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State Civil Services

Tamil Nadu Public Service Commission

Volume – 2

GEOGRAPHY OF INDIA



TAMILNADU PUBLIC SERVICE COMMISION

GEOGRAPHY OF INDIA

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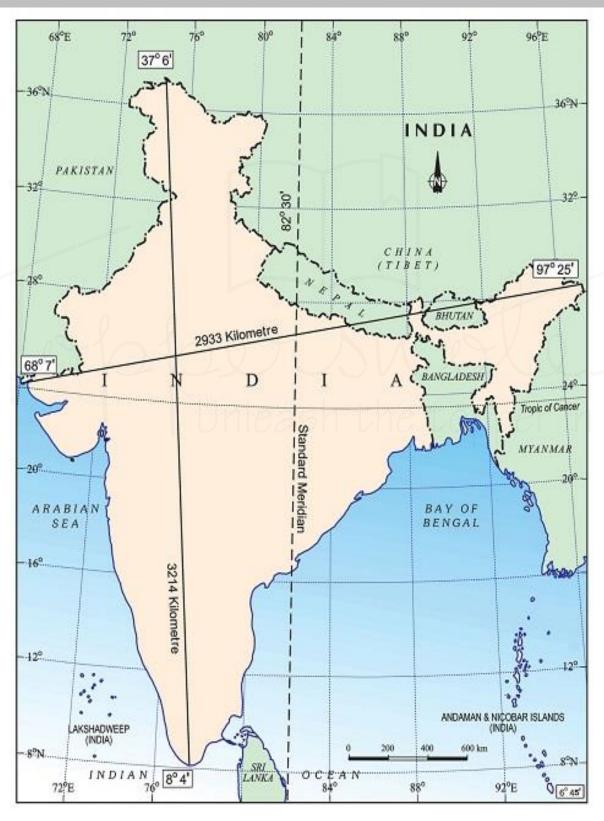
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1 CHAPTER

Location

India -Size & Location

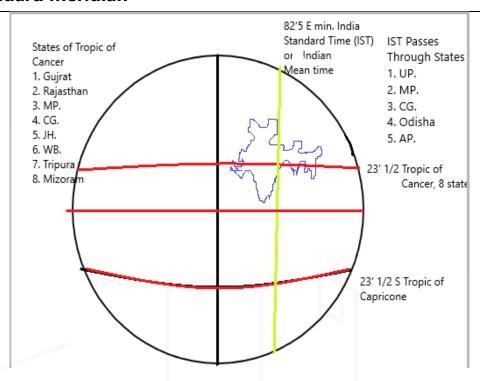




- Situated in the northern hemisphere (8°4'N to 37°6'N and 68°7'E to 97°25'E)
- Bounded by
 - North: the Great Himalayas
 - West: Arabian SeaEast: Bay of Bengal
 - o **South**: the Indian Ocean.
- 7th largest country in the world.
- Northernmost point: Indira Col
- Southernmost point: Indira Point in the Andaman and Nicobar Islands.
- Easternmost point: near Kibithu in Anjaw district of Arunachal Pradesh
- Westernmost point: Sir Creek in Kutch, near the "Guhar Mota" in Gujarat.
- Length: 3214 Km
- Width: 2933 Km (longitudinal difference: 30⁰ or 2 hours)
- Area: 32,87,263 sq. km (2.42% of the world)
- Population: 2nd largest country in the world (17.5% of world's population)
- Total land boundary=15,200 km.
- Total Sea boundary = 7516.5 Km (without islands 6100 Km)
- Border Countries:
 - North-west: Afghanistan and Pakistan
 - India-Pakistan border: Radcliffe line
 - Pakistan-Afghanistan border: Durand line.
 - O North: China, Bhutan and Nepal
 - India-China border: McMahon line.
 - o East: Myanmar, Bangladesh (India has longest boundary with Bangladesh)
 - O South: Sri Lanka separated by Palk Strait and the Gulf of Mannar.
- States sharing International borders:
 - o Bangladesh: total boundary= 4096km
 - 5 States: West Bengal, Mizoram, Meghalaya, Tripura, and Assam
 - China:Total boundary=3488km
 - 3 States and 1 UT: Himachal Pradesh, Uttarakhand and Sikkim and Ladakh
 - Pakistan : Total boundary= 3323km
 - 4 States and 1 UT: Jammu and Kashmir, Punjab, Gujarat, Rajasthan and Ladakh
 - Nepal: Total boundary= 1751km
 - 5 States: Uttar Pradesh, Bihar, Uttarakhand, Sikkim, West Bengal
 - o Myanmar: Total boundary= 1643km
 - 4 States: Arunachal Pradesh, Manipur, Mizoram, and Nagaland
 - O Bhutan: Total boundary= 699km
 - 4 States: Arunachal Pradesh, Assam, Sikkim, and West Bengal
 - Afghanistan:total boundary= 106km
 - 1 UT: Ladakh



