Rousseau (born 1712, died 1778) of France. Their ideas inspired the democratic thrust of the French and American revolutions.

Figure 8.3: What atrocities do you see the peasants being subjected to in this picture?

John Locke

Locke is counted among the most influential philosophers in the world. He wrote against authoritarianism and in favour of democracy. He criticised the policies of Charles I and James II. He fled England to live in Holland in those days, returning only after Mary II became queen of England in 1688. He helped establish the theory of ‘social contract’ along with other philosophers of his age. According to the theory, people cooperate to establish a state that helps them meet their livelihood needs and protects their individual rights. People’s rights and entitlements are the supreme concern of such a state. The king and his ministers derive their power from the people, hence they are accountable to the people.

Locke suggested that the different functions of the state be separated to protect people from authoritarian rule. He suggested creating three independent divisions – making laws, implementing laws and dispensing justice. In such a system, the parliament would make the laws, the king would implement them and an independent judiciary would dispense justice. This would prevent any one of these three institutions from becoming too powerful. The French thinker Montesquieu (born 1689, died 1755) later established this idea as the theory of ‘separation of powers’.

“All mankind being all equal and independent, no one ought to harm another in his life, health, liberty or possessions.”

What do you think Locke was trying to convey in this quote? Translate it into the language you speak at home.

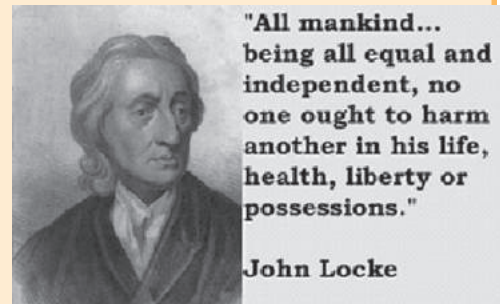


Figure 8.4: John Locke

The constitution of India also separates the powers of the state into three branches – executive, legislature and judiciary. Has this helped to protect the Indian people from despotic rule?

Jean Jacques Rousseau

Rousseau outlined his political thoughts in two books – ‘Discourse on the origin of inequality’ (1754) and ‘On the social contract’ (1762). He believed that humans are naturally ethical and self-controlled when they live in a state of nature.

Rousseau said there was no private property in the beginning and the land and forests belonged to everyone. People worked together according to society’s needs and consumed what they produced. They resolved their problems through dialogue. But with the progress of civilisation, private property, division of labour and inequality began corrupting humans. The rich and powerful people began to enslave others and impose their will on them. They deprived the people of their freedom and rights to perpetuate this inequality.

One of Rousseau’s most famous quotes is: “Man is born free; and everywhere he is in chains.”

He said the only solution to this plight is for all the people to enter into a ‘social contract’, sacrificing the primacy of their natural desires and rights to give primacy to the ‘General Will’. This will is established through collective dialogue and is based on the principles of justice. Giving primacy to the General Will ensures that no individual can be controlled by any powerful or wealthy person. Rousseau’s theory formed the basis of the democratic revolutions in the coming age.

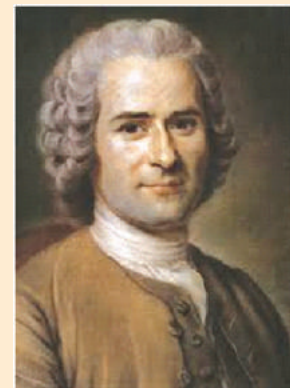


Figure 8.5: Jean Jacques

Rousseau suggested ways to analyse, challenge and overcome social evils and problems. Do you also think about your society? Discuss your thoughts with the class.

In today's world, can any country, village or town make a 'social contract'? If they want to enter into such a contract, what preparations should they make?

8.3 The American War of Independence (1775-1783)

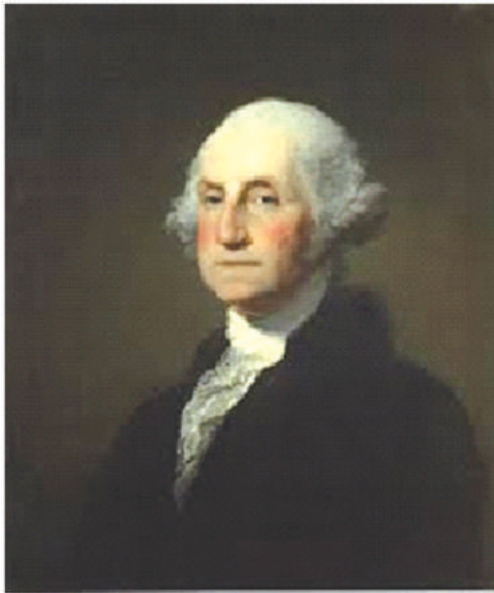


Figure 8.6: George Washington

England established its colonies in North America during the 17th and 18th centuries. They were spread across 13 states. Peasants, artisans, traders and others emigrated in large numbers from England to settle in these colonies. During the 18th century, the English parliament passed laws to govern these colonies. But the colonies did not have the right to send their delegates to the parliament.

The laws made by the parliament and the taxes it levied favoured English traders and merchants, not the people living in the colonies. These people began protesting against this unfair treatment, coining the slogan: '*No taxation without representation!*' The 13 colonies raised the banner of revolt against England in 1744. They organised a joint meeting of their representatives in Philadelphia, which they called the Congress. The Congress petitioned King George III to give the colonies the right to make their own laws. The king saw this

petition as a sign of rebellion and declared war on the American colonies in 1775.

The people living in the colonies decided to challenge England. Their Congress met for the third time in Philadelphia and declared America's independence from England on July 4, 1776. The author of the declaration was Thomas Jefferson. You can read a part of the declaration of independence here:

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain inalienable rights, that among these are life, liberty and the pursuit of happiness.

- That to secure these rights, governments are instituted among men, deriving their powers from the consent of the governed.

- That whenever any form of government becomes destructive of these ends, it is the right of the people to abolish it, and to institute a new government ...

We ... the representatives of the United States of America ... do, in the name and by the authority of the good people of these colonies, solemnly publish and declare that these united colonies are ... free and independent states ... absolved from all allegiance to the British crown.

America won the war against England in 1781, taking the help of France. George Washington, who led the American army to victory, was elected the first president. The United States of America announced a Republican constitution (where people elect the president) that same year. Among the architects of

the constitution was Thomas Jefferson, who was deeply influenced by the ideas of Locke and Rousseau. Their efforts ensured that the American constitution included the rights of citizens, a federal system of government which gave a lot of powers to the states, separation of powers (executive, legislature, judiciary), etc.

How many different languages do the students in your class speak? Translate this English slogan into these different languages: ‘No taxation without representation!’.

Why did the American people feel they were not part of the English nation even though their forefathers had come from England, their language was English and they followed the same religion?

What were the ideas expressed in the American Declaration of Independence that were similar to the ideas of Locke and Rousseau?

Do you agree with the idea that god gave every human being the right to life, freedom and happiness? Discuss in class.

Women in America were not given the right to vote at that time. In those days, people were brought from Africa to work as slaves in the American plantations. They, too, did not have the right to vote. What could be the reason for not giving women and slaves the right to vote? Do you think this was a well-reasoned decision? Tell the class what you think.

Prepare and act a play together. Show how the English king and the parliament must have reacted and what they discussed after the American declaration of independence from English rule and how they must have prepared to go to war with the 13 states of America.

8.4 The French Revolution

The French Revolution from 1789-92 followed the English revolution and the American war of independence. It is considered to be among the events that had the most wide-ranging impact on world history.

Like England, France was an authoritarian state in the 17th century. Here, too, the king followed the practice of taking permission from the representatives of the people before levying a new tax. An assembly called the Estates-General used to be convened for the purpose. French society was divided into three segments or ‘estates’ at the time. The first estate was the Clergy – the priests of the Catholic Church. The second was the Nobility – the aristocratic landowners. The third was the common people - lawyers, traders, artisans, peasants, labourers etc. In terms of numbers, there were very few people belonging to the first two estates (2.5% of France’s population), while the rest (97.5%) were in the third estate.

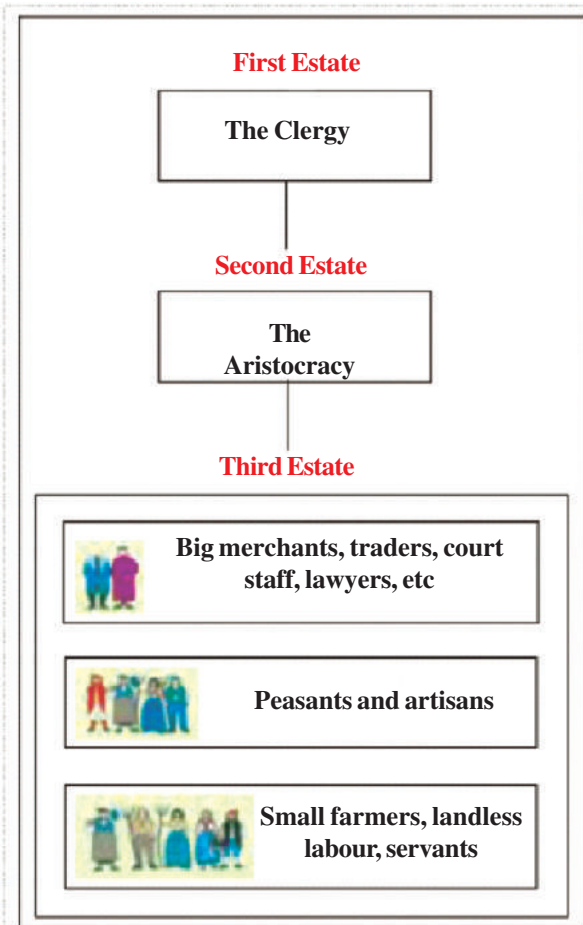


Figure 8.7: The estates system in France

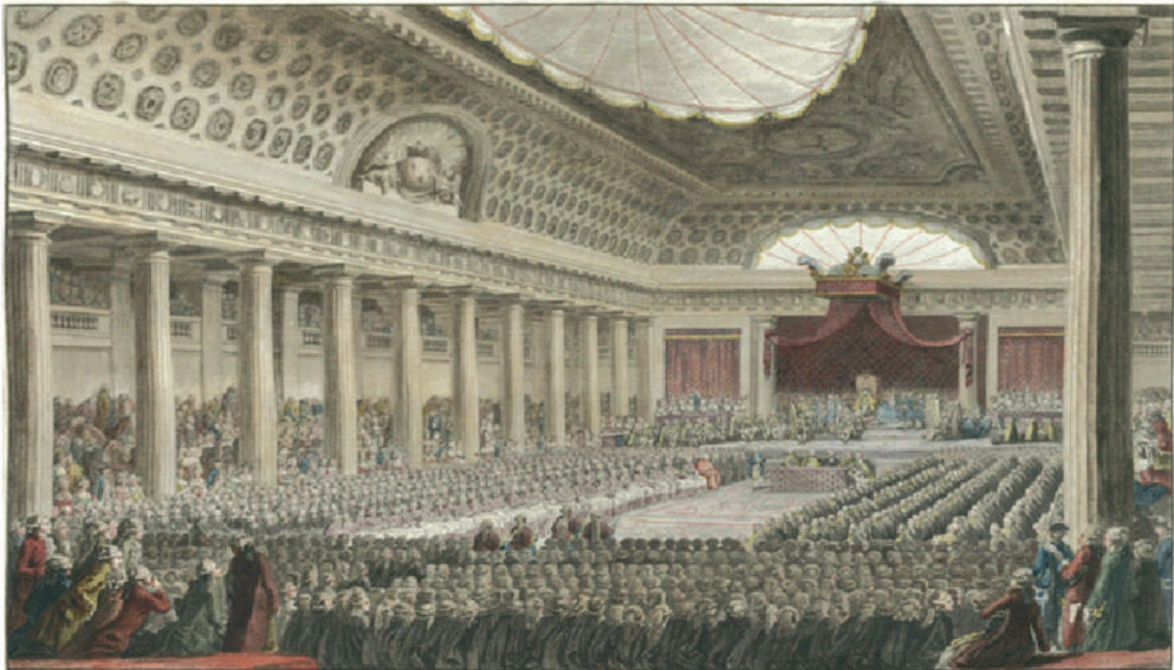


Figure 8.8: A view of the Estates-General. The king is sitting on a throne in the middle. To his right are the clergy and to his left the aristocratic landowners. The delegates of the third estate stand facing the king. Women and other spectators are seated in the galleries. Compare this picture with the scene from the English parliament (Figure 8.2)

The people of the first two estates enjoyed certain legal privileges. For example, they did not have to pay any taxes nor did they have to do forced labour for the crown. The priests also levied tithe or religious tax on the people. Since most of the senior clergymen were from the ranks of the nobles, the interests of the first two estates usually coincided.

Each estate voted as a bloc in the Estates-General. So any proposal that was supported by the first two estates was passed by the assembly. The third estate, which represented 97.5% of the people, could not get any proposal passed unless it had the support of at least one of the other two estates. Thus, while the decision to tax was in the hands of the first two estates, it was the third estate that bore the weight of taxation.

By the turn of the 18th century, the French people were fed up with the despotic behaviour of the authoritarian king and the self-serving aristocracy. The feudal landlords extorted high rents from the peasants and made them pay sundry dues. They also made them do unpaid labour. The king and his officials were constantly trying to levy new taxes, not sparing even items of daily consumption and use. The king would give monopoly rights to sell these daily use commodities to his favourites. They hiked prices as and when they wished.

The French middle class wanted to end feudalism in the country and replace it with a regime that favoured the interests of trade and industry. To some extent, these people were influenced by the democratic ideas of Locke, Rousseau, Diderot and other thinkers. The French soldiers were also fighting in the American Revolution at this time, so the revolutionary ideas from America spread in France.

When Louis XVI was on the French throne, he faced a financial crisis in 1774. The wars the country

was fighting, including helping the Americans, were putting a heavy financial burden on the state. The king failed to resolve the crisis so the only solution left for him was to levy more taxes.

The king called a meeting of the Estates-General and presented his proposal for new taxes. The first and second estates had sent 300 delegates each to the assembly while the third estate had 600 delegates – mostly the wealthy and learned from the middle class. These delegates were elected by the

villages and towns but there was no representation of women, peasants and artisans. Even so, they submitted 40,000 complaint letters listing the problems of their constituencies to the Estates-General.

As we have seen, each estate had the right to one vote according to the rules. But the third estate demanded that voting should be conducted in the full assembly this time, which would give each delegate one vote and strengthen their hand. This was a democratic principle contained in Rousseau's book 'On the social contract'. The king turned down the proposal. The third estate delegates protested and walked out of the assembly.

They believed that they were the true spokespersons of the French people so they announced their own National Assembly. On June 4, 1789, these delegates assembled in the indoor tennis court in the city of Versailles. They swore a pledge that the assembly would continue until it prepared a constitution that curtailed the powers of the king. The National Assembly, now called the National Constituent Assembly, got down to the work of preparing a democratic constitution.

The king expressed his willingness to establish a Constitutional Monarchy. But the aristocracy opposed the new constitution and created obstacles in the assembly because it did not want the feudal system to be dismantled.

At that time, items of daily consumption were becoming so costly that they were out of the reach of the common people. The crops had been badly hit by cold weather and the cost of bread had become exorbitant. One day, an angry mob of women raided the shops in Paris. The king called out the army to control the mobs. Angered, the crowd stormed the Bastille prison, a symbol of the monarchy, on July 14, 1789. The commander of the fort was killed and the prisoners were set free.

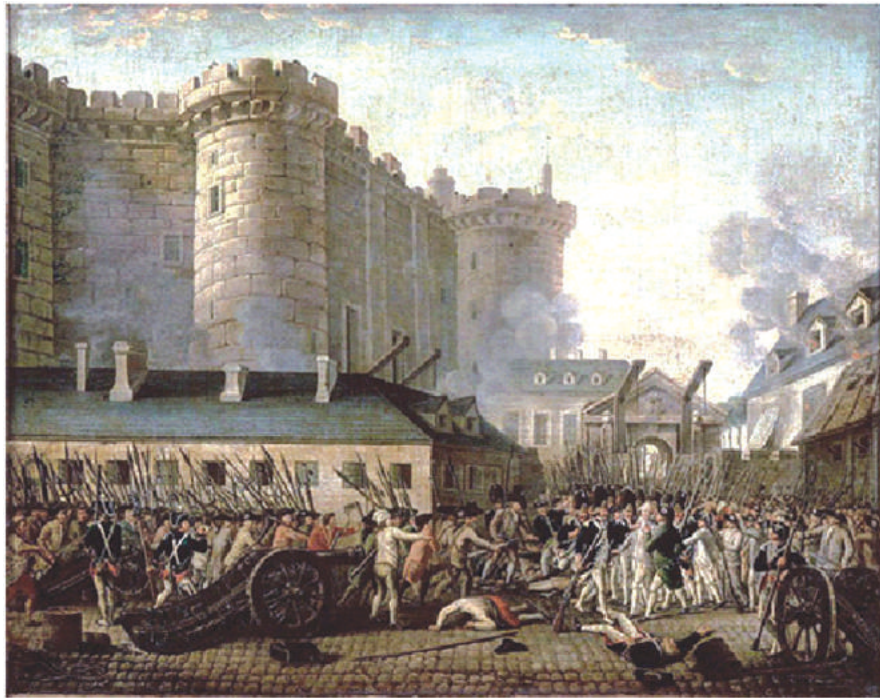


Figure 8.9: The storming of the Bastille by the citizens of Paris in 1789. The French Revolution started with the capture of the fortress. Can you distinguish between the army of the common people and the royal soldiers?

Inspired by the storming of the Bastille, the people in many other towns and cities of France joined the protests and took power into their own hands. The peasants rebelled against the feudal landlords. The rumour spread that the feudal lords were preparing an army to destroy the peasants and their crops. Frightened but incensed, the peasants armed themselves with sickles and spades and invaded the palaces of the landlords. They looted the granaries and burnt the land documents. The aristocratic lords abandoned their estates and fled in large numbers, seeking refuge in neighbouring countries.

The peasant revolt continued from August 4 to 11, 1789. Inspired by its intensity, the Constituent Assembly passed an order to end the feudal system, along with its taxes, duties and restrictions. Many feudal rights and the tithes collected by the church were abolished without compensation. A few months later, the state confiscated the lands of the church and auctioned them. But there was some talk of paying compensation to the feudal landowners for the land their tenants were farming. This angered the peasants who intensified their revolt.

At the same time, work on preparing the new constitution was under way. The 'Declaration of the rights of man and of the citizen' was the first step. The Constituent Assembly approved this declaration on August 26, 1789. Let's take a look at some of the main points in the 17 articles of this declaration.

'Declaration of the Rights of Man and of the Citizen'

'Inalienable right':

a right that cannot be taken away from a person and given to someone else.

1. Men are born and remain free and equal in rights.
2. The goal of any political association is the protection of the natural rights of man which cannot be taken away under any conditions. These rights are liberty, property, safety and resistance against oppression.
3. The principle of any sovereignty resides essentially in the nation. No body, no individual can exert authority which does not emanate expressly from it.
4. Liberty consists of doing anything which does not harm others.
5. The law has the right to forbid only actions harmful to society.
6. The law is the expression of the general will. All the citizens have the right of contributing personally or through their representatives to its formation. It must be the same for all, either that it protects, or that it punishes.
7. No man can be accused, arrested nor detained but in the cases determined by the law, and according to the forms which it has prescribed.
9. The free communication of thoughts and of opinions is one of the most precious rights of man: any citizen thus may speak, write, print freely, (but can be punished for abusing this liberty as determined by the law).
11. A common contribution is essential for the maintenance of the public forces and for the cost of administration. This should be equitably distributed among all the citizens in proportion to their means.
17. Since property is an inviolable and sacred right, no one shall be deprived thereof except where public necessity, legally determined, shall clearly demand it, and then only on condition that the owner shall have been previously and equitably compensated.

What are the kinds of freedom given to man and the citizen in the declaration?

Who can give the right and authority to anyone to rule the people?

The law cannot interfere in some matters. Which are these matters?

What is the process of making laws?

Under what circumstances and by what methods can the freedom of an individual be curtailed?

What was the rule governing taxation in France and what new provisions did the declaration make?

We can see from the title of the declaration that it talks only of 'man'. Up until the 19th century, the democratic thinkers and revolutionaries talked only about the rights of 'man'. They believed that the place for women was in the home and they should not venture into public life. That is why only the rights of 'man' were established in the public sphere. It is also the reason why the French Revolution did not enfranchise (give the vote) women and excluded them from the rights of 'man and citizens'.

Opposition to this viewpoint surfaced in 1791 when many women began to protest against their exclusion. They came out with their own 'Declaration of the rights of woman and the female citizen' but the Constituent Assembly rejected it. The sustained protests of women since then led to women winning citizens' rights, such as the right to vote, in the beginning of the 20th century.

The New Constitution of 1791

The new French constitution curtailed the powers of the king. The powers centralised in the monarchy was separated into the legislature, executive and judiciary. This laid the foundation of Constitutional Monarchy in France. The constitution suggested that priests should be chosen by the citizens. Earlier, priests were appointed by the Pope. Though the king disagreed with the new constitution, he had no choice but to accept and approve it in September 1791.

The constitution states that the source of all power is the citizen. But who is a citizen? All the people living in France were accepted as citizens but not all of them had the right to vote. The state divided citizens into two categories: active and passive. Only the active citizens had the right to vote. They were males aged over 25 years who had paid at least three days wages in a year as taxes.

The passive citizens enjoyed citizens' rights but they did not have the right to vote. They included the poor who were not in a position to pay even the minimum tax, women and all those aged below 25 years. Their number totalled around three million.

There was wide dissatisfaction about such a large number of people being disenfranchised (not given the right to vote). The king and the aristocracy also tried wreck the new constitution. They asked the kings of neighbouring countries to help them against their own people.

Both men and women participated in the French Revolution. So why did women not get the same rights as men?

If both the aristocracy and the poor did not accept the French constitution then who would have found it acceptable?

Between 1792-94

In 1791, the majority of the French people were unhappy with the constitution because it accepted only people with property as active citizens. In those days, people met in political clubs or societies to discuss political issues. These clubs were the predecessors of the political parties of today. The most



Figure 8.10: Robespierre

popular was the Jacobin club. Its members belonged to the less wealthy sections of society. They included shopkeepers, artisans, servants and daily wage labourers. Their leader was Maximilian Robespierre (born 1758, died 1794).

In 1792, the neighbouring countries invaded France in support of King Louis XVI. The residents of Paris were angered by the attack, the scarcity of daily commodities and rising prices. They unleashed their anger in a massive and violent outburst. They attacked the royal palace on August 10, 1792 and imprisoned the king after killing his bodyguards. Fresh elections were held. In this election, all adult males aged over 21 years, whether they owned property or not, were allowed to vote. But women were still not allowed to vote.

The newly constituted assembly, called the National Convention, abolished the monarchy on September 21, 1792 and declared France a Republic (where the head of the government is elected by the people). Louis XVI and his wife Marie Antoinette were declared traitors and sentenced to death.

The sans-culottes – the poor people of France – were now politically active, freed from the pressures of the aristocracy and the middle class. They demanded political and economic equality for all the people and wanted to put a limit on private property and profit. They put pressure on the government to control prices to protect the poor. They wanted their elected representatives to be answerable to the people and wanted people to have the power to remove them if they did not perform their duties. They also wanted citizens to participate in governance and not leave everything in the hands of their elected representatives.

The influence of the sans-culottes was at its peak from 1792 to 1794. They enlisted in large numbers in the French army. They fought against the neighbouring countries to safeguard the revolution and ensure victory for France.

In 1793, the National Convention decided that peasant-tenants would not have to pay their landlords any compensation for getting the title to their holdings. The land of those who fled to neighbouring countries was also seized and divided into small holdings that were distributed among small and medium peasants along with the ownership rights. In 1794, many social welfare schemes were launched, including social security for the poor, pensions for the aged and helpless, child-support allowances for destitute mothers and widows, free medical care for the sick, etc.

A Committee of Public Safety, created in April 1793 under the chairmanship of Robespierre, was given the responsibility of running the government from 1793 to 1794. Robespierre, the leader of the Jacobin club, took control, arresting the enemies of the Republic – the aristocrats, clergy and royalist sympathisers – and sentencing them to death. He controlled wage rates and the prices of bread, flour etc, severely punishing anyone who flouted the rules.

Robespierre exercised such strict control and implemented his policies so harshly that even his supporters were distressed. With so many people being executed as traitors and criminals, this period was labelled the Reign of Terror. Eventually, the court sentenced Robespierre to death in July 1794. After the fall of his government, power again passed into the hands of the wealthy class and royalty and the poor were disenfranchised.

Why were King Louis XVI and his wife Marie Antoinette sentenced to death?**France's Campaign Against the European Kings and its Defeat**

During the French Revolution, the Constituent Assembly had announced in 1792 that France would help to end the monarchies and dynasties of Europe and establish democratic regimes. The French army began a victorious campaign across Europe. The people of all these countries welcomed the French. In 1799, an ambitious general called Napoleon (born 1769, died 1821) took over power in France and established his monarchy in 1804.

Napoleon became a strong ruler. He fought against many countries in Europe and took over their kingdoms, merging them into France. This expansion angered the people of Europe and they were disillusioned with France and Napoleon. The royal dynasties of Europe got together to form a coalition under the leadership of England to oppose Napoleon. The coalition finally defeated Napoleon in 1815 and tried to restore the feudal system across Europe. The old monarchies and landowners began to rule once again and tried to suppress all democratic ideas. These confrontations between the people and their kings continued across Europe. Eventually, France established itself as a Republic in 1891.

8.5 A New Wave of Democratic Nationalism in Europe

The French Revolution (1789-1804) led to a new wave of revolutionary ideas sweeping across the world. One idea was what we call Democratic Nationalism. It is based on the premise that citizens together constitute the nation and the governments should function as per the interests of the nation. Such states are called nation-states. The middle class youth of Europe were enthused by this revolutionary idea and were keen to build their nation-states.

In those days, Italy and Germany were split into many small states. On the other hand, Austrian, Russian and the Ottoman emperors had conquered many different countries and merged them into their vast empires. When nationalistic ideas spread, the young revolutionaries in these small nationalities under the empires were emotionally charged and wanted to unite their own people into nation-states. But the monarchies restored after the Napoleonic era did not tolerate such separatist, democratic tendencies. So the youth formed secret societies to keep their ideas alive.

The ruling kings realised they could not stop the spread of nationalist ideas, which were becoming very popular among the people. The only way for them was to allow nation building but to separate the concept of 'nation' from the concept of 'democracy'. They tried to link the concept of nation to language, culture and religion. They wanted to use nation building to strengthen monarchic rule.

The wars between countries that had been raging for the past several years were changing the political map of Europe. The political leaders and thinkers who played a leading role in these developments included Guiseppe Mazzini, Guiseppe



Figure 8.11: Mazzini launching a secret revolutionary patriotic society called Young Italy in 1833

Garibaldi, Otto von Bismarck, Cavour, Kaiser Wilhelm I, Victor Emmanuel II, etc. Their efforts led to many small kingdoms combining into the nation-states of Italy and Germany under the leadership of King Victor Emmanuel II and Emperor Kaiser Wilhelm I, respectively. Countries like Greece and Poland were also formed as nation-states out of the earlier Austrian empire. You may learn about the efforts of these political thinkers in detail later sometime. But first, let us have some glimpses of the spread of nationalist ideas in Asia.

8.6 Nationalism in Asia

8.6.1 Japan

Japan is considered to be the first Asian country to establish a nation-state. But, interestingly, like in Germany, it was the king who promoted nationalism in Japan.

Japan was ruled by an emperor but, after the 12th century, actual power lay in the hands of the powerful military generals called the Shogun. The Tokugawa family established their Shogunate from 1603 until 1867. During this period, Japan was divided into over 250 feudal provinces that were ruled by the feudal government. But the emperor was a ruler only in name, with the Shogun exercising authority.

The feudal lords lived in palaces and the warriors who fought in their armies were called Samurai. They were paid paddy for their livelihood. They also enjoyed several legal privileges and entitlements.

The peasants in the villages farmed the land of the feudal lords and paid a large portion of their harvest as rent. The rent made up around 80% of the value of the harvest. In addition, the peasants had to do compulsory service for the government, whenever required. They were not allowed to leave their

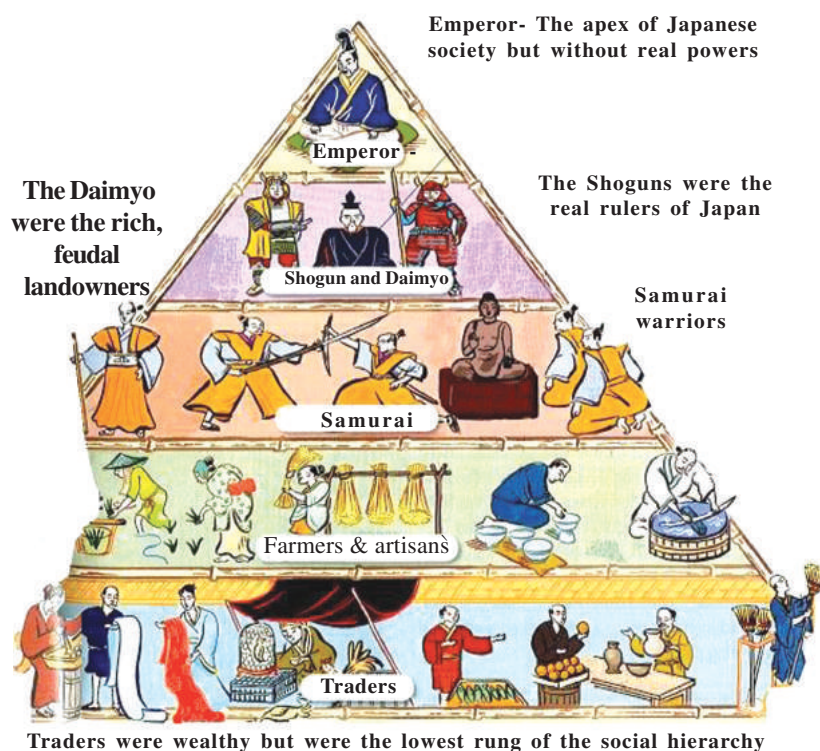


Figure 8.12: The structure of Japanese society

lands and go anywhere without permission. Most of them were forced to take loans from traders at high interest rates to meet their family expenses. The money-lenders were thus able to establish their rights over the land of the tenants. These conditions of indebtedness and poverty led to peasant revolts in the 19th century that shook the foundations of the feudal empire.

The traders and merchants had also emerged as a wealthy class during this period. Even the feudal lords and the Shogun took loans from them when the need arose. But they had little political power or influence.

Compare Figure 8.12 with Figure 8.7. What are the similarities and differences between the feudal system in Japan and France?

Many of the Samurai were able administrators and intellectuals. They came in contact with European merchants and began learning European languages, science etc. This was the class that took up the task of bringing change in Japan.

The Fall of the Shogun and the Restoration of Emperor Meiji

During the 18th and 19th centuries, the Western countries were establishing their colonial empires in India and China. To save their country from this colonialisation, the Japanese Shogun decided to stop all trade with Western countries and sever all ties with them in 1824. But this policy could not be implemented for long. In 1853, America sent Commodore Perry with a naval squadron to negotiate a trade treaty with the Japanese government. Following some minor skirmishes, Japan was forced to sign a treaty with America.

The Japanese people were generally unhappy with the Shogun but their opposition grew after Perry arrived and got the Japanese to capitulate and sign the treaty. In 1868, the Samurais launched an armed rebellion with the help of many feudal lords and rich merchants to overthrow the Shogun. They were victorious and they invited Emperor Meiji to assume power. They believed Japan would unite under the emperor and become a powerful nation that could challenge the Western countries.

The new government took some revolutionary initiatives. At that time, the feudal lords were independently ruling their territories. This system was abolished and a central government was established, with all its officials reporting to the emperor. But the emperor was careful not to annoy the feudal lords too much. He included them and their followers in the new administrative system.

The second important step was to abolish the system of tenancy rents paid to the feudal lords. The state now began to collect the rents directly from the peasants. The feudal lords were compensated with cash pensions. They may have lost their power under the new system but they emerged as a wealthy class because of the generous pensions. They now had a job in the government as well as wealth so they began investing in trade and industry. Japan began industrialising rapidly as a result in the hope of becoming an industrial power.

Another important step was to make all people equal under the law. This initiative effectively put an end to the special rights and privileges enjoyed by social classes like the Samurai.



Figure 8.13: The Japanese emperor 'gifting' the Meiji constitution to the people. What are the European cultural influences that you can see in this picture?

Why was it important to end the autonomy of the feudal lords in order to establish Japan as a modern nation-state?

Do you think this might have improved the condition and life of the peasants?

A Japanese mission visited European countries and America in 1882 to study their constitutions and prepare a report. The constitutional study mission presented its recommendations to the emperor. A committee of experts was set up to draft the constitution. This committee did not hold any public hearings to discuss the constitution or talk to the common people to get their views. The new constitution was promulgated in 1889 and came to be known as the Meiji Constitution. It was basically modelled on the German constitution of Bismarck.

The Meiji constitution stated that it was the emperor's gift to the people – which implied he was gifting power to the people. But it also clearly said that the emperor was supreme and all powers resided in him. Authority was concentrated in the emperor and the cabinet of ministers appointed by him. It also said the emperor will conduct the affairs of the state in accordance with the constitution. It had a provision for an elected parliament but the right to vote was given only to people with property. Moreover, the role of the parliament was limited. The constitution also conferred rights on the people such as equality before the law, freedom of religion, constitutional welfare, punishment only through a legal process, etc. But the right to freedom was limited.

8.6.2 The nationalist movement in India

India was under the control of the British and nationalism in the country evolved to oppose British rule. In 1857, Indian sepoys and some of the subordinate rulers tried to expel the British from the country but they were not successful. The aim of these rulers was to restore the rule of the Mughals and old kings. Around 1880, the emerging middle class began a struggle to make India a free, democratic and modern nation. Unlike Japan, where the emperor took the lead in developing the country into a modern nation-state, the kings of India did not play such a role.

One striking feature of the emerging Indian middle class was that it was made up of people of all castes, religions and regions of India. There were intellectuals like Dadabhai Naoroji and Pherozeshah Mehta, political leaders like Bal Gangadhar Tilak and Gopal Krishna Gokhale, and nationalist patriots like Badruddin Tyabji and Rahmatullah Sayani, Pandita Ramabai, Lala Lajpat Rai, G. Subramania Iyer and Ramasamy Mudaliar, Vamanrao Lakhe, Pandit Sundarlal Sharma, Rash Behari Bose, Madhusudan Das and Joachim Alva, etc. We can see that there were Parsis, Muslims, Christians, Dalits, Brahmins – people from different religions, social classes and regions. In other words, the new middle class represented the whole of India and its different communities. Several British men and women living in India (A.O. Hume, Annie Besant) also contributed to India's political evolution.

One other striking feature of the middle class was that most of its members had been educated in the English education system, so they were aware of and familiar with the democratic and nationalist ideas that were spreading across Europe. They believed that if India wanted to develop into a modern and developed nation, it should first discard the traditional-feudal path and embrace the path of democracy, science and industrialisation. They launched the Indian National Congress in 1885, which met every year to review the country's political situation and to petition the British government to introduce reforms.

Dadabhai Naoroji analysed the economic situation in India under British rule, pointing out how it was impoverishing people day-by-day. Such writings sowed the seeds of nationalism in people. The sprouting

seeds took the form of a mass movement after 1905, with people from all the provinces joining the protest against British rule. There were also underground revolutionary groups who felt that a violent armed rebellion was the only way of freeing the country from the British. They tried to assassinate many oppressive English officials. The most well-known among them were the Chapekar brothers and Khudiram Bose.

The period from 1905 to 1920 was the age of 'Lal-Bal-Pal' (Lala Lajpat Rai, Bal Gangadhar Tilak and Bipin Chandra Pal). Nationalist feelings and ideas spread and developed among the youth under their leadership.

The peasants, labourers, adivasis, Dalits, and women affected by the British policies also raised the banner of revolt. There were rebellions and movements by these groups in many places. These groups were not just fighting against British rule but were strongly opposing the evils of Indian society. They wanted to put an end to exploitative practices such as zamindari, bonded labour, etc and the social discrimination against women, Dalits and others. Many movements were against the caste system and the inequalities embedded in it.

The Role of Gandhiji in the Freedom Struggle

Gandhiji returned to India in 1915 from South Africa, where he was leading a struggle against the South African government for the rights of the Indian community there. He tried to link the nationalist movement in India with the many other movements in the country so that the peasants, adivasis, labourers, women and Dalits would have a voice in the freedom struggle. These social groups began to participate in the mass movement in large numbers.

Gandhiji also propagated the idea of Swarajya or self-rule in which there would be no social discrimination or inequality. He said the objective of the freedom struggle was not just to put an end to British rule but to change Indian society. He was not in favour of a violent revolution. He propagated a new type of protest called satyagraha. This involved convincing the oppressors about the truth and resolve of the objectives of the movement.

The freedom movement strengthened nationalism in India. Even the common people began seeing themselves as part of an Indian nation, binding them to a common destiny. Folk songs, folk tales, art and other cultural forms were used to strengthen this sense of unity and pride in the nation. Despite all attempts of the British, this feeling of nationhood could not be suppressed. People were not ready to accept any compromises or reforms to continue living under British rule. They called for total Swarajya and launched the 'Quit India' movement in 1942.

There were people who were not happy with Gandhiji's leadership of the national movement. They felt its momentum was too slow. They also felt that it did not clearly address issues like ending inequality in Indian society. Many of the younger revolutionaries felt that an armed struggle was the only way to gain freedom from the British.

In the midst of all these different strands of thinking, the country got its freedom in August 1947, after being divided into two nations – India and Pakistan. The leaders of the new nation formed the Constituent Assembly discuss the drafting of a new constitution for independent India. A committee was set up under the chairmanship of Dr B.R. Ambedkar. After three years of deliberation and consultation, the constitution was finalised and announced in January 1950.



Figure 8.14: The Dandi march

The new constitution declared India as a Democratic Republic. It said the state would work to ensure equality, freedom and justice to all and promote brotherhood among its citizens. The apex body of the nation-state would be a parliament of people's representatives elected by all adult citizens aged above 21 years. It would have the authority to make laws and levy taxes and the government would be answerable to it. The constitution also guaranteed various freedoms and rights for all citizens. In this way India became a modern, democratic nation-state.

The people of a vast and diverse country like India united under the emotional pull of nationhood. What are the factors that promoted this feeling of nationhood? Discuss in class.

EXERCISES

1. What steps did the parliament of England take to end authoritarianism?
2. Who was the main architect of the American constitution? List the special features of this constitution in your own words.
3. You have read about England, America and France. Which country do you associate with the following:
 - a. The king still had residual powers after the revolution.
 - b. The slogan: 'No taxation without representation'
 - c. 'Declaration of rights of Man and citizen'.
4. What were the main features of the relationship between the Tokaguwa Shogun and the Japanese emperor?

5. What do you understand about the concept of satyagraha? Write in your own words.
6. How did the English parliament control the monarchy's right to levy taxes?
7. Rousseau believed that private property corrupted human society and robbed humans of their freedom. What reasons do you see behind this argument?
8. What were the factors that led to the American Revolution? Explain in your own words.
9. In what ways was the French declaration of rights similar to the American declaration of independence?
10. What was the attitude of the French revolutionaries towards women that you find reflected in the Declaration of Rights of Man and Citizen?
11. We talk about fundamental rights in India today. How did they emerge during the French Revolution?
12. What was the role of the poorer classes, especially the peasants, in the democratic revolutions of the different countries discussed?
13. What is the difference between Indian and Japanese nationalism? Write in your own words.
14. What changes occurred in Japan after the re-instatement of the Meiji dynasty?
15. What was the main reason for India's freedom struggle picking up momentum after Gandhiji's return from South Africa? Discuss in class.
16. What difference do you see in the following table between India and other countries on the issue of the right to vote for all adult men and women?

Country	Men	Women
England	1918	1928
America	1862	1920
France	1875	1944
Germany	1871	1919
Italy	1912	1945
Japan	1925	1946
India	1950	1950

9

The Industrial Revolution and Social Change (1750-1900)

You may have seen and heard about factories established in your area. Your relatives and acquaintances may also be employed in these factories.

There are many small enterprises in Chhattisgarh that produce rice, kosa textiles and other products. Kurud, Mahasamund, Tilda-Newra, Nawapura, Rajim, Bhatapara, Dhamtari, etc are places with many rice mills. There are many big factories in the state as well – for example, the Bhilai Steel Plant (where iron and steel are produced), the aluminium plant in Korba and the cement factory in Baloda Bazar.

Many new factories have been set up in the last few decades. Villagers are leaving their farms to work in these factories to earn their living. We see many products manufactured by these factories in the markets.

We learnt about the different types of industries and the products they manufacture in class VII.

Tell the class about the factories or mills that you know about.

Industrialisation is the process of establishing factories, using industrial products in our daily life, and people leaving villages to work in factories in the cities. We can see this process happening in our state. It changes our lifestyle, our way of thinking and our surroundings in fundamental ways. But factory production was not always part of our lives. It started in Britain in the 18th century.

9.1 The Industrial Revolution

Britain went through many industrial and economic changes between 1780-1850. This period is known as the ‘first industrial revolution’. We call such change a revolution because Britain’s economic system and British society were transformed within a span of a few decades. The growth in human productivity was unparalleled. It changed every aspect of the people’s lives. It had many other far-reaching effects on Britain. Subsequently, Germany and the United States of America also went through this process of change. The impact of these changes was felt by the economies and societies of all the countries of the world.

