

**9****PHYSIOGRAPHY OF INDIA**

**Tutor** : Dear learners, you will agree that the place to which we belong has many influences on our thinking and behaviour. Let us try to know which place do we belong to?

**Natasha** : I belong to Hisar town. Farah is from Fatehabad and Rajinder comes from Bhiwani.

**Tutor** : Do you know where all these places are located?

**Rajinder** : Yes, they are in Haryana as well as in India. But, where is India located?

**Farah** : What is the need to know India's location?

**Tutor** : Location of a country is the key to its identity. It determines the important aspects like climate, vegetation, agriculture, resources etc. This has a deep impact on the way people of that area live, what they eat and how powerful is their voice on the world stage. Therefore, to understand the various aspects of India, we need to look into its location. Let us discuss more about it in this lesson.

**OBJECTIVES**

After studying this lesson you will be able to:

- describe the location of India in terms of latitude and longitude;
- describe with the help of map, the significance of the relative location of India in terms of neighbouring countries;
- illustrate the States and Union Territories with the help of political map of India;
- explain the major physical divisions of India;
- describe the drainage system in India;
- compare and contrast between the Himalayan and the Peninsular drainage system; and
- explain the importance of people's participation in keeping river clean.

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### 9.1 LOCATION

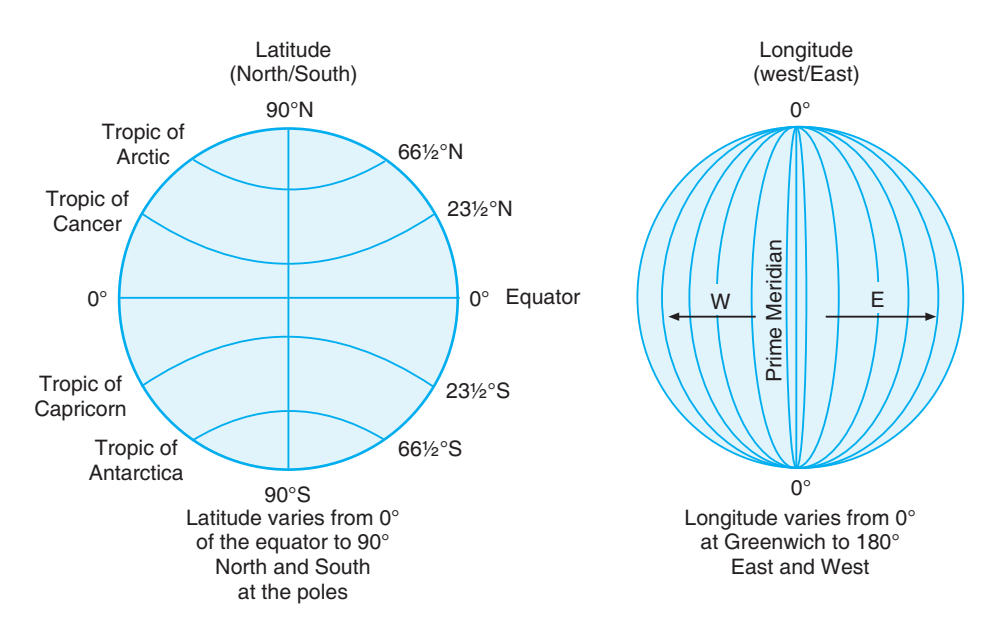
Teacher: Learners, when someone asks where India is, we can answer in two ways, in terms of absolute and relative location. Let us see what we mean by absolute location and relative location. Absolute location is given in degrees of latitude and longitude. Relative location depends upon point of reference, e.g., near, far etc.

#### ? Do you know

**Latitude:** Latitude is the angular distance, north or south from the equator, of a point on the earth's surface.

**Longitude:** Longitude is an angular distance on the earth's surface, measured east or west from the prime meridian at Greenwich.

