

# PHYSIOGRAPHY OF INDIA

## Physical Features of India

The physical features of India can be grouped under the following physiographic divisions:

1. The Himalayan Mountains
2. The Northern Plains
3. The Peninsular Plateau
4. The Indian Desert
5. The Coastal Plains
6. The Islands

## The Himalayan Mountains

- The Himalayas, geologically young and structurally fold mountains stretch over the northern borders of India.
- Aravalli range is the oldest fold mountain range in India.
- It stretches for a distance of 2,400 km from the Indus gorge in the west to Brahmaputra gorge in the east.
- The width of the Northern Mountains varies from 400 km in Kashmir to 150 km in Arunachal Pradesh.
- The Pamir Knot, popularly known as the “Roof of the World” is the connecting link between the Himalayas and the high ranges of Central Asia.
- The Northern Mountains that function as a great wall is grouped into three divisions.
  - The Trans-Himalayas
  - Himalayas
  - Eastern or Purvanchal hills.

## The Trans-Himalayas

- It is also known as western Himalaya's.
- The Trans-Himalayas are about 40 km wide in its eastern and western extremities and about 225 km wide in its central part.
- The rocks of this region contain fossils bearing marine sediments which are underlain by Tertiary granite.
- The prominent ranges of Trans Himalayas are Zaskar, Ladakh, Kailash, and Karakoram.

## The Himalayas

- It constitutes the core part of northern mountains. It is a young fold mountain.
- The main divisions of the Himalayas are:
  - The Greater Himalayas
  - The Lesser Himalayas
  - The Siwaliks

### **The Greater or Inner Himalayas or the Himadri**

- The Greater Himalayas are about 25 km wide. Its average height is about 6,000 m.
- The Greater Himalayas receive lesser rainfall as compared to the Lesser Himalayas and the Shiwaliks.
- The folds of Great Himalayas are asymmetrical in nature. The core of this part of Himalayas is composed of granite.
- Almost all the lofty peaks of Himalayas are located in this range. The notable ones are Mt. Everest (8,848 m) and Kanchenjunga (8,586 m). Mt. Everest is located in Nepal and Kanchenjunga is located between Nepal and Sikkim.
- It is perennially snow bound.
- Gangotri, Yamunothri and Siachen are some of the glaciers found in this region.

### **The Lesser Himalayas or The Himachal**

- It is the middle range of Himalayas. Height of this range varies from 3,700 to 4,500 m. Its width varies upto 80 km.
- The major rocks of this range are slate, limestone and quartzite.
- Pir Panjal, Dhauladhar and Mahabharat are the mountain ranges found in this part.
- Major hill stations of the Himalayas are located in this range. Shimla, Mussoorie, Nainital, Almora, Ranikhet and Darjeeling are the familiar ones.

### **The Siwaliks or Outer Himalayas**

- The Siwaliks extend from Jammu and Kashmir to Assam. It is partly made by the debris brought by the Himalayan rivers.
- The altitude varying between 900-1100 metres elevation of this range is 1300 m. The width of Siwaliks vary from 10 km in the east to 50 km in the west.
- The longitudinal valleys found between the Siwaliks and the Lesser Himalayas are called Duns in the west and Duars in the east.

### **Purvanchal Hills**

- These are the eastern off-shoot of Himalayas. It extended in the north-eastern states of India.
- Most of these hills are located along the border of India and Myanmar while others are inside India.
- Dafla Hills, Abor Hills, Mishmi Hills, Patkai Bum Hills, Naga Hills, Manipur Hills, Mizo Hills, Tripura Hills, Mikir Hills, Garo Hills, Khasi Hills and Jaintia Hills are the hills which are collectively known as purvanchal Hills.

### **Highest Peaks in Himalayas**

- Himalaya is the home of several high peaks. However, it holds the record of having the maximum number of highest peaks among any mountain range in world. Out of 14 heights peaks in this world, Himalayas holds 9.

Peak	Country	Height in metres
Mt. Everest	Nepal	8848
Mt. K2 or Godwin Austen	India	8611
Kanchenjunga	India	8598
Makalu	Nepal	8481
Dhaulagiri	Nepal	8172
Nanga Parbat	India	8126
Annapurna	Nepal	8078
Nanda Devi	India	7817
Kamet	India	7756
Namcha Barwa	India	7756
Gurla Mandhata	Nepal	7728

### The Great Northern Plains

- This plain is one of the most extensive stretches of the alluvium in the world and is deposited by the rivers Indus, Ganga, Brahmaputra and their tributaries.
- The length of the plain is about 2,400 km and the width varies from 240 to 320 km. Its width increases from east to west. It covers an area of over 7 lakh sq.km.
- The Great Plains of India is remarkably a homogeneous surface with an imperceptible slope. They are formed mostly by the depositional process of the Himalayan and Vindhyan rivers. These rivers deposit enormous quantity of sediments deposited along the foothills and flood plains.
- Northern Great Plains is divided into four as Rajasthan Plains, Punjab Haryana Plains, Gangetic Plains and Brahmaputra Plains.
- The great northern plains are a rich soil cover combined with adequate water supply and favorable climate it is agriculturally a very productive part of India.
- The rivers coming from northern mountains are involved in depositional work. In the lower course, due to gentle slope, the velocity of the river decreases which results in the formation of riverine islands.
- Majuli, in the Brahmaputra River is the largest inhabited riverine island in the world.

