



# Physical Features of India

## Introduction

- India has a great landmass which is formed during different geological periods.
- Besides geological formations, a number of Processes such as weathering, erosion and deposition.

## Major Physiographic Divisions

- (a) The Himalayan Mountains
- (b) The Northern Plains
- (c) The Peninsular Plateau
- (d) The Indian Desert
- (e) The Coastal Plains
- (f) The Islands

### The Himalayan mountains

- The Himalayas are one of the loftiest and the most rugged mountain barriers.
- These are young and structurally folded mountains, that run in the from Indus to the Brahmaputra.
- The Himalaya's length is 2,400 km, and the width varies from 400 km in Kashmir to 150 km in Arunachal Pradesh.
- Longitudinally, the Himalayas consist of three parallel ranges-
  - (a) The Greater Himalayas or Himadri
  - (b) The Lesser Himalayas or Himachal
  - (c) The Shivalik.

### The Himachal

- This range lies to the south of the Himadri.
- The ranges are mainly composed of highly compressed and altered rocks.
- The altitude varies between 3,700 and 4,500 meters and the average height width is 50 Km.
- Pir Panjal range is the longest and the most important range.
- The famous valleys of this range are the Kashmir, the Kangra and Kullu valley in Himachal Pradesh.

### The Shivaliks

- These are the outermost ranges of the Himalayas.
- The height varies between 900 and 1100 metres, while the width is between 10 to 50 km.
- The valleys lying between Himachal and Shivaliks are known as Duns.

### The Himadri

- The innermost ranges of the Himalayas are called the Great Himalayas or 'Himadri'.
- It consists of the loftiest peaks with an average height of 6,000 metres.
- The core of this part of the Himalayas is composed of granite.

### The Himalayas can also be divided from west to east

- Lying between Indus and Satluj - Punjab Himalayas, also called Kashmir and Himachal Himalaya
- Lying between Satluj and Kali - Kumaon Himalayas
- Lying between Kali and Teesta - Nepal Himalayas
- Lying between Teesta and Dihang - Assam Himalayas
- The Himalayas running in the northeast region of India are called Purvanchal or Eastern hills.
- The Purvanchal consists of various hills such as the Patkai Hills, the Naga Hills, the Manipur Hills and the Mizo Hills.

### The Northern Plain

- The northern plains have been formed by the combination of three major river systems - The Indus, the Ganga and the Brahmaputra along with their tributaries.
- The northern plains spread over an area of 7 lakh sq. km. 2400 km long and 240 to 320 km broad.
- This is the most fertile area in India with adequate water supply and a favourable climate.
- Punjab Plains - It is formed by the Indus and its tributaries. This section of the plain has doabs.
- Ganga Plain - lies between Ghaggar and Teesta rivers.
- Brahmaputra Plain - lies in the state of Assam.
- Northern plains have four regions with different relief features.
  - a) Bhabar: It lies at the foot of Shivalik, a narrow 8-16 km wide belt of pebbles.
  - b) Terai: The streams and rivers re-emerge and create a wet, swampy.
  - c) Bangar: Older alluvium plain which rises above the level of the flood plains.
  - d) Khadar: The newer, younger deposits of the flood plains are called Khadar.
- Note: Majuli - in Assam - is the largest inhabited riverine island in the world.

### The Western Ghats

- It is located at the western edge of the Deccan plateau.
- The average elevation is 900 - 1600 metres; the highest peaks include the Anaimudi (2695 m) and the Doda Betta (2637 m).
- They are continuous and can be crossed through passes only.

### The Eastern Ghats

- It is located at the eastern edge of the Deccan Plateau.
- The average elevation is 800 metres; Mahendragiri (1501 m) is the Eastern Ghats' highest peak.
- Eastern ghats are discontinuous and irregular landmasses, drained by many rivers.

### The Eastern Ghats

- It is located at the western boundary of the Aravalli Hills.
- It is a sandy plain, covered with dunes. Barchans (crescent-shaped dunes) are prominent in large areas.
- Receives deficient rainfall, below 150 mm per year.
- Arid climate with shallow vegetation.
- Consist of only one large liver - Luni.

### The Peninsular Plateau: The Oldest Landmass

- Peninsular plateau is a tableland created by the breaking and drifting of Gondwana land.

- It is composed of old crystalline, igneous and metamorphic rocks.

The peninsular plateau consists of two sections: the Central Highlands and the Deccan Plateau.

### I. The Central Highlands

- The part of the Peninsular Plateau lying to the North of the Narmada River covering a major area of the Malwa Plateau is known as the central Highlands.
- It has the Vindhya range, surrounded by the Satpura range in the south and Aravallis in the northwest.
- It is drained by rivers such as the Chambal, the Sind, the Betwa and the Ken.
- The eastward extensions of this plateau are locally known as the Bundelkhand and Baghelkhand.
- The Chotanagpur region, drained by the Damodar River, marks the eastward extension.

### II. The Deccan Plateau

- Lying to the south of Narmada, the Deccan plateau is a triangular mass.
- The Deccan plateau is surrounded in the north, the Mahadev, the Kaimur hills and the Maikal range in the east.
- In the northeast, the plateau is known as the Meghalaya, Karbi-Anglong Plateau and North Cachar Hills. Prominent hill ranges are the Garo, the Khasi and the Jaintia Hills.
- The Deccan Trap is one of the most crucial features of the Deccan Plateau. It is an area of volcanic origin, and over time, thus responsible for the formation of black soil.

### The Coastal Plains

- India's coastal plains consist of land running along the Arabian Sea on the west and the Bay of Bengal on the east.
  - i). The Western coast is divided into three stretches: -
    - a). Konkan (Mumbai - Goa) - Northern stretch,
    - b). Kannada plains - central stretch,
    - c). Malabar coast - southern stretch.
  - ii). Eastern Coastal Plains are vast and levelled ground. It is divided into two parts.
    - a). The northern part is called the Northern Circar.
    - b). The southern part is called the Coromandel Coast.
    - c). Consist of deltas of huge rivers such as the Mahanadi, the Godavari, the Krishna and the Kaveri.
    - d). Lake Chilika (the largest saltwater lake, in Odisha) is an essential feature of the eastern coast.

### The Islands

- I. The Lakshadweep Islands**
  - The Lakshadweep Islands are composed of small coral islands.
  - Coral polyps are short-lived microscopic organisms, which live in colonies. They secrete calcium carbonate.
  - The coral secretion and their skeletons form coral deposits in the form of reefs. Reefs are of three types - barrier reefs, fringing reefs and atolls.
  - The Lakshadweep Islands were formerly known as Laccadive, Minicoy and Amindive.
  - In 1973, different islands were combined to form the Lakshadweep Islands, of which the Kavaratti Island serves as the administrative headquarters.
  - It covers an area of 32 square km; it consists of diverse flora and fauna.
  - The Pitti island is uninhabited, and it has a bird sanctuary.
- II. The Andaman and Nicobar Islands**
  - Lying in the Bay of Bengal, the islands are bigger in size and large in number.
  - The islands in the north are the Andaman, while the group in the south are the Nicobar.
  - The islands are believed to be an extension of some submarine mountain system, consist of thick forests.
  - As the islands lie near the equator, so it experiences equatorial climatic conditions.
  - India's active volcano lies on Barren island of the Andaman and Nicobar Islands.