**Angular distance :** The angular distance between the points from the centres is called angular distance.



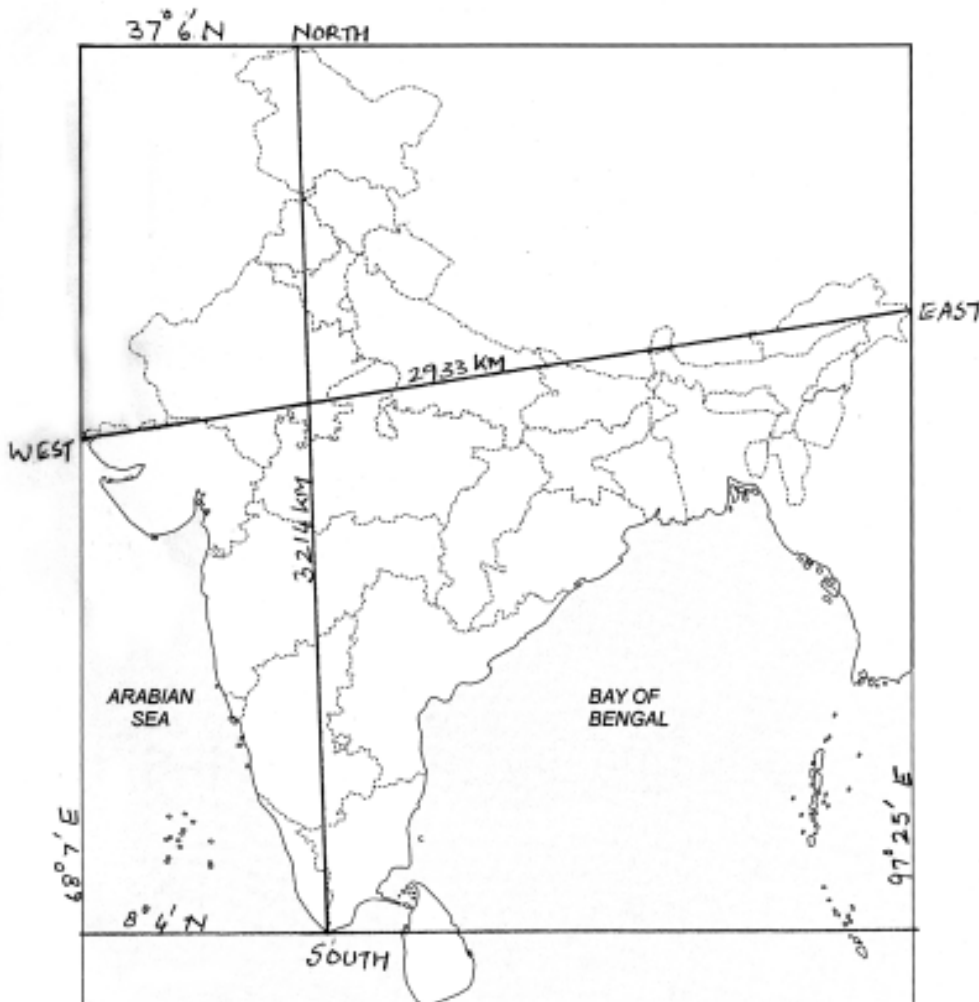
Teacher: With the help of this map can you find out the latitudinal and the longitudinal location of Indian mainland.

Natasha: The Indian mainland extends between  $8^{\circ}4'$  North and  $37^{\circ}6'$  North latitudes and from  $68^{\circ}7'$  East and  $97^{\circ}25'$  East longitudes. Thus, the latitudinal and the North-south extent is 3214 km and East-west extent is 2933 km. India accounts 2.42% of the total world land area

Teacher: India lies entirely in the northern hemisphere, and eastern hemisphere. The Tropic of Cancer ( $23^{\circ}30'$  North) passes through the centre of the country. It divides the country into almost two equal parts Northward of this latitude is North India and South of it is known as south India. Similarly



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**Figure 9.1** Latitudinal and Longitudinal extent of mainland of India

82°30' East longitude passes almost from the middle of the country. It is known as **Standard Meridian** of India.

Teacher: Now determine the relative location of India and then record it in the space given below: Remember relative location is given in relationship to other places (north of, south of, northeast of, next to, across from). India is part of Asian continent. India is surrounded by water from three sides. Arabian sea in west, Bay of Bengal in the east and Indian ocean in the south. Towards its north west is Pakistan and Afghanistan. China, Bhutan, Tibet and Nepal lies to its north. Bangladesh and Myanmar lies to its east. Srilanka and Maldives are located in the Indian Ocean towards its south. The southern most point of the country is Indira Point (Nicobar Islands) which lies on 6°4' N latitudes and Kannya Kumari is southern most point of Indian mainland which lies on 8°4' N latitudes.

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### ? Do you know

The  $82^{\circ}30'E$  longitude passes through Mirzapur (in Uttar Pradesh). This is the Standard Meridian of the country. The  $82^{\circ}30'$  East has been selected as standard Meridian because there is a time lag of almost two hours between Gujarat and Arunachal Pradesh. Therefore, a Central Meridian is selected to determine the time for the whole country.

### 9.1.1 Locational Significance

Let's observe the Fig. 9.2. What do you notice? India is the largest country in terms of area and population in South-Asia. It is surrounded by ocean. India is strategically located in Indian Ocean. It commands sea routes between Europe and Africa, South-East Asia, far East Asia and Oceania. It is because of this that India shares good trade relation between many countries since ancient times. India has a good location in terms of sea and also well connected by land. Various passes like Nathu-La (Sikkim), Shipki-La (Himachal Pradesh), Zoji-La and Burji la pass (Jammu & Kashmir) have their own importance. The main India-Tibet trade route that connects Kalimpong near Darjeeling with Lhasa in Tibet passes through Jelep La. Several passes have provided a passage to many ancient travelers. These routes are not only important for trade but also to exchange ideas and culture.