Indian Standard Meridian



- 82°30'E Meridian crossing through Mirzapur city of Uttar Pradesh is India's Standard Meridian.
- Ahead of mean time by 5 hours and 30 minutes.
- Tropic of cancer (23°30'N) passes through -Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Mizoram, and Tripura.

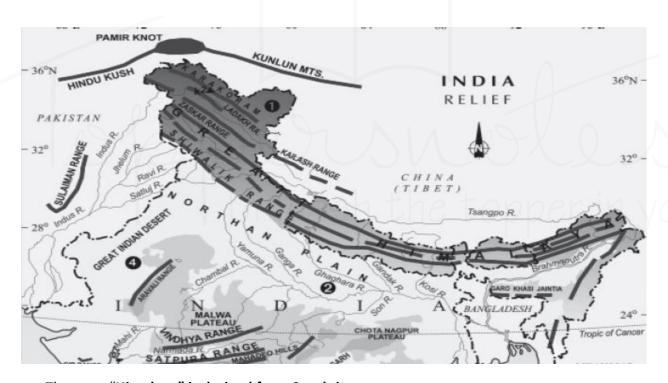
2 CHAPTER

Physical Features

Major Physiographic Divisions of India

- It is divided into the following five physiographic divisions:
 - 1. The Himalayan Mountains
 - 2. The Great Northern Plains
 - 3. The Peninsular plateau
 - 4. The Indian Desert
 - 5. The Coastal Plains
 - 6. The Islands

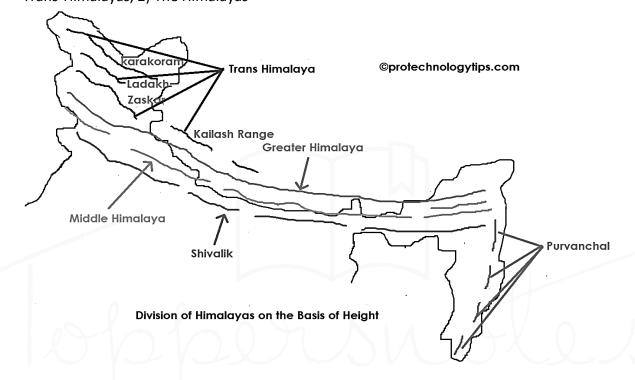
1. Himalayan Mountains



- The term "Himalaya" is derived from Sanskrit.
- It is referred as "The Abode of Snow".
- The Himalayan Mountains (Northern Mountains) consist of the **youngest and the loftiest** mountain chains in the world.
- They have been formed only a few millions years ago.
- It has been found that they were formed because of the **folding of the earth crust** as a **result of tectonic activity.**
- It extends for a distance of 2,500 km from the **Indus gorge in the west** to **Brahmaputra gorge in the east.**



- The width of the Northern Mountains varies from 500 km in Kashmir to 200 km in Arunachal Pradesh.
- The **Pamir Knot**, popularly referred as the **"Roof of the World"** is the connecting link between the Himalayas and the high ranges of Central Asia.
- Himalayas extend from Pamir towards east in the form of an arc shape.
- The Northern Mountains that function as a great wall are grouped into three divisions. 1) The Trans-Himalayas, 2) The Himalayas



A. The Trans-Himalayas

- It is also known as western Himalaya's.
- It lies to the north of the great Himalayan range and lies in Jammu and Kashmir and Tibetian plateau.
- o Its aerial extent is more in Tibet, it is also known as Tibetan Himalayas.
- The Trans-Himalayas are about 40 km wide in its eastern and western extremities and about
 225 km wide in its central part.
- They contain the Tethys sediments.
- The rocks of this region contain fossils having marine sediments which are underlain by 'Tertiary granite'.
- It also had metamorphosed sediments the core of the Himalayan axis.
- o The prominent ranges of Trans Himalayas are Zaskar, Ladakh, Kailash, and Karakoram.