The first phase of industrial development in Britain began with the invention of new machines and techniques. They made it possible to produce goods on a scale that was impossible in the cottage handicraft and handloom industries. Industrialisation made some people very wealthy. But many lakhs

of people had to work in harsh and unsafe conditions at very low wages during this initial phase. They included women and children. The pitiable working conditions caused wide discontent among the people and led to mass movements for social change. As a result, the British government had to pass laws to regulate the working conditions of industrial labour.

9.1.1 The Beginnings of Industrialisation

Industrial production began much before factories were established in England, Europe and India in the 17th and 18th centuries. In those days, the demand for textiles, iron implements and other goods was growing in the markets around the world. Merchants living in towns and cities wanted to meet this growing demand. They gave advances to peasants and artisans in villages to produce these goods. The artisans were contracted to produce the goods only for them and within a specified time. When the merchants wanted to increase production, they contracted more artisans. Historians call this phase of industrialisation as 'proto-industrialisation'.

In proto-industrialisation, the merchants lived in the city but the goods were produced in the village. This system of production became part of a world wide trading network. The merchants controlled the production and the artisans produced the goods in their homes, not in factories. Each merchant had scores of artisans working for them. In this way, a large number of people became involved in industrial production, international trade and monetary transactions.

In the class VII social science textbook you learned about a similar production system in Chhattisgarh. Try to recall what that system was and discuss its special features in class. Were these village artisans also linked to an extensive market system?

9.1.2 The Industrial Revolution in Britain

The first factories in England were established during 1730-40. But it was only towards the end of the 18th century that the number of factories began to increase rapidly. In factory production, the goods were produced under one roof in the cities instead of the homes of artisans in the villages. So there was mass production of goods. This required capital and labour. It also required demand for the goods in the market. Britain had rich merchants who provided the capital. There was good demand in the market. Labour to work in the factories was available from the villages and towns. New machines were also invented to produce more goods in less time.

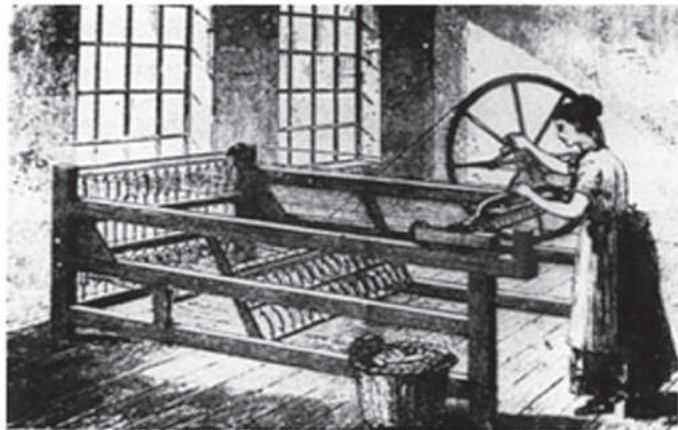


Figure 9.1 The spinning jenny was a new invention to spin cotton faster. It had many spindles in a frame that could be worked by a single worker. What power is being used to run the machine?

Inventions and Factories

In the 18th century, around 26,000 inventions were patented to step up production and improve productivity. As labour productivity rose, the quality of the goods also improved. These changes occurred most rapidly in the textile industry. Richard Arkwright created the modern factory system for textile mills. Until then, cloth was woven on handlooms in the homes of hundreds of weavers in the villages.

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But now all the processes were centralised under one roof of the factory, which was owned by a single manufacturer. The production process and the labour could thus be monitored. This ensured the quality of the textiles produced. All this was not possible when production was dispersed in individual homes in villages. Machines were also invented for every step of the production process.



Figure 9.2 In a factory, the production process, quality of the product and the workers can be monitored

How did ‘proto-industrialisation’ help in establishing the factory system?

Why was it necessary to set up factories to use the new machines?

Iron and Steel

Have you visited any steel mill in your state? How is the production done in the mill? Find out and discuss in class.

Why is good quality iron/steel required to establish a factory?

What are the differences between wood charcoal and coal?

There were many problems in making the machines needed in the factories. The machines had to produce goods on a mass scale so they had to be made of strong and durable steel. Fortunately, England had rich resources of coal and iron ore, which were needed to produce the steel to build machines. In addition, other metals used by industries, such as lead, copper and tin were also available in plenty.



Figure 9.3 A view of the Colebrookdale industrial area showing the blast furnaces, wood charcoal furnaces and a horse-drawn railway carriage. (A painting by F. Vivers dated 1758)

But until the 18th century, England did not produce good quality steel to build machines. In those days, wood charcoal was used to smelt the ore. But wood charcoal did not produce very high temperatures and was not easily available. So the iron produced in England was of poor quality.

A family of iron-mongers named Abraham Derby began conducting experiments in iron smelting in the early 18th

century. Over three generations they introduced some revolutionary changes in the process. The most important change was using coke instead of wood charcoal in the blast furnace. The iron smelted from such furnaces was of better quality. It could be used to produce long castings that made it easier to manufacture many kinds of iron goods cheaply.

Since this steel was stronger and more durable, it could also be used to build machines. In addition, it was a better alternative than wood to manufacture rails and other products - wood burns and wears out faster. The physical and chemical properties of iron could also be controlled.

In this way, the industrial revolution that began with the textile industry, now focused on making machines with iron and steel. Larger quantities of iron ore and coal were mined and new factories sprang up close to the mines. But it took two other important developments to stabilise the Industrial Revolution.

i. The Sources of Energy

In the 17th century, human or animal power was used to run machines. The energy of rapidly flowing water in rivers was also converted by water wheels. But these sources of energy were not sufficient to run heavy machines throughout the year. The use of steam power was a revolutionary development. People did know about steam power but it was James Watt (born 1736, died 1819) who invented a steam engine that could be used as a prime mover (primary source of power) to run the machines in a factory. By the end of the 18th century, Watt's steam engine replaced human/animal power and the energy of flowing water (water wheels).

What energy is used to power factories today? How is this energy produced?

Why is industrialisation not possible with animal power or the energy of flowing water?

ii. Transport

Industrialisation and the expansion of trade required different modes of transport to carry the large quantities of goods produced from one place to another. Initially, a network of canals was built to carry goods cheaply by boats and ships. The next development was laying railway tracks on which carriages could carry goods. Initially, the rails were made of wood and the carriages were pulled by horses.

Two developments helped the railway network to spread rapidly. The first was the use of the steam locomotive instead of horses. George Stephenson built the first steam locomotive in 1814. Second was the use of iron rails to replace wooden rails. Rail transport now became available throughout the year. It was also cheap and fast and could carry both goods and passengers. This helped usher in the second phase of the Industrial Revolution.



Figure 9.4 A view of a railway factory, The Illustrated London News, 1849

What is the difference between setting up a factory and laying a railway track?

The number of factories multiplied with the use of steam engines. By the beginning of the 19th century, factories became a part of England's landscape. The huge factories and the power of the new technology were truly awe-inspiring. But, in spite of the spread of factories and machines, the total production of goods by artisans was still much larger than factory production until the middle of the 19th century. But factory production slowly began playing a decisive role in the economic system as artisan production continued to decline.

9.1.3 Why did the Industrial Revolution happen only in Britain? Why in the 18th century?

Britain was the first country to industrialise. What were the conditions in the country that made modern industrial production possible and why during this period? This question has been widely debated. Historians believe that such far-reaching changes cannot happen if the social, economic and political conditions aren't favourable. Let us examine this mix of enabling conditions that made it possible for Britain to industrialise in the 18th century.

1. The Political Situation

Britain was politically stable during the 17th century, with one king ruling over England, Wales and Scotland, its three constituents. This meant there was a single law, single currency and single market system for the entire country. The unification of systems benefited trade. The government removed or reduced many obstacles to the growth of trade and industry. But it did not invest in industry. What it did was levy additional duties on goods from other countries. This made imported goods costlier than British goods. So British industrial and agricultural goods were protected against competition and people preferred buying them because they were cheaper.

Such protectionist duties continued up to the 1840s. After 1846, the government began reducing these duties, levying the same duty on both imported and exported goods. This is known as a free trade policy. Under such a policy, the government does not interfere too much in the economic system and private capitalists are given greater freedom. Britain could introduce such a policy because industrialisation had made British goods so cheap that the country no longer feared competition from other nations.

India also imposed high protectionist duties on foreign goods from 1947 onwards. But after 1990, the protectionist duties were reduced to a minimum. Ask your teacher about this change in policy and why it happened. Discuss in class.

2. The Domestic Market

In industrialisation, the mass production of goods requires a big market to sell these goods. Let us see how Britain developed this market.

Britain was politically unified and had a centralised administration from the 16th century. So it could establish a unified economic policy for the whole country. The local feudal lords and officials could not interfere in the market economy like they used to do earlier – for example, they could not levy a tax on goods passing through their territory. The whole country had a single tax, weights and measures and currency system. This made it easy to trade across the country. Hence, internal trade expanded rapidly.

By the end of the 17th century, Britain was using currency widely for daily transactions. Earlier, most transactions were done by exchanging food-grain or goods (barter system). But as trade expanded,

wages, land rents, taxes etc were paid in cash. Another important reason for this shift was the commercialisation of agriculture. Farming was no longer done just to meet household needs but to sell farm produce in the market for a profit. Hence, cash transactions became common in rural areas as well. As a result people could exercise greater choice in buying goods with their money. So the demand for goods grew and the markets expanded.

If different provinces of a country have different weights and measures, what problems could it cause for trade?

If each province has its own currency, what difficulties would traders face?

Have you come across any example of barter of goods in your city or village? Tell the class about these examples.

How does currency help in expanding trade?

3. Commercialisation of Agriculture and Agricultural Revolution

Trade in food-grain, meat and cotton began expanding in Britain from the 15th century. Many tenant farmers began producing for the market. The profits of these farmers grew in the 17th century as prices rose. The landowners now began showing an interest in agriculture. They evicted their tenants, hired labour and began managing their farms themselves. They bought more land from neighbouring farmers and encroached on the village commons (pastures) to create huge landholdings. They also introduced new farming techniques and began commercial sheep rearing to maximise their profits.

This huge economic change happened in Britain during the 18th century. It is called the Agricultural Revolution. It had one distressing outcome. The peasants who were tenants of the landowners and the shepherds who grazed their sheep in the village commons lost their livelihoods. They were forced to look for other livelihood options.

The agricultural revolution benefited industrialisation in two ways. First was the commercialisation of agriculture, which increased the production of food-grain and meat and raw materials like wool. The second was the exodus of peasants and shepherds from the villages to the factories in the cities as industrial labour.

How much of their agricultural produce do farmers in your area sell in the market and how much do they retain for household consumption? Discuss in class.

Who reaped the benefits of increased agricultural production during the agricultural revolution in Britain?

4. International Trade and Colonisation

By the end of the 17th century, British merchants were trading in China, India, Africa, America and other countries. They were also politically active in these countries. As a result, Britain accumulated considerable wealth and capital. The merchants got cheap cotton, food-grain and other produce from the American colonies. In exchange, the colonies purchased the industrial goods manufactured in Britain. The British cities like London became international trade hubs. Many financial institutions such as banks were established in these hubs. They provided finance for new economic projects. The spread of such facilities helped Britain to establish more factories.

How does a bank provide capital for setting up a factory? Where does it get this money?

What kinds of factories were set up in Britain that got their raw materials from the colonies?

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Industrialisation requires adequate capital to set up factories and sell the output for bigger profits. This money could belong to an individual or it could be the money of many people in financial institutions like banks.

The second requirement for industrialisation is a market for the goods produced. People should be willing to buy these goods. They should also be easily available to the buyers at the minimum cost. So there should be market demand for the goods and buyers with cash to pay. In addition, the government should not levy heavy taxes on the goods and there should be transport facilities to reach the goods to consumers in distant markets as cheaply as possible.

The third requirement for industrialisation is the availability of workers who are willing to work at low wages because they have no other livelihood options other than factory labour. The fourth requirement is a regular supply of cheap raw materials.

Industrialisation in Britain made it possible for the country to expand its international trade and establish its colonies.

Wealthy landowners and wealthy merchants – which of these two would be willing to invest capital in industry? Why?

The village peasant and the daily labourer in the city – which of these two would buy all the goods they need from the market?

From what you have read till now, which raw materials do you think Britain needed for its industrialisation? How were the raw materials supplied?

9.1.4 The Working Class and Industrialisation

As more factories were established and more mines were opened, there was an exodus of people from the villages to the cities in search of employment. The chances of getting jobs were higher if they had contacts – friends or relatives – working in a factory. But those who did not have such contacts had to wait for weeks to get work. There were many such people looking for work. They slept under bridges or in night shelters. The police also put up temporary shelters for them. Even those who got

work lived in filthy tenements without any civic facilities. Sickness and epidemics were common. Because of sickness and poverty, the average lifespan of workers was very low.

Production in many industries was seasonal. Hence, workers were laid off for long periods. Some of them would return to their villages in summer when farm work was available. But most of them remained in the cities, living on the streets and looking for whatever small jobs were available.



Figure 9.5 'Houseless and hungry' – a painting by Samuel Luke Fildes, 1874. Homeless people standing in line, heads bowed and sad, to stay overnight in a workhouse in London. It was considered a disgrace to stay in a workhouse

Towards the beginning of the 19th century, wages increased but they were still too low to meet the rising cost of living. The average daily wages of the workers depended on the prevailing wage rate as well as the period of employment. By the middle of the 19th century, around 10% of the urban population lived in dire poverty even in the best of times. In times of economic depression, the unemployment rate would climb to 35% - and even 75% in some regions. Food riots often broke out during these times.

The workers resented the new technology and mechanisation that reduced their employment opportunities. Very often, they tried to destroy the machines, blaming them for displacing workers from their jobs. First, they targeted machines in factories but soon they began wrecking even the newly developed agricultural machinery like threshers.

9.1.5 Women and Child Labourers

The industrial revolution changed the kind of work that women and children did. Earlier, rural children used to work at home or in the fields under the watchful eye of their parents or relatives. The kind of work they did depended on the seasons. The women worked in the fields, grazed cattle, collected firewood or spun yarn on spinning wheels at home.

During the industrial revolution, women and children began working in factories. The work was quite different from what they did earlier. They now had to do repetitive tasks for long hours under harsh conditions. They were strictly supervised and lived in constant fear of punishment.

Women and children had to work to supplement their family income because the men did not earn enough to meet the daily needs. With mechanization, there was less use for skilled labour. The industrialists preferred employing women and children rather than men for the less skilled work.

Large numbers of women and children were employed in the cotton textile mills of Lancashire and Yorkshire. They were also employed in the silk weaving and lace making industries as well as the metal industries of Birmingham.

The agile fingers and shorter height of children were particularly suited to operate the cotton spinning machines. Also, the textile machinery was closely packed in the mills so it was easier for small-sized children to operate them. That is why mills preferred to employ children. They had to work long hours and got little chance to breathe fresh air. They worked even on Sundays, when they were made to clean the machines. Accidents often occurred – their hair would get caught in the machines or their hands would be mangled. The long hours tired them so much that they often fell asleep on the job, meeting their death by getting entangled in the machines.

The coal mines were also dangerous places to work in and workers suffered many injuries. The tunnel roof often caved in and gas explosions were common. The mine owners used to send children to inspect the deep working face of the coal seams in the mine, which were too narrow for adults. They were even made to carry heavy loads of coal on their backs and haul coal-laden wagons.



Figure 9.6 Children working in a mine

The factory owners were keen to employ children because they grew up to become skilled workers. Most of the factories employed children aged 10 to 14 years. Work made women financially independent and boosted their self-respect. But these gains were offset by the appalling conditions in which they worked. Pregnant women faced serious problems and often delivered still born babies. Since they did not get the time to take care of their infant babies, infant and child mortality was unusually high among the workers. Women were forced to live in filthy and appalling hovels just to be near their factories.

What kind of work do women do in factories today? Is it legal for children aged below 14 years to work?

How many hours do workers work in factories every day these days?

Women worked 12 to 16 hours every day during industrial revolution and became financially independent.

What impact do you think this had on their status in their families?

9.1.6 Working Class Movement

Industrial workers used to give vent to their anger at their terrible working conditions in spontaneous protests that were often violent. But when they saw no improvement in their working conditions, they began to adopt more organised ways of protest. The workers of different industries formed their organised groups to collectively bargain with the factory owners. These organisations developed into labour unions or associations. The workers also set up mutual aid societies to help sick and unemployed workers. They contributed small donations to run these cooperative societies.

The workers were mostly inspired by the republican ideas of the French Revolution and the Jacobins. They were also influenced by socialist ideology. They began to demand democratic rights and economic and political equality for all.

A movement called Luddism developed between 1811-17. Named after an imaginary or real ‘general’ Ned Ludd, it was essentially a protest against mechanisation, which was robbing people of their livelihoods. Today, ‘Luddite’ is a generic term for people who oppose technology and machines. But the Luddites had a much broader agenda that included a minimum wage, regulation of women and child labour, jobs for workers displaced by newly invented machines, and the right to form trade unions and associations to fight for their demands. The parliament responded by trying to suppress the workers. It passed a new law that prohibited people from protesting against state policies.

But the flow of democratic ideas could not be stemmed and this oppressive law was withdrawn in 1824-25. From 1832, right to vote for parliament was gradually thrown open to other social classes. After 1819, laws were formulated to regulate child labour and limit working hours.

Was industrialisation a curse for the workers or a way of escaping from the clutches of feudal landowners? Discuss in class.

9.2 The Industrialisation of Germany

Britain’s industrial revolution changed its economy in significant ways. It was Europe’s first industrial revolution. It helped the nation to establish its political and economic might. Other European countries sought to follow its example and began industrialising their economies. However, the political situation in these countries in 1830 did not encourage industrialisation. For example, Germany and Italy were divided into a number of smaller states.

But by 1871, these countries unified into constitutional monarchies, creating more conducive conditions for industrialisation. France had also become a democratic republic.

Two obstacles still stood in the way of speeding up their industrialisation. The first problem was that it was difficult for them to compete with Britain, which had industrialised strongly and captured the international market for industrial goods. In fact, it was almost impossible to break Britain's monopoly in the textile industry. The second problem was that these countries did not have a strong capitalist class with capital and experience.

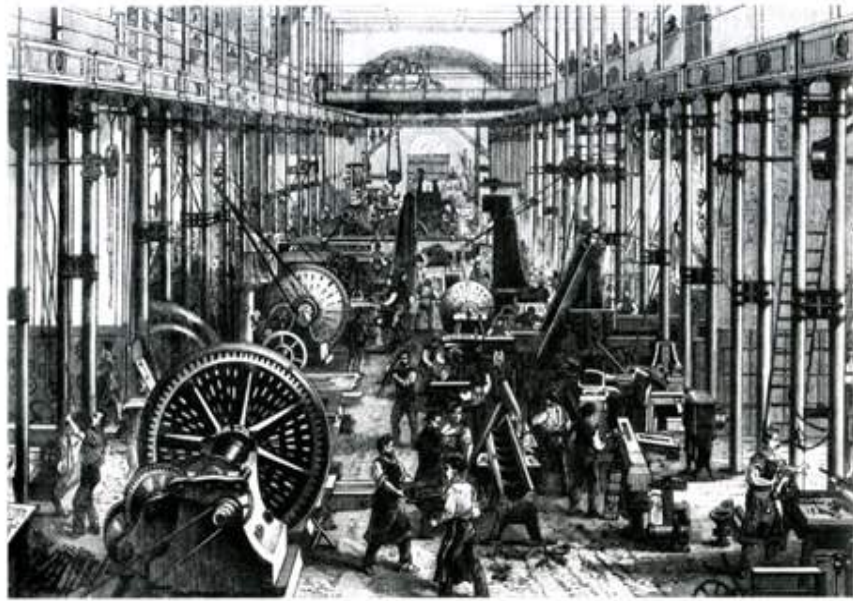


Figure 9.7 A heavy machinery factory

Let us see how Germany addressed these two problems. At the time of the French Revolution, the country was divided into more than 300 small states. After the defeat of Napoleon in 1815, when European countries were reorganised, Germany was left with about 39 states. Soon these 39 German-speaking states formed a loose federation. The most powerful among them was Prussia. It tried to forge the federation into a single unit under its political umbrella.

One of the steps Prussia took was to form an economic union in 1834. It reduced tariff barriers to trade and reformed its currency system. It also tried to end the control of the feudal landowners over the economy. It abolished the feudal practice of serfdom and carried out land reforms. The tenant peasants were freed from the clutches of the feudal landowners.

The unification of Germany in 1871 led to the setting up of large factories and the opening of new mines. Large numbers of unemployed people found work in these new enterprises. The feudal landlords also became enterprising farmers, adopting modern agricultural practices. As a result, agricultural production rose and they sold their produce in the national and international markets.

As pointer out earlier, Germany had to compete with Britain to industrialise and become powerful. The German rulers focused on those industries that Britain had not developed. In those days, there were three new areas of industrial development. These were the chemical industry, the heavy machinery industry and the electricity industry.

The chemical industry produced synthetic fertilisers, synthetic dyes, pharmaceuticals, photographic chemicals, plastics, synthetic fibres and new types of explosives. The heavy machinery industry manufactured industrial machines. The electricity industry was developing rapidly with the invention of new equipment powered by electricity. Among the foremost inventors of the time was the American inventor Thomas Alva Edison. In addition, around 1850, the railways and steamships also emerged as important areas for capital investment.

The German industrialists chose to develop these new areas to compete with Britain. But unlike textiles and cotton mills, the new industries required heavy capital investment. Germany did not have

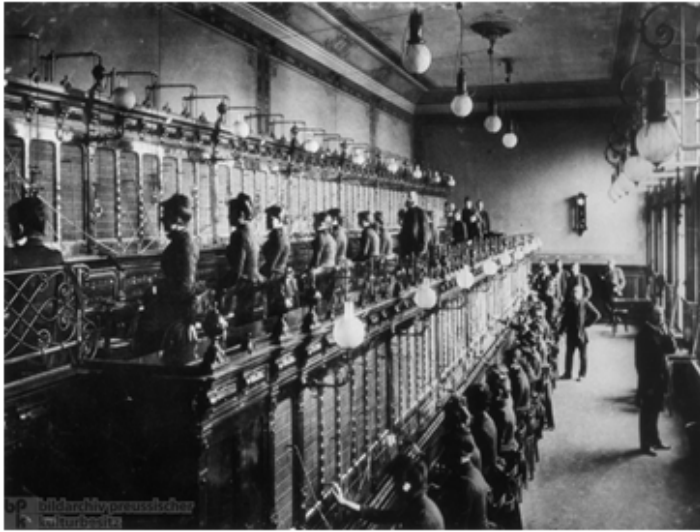


Figure 9.8 Women workers in a factory powered by electricity

such wealthy capitalists. This is where the German government stepped in with large capital investments. It created a vast railway network in the country and invested in opening mines.

The next initiative was to open schools, universities and technical institutions. The research conducted in the universities was linked to the requirements of industry. The technical institutions were also linked with industry to ensure that their students acquired knowledge and skills required by factories.

The German state established a tax regime in which the products of other countries imported into Germany faced high protectionist tariffs while the tariff on goods exported from Germany were low. These policies protected German industry from international competition. The growing power of its unified economy led Germany to establish colonies in Africa and Asia.

In this way, the German state played an important role in the country's industrialisation. This was quite different from the role played by the British state in Britain's industrialisation.

What were the differences in the role of the state in the industrialisation of Germany and Britain?

Why do you think the feudal landowners and the emperor supported and encouraged industrialisation?

The German capitalists introduced many institutional innovations to face international competition and make up for their lack of capital. The large banks played a central role. Even more important was the formation of cartels - unified trade associations. Each cartel included all the companies in a particular industrial sector. Their members had to follow certain mutually beneficial rules. By joining hands instead of competing with each other, the companies could keep the prices of their products high.

By 1900, Germany had captured 90% of the market for synthetic dyes. The synthetic chemicals industry helped establish the pharmaceutical, photographic chemicals, plastics, synthetic fibre and explosives industries. Germany's production of chemicals was 60% higher than Britain's. The German electricity and steel industries also saw rapid progress during this period.



Figure 9.9 Emperor: I, too, am with you.

Socialist worker: Okay brother. But first remove your crown and then join us.

(From an 1890 edition of the satirical magazine *Punch*, published from London)

9.2.1 State Socialism in Germany

Labour in Britain had to work in adverse conditions during the industrialisation of the country. Germany faced a similar problem while industrialising. Labour movements sprouted here as well. The workers adopted socialist ideologies and sought to launch a social revolution.

The German state took steps to control the situation. First, it instituted compulsory – and free - primary education to ensure all children were educated. Royal technical education institutions were also set up where free education was given for those who wanted to become skilled workers.

The most important step was bringing in labour welfare schemes such as old-age pensions, and medical and accident insurance. These welfare facilities were run jointly by the state and the factory owners. They ensured that the workers could live with respect during their service, after retirement, or when they were sick or injured.

These initiatives helped the state to control the labour movements. Since it the state itself implemented the socialist demands, this policy was called ‘State Socialism’. (see figure 9.9)

9.3 The Social Impact of the Industrial Revolution

1. Dependence on industry for livelihoods: The industrial revolution led to many important social changes. One far-reaching change was that people moved out of agriculture to work in factories in the cities. The peasants became industrial workers. They totally depended on industry for their livelihood. The population of industrial towns grew rapidly. In Britain and Germany, only 1-2% of the population are cultivators today. The rest work in industry or in the service sector. These countries no longer have any small peasants.

2. The birth of industrial capitalism: Industrialisation marked the birth of industrial capitalism. Economic power was concentrated in the hands of a few people. Society was divided into two classes. One class was the workers. Their only possession was their labour, which they sold to the factory owners to earn a livelihood. They got meagre wages in return. The second class was the capitalists and landowners. They took risks to invest their money to set up factories. But they also claimed all the profits. Their capital grew over the years and the workers became totally dependent on them.

3. The market-oriented economy: One fundamental problem in a market-oriented economy is that the factory owner does not know whether his products will sell in the market. The market often becomes dull for various reasons and the products don’t sell. It could be because more goods are produced and supplied to the market than it needs, or because the people don’t have enough money to buy the goods. When this happens, the factory owner suffers a loss and is forced to stop production and lay off workers. This creates the problem of unemployment.

4. A constant effort to reduce input costs: The capitalists constantly try to reduce the cost of production so that they can sell at a lower price than their competitors. There are many ways of reducing the cost of production. For example, new kinds of machines or production systems can be introduced that produce more goods with fewer workers. Or cheaper raw materials can be used or new sources of raw materials can be explored. Or else, a new product can be introduced to substitute for a conventional product. This is the defining feature modern industrial production - technology and production processes are constantly changing. Many workers are laid off because of technological changes and new machines. These unemployed workers have to look for other jobs.

9.4 De-industrialisation and the Beginning of Modern Industrialisation in India

Between 1500 and 1750, that is before Britain industrialised, India had a flourishing textile industry. Indian weavers wove high quality fabrics that were in high demand in the international market. European traders first ventured into India to profit from this trade in Indian textiles. Seeing the growing demand, Indian artisans and merchants stepped up their production. The East India Company established its rule in India to corner this trade and establish its monopoly. Let's examine what impact this new regime had on Indian industry.



Figure 9.10 A weaver working on a handloom in Bengal

9.4.1 What happened to the weavers?

The demand for Indian textiles did not decrease after the East India Company established its rule in 1760. At that time, the British textile industry was yet to develop. Also, there was heavy demand for fine Indian textiles in the European markets. That is why the company was keen to expand its exports of Indian textiles. In 1772, an officer of the East India Company Henry Pathula said that the demand for Indian textiles would never decrease because no other country in the world made such fine textiles. But exports of Indian textiles began to fall steeply from the beginning of the 19th century. In 1811-12, cotton textiles made up 33% of the total textiles exported from India. In 1850-51, the figure was only 3%. How did this happen and what impact did it have?

When textile mills were established in England, the British industrialists complained about textile imports from other countries. They put pressure on their government to levy an import duty on imported textiles so that the textiles produced in Manchester could sell in the domestic market without facing competition. They also put pressure on the East India Company to sell English textiles in the Indian market. As a result, exports of British textiles rose dramatically towards the beginning of the 19th century.

This created two problems for Indian weavers. Their export market shrank and so did their Indian market. The textiles produced in Manchester flooded the Indian market. The local weavers could not compete with these cheap, mass produced cotton textiles. By 1850, stories of the sad plight of the helpless weavers could be heard across all the textile producing regions of India.

In the decade after 1860 a new problem arose – Indian weavers could not get cotton to weave because all the cotton from India was exported to the Manchester textile mills. But the death knell for the Indian weavers and artisans was sounded when Indian mills and factories began producing textiles and other goods around this time. How long could the local weaving industry hope to survive after the entry of locally manufactured textiles in the domestic market?

What do you think the weavers did to earn their livelihood after their textiles stopped selling in the market?

9.4.2 The Growth of Factories in India

The first textile mill in India was established in Bombay (now called Mumbai) in 1854 and it began production two years later. By 1862, Bombay had four mills with 94,000 spindles and 2,150 looms. At the same time, jute mills were opening in Bengal. The first jute mill was established in 1855 and a



Figure 9.11 Women workers engaged in spinning in a mill in Ahmedabad



Figure 9.12 A jobber

second followed seven years later in 1862. In North India, the Elgin mill was established in Kanpur in the decade of 1860. Within a year of its opening, Ahmedabad (now known as Amdavad) got its first textile mill. The first spinning and weaving mill in Madras went into production in 1874. In Chhattisgarh, the C.P. textile mill was established in Rajnandgaon in 1894. It was renamed the B.N.C. mill in 1906.

Let's now see who were establishing the textile mills in India. Where did these people get the capital to invest? Where did the mill workers come from?

The first entrepreneurs: Some Indian merchants wanted to establish factories in the country after accumulating wealth from their trading activities. In Bombay, Parsi merchants like Dinshaw Petit and Jamshedji Nusserwanji Tata (who went on to lay the foundation of a vast industrial empire in India) earned handsome profits by exporting opium to China and raw Indian cotton to England. Seth Hukumchand, a Marwari merchant who set up India's first indigenous jute mill in 1917, was also involved in the China trade. So were the father and grandfather of G.D. Birla. Apart from them, there were some commercial groups that were not directly involved in foreign trade. They were trading and moneylending in the domestic market. When opportunities to invest in industry opened up in India, many of them began establishing factories.

Where did the workers come from?: Most of the workers in the industrial belts came from the adjoining districts. The unemployed peasants and artisans in the villages migrated to these industrial centres in search of work. In 1911, 50% of the workers in the cotton textile mills of Bombay came from the nearby Ratnagiri district. The workers in the Kanpur mills mostly came from villages around the city. They would return to their villages during the festival season or to harvest the crops.

As people came to know that new kinds of work was available in the cities, they started coming from more distant regions. For example, people from Uttar Pradesh began looking for employment in the textile mills of Bombay and the jute mills of Calcutta (now known as Kolkata).

Finding employment was always difficult. Many mills were being opened and the demand for workers kept growing. But the number of people seeking employment always outnumbered the number of jobs available.

Social Science Class-9th

The industrialists appointed jobbers (agents) to hire workers. They were mostly experienced and trusted workers. They would bring people from their villages, promise them jobs in the city, help them settle in the city and give them loans when they faced financial problems. The jobbers soon became powerful people. They later began demanding money or gifts in exchange for jobs and began controlling the lives of the workers.

The policies of the British government: Indian industrialists demanded an import tax on goods imported into the country to protect the output of the Indian mills. They also demanded priority for Indian products in all government purchases. The British government was not in favour of taxing imported goods because such a tax would harm British exports. But rising government expenditure made it necessary to levy new taxes. However, the government showed no favour to the local industrialists and fixed the same levy for both imported and locally produced goods. Thus, Indian industry got no protection. The government also refused to purchase Indian products for its requirements, citing their inferior quality. Even writing paper and ink were imported from England. This situation continued till 1914, when the World War made it difficult for British goods to reach India. Indian industry began to expand and grow freely only after this.

The British also made laws to protect women and child labour. Employing children aged below nine years was prohibited and the working hours of child workers was limited to seven hours per day. For women, the limit was nine hours per day. In 1911, a law was passed restricting the work hours for men to 12 hours per day.

EXERCISES

1. Choose the correct alternative:
 - a) Where did the first industrial revolution occur?
 - i) France ii) Germany iii) Spain iv) England
 - b) Germany's industrial revolution was based on which industries?
 - i) Textiles ii) Computers iii) Minerals iv) Chemicals and Electricity
2. What were the similarities and difference between proto-industrialisation and factory production?
3. Who were the people who invested capital for Britain's industrialisation?
4. Who invested capital for Germany's industrialisation?
5. What is the difference in the role the state played in the industrialisation of England, Germany and India?
6. How did the iron and steel industry contribute to the industrial revolution?
7. What impact did industrial development have on society?
8. What were the obstacles in the way of Germany's industrial revolution in the 18th century? How were these obstacles overcome?
9. How did the colonies contribute to industrialisation? What were the obstacles to industrialisation of the colonies?

10. If the goods produced in a factory do not sell in the market, what effect does it have on capitalists and workers?
11. How does technological change affect the workers and how do the products of new technologies affect the consumers? Discuss with an example.
12. How did Britain's industrial revolution affect the weavers in India?
13. Who were the first Indian industrialists? How did they get the capital to invest in new factories?
14. What challenges did the first Indian industrialists have to face?
15. What were the differences and similarities in the laws enacted in Britain, Germany and India to protect the interests of the workers?

PROJECT WORK

1. 'Competition among companies, technological progress and workers' – prepare a play on what has been said about these processes in this chapter and perform it in class.
2. What are the laws enacted in our state to protect the interests of workers? Find out and prepare an exhibition of your findings.
3. How have the energy sources for industry changed from the 17th century to the present? Find out and write an essay on your findings.

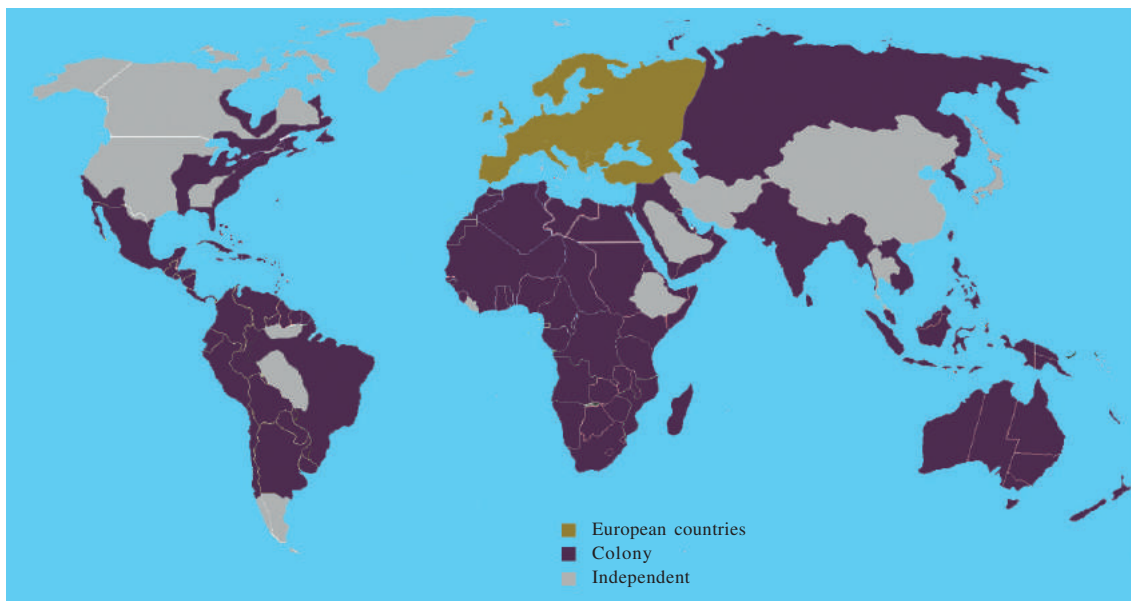
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10

Colonialism

August 15, 1947 is a historic day for us. This was the day India gained freedom from British rule. On July 4, 1776, America gained independence from Britain. So every year, the Americans celebrate July 4 as their Independence Day. Many countries in the world celebrate their independence day to mark the winning of freedom from colonialism. Look at the map below. It shows that except for Europe, most of the countries in the other continents of the world were colonised by some other country in the past 200 years.

Map 10.1 The countries of the world over which the Europeans established their control between 1750-1914



The map shows that European countries established their rule in many countries of Asia, Africa and America.

How did the European countries conquer countries located thousands of kilometres away? Why did they want to establish their rule over these countries? What were the other countries in the world doing when the Europeans were conquering these countries? What impact did European rule have on the colonies? How did the colonies gain their freedom?

If we wish to answer these questions, we must first understand two concepts in the social sciences – imperialism and colonialism. When a country establishes its control over another country and exploits that country's resources for its own benefit, it is called an imperialist nation. The country it controls is called a colony. For example, India was ruled by Britain. So Britain was an imperialist country and India was a colony.

An imperialist nation reorganises the economy of the colony and restructures its society to freely exploit it. This exploitation impoverishes the colony. As a result, the colony does not have enough capital to invest in its own economic development. Hence its growth and progress are stunted. This is not all. The imperialist nation tries to change the way the people in the colony think so that they accept their colonial situation without protest. But when the colony realises the problems created by the exploitation of its resources, it struggles to throw off the colonial yoke and become independent.

World history in the last 300 years is all about how the developed countries of Europe established their colonies in Asia, Africa, Australia and America and how these colonies fought for their freedom. In this chapter, we shall study the process of colonisation and its impact on a global scale. We will first learn how Europe established its dominion over South America. Then we will compare the European conquest of South America with the process of colonisation in south and south-east Asia, China and India.

Locate the countries listed below in the world map and write the names of the continents they are situated in. Which of these countries do you think were imperialist nations and which were colonies? Write your answer in the third column.

Country	Continent	Imperialist/Colony
India		
China		
Argentina		
Portugal		
Brazil		
Indonesia		
France		
England (Britain)		
Japan		
South Africa		
Mexico		
Nigeria		
Germany		
Laos		
Vietnam		
Chile		

Locate the Atlantic Ocean, Pacific Ocean, Indian Ocean and Mediterranean Sea on the map.

10.1 Colonialism and Nationalism in South America

The Discovery of the 'New World'

The Spanish navigator Christopher Columbus sailed with three ships across the Atlantic Ocean in 1492 to find a sea route to India. He reached some islands off the coast of America. He thought he

had reached India. He named the islands the Indies and called its inhabitants Indians. Today, these islands are called the West Indies. Later, it was discovered that the new continent was not India but even today the native people of America are called Indians.

10.1.1 The Conquest of South America

Within a few years of Columbus' voyage, European sailors explored the entire eastern coast of the new continent that was named America. The Spanish '*conquistadors*' – professional soldiers and explorers – wanted to explore and conquer the 'new world'. They sought fame and fortune. They raised their armies and took permission from the Spanish king to embark on expeditions to conquer the new world. They wanted to claim large territories in America in the name of the Spanish crown so that they could farm the land and raise cattle. In those days, Europe's population was rising rapidly and people did not have land for farming. So what better option did they have than to settle in a new continent and get as much land as they wished?

America held an additional attraction. Gold and silver were scarce in Europe in those days and the rumour spread that the new world had vast treasuries of gold and many gold mines. The conquistadors and their armies set out for America in the hope of capturing untold booty.

There was one more compelling reason for these explorers to venture into unknown lands besides the lure of land and gold. They wanted to spread the Christian faith among the uncivilised natives. The Roman Catholic Church despatched its missionary priests to accompany the conquistadors and convert the local people.

What were the reasons for English traders' coming to India? Compare their reasons to the reasons why the Spanish conquistadors went to America.

In those days, there were two mighty empires in America. The first was the Inca Empire, which stretched from Peru to Chile in the Andes mountain range of South America. The second was the Aztec Empire in Mexico in Central America. As these civilisations were cut off from the rest of the world, their technological development was quite different. They did not use iron nor did they have vehicles with wheels or horses or cattle or cannons and guns. They did not plough their fields but used hoes for tilling, growing different kinds of food-grain such as maize and vegetables like chilli, tomato, pumpkin, potato, etc. They lived in small villages in which most people were related to one another. They had to do corvee labour (forced labour) for the king and the elite class whenever the need arose. The priests played an important role in Inca society. They worshipped the sun god and offered animal and human sacrifices.

A conquistador named Cortes ravaged and destroyed the Aztec Empire with his Spanish army in 1519. The Aztec king lived in an impregnable fort in Mexico. He welcomed Cortes and his soldiers into the fort, thinking they were gods who had come in peace. (The Aztecs believed that their gods would come from the east from across the seas.) But Cortes imprisoned the king in his own palace and his soldiers went on a rampage of plunder and bloodshed.

The Aztec warriors were easily overpowered by the Spaniards. Their spears and arrows were no match for Spanish horses, guns and cannons. Also, most of the Aztecs were afflicted by European diseases like smallpox



Figure 10.1 Hernando Cortes

that were unknown in the country. So they couldn't fight. Cortes declared the Aztec Empire as a Spanish province. The Aztec people were forcibly converted to Christianity and made to do forced labour.