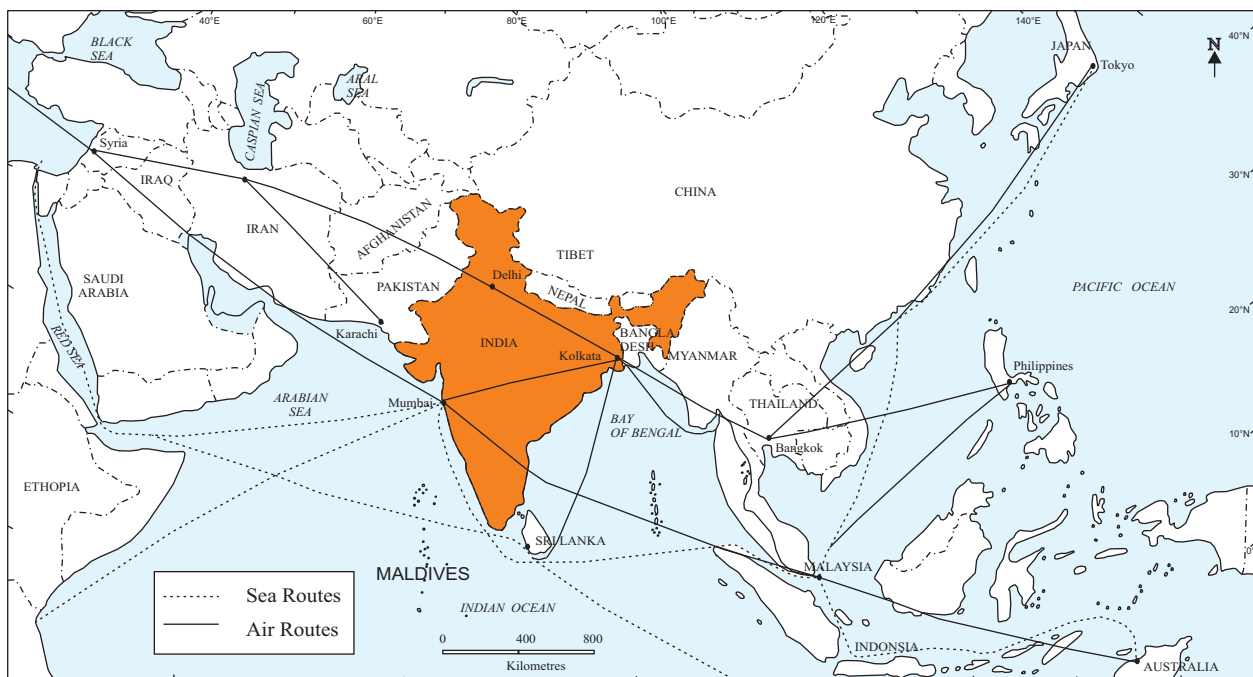


Figure 9.2 Location of India with respect to important trade routes



**INTEXT QUESTIONS 9.1**

1. Look at the map 9.2 and answer the following questions.
  - (i) Find out the names of two countries lying to the eastern side of India.
  - (ii) Mention the names of two seas located on the eastern and western side of India.
  - (iii) Which country is connected to India by Palk Strait?
  - (iv) Write the names of two countries having a common border with India.



Notes

**9.2 STATES AND UNION TERRITORIES OF INDIA**

India is the seventh largest country in the world. It has land boundaries of 15,200 km and 6100km long coast line. India's landmass covers 3.28 million square kilometer of area. This accounts for nearly 2.42 percent of the total geographical area of the world.

For good governance, India has been divided into 28 states and 7 union territories. Let us study the Fig. 9.3 given below.



Figure 9.3 Political Map of India

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This map clearly indicates that each state and union territory has its own capital. It is interesting to note that while New Delhi is the capital of India, Delhi is the capital of Union Territory Delhi. Can you identify any other capital like this? Yes, it is Chandigarh which is the capital of two states Haryana and Punjab and also a Union Territory.



### ACTIVITY 9.1

Find out the minimum number of states you need to across, if you want to move between the following places. (Refer Fig. 9.5)

- (a) Kashmir to Mizoram    (b) Punjab to Bihar    (c) Delhi to Bangalore  
(d) Mumbai to Kolkata    (e) Chennai to Raipur



### INTEXT QUESTION 9.2

1. Look at the map 9.3 and answer the following questions.
  - (i) Write the names of two States of South India.
  - (ii) Mention the names of two states sharing international boundary.
  - (iii) Write the names of two countries sharing their boundaries with Sikkim.
  - (iv) Write the names of two union territories along Arabian Sea.

## 9.3 PHYSICAL DIVISIONS OF INDIA

Natasha : What is terrain?

Tutor : Terrain is an area of land which usually has a particular type of physical feature.

Farah : Like, Mumbai beach is sandy and Shillong is a hilly.

Teacher : Right. Do you know India is a vast country with varied land forms and topography?

Rajinder : What is the meaning of topography?

Teacher : Topography means the features of a place determined by nature. It is the description of various features and landscape on the surface of the earth.

India has the topographical diversity. This includes the Great Himalayas, the Northern Plain, the Thar desert, the coastal plains and the Peninsular Plateau. The reasons for variation in the topography could be:

- Differences in the rock formations. These landmasses have been formed in different geological periods.

- Number of processes such as weathering, erosion and deposition has modified these features to their present forms.

**Weathering:** Weathering is the process of gradual destruction of rocks at or near the earth's surface through physical, chemical and biological processes caused by wind water, climate change etc.

**Erosion:** Erosion is the process of gradual transportation of weathered rock materials through natural agencies like wind, river, streams, glaciers etc.

Weathering is distinguished from Erosion as no transportation of material is involved in case of weathering.