B. The Himalayas

- o It constitutes the core part of northern mountains.
- It is a young fold mountain formed by the movement of Angara land mass in the north and Gondwana landmass in the south.
- The Tethys sea found between these two land masses was uplifted by the compression and the resultant landform was the Himalayas.
- It consists of many ranges.



 The main divisions of the Himalayas are the (i) Greater Himalayas, (ii) the Lesser Himalayas and (iii) the Siwaliks.

(i) The Greater Himalayas or the Himadri

- The Greater Himalayas rise abruptly like a wall north of the Lesser Himalayas.
- The Greater Himalayas are about 25 km wide. Its average height is about 6,000 m.
- It receives less rainfall as compared to the Lesser Himalayas and the Siwaliks.
- Physical weathering is less effective over the Greater Himalayas as compared to the other ranges.
- 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.
- This range is the most continuous of all ranges.
- It is a region of permanent snow cover. So, it has many glaciers.
- Gangothri, Yamunothri and Siachen are some of them.

(ii) The Lesser Himalayas or The Himachal

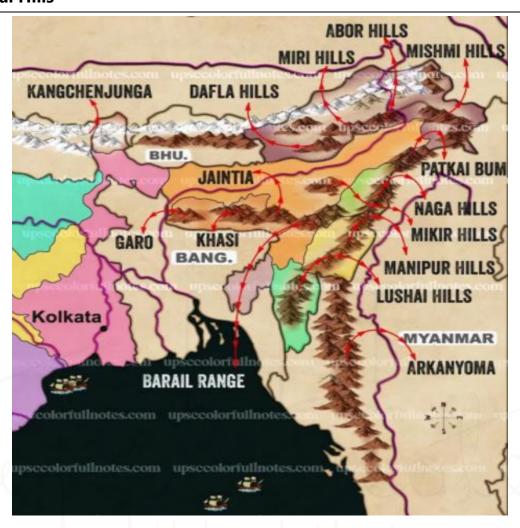
- It is in the middle range of the Himalayas.
- Height of this range varies from 3, 700 to 4,500 m.
- Its width varies upto 80 km.
- The major rocks of this range are slate, limestone and quartzite.
- This region is subjected to extensive erosion due to heavy rainfall, deforestation and urbanization.
- 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 major passes in the Himalayan are Karakoram pass (Jammu and Kashmir), Zojila pass, Shipkila pass (Himachal Pradesh), Bomdila pass (Arunachal Pradesh), Nathala pass (Sikkim) and Jhelepla pass (Sikkim).
 - ✓ The Khyber pass which connects Pakistan and Afghanistan, and Bolan pass in Pakistan are important passes of the Indian subcontinent

(iii) 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.
- It is the most discontinuous range.
- Siwaliks and the Lesser Himalayas are called Duns in the west and Duars in the east.
- These are the ideal sites for the development of settlements in this region.



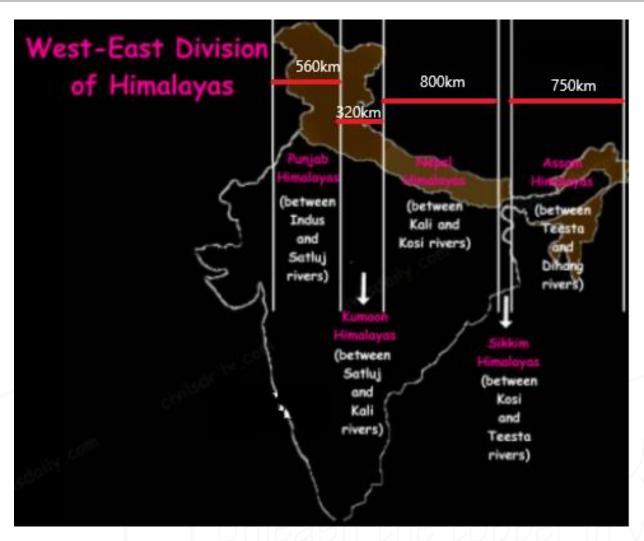
Purvanchal Hills



- These are the eastern off-shoot of the 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.



Longitudinal Divisions of Himalayas



- Kashmir/Punjab/Himachal Himalayas- Located between the rivers of Indus and Sutlej.
- Kumaun Himalayas- Located between the rivers of Sutlej and Kali.
- Central-Nepal Himalayas- Located between the rivers of Kali and Tista.
- Assam Eastern Himalayas- Located between the rivers of Tista and Dihang.