A similar story was repeated in the Inca Empire, with the Spanish conquistador Pizarro conquering the Inca capital in 1533. The Spanish king declared both empires to be provinces of Spain and appointed his trusted governors to rule them.

Like Columbus, many Portuguese navigators also embarked on expeditions, reaching the coast of Brazil. But Brazil was inhabited by hunting-gathering tribes and did not have any local kings or kingdoms. The Portuguese claimed these territories in the name of their king. A wave of Portuguese people then began settling in the new colony to farm the land.

How did a handful of Spaniards overcome such large empires so swiftly and easily? What were the reasons for their success? Why do you think England could not defeat the Mughal emperors so easily in India?

10.1.2 Conquest, Colonisation and the Slave Trade

Spain conquered more land and acquired more natural resources than were available in the whole of Spain itself. The forests in the colonies were cleared and people began cultivating the land. They also opened mines to exploit the mineral resources of their new lands, especially gold and silver. The Spanish rulers encouraged their subjects and people from other European countries to settle in the new colonies.

Many European settlements soon came up along the eastern coast of America. Most of the European settlers were small peasants or landless labourers who left their homes in search of a better life. It required a lot of hard work to clear the forests and make the land suitable for farming. The settlers needed more labour. They forced the native people to work on their farms. Every village had to send batches of young people to work on the farms and mines for many months at a stretch.

Most of these native people could not survive the European invasion. Thousands died because of the wars, epidemics and forced labour. They had never been exposed to European and Asian diseases so they had no immunity to these diseases. The



Map 10.2 Latin America (Spanish/Portuguese)

How did Latin America get its name?

South America was mostly colonised by Spain, Portugal and France while North America was mostly colonised by England. Latin is the root language of Spanish, Portuguese and French, hence they are called Latin languages. Since Latin languages were the major cultural influence in South America, the continent was called Latin America. The English language and its culture were the dominant influences in North America.



Figure 10.2 Mining for silver – an illustration from 1596

smallpox epidemics almost exterminated the local population. Mexico's indigenous population was around 250 lakh in 1519. It shrunk to 26 lakh by 1592. Similarly, Peru's indigenous population fell from 90 lakh in 1532 to 13 lakh in 1568. That means out of every 100 people living in the villages, only 10-15 survived.

As a result, the colonies faced a shortage of human labour to clear the forests for farming and to open new mines. This shortage was met by bringing slaves from Africa. The slave trade across the Atlantic Ocean grew as the Europeans colonised new regions of the continent. From 1451 until 1870, 100 lakh slaves were brought to America from the African continent. Of this

total, Spanish America accounted for 16 lakh, Brazil for 36 lakh, the United States of America and the British colonies for 20 lakh, and the French Caribbean region for 16 lakh.

In this way, the American continent became home to a mixed population that included the native Indians, African slaves and European settlers. Many of the Europeans tried to maintain their racial distinctness, but over time cultures and races mingled in South America. The native people mostly accepted the Catholic faith but many of them retained their traditional customs and rituals.

The Spanish monarch divided the territory under his control into large '*haciendas*' or estates on which the native people had to forced labour. He distributed these haciendas as rewards to his victorious generals and also to the elite class for their pleasure and enjoyment. The hacienda owners got African slaves, native tribals and immigrant small peasants and shepherds from Spain to farm the land. Agriculture and cattle rearing grew rapidly as a result of the hard work of the slaves and tribals. The region soon began exporting sugar and meat to Europe.

The mining industry also developed rapidly. Large silver mines were opened and copper and tin were also mined. Big cities sprang up in the vicinity of these mines.

10.1.3 The Structure of Government and Society

The Spanish Empire was controlled by a Council in Spain that advised the Spanish monarch. The Council sent high-ranking officers belonging to the elite class to administer the American colonies. They came on short tenures, so their sole interest was to make as much money as they could while they were posted in the colonies. They did not pay much attention to the problems of the Spanish, African and tribal people living there. So the people were unhappy with these officials.

The people of Spanish descent, most of them born in Latin America, formed the largest component of the colonial society. This section included landowners and other social groups. They were called Creoles. They mostly followed occupations such as farming, cattle rearing, trade, artisanal crafts, industry, etc. They were not given high political positions in the colonial administration.

Below them in the social ranking were the Mestizos. They were the mixed offspring of Europeans and the native tribals. Below them in the ranking were the Mulattos, who were the mixed offspring of the Europeans and African slaves. They were mostly labourers.

The native tribes came next in the social hierarchy. They had no position in the administration, had their own lands but also had to do forced labour on the farms of big landowners and in mines and pay heavy taxes to the government.

At the bottom of the social hierarchy were the African slaves. They had to do all kinds of hard physical labour and had no rights. Their owners treated them like chattel.

The Creoles were the most educated and wealthy among the colonial people and provided leadership to the colonial society.

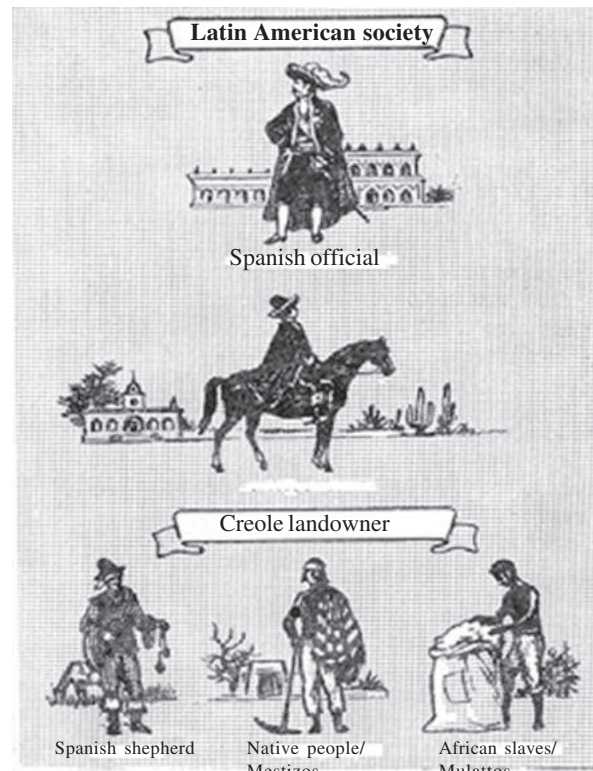


Figure 10.3 Latin American society

What complaints do you think the Creoles may have had with the colonial administration?

Why were the African slaves and the native people given no place in the colonial administration? Can you think of a reason?

10.1.4 The Exploitation of the American Colonies by Spain

We learnt that the Council of Spain ruled the Spanish colonies in Latin America. Its main objective was to systematically exploit the natural resources to benefit Spain's economy.

The peasants and landowners in America grew commercial crops like sugarcane. The Council made them sell their produce only to authorised Spanish merchants at a fixed rate that was kept low. So they earned only small profits. They never had enough capital to invest in improving their farms. As a result, agriculture in the region could not be modernised.

The Spanish monarch owned the output of the American mines – gold, silver and minerals. They were exported to Spain, the minerals being used in Spanish factories. Hence, no industries were allowed to develop in the colonies. All their needs for manufactured goods were met from Spain.

Imagine you are a native tribal in colonial America. Imagine you are a Spanish rancher who rears animals to sell meat in the market. Imagine you are an African slave who works on the farm of a Spanish landowner. What complaints would you have against the Spanish administration in each of these three roles?

10.1.5 The Revolt Against Spanish Colonialism

There were many revolts and struggles against Spanish rule, particularly by the native tribes and African slaves, but they were all unsuccessful. Every section of colonial society was unhappy with the Spanish administration. The people of European descent were familiar with democratic and nationalist

ideas. The countries of Latin America were also influenced by the American Revolution in 1776 and the French Revolution in 1789. So they stepped up their efforts to gain freedom.

Haiti: The first successful insurrection in Latin America was in Haiti Island, a French colony, in 1791. Inspired by the French Revolution, about 100,000 African slaves rose in revolt. A former slave, Toussaint Louverture, led the successful rebel army. All the slaves were freed, thus eliminating the practice of slavery. But Napoleon's military commanders arrested and imprisoned Louverture by deceit, deporting him to France, where he later died. The Haitians, however, continued their revolt, declaring independence in 1804. Independent Haiti was the world's first successful slave insurrection.



Figure 10.4 Toussaint Louverture

Latin America's War of Independence: After the Haitian insurrection, revolts began brewing in Spanish Latin America in 1811 under the leadership of the Creoles. As you know, the Creoles were the least exploited social group in Latin America. Many of them were educated in European universities and were familiar with modern democratic ideas. The most prominent among the Creole revolutionaries were Simon Bolivar and José Martin.

Bolivar assembled an army of Creoles, African slaves and small peasants to raise the banner of revolt against Spain in 1811. He faced many defeats but continued to wage war against Spanish rule. Eventually, in 1819, he gained independence for what is Colombia today. Two years later in 1821, he gained independence for present-day Venezuela. He then went south to Ecuador, where he joined forces with the other great Latin American revolutionary José Martin.

Martin led the freedom struggle in the southern part of Latin America – what is called Argentina today. He gained independence for both Argentina and Chile. In 1824, the combined forces of Bolivar and Martin threw out the Spanish army from Peru. At the same time, the people of Brazil declared their independence from Portugal. In this way, the whole of Latin America was freed from Spanish rule.

Bolivar is known as the revolutionary 'liberator' of all of South America. Wherever he achieved success, he first abolished slavery and forced labour, so the African slaves and Indian tribes joined him in his revolutionary campaign. He vowed to divide the haciendas into small holdings and distribute them among the small peasants but he could not fulfil his promise in the face of opposition from Creole landowners.

Which leader of India's freedom struggle would you compare with Simon Bolivar?

What were the similarities and differences between the freedom struggles in Haiti and South America?

10.2 Colonialism in Asia

European traders came to Asia to buy cotton, silks, spices, etc. The merchants from Western Europe sought a sea route to India. Eventually, the Portuguese navigator Vasco da Gama sailed around the tip of the African continent to reach India in 1498. This opened the way to reach India and China by sea. The European navigators who sailed to America did not have to face any tough military resistance. But in Asia, there were many kingdoms that were larger than any European kingdom of the time and

also more formidable. The European powers could not hope to defeat these powerful kings in a direct military confrontation.

The Portuguese established their naval and trade outposts in many Indian Ocean ports – such as Goa in India, Hormuz in West Asia and Malacca in South-east Asia. They used armed force to prey on trade ships plying across the Indian Ocean, forcing them to pay a protection tax. They were thus able to establish a vast sea empire. Their monopoly was broken only after merchants from Britain, Holland and France established their own trade and naval outposts in the Indian Ocean and challenged Portugal's supremacy.



Figure 10.5 Simon Bolivar crossing the mighty Andes with his army

10.2.1 The Colonisation of Indonesia by Holland

The trading companies from European nations like France, England and Holland joined the Portuguese in the highly profitable trade with countries of South-east Asia and the Far East. The Dutch succeeded in breaching the supremacy of the Portuguese in the Indian Ocean region, successfully establishing their colonies in South-east Asia. (The people living in Holland, also called the Netherlands, were known as the Dutch because they spoke the Dutch language.)

The Dutch established the Dutch East India Company in 1602 to trade with Asia. The company had to wage many wars against the Portuguese to break their trade control. The Portuguese had their base in Malacca at the time. The Dutch eventually established their control over parts of the island of Java in Indonesia. Their company tried to take over the entire spice trade in Indonesia so that it could control prices in Europe and earn huge profits.

The Dutch had no intention of establishing their rule in Indonesia. Java was ruled by the Mataram dynasty in the 17th century. The sultan tried to oust the Dutch from their base but did not succeed. The island was, thus, under dual control – some parts under the control of the Dutch and the rest under the control of the sultan. The sultan granted many concessions to the Dutch East India Company, including monopoly rights to the spice trade.

The company put pressure on the local people to clear the forests and establish plantations to grow sugarcane and spices. It systematically developed the spice plantations to establish its monopoly on the spice trade by 1700. This gave the company total control of not just the trade but the cultivation of spices as well.

In 1800, the Dutch monarch took over the governance of Indonesia from the Dutch East India Company. By 1830, Dutch rule was established over the entire island of Java. The peasants were compelled to grow coffee, rubber and spices and sell the produce to the Dutch at low rates. The Dutch, in turn, sold the produce in the international markets, earning huge profits. Even the small peasants were forced to

grow these crops in place of cereals. As a result, Java faced a famine situation as food-grain became scarce. The people rose in revolt but their protests were put down with force. This situation continued until 1870.

The Plantation Economy

The Dutch invested a lot of capital in developing the plantations after 1870. They cleared thousands of acres of forests and grew mono-crops – rubber, coffee, tea, pepper and sugarcane – over vast tracts.

Factories were set up on the

plantations to process the produce. Hundreds of wage labourers worked day and night on these plantations, living there with their families.

Many plantations were established on other Indonesian islands. The country soon became the main exporter of cocoa, tea, coffee, rubber etc. The plantation owners were mostly Europeans but the workers were either local people or were brought from China and India. Thus, a heterogeneous society developed in Indonesia.



Figure 10.6 A tea plantation in Java

You learnt about plantations in class VI. Try to recall what you learnt.

Are there any plantations like the Java plantations in your state?

Which crops are grown in plantations in India today and in which states? Find out about them.

The European nations could not establish their rule in Asia in the 15th and 16th century. What do you think was the reason?

What did the Portuguese and Dutch do to establish their monopoly on the spice trade?

The Portuguese established a sea empire. What do you think this means? How would it have affected the Asian traders?

What impact did the Dutch agricultural policy have on the peasants of Indonesia between 1830 and 1890?

The equatorial forests of Indonesia were cleared on a large scale to develop plantations. What impact would this process have had on the lives of the local people?

10.2.2 Colonialism in China

China in the 19th century

In the 17th century, China was the biggest country in the world in terms of size and population. The Manchu (Qing) dynasty ruled the country during this time. The Chinese empire extended over the entire country under their regime and included Mongolia, Tibet and other regions as well. Imperial

China's suzerainty also extended to Korea, Vietnam and other countries of East Asia. These vassal (tributary) states paid a tribute to the Chinese emperor.

The Manchu empire was run by a well-established bureaucracy. Officials had to pass a qualifying examination that was open to all. However, since preparing for the examination was both difficult and expensive, only the wealthy class managed to appear for it. China was basically a peasant society. Most of the people depended on farming for their livelihood. The main source of income for the state was the tax paid by the peasants. A vast army of officials was deployed to collect the land rents.

Apart from agriculture, the manufacturing and mining were also well developed in the country. There were extensive tin, salt, silver and iron mines. In addition, mineral ores were available in sufficient quantities for indigenous use. China was always famous for its porcelain ware and silks, with merchants coming from all over the world to purchase these goods. Tea was consumed as a medicinal herb and became very popular in Europe during the 18th century. European merchants also started trading in tea.

It can be said that in those days China had everything to cater to its needs. In a way, it was a self-sufficient economy.

The Chinese rulers wanted to shield the country from all foreign influences. That's why they exercised strict control over foreign trade. The country had three authorised ports for foreign trade – Canton, Macau and Ningbo. European merchants were allowed to disembark only in these ports. Local trading guilds called Co Hong had a monopoly on trade with foreigners. They would despatch foreign goods to all corners of China from these ports and also supply all the goods the foreign traders wanted. These ports also had European trade settlements.

The English Trade and the Opium Wars

European traders were keen to establish trade ties with China. The first to achieve some success was the Dutch company. When the English traders began trading with China, they sought trade concessions but they achieved no success until 1830.

The biggest problem the European companies faced in trading with China was that they had no goods they could sell in the country. This forced the traders to carry silver and gold to China to pay for the goods they bought. Hence, the trade balance was always in China's favour. During this time, the English established their rule in India. They began buying opium in India and selling it in China, using the money they received to buy tea, silks and other goods from China. In this way, they no longer had to



Figure 10.7 A Chinese painting of the Opium War

use gold and silver as bullion. They tried to sell as much opium as they could in China to earn the maximum profits.

The opium trade was illegal and was mostly carried out by smugglers. The corrupt officials and local traders at Canton port would buy the opium and reach it to other parts of China. The supply of opium to the interior regions of China soon led to large numbers of Chinese becoming opium addicts.

When the Chinese government came to know of what was happening, it cancelled the trading rights of the English merchants and passed an order banning them from Canton port. This led to a war between England and China, which was known as the First Opium War. The war raged between 1839-42, ending in China's defeat. The emperor was forced to sign a humiliating treaty in 1842 called the Treaty of Nanking.

The treaty gave the English traders the right to trade across the whole of China without hindrance. The English also got the right to establish their trade settlements on Chinese soil where only English law applied. So the settlements were outside the purview of Chinese law. In addition, China had to pay a considerable sum to Britain as compensation. One more clause included in the treaty stated that if any European company received any trade concession from China, the English traders would automatically qualify for the same concession.

Growing Foreign Influence in China

The defeat in the Opium War exposed the weaknesses of the Chinese military to the world. Other European powers also tried to gain a foothold in China. In 1844, China signed treaties similar to the Nanking treaty with France and America, which gave both many trade concessions. Similar unequal treaties were signed with other European countries like Germany, Russia, etc. As a result, different countries established their spheres of influence along the Chinese coast.

Among them was Japan, a small country situated to the east, which attacked and defeated China in 1895. Japan, too, forced China to enter into a treaty similar to those signed with the European countries. In this way, a large part of China came under the influence of the European and Asian imperialists.

Open door policy

The United States of America had been trading with China for many years. It was worried that if the European countries divided China into their spheres of influence, American trade would be affected. So it opposed this division and announced an open door policy as an alternative. Under the open door policy, all countries would be free to trade with China and no country could establish its defined sphere of influence. After some initial bickering, all the countries accepted this new treaty.



Figure 10.8 A cartoon depicting the division of China by the Europeans and the Japanese

But why was all this happening? By 1850, France, Germany and America had industrialised and wanted to capture every potential new market to sell their goods. We had read earlier that China had the largest population in the world at the time. A huge population meant a huge market. That's why all the industrialised countries of the world wanted to bring China within their sphere of influence.

Another important reason was that the industrialised countries had accumulated large amounts of capital. They were looking for new ways to invest this capital. The European countries wanted to invest their money in laying new railway lines and opening new mines in their colonies.

Why do you think the industrialised countries wanted to invest in laying new railway lines and opening new mines in their colonies? Why didn't they want to establish new factories?

If they had invested capital in China in this way, how would it have affected the Chinese economy and society?

The Opposition to Foreign Control

We saw how the European countries got what they wanted without directly capturing Chinese territory. Chinese rule was still in the hands of the Manchu emperor. But his authority did not extend over large territories that were the spheres of influence of the foreign traders. Also, he had to pay large sums in compensation. As a result, the tax burden on the people increased.

The people were feeling a sense of hopelessness and despair and were looking for change following the humiliating treaties China was forced to sign. Many of them turned against the emperor because he had failed to control the foreign powers. As a result, there were many uprisings between 1850 and 1900. The Chinese government took the help of foreign powers to suppress the people.

One group of Chinese officials tried to take China on the path of modernisation. They felt the European powers were successful because of their superior armies and weapons. They tried to establish modern armament factories in China. But their efforts were not very successful.



Figure 10.9 Boxer warriors captured by the international force

The poor peasants and workers formed a secret organisation called the 'Society of the Righteous and Harmonious Fists' to oppose the special rights granted to the foreign powers. This society, which was popularly called the 'Boxer' society, believed that people could become invincible and even withstand bullets in battle if they did some special physical exercises. The Boxers surrounded the European district in Peking (now called Beijing) in 1900. Shouting slogans like 'Hang the foreign devils', they surrounded the capital city for several months. In August 1900, an international force launched an attack on Peking to suppress the uprising. The soldiers indulged in rampant looting, killing people indiscriminately and mercilessly, with the Chinese ruler looking on as a mute spectator.

The Boxer rebellion may have failed, but it gave birth to a strong nationalist streak in the Chinese people. As a result, the rule of the Manchu dynasty came to an end in 1911 and China was declared a republic. However, China eventually got its freedom in 1949 after a hard-fought revolution.

Why was China not interested in trading with any other country?

The European nations colonised other regions of the world, establishing their direct control over them. But in China they did not do this. Instead, they tried to establish their influence in different ways. Why do you think their approach differed in the case of China?

What do you understand by an ‘open door’ policy? Why did America favour an open door policy with China?

10.3 The Colonisation of Africa

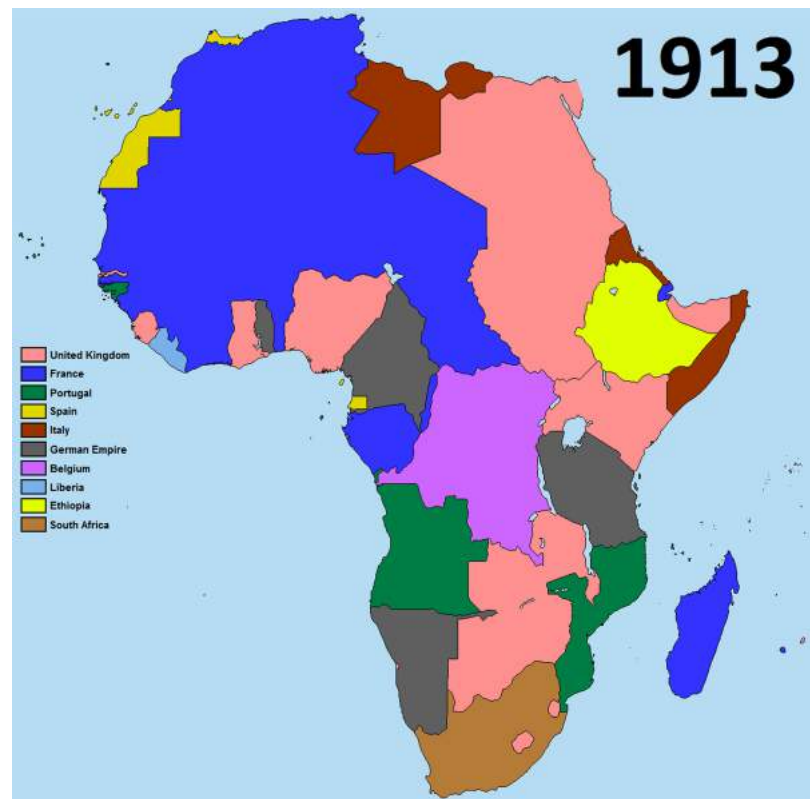
We had earlier read about America bringing African slaves to work in the plantations. The colonisation of Africa by the European nations began towards the middle of the 19th century. In 1878, only 10% of the entire African continent was controlled by the Europeans. But, 36 years later in 1914, almost the entire continent was colonised by different European nations.

How do you think the European nations gained control over Africa in such a short period? Why did they want to establish their colonies there? How were the people living in Africa affected by this rapid invasion?

10.3.1 The Slave Trade

Africa was mostly inhabited by various tribes in the middle of the 19th century. Their main sources of livelihood were animal herding, farming, collecting forest produce and hunting. The African continent was already well-known during the Middle Ages as the main source of slaves in Europe, West Asia and India. The tribes sold the prisoners they captured during their incessant inter-tribal battles as slaves to merchants.

After 1500, the slave trade from Africa expanded rapidly as the demand for slave labour on the plantations of North and South America increased. Many European nations entered this lucrative human



Map 10.3 Africa in 1913. With the exception of Ethiopia, the rest of the African continent was under the control of European nations. The largest expanse of territory was under the British

trade and earned enormous profits, supplying lakhs of Africans. This trade continued for more than 300 years, gradually coming to an end between 1800 and 1900. Ironically, the European nations, the main slave traders, now began saying they needed to rule Africa to put an end to the slave trade. That started the ‘Scramble for Africa’.

10.3.2 The Industrial Revolution, Imperialist Competition and Africa

The first nations to industrialise, such as Britain, captured the raw material sources for their factories across the world, especially in Asia. They also captured markets for their industrial products. Germany, France and Italy began industrialising 100 years later. By that time, Africa was the only continent left for these nations to gain control over raw materials and markets.

Racist Ideologies

Colonisation was seen as a symbol of national strength so the European nations felt a sense of national pride in expanding their colonies. But certain other ideas were gaining popularity across Europe at this juncture that were making them see colonisation as a national duty. One such belief that was gaining credence was that the world is divided into races and the European race is superior to all the other races. This ideology that one race is superior to the other is called racism. Racists believe that the superior race has a natural right to rule over and exploit the inferior race.

The Europeans had settled in the southern regions of the continent, such as South Africa, Zimbabwe, etc. Many people from India had also settled there. They all believed they were superior to the black tribal people who were the natives of Africa, so they demanded and got some special privileges. They also tried to prevent intermingling of races and therefore adopted a policy of racial segregation. This institutionalised racial segregation on the basis of ethnicity and skin colour is called ‘apartheid’. It was only as recently as 1994 that this policy came to an end.

Another concept that gained popularity during the colonial period was the ‘white man’s burden’. This concept was based on the perception that the people of other continents were uncivilised and backward and it was the ethical responsibility of the European people to civilize them. According to this worldview, it was the duty of the European nations to show the other countries in the world the true path of knowledge and religion. Inspired by this mission, many people went to Africa to propagate the Christian religion or modern science and rationality.

France and other European nations also sought to develop a class of African people who spoke European languages, and adopted European culture, religion and ideologies. They established many universities and educational institutions with this objective in mind. The idea was that this class would help them to administer their colonies.



Figure 10.10 How is racism reflected in this photograph?

The Berlin Conference and the Division of Africa (1884-85)

After 1850, the newly industrialised nations of Europe aggressively pursued a policy of establishing their control in Africa. In a very short time, many of them succeeded in capturing control in different parts of the continent. But the fear now was that they would begin fighting among themselves. To eliminate the possibility of war, they called a conference to mutually divide the continent among themselves. Fourteen European nations attended the conference that was held in the German capital of Berlin. There was not a single representative of the African people.

The conference decided that any European nation that wanted to colonise any region in Africa must first inform the other nations before taking such a step. In this way, within a span of 30 years, the entire African continent was occupied by one European nation or the other. Each nation sought to exploit its colony to the utmost limit.

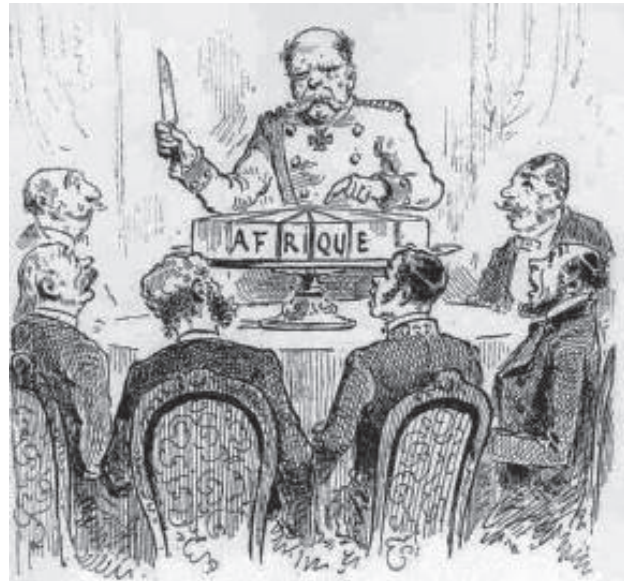


Figure 10.11 A cartoon of the division of Africa under the chairmanship of German chancellor Bismarck

Why were the European nations so keen to capture African territories?

Why was it so easy for them to establish their control over Africa?

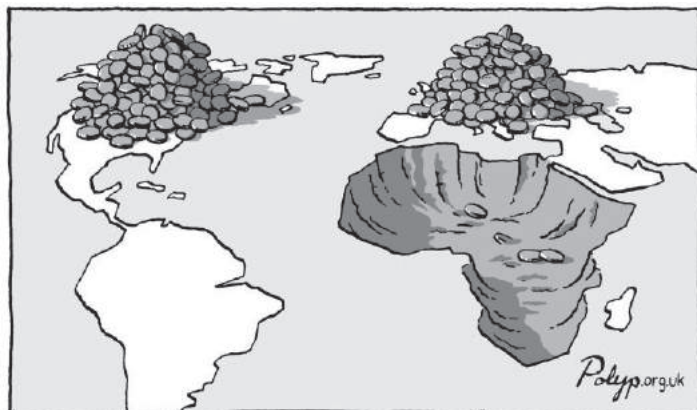
Make a comparative analysis of Figure 10.8 and Figure 10.11.

10.3.3 Colonialism and its Impact

Once the European nations gained control of Africa, they began to shape the continent according to their



Figure 10.12 In a gold mine



Map 10.4 What is being said in this map?

individual interests. These changes had a transforming impact on the life of the African people.

Colonialism and the Pastoral Societies: Before colonial rule, the Masai tribe lived a pastoral life, rearing cattle in the vast savannah grasslands. During the process of colonisation, Britain

and Germany demarcated an international boundary to divide the Masai territory into two regions. The two nations began encouraging farming in the savannah. As a result, the Masai were barred from grazing their cattle in around 60% of their traditional pastoral land. They were slowly pushed into the shrub-lands where the grass was sparse and the rainfall was scanty. Once even more prosperous than the farmers, the pastoral Masai were now reduced to penury by their changed circumstances. Pastoral societies in other parts of Africa were also facing such adverse changes.

The Mineral Revolution and Africa: The first diamond deposit was mined in what is present-day South Africa in 1867 and the first gold lode was discovered in 1886. Following the discovery, thousands of European prospectors flocked to the region to settle down and try their luck. Soon after diamonds were discovered, the British government confiscated the land of the native tribes living in the region as well as the land of the original Boer settlers. The Boers were the Dutch farmers who had settled in the region in the 17th century.

Many workers were needed to mine diamonds. Until then, the native Africans were mostly pastoralists or farmers and had not done wage labour for a living. The colonial administration clamped a hut tax on them to force them to work as miners. It took an adult at least three months to earn enough money to pay the tax. As a result, a large percentage of the local population was forced to leave their farms and pastures to work in the mines.

The miners began living near the gold and diamond mines. Many Europeans who were doing administrative and sales work also started living in these settlements, which grew into towns. One of the towns near the gold mines was Johannesburg, which developed into South Africa's largest city. The cities had segregated settlements for the Europeans and Africans. They were governed by different rules. This segregation contributed to the discriminatory apartheid policies of the state.



Figure 10.13 Children and women with their hands cut off in the Congo

Rubber cultivation in the Congo and the genocide of local communities

King Leopold II of Belgium was keen to establish his own dominion in Africa. Between 1879-82, he deceived many tribal chiefs in the Congo to sign treaties that gave him control over 23 lakh square kilometres of land. This land area was around 80 times the size of Belgium. It became his private property.

Leopold ordered all the people living in the forests of the Congo to sell rubber, elephant tusks and other forest produce to the King's agents failing which the defaulters would be killed or have their hands cut off. Many companies were contracted to collect the produce on behalf of the king. These 'concessionaire' companies wrote a new chapter in the annals of human cruelty. The Africans who did not bring rubber in the specified quantity had their hands cut off. It is said that 100 lakh people

living in the Congo were killed in this human genocide. The concessionaire system was discontinued in 1908 when the Belgian parliament took over the reins of government in the Congo.

10.3.4 Colonialism and African Resistance

Despite their limited resources, the African people put up a spirited resistance against the European powers. But most of their protests met with failure. Edward Morel, a British journalist who spent some time in Africa, wrote a book about the pitiable plight of the African people titled ‘The black man’s burden’. Given below is an extract from the book:

‘Nor is violent physical opposition to abuse and injustice ... possible for the African in any part of Africa. His chances of ... resistance have been ... dwindling with the increasing ... killing power of modern armament ... Thus the African is really helpless against the material gods of the white man ... embodied in ... imperialism, capitalistic exploitation, and militarism.’

Do you agree with what Edward Morel has written – that the African people were helpless against the European powers?

The Maji Maji rebellion

Germany controlled East Africa. The German government put pressure on people living in this region to grow commercial crops like cotton instead of cereals for consumption. The cotton was mainly to supply to the German mills. In 1905, a rumour suddenly spread that if Africans sprinkled magical holy water on their body, the German bullets would turn to water. Around 20 tribes joined hands to fight against German rule. They believed their god had ordered them to wage war and their ancestors would protect them in battle. This rebellion is known as the Maji Maji rebellion. But when the tribal warriors attacked the German troops with their spears, 75,000 of them were mowed down by the German machine guns. Twice that number later died in the famine that ravaged the land because of the severe food-grain shortage caused by cultivating cotton instead of cereals.

Ethiopia’s Successful Rebellion

Ethiopia was the only African country that successfully resisted against European colonial rule. Menelik II was the Ethiopian ruler in 1889. After the Berlin Conference, the British, French and Italians tried to extend their spheres of influence in Ethiopia. Menelik cleverly used one European nation against the other. During this time, he made big purchases of guns and ammunition from Russia and France.

Italy signed a treaty with Menelik in 1889. Separate documents were prepared for the bilingual treaty. Ethiopia said the Ethiopian version ceded a portion of its territory to Italy, but the Italians said their version backed their claim to take over the entire country as its ‘protected state’ (protectorate). The Italian forces advanced into North Ethiopia. Menelik declared war against Italy. The Ethiopian army defeated the Italians in the Battle of Adwa in 1896 to write a new chapter in colonial history.

Take a close look at the boundaries of the different countries in the political map of Africa. In many places, the boundary appears to be a straight line. Can you suggest a reason why the boundaries are straight lines?

We read in this chapter that Africa did not have nation states in 1850. But we see the continent divided into many different countries in 1913. How did so many countries come into existence in a span of only 60 years?

What is the ideology of racism? Today, the whole world thinks racial discrimination is morally wrong. What do you think is wrong with the theory of racism?

Why did the Maji Maji uprising fail? Why were the Ethiopian people successful in their rebellion?

Do you think it was right or wrong for the European nations to divide Africa among themselves? Give reasons for your answer.

Did Italy's defeat at the hands of the Ethiopians have any impact on European supremacy?

10.4 Colonialism in India (1756-1900)

We learnt in class VIII that the English East India Company defeated the Nawab of Bengal in the Battle of Plassey in 1757. This marked the beginning of British imperialism in India. We also learnt how the whole of India was slowly subjugated by the British after that. In this chapter we shall try and understand how the colonial government tried to influence and mould Indian society.

Colonialism went through many phases in India after 1757. Each phase was shaped by Britain's changing needs and India's resistance. Colonial policies transformed India from a once-prosperous country into a poverty-stricken nation. But the resistance to foreign rule took India on the path to democracy and equality while forging the country into a modern nation. We read the story of India's struggle for democracy, equality and nationhood. We shall now learn about the colonial policies and their impact.

10.4.1 The Era of Monopoly Trade

British colonialism had two objectives in the initial phase. The first was to establish British monopoly over India's trade. The East India Company wanted to ensure that it had the sole right to sell Indian goods in the international market. It wanted to reap the maximum profit by buying the goods cheap from Indian peasants and artisans, then hiking the prices in the foreign markets.

The East India Company used its political power to establish its monopoly over Indian trade and handicrafts. It forced the established merchants to trade as its agents or shunted them out if they refused to comply. Indian craftsmen and weavers were, thus, forced to sell their products cheaply to the company. As a result, although trade expanded, the artisans did not get their rightful due.

The second objective of the East India Company was to control and use the revenue it earned to further Britain's interests. But to control the revenue, it had to first wage war to establish its supremacy in India. Fighting wars requires large finances. The company tried to cover the costs from its Indian revenues. To increase its revenues, it tried to conquer new territories and merge them into its British India Empire.

The company also introduced a new land revenue system in all the territories it controlled. The zamindars were recognised as owners of the land and were given the right to collect rent from the peasants. The colonial government increased its share of the tax collected to maximise its land revenue. The long term impact of this policy was that the peasants were impoverished and became the victims of unprecedented man-made famines. They took loans from moneylenders to pay the increasing land dues but were trapped in life-long bondage because they were unable to repay the loans.

10.4.2 The second phase: Industrial Revolution in England and Colonisation of India

The Industrial Revolution began in England in 1750-1800. The new industrialists did not want the East

India Company to have a monopoly on trade with India because it did not suit their interests. They did not want Indian textiles to be sold in Europe. On the contrary, they wanted India to buy textiles manufactured in their factories. They put pressure on the British government to end the control of the East India Company (which was only a traders' group). The British parliament responded by officially ending the company's monopoly in 1813. It began to take more interest in Indian affairs and, after the 1857 war of independence, it took over the administration of its Indian territories.

Many changes were effected in India's trade policies. Import taxes on British goods were either reduced or abolished to ensure that goods manufactured in British factories could sell in the Indian market. We learnt about these policies in the previous chapter and also discussed their impact on Indian weavers. Lakhs of weavers were rendered jobless. They turned to farming in the absence of any alternative livelihood. This increased the pressure on land. More people now had to earn a living from the same amount of land. This process of people shifting from industry to agriculture is known as the 'de-industrialisation' of India. It put the country in the ranks of the world's poor nations.

There was another reason for India's impoverishment – the transfer of India's wealth to England by various means. The booty looted from the treasuries of the kings, the salaries paid to British soldiers and officers were all sent to England. These payments were made in cash from the land revenue paid by the peasants.

British industrialisation required raw materials such as indigo, cotton and jute while the demand for agricultural produce like cereals, tea and sugar also increased. The colonial government wanted Indian farmers to produce these cheaply and supply to England at low costs. It placed the land revenue demand at a very high and this forced the Indian farmers to change the cropping pattern. In order to pay the high revenue they began growing more commercial crops which were being bought by traders for England.

The government launched many irrigation projects to supply water to the peasants so they could grow commercial crops. It also laid new railway lines to connect the major agricultural regions to the seaports. The British industrialists supplied most of the material needed to expand the railways. This benefited the British steel industry. In this way, Indian agriculture began serving the needs of England's industrialisation. The production of cash crops grew, taking the place of textiles in the export market.

What impact would commercial agriculture and high revenue demand have had on the life of the common people?

10.4.3 'Colonisation of the Mind'

We saw the impact of colonial policies on the economic system of the country. But colonialism goes beyond economic impacts. It influences the way people think. How does this happen? Let us look at an example.

During the time the British were establishing their rule in India, many English people became interested in India's culture, knowledge and history. They were deeply influenced by the country's culture, religion, etc. They urged the East India Company to patronise the study of traditional Indian knowledge and literature. Their efforts led to the opening of Sanskrit colleges and madrassas. These people were called Orientalists – scholars of oriental (eastern) cultures.

However, the company's thinking on Indian culture and knowledge began to change after 1800. Many high-ranking company officials now felt that modern European knowledge was the only knowledge

people should learn and the way to learn was through the medium of English. They felt that traditional Indian knowledge had no utilitarian purpose so spending money on it was worthless. These people were called ‘Anglophiles’ – persons who admire English culture and education.

The Anglophiles were dominant at the time the British government was formulating its education policy for India. The most well-known among them was Thomas Macaulay, who presented his ‘Minute upon Indian education’ to the British parliament in 1830. Macaulay said:

“I have conversed both here and at home with men distinguished by their proficiency in the Eastern tongues ... I have never found one among them who could deny that a single shelf of a good European library was worth the whole native literature of India and Arabia.”

Macaulay felt that the native literature could not compare with books on European poetry, history, science and philosophy. He advised the parliament to implement education in science, mathematics and western philosophy and culture. He said this would be to the advantage of Indians, freeing them from superstition and barbarity.

Macaulay’s plea was to give Indians an English education to create a class of Indians who would support British rule and teach their fellow countrymen. He said:

“We must at present do our best to form a class who may be interpreters between us and the millions whom we govern - a class of persons Indian in blood and colour, but English in tastes, in opinions, in morals and in intellect. To that class we may leave it to refine the vernacular dialects of the country, to enrich those dialects with terms of science borrowed from the Western nomenclature, and to render them by degrees fit vehicles for conveying knowledge to the great mass of the population.”

The colonial education system was based on such thinking and ideas. What impact do you think English education had on the Indian people?

Colonialism – a comparative analysis

We saw how Latin America, Africa, Indonesia, China, India and other countries were subjected to and influenced by different kinds of colonialism. One kind was seen in Latin America. Large numbers of the native people of these countries were killed. Europeans settled there and forcing enslaved Africans to live in these countries. The European nations wanted to exploit these settled colonies for their own benefit. The people living in the colonies opposed them. Their freedom struggles successfully ended slavery, forced labour and colonial policies.

Colonialism in Asian countries like Indonesia and India was different from Latin America. The European nations established their government in these countries and changed the local economy to suit their needs. But there were differences between Indonesia and India as well. In Indonesia, the forests were cleared to establish plantations that were owned by the Dutch. In India, too, plantations were established in the hilly regions. But in the rest of the country, the peasants were subjected to high taxes and induced to grow commercial crops. Most important, industries were not allowed to develop in India. As a result, the local textile industry was destroyed.

China’s story was different from the rest. The Chinese emperor continued as the nominal ruler. But several European nations established their supremacy (spheres of influence) in different regions of

the country. They exploited the people and the country's resources without holding the reins of government.

The opposition to colonialism was also different in all these countries. We can compare the resistance in Latin America, China, India and Africa by answering the following questions:

How did the local people participate in the colonial system of governance? Explain in the context of South America and Africa.

How did the European nations behave with the local population? Explain in the context of the Congo, Spanish Mexico and Indonesia.

How were natural resources and human labour exploited in the colonial process? Explain in the context of mining in South America and Africa.

What changes occurred in the methods of colonial exploitation before and after the Industrial Revolution? Explain in the context of South America and India.

What is the difference between commercialisation of agriculture and investing capital in agriculture? Explain in the context of Indonesia and India.