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India is a country of physical diversity. There are high mountain peaks in some areas while in others, lie the flat plains formed by rivers. On the basis of physical features, India can be divided into following six divisions:

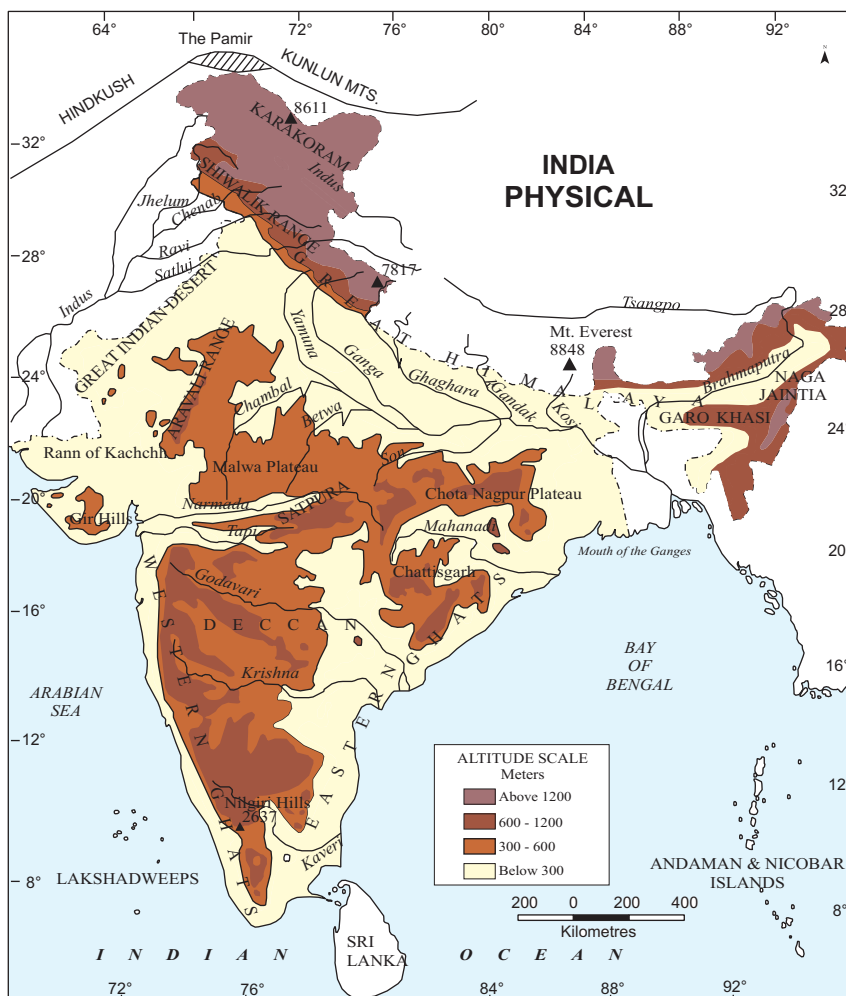


Figure 9.4 Physiographic Divisions of India







Notes

covering a distance of 2500 KM. Their width varies from 400 in the west and 150 KM in the East (Fig. 9.5). The Himalayas may be divided into three parallel ranges:

- (a) Greater Himalayas or Himadari
- (b) Lesser Himalayas or Himachal
- (c) Outer Himalayas or Siwaliks.

(a) **The Greater Himalayas or Himadari:** The Greater Himalayas comprises of the northern most ranges and peaks. It has an average height of 6000 metres and width lies between 120 to 190 Kms .It is the most continuous range. It is snow bound and many glaciers descend from this range. It has high peaks like Mt. Everest, Kanchenjunga, Makalu, Dhaulagiri, Nanga Parbat etc. having a height of more than 8000 metres. Mt. Everest (8848 m) is the highest peak of the world and Kanchenjunga is the highest peak of Himalaya in India. High Mountain passes also exist in this range, namely, Bara Lacha-La, Shipki-La, Nathu-La, Zoji-La, Bomidi-La etc. The Ganga and Yamuna rivers originates from this Himalayas.

(b) **The Lesser Himalayas or Himachal:** The altitude of this range lies between 1000 and 4500 metres and the average width is 50 KM. The Prominent ranges in this are Pir Panjal, Dhaula Dhar and Mahabharata ranges.It compresses of many famous hill stations like Shimla, Dalhousie Darjeeling, Chakrata, Mussoorie, Nanital etc. It also comprises of famous valleys like Kashmir, Kullu, Kangra etc.

(c) **The Outer Himalayas or the Siwaliks:** It is the outer most range of the Himalayas. The altitude varies between 900-1100 meters and the width lies between 10-50 KM. They have low hills like Jammu Hills, etc.The valleys lying between Siwalik and Lesser Himalayas (Himachal) are called 'Duns' like Dehra Dun, Kotli Dun and Patli Dun.

**(ii) The Trans-Himalayan ranges**

It extends north of greater Himalaya and parallel to it is called zaskar range. North of Zaskar range lies Ladakh range. The Indus river flows between Zaskar and Ladakh range. The Karakoram range lie extreme north of the country. K<sub>2</sub> is the second highest peak of the world.

**(iii) The Purvanchal hills**

It comprises Mishami, Patkoi, Naga, Mizo hills which are located in eastern side. The Meghalaya plateau is also part of these hills which includes the hills of Garo, Khasi and Jaintia.



