

### India- Subcontinent and Location

Subcontinent: A subcontinent is a large, relatively self-contained landmass forming a subdivision of a continent. The term subcontinent signifies "having a certain geographical or political independence" from the rest of the continent, or "a vast and more or less self-contained subdivision of a continent."

Used on its own in English, the phrase "the Subcontinent" commonly refers to the Indian subcontinent. The region largely comprises a peninsula of Asia south of the Himalayas and constitutes a geo-culturally distinct region within Asia. The region contains desert, plateau, rain forest, mountains and a myriad of languages, races, and religions. According to some pundits the concept was evolved during the British rule, who wanted to project India as culturally and geographically diverse, in order to rule it and avoid its unification.

### Locational Features of India

- Area of India: 3.28 million sq. km.
- It is 7th largest country in the world. It has 2.4% of the total world's area.
- Latitudinal and Longitudinal extent: Latitudinal and longitudinal extent of India are roughly about 30 degrees.
  - Longitudinal extension: 68 Degrees 7' East to 97 Degrees 25' East
  - Latitudinal extension: 8 Degrees 4' North to 37 Degree 6' North. The southern boundary has two values. Main land boundary - 8° 4' N and Southern most point of India is the lower point of Nicobar Islands which is 6°45'N. This point is called the 'Indira Point' which was previously known as 'Pygmalion point'
- Coastline has two different longitudinal values.
  - Total length of the coastline contained within the mainland-6100kms
  - Total coastline contained within the Indian territory-7517kms

### Indian Standard Time Longitude (IST)

- The longitudinal value is 82 1/2° E and this longitude passes through Allahabad.

Q: What are the implications of India having a long coastline?

- Moderating effect caused because of proximity to sea which is dominating in the peninsular region and determines a maritime type of climate.
- Vulnerability to calamities like cyclones and tsunamis and rise in the sea level due to climate change.
- Social and Economic implications:
  - A greater number of ports leading to a higher trade.
  - Large amount of marine resources owing to large EEZ(Exclusive Economic Zone)
  - Cultural affinity to the West and East in previous centuries.
  - Forces the Indian government to maintain a large Navy in order to protect its sea territory

## STRUCTURE AND PHYSIOGRAPHY OF INDIA

Based on the variations in its geological structure and formations, India can be divided into three geological divisions. These geological regions broadly follow the physical features:

1. The Peninsular Block
2. The Himalayas and other Peninsular Mountains
3. Indo-Ganga-Brahmaputra Plain.

### THE PENINSULAR BLOCK:

- The northern boundary of the Peninsular Block is an irregular line running from Kachchh along the western flank of the Aravali Range near Delhi and then roughly parallel to the Yamuna and the Ganga as far as the Rajmahal Hills and the Ganga delta. Apart from these, the Karbi Anglong and the Meghalaya Plateau in the northeast and Rajasthan in the west are also extensions of this block. The northeastern parts are separated by the Malda fault in West Bengal from the Chotanagpur plateau. In Rajasthan, the desert and other desert-like features overlay this block.
- Formed by a great complex of very ancient gneisses and granites, which constitutes a major part of it.
- Since the Cambrian period, the Peninsula has been standing like a rigid block and never been submerged, with the exception of some of its western coast which is submerged beneath the sea
- Part of the Indo-Australian Plate, it has been subjected to various vertical movements and block faulting. The rift valleys of the Narmada, the Tapi and the Mahanadi and the Satpura block mountains are some examples of it.
- The Peninsula mostly consists of relict and residual mountains
- The river valleys here are shallow with low gradients.

### THE HIMALAYAS AND OTHER PENINSULAR MOUNTAINS:

- Young, weak and flexible in their geological structure unlike the rigid and stable Peninsular Block.
- Still subjected to the interplay of exogenic and endogenic forces, resulting in the development of faults, folds and thrust plains.
- These mountains are tectonic in origin, dissected by fast-flowing rivers which are in their youthful stage. Various landforms like gorges, V-shaped valleys, rapids, waterfalls, etc. are indicative of this stage.

### INDO-GANGA-BRAHMAPUTRA PLAIN:

- These plains are formed mainly by sediments brought by the Indus, the Ganga and the Brahmaputra river systems.
- Originally, it was a geo-synclinal depression which attained its maximum development during the third phase of the Himalayan mountain formation.

- Average depth of alluvial deposits in these plains ranges from 1,000-2,000 m.

PHYSIOGRAPHY:

Physiography of an area is the outcome of structure, process and the stage of development. The land of India is characterized by great diversity in its physical features. Based on these macro variations, India can be divided into the following physiographic divisions:

- (1) The Northern and North-eastern Mountains
- (2) The Northern Plain
- (3) The Peninsular Plateau
- (4) The Indian Desert
- (5) The Coastal Plains
- (6) The Islands

**The North and Northeastern Mountains:**

- The North and Northeastern Mountains consist of the Himalayas and the Northeastern hills.
- The Himalayas consist of a series of parallel mountain ranges. Some of the important ranges are the Greater Himalayan range, which includes the Great Himalayas and the Trans-Himalayan range, the Middle Himalayas and the Shiwalik.
- Orientation:
  - Northwest to the Southeast direction in the Northwestern part of India.
  - In the Darjeeling and Sikkim regions lie in an east west direction,
  - In Arunachal Pradesh they are from southwest to the northwest direction.
  - In Nagaland, Manipur and Mizoram, they are in the north-south direction.
- The approximate length of the Great Himalayan range, also known as the central axial range, is 2,500 km from east to west, and their width varies between 160-400 km from north to south.

On the basis of relief, alignment of ranges and other geomorphological features, the Himalayas can be divided into the following sub-divisions:

1. Kashmir or Northwestern Himalayas
2. Himachal and Uttaranchal Himalayas
3. Darjeeling and Sikkim Himalayas
4. Arunachal Himalayas
5. Eastern Hills and Mountains.

Typical features of Himalayas and its importance:

- Protects India from the cold North-Eastern trade winds from Tibet
- They help in directing the monsoon winds or channeling effect on Monsoon
- Store house of various resources
- Great source of biodiversity
- They are a major tourist attraction
- Transhumance is practiced. (i.e. This is practiced by nomadic groups who migrate to ‘Bugyals’ (the summer glasslands in the higher reaches) during summer months and return to the valleys during winters)
- **Doon or Dun:** It is a local word for longitudinal valley, particularly an open valley, in the Siwaliks or between the Siwaliks and higher Himalayan foothills. E.g.: Dehradun, Nalgarh Dun, Harike Dun
- **Karewas-** Karewas are the thick deposits of glacial clay and other materials embedded with moraines. These are found in Jammu & Kashmir Region (Kashmir Valley). They are very fertile and specifically use to cultivate saffron in India.

Theories of Formation of Himalayas:

1. Continental Drift Theory - Alfred Wegener (1912)
  - The super continent was called PANGAEA which further broke into Laurasia and Gondwanaland.
  - The water body surrounding the Pangaea was called PANTHALASSA
2. Plate Tectonic Theory:
  - According to this theory, Himalayas were created due to collision of Indo-Australian plate and Eurasian plate in successive phases
  - This is the most acceptable theory which explains the origin of Himalayas.