EXERCISES

- List the following events according to their timeline: the destruction of the Aztec Empire; Columbus reaches the West Indies; the Haiti uprising; the destruction of the Inca Empire.
- Match the following:

Hernando Cortes	Conquest of the Aztec Empire
Toussaint Louverture	The Congo genocide
Leopold II	The Haiti uprising
Macaulay	Independence of Columbia and Venezuela
Francis Pizzaro	Conquest of the Inca Empire
José Martin	India's education policy
Simon Bolivar	Argentina's independence
- What kind of social system developed after the Spanish conquest of Latin America?
- How did the French Revolution influence the freedom struggles in Latin America?
- Three categories of people lived in Spanish-ruled America – the people of Spanish descent, including administrative officials and common peasants; the native population; and the African slaves. Did these three categories have different rights under colonial rule? What were the differences?
- What is commercialisation of agriculture? What were the reasons for commercialising agriculture in India?
- How did trade monopoly affect the weavers in India?
- Concepts like freedom, equality and democracy became popular in Europe. At the same time, the Europeans behaved barbarically with the people living in their colonies. How was this contradiction possible and what do you think of it?

**



POLITICAL SCIENCE

11

The Idea of Democracy and its Spread

We studied some topics in European history in the History chapters of this Social Science textbook. We learnt that the French Revolution which spread new political ideas across the world. We saw the European monarchies of the time being challenged. In most cases, the attempts were to replace them with governments in which the people chose or elected their representatives. We shall learn about this new political system, called democracy, in this chapter.

We shall try to understand how democratic ideas began spreading in different countries of the world and the kind of challenges the people faced in establishing democratic rule. We shall study the examples of two countries - Libya and Myanmar - to see how the process of democracy takes root. We shall study the struggle to establish democracy in these two countries in recent years.

Some familiar events

The students are playing on the school playground. The bell rings. They all run to their classrooms. The social science teacher enters class IX. The students greet her as they go to their seats.

Teacher: Who is the monitor of the class?

Ramesh: Ramabai is the monitor of our class.

Teacher: Who made Ramabai the monitor of this class?

Komal: I don't know.

Teacher: Who made you the monitor, Ramabai?

Ramabai: I didn't want to be the monitor. Our class teacher gave me this duty.

Teacher: Is there any other way that a student can become the monitor of the class?

Kamlesh: We can ask the students who they want as their monitor.

Which of the two processes of appointing a monitor is more democratic, and why?

Rosy scored 80 percent in her class 10 examination. Her family was happy. They wanted her to study science. But Rosy wanted to study social science. Her parents and other relatives were upset by her decision and tried to pressurize her to study science so she could become a doctor. In the end, Rosy could not study the subject of her choice.

Do you think the family's decision was democratic?

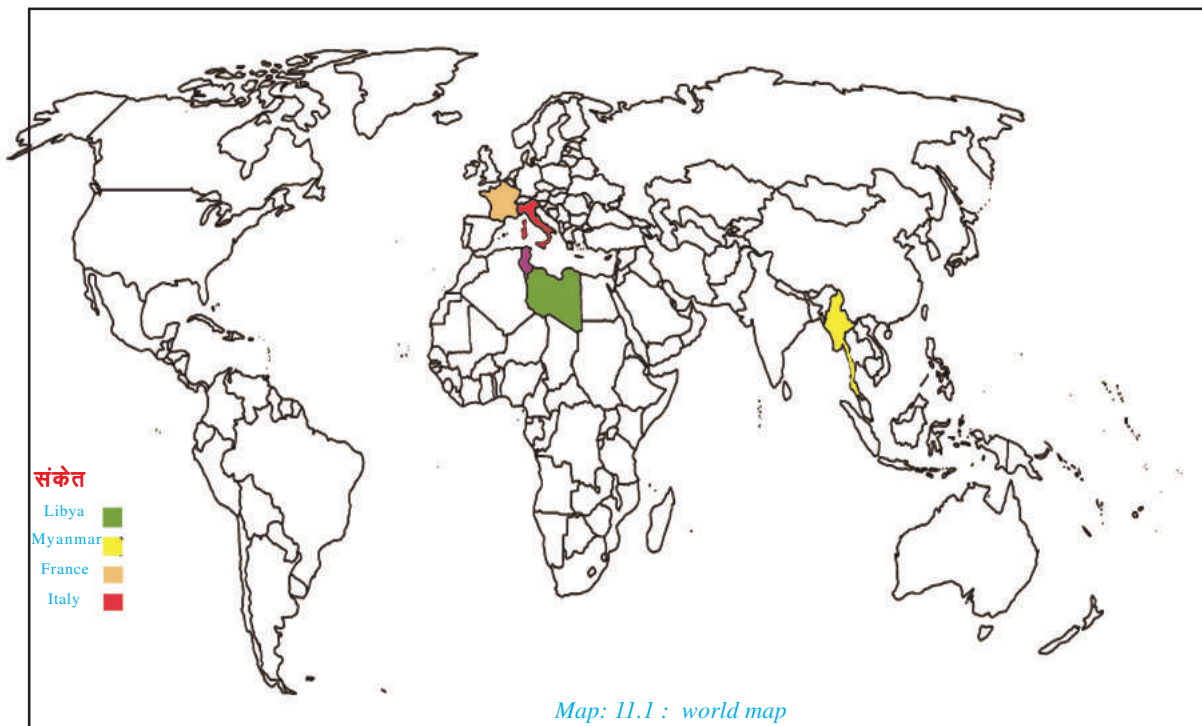
Democracy is a comprehensive idea that is linked to one's personal, family and social life. We also see democracy as a form of government, a political system. In this chapter, we shall try to understand how people participate in a democratic system of governance.

We learnt about India’s democratic system in the previous class. We learnt how governments are formed and what functions they perform. The table below lists the different units in a democratic system to which representatives are elected.

No	Unit	Representative’s position
1.	Rural (Gram Panchayat)	.....
2.	Urban (Nagar Panchayat, Municipal Corporation)	.....
3.	Vidhan Sabha (Legislative Assembly)	.....
4.	Vidhan Parishad (Legislative Council)	.....
5.	Lok Sabha (Lower House of Parliament)	.....
6.	Rajya Sabha (Upper House of Parliament)	.....

What is the role of the people in electing the above representatives? Discuss in class.

Map 11.1: Democratic struggles against dictatorships and the spread of democracy in the world



Map: 11.1 : world map

Locate the following countries - Libya, France, Italy and Myanmar in the world map.

We shall now look at the examples of Libya and Myanmar, whose people fought for democracy.

11.1 The Story of Libya

Libya was a poor country in North Africa that was colonised by Italy. It gained its independence from Italy on February 10, 1947. But it remained under the rule of the United Nation's Security Council until December 24, 1951. England and France looked after Libya's affairs on behalf of the Security Council during this period. Libya achieved full independence on December 24, 1951.



Map 11.2: Libya

Establishment of Monarchy in Libya

After independence, King Idris became the ruler of Libya. He dominated the country along with a few elite families. Most Libyans belonged to different tribes. They engaged in farming and animal husbandry and were dominated by their tribal chiefs.

Large reserves of natural oil and gas were discovered in Libya in 1959 and the country became a rich nation. The king and his favoured elite families gained control of all these natural resources. It was during this period that a wave of nationalist movement began spreading in North Africa. Its impact was felt in Libya.

The youth of the country were aspired to set up a modern state for the welfare of the people, free from all exploitative forces. They wanted to bring unity and peace to Libya, ending all tribal conflicts and atrocities against women. They wanted the revenue earned from oil to be used for the benefit of all the citizens.

Libya was a colony of which nation?

What impact did the discovery of large reserves of oil and natural gas have on Libya's system of governance?

What kind of state did the youth of the country want to establish?

Military Coup by Col Muammar Gaddafi

Col. Muammar Gaddafi was one of the powerful leaders of the Libyan army. Along with 70 young officers, he took control of the country in 1969. He called his military junta the Free Officers Movement. King Idris abandoned the throne and fled from Libya. The monarchy was ended and Gaddafi declared a new Socialist Libyan Arab Republic. The army gave its full backing to the revolution under the leadership of the Revolutionary Command Council (RCC), which consisted of 12 army officers. The RCC declared that Libya would be a modern, egalitarian nation.



Figure 11.1: Col Muammar Gaddafi

Progress and Development in Libya

We read earlier that most people in Libya belonged to various tribes. Their primary concern was the security, respect and well-being of their own tribe. They were mostly poor nomadic pastoralists. Women were veiled and were not allowed to participate in public affairs.

The new government took many important steps that led to Libya's rapid development. They included nationalization of the country's oil wealth. However, despite this, a few rich and powerful families allied to the government continued to exercise control over the country's oil resources, trade and industry. They gained control of the government-controlled oil companies.

The military government used the oil revenues to launch many programmes for the welfare of the people. The nomadic tribes were allotted irrigated agricultural land so that they could live a settled life. Free primary education and free medical facilities were provided to all citizens and many government housing schemes were launched.

Gaddafi made military service compulsory for all Libyans – both men and women. He ensured that women had equal status in society as men and formulated many laws for their benefit. Legally no man was permitted to have more than one wife.

From the time Gaddafi came to power in 1969 until 2011, these welfare schemes saw the average life expectancy of the people increase from 50 years to 77 years. The country's 30 lakh population was provided free medical facilities, education and subsidized housing. The most important change was freedom and equality of women. They now had the right to start their own business, own property and work in government jobs. In 2010, Libya's male-female literacy rate was 90 percent. The country occupied the leading position in the whole of Africa in social welfare.

This period of development in Libya saw the emergence of a new middle class. The government established people's councils



Figure 11.2: A political protest by Libyan citizens

to encourage its citizens to participate in the administration of the country. It also established a legislative assembly in the central government.

However Gaddafi and the RCC had very little faith in democratic institutions. The members of the legislative assembly and councils had to accept the writ of the RCC. They could not take their own decisions. That's why the people began losing faith in these councils. Any leader who appeared to pose a political challenge was suppressed. People did not have the freedom to form their own organisations nor was an independent media permitted to flourish.

The Economic Development and Social Welfare

The rapid changes occurring in Libya because of urbanization, liberalization of the economy and growing job opportunities in the government sector led to the gradual demise of tribal life. The different classes and communities in Libyan society were now living in harmony. Most people were employed in government service. The growing middle class was showing keen interest in business and industry but opportunities were limited.

What steps did Col Gaddafi take for Libya's progress?

What impact did the various initiatives launched by Col Gaddafi have on the people of Libya?

Do you think Gaddafi ruled Libya democratically? Discuss in class.

Military Dictatorship and the Struggle for Democracy

The Gaddafi government had no faith in democratic institutions. It established a parallel administrative body called the Revolutionary Command Council. The military rulers did not tolerate any kind of opposition to the government. They imprisoned and even killed anyone who raised their voice in protest and used the crudest methods to suppress and silence all opposition. The citizens were not allowed to form any kind of organization.

In 2010, a businessman was killed in Tunisia, Libya's neighbour. The incident sparked a revolt that quickly spread across Egypt, Libya, Yemen, Bahrain and Syria. The internet and mobile technology played a big role in its spread since the governments found it difficult to control these social communication media channels that were used extensively to channelize the protest movement. This revolutionary movement came to be popularly known as the Arab Spring.

In January 2011, the Libyan people staged a protest against corruption in the city of Al-Bayda and the delay in constructing homes under a government housing scheme. Also, in Benghazi, people were not getting even the minimum civic facilities. Many people in the city were unemployed. Many families had no regular income. Benghazi soon became the centre of a violent anti-government protest. The police tried to crush the revolt. People across the country began sharing their problems through the internet and their mobile phones. But the government-controlled media was instructed to blank out coverage of all political developments.

The anti-government protests took a more violent turn in February 2011. People in Benghazi staged demonstrations against the police. Some protesters used fire-arms. They were mostly ordinary citizens, but they included soldiers who had deserted the army to join the protests. Many people's organisations opposing the Gaddafi government began to unite and coordinate the efforts.

Protests broke out in many cities across the country. The protesters attacked government buildings and took control of the radio stations. The police and army resorted to firing in many places to quell the revolt. However, the wave of protest continued to spread and intensify. The rebels pressed their

demand to establish a democratic government in Libya. Gaddafi declared a state of war. He used his air force and army to suppress the revolt. The country was soon in the grip of a civil war.

Some powerful democratic nations in the world were keen to end Gaddafi's dictatorship in Libya. They began extending support the rebel organisations, providing them with weapons and money. The United Nations (UN) also declared its support for the rebels, declaring a 'no-fly zone' over Libya, basically to put a stop to the government's aerial attacks and protect the people. But Gaddafi continued his air strikes. The NATO forces of the United States of America, Britain and France together used their airplanes to attack government positions. The rebellion was eventually successful. Col Gaddafi was arrested as he prepared to flee. He was executed.

Libya Becomes Democratic

Libya held its first democratic election in November 2012. Many political parties put up their candidates to contest the elections. Around 200 people's representatives were elected. A new government was formed. It declared an interim constitution which laid the ground for establishing democracy on a permanent basis in Libya. The eyes of the world are now on the country. They are keen to see whether democracy succeeds in Libya or not. Will the Libyan people be able to strengthen the concept of democracy in their country?

Discuss the Arab Spring with your teacher.

Why did the Libyans want democracy?

Why did the Gaddafi government fail to control the rebellion in Libya?

What role did the internet and mobile phones play in Libya's struggle for democracy?

What were the main issues of the democratic movement in Libya?

11.2 Myanmar (Burma)

Like India, Myanmar, too, was a British colony. The country is a prominent producer of rice and is rich in forest resources like teak, minerals like tin, and semi-precious stones like sapphire and ruby. It gained its independence five months after India. It became a parliamentary democracy with two legislative assemblies, just like India. It seemed like Myanmar would emerge as a democratic nation, just as India did. But the country did not have strong political parties, national leaders or a politically conscious society that could steer it along the democratic path.

Democracy in Myanmar

An ethnic Burmese leader Aung San led the movement for the independence and Myanmar gained independence on January 4, 1948 even though Aung San was assassinated six months earlier. Prior to the independence, the leaders of the different ethnic groups of Burma had reached an agreement to guarantee the rights of their tribes and to also include minority communities in the democratic process. The agreement allowed the country to function as a democracy in the initial few years. Many political parties participated in the elections conducted in 1951, 1956 and 1960 to elect democratic governments.



Map 11.3 : Myanmar

In which year and under whose leadership did Myanmar achieve independence?

In which years were democratic elections held in Myanmar?

Military Rule in Myanmar

Myanmar faced many complex problems related to tribal rights. The country required a strong institutional structure to address and resolve these problems. But it did not have such strong institutions. The army took control of many tribal regions and established its rule. Many tribes took up arms to oppose the military takeover.

The army began suppressing the rebels. Army chief Gen Ne Win overthrew the duly elected government in 1962 and took over control of the country. He tried to nationalize the industrial and mineral resources sectors and also declared free universal education and free medical facilities for all citizens. Between 1962 and 1965, many laws were passed to control the powerful landlords and curb money-lending activities. The laws sought to protect the land and property rights of small peasants as well as the interests of sharecroppers.

The military rulers tried to gain the confidence of the people by showing them that they were working for their welfare. They nationalized all industries and mines. This brought all natural resources under army control. But unlike Libya, where army rule led to the welfare of the country, Myanmar saw no progress and the country became increasingly economically impoverished. Poverty forced the peasants to work on the farms, which were now run by the army. Their children were also forced into bondage by the army. There were many allegations of human rights violation against the military administrators. People were evicted from their homes and forced to work as bonded labourers. Child labour was also harshly exploited.

The protests against military rule were mostly spearheaded by students. A major protest broke out in 1988, which was brutally suppressed by the army. Thousands of protesters were killed. Following the protest, one army faction took over the reins of government, promising to hold elections. It was during this period that Aung San Suu Kyi (daughter of assassinated Aung San) launched a movement for political reform in the country. She has since emerged as the leader of Burma's struggle for democracy.

How was military rule established in Myanmar?

What steps did the military rulers undertake to win the support of the people?



Map 11.3 : Aung San Suu Kyi

Why did Myanmar not see much development even after the army nationalised the country's industries and mines?

Myanmar's military rulers declared that elections would be held in 1990. The National League for Democracy (NLD) won 80 percent of the seats in the election. Party leader Aung San Suu Kyi was in jail at the time. The army rejected the demand for her release and did not permit her party to form the government. Suu Kyi was released after the election but kept under house arrest. Her freedom of movement was restricted and she was not permitted to meet or interact with people. She was not even allowed to attend her husband's funeral or meet her two sons.

Many democratic nations in the world put pressure on the military

rulers to release all the imprisoned political prisoners and restore the democratically elected government in Myanmar. International economic and trade sanctions were imposed on the country to maintain the pressure on the army. Myanmar could neither export nor import goods. The sanctions forced the military government to modify its policies.

Who was Aung San Suu Kyi? What did she do to usher in political change in Myanmar?

Why didn't the military rulers permit the National League for Democracy to form the government even after the party won 80 percent of the seats in the election?

What impact did the economic sanctions imposed by the democratic nations have on Myanmar?

Changes in Myanmar

Many changes took place in Myanmar in 2008. The military government announced a public referendum on establishing democracy in the country but the referendum was never conducted. The name of the country was changed from Burma to Myanmar. An election was held in 2010 under the supervision of the United Nations. However, Suu Kyi remained under house arrest and was barred from contesting. She was released only after the election. Her party boycotted the election in protest. As a result, the military-backed Union Solidarity and Development Party emerged victorious amidst accusations of electoral malpractices.

The military junta was dissolved and Thein Sein was elected the new president of the country. But the army continued to exercise control behind the scene. Hence, most countries in the world did not consider the elections to be legitimate.

In 2011, by-elections were held to 45 seats. This time, Suu Kyi's NLD contested, winning 43 seats. Suu Kyi's release and the NLD's participation in the elections marked the beginning of democratic rule in Myanmar.

The political upheavals in Libya and Myanmar are an on-going story that has yet to reach its conclusion. It appears that Myanmar will complete the transition to a democratic nation, with many more political parties contesting future elections. Hence, the possibility of democracy establishing roots in the country is strong.

Comparing Libya and Myanmar

We read about two contemporary democratic struggles in the world. The two nations are different in many ways but there are similarities in the aspirations of their people.

The welfare measures undertaken in Libya fulfilled the fundamental needs of the people. They gave the people the opportunity to improve their living standards through education and employment. Myanmar also initiated some welfare measures, including land reform laws. But the army exploited the people and the country's natural resources. As a result, the people were mired in poverty.

In both countries, the ruling government had the active backing of the army. The rulers did not allow free and fair elections nor did they permit the formation of political parties. Even when elections were held, they did not allow the victorious parties to form a government. Such autocracy stifled freedom of thought, expression and political dissent. It also stifled the evolution of political organisations.

However, Myanmar was different from Libya. Myanmar started with a democratic government but then the military took over the reins of government. In Libya, the army took over power after abolishing the monarchy. Both countries lacked the enabling conditions for a healthy democracy to flourish. Both

countries were deeply divided politically and the possibility of the ruling classes working out a composite solution acceptable to all was low. The people of both nations wanted freely elected governments. They wanted freedom of expression. They wanted the freedom to protest against wrong doing. They wanted political parties that could act freely and independently.

Both countries resorted to large scale nationalization, which put the brake on balanced development. They were also affected by large scale corruption. Even the routine, daily working of the government was affected by corruption. People felt helpless and angry, which strengthened their will to protest against the government. They began to believe that democracy could provide a solution to their problems.

In this chapter, we tried to understand the struggle for democracy over the past few decades in both Libya and Myanmar. In the 20th century, many countries in the world began demanding some form of democratic governance. Democracy was established in most colonial countries after they gained independence. Wherever democracy failed to take root, the struggle to establish a democratic government continues to this day. In the modern era, there is no country in the world whose citizen's would willingly accept the rule of a monarch or dictator.

The Nobel Prize

Aung San Suu Kyi was awarded the Nobel Prize for Peace in 1991. She was under house arrest at the time. In her absence, her son accepted the award on her behalf. The following is an excerpt from his acceptance speech:

“... She would begin by saying that she accepts the Nobel Prize for Peace not in her own name but in the name of all the people of Burma. Theirs is the prize and theirs will be the eventual victory in Burma’s long struggle for peace, freedom and democracy.

“... I personally believe that by her own dedication and personal sacrifice she has come to be a worthy symbol through whom the plight of all the people of Burma may be recognised. The plight of those in the countryside and towns, living in poverty and destitution, those in prison, battered and tortured; the plight of the young people, the hope of Burma, dying of malaria in the jungles to which they have fled; that of the Buddhist monks, beaten and dishonoured.

“... Aung San Suu Kyi says, ‘The quest for democracy in Burma is the struggle of people to live whole, meaningful lives as free and equal members of the world community. It is part of the unceasing human endeavour to prove that the spirit of man can transcend the flaws of his nature.’”

What were the major policy changes the military government made after 2008?

What did the military rulers do to prevent Suu Kyi and her NLD party from coming to power in 2010 and thereafter?

Why does it seem like democracy can be established in Myanmar? Discuss in class.

EXERCISES

1. Choose the right option in the following:

1. Who was the king of Libya?
 - a) Idris
 - b) Mussolini
 - c) Col. Gaddafi
 - d) Aung San Suu Kyi

2. In which city did the rebellion in Libya begin?
a) Tripoli b) Benghazi c) Al Bayda d) Rangoon
3. What was the literacy rate (percent) in Libya in 2010?
a) 50 b) 70 c) 80 d) 90
4. Who took over power after toppling the democratic government in Myanmar?
a) Aung San b) Ne Win c) Aung San Suu Kyi d) Thein Sein
5. Aung San Suu Kyi was awarded the Nobel Prize for her contribution in which field?
a) Literature b) Peace c) Social welfare d) Medicine

2. Fill in the blanks:

1. Libya was a in North-Africa.
2. is the current president of Myanmar.
3. The people of Libya were mostly involved in farming and
4. Myanmar was colonized by
5. In Myanmar, farmers were forced to sell their children to the

3. Answer the following questions:

1. Why did Libya witness mass protests in 2011?
2. Why did America want to dismiss the Gaddafi government?
3. How did urbanization affect the people of Libya?
4. Apart from the common people, who participated in the popular movement to oust the Gaddafi government?
5. What were the atrocities committed by the army against the people of Myanmar?
6. Why was Aung San Suu Kyi placed under house arrest?
7. Why did people oppose the Gaddafi government despite the economic and social development initiatives it undertook?
8. Why did America not intervene in Myanmar?
9. Why did democracy fail in Myanmar after independence?
10. Why did America, France and Britain attack Libya?
11. How was military rule in Libya different from Myanmar?
12. Why do you think democracy was not established in Libya even after it gained independence?
13. What were the differences in the social welfare measures undertaken by the military governments in Libya and Myanmar?
14. What role did Aung San Suu Kyi play in establishing democracy in Myanmar?
15. How does literacy and social communication contribute to spreading democratic awareness?
16. Why did the military government refuse to accept the 1990 election verdict in Myanmar?

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12

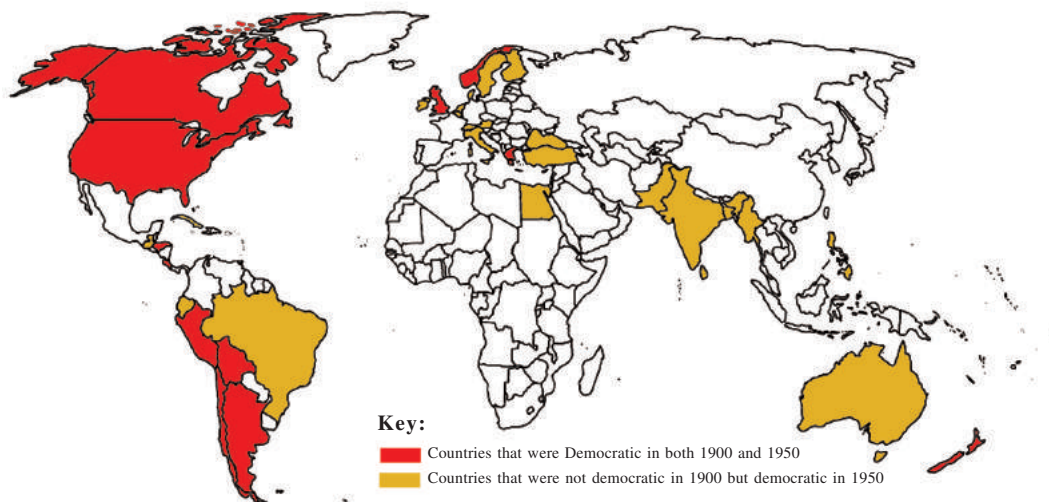
The Main Features of democracy

After 1950 many countries liberated from colonialism began establishing democratic governments. In the 1980s and 1990s, the decline of the communist regimes saw the further spread of democratic rule. After 2010, countries like Libya and Myanmar raised their voice against dictatorship and also opted for the democratic system.

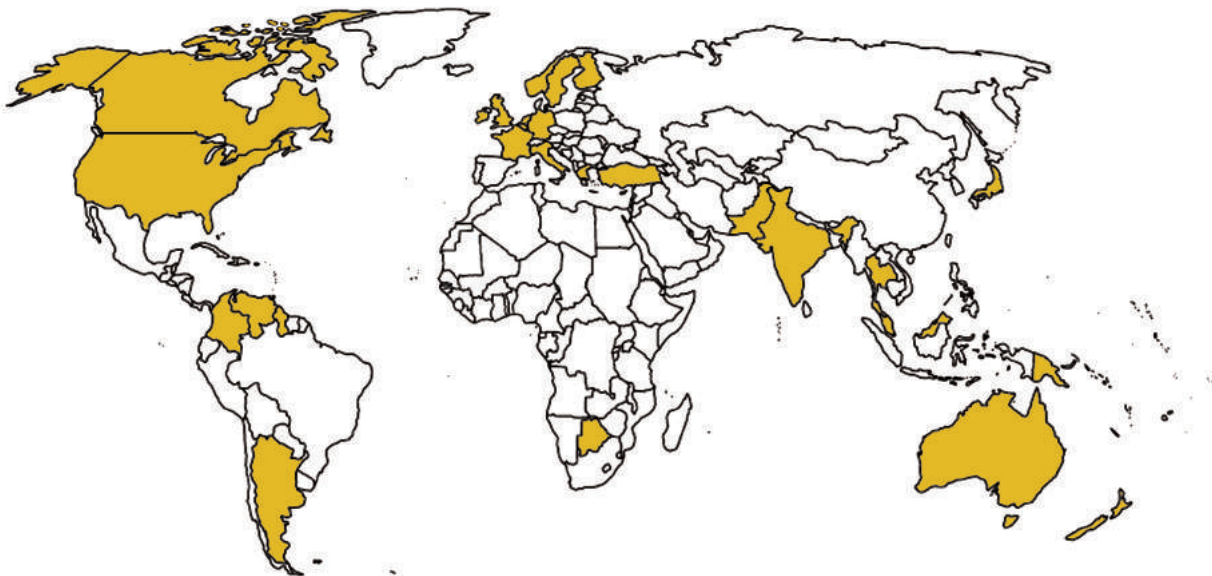
Dictatorship is a term used to describe the rule of a person who establishes total dominion over a country. The dictator takes control of all organs of government. Col Gaddafi and Gen Ne Win are examples of dictators. Such individuals gain the support of their army. They suppress all political opposition to establish single party rule. Dictators centralize all political power in their hands. They rule according to their will, enacting laws that suit their requirements. Justice is dispensed in accordance with the decisions of their government. Democracy is the opposite of dictatorship as a system of governance.

Democracy

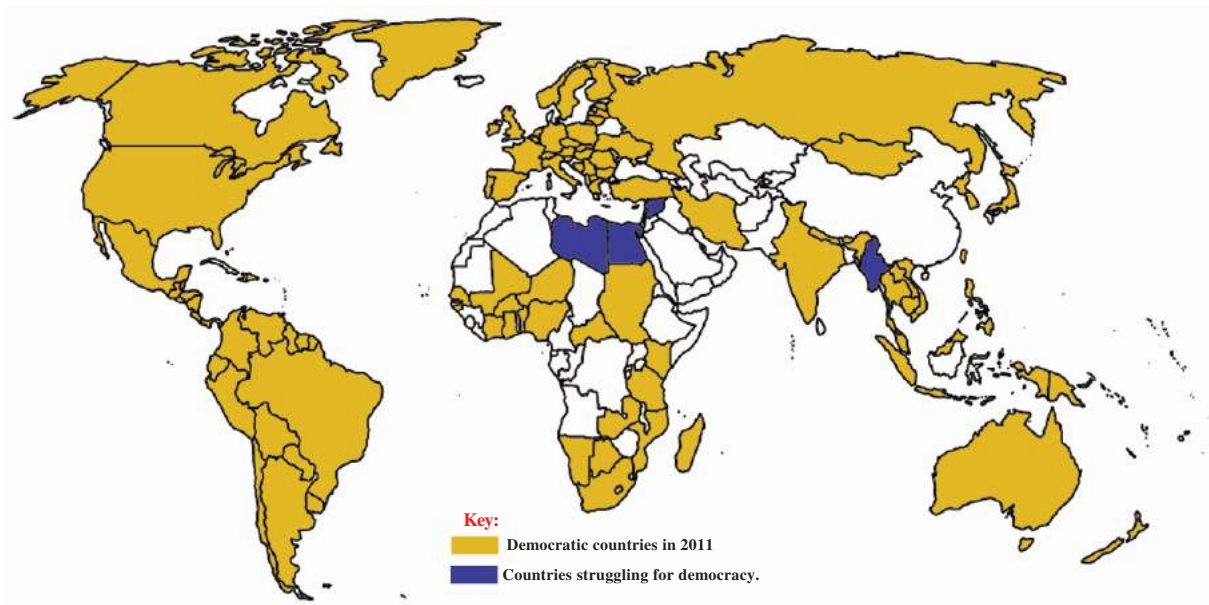
We learnt about the evolution of democracy in Europe and its spread across the world in the history chapters. The political developments during the 18th and 19th centuries led to the decline in power of the monarchies in Europe. The French Revolution inspired democratic struggles in many parts of Europe. In France itself, democracy was established after many ups and downs at the end of the 19th century. The struggles for democratic governance in the 19th century were based on the principles of political freedom, equality and justice.



Map 12.1: Democratic countries between 1900 and 1950



Map 12.2: Democratic countries between 1950 and 1975



Map 12.3 Democratic countries between 1975 and 2000

Study the maps given above to analyse the spread of democracy across the world. Take the help of your teacher.

In Map 12.1, identify the countries that became democratic between 1900 and 1950.

In Maps 12.1 and 12.2, identify the countries that became democratic between 1950 and 1975.

In Maps 12.2 and 12.3, identify the European countries that became democratic between 1975 and 2000.

Identify the countries in South America that adopted democracy after 1975.

Make a list of the countries that had not adopted democracy even as late as 2000.

Which was the most important period for the spread of democracy? Study the maps to find the answer.

Three important points to remember from **the struggle for democracy in the two countries** we read about in the last lesson:

1. **The establishment of monarchy and Col Gaddafi's rule after Libya gained independence.**
2. **The establishment of military rule in Myanmar after the death of Aung San.**
3. **The struggle for democracy in Libya and Myanmar.**

Discuss the following with the help of your teacher:

What are the differences and similarities between the governments of these two countries? Why do we call these two governments as dictatorships?

What rights were the people of Libya and Myanmar deprived of in the absence of democracy?

If Gaddafi had respected and strengthened democratic institutions, what effect would it have had on the people of Libya?

In Libya and Myanmar, the people did not elect the military leaders who controlled the army. The military leaders seized power themselves. The people had no role to play in the decisions of their government. Governments that are elected by the people of a country are known as democratic governments. In a democratic government, people elect their representatives and these chosen representatives run the government. The people play an important role in choosing and changing the government.

The discussion above inevitably raises the following questions in one's mind:

1. **Who will be the ruler?**
2. **What kind of elections are called democratic?**
3. **Who elects the rulers?**
4. **What qualifications are needed to be elected as a ruler?**

We need to analyse the main features of democracy if we wish to find answers to these questions.

An Accountable Government

We saw that the ultimate decision-making power in Libya lay with the military ruler. He was not chosen by the people. The people were compelled to abide by the orders of the military junta. The junta was not accountable to anyone.

In a democratic country, the representatives chosen by the people and the legislative assembly are supreme. There are various ways in which elected governments are accountable to the people. A look at the government system in India will show us that the central and state governments are accountable to the people and their representatives in many ways.

In India, all members of the executive – like the prime minister, chief-minister, council of ministers and senior officials - are accountable to the parliament or the state legislative assemblies.

Elections After Fixed Intervals

All democratic governments are elected for a fixed period. Do you know how many years this fixed period is in India? A government can return to power only if it is re-elected by the people. Elections are

the time when the people experience and exercise their power in a democracy. By holding elections at fixed intervals, people retain control over the government. If people are not satisfied with the performance of their elected representatives, they can change the government through elections.

Free and Fair Elections

To hold free and fair elections, it is necessary that they are conducted by an independent body and all political parties are permitted to participate without any pre-conditions. India has a body called the Election Commission to conduct elections. The constitution bestows special powers on the Election Commission to conduct free and fair elections. A multi-party system is also necessary in a democracy to hold impartial elections. It gives people a range of alternatives to choose from.

Under which conditions can people change their government? Discuss in class.

Why are elections conducted after a fixed period of time?

Why is it necessary to have more than one political party in a democracy?

Universal Adult Franchise

We say that democracy is a government by the people. This means every adult in the country – whether male or female, rich or poor, of any religion or faith, or speaking any language – has the right to vote. This is political equality. Each vote has the same value. Whether rich or poor, literate or illiterate, every person's vote has equal value.

In the beginning, some countries limited the right to vote to only those people who owned property or paid taxes. After much struggle, the right to vote was gradually given to everybody. In India, universal adult franchise was accepted from the day the constitution was adopted. This means all people aged 18 years and above can cast their vote.

Should there be some conditions for universal adult franchise? Discuss in class.

What are your views on political equality?

In India, from which year was the electronic voting machine used in elections?

People's Participation in Democracy

In a democracy, people participate in the functioning of the government. Citizens play an active role in making and implementing laws. It is the people who inform the government of their problems and needs.

Before a policy is formulated, it is widely discussed among the people. There are many ways this is done to strengthen democracy. People write articles in the newspapers and present memorandums to the government about the proposed law or policy. They participate in discussions on television and on the internet. They hold seminars, workshops and meetings. They use many other methods to make their opinions on the law or policy known. There are many societies and committees to direct these discussions and interactions. The biggest enemy of democracy is the apathy of the people.

In what ways can you participate in a democracy? Discuss in class.

Do you think democracy can be successful without people's participation?



Figure 12.1: Women casting their vote in an election

Figure 12.2: Electronic voting machine (EVM)

The Rule of Law

A defining characteristic of a democracy is the rule of law. This means the government performs all its functions in accordance with the law and does not do anything which is against the law. The rule of law also means that all laws apply equally to all the citizens of a country. No individual is exempted from the law in any way. There are many instances when high-ranking officials and powerful leaders have had to face legal proceedings in the courts just like the common citizens.

Respect for the Law

In a democracy, we depend on institutions that function according to the constitution and the law. No one has the authority to perform an illegal act. Respecting this principle means respecting the law.

A democratic government cannot act arbitrarily just because it has been elected to power. It has to accept and function in accordance with some basic laws and rules of conduct. It is the duty of the government and the people to respect a free and independent judiciary.

List the incidents that have occurred around you that you feel have violated the law. Discuss your list in class with the help of your teacher.

Human Rights and Democracy

Human rights are those entitlements that are necessary for an individual to live with dignity and progress in life. People cannot realise their full potential without these rights. They are bestowed these rights in a democracy. In other words, the right to express one's opinions, right to question, debate and discuss, right to form associations and other human rights are what give democracy strength and legitimacy.

How will people's participation in a democracy be affected if they had no human rights?

Rights of Minorities

In most countries there are small populations of people of a certain race, religion, community, language, colour, region, sex or political thought. These small populations of people are called minorities. Most countries are ruled by people belonging to the majority community. Democracy doesn't mean uniformity.

It accepts diversity in society. So respecting the opinion of the minorities is an integral part of democratic values. Hence, minorities are guaranteed certain rights by the constitution.

In any region, who are defined as minorities? Explain with an example.

If minorities do not have the same rights as the majority, how will they be affected?

Why is it important to accept diversity in a democracy?

Democracy and Inclusiveness

In a democracy, the government is formed on the basis of the majority. Even if there are differing and dissenting views, the decision taken on the basis of the majority view is accepted. But such decisions are not always inclusive. The minorities often feel a sense of alienation. A democracy needs to foster inclusive processes to ensure the participation of the minorities. They should not feel left out.

Let us try to understand this with an example. Belgium is a small country in Europe. Its society is divided into the following ethnic and language groups: 59% speak Dutch, 40% speak French and a few speak German. They mostly live in distinct and separate regions. But 80% of the people speak French in the capital Brussels and 20% speak Dutch. The three communities have always been in a situation of confrontation. This was especially true of Brussels where the Dutch speakers are in a minority. In such a situation, Belgium took the following special measures to ensure an inclusive society:

The constitution has a clear provision that there must be equal representation of Dutch and French-speaking ministers in the central government. Important laws can only be passed if they have the support of the majority of parliamentarians belonging to both language groups. In this way, no community can make a one-sided decision in its favour.

- **The constitution delegates many powers to the regional governments. So the regional governments cannot be regulated by the central government in these matters.**
- **Brussels has a separate government with equal representation of both communities. The French-speaking people in Brussels have accepted this proposal for equal representation because the Dutch-speaking people have accepted equal representation in the central government.**

This shows how sensibly the people of Belgium have included people speaking different languages in the functioning of the government.

What does inclusion mean? Explain with an example.

Why is inclusion of different communities necessary?

What can we do to improve democracy? Discuss in class.

List the activities, based on democratic values, you would undertake if you were appointed as *sarpanch* or municipal commissioner.

What we learnt in this chapter**Arguments for and against democracy**

For Democracy:	Against Democracy:
<p>Democracy is a government of the people. Hence, elections are conducted periodically. It is important for all governments in a democracy to function according to the constitution.</p> <p>Widespread participation of the people brings greater transparency examples of ethical functioning. Different views and opinions are accommodated.</p> <p>Since this system of governance depends on the participation of greater numbers of people, it takes more time to function. But this helps to bring out the merits/demerits of issues, thereby making it possible to reach better decisions.</p> <p>Electoral reforms are helping to reduce the expense of government functioning. Democracy is constantly progressing. This process ensures the maximum protection of citizens' rights. As democracy is strengthened, its deficiencies are also gradually eliminated.</p>	<p>The representatives in a democracy keep changing. This leads to instability.</p> <p>Democracy is only about political battles and power play. There is no room for ethical functioning.</p> <p>Decision-making is delayed in a democracy because issues have to be discussed and debated by the masses.</p> <p>Electoral battles are important and expensive so there is scope for corruption.</p>

Are there other merits and demerits in a democracy? Discuss in class and add to the above list.

We have tried to explain the concepts of democracy and dictatorship. We saw how, in a dictatorship, military leaders like Libya's Col Gaddafi and Myanmar's Gen Ne Win tried to establish one-party, one-leader rule and the methods they used to control all facets of government to strengthen their rule.

Democracy is the opposite of dictatorship. It visualizes a government of people's representatives in which an attempt is made to widen the scope of people's participation in all functions of the government. A dictatorship believes in the strength of a single party and a single leader. A one-leader government progresses towards authoritarian rule and distances itself from the people. Col Gaddafi is an example. A democracy, on the other hand, believes in the collective ability of the people to make a decision and has faith that the people can make the right decision collectively.

In a dictatorship, there is no place for people's rights, self-respect and dignity, whereas a democracy cannot function without citizens' rights.

In a dictatorship, the media and people's personal freedom depend on the whims of the government, whereas in democratic governance, an independent communication media plays an important role in political discourse. A democracy cannot function without personal freedoms.

13

Rights

In the previous chapter, we learnt about democracy and how the idea evolved and spread in different parts of the world. The concept of rights, too, evolved over the past several decades to change and strengthen the way democracy is practiced.

In this chapter, we begin by discussing some real-life incidents of the past that reflect how difficult it was for people to live their daily lives without fundamental rights. We shall then try to understand why we need these rights, what they mean to us and what role they play in the spread of democracy.