**Notes**



**INTEXT QUESTIONS 9.3**

1. Write the names of the three ranges of the Himalayas.
2. Look at the map (Fig. 9.5) and find out.
  - (i) In which state Nanga Parbat and Nanda Devi are located?
  - (ii) Say Yes or No.
    - (a) Mt. Everest is located in India.....
    - (b) Shipki-La pass is located in Siwalik Range.....
    - (c) Mansarover lake is located in Kailash Range.....
3. Mention the names of the countries in which the Greater Himalayas are situated.
4. Identify two purvanchal hills.

**2. The Northern Plains**

Let us try to locate and label the states lying in the Northern Plains of India (refer Fig. 9.5). The Northern Plains are located between south of the Himalayas and north of the Peninsular plateau. It is formed by the deposition of the sediments brought by three main river systems namely : the Indus, the Ganga and the Brahmaputra. From Punjab in the west to Assam in the east, this plain is about 2400 km long. Its width varies from about 300 km in the west to about 150 km in the east. It mainly includes the states of Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal and Assam. This plain is very fertile due to alluvial sediments brought by the rivers from the Himalayas. This plain is one of the largest and most fertile plains of the world. Major crops such as wheat, rice, sugarcane, pulses, oil seeds and jute are grown here. Due to proper irrigation, the plain makes significant contribution in the production of food grains. The Northern plain is broadly divided into two parts :

- (a) The Western plain
- (b) The Ganga-Brahmaputra plain

**(a) The Western Plain**

This plain is formed by the river system of the Indus. It lies to the west of Aravallis. This plain is formed due to deposits brought by the rivers like the Satluj, the Beas and the Ravi. This part of the plain has doabs.

**(b) The Ganga-Brahmaputra plain**

It is also formed by the deposition of the sediments brought by two main river systems, the Ganga and the Brahmaputra. The early civilizations like Mohenjo-Daro and

Harappa also called river valley civilizations, were spread over plain areas. This is because of the availability of fertile land and water through the river networks.

**Doab:** the alluvial land between two converging rivers. Example doab area in Punjab.

**Khadar:** The area flooded by rivers almost every year

**Banger:** The area never flooded by rivers.



Notes

### 3. The Peninsular Plateau

Look at the map (Fig. 9.6) given below, you will find that the Peninsular plateau is a triangular shaped table land. It is part of ancient land mass called Gondwana level. It covers an area of nearly 5 lakh sq.km. It is spread over the states of Gujarat, Maharashtra, Bihar, Karnataka and Andhra Pradesh.



Figure 9.6 The Peninsular plateau of India



### Notes

River Narmada divides the peninsular plateau into two parts : The central highlands and Deccan Plateau

- (i) **The central Highlands:** It extends from Narmada river and the northern plains. A ravallis is the important mountain which extends from Gujrat through Rajasthan to Delhi. The highest peak of the Aravallis hills is Gurushikhar (1722m) near Mt. Abu. The Malwa Plateau and Chhota Nagpur plateau are parts of the central highlands. River Betwa, chambal and Ken are the important river of Malwa plateau while Mahadeo, Kaimur and Maikal are the important hills of chhota Nagpur plateau. The valley of Narmada is lies between the Vindhyas and the satpura which flows east to west and joins the Arabian sea.
- (ii) **The Deccan Plateau:** The Deccan plateau is separated by a fault (A fracture in the rock along which rocks have been relatively replaced), from Chota Nagpur plateau. The black soil area in the Deccan plateau is known as Deccan trap. It is formed due to volcanic eruptions. This soil is good for cotton & sugarcane cultivation. The Deccan plateau is broadly divided into:
- (a) The Western Ghats
  - (b) The Eastern Ghats
- (a) **The Western Ghats:** If you look at map (Fig. No. 9.6), we will see the Western Ghats or Sahyadris lie on the Western edge of the Deccan plateau. It runs parallel to the western coast for about 1600 km. The average elevation of the Western Ghats is 1000 metres. The famous peaks in this area are Doda Betta, Anaimudi amd Makurti. The highest peak in this region is Anaimudi (2695m.). Western ghats are continuous and can be crossed through passes like Pal Ghat, Thal Ghot and Bhore Ghat. The rivers like Godavari, Bhima and Krishna flow eastward while the river Tapti flows westward. The streams form rapids & water falls before entering the Arabian Sea. The famous water falls are Jogfalls on Sharavati, Shiva Samudram falls on Kaveri etc.
- (b) **The Eastern Ghats:** The Eastern Ghats are discontinuous low belt. Their average elevation is 600 m. They run parallel to the east coast from south of Mahanadi valley to the Nilgiri hills. The highest peak in this region is Mahendragiri (1501 m). The famous hills are Mahendragiri hills, Nimaigiri hills in Orissa, Nallamallai hills in Southern Andhra Pradesh, Kollimalai and Pachaimalai in Tamilnadu. The area is drained by the Mahanadi, Godawari, Krishna and Kaveri river systems. The Nilgiri hills join Western & Eastern Ghats in the south.



**ACTIVITY 9.2**

Trace five main differences between Western and Eastern Ghats.