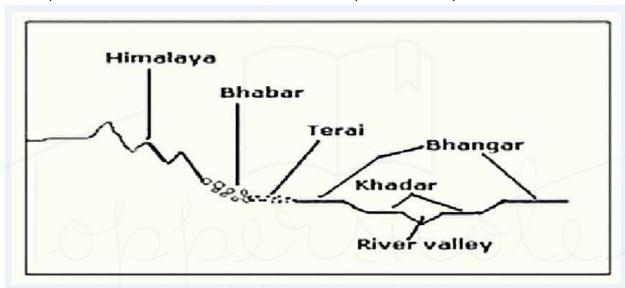
Importance of Himalayas

- The Himalayas blocks southwest monsoon winds and causes heavy rainfall to north India.
- It forms a natural barrier to the subcontinent.
- It is the source for many perennial rivers like Indus, Ganges, Brahmaputra etc.
- The Northern Mountains are described as the paradise of tourists due to its natural beauty.
- Many hill stations and pilgrim centres like Amarnath, Kedarnath, Badrinath and Vaishnavidevi temples are situated here.
- It provides raw material for many forest based industries.
- It prevents the cold winds blowing from central Asia and protects India from severe cold.
- The Himalayas are renowned for their rich biodiversity.



The Great Northern Plains

- The fertile land extending across seven north Indian states forms the Great Northern Plains.
- This extensive plain lies to the south of the northern mountains.
- 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.
- It is a homogeneous surface with an imperceptible slope.
- Formed mostly by the depositional process of the Himalayan and Vindhyan river
- The important characteristics features of sediment deposition in the plains areas are as follows:



A. The Bhabar Plain

- This **plain is made up of gravels and unassorted sediments which was** deposited by the Himalayan rivers.
- The porosity of this plain is so high that most of the small streams flowing over this region disappear.
- It lies to the south of the Siwalik from west to east (Jammu Division to Assam).
- Its width varies from 8 to 15 km.
- It is wider in the western plains (Jammu Division) than in the east (Assam).
- This plain is **not suitable for cultivation**, only big trees with large roots thrive in this region.

B. The Tarai Tract

- It is a zone of excessive dampness, thick forests and rich wild life.
- This tract lies to the south of Bhabar plains.
- The width of this belt is 15-30 km.
- The Tarai is wider in the eastern parts of the Great Plains, especially in Brahmaputra Valley due to heavy rainfall.
- In many states, the Tarai forests have been cleared for cultivation.



C. The Bhangar Plains

- The Bhangar represent the upland alluvial tracts of the Great Plains of India, formed by the older alluviums.
- The Bhangar land lies above the flood limits of the rivers.
- This soil is dark in colour, rich in humus content, well drained and useful for agriculture.

D. The Khadar Plains

- The new alluvium tracts along the courses of the rivers are known as the 'Khadar' or 'Bet' lands
- The Khadar tracts are enriched by fresh deposits of silt every year during rainy seasons.
- The Khadar land consists of sand, silt, clay and mud.
- It is highly fertile soil.

E. Delta Plains

- The deltaic plain is an extension of the Khadar land.
- It covers about 1.9 lakh sq.km in the lower reaches of the Ganga River.
- It is an area of deposition as the river flows in this tract sluggishly.
- The deltaic plain consists mainly of old mud, new mud and marsh.
- In the delta region, the uplands are called 'Chars' while the marshy areas are called 'Bils'.

The Peninsular Plateaus

- 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 (about half of the total area of the country).
- It is an old rocky plateau region.
- The topography consists of a series of plateaus and hill ranges interspersed with river valleys.
- 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.
- Peninsular Plateau
 of India

 Chota Nagpur
 Plateau
 Plateau

 Deccan Plateau
 Plateau

 Dandakaranya
 Plateau

 Telangana
 Plateau

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- The peak of **Anaimudi is the highest point in the plateau**. Its height is 2,695 m and is located in **Anaimalai.**
- The general slope of this plateau is towards the east.
- The Great Plateau is a part of the Gondwana (very ancient one) land mass.
- Due to the old age, the rivers in this region attained their base level and developed broad and shallow valleys.