13.1 Slavery: when there were no rights

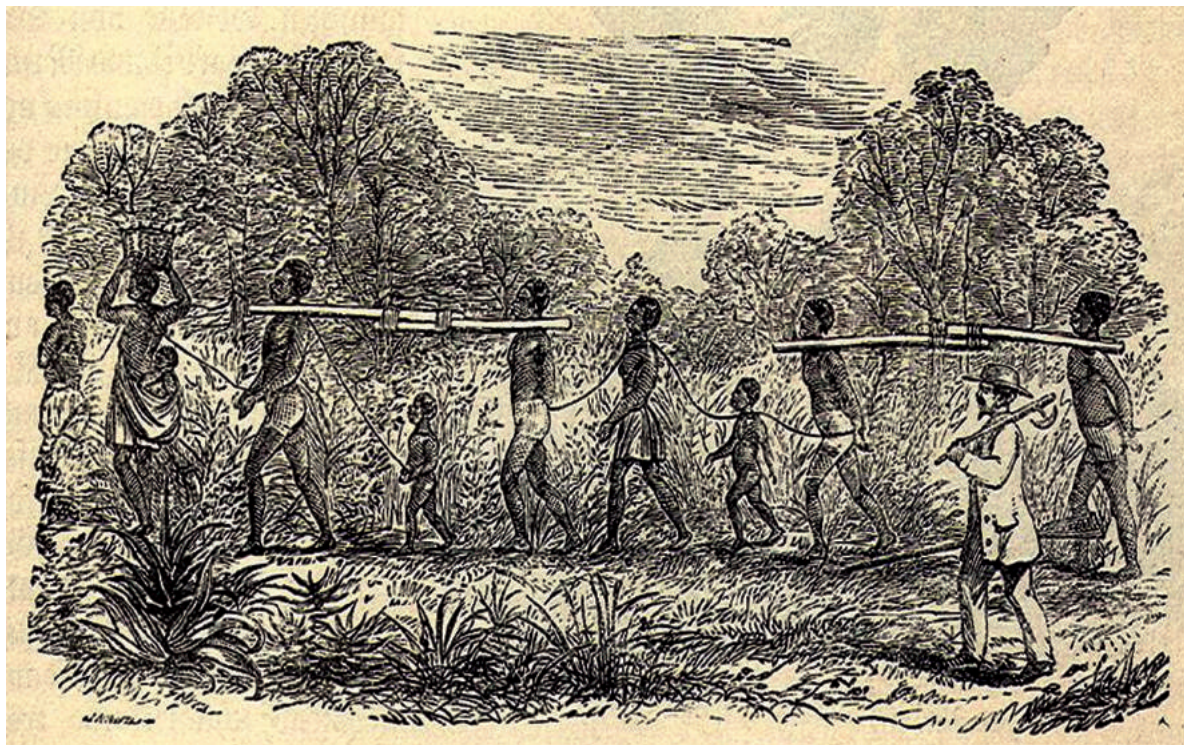


Figure 13.1: Captured and bound slaves being conducted by an agent

We learnt about the French Revolution of 1789 in the history chapters. Its biggest achievement was that it established the importance of human rights. But it was also during this period that the practice of slavery was widely prevalent, with France and other European countries enslaving the people of Africa in large numbers.

The slave trade flourished in African and Asian countries in the 17th century. Spain, Portugal, England,

France, etc were the main slave-trading countries. For example, French traders would set sail from the ports of Bordeaux and Nantes for the African coast, where they would buy slaves from local chiefs. They would brand and handcuff the slaves and cram them into their ships for the three-month-long journey across the Atlantic Ocean to the Caribbean countries. Here, they would sell them to plantation owners from America. The slaves had to face tremendous hardships during the arduous sea voyage. The traders treated them like cattle. They were not properly fed so many of them fell ill.

Slave labour made it possible for the American colonies to meet the growing demand in European markets for commodities like sugar, coffee and indigo. Ports like Bordeaux and Nantes became prosperous cities because of the slave trade.

During those days, the French National Assembly conducted long and exhaustive discussions on whether fundamental rights should, or should not, be extended to all residents of the colonies, not just French citizens. The fear of antagonising the powerful slave traders, however, prevented the assembly from passing any law against the practice of slavery. But the assembly did eventually pass a law in 1794 granting freedom to all slaves in the French colonies.

Ten years later, Napoleon restored the practice of slavery. The plantation owners were once again allowed to enslave the coloured people of Africa to protect their economic interests. The slave trade in the French colonies finally came to an end only in 1848. In America, the trade was abolished in 1865, but the liberated slaves were not granted equal citizens' rights until the 20th century.

Which rights of the people did the practice of slavery deny?

Compare the lifestyle of a citizen of a democratic country with that of a slave brought from Africa.

After America achieved independence, its constitution gave many rights to its citizens. However, women and coloured people had to wage a relentless struggle to claim these civic rights. Slavery was abolished in 1864 and the coloured (Afro-American and Native American) men were given the right to vote in 1870. All women were given voting rights in 1920. However, the coloured people continued to face various kinds of discrimination which prevented them from registering as voters as many states made laws to keep them away from voting or enjoying other civil rights. They were not permitted to sit with white Americans in public places like buses, trains, parks, restaurants and cinema houses. They could not interact as equals with them. They did not have equal access to public leisure and dining places.

In 1956, an incident of racial discrimination created a massive wave of anti-racism that swept across America. A coloured American citizen named Rosa Parks was not allowed to sit in a public bus. The coloured Americans, under the leadership of Martin Luther King Jr, launched a mass campaign for their 'Civil Rights Movement'.

What is a public place? Give some examples.

The coloured Americans staged a series of demonstrations in different places during the course of the civil rights movement. The pressure created by the protests led the American government to abolish all those laws that caused discrimination against non-whites in 1964. This also finally removed obstacles created by state laws to voting rights of the non-whites.

The leader of the movement, Martin Luther King Jr, asserted that coloured Americans should resort to direct action and long marches to attain their objectives. He gave a powerful and emotional speech to a mass rally of over 250,000 people assembled under the Lincoln Memorial in Washington DC on

August 28, 1963. This speech is considered to be one of the most memorable and influential speeches on human rights in world history. Some excerpts are given below:

“I am happy to join with you today in what will go down in history as the greatest demonstration for freedom in the history of our nation.

“Five score years ago, a great American, in whose symbolic shadow we stand today, signed the Emancipation Proclamation. This momentous decree came as a great beacon light of hope to millions of Negro slaves who had been seared in the flames of withering injustice. It came as a joyous daybreak to end the long night of their captivity.



Figure 13.2 Martin Luther King Jr addressing a meeting.

“But one hundred years later, the Negro still is not free. One hundred years later, the life of the Negro is still sadly crippled by the manacles of segregation and the chains of discrimination.

“One hundred years later, the Negro lives on a lonely island of poverty in the midst of a vast ocean of material prosperity. One hundred years later, the Negro is still languishing in the corners of American society and finds himself an exile in his own land. So we have come here today to dramatize a shameful condition.”

“I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood.

“I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

“I have a dream that my four little children will one day live in a nation where they will not be judged by the colour of their skin but by the content of their character.

“I have a dream today.

“I have a dream that one day, down in Alabama, ... little black boys and black girls will be able to join hands with little white boys and white girls as sisters and brothers.

“This is our hope.”

“This will be the day when all of God’s children will be able to sing with a new meaning ... ‘let freedom ring’.”

What miseries of the coloured Americans does the speech highlight?

Describe the America Martin Luther King Jr dreams about in his speech.

What methods did the coloured Americans resort to during the civil rights movement to gain their electoral rights?

13.2 The Importance of Rights in a Democracy

The concept of rights is not unique to the democratic system. Other systems also emphasise human rights - such as the right to work or the right to participate in local governance. However, rights are an integral part of a democracy because a democratic government cannot be formed and cannot function



Figure 13.3 Parliament House

without people's participation. The basic essence of a democracy is that the people choose their representatives; these representatives work for the people's interests and are accountable to them.

If the common people are denied their rights, then a limited number of people form the government. We saw this earlier in the example of the United States of America. If rights are not given to all the people, the government's policies and laws become one-sided and partisan. People cannot express their opinions about these laws and policies nor do they have the opportunity to change them. Also, if citizens' rights are not protected, the government can easily oppress, exploit and manipulate the people.

Rights are important for all human beings. Hence, there should be no discrimination on the basis of colour, race, caste, religion, region or country in awarding these rights. Denying rights to some people means denying them the right to progress in their life.

Rights empower and free individuals. They give them the opportunity to be creative, innovative and original - in music, dance, writing, etc. The right to education helps us to progress in life. Rights equip us to negotiate life with dignity and honour. They can be seen as freedoms and facilities given to individuals by the state to enable them to grow and develop physically, emotionally and mentally.

What problems would individuals face in life if they have no rights?

How do rights help develop an individual's personality?

How do we ensure that all individuals get their rights and are able to exercise them?

13.3 Rights in the Constitution

We may justify the need for rights both socially and morally. But rights are meaningful only if they have legal backing. This underlines the importance of legal recognition and sanction. The form in which rights are recognized today was not conceived by any one individual or country. Nor was it developed in one day. The form and scope of rights have evolved with our evolving understanding of human needs.



A right is considered a right only when it is given legal status. If there is no legal sanction, the people cannot demand the right nor is the state bound to implement it. For example, the Indian parliament accorded legal sanction to the right to education in 2002 under the 86th amendment to the constitution. Only then did this right become a fundamental right of the citizens.

The Magna Carta: Legal recognition of rights has a history that goes back about 800 years. The first example is in 1215 when the King of England recognized a charter of rights called the Magna Carta. The king of England gave his subject barons (aristocratic landlords) some rights through this charter. Prominent among them was freedom from arbitrary imprisonment, levying of feudal dues by the king only after it is approved by a council of barons.

Discuss the following:

How do rights get their legal status?

How was our life affected without the right to education?

Can the following be considered as rights:

1. The king's order
2. Rules decided upon by a community
3. Rules made by the parliament.
4. A facility extended to the people under rules made by the parliament

American Bill of Rights: In 1776, 13 colonies calling themselves the United States of America declared their independence from England and adopted a new constitution. The constitution contained a Bill of Rights that legally awarded several fundamental rights to the citizens. Prominent among them were the right to freedom, right to equality and right to property.

French Declaration of Rights: The people of France also issued a Declaration of Rights after the French revolution in 1789 that gave legal sanction to several rights. They included the rights to freedom, equality, property, protection against exploitation, etc.

Most of the democratic countries in the world followed France's historical step, legally granting many rights to their citizens. The source for sanctioning such legal rights was, generally, their constitution. These countries included provisions for granting rights in some form or the other in their constitution. For example, fundamental rights are statutory and legally binding in the Indian constitution. If the central government or any state government fails to extend these rights, then the citizens can register a case of non-compliance against the government in the High Court or the Supreme Court.

The fundamental rights listed in the Indian constitution are the source of all other legal rights and also the basis of their legality. This means all other legal rights given in the constitution are linked to the fundamental rights. The constitution lists six fundamental rights. Do you know what these rights are? We learnt about these fundamental rights in the Civics section of the class 8 Social Studies textbook. We shall now discuss them one by one.

Read the following texts. Which right do you associate them with?

1. **Whether it is the prime minister or a farm worker in a remote village, the same law governs everybody. No individual is allowed any special privilege under the law on the basis of birth or status. A few years ago, corruption charges were filed against a former prime minister. After deliberating the case, the**

court declared him innocent. But he had to attend the court proceedings like any other citizen during the pendency of the suit. He had to give evidence and submit documents to defend himself in the court.

Which right is involved in this example?

2. a. Which right permits rural people to migrate to urban areas, or people from impoverished regions to migrate to more prosperous regions, in search of work or to settle down?
- b. Which right permits people to express their views by printing and circulating leaflets, or writing articles in newspapers and magazines?
3. Children aged below 14 years are not allowed to do dangerous work in locations like factories, mines, ports or railways. The village head also cannot compel a child to work.

Which right is involved in this example?

4. Why is it necessary for the minorities to preserve their language, culture and religion?

Minorities – At a national level, they include not just the religious minorities. There can be other kinds of minorities like linguistic minorities. In any region of the country, the majority of the people speak one language. But there are also minorities who speak other languages or dialects. For example, in Andhra Pradesh, the majority speaks Telugu, but Telugu-speakers are a minority in Karnataka. In a similar way, minority and majority communities can be defined on the basis of religion or culture.

Which fundamental right protects the minorities?

5. There is a factory in our locality that discharges effluents that are polluting the drinking water. Diseases such as diarrhoea, jaundice, skin rashes etc are spreading because of the polluted water. This endangers people's life and health.

Which Fundamental Right does this violate?

13.4 Institutions that Protect our Rights

Giving legal recognition to rights is not enough to ensure that they are properly implemented and not violated. There must be institutions to implement and protect these rights. These institutions have to oversee whether these rights are being implemented properly or not. Such institutions are needed at the central and state level. Examples include the Human Rights Commission, Commission for Protection of Child Rights, Commission for Women etc.

Let us now take a closer look at some of these agencies that protect people's rights:

The Courts

We read about the courts in the previous classes. We know that the courts do not only deliver justice but they safeguard the constitution as well. If any person or institution violates our rights, we can appeal to the courts for justice. The denial of rights could be in any aspect of life, whether in education, environment or anything else. The fundamental rights in our constitution give us the right to file a suit in India's Supreme Court or any of the High Courts in the states if we are denied any of these rights.

There are several other institutions, apart from the courts, that act as protectors of our fundamental rights:

Human Rights Commission

The United Nations Security Council adopted the Universal Declaration of Human Rights on December 10, 1948. (This is why we celebrate Human Rights Day on this date every year.) Human rights are based on the premise that all human beings are equal and no human being is born to be a slave of another person. The idea was propagated to challenge inequalities based on race, ethnicity, religion, gender etc. All modern democratic nations have created special institutions to formulate laws and generate awareness to protect people's rights.



The Declaration of Human Rights accepts and includes all basic human needs as well as all key democratic ideals - such as freedom, equality, justice, human dignity etc. All signatory nations have set up human rights commissions to oversee the proper implementation of these rights and prevent their violation.

India constituted an independent National Human Rights Commission in 1993. A retired chief justice is appointed to head the commission. It cannot penalize anyone but has the authority to conduct an independent and impartial probe into any case of violation of human rights. They include cases where government officials stand accused of violating or preventing the violation of these rights. The violations cover social discrimination and boycott, domestic violence, child abuse and violence, child marriage, dowry harassment, abuse of prisoners, child labour, bonded labour, pollution, revenue, human trafficking etc.



Like any court, the commission can issue summons to eye-witnesses to appear before it, question any government official, and demand any government document. It can also visit the place where the violation took place to conduct an inquiry or send an expert team for an on-the-spot investigation.

Like the National Human Rights Commission for the entire country, every state has a State Human Rights Commission. The state government appoints the members of their state-level body. It has a chairperson (a retired Judge of High Court) and seven members and serves a term of five years.

The commission tries to prevent human rights violations occurring in the state. For example, in Chhattisgarh, the State Human Rights Commission had 1,121 cases of human rights violations on its register on December 10, 2014. Of these, 1090 people received justice while 730 cases are still under investigation. Address: Chhattisgarh State Human Rights Commission, near DKS Bhavan, Raipur 492 001. Tel: 0771-2235594

Summons:

It is issued by a court to any individual to present himself/herself before the court.

Let us look at one of these cases. A prisoner named Manoj Singh was undergoing life imprisonment in the Central Jail of Ballarpur. He was suffering from hernia. But he could not be taken for treatment because no guard was available to escort him. He registered a complaint with the commission, which looked into the matter. The commission instructed the jail superintendent of Bilaspur to arrange to have the prisoner escorted to the Raipur Medical College for treatment.

What problems would people face in places where there is no human rights commission? Why would they face such problems?

Is it possible for a human rights commission to protect the rights of all individuals?

Discuss the following statements among yourselves and then say which human right was violated in each case:

1. **In India, 183 people died in police custody and 1,114 people died in legal custody in 1998- 99.**
2. **Around 3,000 prisoners were interned in Meerut jail, which had a capacity to accommodate only 650 prisoners.**

Right to Information Commission

Malti lives in a slum near Bhilai. She has been trying for several months to get a ration card. She filled the form for the fifth time and submitted it to the block development office. When she went a few days later to collect her ration card, the concerned official told her that the office had not received her application. When she showed him the receipt of the form she had submitted, he told he would have to trace the application. Malti was upset by his answer.

While on her way home, she met Ramesh, a boy who lives next door to her. Seeing her so agitated, he asked her, “What’s the matter?”

She told him she had submitted her application form for a ration card four times, but every time the block development office told her it could not be traced.

Ramesh asked her, “Why don’t you enquire about the status of your application under the right to information?”

He told her, “Anyone can ask for information from any government office under a law enacted in 2005. All you have to do is fill in a form and deposit a fixed fee. It’s called the Right to Information (RTI) Act.”

Malti confessed, “Son, I don’t know anything about this law.”

Ramesh replied, “Don’t worry aunty, I’ll bring the RTI application form tomorrow, fill it up and we can then demand the information about your pending ration card from the block development office.”

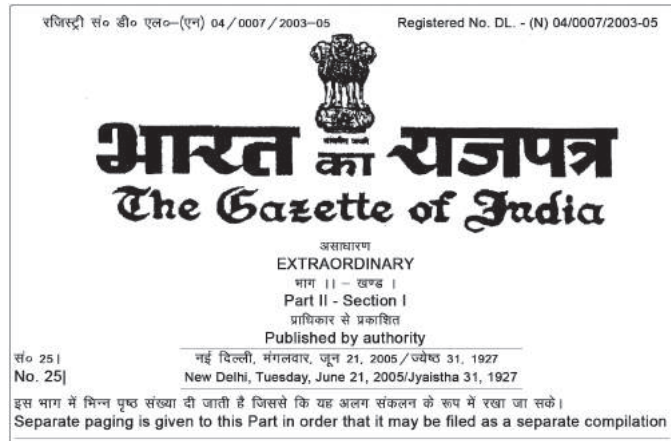
The next day, with Ramesh’s help, Malti demanded information from the block development office on the status of her application under the RTI Act. About 20 days later, she received a letter from the government saying that her ration card was ready and she could collect it from the concerned office.

In this way, the right to information gives us the authority to protect our rights. After the Parliament passed this act it came into effect from October 1, 2005. Information commissions have been set up at the central (Central Information Commission) and state (State Information Commission) levels. We can examine documents and records under the RTI and also get certified copies of records from any organization. If the organization fails to provide the information, we can file a complaint with the State Human Rights Commission.



The RTI Act mandates that the required information should be provided to the petitioner within 30 days. If the matter concerns an individual’s right to freedom or right to life, the information should be provided within 48 hours. Failure to provide the information in the stipulated time invites a daily penalty of Rs250 on the defaulting organization or authority, subject to a maximum fine of Rs25,000.

The RTI has brought transparency to the functioning of both public and private institutions and also ensured that records are maintained properly.



What problems did people face in getting information from various departments in the absence of the RTI? Discuss among yourselves.

How has the RTI brought transparency to the various departments?

Who is the present information commissioner of Chhattisgarh state and who is the present central information commissioner?

Fill in the RTI application form given below:

(Draft application form under the Right to Information Act)

1. Name of the applicant`
2. Address
3. Tel No (if any).....
4. Date of application.....
5. Name of the office
6. What information do you want

(Copy, work inspection, record inspection, certified copy of record, certified sample)

7. Fee deposited with application form Rs10
(cash/challan/money order/non-judicial stamp)
8. Is the applicant below the poverty line? Yes/No
(If yes, kindly provide BPL card number)

Signature of applicant

Commission for Women

Some days ago, a woman arrived in search of employment. She works as a housemaid, sweeping, swabbing, and washing utensils. Her husband is addicted to alcohol. He beats her up and snatches her hard-earned money. He comes home drunk every night and beats her up.

One day, I saw her bruised face and asked her why she did not protest against this physical violence. “What can I do? I am only a woman. Who will listen to me?” she responded in a defeated manner.

There are many women like her who face such hardships but hesitate to seek justice in the women’s police station, court or human rights commission. This is why a commission for women has been set up at the central and state levels. The commission undertakes initiatives and organizes programmes in different places to generate awareness among women about their rights and the laws passed for their security.



A woman teacher once participated in one of the programmes organized by the commission in a school. We would like to share with you the information she gave to the audience:



The commission for women has been set up to improve the social and economic status of women and advise the government on women’s welfare. It works to give women constitutional and legal protection, investigate cases of bonded women, and make women self-confident and independent. The National Commission for Women works to abolish child marriage; ensure financial assistance to abandoned, widowed or divorced women; prevent female foeticide; and uplift minority and

backward caste women. It also works to create awareness among women to fight against exploitation and injustice.

Why did the need to create a women’s commission arise?

How does the commission for women help affected women?

Address: Chhattisgarh State Commission for Women, Gayatri Bhawan-13, Jal Vihar Colony, Raipur, Tel: 0711-4241400

Commission for Protection of Child Rights

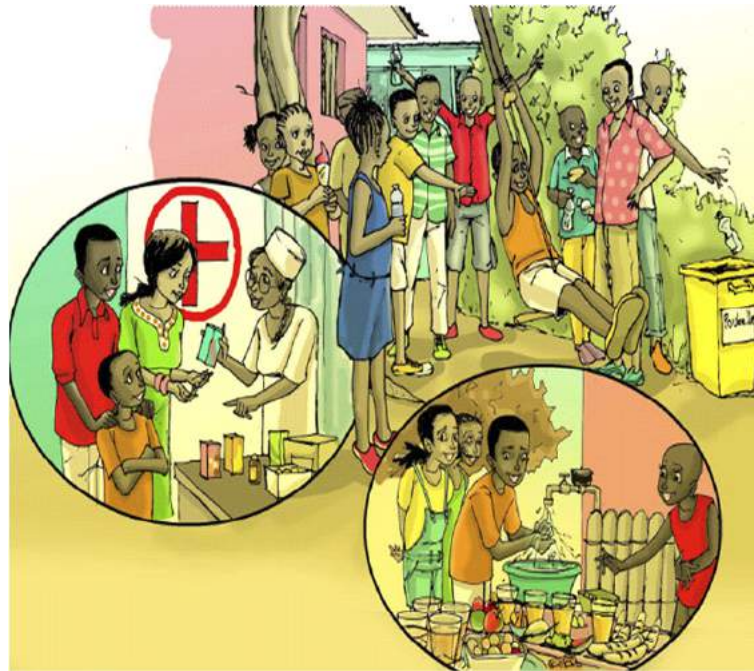
Somaru works in a big hotel. The hotel manager makes him work hard the whole day until 10.00pm. One night, a teacher passing that way noticed Somaru leaving the hotel. The teacher asked him what he was doing there so late in the night. Somaru told him he worked in the hotel.

The teacher asked him, “Why do you work here? Why don’t you go to school? Somaru told him his parents are labourers who earned very little money. This was not sufficient for their household expenses. Hence, Somaru also had to work.

In our society and across the world, the resources we need to earn a livelihood - such as water, forests, land, mines, and industries - are not divided equally among the people. This is the reason why some people are very rich and some are very poor. The poor do not have enough money or work to

educate their children. Poor children like Somaru work at an age when they should be studying in school. So they remain illiterate.

Children below the age of 14 years who work are called child labour. Children of that age have many needs. If these needs are not fulfilled, their physical and mental development is affected. Keeping this in mind, all countries at the international level set up commissions for the protection of child rights. The consensus on child rights among these countries was that these rights should be respected and protected even in the most distressing situations such as war.



India, too, set up the National Commission for Protection of Child Rights, while the states have set up state commissions. The mandate of these commissions is to prevent all violations of child rights, whether by social institutions or by the state. Their special focus is on child abuse, child trafficking, child labour as well as the health and education of children. They prepare status reports on child rights from time to time. They also advise and give instructions to all concerned institutions.

What kind of work are child labourers usually engaged in? List the different kinds of work.

Why was the commission for the protection of child rights established?

Address: Chhattisgarh State Commission for Protection of Child Rights, A-34 Sector-1,
Shankar Nagar Nigam Zone Office, Near water tank, Raipur I.
Toll Free: 18002330055, **Tel:** 0771-2420095

13.5 Democracy and Child Rights in the Changing Context of Rights

We observed in our discussion on the concept of rights that rights change as human needs and thinking evolve. Apart from some basic needs, different aspects of human life, different values and ideals, gain importance in society from time to time. It is for this reason that the notion and context of rights has changed across the world over the past several decades. For example, many European countries now recognize sports as a fundamental right of children. Similarly, many countries have formulated special rights for people with special needs. India, too, enacted the PWD Rights Act 1995 to protect the rights of people with special needs. The act has special provisions for the education, employment and rehabilitation of 'People With Disabilities' (PWDs).

Fifty years ago, it was probably difficult to imagine that children would need special rights for their well-being and security. It was the growing problem of child labor in the country and across the world that led to the enactment of Child Labour (Prohibition and Regulation) Act of 1986. The act seeks to prohibit the employment of children aged below 14 years in dangerous occupations.

The Right to Information Act of 2005 can also be seen as an outcome of the changing context and scope of rights. Around 30-40 years ago, no one would probably have imagined that citizens would be granted something like an RTI act. The need to establish this act was felt because people realized they were unable to access information on various government projects, hence they could not share the benefits. Whether it was a case of labourers in Rajasthan not getting the minimum wage, or a panchayat's share of funding in a government project, the lack of information was depriving people of their benefits. This demand to know slowly gained momentum, leading to the right to information becoming a statutory requirement in the country.

In the past several years, India's Supreme Court and the High Courts in many states have been viewing different cases through the prism of fundamental rights. They have given judgments in many cases on the basis of the fundamental rights listed in the constitution. The courts now accept that clean drinking water, pollution free environment, food and education should be seen as integral to the right to live a dignified life. For example, in a case filed by Mohini Jain against the state of Karnataka in 1992, the Supreme Court ruled in her favour, asserting that the need for education is integral to the fundamental right to freedom and life. The court reasoned that education was necessary for humans to progress in life and live with dignity. The parliament passed the 86th Amendment Act of 2002 to guarantee education as a fundamental right on the basis of this ruling.

This example shows that if a social demand is universal, just and for the public good, the right will be given legal status by the court and parliament.

In today's world, rights are the most important medium for countries that call themselves democracies to uphold the dignity and respect of their citizens. Apart from government entities, there are many public and private institutions and organisations that are mandated to implement and monitor citizens' rights. Even today, many countries and many citizens in India are denied some of their rights. Many people are still struggling to realise their rights. They are also demanding new rights as their lifestyles and life needs evolve. The scope of rights keeps widening. It is the responsibility of citizens to acknowledge the importance of rights and fight to acquire them. That is why it is important for citizens to remain alert and be aware of their rights to prevent governments from becoming authoritarian and dictatorial.

**Address: National Human Rights Commission, Human Rights Commission block,
CGPO Complex, INA, New Delhi. Tel: 011 24651330**

EXERCISES

1. Fill in the blanks:

1. The French Revolution occurred in
2. The slave trade began in the century.
3. The was created to protect women's rights.
4. The constitution defines child labour as children aged below years.
5. Martin Luther King Jr led a movement for the rights of..... people.
6. The present chairperson of the National Women's Commission is.....

2. Choose the correct option:

i) Which constitutional amendment granted the right to education?

- | | |
|---------------------|----------------------|
| a) 82 nd | b) 84 th |
| c) 86 th | d) 100 th |

ii) The current minimum voting age in India is:

- | | |
|-------------|-------------|
| a) 16 years | b) 18 years |
| c) 21 years | d) 25 years |

iii) Coloured people are the native inhabitants of:

- | | |
|------------|-----------|
| a) America | b) Europe |
| c) Africa | d) Asia |

3. Answer the following questions:

1. What does slavery mean?
2. What is a summon?
3. How are human rights violated?
4. How does the Human Rights Commission protect human rights?
5. When did the coloured people in America get unrestricted right to vote?
6. What functions does the commission for women perform?
7. Why was the commission for protection of child rights set up?
8. What was the main reason for racial discrimination of the coloured people by white Americans?
9. Why is the right to information important in your life?
10. Discuss whether the fundamental rights in the constitution are a reflection of universal human rights.

**

14

Gender Equality and Women's Rights

We learnt about democracy and human rights in the previous chapters. We learnt that a successful democracy is one in which all members of society participate to the fullest possible extent. We also learnt that citizen's should have rights for a democracy to function properly. This is why democratic countries have legally recognized many human rights.

In this chapter, we shall try to see whether democracy has – or has not - given equal importance to the participation of all sections of society, particularly women. Are women actually able to exercise the rights the constitution guarantees to all citizens? Why is it that, in reality, women do not get equal opportunity to develop and progress in life? Let us try to understand the reasons.

Study the items of daily use shown in Images 1 to 8.

Now discuss the following questions in class.

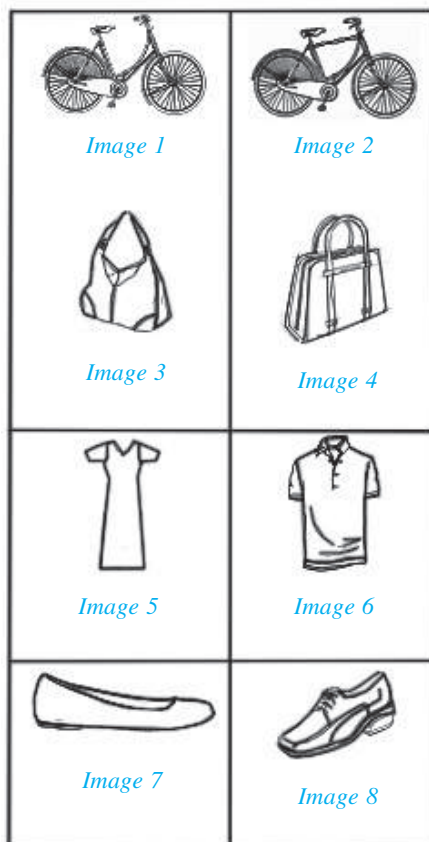


Figure 14.1: The differences in products used by boys and girls

Who uses the kind of cycle shown in Image 1?

Why are cycles made differently for boys and girls, as shown in Images 1 and 2?

What difference is there between Images 3 and 4? Why is there a difference?

Who uses the handbags shown in Images 3 and 4?

Can both girls and boys use all the items shown in Images 1 to 8 or not?

We see many clear differences between boys and girls and men and women in the society around us. Girls and boys are taught to behave, dress and play in a particular manner from childhood. At home, parents give boys toy aeroplanes and cars to play with while girls are given dolls and toy utensils, stoves and other kitchen items.

If we look carefully, we notice these differences between boys and girls even in very small matters in everyday life. For example, girls are generally considered to be emotional and polite. In contrast, boys are considered to be rough and tough. The influence of such ideas can be seen in their later life. For instance, technical and higher education are considered suitable for boys, while teaching, nursing, etc are considered suitable for girls.

Some beliefs are planted in the minds of boys and girls while they are growing up. For instance, it is the responsibility of women to look after the household and the upbringing of children while men work outside the home even though they are quite capable of performing household chores. Such prejudices are called gender discrimination.

What is Gender?

There are biological differences between boys and girls and we recognize them at birth. But it is society that has assigned different roles and attire to men and women. These roles have slowly become fixed. This societal perspective, which determines the role of men and women, is what we call social or gender discrimination.

With whom do we normally associate the following words? Fill them in the appropriate column in the table given below:

beauty, tenderness, harshness, anger, tolerance, bravery, talkative, emotional, ornaments, hard work, intellectual work, household work, driving a bus, driving a car, working on a computer, technical work

Girl	Boy	Both

What are the reasons for associating the words in column 1 with girls?

What are the reasons for associating the words in column 2 with boys?

We associated some words in column 3 with both boys and girls. Why?

From the time a child is born, our socio-cultural practices assign roles in life for boys and girls. These roles are based on gender differences. The practice of allocating roles based on gender is known as 'genderisation'. For example, it is generally believed that men are physically stronger than women, hence they can easily perform tasks that are considered tough and require strength. Similarly, women are considered to be kind and tender by nature, hence they can look after children well.

In general, the difference between men and women are attributed to their biological make-up. But it is important for us to understand that these roles are assigned not merely on the basis of sexual or biological differences but are influenced by social practices. These roles are shaped by our prevalent social beliefs.

What does the term 'gender' convey to you?

Are politeness, tenderness, and tolerance qualities we find only in women? Discuss with reasons.

We saw how gender discrimination is based on prescribed social beliefs. We shall now see how labour and wages are assigned on the basis of gender.

The third gender:

There are people in the world who are not fully male or female. They are called the third gender. The Supreme Court has suggested that there should be a provision for the third gender in all official forms that seek personal information about individuals.

Is Division of Labour Based on Gender?

The way men and women behave and the decisions they make in life are influenced by various factors. It is accepted that one important factor is biological.

The table below contains a list of jobs. Which jobs do you think are for men and which are for women? Which jobs do you think both men and women can do?

S. No	Job	For men	For women	For both
1	Factory work			
2	Labourer			
3	Nurse			
4	Doctor			
5	Lawyer			
6	Trader			
7	Beauty parlour			
8	Tractor driver			
9	Sports			
10	Teacher			

Why did you choose some jobs only for men? Discuss among yourselves.

Why do you think men are unsuitable for those jobs that you chose for women?

Why do you think the jobs you chose for both men and women are suitable for both?

Society considers the division of labour on the basis of gender to be natural. But the only biological function that is natural for women is childbirth. It is society that has assigned all the other roles to men and women. Since men are more dominant in society, they tend to influence this division of labour. Women have been given responsibilities that are boring, tedious and require a lot of hard work. Bringing up children after childbirth is considered their primary responsibility. Along with this primary responsibility, their other duties include household chores like cooking, cleaning, etc. Such work is called women's work. But if we see 'women's work' from a different perspective, bringing up children is as much the responsibility of the father as it is of the mother.

Men work outside the home. It's not that they cannot do housework. They just think that housework is a job for women. We need to change such traditional thinking. Men do these same jobs outside the house because they are paid wages. They cook in hotels and sew in tailoring shops. These are jobs men perform.

There are no wages for housework. But even for work outside the home, the wages paid differ according to gender. Women who work on farms or as labourers are paid lower wages than men. Also, women who work the whole day as housemaids do not get a respectable wage. Just think. Is it fair to pay lower wages to women on such basis?

Gender Difference in Time Spent on Work

It would be interesting to know how many hours men and women actually work. What is the difference in the work they do and the number of hours they work? A survey was conducted to find out about this. This information is contained in the tables of the chapter titled '**Understanding Economic Activities**'.

Collect information about the kind of work men and women in your family and in the neighbourhood do every day and the number of hours they work. Discuss your findings in groups.

If an unmarried man does the work that both men and women perform at home, how many extra hours does he work? If the same man eats his three meals in a hotel, how much does he spend daily on food?

On the basis of these facts, we can say that women face discrimination in both work and wages. The government has passed laws to ensure equal wages for women but they are still paid less for employment outside the government sector. They do not get equal wages in the agricultural sector nor are they considered to be farmers. In the unorganized sector, they are paid around 60% of the wage that men are paid.

It is evident from Ramvati's situation that women face discrimination and inequality in employment. There are countless stories like Shyamlal's family, where girls remain illiterate and house-bound because all family decisions are taken by men. In this way, women continue to face exploitation.

There are many people in our society who think like Shyamlal and prevent their educated and skilled wives like Ramvati from working. They accept age-old traditions and customs and are accustomed to thinking that only men have the right to decide who stays at home and who can work outside. They believe that their decisions should be accepted without questioning.

Who created these customs and practices that people follow so blindly? Have you ever thought about it? How do these customs and traditions allow men to dominate? Why can't women break free from them?

Why did Shyamlal stop his wife Ramvati from working? Are the reasons he gives legally valid?

How would the family have benefited if Ramvati had worked in a factory or somewhere else?

Whose thinking do you think was right, Shyamlal's or Ramvati's? Discuss with your teacher.

Efforts to Break Existing Conventions

We saw how Ramvati accepted traditional beliefs and sacrificed her desire to work and earn a living. In the beginning of the 19th century, there were many social reformers in India and the rest of the world – like Rammohan Roy, Ishwarchandra Vidyasagar, Jyotiba Phule etc - who sought to reform the social status of women by raising their voice in protest against traditional beliefs and conventions.

The following example illustrates another facet of gender differentiation:

Shyamlal's family lived in Naya Raipur. They faced a lot of economic hardship. Shyamlal was the head of the family. He never let anyone express their opinions. If his wife Ramvati offered advice, he would snub her, saying, "You concentrate on the household work. There's no need for you to offer me any suggestions." Ramvati was a tolerant and submissive woman who accepted the traditions of her society.

The family needed money to bring up their children properly and to get their daughter married. Ramvati kept telling her husband that she could work in a factory. In this way, she would get the chance to use her education and skills and also contribute to the family income. Shyamlal always responded in anger, saying, "If you go out and work alongside other unknown men you will disgrace me in society. Just remain quietly at home and try to manage the household with the money I bring. No woman in our family has ever stepped out of the house to work." His wife was disturbed by such narrow-minded thinking but she kept her thoughts to herself.

For example, Raja Rammohan Roy sought to make modern education available to all and talked of creating laws to eradicate the practice of *sati*. Ishwarchandra Vidyasagar made special efforts for girls' education, widow remarriage and fixing a minimum age for girls to be sent to their in-laws' house after marriage. Jyotiba Phule and Savitribai Phule undertook many initiatives to educate and socially reform the disadvantaged classes in society.

Savitribai Phule (1831–1897)

During Savitribai Phule's lifetime, people belonging to the lower social castes faced a lot of discrimination, violence and persecution in India while people belonging to the upper classes were held in high esteem and revered. It was the upper castes who formulated social laws and religious policies, instilling the fear of sin in people to get them to accept and obey the laws. In those days, women did not have the right to education, property, freedom, equality and respect.



Figure 14.2: Savitribai Phule

The common belief about women's education was that if women studied, they would be widowed. Savitribai Phule believed that women could liberate themselves from such social conventions only if they were educated. She made education her weapon. She felt the only way to change people's mental attitudes was through education and scientific thinking.

What were the difficulties people from the weaker sections of society faced during Savitribai Phule's time and why?

Why did Savitribai Phule believe that education is an important tool for the emancipation of women and people from the weaker sections of society?

Savitribai Phule worked hand in hand with her husband Jyotiba Phule to bring education to the weaker sections. She established the first school for girls in 1848. She set up 17 more schools by 1897. She was illiterate herself but learnt to read and write with the help and motivation of her husband. She became the first woman teacher of her school. She motivated children from the weaker sections to study. Her school curriculum sought to develop an understanding of moral stories, Devanagari script, grammar, mathematics, geography, Maratha history, and the maps of Asia, Europe and India.

The Phule couple faced a lot of opposition from the upper caste communities. Fearing the wrath of influential members of these communities, Jyotibai's family put pressure on him to close the schools and, eventually, threw him out of their home. The upper caste people tormented Savitribhai in many ways. They threw garbage in the entrance and courtyard of her school. She was insulted and abused while walking on the road. She faced the abuse and torment with patience and courage. But she never forsook her chosen path and continued her work.

Savitribai and Jyotiba Phule used the creative arts like drama, songs and poetry to convey their ideas, their main objective being to develop in children an awareness of social reform and a desire to advance in life.

Savitribai was also a poetess. Her poetry reflected her deep sympathy and concern for the exploited classes in society. Her collection of poems titled *Kavya Phule* is considered to be an important literary landmark that heralded the Renaissance movement in Marathi literature.

She was one of India's pioneering women's social reformers. Her efforts are all the more significant because they showed the way to exploited women to fight for their rights.

What efforts did Savitribai Phule make for women's education?

What was the long-term impact of Savitribai Phule's efforts in women's education and social reform?

Why do you think Jyotiba Phule encouraged and helped his wife Savitribai to study?

Women's Struggle for Political Rights

Women constitute almost half of India's total population. But do they participate equally? Can any democracy succeed without the participation of half of the population - women?

In most democratic countries of the world, women had to struggle for many years to gain their political rights. Women played a key role in India's independence movement and consistently sought their rights. They repeatedly demanded their voting rights, even joining the International Universal Suffrage Movement. Kumudini Mishra was invited as India's



Figure 14.3: Women casting their vote

women's representative at the International Women's Suffrage Congress held in Budapest in 1913.

Women also voiced their demands during the discussions on political reforms in 1917, stating that they be given educational and health benefits. The Madras Assembly granted women their voting rights for the first time in 1921. The Act of 1935 reserved seats for women in the assembly. But it was only after the Constitution of India came into effect that every adult woman in the country finally got the right to cast her vote.



Figure 14.4: Women demanding equal rights

After independence, as women's organizations became stronger, they went beyond their demands for rights in their everyday lives, such as education, jobs, personal safety and abolition of dowry, inheritance of property, etc. They now began demanding greater participation in political organizations as well.

The law granting equal rights to boys and girls in their father's property was passed in 1956. It took a sustained struggle to get the law passed. It was argued by its opponents that such a law that would create rifts in the family while its supporters saw it as step forward in upholding the democratic values of justice and equality. The 1956 law had several shortcomings that were subsequently addressed and rectified in a more robust version of the law passed in 2005.



Figure 14.5: Women participating in a political organisation

Women believe that if they get due representation in political organizations, they will be able to mobilise public opinion and get laws passed on issues linked to their daily lives. They believe it will help them to take personal and political decisions more easily.

How can women's participation in a democracy be ensured?

What rights were women demanding in pre-Independence India?

Representation of Women in Political Organizations

The 73rd and 74th amendment of the constitution gave women in India 33% reservation in local bodies like the village and district panchayats and municipalities. In several states, this reservation is presently 50%.

Women *panchs* and *sarpanchs* faced many problems in local self-government. One major problem was that men were not mentally prepared to accept the decisions they took. The local self-government institutions did not have the required authority to influence society nor did they have the capacity to initiate major social changes. This is why women demanded 33% reservation in the state assemblies and the central parliament.

A bill was introduced in the state assemblies and parliament under the 81st amendment to the constitution proposing 33% reservation for women. But till today, this bill has yet to be passed by the parliament. All political parties support 33% reservation in principle but for various reasons they have not been able to build a consensus on the details of the bill.