1. Continuity		
2. Average Elevation		
3. Extent		
4. Highest Peak		
5. Rivers		



**Notes**

**4. The Indian Desert**

The Indian Desert lies towards the western margin of Aravali Hills. It is also called Thar Desert. It is the ninth largest desert in the world. It spreads over the states of Gujarat and Rajasthan. This region has semi-arid and arid weather conditions. It receives less than 150 mm of rainfall per year. The vegetation cover is low with thorny bushes. Luni is the main river in this area. All other streams appear only at the time of rainfall otherwise they disappear into the sand.



**Figure 9.7** *The Indian Desert*

*I am Thar ‘The Indian Desert’:*

1. I remain dry most of the year. The moisture bearing winds goes parallel to Aravalli so I receive scanty rainfall.
2. I am pierced by cactus and other thorny bushes on my body.
3. If you are thirsty, you will have to walk several kilometers to reach an oasis and sinduates (small water body).

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4. The sand dunes add to the beauty of my desert.
5. My people follow rich cultures and traditions.

### 5. The Coastal Plains

The coastal plains in India run parallel to the Arabian Sea & Bay of Bengal along the Peninsular Plateau. The western coastal plain is a narrow belt along the Arabian sea of about 10-20km wide. It stretches from Rann of Kachchh to KanyaKumari. Western coastal plains comprises of three sectors (i) Konkan Coast (Mumbai to Goa), (ii) Karnataka coast from Goa to Mangalore (iii) Malabar Coast (Mangalore to Kanya Kumari). The eastern coast runs along Bay of Bengal. It is wider than the western coastal plain. Its average width is about 120Kms. The northern part of the coast is called Northern Circar and the southern part is called Coromandal Coast. Eastern coastal plain is marked by Deltas made by the rivers Mahanadi, Godavari, Krishna and Kaveri. The Chilka largest salt water lake in India in Odisha is located to the south of Mahanadi Delta. The coastal plains are belts for growing spices, rice, coconut, pepper etc. They are centres of trade & commerce. The coastal areas are known for fishing activities, therefore large number of fishing villages have developed along the coasts. Vembanad is famous lagoon which is located at Malabar coast.

### 6. The Islands

India has two main groups of Islands. There are 204 islands in Bay of Bengal called as Andaman and Nicobar islands and 43 islands in Arabian Sea called as Lakshadweep islands. The Andaman & Nicobar island extend from north to south in Bay of Bengal. They are bigger in size. An active volcano is located on the Barren Island in Andaman & Nicobar group of islands. Lakshadweep islands are located near Malabar coast of Kerala in the Arabian sea. They cover an area of 32 sq km. Kavarati is the capital of Lakshadweep. These islands are formed by corals and endowed with variety of flora and fauna. These islands are important tourist attraction under water activities like snorkling, such diving, deep sea diving and other sports make these island more popular.



### INTEXT QUESTIONS 9.4

1. Answer the following questions briefly (not more than two sentences)
  - (i) How was Deccan Trap formed?
  - (ii) State any two economic activities of coastal plains.
  - (iii) Why does Andman and Nicobar Islands attract more tourists?
  - (iv) Write the names of the rivers which help to form the western plain.



## Notes

## 9.4 DRAINAGE SYSTEMS IN INDIA

The drainage system refers to the system of flow of surface water mainly through rivers. An area drained by a river and its tributaries is called a drainage basin. The drainage system is related to a number of factors like slope of land, geological structure, amount and velocity of water. A river through its drainage system performs several tasks. These are excess water removal from a particular area, transportation of sediments from one place to other, providing natural source for irrigation and maintaining the water table of a region. Traditionally, rivers were useful as a source of abundant fresh water and navigation. In today's world rivers importance has risen to include hydro power generation and setting up water-based industries. These are also important tourist attraction for activities such as boating, river rafting and cliff jumping. Because of their utility, rivers are important for life and hence regarded as lifeline. Many cities are located along the rivers and are densely populated. Delhi on the banks of Yamuna, Patna along Ganga, Guwahati along Brahmaputra, Nasik along Godavari and Cuttack along Mahanadi are some examples (Fig. 9.8). On the basis of the origin the drainage can be divided in to two parts:

- (a) The Himalayan drainage system
- (b) The Peninsular drainage system

**Tributary:** A stream or river that flows into a larger river. e.g. Yamuna

**Delta:** A triangular shaped land at the mouth of a river formed from the deposition of silt, sand and small rocks that flow downstream in the river. eg. Ganga delta.

**Estuary:** A partially enclosed coastal body of water where the salty tidal water mixes with the fresh water of the river. eg. Narmada river makes an estuary.

## 9.5 MAJOR DRAINAGES SYSTEMS

As mentioned earlier on the basis of origin, the Indian river have been classified into two major drainage systems. Let us discuss the comparision between the two drainage systems.

### Himalayan River System

1. They are Perennial rivers originating from glaciers.
2. Rivers form valleys by the process of erosion.
3. The rivers are ideal for irrigation purposes as they pass through plain fertile tracts.
4. These rivers have meandering courses which shift over time.

### 9.5.1 The Himalayan Drainage System

Most of the Himalayan Rivers are perennial. This means they have water throughout the year. This is because most of these rivers originate from the glaciers and snowy

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peaks. They also receive water from the rainfall. The main river system in this category are:

1. The Indus River System Jhelum, Ravi, Beas and Satluj
2. The Ganga Rivers System Yamuna, Ramganga, Ghaghara, Gomti, Gandak and Kosi etc.
3. The Brahmaputra River System Dibang, Lohit, Tista and Meghna etc.