### The Peninsular Plateau

- The Peninsular plateau is a tableland composed of the old crystalline, igneous and metamorphic rocks.
- The plateau region lies to the south of the Great Northern Plains. This is the largest physiographic division of our country. It covers an area of about 16 lakh sq.km.
- Aravalli hills mark the north-western boundary of the plateau region. Its northern and north-eastern boundaries are marked by the Bundelkhand upland, Kaimur and Rajmahal hills. The Western Ghats and the Eastern Ghats mark the western and eastern boundaries respectively.

- The altitude of a large portion of the plateau is more than 600 m from mean sea level.
- The peak of Anaimudi is the highest point in the plateau. Its height is 2,695 m and is located in Anaimalai.
- All the major rivers (Mahanadi, Godavari, Krishna, Kaveri etc.) lying to the south of the Vindhyas flow eastwards and fall into the Bay of Bengal.
- Narmada and Tapti are the two rivers situated to the south of the Vindhyas flow westward. Their movement towards west is due to the presence of a rift valley in the region.
- The river Narmada divides the plateau region of India broadly into two parts. The region lying to the north of the Narmada is called the Central Highlands and the region lying to the south of Narmada is called the Deccan Plateau.

### Central Highlands

- The Central Highlands extend between the river Narmada and the Northern Great Plains.
- The Aravallis form the west and northwestern edge of the Central Highlands. These hills extend from Gujarat, through Rajasthan to Delhi in the northwesterly direction for a distance of about 700 km.
- Gurushikhar (1,722 m) is the highest peak of Aravallis range.
- The Western part of the Central Highland is known as the Malwa Plateau. The rivers Chambal, Betwa and Ken drain the Malwa Plateau before they join the river Yamuna.
- The part of the Central Highlands which extends to the east of Malwa Plateau is known as Bundelkhand and its further extension is known as Bagelkhand.
- The eastern part of the Central Highlands which lies in the north-eastern part of the Indian Plateau is known as Chhota-Nagpur Plateau. It covers much of Jharkhand, adjacent parts of Odisha, West Bengal, Bihar and Chhattisgarh. This region is very rich in mineral resources particularly iron ore and coal.

### Deccan Plateau

- This physiographic division is the largest part of the plateau region of India. The shape of this plateau is roughly triangular.
- The area of this Plateau is about 7 lakh square km and the height ranges from 500 to 1000 m above sea level.
- The Western Ghats forms the western edge of the Peninsular Plateau. It runs parallel to the Arabian Sea coast. The northern part of this range is called as Sahyadris. The height of the Sahyadris increases from north to south.
- Eastern Ghats run from southwest to northeast form the eastern edge of this Plateau. This range is also called as Poorvadri.
- The Eastern Ghats join the Western Ghats at the Nilgiri hills, bordering Karnataka and Tamil Nadu.
- The Eastern Ghats are not continuous like the Western Ghats.

### The Indian Desert

- The Thar desert, also known as the Great Indian desert is a large arid region in the north western part of the Indian subcontinent that covers an area of 2,00,000 km<sup>2</sup> and forms a natural boundary between India and Pakistan.

- It is the world 7th largest desert, and world 9th largest sub-tropical desert located in Western part of the India.
- This region receives very low rainfall below 150 mm per year. Luni is the only large river in this region.

## The Coastal Plains

The Indian coastal plains are divided into the following two divisions:

- The Western Coastal Plains
- The Eastern Coastal Plains

### The Western Coastal Plain

- It lies between the Western Ghats and the Arabian Sea. It extends from Rann of Kutch in the north to Kanyakumari in the south and its width varies from 10 to 80 km.
- The northern part of the West Coastal Plain is known as Konkan Plain. The middle part of this plain is known as Kanara. The southern part of the plain is known as Malabar Coast which is about 550 km long and 20-100 km wide.
- Along the west coast, there are numerous shallow lagoons and backwaters called Kayals and Teris. Vembanad is a famous back water lake found in this region.

### The Eastern Coastal Plain

- It lies between the Eastern Ghats and the Bay of Bengal.
- The coastal plain between Mahanadi and Krishna River is known as the Northern Circars and the southern part lies between Krishna and Kaveri rivers is called Coromandel coast.
- The Marina beach on this coast in Chennai and it is the second longest beach in the world.
- The Chilika Lake is the largest salt water lake in India. It lies in the state of Orissa, to the south of the Mahanadi delta.
- The Kolleru Lake which lies between the deltas of Godavari and Krishna.
- The Pulicat Lake lies in the border of Andhra Pradesh and Tamil Nadu are the well-known lakes in the east coastal plain.

## The Islands

- India has two major island groups namely Andaman and Nicobar and Lakshadweep.
- The Andaman and Nicobar group consists of 572 islands and are located in Bay of Bengal.
- Lakshadweep consists 27 islands and are located in Arabian Sea.

### Andaman And Nicobar Islands

- India's only active volcano is found on Barren Island in Andaman and Nicobar group of Islands is divided into two. They are Andaman in the north and the Nicobar in the south.
- Port Blair is the administrative capital of the Andaman and Nicobar islands.
- The Ten Degree Channel separates Andaman from Nicobar group.
- The southernmost tip, the Indira Point is a part of Nicobar Island.
- India's only active volcano is found on Barren Island in Andaman and Nicobar group of Islands.

### Lakshadweep Islands

- This is a small group of coral islands located off the west coast of India. It covers an area of 32 sq. km.
- Kavaratti is its administrative capital.
- Lakshadweep islands are separated from the Maldives Islands by the Eight Degree Channel.
- The uninhabited “Pitt Island” of this group has a bird sanctuary.

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