Participation of women in the Lok Sabha

Lok Sabha	Total seats	Women members	Percentage
1952	489	Not available	.....
1957	494	22	4.4
1962	494	31	6.3
1967	520	29	5.6
1971	518	21	4.2
1977	542	19	3.5
1980	542	28	5.2
1984	542	42	7.7
1989	543	29	5.3
1991	543	37	6.8
1996	543	40	7.4
1998	543	43	7.9
1999	543	49	9.0
2004	543	45	8.2
2009	543	59	10.9
2014	543	62	11.4

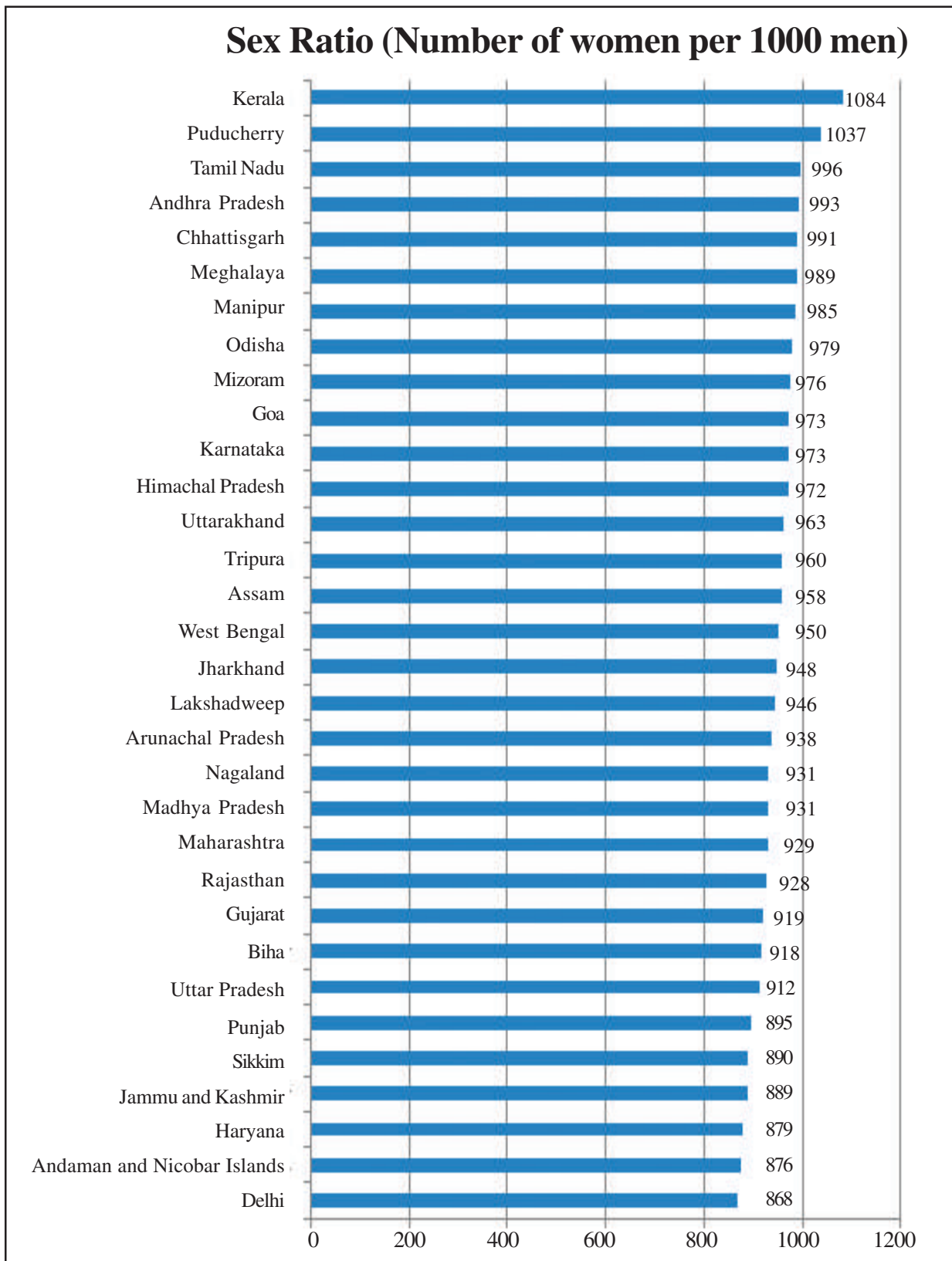


Figure 14.6: Women's participation in various states and union territories

(Source: www.census2011.co.in/sexratio.php)

What problems did women experience after being elected as members of local self-government bodies?

Why did women demand reservations in the state assemblies and the parliament?

The table above shows that the number of women in the Lok Sabha is very small. What could be the reason for this?

Compare the sex ratio in Chhattisgarh and Haryana. What is the reason for the difference?

If there is no discrimination in a society, the sex ratio is almost equal. We can see from the table that the sex ratio in many states is quite unequal. This shows that, even today, most people in our society prefer boys to girls as children.

Efforts to Make Women Self-dependent

Along with seeking political rights, women have also tried to become economically self-reliant because they cannot take independent decisions without being economically empowered. Over the past few decades, women have benefited from the various government schemes and also made efforts themselves to become economically self-reliant. Let us look at one such an attempt.

Mata Rajmohini Devi

Mata Rajmohini Devi was born in a poor peasant family in Sarseda (Shardapur) village of Sarguja district (now in Balrampur district) on July 7, 1914. Her father's name was Virdas and her mother's name was Sheetala Devi. She received no education during her childhood. She was married to Ranjit Gond of Gobindpur village and spent the next 20 years as a housewife. Because of widespread illiteracy in those days, problems like superstition, conservatism and alcoholism had risen to alarming proportions in the villages of Chhattisgarh.

Rajmohini Devi was moved by the oppression that women faced in a male dominated society. It inspired her to take up the task of teaching the villagers how to lead a happy life. Alcoholism had not only impoverished the villagers but also led to their moral degradation. She gave a 'ban alcohol' call, urging women to join her and show their strength. Thousands of women came forward to join her movement. On March 28, 1953, she launched a *satyagraha* to demolish all the distilleries in the region. Around 50,000 people participated in the *satyagraha* that carried the message 'Alcohol destroys mind-body-wealth'. This affected the distilleries in Duddhi, Singrauli, Agori and Bijaygarh in Uttar Pradesh; Ranchi (now in Jharkhand) and Patna in Bihar; as well as in Kerala and Madhya Pradesh.

Rajmohini Devi addressed a conference organized by the All India Prohibition Council in 1963-64. She was



Figure 14.7: Mata Rajmohini Devi

congratulated by Lal Bahadur Shastri and Morarji Desai, who were impressed by her speech on prohibition. She established *seva mandals* to serve the villagers. She was also lauded by the then Chief Minister Ravishankar Shukla and the first President of India Dr Rajendra Prasad in Ambikapur for her social welfare initiatives in villages.

Rajmohini Devi received the Indira Gandhi Award on November 19, 1986 and was awarded the Padma Shri by the President of India on March 25, 1989 for her outstanding efforts to uplift the weaker sections of society. After battling with prolonged illness, this revered woman activist of Chhattisgarh breathed her last on January 6, 1994. Her social reform efforts will remain etched in memory.

Efforts to Empower Women in Sarguja District

As in other regions of the country and elsewhere in the state, women in Sarguja district are also making efforts to empower themselves. Around 12,000 women's self-help groups (SHGs) have been constituted under the guidance of the district's first woman district magistrate. These SHGs have helped women find jobs as auto, jeep, tractor, harvester and van drivers. Women are also engaged in making sanitary napkins and compost powder from egg shells. Motivated by these efforts, women in other rural and urban areas are also engaging themselves in such self-employment activities.



Figure 14.8: Women auto rickshaw drivers waiting for passengers

Rajmohini Devi launched her satyagraha in

What were the problems plaguing the villages of Chhattisgarh during Rajmohini Devi's lifetime?

Do these problems still exist today? If they do, then what role can Chhattisgarh's youth play in eradicating them?

Discuss the efforts that are being made in your area for women's empowerment.

Discuss the adverse effects of alcohol addiction on the health and lives of people.

Discuss

How can parents eradicate gender-based discrimination in bringing up their children?

How can parents help their daughters study the subjects of their choice and pursue careers that they want to?

How can workplaces be made more gender sensitive?

How can men be sensitized to put an end to violence against women?

How to stop sexual harassment and eve-teasing

Newspapers and news channels often carry reports of women facing sexual harassment and eve-teasing within the family and in public places. In most of these cases, the perpetrators are men and boys from the family itself, near or distant relatives known to the girl, or, sometimes, complete strangers. Sexual harassment and eve-teasing include passing lewd comments, making sexually-explicit gestures, indecent behaviour and using force to commit acts that outrage a girl's modesty. These are offences that are punishable by law. If proven, the perpetrator can be penalized.

Girls must not remain silent about such criminal acts because of pressure from others. They should talk to their parents, elder brothers or sisters, teachers or someone who they feel is understanding and trustworthy. Children of every family and school should be taught good and positive habits and behaviour to discourage such crimes. Society should make an attempt to be sensitive to girls if it wants to put an end to such criminal acts. This is everybody's social responsibility because such criminal acts affect the esteem and dignity of the girl and are an insult to society. One can also register a complaint on police helplines against instances of sexual harassment and eve-teasing.

(Committee Against Sexual Harassment; CASH)

This committee is also known as the Vishakha Committee. The Supreme Court of India, while pronouncing its judgment on the Vishakha Case, decreed that these committees should be set up to put an end to cases of sexual harassment and eve-teasing against women at their workplace. Hence, it is mandatory for every office and institution - such as schools, colleges, government offices, private institutions and company offices - to set up a Committee Against Sexual Harassment (CASH) to address complaints by women about sexual harassment and eve-teasing at their workplaces. The head of the institution is responsible for ensuring the committee is set up.

The committee should include three senior women members of the institution or company. Their names should be permanently displayed on the office notice board so that they are known to all employees of the organization.

The committee is responsible for independently and objectively assessing complaints made by women about sexual harassment and eve-teasing within their organization. If the complaint is proven to be valid, then the committee recommends legal and departmental action against the guilty person.



Figure 14.9:

We tried to build an understanding of the concept of gender and gender discrimination in the different sections of this chapter. We tried to understand, through various examples, how the work that men and women generally do is determined by society. These roles are not permanent but keep changing as social awareness increases. Women are making efforts to gain political, economic and social equality. The concept of equality is the basic foundation of democracy. Being a democracy, this is why India's constitution promises political equality for all its citizens, which includes women.

EXERCISES

1. Choose the correct answer:

- i) Gender means
 - a) biological difference
 - b) economic difference
 - c) social difference
 - d) political difference
- ii) Household work done by women is considered to be
 - a) high wages work
 - b) no wages work
 - c) low value work
 - d) women's work
- iii) Men dislike cleaning, cooking, washing clothes, etc in their home but they are seen to do such work outside their homes. This is because
 - a) they get paid
 - b) there is no dignity in doing these chores
 - c) they do not earn any money
 - d) such work takes a lot of effort
- iv) Many people accept their gender-based roles because
 - a) they accept traditional beliefs and customs and cannot easily discard them
 - b) they think it is against the law to change their roles
 - c) they feel it would not be just to women for them to change their roles
 - d) they feel it would be difficult for them to change their roles

2. Fill in the blanks:

- i) Women first demanded rights linked to their personal lives.
- ii) Women have percent reservation in local self-government bodies.
- iii) Women are demanding 33 percent reservation in
- iv) Women are forming to achieve economic self-reliance.

3. Answer the following questions:

- i) What were the prejudices against women?
- ii) What is the basic difference between the work women do at home or outside?
- iii) What was taught in the schools run by Savitribai Phule?
- iv) What efforts did women make to win their rights?
- v) What are the reasons for gender discrimination in society?
- vi) If women get the opportunity to participate equally in decision-making bodies, how will it affect their status in society?
- vii) What efforts are being undertaken to make women economically self-reliant?
- viii) What should be done to end the gender discrimination that exists in society?

PROJECT WORK

1. Make a list of the different kinds of work that self-help groups in your neighbouring areas are doing.
2. Make a case-study of the benefits women derive from the work done by their self-help groups.

**



15

Understanding Economic Activities

Economic activities

People around us do different kinds of activities to fulfill their needs. Some activities involve producing goods, like making baskets from bamboo, weaving cloth, growing crops in fields, manufacturing cement in factories, and so on.



Some other kinds of activities provide services to people. For example, shopkeepers sell goods, bus drivers transport people, and barbers give haircuts. They do not provide these services free out of a sense of charity. We pay them for the services. Just like we buy goods, we pay money for these services.



Both kinds of activities – producing goods and providing services – are called economic activities. Most economic activities are activities in which money is exchanged. Goods and services are part of the production process. We pay money to buy them. However there are some economic activities, where production of goods and services takes place but they are not exchanged for money. We'll study this in the last section of the chapter.

Figure 15.1: An example of economic services

Study the economic activities listed in the table below:

1. Farmers growing and selling crops.
2. Making and selling clay pots.
3. Traders purchasing manufactured goods and selling them in the market.
4. Teachers teaching children in school.
5. Setting up a shop to sell biscuits and savouries.
6. Carpenters making and selling furniture.
7. Factories manufacturing and selling paper.
8. Gathering honey from the forest and selling it.
9. Spinning thread from silk to weave saris and selling them.



Figure 15.2: Various economic activities

- 10. Culturing and selling fish.
- 11. A company mining bauxite and selling it to another company

Based on your experience, add more economic activities to the list. Remember, economic activities are goods and services produced and exchanged for money.

- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

The list shows that people do different kinds of economic activities to fulfil their needs.

So all activities to produce goods and services, which are exchanged for money to fulfill our various needs, are the major part of economic activities.

Separate the activities to produce goods from the activities to provide services listed in Table 1.

What are economic activities? Explain with examples.

Make a list of economic activities that:

- a) continue throughout the year,
- b) continue for a few days or months.

Project work: Many activities that are important for our social and community life take place in your home and your neighbourhood. But we don't spend any money on them – no payment is made for them. Can you think of any such there is production of a good or service. Make a list of these activities.

Sectors of the economy

The different kinds of economic activities occur in some sector or the other. They can be classified into specific sectors on the basis of their production.

These sectors are the agricultural sector, the industrial sector and the service sector. Such sector-wise classification makes it easy to calculate the share of each sector in the total production of the Indian economy.

1. Agriculture and allied sector

The process of production in this sector depends primarily on nature. It uses natural processes and resources. Various crops such as rice, wheat, corn, millet, maize, cotton etc are produced. Forestry is an



Figure 15.3: Agricultural work in progress

allied sector to agriculture. Forest produce includes flowers, herbs, fruits, glue, honey etc. Other allied sectors are animal husbandry, fishery (pisciculture) etc.

2. Industrial sector

In this sector, goods are manufactured by using machines/tools and human labour - for example, using bamboo to manufacture baskets, sugarcane to manufacture jaggery, leather to manufacture shoes, limestone to manufacture cement, etc.



Figure 15.4: Steel rolling mill

Industries are classified into cottage industry (micro industry), small-scale industry, and medium or large industry. Goods produced on a very small scale in the household, mostly by family members, are classified as cottage industry.

Small scale industry requires more capital and labour compared to cottage industry. Production is done using small or medium-sized machines. Examples include rice

mill, printing press, brick kiln, and small components factory. They are classified as small-scale industry.

Large-scale industry requires much higher capital and resources than small-scale industry. Goods are manufactured in large factories with a large labour force. Cement and steel factories are examples of large-scale industry.

Explain the role of nature in agricultural production.

Make a list of the different enterprises in your area and classify them into cottage industry, small-scale industry and large-scale industry in the table below.

S No	Cottage industry	Small-scale Industry	Large-scale Industry
1	Name of enterprise	Name of enterprise	Name of enterprise
2	List of raw materials required.....	List of raw materials required.....	List of raw materials required.....
3	Where the raw materials are sourced from	Where the raw materials are sourced from	Where the raw materials are sourced from
4	Finished product	Finished product	Finished product

Table 1.1

3. Service sector

This sector covers special services provided by professionals. Examples include medical treatment, nursing, legal practice, teaching, etc. Also included are services that support the production process, such as transporting goods to distant markets by tractors or trucks, banking services, communication services etc. All government services fall within this category.

Classify the economic activities listed in Table 1.1 into the sectors given in the table below:

S No	Agricultural and allied sector	Industrial sector	Service sector
1	Production of grain by farmers and its sale in the market	Making baskets from bamboo	Teacher teaching students
2			
3			
4			

Table 1.2

How do transportation and communication services help in the production of goods?

Project work: Visit your local market and list the different kinds of activities that are in the services sector - such as loading and unloading trucks and vans, transporting people to various places, selling goods, repairing shops etc.

Calculating the production of goods and services: how and why?

People engage in different kinds of economic activities to produce a large variety of goods and services. If we want to know the total production of any country, we have to add all the goods and services produced in that country.

But adding all these goods and services is a difficult and complicated task. We could make a list of all the goods but it will still be difficult to calculate their total quantity because we use different units to measure different goods and services.

To solve this problem, money is used as the unit of measurement. We find the money value of all the goods and services. If 500kg of sugar is sold at Rs30 per kg, the total value of sugar is Rs15,000. Similarly, the value of 100 litres of milk at Rs30 per litre is Rs3,000. If a doctor charges Rs5,000 for an eye operation, the value of 10 operations will be Rs50,000.

To calculate the total value of these three goods and services, complete the table given below:

S No	Name of good/service	Quantity	Rate	Total value
1.	Sugar	500kg	Rs30 per kg	Rs 15,000
2.	Milk	.....	Rs30 per litre	Rs 3,000
3.	Eye operation	10	.....	.....
TOTAL				Rs 68,000

Table 1.3



Figure 15.5: A rice mill

In this example, we added the value of the three goods and services to calculate the total production. But how do we add the value of all goods and services to calculate the total production of a country? In some cases, the goods are used to produce other goods. So it is not necessary to calculate the value of all the goods and services that are produced and sold. We need to calculate the value of only the final goods and services that we use or consume. The following example illustrates how this is done:

A farmer sells 100kg of paddy to a rice mill at the rate of Rs10 per kg. The total selling price of the paddy is Rs1,000. The farmer uses his own seeds to grow the paddy. The rice mill produces 60kg of rice from the 100kg of paddy. It



15.6: A shopkeeper making puffed rice

It sells this rice to a shopkeeper at the rate of Rs20 per kg, so the total value of the rice is Rs1,200. The shopkeeper produces 55kg of puffed rice (*murmura*) and sells it at Rs50 per kg to his customers.

In this example, the paddy is converted to puffed rice, which is the final product that reaches the end customer. Paddy and rice are, therefore, the **intermediate** goods for the shopkeeper.

The value of intermediate goods is included in the value of the final product. The value of the puffed rice – the final product - is Rs2,750.

The value of the intermediate goods is Rs1,000 for paddy and Rs1,200 for rice. These values are already included in the price of the final product. So it is not correct to add the values of paddy, rice and puffed rice. Adding the values of the same thing in different forms would be double counting.

Discuss with your teacher

Intermediate goods are used to produce the final goods and services. We use or consume the final goods and services as customers. The final product is not used again in a production process. So the production process ends with the final product.

Calculating total production by the value added method

We can calculate the total value of production in the above example in another way. To understand this method, write the example in the form of the table given below:

S No	Goods	Total value (in Rs)	Value of intermediate goods purchased (in Rs)	Value added at each stage (in Rs)
1.	Paddy	1,000	0	$1,000 - 0 = 1,000$
2.	Rice	1,200	1,000	$1,200 - 1,000 = 200$
3.	Puffed rice	2,750	1,200	$2,750 - 1,200 = 1,550$
	Total value of production			$1,000 + 200 + 1,550 = 2,750$

Table 1.4

In this table, the value is added at each stage. In the first stage, the value added to paddy is Rs1,000 since the farmer owns the seeds and does not have to buy them. In the second stage, the rice mill paid Rs1,000 for the paddy and sold the rice for Rs1,200. In this stage, the value added is Rs200. In the third stage, the shopkeeper bought the rice for Rs1,200 and sold the puffed rice for Rs2,750, the value added being Rs1,550. In this way, some value is added to things at every stage of production. This is called **value addition**. This method avoids double counting to calculate the value of total production.

Project work: Calculate the total value of the goods and services purchased in your home in a month.

What are the intermediate goods required to produce a motorcycle? Discuss in class.

Can anything be a final product in one case and an intermediate good in another case? Explain with an example.

Explain the concept of value addition with an example.

Gross Domestic Product (GDP)

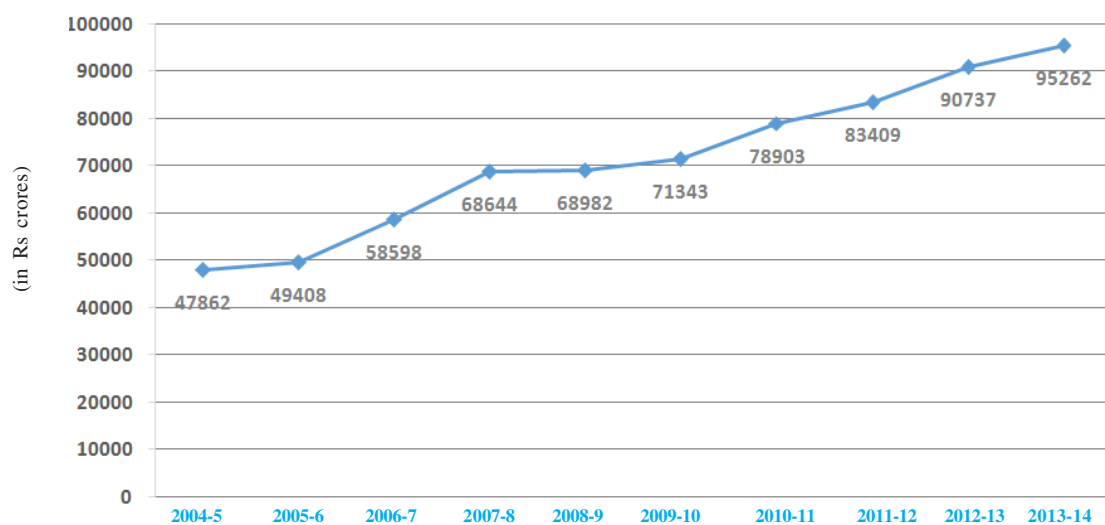
The total production of a country in a financial year is the total value of all the final goods and services produced in all sectors of the economy. All this production must occur within the geographical boundaries of the country. The total value of this production in a financial year is called the Gross Domestic Product or GDP. Domestic means the production takes place within the country.

The central government's Ministry of Statistics calculates the annual GDP. The ministry seeks the support of different central and state government departments to calculate the total quantity of final goods and services produced. It determines the market value of this production to estimate the country's GDP.

Gross Domestic Product of Chhattisgarh (in Rs crores)

Field	2004-05	%	2014-15	%
Agricultural and allied sector	10,519	22	18,727	
Industrial sector	21,221	44	42,282	
Service sector	16,482	34	39,833	
Total	47,862	100	1,00,842	100

The graph clearly shows that Chhattisgarh's GDP has increased consistently from 2004-05 to 2013-14.



(Source: Chhattisgarh Economic Survey 2014-15)

Figure 15.7: Chhattisgarh's Gross Domestic Product

Explain the concept of Gross Domestic Product in your own words.

How has the share of each sector in total production changed in Chhattisgarh between 2004-05 and 2014-15? Discuss with your teacher.

Calculate the share of each sector in total production in 2014-15 and fill in the percentages in Table 5.

Which sector has gained the most in the last 10 years?

Understanding the concept of unpaid work and its Importance

Figure 15.8: Milking a cow

We learnt that the value of only the final product is taken to calculate the GDP. This means we calculate the GDP on the basis of the price at which the goods and services are bought or sold in the market. But we do many different kinds of activities in our daily lives for which we don't receive any payment. These activities, which are not bought or sold, or for which no money is paid, are very important in our life. Such activities are not taken into account when calculating the GDP because they are unpaid activities. As a result,



Figure 15.9: Sweeping and keeping the house clean

the GDP estimate is always less than what it actually should be. If these important but unpaid economic activities are taken into account, the GDP value would be much higher.

These activities have a special importance even if they find no place in any sector of the economy. They play a vital role in our family and our society. Women perform most of these activities. But they are not paid for doing such work, which includes cooking food for the family, looking after children etc.

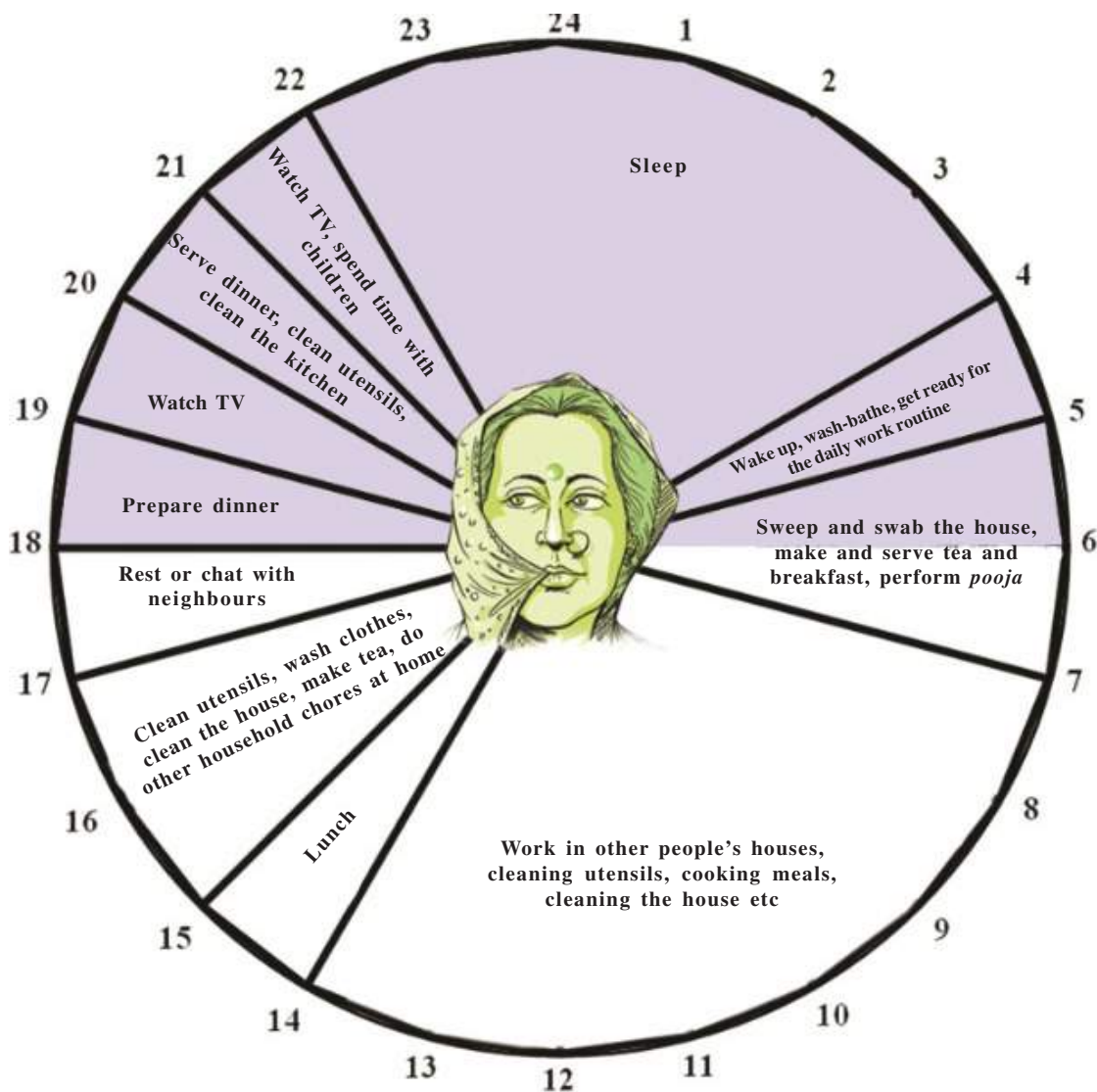


Figure 15.10: The daily work chart of a female domestic worker

Activity: Discuss in small groups and prepare a list of activities that you see at home or around you that produce something or provide a service but are not paid for.

There is a way to assess such unpaid activities. They can be assessed on the basis of the time spent in performing them. Some women are engaged in economic activities along with their household chores. For example, Figure 15.10 shows the daily work chart of a working woman. She does economic activities, for which she is paid, in addition to her normal household work, for which she receives no money. Women do many other kinds of work that are not included in the work chart, like cleaning and storing grain, beautifying their home, entertaining guests, taking care of aged and ailing members of the family, daily grocery shopping, looking after domestic animals, helping children with their homework, etc.

Make a list of unpaid work.

S No	Unpaid work
1.	
2.	
3.	
4.	

Table 1.6

The daily routine of people can be divided into three kinds of activities, based on the time spent doing them. They are:

Paid work: All activities for which a payment is made.

Unpaid work: All activities for which no payment is made.

Non-work activity: Leisure time activities, like watching TV, chatting, resting etc.

The Central Statistical Organization (CSO) conducted a survey in six states in 1998-99 to find out how much time is spent on different activities. The table below shows what percentage of their time men and women in the rural areas spend in doing the three kinds of activities listed above:

S No	Work	Men (rural)	Women (rural)
1.	Paid work	25%	20%
2.	Unpaid work	2%	14%
3.	Non-work activity	73%	66%

Table 1.7

Analysing the daily work routine of men and women in rural areas

Fill in the work percentages for women given in Figure 15.11 in the pie chart below:

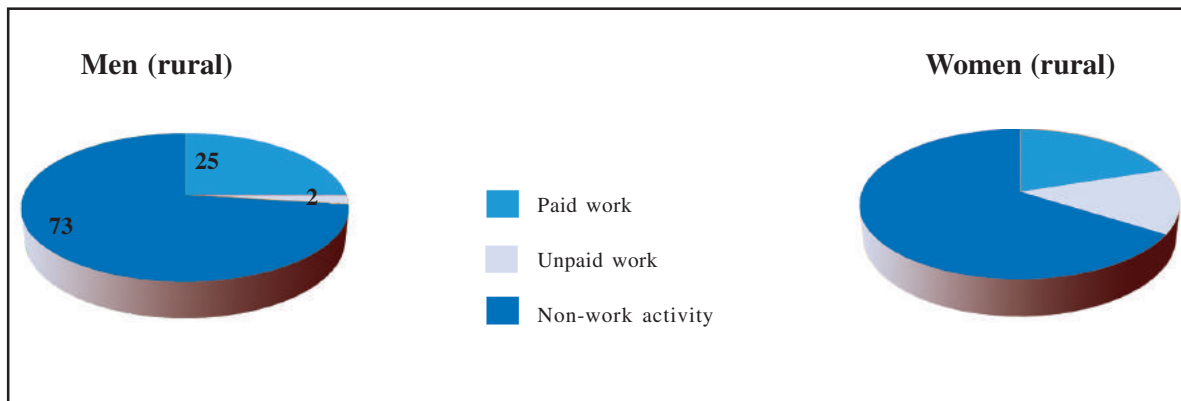


Figure 15.11: Pie chart of work percentages of rural men and women

The pie chart clearly shows that women spend more time doing unpaid work, which is not included in the GDP calculations. It is necessary to understand these activities and include them in the GDP calculations. Many countries are trying to do this. We need to create awareness of and sensitivity towards such work in our society.

EXERCISES

1. Choose the correct answer:

- i) Education and health related work are included in
 - a) agricultural sector
 - b) industrial sector
 - c) services sector
 - d) none of these
- ii) In double counting, the total production is the actual production
 - a) less than
 - b) more than
 - c) the same as
 - d) none of these
- iii) Unpaid work is mostly done by
 - a) children
 - b) men
 - c) women
 - d) old people
- iv) The annual Gross Domestic Product takes into account the value of
 - a) all goods and services
 - b) all final goods and services
 - c) all intermediate goods and services
 - d) all intermediate and final goods and services

2. Choose the odd one out among the following options and explain your choice

- i) farmer, basket maker, fisherman, goatherd
- ii) cooking, playing, cleaning, looking after the aged
- iii) making paper, making cars, making fans, teaching

3. What are the allied economic activities in the agricultural sector?

4. How does cottage industry help in reducing unemployment?

5. What are intermediate goods? Explain with suitable examples.
6. How is the service sector different from other sectors? Explain.
7. Explain the concept of value addition with suitable examples.
8. Explain the importance of unpaid work for the family and for society.
9. Women mostly do unpaid work. Do you think this work should be included in GDP calculations? Explain with reasons.
10. Make a list of the different kinds of work you see adults around you doing. How will you classify these activities?
11. Explain the following sentences with suitable examples
 - i) Household chores are invisible and unpaid work
 - ii) Household work requires physical labour

**

The Nature of the Indian Economy

Part 2: Industrial and services sectors

Industrial sector

A glimpse of the past 60 years

Initial phase: Before independence, the growth and spread of industries in India was limited. There were very few industries at the time, mostly jute, cotton, cement, iron and steel etc. More than 80% of the population lived in villages. Hence, cottage industries played an important role in generating employment. A large number of people were employed in these small enterprises.

The bar graph shows that the contribution to the GDP of the industrial sector rose from 17% in 1950-51 to 28% in 2009-10. During this 60-year period, the sector's share in employment rose from 11% to 22%. Thus, although industry grew, the growth in production and employment was below expectations.

After independence, the government took many steps to promote industrial development. The primary objective was to achieve self-reliance by producing a range of goods to fulfill the country's needs. To encourage the growth of new industries, the government focused on establishing core industries such as electricity,

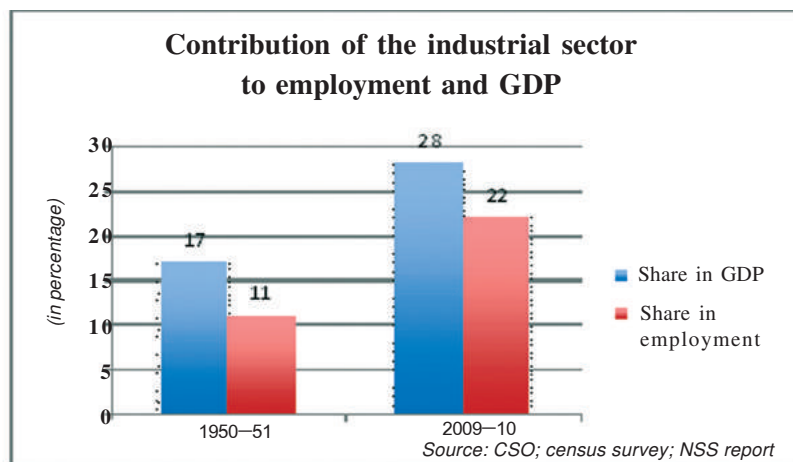


Figure 17.1: Bar graph showing the contribution of the industrial sector to employment and GDP



Figure 17.2: Core industry – Bhilai Steel Plant

machinery, metals, minerals etc. Factories require the products of these core industries. New factories were set up at a rapid pace following the establishment of core industries. Production and employment also grew with rapid industrialization.

Setting up core industries is a challenging task because they require large capital investment and long gestation periods. For example, it takes 5-10 years to set-up a power plant to generate electricity. That's why the government stepped in to establish these industries. Among the large industries the government set up in the public sector were iron and steel, power plants and mining and mineral plants. These large enterprises catalyzed the establishment of factories, which, in turn, generated employment and helped to make the country self-reliant in the production of many goods.

The reforms phase:

The government made many laws to develop industries. For example, it gave small producers the production rights in some sectors such as producing cloth with handlooms. Large industries were not



Figure 17.3: Wire factory

given permission to set up factories to produce these goods. This was done to protect the small producers from competing with the big producers. Also, the small scale sector employed large numbers of people. A licensing system was introduced for large industries, which regulated the quantity of goods they could produce.

But this industrial policy created many problems over the years. The licensing system became more and more complicated, with the paper work and documentation

required to set up an industry taking a lot of time. Only a few influential people could easily procure licenses. The big industrialists benefited while the policy created many hurdles for small entrepreneurs. The big industrialists were able to establish their monopoly in some sectors, with absolutely no competition. This stifled technological progress and limited production.

So while the industrial sector grew rapidly in the first 15 years after independence, with big increases in production and employment, the sector subsequently faced problems that slowed down the growth of industries considerably.

During this slowing down phase, many public sector factories run by the government also started making losses. The government had to provide extra funds every year to keep them running. The hope that these factories would become self-sustaining was never realised. The economy was faced with the growing problem of unemployment and lack of capital for investment.

The industrial policy was changed in the decade of the 1990s and efforts were made to resolve the problems faced by the industrial sector. This policy reform encouraged the establishment of new industries and allowed greater freedom to import and export certain goods. It also encouraged private

companies from other countries to set up factories in India. The licensing system was discontinued. Large industries were now permitted to set-up factories in sectors that were earlier restricted. The government also invited the private sector to take over and run its loss-making factories. Increasing competition in the market forced these factories to improve their operations and increase production.



Figure 17.4: An automobile factory

The liberal policies encouraged private and foreign investment in industry as well as the information and communication sector, leading to the establishment of many new factories and enterprises.

Employment in the industrial sector

High levels of automation in the new factories, however, led to fewer employment opportunities in the industrial sector. For example, production multiplied five-fold in a large steel plant between 1991 and 2005, but the number of workers employed in the plant was reduced by 50%. In 1991, the plant produced 10 lakh tonnes of steel and employed 85,000 workers. In 2005, production increased to 50 lakh tonnes but the number of employees went down to 44,000. Many jobs were given to contractual workers. In this way, employment in the industrial sector did not rise according to expectations even though production increased substantially.

1. Steel is used to manufacture many goods. Make a list of these goods.
2. Why are core or basic industries important?

Project work: Select a factory in your area and write a report on how capital was invested and how technology is being used in the production process.

Sub-sectors of industry

We need to look at the sub-sectors of the industrial sector if we are to understand how production and employment can be increased. Industry requires electricity, gas, water supply, mining and manufacturing facilities to produce goods. Manufacturing is a process in which raw materials are physically and chemically transformed into new products. Manufacturing is the most important sub-sector of industry. In 2009-10, manufacturing contributed 16% of the GDP and employed around 5 crore workers.

Manufacturing is widely accepted as the foundation of a balanced economy. It was a prime factor in the growth of developed countries. Historically, all developed countries focused on developing their manufacturing sector. Growth in manufacturing catalyses demand in other sectors. Goods from the manufacturing sector fulfil many of our life needs. So the objective of the manufacturing sector is to find the appropriate technology to mass produce goods and ensure that these goods are available to everyone in the market.

1. Make a list of manufactured products that you see around you.
2. How are these goods produced? Discuss in class.
3. How does industrial production impact people and the environment? Discuss in class.



Figure 17.5: Bar diagram of steel production

Source: Ministry of Steel Annual Report 2012-13

Basic metals, food processing and textiles are important manufacturing industries in India. Iron and steel is a core industry, with steel production indicating the manufacturing capability of a country. The food processing and textile industries are the biggest employment generators. The textile industry is an example of an important manufacturing industry where India is self-reliant for all its requirements - from raw materials to machinery to finished products.

The employment situation in the food processing industry is given in the following table:

Table 17.1: Employment in the food processing industry

S No	Year	Employment
1.	2007-08	15 lakh
2.	2008-09	15.5 lakh
3.	2009-10	16 lakh
4.	2010-11	16.5 lakh
5.	2011-12	17.75 lakh

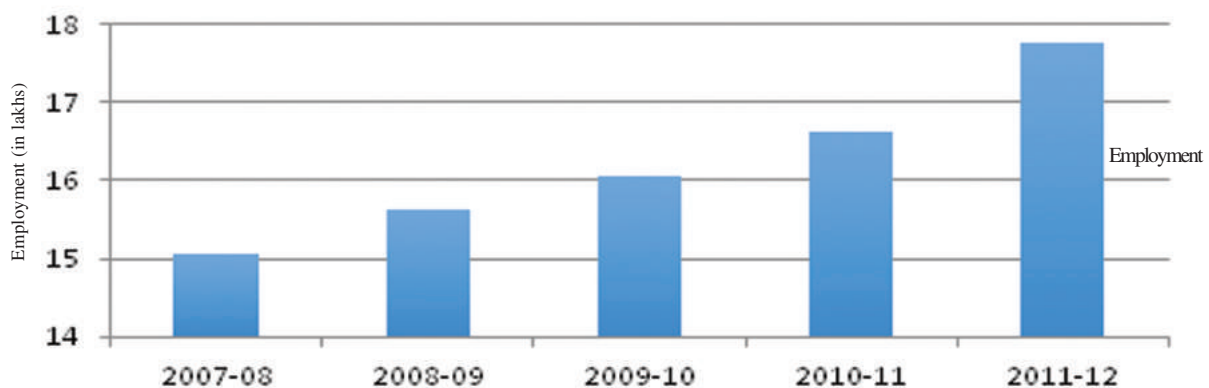
Employment in the food processing industry

Figure 17.6: Bar diagram of employment in the food processing industry

Source: ASI Annual Report 2011-12

1. Where are new employment opportunities in industry being created? Discuss in class.
2. Can a food processing factory be set up in your area? Discuss in class.

Challenges facing the industrial landscape

Producing goods in a factory requires machinery, electricity, various chemicals and other raw materials. During production, some industries discharge harmful chemical wastes that pollute the environment.

Dust, smoke and polluted water discharged from factories increases soil, water and air pollution. This pollution affects crops as well as the health of people, causing various illnesses. Factories should be prohibited from emitting wastes that pollute the environment. Or they should treat the wastes before discharging them. But regulations to control waste discharge either don't exist or are not observed or implemented.