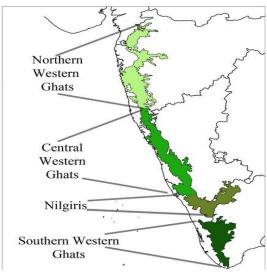
- The river Narmada divides the plateau region of India broadly into two parts.
 - O The region lying to the north of the Narmada is called the Central Highlands
 - The region lying to the **south of Narmada is called the Deccan Plateau**.
- All the major rivers (Mahanadi, Godavari, Krishna, Kaveri etc.) lying to the south of the Vindhyas flow eastwards and fall into the Bay of Bengal.
- Narmada and Tapti 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.

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.
 - The **height** of these hills is about **1,500 m in the southwest** while near **Delhi** the height is hardly **400 m**.
 - Gurushikhar with 1,722 m is the highest peak of this range.
- The Western part of the Central Highland is known as the Malwa Plateau.
 - o It lies to the southeast of Aravallis and to the north of Vindhyachal Range.
 - 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.
 - One of the sides of this triangle is marked by the line **joining Kanniyakumari with Rajmahal Hills** and this line passes **through the Eastern Ghats**.
 - The second arm is marked by the **Satpura Range, Mahadeo Hills, Maikal Range and the Rajmahal Hills**.
 - The third arm is marked by the **Western Ghats**.
- Area: 7 lakh sqkm
- Height: 500 to 1000 m above sea level.
- 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 Sahyadris.
 - The **height** of the Sahyadris increases from **north to** south.
 - Anamudi is a tri-junction of the Anaimalai Range, the Cardamom Hills and the Palani Hills.





 Kodaikanal is a beautiful hill resort situated on the Palani Hills.

Eastern Ghats:

- Run from **southwest to northeast** from the eastern edge of this Plateau.
- This range is also called 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 rivers of Mahanadi, Godavari, Krishna, Pennar and Kaveri have dissected this range at many places.



The Indian Desert

- The **Thar desert**, also known as **the Great Indian desert**.
- It is a large arid region in the north western part of the Indian subcontinent that covers an area of

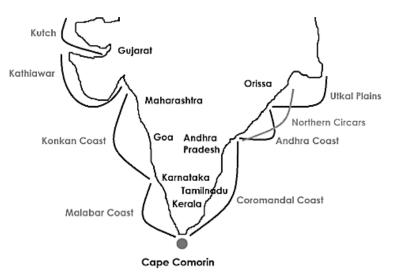
2,00,000 km2 and forms a natural **boundary between India** and Pakistan.

- It is the world's **7th largest desert**, and world's **9th largest** subtropical desert located in Western part of India.
- The desert lies in the western part of the Aravalli range and covers 2/3rd of Rajasthan state.
- There are two major divisions in the Thar desert.
 - Actual desert region (Marusthali)
 - Semi desert region (Bhangar).
- Many different types of sand dunes and salt lakes (Dhands) are seen here.



The Coastal Plains

- The Peninsular Plateau of India is **flanked by narrow coastal plains** of varied width from north to south.
- It came to be known as the Western Coastal Plains and the Eastern Coastal Plains.
- They were formed by the depositional action of the rivers and the erosional and depositional actions of the seawaves.
- The Indian coastal plains are divided into the following two divisions:
 - Western Coastal Plains
 - Eastern Coastal Plains



Eastern and Western Coastal Plains of India



Western Coastal Plain

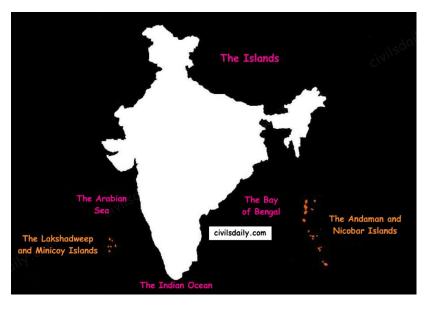
- It lies between the Western Ghats and the Arabian Sea.
- It extends from Rann of Kutch in the north to Kanniyakumari in the south and its width varies from 10 to 80 km.
- It is mainly characterized by sandy beaches, coastal sand dunes, mud flats, lagoons, estuary, laterite platforms and residual hills.
- 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.
- This part of the coast is characterized by sand dunes.
- Along the coast, there are numerous shallow lagoons and backwaters called Kayals and Teris.
- Vembanad is a famous back water lake found in this region.