### 9.5.2 The Peninsular Drainage System

You have already studied about Peninsular Plateau. Most of the Peninsular rivers flow eastwards and enters into Bay of Bengal. Only Narmada and Tapi rivers which flow westwards of the Western Ghats. They are good for generating hydropower because these rivers form rapids & water falls. The major peninsular rivers are Mahanadi, Godavari, Krishna and Kaveri.

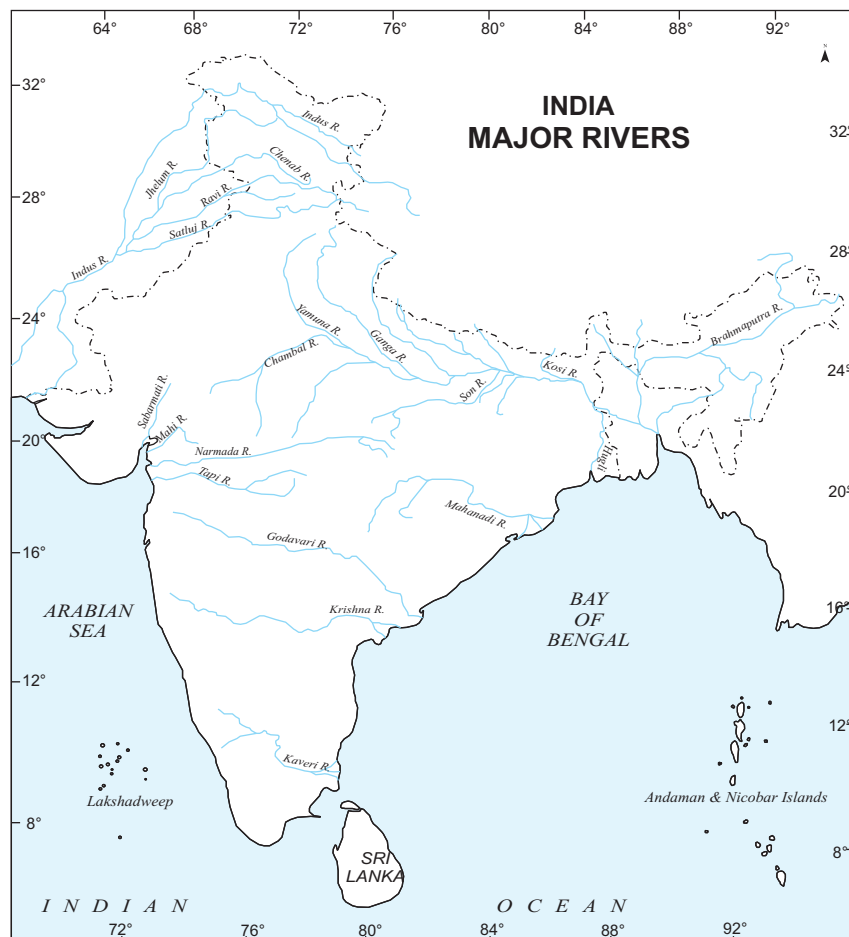


Figure 9.8 Major Rivers of India





**ACTIVITY 9.3**

Look at the physical and political maps of India in an atlas. Given below are four river. Find out the following information and record in the table given below.

<i>Rivers</i>	<i>Main tributaries</i>	<i>Origin</i>	<i>States it passes through</i>	<i>Drains into</i>
Ganga				
Brahmputra				
Indus				
Satluj				
Kaveri				
Godavari				
Krishna				



**Notes**



**ACTIVITY 9.4**

Look at the Atlas and name all the cities situated along the Ganga and locate on the physical India map.

**9.6 KEEPING RIVERS CLEAN**

Do you know that over 97% of all the water on Earth is salty and remaining 3% is fresh water. This tiny amount has to provide the fresh water needed to support the entire population of the world. Fresh water is a precious resource and the increasing pollution of our rivers and lakes is a cause for alarm.

You must have seen a river either flowing through your town, village or elsewhere. India has a large number of rivers that are lifelines for the millions of people living along their banks. These rivers can be broadly categorized into four groups:

- (i) Rivers that flow down from the Himalayas and are supplied by melting snow and glaciers. This is why these are perennial, that is, they never dry up during the year.

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- (ii) The Deccan Plateau rivers, which depend on rainfall for their water.
- (iii) The coastal rivers, especially those on the west coast, which are short and do not retain water throughout the year.
- (iv) The rivers in the inland drainage basin of west Rajasthan, which depend on the rains. These rivers normally drain towards silt lakes or flow into the sand.

**Rivers have been given the pride of place in the way of life.** Several cities as well as holy shrines are on the banks of rivers, and indeed, rivers such as the Ganga and the Yamuna are sacred to millions. Despite this, they are being polluted with unaccountable and environmentally threatening practices. Only sewage claims for about 70 percent pollution loads in Indian rivers. Heavy loads of biological and chemical pollutants usually enter waterways to be consumed in some manner by the downstream users. This affects the aquatic life and causes various health hazards. Along with the pollutants, the insensitivity of people towards rivers is severely adding to the problem. Urban dwellers identify vaguely with rivers. An example can be the highly contaminated blackish water of Yamuna river in New Delhi which hardly draws attention from capital's citizens.