Another challenge is the outdated technology still being used to produce goods, which makes it difficult to increase



Figure 17.7: Smoke emitted by a factory

production. New technology needs to be adopted and research and development in production processes needs to be promoted. The government and private enterprises should make efforts in these areas.

Land is required to construct a factory. The demand to establish more factories is putting pressure on agricultural land and forests. In many regions, people who depend on forests or agriculture for their livelihood are being displaced and forced to relocate in other regions. Rehabilitating all the displaced people is a difficult and complicated process.

Promoting the manufacturing sector to increase the production of goods is the need of today. But it is necessary to maintain a balance between preserving the environment and industrial growth. Also, increasing production requires large amounts of capital. This is why the government is inviting foreign investors. Encouraging the steel, cement, electricity, renewable energy and information technology industries is a leading priority for the government because it leads to all-round economic development.

At present, around 60-70% of the industrial labour force works in the unorganized sector while 30-40% work in the organized sector. Workers in the organized sector receive many benefits and have a sense of security, which is not the case in the unorganized sector. Workers in the unorganized sector are often forced to work for long hours for lower wages. It is a challenge to protect these workers from exploitation and provide them with necessary benefits.

People who work in government offices have fixed hours of work. They get their salary every month. They also get a provident fund as per government rules. They are entitled to medical and other allowances in addition to their salary. They do not work on Sundays and they get paid holidays. They

are given an appointment letter when they take up a job, which clearly states all the terms and conditions related to their employment.

Now consider those people who are daily wage workers in, say, a grocery shop. They go to work at 7.30 in the morning and work till 8.00 at night. They do not get any additional allowances or incentives apart from their wages. They don't get an appointment letter from the employer stating the terms and conditions of their employment. Their employer can terminate them from the job at any time.

The people in the first example work in the organized sector whereas the people in the second example work in the unorganized sector. Enterprises in the organized sector are registered with the government so they have to follow official rules and regulations. That's why the sector is known as the organized sector because it observes official procedures and processes. Employees in the sector get the benefit of job security and their employment conditions are regulated. They are expected to work for a fixed period of time. If they work extra hours, they are paid an overtime by the employer. They also get many other benefits from their employers. These benefits include paid leave, provident fund, medical insurance, other incentives and pension after retirement. In addition, the factory owner has to ensure availability of clean drinking water, safe work environment etc.

The unorganized sector is made up of smaller units, many of which are not registered with the government. There are rules and regulations for the sector but these are not strictly followed. The salaries are usually low and irregular. There is no provision for overtime wages for extra hours of work, paid holidays, leave, medical benefits etc. There is no job security and employees can be dismissed without any specific reason on the whims of the employer. They are also laid off during the off season when there is little work.

A large number of people in the unorganized sector are also self-employed such as hawkers, mechanics and maintenance and repair workers. Similarly, farmers who work in their own fields are also self-employed. All these self-employed people have no access to the social benefits that the organized sector workers get.

1. **Many technical methods to reduce industrial pollution are available but they are usually not implemented. Find out about these methods with your teacher's help.**
2. **Why is there a serious conflict for land to set up factories?**
3. **What are the benefits of promoting the manufacturing industry?**
4. **What measures can we take to ensure the security of employees in the unorganized sector?**

Service sector

The service sector has gained in importance in recent years compared to earlier times. We need to understand its contribution to the GDP. New technologies have led to an explosion of many new services. One example is the communication sector where mobiles, computers and the internet have made it easier to store, track and exchange information, thereby speeding up communication.

Service sector and employment

The contribution of the service sector to the GDP rose from 30% in 1950-51 to 57% in 2009-10. During this period, its share in total employment rose from 17% to 25%. The following bar graph traces the growth of the service sector from 1950-51 to 2009-10.

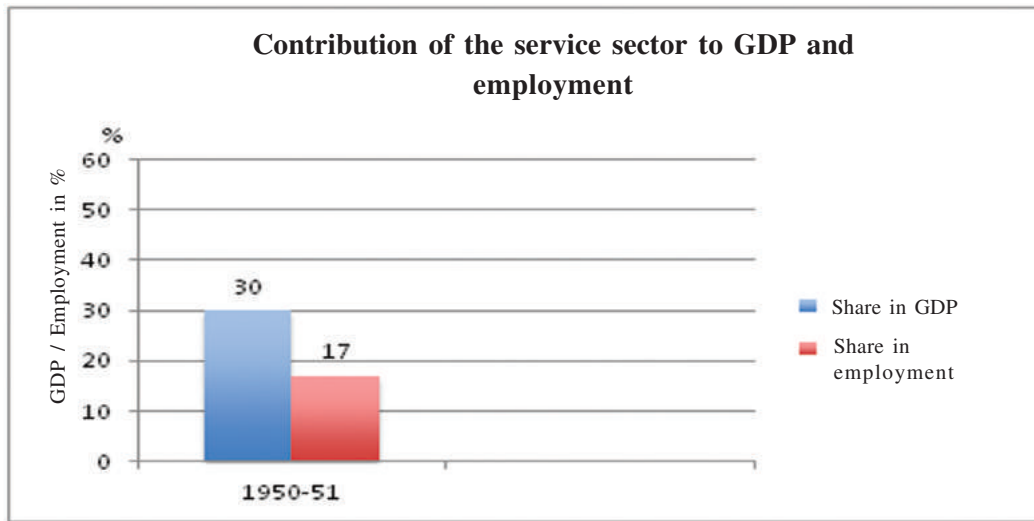


Figure 17.8: Bar graph showing the contribution of the service sector to GDP and employment

1. Make a bar graph similar to Figure 17.8 to show the contribution of the service sector to the GDP and employment in 2009-2010.
2. The share of the service sector in employment increased to percent in 2009-10, compared to percent in 1950-51.

Sub-sectors of the service sector

The growth of employment in the service sector was below expectations even though the share of the sector in the GDP rose substantially. Why was growth in employment not in the same ratio as the share in the GDP? We need to look at the sub sectors of the service sector to understand why employment growth did not match expectations.

The service sector includes many activities that can be divided into three classes.

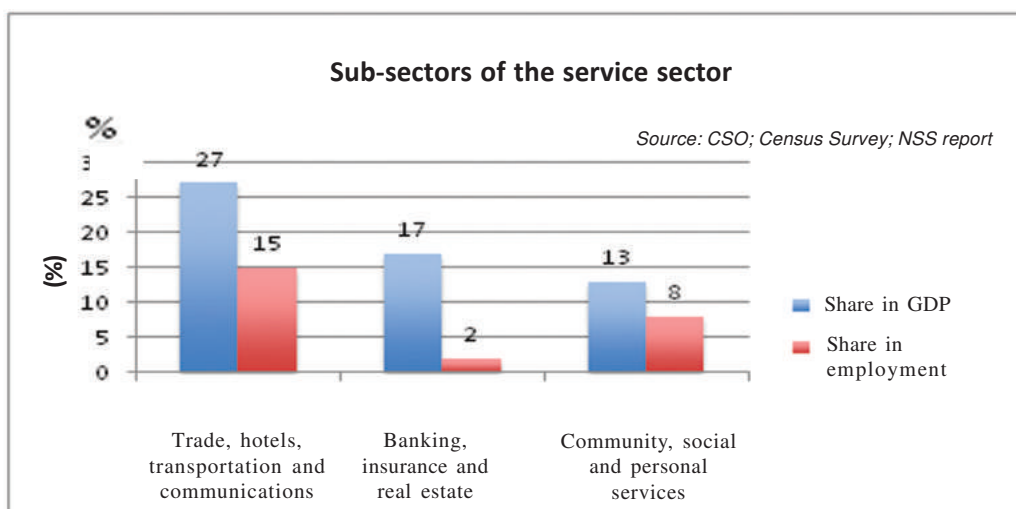


Figure 17.9: Bar graph depicting the sub-sectors of the service sector

1. Trade, hotels and restaurants, transportation, warehousing and communication.
2. Banking, insurance and real estate.
3. Community, social and personal services.

1. Trade, hotels and restaurants, and transportation, warehousing and communication

The trade, hotels and restaurants, and transportation, storage and communication sub-sectors contribute the most to the GDP and employment. They include the purchase and sale of goods - buying and selling clothes, food-related items, accommodation in hotels etc.

Transportation, warehousing and communication is an important component of this sub-sector. Transportation involves moving goods and people from one place to another by air, rail, road or water. The sub-sector also includes services provided by small lodges, transport services by tempos and autorickshaws, shops selling fruits and vegetables, hawkers and other self-employed people.

Employment is irregular in this sub-sector. Autorickshaw, tempo and tractor drivers ply their vehicles all day but often don't get enough work. Many small services employ workers at low wages. Most people working in this subsector are in the unorganized sector.

Warehousing services are important for both the agricultural and industrial sectors. If storage facilities are not available in rural areas, consumable goods produced by the agricultural sector would decay and rot, leading to economic losses.

Communications is the fastest growing sub-sector. It includes radio, television, internet, mobile, newspapers, magazines etc. Around 75-80% of the population use mobiles and 20% use the internet. For instance, a village shopkeeper manages his business with a mobile phone. He can find the rates of goods available in the city before making his purchases. He, thus, saves both time and money.

1. Employment is irregular in some services sub-sectors. Explain with examples.

Project work: Find out the wages and working conditions of a worker employed in a shop in your neighbourhood. Write a report on your findings.

2. Banking, insurance and real estate

This sub-sector is among the fastest-growing and contributes significantly to the GDP. The services include banks, post offices, non-banking finance companies, life insurance, general insurance (crop, vehicles etc), real estate companies etc. The sub-sector employs highly skilled workers and uses modern technology. That's why it contributes 17% of total production even though its share in employment is only 2%. Though it employs few workers, the market value of their services is very high.

3. Community, social and personal services

Public administration, defence, education, health and personal services such as hair-cutting, tailoring, cleaning etc come under this sub-sector. So do government jobs.

Project work: Make a list of the community, social and personal services that you find in your neighbourhood.



Figure 17.10: Banking services

The changing face of the service sector

New technological innovations and inventions have changed the face of the services sector. The most striking impact is in banking, insurance and business services. This is why this sector contributes 17% of the GDP even though its share in total employment is only 2%.

Communication technology has also seen tremendous changes since 1990. As a result, many new services, based on technology, have grown rapidly. They include computer-based services, internet cafés, ATMs, call centres, software companies etc. Some decades back, banking services depended mostly on human resources. But information technology has changed all this, making banking services available at the doorstep. Today, one can easily deposit or withdraw money from ATMs, get loans with credit cards, transfer money from one account to another, and so on.



Figure 17.11: Real estate business

Information technology has opened the way for global services, such as consultation, transmitting information, submitting examination forms etc. The internet, mobile and computer enable us to get any information in any field from anywhere in the world instantly.

BPO services have expanded the boundaries of the service sector. For instance, an employee working in a call centre in India can provide various services to people in the USA via the computer and internet. An American citizen can ring up the call centre and get any information he needs about his bank account, medical records, insurance etc. The call centre employee checks the individual's records on his computer and provides the desired information.

A call centre can be located in India or any other country/region of the world. It need not be located in the US to provide services to American citizens. This service is known as Business Process Outsourcing (BPO). Many companies use the services of BPO agencies to reduce their operating costs and increase their profits.

BPO services have multiplied employment opportunities in the service sector. Explain

India earns considerable foreign exchange by exporting large volumes of computer-related technology and software to other countries. This is an important achievement for the country, which gives us the opportunity to import goods that we need.

Challenges facing the service sector

The service sector faces many challenges. The biggest challenge is the lack of employment opportunities. Today, though the service sector contributes 57% of the GDP, its share in employment is just 25%.

Some sub-sectors in the service sector, such as banking and software, contribute heavily to the GDP but employ very few people. These services require highly skilled employees. At the same time, there are other sub-sectors that employ large numbers of people but contribute little to the GDP. For instance, a large number of people are self-employed in small businesses but their contribution to the GDP is limited. This shows the dual nature of the service sector.

Employment opportunities are limited in the organized sector. According to 2009-10 data, of the total people employed in the services sector, 30% were employed in the organized sector while 70% were in the unorganized sector.

Another challenge faced by the service sector is the practice of sub-contracting. There are many layers of sub-contracting agents who operate in the unorganized sector. So while sub-contracting benefits the employers the workers do not stand to benefit.

Many services are required by the agriculture and manufacturing sectors - for instance, trade and transportation services. If agriculture and manufacturing expand, production will increase and there will be greater demand for trade and transportation services. This will increase employment and the GDP. Hence, every sector depends on other sectors to grow and expand.

What are the sub-sectors of the service sector?

Can you give examples of services that have increased employment opportunities?

EXERCISES

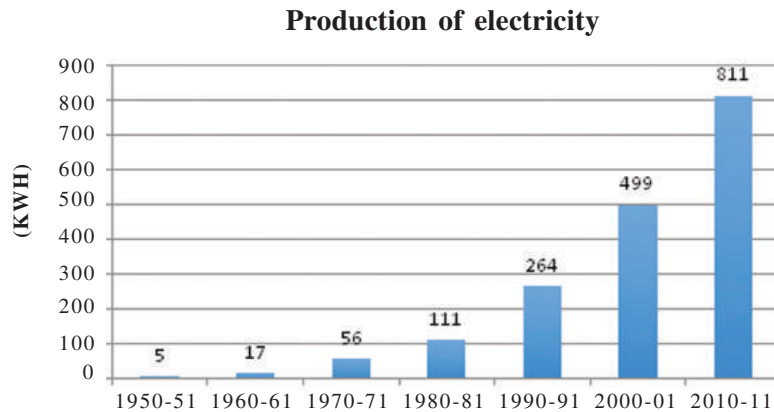
1. Choose the correct option:

- i) The introduction of new technology and machines has employment opportunities in the industrial sector
 - a) increased
 - b) decreased
 - c) not changed
 - d) none of the above
- ii) The is a basic/core industry:
 - a) cotton industry
 - b) paper industry
 - c) iron industry
 - d) handloom industry
- iii) Currently, the biggest contributor to the GDP is the
 - a) agriculture sector
 - b) industry sector
 - c) service sector
 - d) none of these sectors
- iv) The conditions of employment are regulated in the
 - a) organized sector
 - b) unorganized sector
 - c) both sectors
 - d) none of these sectors

2. Explain the following terms in brief:

- i) Communication and medium of communication
- ii) Banking and insurance
- iii) Internet
- iv) Increase in production
- v) Manufacturing
- vi) Warehousing

- vii) Food processing
 - viii) Community services
 - ix) Personal services
 - x) Global services
 - xi) Real estate
 - xii) Information technology
3. After independence, India focused on setting up core industries. What were the reasons for this?
 4. Many services are linked to the agriculture and manufacturing sectors. Explain with examples.
 5. The service sector has a dual nature in employment generation. Explain with examples.
 6. Why was it necessary to change the industrial policy after 1990? Explain.
 7. Study the bar graph below and answer the following questions:



Source: Central Electrical Authorities Report

- i) What changes do you see in electricity production?
 - ii) How does rising electricity production contribute to the country's economic development?
8. What are the harmful effects of industries on the environment? Explain these effects and suggest ways to prevent them.
 9. Does the unorganized sector promote social insecurity among the workers? Interview a worker employed in the unorganized sector to answer this question.
 10. Tabulate the data on Steel Production given in the bar graph on page 249.
 11. Tabulate the data on the sub-sectors of the service sector given in the bar graph 17.9 and explain your table.

**

How does Production take Place?

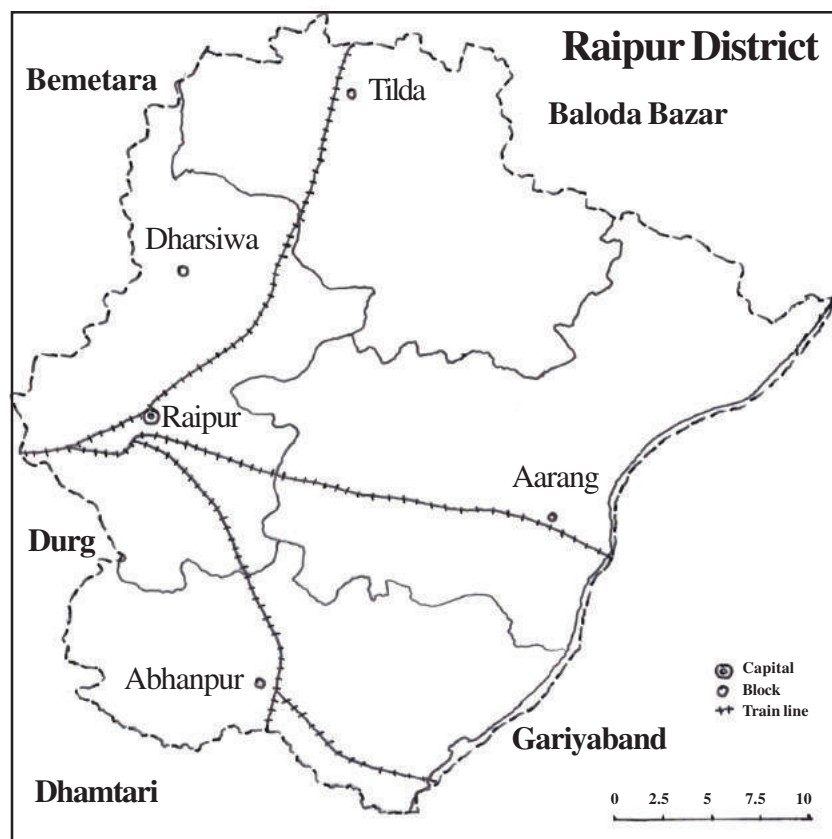
The production process has four main components - land, labour, capital and entrepreneurship. They are economic concepts that have a very specific meaning in the context of production. For example, we generally associate labour with hard, physical work. But in the context of production, it means the human contribution to the process, which could be either physical or mental. All four factors are essential for production. We shall try to understand what these economic concepts mean in this chapter. How do they come together in a production process? Who receives what from the process? How much does the worker earn for his contribution? Does the production yield a surplus? The answers to these questions depend on the existing social system in which the production is organized.

We shall use the city of Raipur as a case study to try and understand these factors in the production process. For this, the teachers and students should study the local production processes in their area and link them to these concepts to develop their understanding.

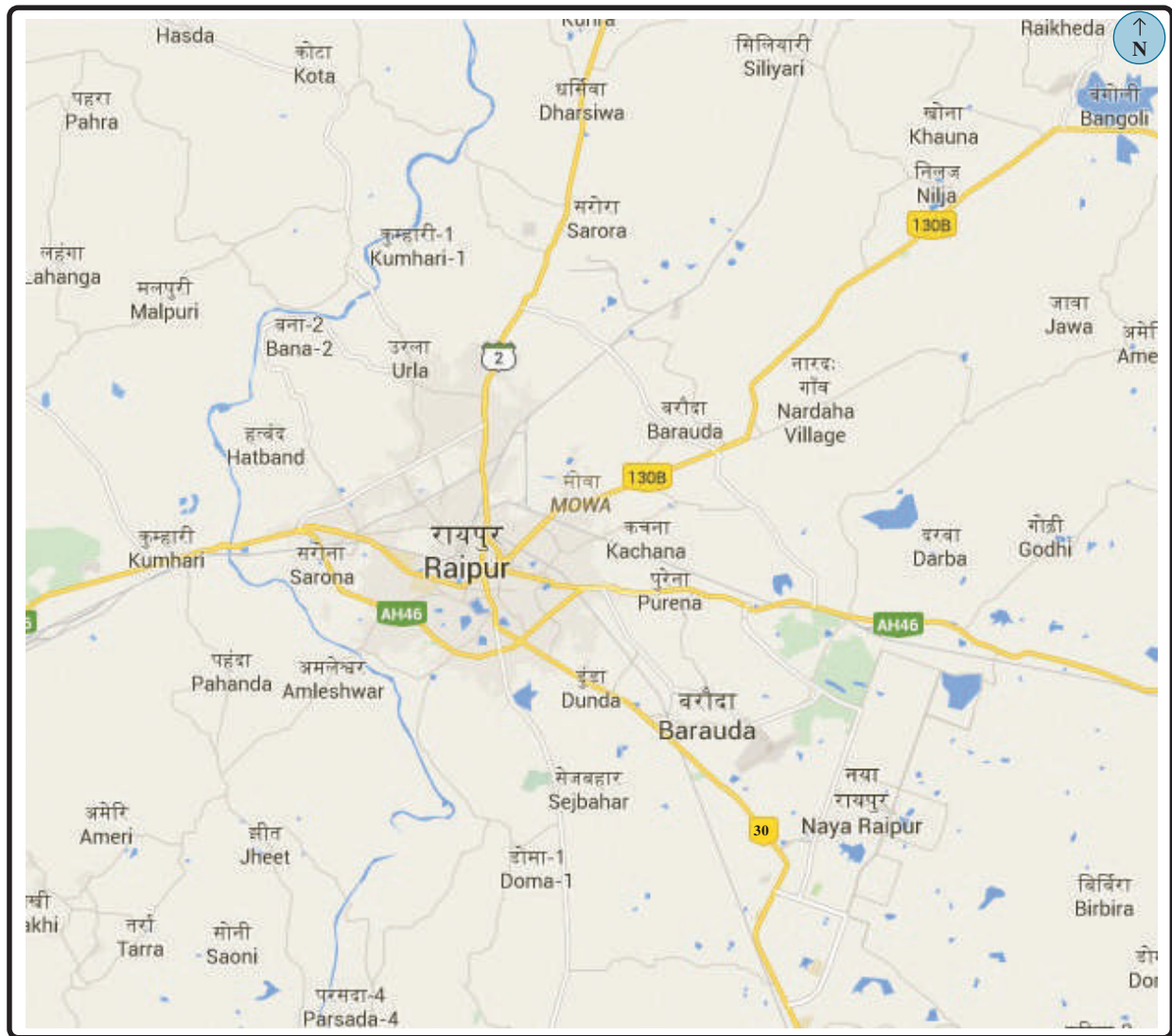
Raipur – an expanding city

Raipur is the capital of Chhattisgarh state. The city is also the headquarters of Raipur district. It was declared the capital in 2000, when Chhattisgarh became an independent state. The city has developed rapidly since then to become a major Indian metropolis by 2011.

The rich mineral deposits and forest resources available in various parts of the state have contributed to the city's industrial growth. Several important steel plants and cement factories have been established in and around Raipur. The city is a regional centre for electricity and steel production, leading to its emergence as an industrial hub of central and east India. It is also one of the



Map 18.1: Raipur district



Map 18.2: Raipur and the adjoining areas

country's prominent markets, with the state's vast forest resources making it an important trading post for forest produce. Its wholesale market serves the needs of not just Chhattisgarh but several districts of the adjoining state of Odisha.

Raipur is easily accessible from other important cities of India by the network of national and state highways. NH46, connecting Mumbai and Kolkata, passes through the city. NH30 connects it to Vishakhapatnam. Other cities like Bhopal, New Delhi, Mumbai, Bhubaneshwar and Nagpur are also connected by road or rail.

Over the last 15 years, large numbers of people from the rural areas have migrated to Raipur and its suburbs in search of employment in factories and offices. The city's geographical location, easy access by road and availability of civic facilities are major factors that draw people to it.

Map 18.2 shows the spread of industry, markets and civic services in Raipur. The industrial hub is located to the north of the city. It is a planned hub, with Urla, Siltara and Burnpur being important centres of small, medium and large enterprises.

Land

Land utilization in Raipur

In rural areas, land is primarily used for agriculture and people live in villages near their agricultural fields. In a city, there is no agriculture. People follow other occupations or do other kinds of activities. Land is used to establish factories, or construct government administrative offices, commercial offices, and residential buildings, or provide services like roads, schools, hospitals, markets, shops, etc.

The government provides many services to people living in urban areas, like transport facilities, electricity, water, etc. Apart from the government, private companies also provide these services in some areas.

A few years ago, the state government collected data of land utilization in the city and formulated an alternate plan for land use. One suggestion in the plan was to increase the land allocated for entertainment and leisure (parks, open spaces etc) from 3% to 21% (*Urban and Rural Investment Report, 2013*).

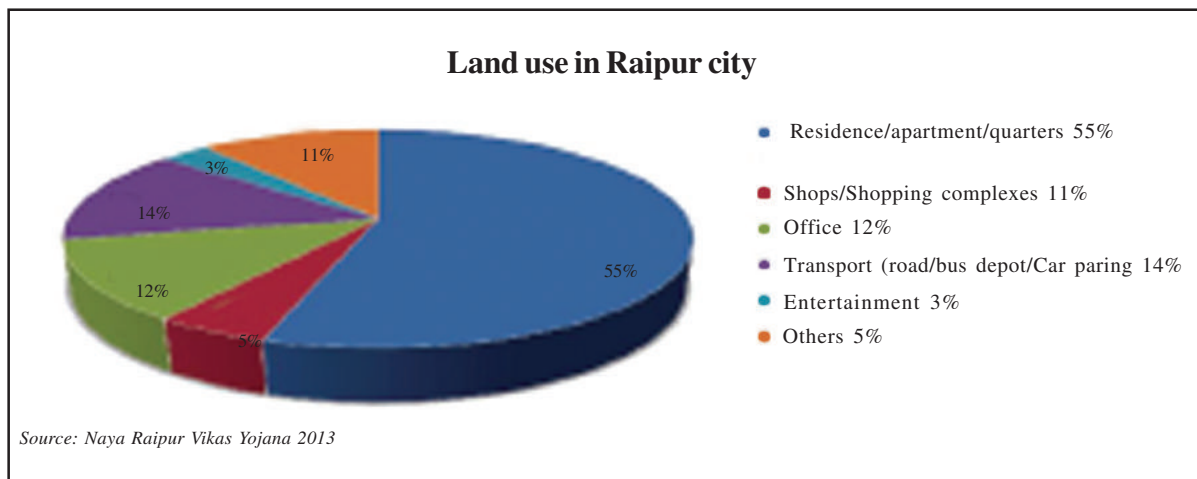


Figure 18.1: Pie chart of land use in Raipur city

Why did the government propose to increase the land allocated for entertainment?

Suggest a plan that could help in increasing the employment opportunities in Raipur?

Project work:

Study the land utilization in your locality and prepare a report.

People build houses in urban areas to live in but many house owners give their houses on rent. The rents vary according to the locality and the available services. People also rent shops for commercial activities. Rents of commercial spaces in shopping complexes, malls, and prominent market areas are high. But many self-employed traders run their business in small stalls and kiosks. They either own the kiosks or take them on rent. There are also many street-side vendors who cannot afford the rents. Many self-employed hawkers sell their goods on handcarts (*thela*). There is a lot of competition to get shops, kiosks and street side spots among the small traders, hawkers and vendors.

The distribution of land in cities is unequal and not according to people's needs. Hence, any development plans for cities must ensure that everyone gets a home and the opportunity to earn a livelihood.



Figure 18.2: A local bazar



Figure 18.3: A hawkker selling goods from a handcart

Labour

We have seen that land is an important source for earning a livelihood. Land is needed not just for the production of goods and services but also for residential purposes. If you do not have a house, what would your family do? They would probably rent a house to live in. Many families in the city live in rented houses. They have to spend part of their income to pay the rent. In Raipur, only 20% of the slum dwellers have title deeds to land (*pattas*) to build their own houses. (This legal document given by the government recognizes the holder as the owner of the land.) Slum dwellers also need civic facilities like drinking water, sanitation, toilets, public health centres, schools etc like any other citizen.

What are the possible ways in which low income families can increase their earnings?

Low income families in Raipur

People in cities live in many kinds of residences. Around 40% of the families in the Raipur Municipality live in slums. Of this population, about half have migrated to the city.

A survey was conducted in Raipur in 2012 to understand how people living in slums contribute to the economy of the city. The pie chart (Figure 18.4) shows that a large section of the slum population work as domestic help, porters, shop helpers, office peons etc.

The survey showed that the average earnings of slum dwellers was Rs.6763 per month. They spend their entire monthly wage on foodstuff - wheat, oil, vegetables, groceries etc. They have no savings to meet emergency needs so they are forced to take loans, which leaves them indebted.

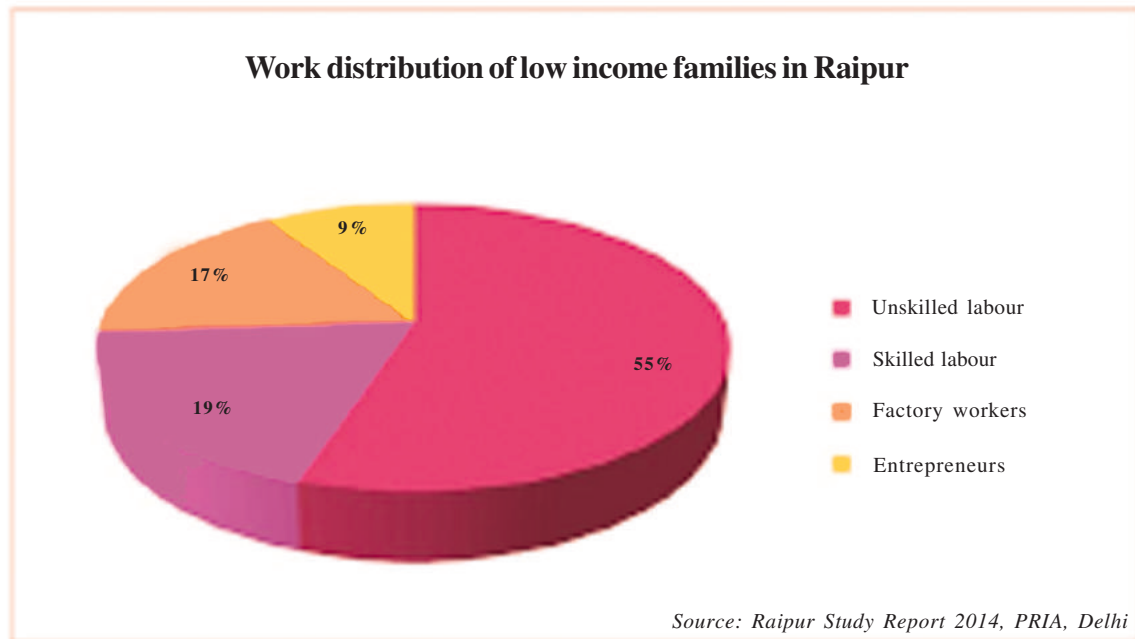


Figure 18.4: Pie chart of work distribution of low income families

Labourers in a city – Raipur as an example

Till now, we have looked at the role that land plays in the process of production in Raipur city.

Apart from land, the development of a city depends on people who can work in factories, offices, shops, schools and other institutions. Raipur is no different. Industrial growth has drawn many people to live in the city, both from within and outside the state. The growing population and expanding economy have boosted the service sector. Many people have come from other states and various parts of Chhattisgarh to work in factories and the different services. A large part of the workforce commutes daily from the neighbouring rural areas. People come from within a 25km radius on cycle and other modes of transport.

They include daily wage earners, unskilled and skilled workers, such as electricians, mechanics, fabricators etc, some of whom work in factories. Similarly, daily wage workers, masons, carpenters, plumbers, and electricians are engaged in the construction industry. Another category of labour includes supervisors, managers, accountants etc who are employed in factories and other businesses.

The service sector is also diverse, depending on the kind of services people are engaged in. Generally, the services cover wholesale and retail trade, transport and warehousing, hotels and restaurants, mobile and internet, finance and insurance, education, health, entertainment and administration.

The people who traditionally migrate to the city mostly belong to landless rural families. But the continuing slump in agriculture, displacement, and lack of employment opportunities in the villages are leading to large numbers of people from the scheduled castes, scheduled tribes and other backward castes (OBCs) migrating to the urban areas in search of employment. A survey report reveals that 49% of the population residing in Raipur's slums are scheduled castes, 26% OBCs, 13% minorities, 9% scheduled tribes and 2% others. (Source: Raipur Report, 2014, PRIA, Delhi).



Figure 18.5: Travelling to the city in search of employment

According to the 2011 census, the working population residing within the municipal limits of Raipur city totals 3.76 lakh people. They include salaried workers, wage earners and the self-employed.

Around 40% of the working people in urban India are self-employed, another 50% are in salaried jobs, and the rest are daily wage earners. The situation in

Raipur is unlikely to be different.

Let us examine a few examples to understand the condition of these categories of workers:

Self-employed labour

Vegetable sellers who buy vegetables from the wholesale market and sell them in different localities are an example of self-employed labour. They work and earn on their own and are not employed by others. Their earnings from selling vegetables take care of their daily needs. Their income is not fixed but fluctuates. Such workers are denied benefits like accident insurance, provident fund etc.



Figure 18.6: People in search of work gathered at a locality

Unskilled labour

There are many small jobs in the city like manual labour, white washing, maintenance, etc done by unskilled labour. Most of them come from the rural areas. Their work is irregular so their earnings are also irregular. Chhattisgarh has a high percentage of unskilled labour.

Visit a locality where unskilled labourers gather in search of work. Speak to some of them and find out:

How many people gather here daily to look for work?

What is the percentage of women among them?

How many people, on average, get work in a day?

Skilled labour

Skilled labour are people who have an occupational skill. Doctors, lawyers, engineers, teachers, accountants, technicians etc fall in this category. These highly skilled people are employed in the organized sector so they enjoy the benefits of job security and an assured monthly salary. They also have assistants to help them.

Let us look at the example of a chartered accountant who works in a big factory. She has an office and assistants to help her. She gets a salary every month and several other benefits. She spends a fixed amount of her salary and saves the rest. She uses these savings to cover any planned future expenditure. She required a minimum educational qualification and had to continue her commercial education after college to attain a professional certificate to qualify as a chartered accountant. Only then did she come in the highly skilled labour category.

There are many other kinds of semi-skilled work such as those of electricians, plumbers, masons etc.

The table below lists the work in an area of Raipur and the prevalent wage rate:

Type of work	Wage rate (per day/month)
Factory worker (regular)	Rs7,000 to Rs15,000 per month (semi-skilled and skilled work)
Factory worker (daily wages)	Rs150 to Rs200 per day (unskilled labour) Rs300 to Rs400 per day (skilled labour)
Helper in a grocery store	Rs100 to Rs150 per day
Helper in a vegetable store	Rs50 to Rs100 per day
Domestic worker (full time)	Rs1,500 to Rs4,000 per month
Hotel worker	Rs200 to Rs300 per day
Transport worker (driver)	Rs5,000 to Rs10,000 per month
Temporary office worker	Rs3,000 to Rs7,000 per month
Construction worker	Rs150 per day (women) Rs250 per day (men)

Source: Field survey, 2014

The government has fixed the wages that employers should pay their employees in some occupations. The table below gives the wages an employer has to pay his employee according to Indian law. The wage rates were declared for 2014-15 and were implemented in Raipur and the entire state of Chhattisgarh.

Project work:

Compare the earnings from self-employment and salaried employment and state the differences between the two.

What kind of professional training needs to be imparted to ensure that more people acquire skills to qualify them for better jobs?

Why does the wage structure of various professions differ?

The wage rates for men and women construction workers in cities are different. Do you think this is a correct practice? Justify your answer.

Wage rate per day

Type of employment	Unskilled	Semi-skilled	Skilled
Farming	149	-	-
Production industry, cloth mill, rice mill, dal mill, grinding mill, saw mill	214	222	233
Transport or printing press	212	219	229
Hotel, shops and/or other businesses	212	219	229

Source: Commissioner of Labour, Minimum Wage Act, Chhattisgarh, 2014-15

Collect data from your city or village on the prevalent wage rates. Compare these rates with the rates given in the table.

What is the difference between the wage rate fixed by the government and the actual wage received by labourers in Raipur?

Why does the government fix a minimum wage for labourers? Discuss in class.

Planning for Production

We have seen earlier that four factors are involved in the production process. We have discussed land and labour. We tried to understand, through some examples, how the production process uses land and labour.

The production process requires land and natural resources such as water, mineral ores etc. The second requirement is labour. Some processes require highly qualified and skilled labour to carry out

specialized work. Other processes require physical labour. Each worker provides the required labour to carry out the production.

Here, labour does not mean only physical labour, which is the generally accepted meaning of the word. It means any form of human effort that is required to carry out the production process. For this, the worker earns a wage that is paid by the employer. A relationship is, thus, established between the employer and the employee.

We have discussed two factors of production, land and labour. The third factor is capital.

Capital

There are two kinds of capital – physical or fixed capital and working or variable capital.

Physical or fixed capital: This consists of equipment, machines, buildings etc. These machines are used for different categories of work. For example, plumbers, electricians, masons etc use simple tools, the vegetable seller uses a hand-cart to sell vegetables, a roadside barber uses a razor to shave. Factories use complex machines such as turbines, boilers, furnaces, computerized automatic machines etc. This equipment is not limited to a single production cycle but operates for years to produce goods. They require some repair and maintenance in order to run smoothly over the years. These assets are known as physical or fixed capital.

Working capital: Raw materials and finance are required to complete each production cycle. Various kinds of raw materials are required, such as bamboo for basket weavers; bricks, iron rods, sand and cement for construction work and so on. Unlike physical capital these raw materials are consumed in the production process. Money is also needed to pay the wages of workers engaged in production. The process takes a certain amount of time for completion. Thereafter, arrangements have to be made for these goods and services to be sold in the market. The money earned from selling these goods marks the completion of the production cycle. This money is utilized to purchase raw material and pay wages in the next production cycle.

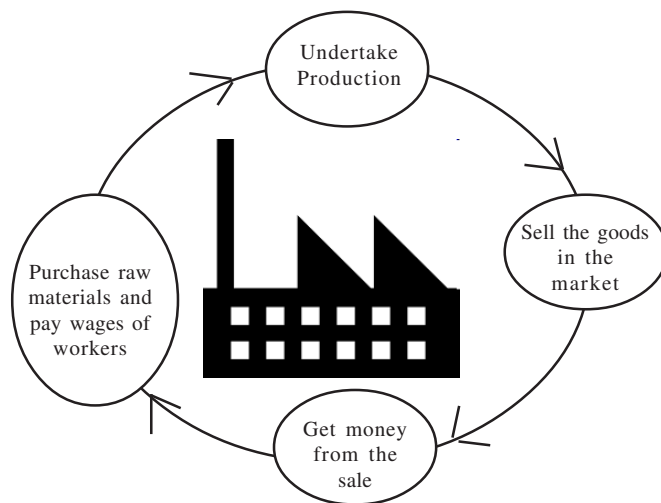


Figure 18.7: The production cycle

Raw materials and finances ensure that the goods are produced, hence they are known as working capital. This capital is required to start the production process so that the money earned from each cycle is used for the following production cycle. This capital is different from fixed capital because it is consumed and exhausted in the production cycle. So each production cycle requires fresh working capital.



Figure 18.8: An office building

Arranging fixed and working capital

Both fixed and working capital are needed for a production cycle. People arrange this capital from their savings or by using the land or buildings they own. They can also take a loan from a bank or borrow from other financial sources. The prevailing interest rate has to be paid when returning money loaned by a bank or a moneylender.

Interest rates vary between the different sources of finance. Banks charge an annual interest rate of 11% to 18%. Loans taken from informal sources such as traders and money lenders attract a much higher interest rate that can vary from 30% to even 200% a year.

People rely on various sources of finance for loans. They take production loans from formal sources like banks, cooperatives and bank linked self-help groups. But most low income families depend on informal sources like money lenders and wholesale traders. Sometimes, they also take loans from friends and relatives. It is necessary to ensure that these people can access formal sources for loans.

Entrepreneurship

Production requires in-depth knowledge of the process, faith in the venture and the ability to use land, labour and capital meaningfully. The owner of the fixed capital or the manager he employs provides this expertise. Owners also have to take the market risk – whether, or not, they will find buyers for their goods and services. In our society, goods and services are mostly produced for sale in the market. The risk is that demand for the product may change during the time it is produced and reaches the market.

It requires courage to take market risks. Such people could be a small shop owner or a large factory owner, or the owner of a company with different business interests. People buy their goods and services. The owners could make a profit or loss in the transaction.

Today, people in any area of business have to face obstacles and problems to earn a profit. Before embarking on a production process they have to arrange the required resources (land, labour, capital). Such people with the courage to take risks are called entrepreneurs.

Let's look at a few examples of entrepreneurship:

Jan Koum and his WhatsApp

Jan Koum is an American who grew up in poverty in a small village of undivided Russia. The family could not even afford electricity. Koum's mother worked as a governess, taking care of children. Koum worked as a janitor in a grocery and dreamed of starting his own venture someday. At the age of 18, he read a book on computer networking while working at the store and learnt everything about the subject. He subsequently worked as a security tester at San Jose State University. A turning point in his life came when he met Brian Acton, a computer



Figure 18.9: Jan Koum

engineer. Koum found work at Yahoo as an infrastructure engineer. This gave him hope to chase his dream. In 2007, Koum resigned from Yahoo and bought an iPhone. He spent hours trying to understand the dynamics of messaging. One day, an idea for an application sparked in his mind. He visualized a way to bring people from across the world together on a single platform to exchange news easily. Koum failed many times in coding and decoding before he achieved success in creating WhatsApp. Jim Goetz had faith in Koum's idea and backed it by investing money. Soon, WhatsApp became the number one application in the mobile application market.

Setting up a rice mill

A small trader called Rajendra had been trading in grain for many years. He wanted to expand his business. He decided to set up a rice mill. He owned land but had to arrange capital to begin production. He took a loan from a bank to organize the fixed capital of buildings, machines, furniture etc for the rice mill.

He used his own savings for working capital to purchase raw material, pay wages, get electricity etc. He also availed of government benefits such as subsidies and concessions provided to small scale industries.