Eastern Coastal Plain

- It lies between the Eastern Ghats and the Bay of Bengal and stretches along the states of West Bengal, Odisha, Andhra Pradesh and Tamil Nadu.
- These plains are formed by the alluvial fillings of the littoral zone by the east flowing rivers of India.
- The coastal plain consists mainly of the recent alluvial deposits.
- 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 lake **Chilka (Odisha** Back water lake) is the largest lake in India located to the **southwest of the Mahanadi delta**.
- The Kolleru Lake which lies between the deltas of Godavari and Krishna.
- The Pulicat Lake lies on the border of Andhra Pradesh and Tamil Nadu are the well known lakes in the east coastal plain.

The Islands

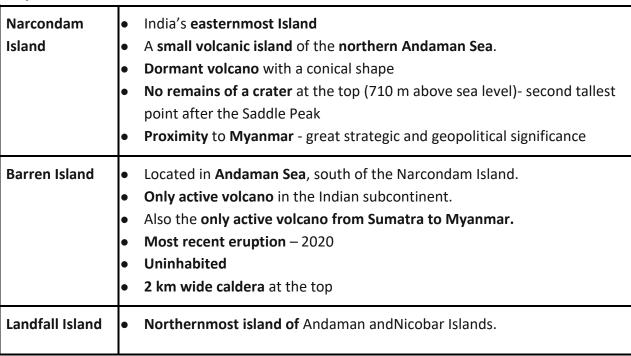
- India has two major island groups namely **Andaman and Nicobar and Lakshadweep**.
- The former group consists of 572 islands and are located in Bay of Bengal, and the later one has 27 islands and are located in Arabian Sea.
- The islands of Andaman and Nicobar are largely tectonic and volcanic in origin.
- India's only active volcano is found on Barren Island in Andaman and Nicobar group of Islands, while the islands of the Arabian Sea are mainly coral origin.





Andaman and Nicobar archipelago

- In Bay of Bengal
- Extended in a north-south direction b/w
 6° 45′ N to 13° 45′ N.
- Composed of ~ 265 big and small islands
 [203 Andaman + 62 Nicobar Islands]
- 3 main groups i.e. North, Middle, andSouth.
- Duncan passage separates Little
 Andaman from South Andaman.
- Andaman group of islands in the north separated by Ten Degree Channel from Nicobar group in the south.
- **GrandChannel** b/w Great Nicobar islands andSumatra islands of Indonesia.
- Coco Strait b/w North Andaman islands andCoco Islands of Myanmar.
- Port Blair- capital of Andaman Nicobar Islands,- in South Andaman.
- Volcanic island- Barren and Narcondam Islands (only active volcano in India).
- Highest peak- Saddle peak (737 m) in North Andaman.
- Tropical marine climate influenced by seasonal flow of monsoon winds.
- Major earthquake zone.
- also known as Emerald Islands.
- Home to the only known paleolithic people, the Sentinelese.
 - One of the last humans on earth untouched by modern civilization.
- State Animal- dugong (sea mammal)
- Major islands of Andaman and Nicobar:







	 Separated from Coco Island of Myanmar by the Coco Channel. Separated from North Andaman Islandby the Cleugh Passage. Limited tourism.
North Andaman Island	 Northern island of Great Andaman. Highest point- Saddle Peak (731 metres) present here. Northern tip k/a Cape Price Part of the Arakan Yoma Main town - Diglipur Main economic activities - Rice and Orange production.
Middle Andaman Island	 b/w North Andaman andSouth Andaman Home to Jarawa tribe. Geologically part of the Arakan Yoma Dependent on Fishing and agriculture Towns: Rangat, Billiground andMayabunder
South Andaman Island	 Southernmost island of great Andaman Group 3rd largest after Middle andNorth. Port Blair - Capital city of Andaman andNicobar- south-eastern part of the island(less mountainous than others) Majority of population of Andaman andNicobar live here.
RutlandIsland	 b/w South Andaman and Little Andaman North of the Duncan Passage Rich in marine life Formerly home to the Jangil (Rutland Jarawa), an indigenous Andamanese tribe. Presently, no permanent indigenous settlement.
Little Andaman	 4th largest of the Andaman Group. Separated from RutlandIslandin Great Andaman by Duncan Passage. b/w Duncan Passage and 10 Degree Channel A counterpart of Great Andaman island group. Home to Onge people.
Interview Island	 In Andaman Islands. West of Austen Strait - separates North andMiddle Andaman Island
Swaraj Island	 Formerly k/a Havelock Island. One of the largest islands in Ritchie's Archipelago Located b/w Peel Island Neil Island. East of Great Andaman within Andaman Islands. Named after Henry Havelock, a British general.