Since, water issues are assigned to provincial governments in India, each one of them treats a river as its own, with little or no regard to the downstream effects. Ecologists and conservationists have long demanded that rivers need to be treated as one entity and work on a determined, time-specific combination of serious efforts. This could lead to an improvement of water quality of the rivers. The government has come up with ambitious river cleaning initiatives such as the Ganga Action Plan (GAP) and the National River Conservation Plan (NRCP) in the hope of improving water quality. Water harvesting is gaining popularity across the country, through which monsoon waters could be retained in the river basins. Several civic organizations and people movements are also contributing in raising awareness and sensitivity about the critical condition of polluted rivers.



### ACTIVITY 9.5

1. Find out the river or natural water source in your locality. Observe the kind of activities that are happening there.
2. What kinds of human activities are causing damage to river systems?
3. Write a letter to the local authority suggesting what you and your friends like to do to stop pollution. Also mention in the letter what help would you like to have from them.
4. Organise a meeting with your friends to discuss what can be done to prevent the negative effects of the human activities

There could be many ways of stopping pollution. Suggests the ways to check the water pollution.



### INTEXT QUESTION 9.5

Answer the following question:

1. Mention the name of two tributaries joining Ganga from the north.
2. Which lake is located near Mahanadi?
3. Write the names of the states drained by river Godavari.
4. Which river is tributary of Tunghabhadra?



### WHAT YOU HAVE LEARNT

- India is located between 8°4' North and 37°6' North latitudes and 68°7' East and 97°25' longitudes. India has land boundaries of 15,200 km and 6100km long coast line. India's landmass covers 3.28 million square kilometer of area.
- India can be divided into mainly six physical divisions: the Northern mountain, The Northern Plain, the Peninsular Plateau, the Indian desert and the coastal plains and Islands.
- The Himalayas may be divided into three parallel ranges: Greater Himalayas or Himadari, Lesser Himalayas or Himachal and Outer Himalayas or Siwaliks.
- The northern plain spreads mainly in the states of Punjab, Haryana, Uttar Pradesh, Bihar and West Bengal. The soil here is rich in nutrients and hence good for cultivation of varieties of crops.
- The Peninsular plateau stretches from the Aravali range till the southern tip of India. It is a table land made of old and metamorphosed rocks.
- The Great Indian Desert spreads over the states of Gujarat and Rajasthan. This region has semi-arid and arid weather conditions.
- The coastal plains in India run parallel to the Arabian sea & Bay of Bengal. They are called Western coastal plains and the Eastern coastal plains.
- India has two main groups of Islands. There are 204 islands in Bay of Bengal called the Andaman and Nicobar Islands and 43 islands in Arabian Sea i.e Lakshadweep islands.
- Indian River System can be divided into two main categories: The Himalayan Drainage System and The Peninsular Drainage System. The three main rivers in Himalayan system are the Indus, Ganga, The Brahmaputra. The main Peninsular rivers are Narmada, Tapi, Godavari, Krishna, Kaveri and Mahanadi.



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### TERMINAL EXERCISES

1. Explain the location and extends of India.
2. Dercribe any three characteristics of the Indian Desert.
3. Explain any two paints each about the three parallel ranges of Himalayas.
4. Differentiate between Himalayan and Peninsular drainge system by giving any four differences in each.
5. Give reasons:-
  - (i) Northern plans have fertile alluvial soil.
  - (ii) Indian desert has very less vegetation cover.

### Project:

- Create a guidebook for visitors to your home region
  1. It should describe your region's unique physical and human characteristics.
  2. List elements of the physical landscape, such as climate, landforms, plants, animals, and elements of the human landscape, such as work opportunities, economic activities, recreational activities, regional language, and foods.
  3. The guidebook should include pictures/ drawings and should feature the things that you feel are special about your locality.



### ANSWERS TO INTEXT QUESTIONS

#### 9.1

1.
  - (i) Bangladesh, Myanmmar.
  - (ii) Bay of Bengal and Arabian Sea.
  - (iii) Sri Lanka.
  - (iv) Pakistan, Bhutan.

#### 9.2

1.
  - (i) Kerala, Tamil Nadu.
  - (ii) Jammu and Kashmir, Arunachal Pradesh.
  - (iii) Nepal, Bhutan.
  - (iv) Daman and Diu, Dadar Nagar Haveli.



**9.3**

1. the Himadari The Himachal, and Siwalik.
2. A. Jammu and Kashmir.  
B. (a) No  
(b) No  
(c) Yes
3. India, Nepal, Bhutan.
4. Patkoi, Mizo hills

**9.4**

1. (i) Due to volcanic eruption.  
(ii) (i) Agriculture (ii) fishing (iii) trade and commerce (any two)  
(iii) Because Islands have developed attractive tourist activities of under water and water sports.  
(iv) Satluj, Beas, Ravi

**9.5**

1. Gandak, Kosi.
2. Chilka.
3. Maharashtra, Andhra Pradesh and Chattisgarh.
4. Krishna.