Around 20-30 workers were employed in the mill, including 2-3 women. Most of them were casual labourers who received a daily or weekly wage. He had a few permanent employees who were paid a monthly salary along with other employee benefits such as insurance.

The modern machines he installed enabled him to mill rice throughout the year. He mostly procured paddy from the government warehouse and, after milling, despatched the rice back to the warehouse. He received payment for the rice almost every month. The government also permitted mill owners to procure paddy from the open market in times of drought to make good their losses. It was this support from the government that gave Rajendra the courage to start his own rice mill.

A local tea stall

Ramesh runs a modest tea stall in a busy area of Raipur. He shared his experiences of running the tea stall.

Ramesh borrowed Rs10,000 from his relative on interest to arrange the fixed capital for his tea stall such as utensils, gas cylinder, and wooden shelves.

Table: Ramesh's monthly income and expenditure

Monthly expenditure	Amount spent
Land rent	Rs 3,000
Raw materials- milk, gram flour, oil etc	Rs 24,000
Salary of helper	Rs 4,000
Electricity	Rs 1,000
Interest on loan	Rs 200
Repair, maintenance & other expenses	Rs 800
Total expenses	Rs33,000

Income:

Daily sale of tea and snacks: Rs2,000

Monthly sale for 26 days in a month: Rs52,000

Surplus (income–expenditure) Rs52,000-Rs33,000 = Rs19,000

Since he is self-employed, his surplus is used to meet his family expenditure of Rs16,000. He is, thus, able to save Rs3,000 every month, which is his profit. He plans to expand his shop in future with his savings.

Distinguish between fixed capital and working capital in the above examples.

Project work:

Discuss with an entrepreneur what motivated her/him to take the risk of starting a business and what challenges she/he had to face. Prepare a report.

Summary

Land, labour and capital are essential for any production process. The entrepreneur organizes these essentials to produce goods or services. The entrepreneur may arrange the land and natural resources through his personal means or with the support of the government. Labour includes the physical as well as mental efforts of the employees. The production process establishes a social relation between people, some as employers and others as employees. The benefits workers receive may differ significantly. In the organized sector, they earn a salary and other benefits. In the unorganized sector, their wages are low and they are deprived of social benefits. Capital has to be organized for production. We studied the differences between fixed and working capital and how they are organized. We also looked at some examples of entrepreneurship.

There are many production processes for goods and services in Raipur. There are steel plants and factories that manufacture metal products, which they supply to other cities. These factories use large, complex machines and provide regular employment to some highly skilled people and contract

work to unskilled labourers. So they employ people in both the organized and unorganized sectors. The factories are situated away from residential areas, on the outskirts of the city. We have also seen that Raipur is a fast developing city with many emerging services – a centre for agriculture and forest resources, a wholesale market for manufactured goods, and a hub for new educational services. Large enterprises continue to make a profit here while small enterprises have to struggle and face greater risks to grow.

EXERCISES

1. Fill in the blanks

- i) There are many industries producing and in and around Raipur.
- ii) Workers who achieve expertise in a profession are called labour.
- iii) National Highway 46, which connects Mumbai and Kolkata, passes through
- iv) Machines, buildings etc are categorized as capital.
- v) Arranging resources for production is called.....
- vi) All kinds of physical and mental effort is known as
- vii) Fixed and working capital are required to organize

2. Mark the odd one out

- i) Durg, Balodabazar, Aarang, Rajnandgaon
- ii) Land, labour, cement, capital
- iii) Machine, building, plant, raw material

3. Answer the following questions

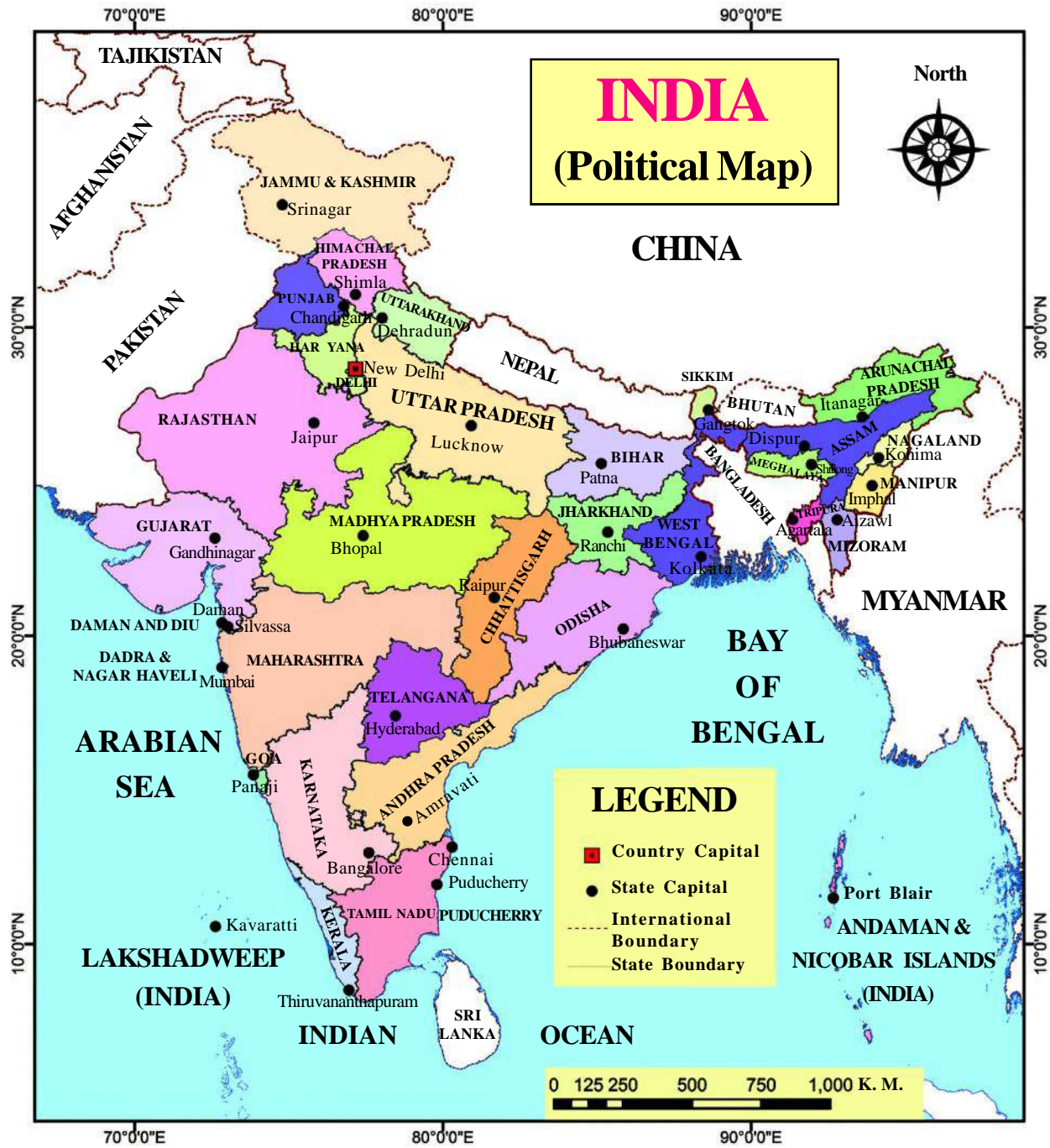
- i) Compare how land is used in villages and towns.
- ii) The government is responsible for providing residential quarters for its employees. Do you agree? Explain.
- iii) Why is it important for the government to fix a minimum wage rate for labour?
- iv) How does fixed capital differ from working capital?
- v) Why are loan facilities not accessible to all?
- vi) What factors influence the rent of a building?

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Reference Maps

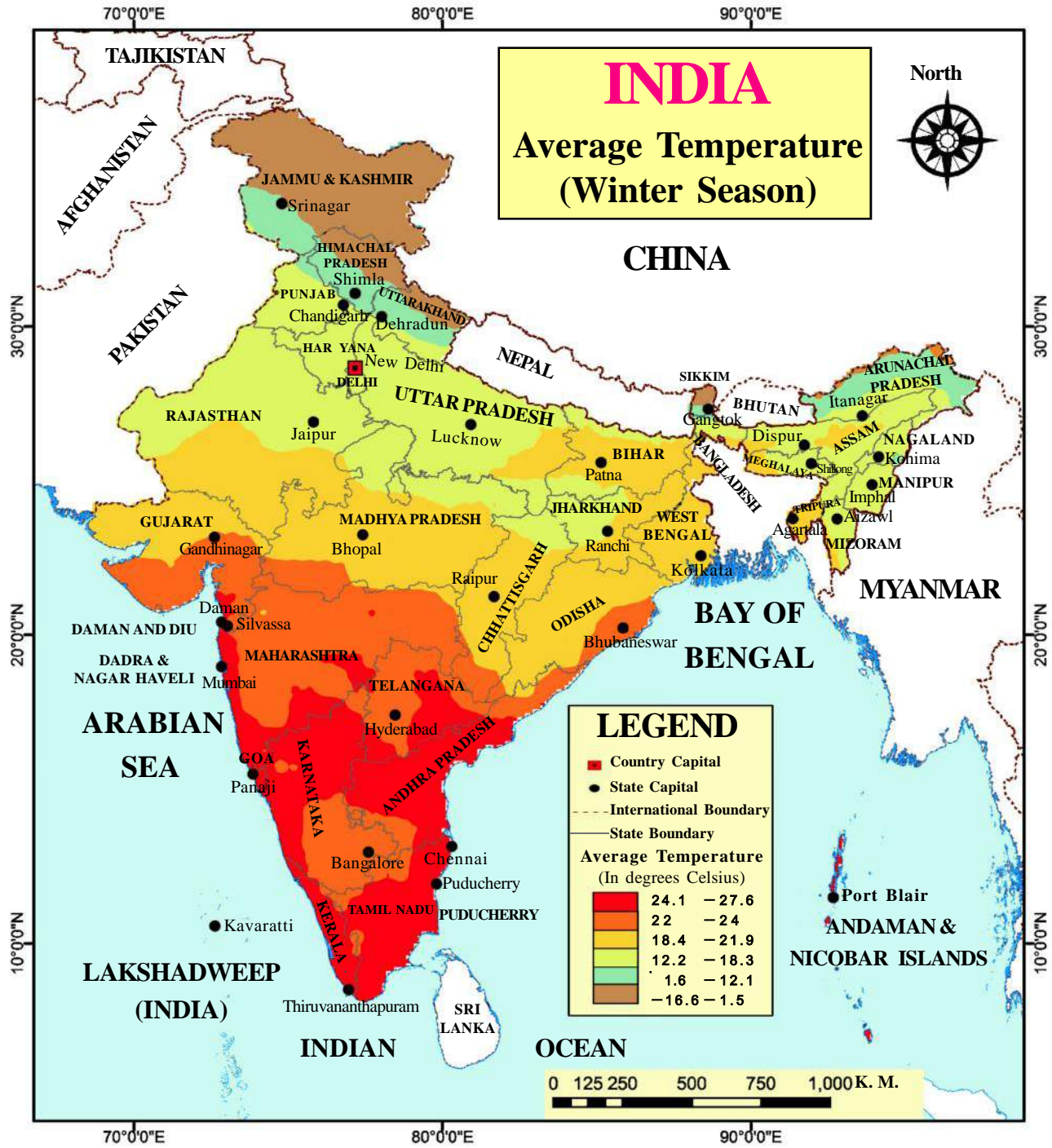
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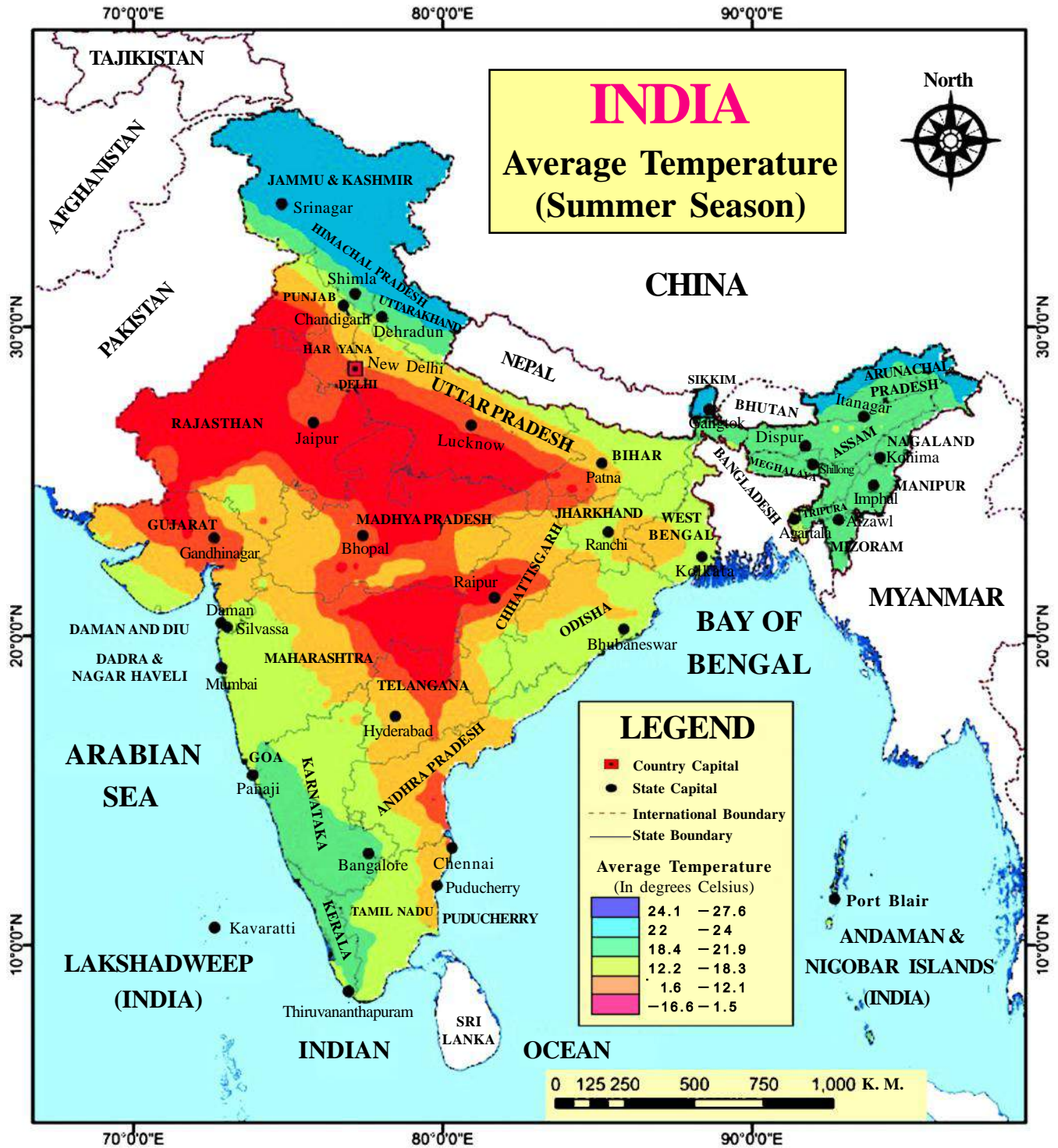
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Map - 3



Map - 4



Map - 5



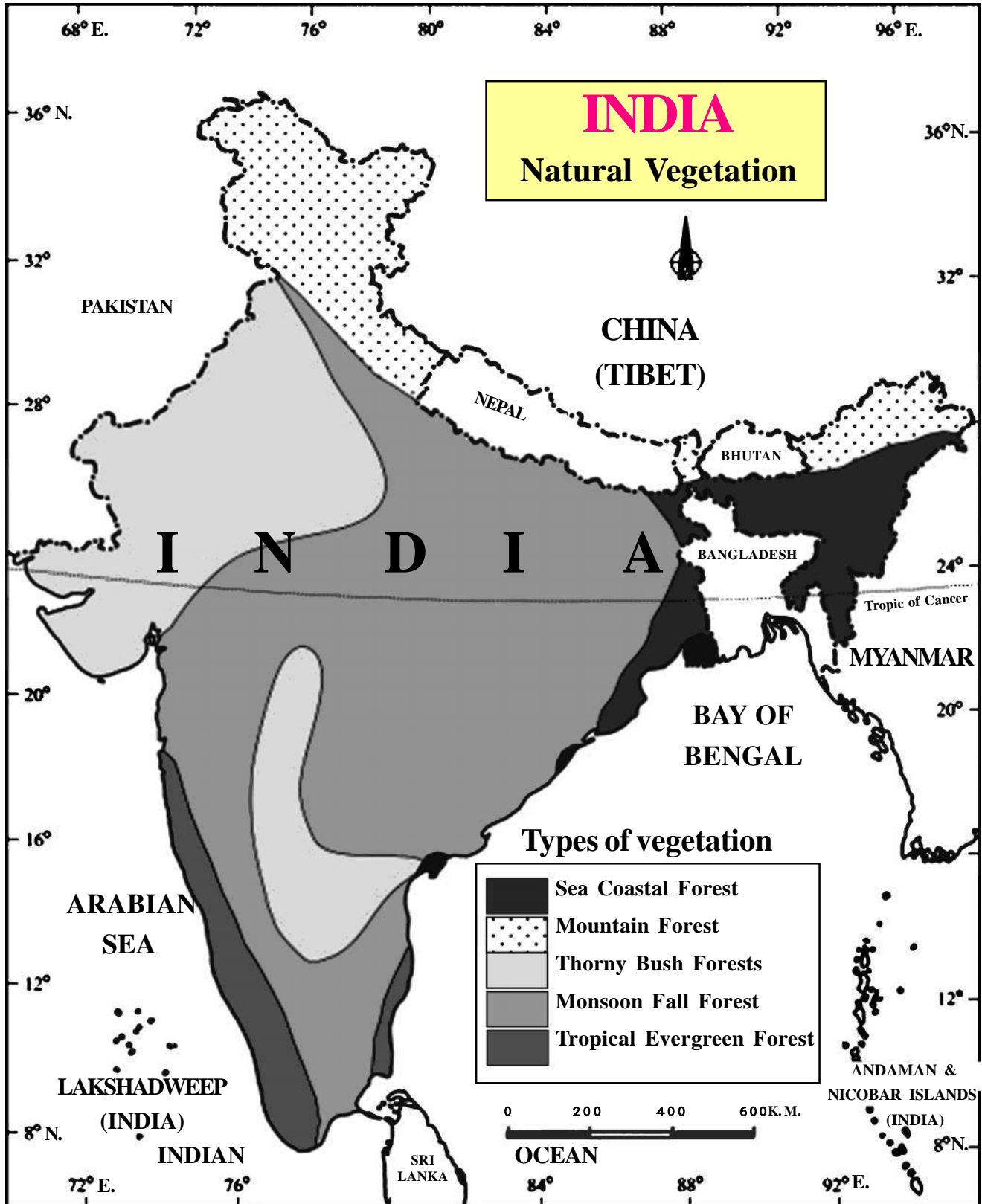
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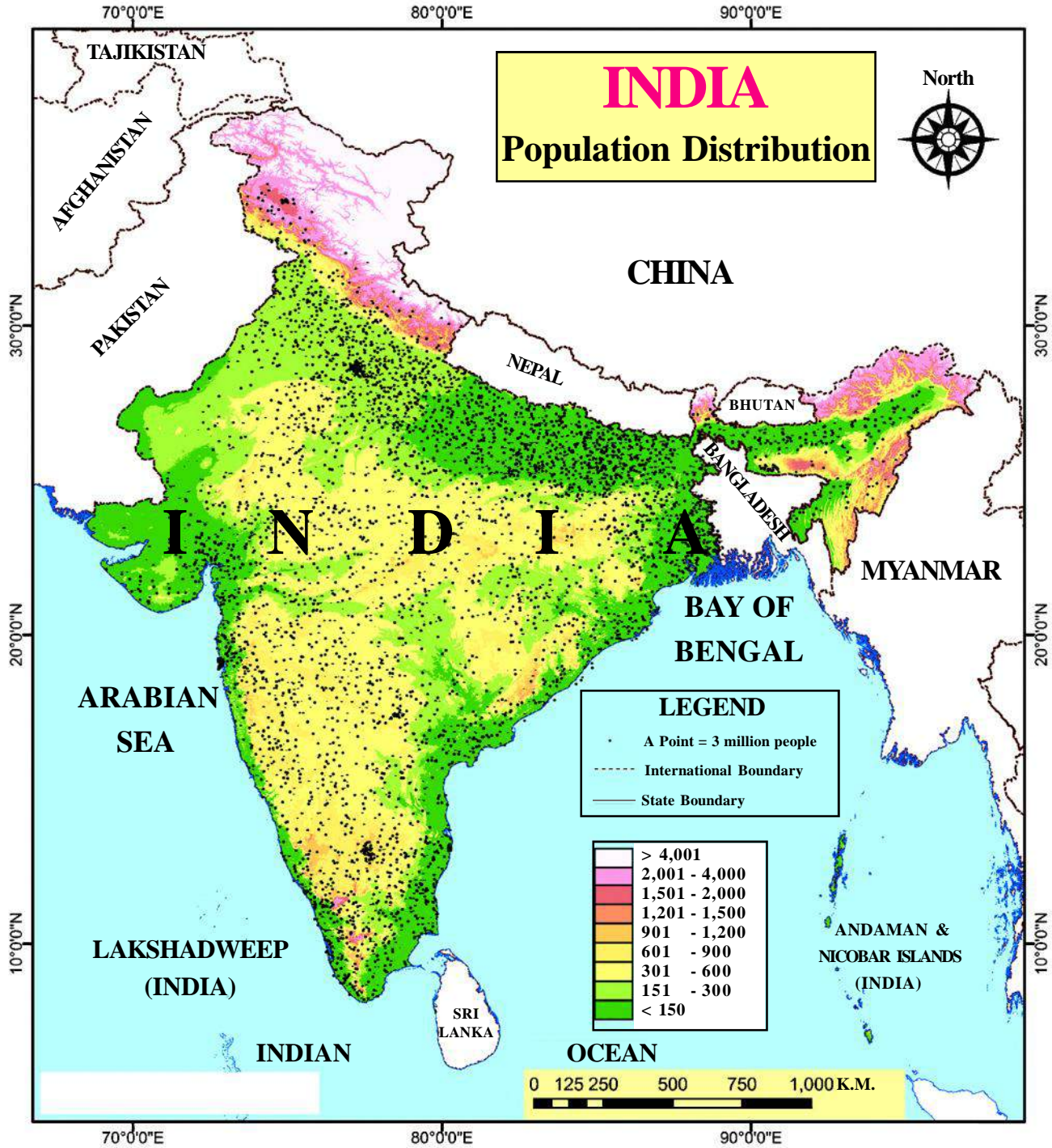
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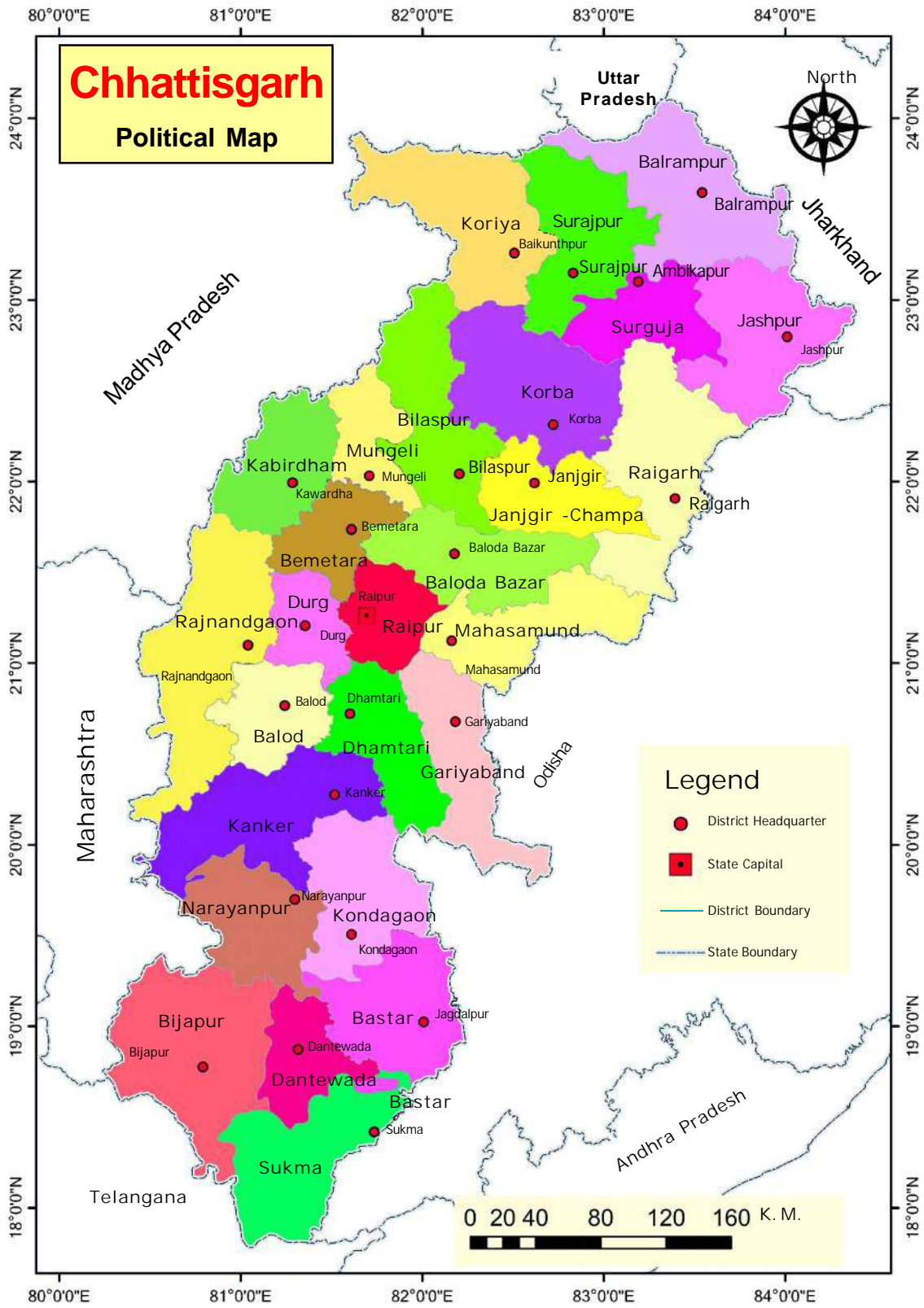
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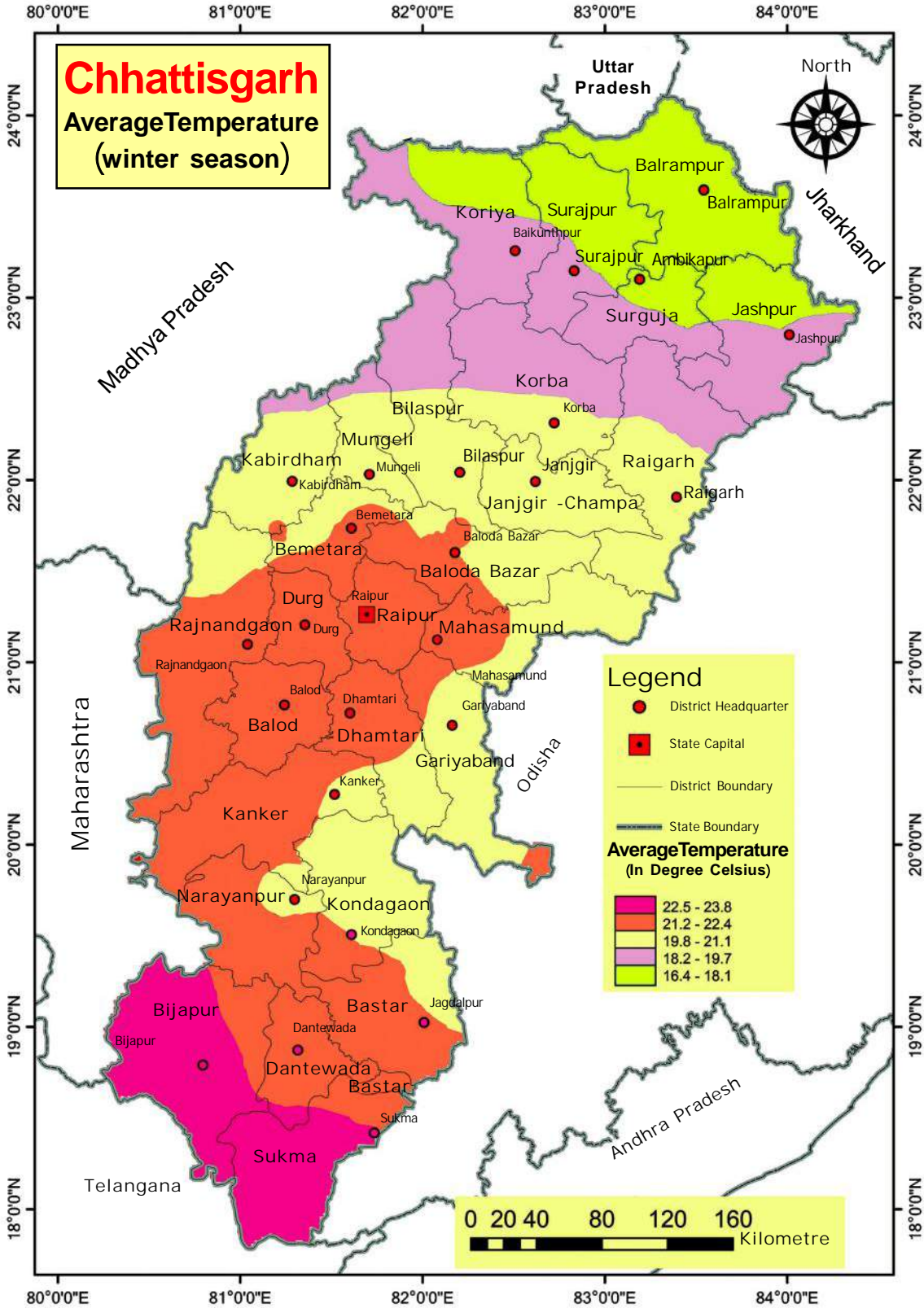
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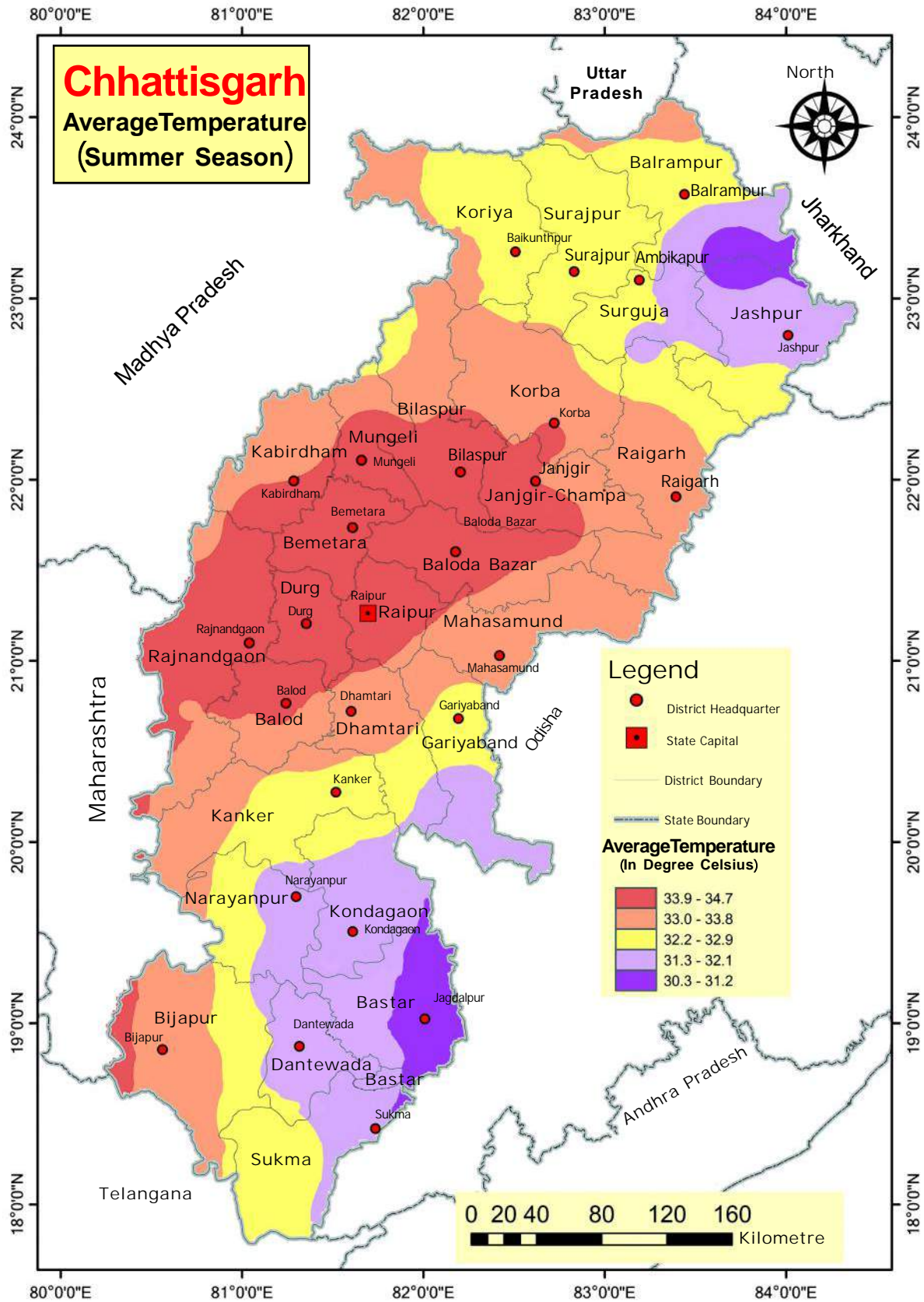
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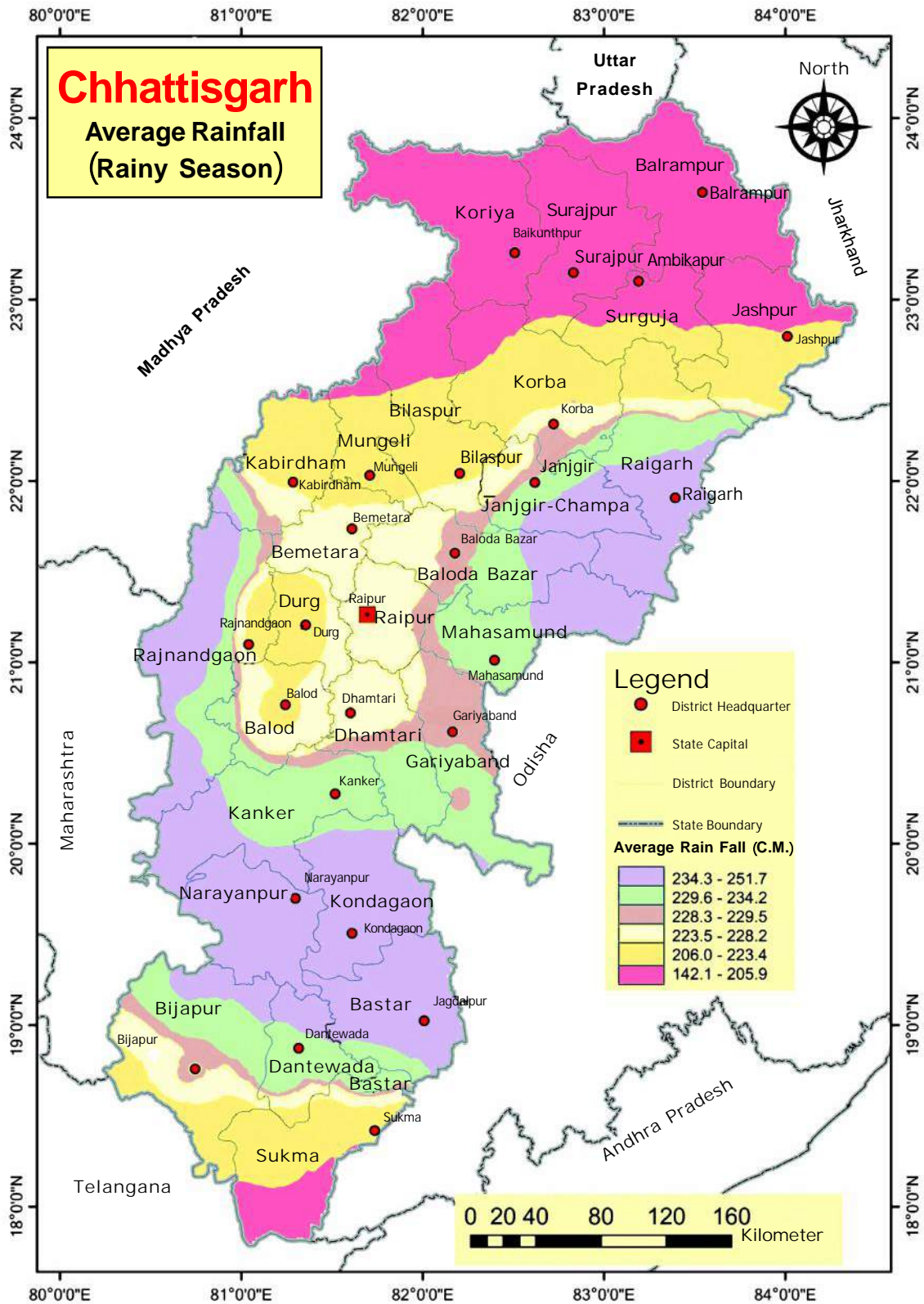
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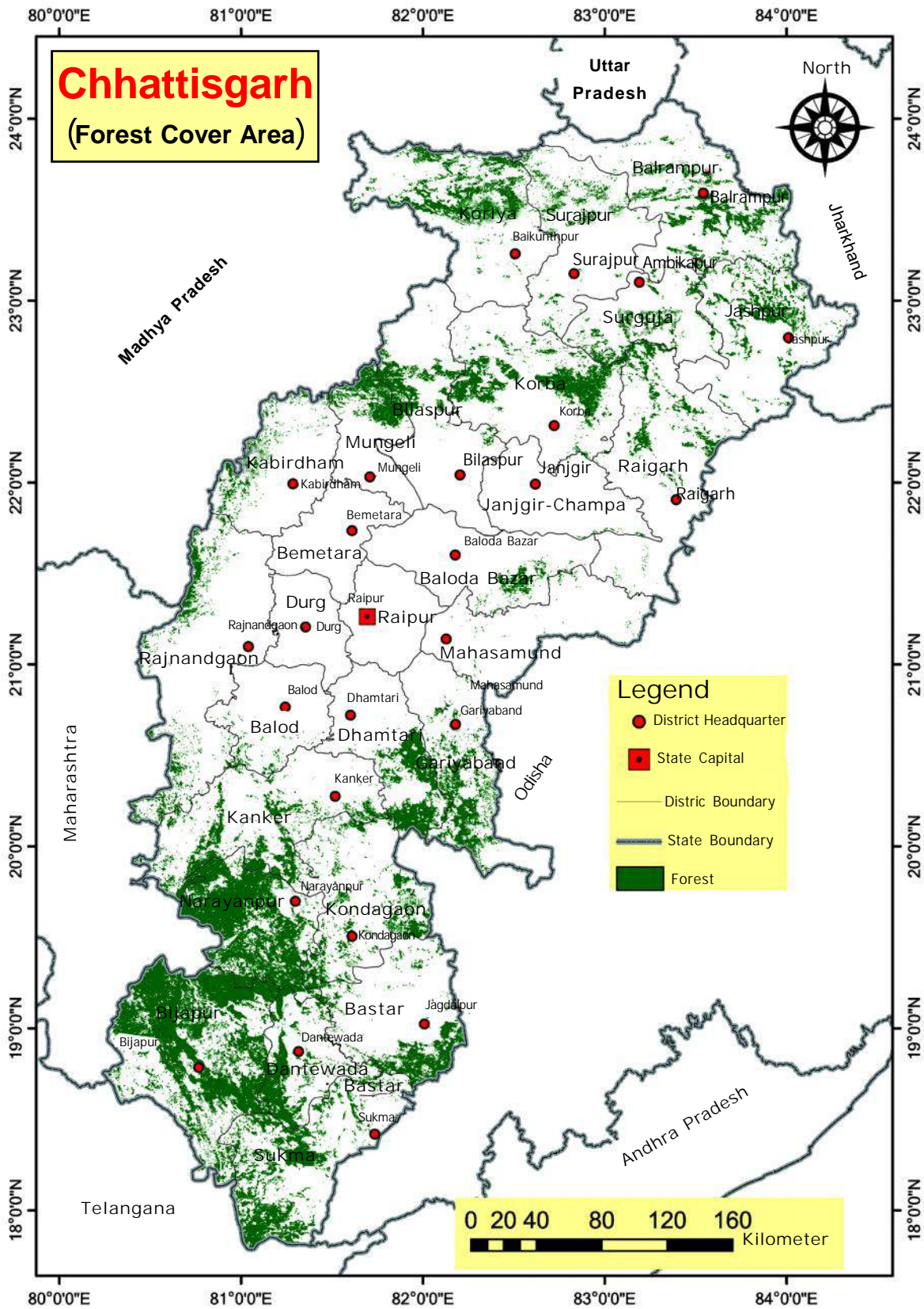
Map - 14



Map - 15



Map - 16





World Map

