

Target UPPCS 2021

Geography

Short Notes for Quick Revision



GEOGRAPHY

India and the Administrative Units; the States and Union Territories

a. Physiography of India

- India lies in the northern hemisphere of the globe between $8^{\circ}4' N$ and $37^{\circ}6' N$ latitudes and $68^{\circ}7' E$ and $97^{\circ}25' E$ longitudes.
- The southern extent goes up to $6^{\circ}45' N$ latitude to cover the last island of the Nicobar group of islands. The southern extreme is called Pygmalion Point or India Point.
- The Tropic of Cancer passes through the middle part of India and crosses the eight states of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram.
- The total land frontier of 15,200 km passes through marshy lands, desert, plains, mountains, snow-covered areas and thick forests.
- The maritime boundary of 6100 km along the main landmass which increases to 7516 km of the coastlines of Andaman-Nicobar and Lakshadweep Islands are added to it.
- India commands a total geographical area of 32,87,263 sq.km which is roughly 0.57% of the area of the earth and 2.4% of the total area of the land hemisphere.
- India is the seventh-largest country of the world after Russia, Canada, USA, China, Brazil and Australia (all are mentioned in the descending order).
- India's area is almost equal to the area of Europe (excluding Russia), one-third of Canada, one-fifth of Russia, eight times of Japan and twelve times of the United Kingdom.
- India has roughly a quadrangular shape. It measures about 3,214 km from north to south and about 2933 km from east to west, the difference between the two is just 281km.

b. Land frontiers of India

- The Himalayan ranges form a natural frontier between India and China. In the north-west, Jammu and Kashmir share the international border with Sinkiang and Tibet in China.
- In the east, Himachal Pradesh and the mountain region of Uttarakhand have a common frontier with Tibet.
- Nepal has its border with Uttar Pradesh and Bihar.
- West Bengal and Sikkim also touch the Nepalese border for a small distance.
- India-Afghanistan and Pakistan-Afghanistan international boundaries are called the Durand Line, determined as a 'military-strategic border' between British India and Afghanistan.
- The boundary between India and Pakistan and Bangladesh (East Pakistan) was finalized at the time of partition in 1947 through the 'Radcliff Award'.
- In Punjab, the frontier runs through a smooth and fertile plain, which is purely man-made. The Indian frontier with Pakistan in Kashmir is still disputed and has led to strained relations between the two countries since partition in 1947.
- The eastern boundary of India is formed by a complex chain of the Himalayan offshoots consisting of the Mishmi, the Patkai, the Naga hills, the Barail range, the Mizo hills and finally the Arakan Yoma mountain range.
- The Arakan Yoma is submerged in the Bay of Bengal for a sufficiently long stretch and emerges again in the form of Andaman and Nicobar Islands.
- The boundary line between India and Bangladesh crisscrosses the vast Ganga-Brahmaputra delta. This boundary runs through an entirely flat country in which there is not even a small mount or hill which could be used for demarcating the boundary between two countries.
- Bangladesh and India share the fifth-longest land border in the world, including Assam, Tripura, Mizoram, Meghalaya, and West Bengal.
- There is a maritime boundary of 6100 km along with the main landmass which increases to 7156 km if the coastlines of Andaman and Nicobar Islands are added to it.
- The nearest neighbour in the south across the seas is Sri Lanka which is separated from India through the narrow channel of Palk Strait.

- Similarly, the Eight Degree Channel forms the boundary between the Lakshadweep and Maldives islands.

Name of the Country	Length in Km
Bangladesh	4,096.7
China	3,488
Pakistan	3,323
Nepal	1,751
Myanmar	1,643
Bhutan	699
Afghanistan	106
Total	15,106.7

The states having a common boundary with the neighboring countries.

Country	States
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Pakistan	3 States: Punjab, Rajasthan, Gujarat and 2 Union Territories- Jammu & Kashmir and Ladakh
Afghanistan	1 Union Territory- Ladakh
China	4 States: Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh and 1 Union Territory- Ladakh
Nepal	5 States: Uttarakhand, Uttar Pradesh, Bihar, West Bengal, Sikkim
Bhutan	4 States: Sikkim, West Bengal, Assam, Arunachal Pradesh
Myanmar	4 States: Arunachal Pradesh, Nagaland, Manipur, Mizoram
Bangladesh	5 States: West Bengal, Meghalaya, Assam, Tripura and Mizoram

Quick Glance at States Area-wise:

State	Area (Km ²)	Capital	Main Language
Rajasthan	342,239	Jaipur	Rajasthani, Hindi
Madhya Pradesh	308,245	Bhopal	Hindi

Maharashtra	307,713	Mumbai	Marathi
Uttar Pradesh	240,928	Lucknow	Hindi
Gujarat	196,024	Gandhinagar	Gujarati
Karnataka	191,791	Bengaluru	Kannada
Andhra Pradesh	162,968	Hyderabad	Telugu
Odisha	155,707	Bhubaneswar	Oriya
Chhattisgarh	135,191	Raipur	Hindi
Tamil Nadu	130,058	Chennai	Tamil
Telangana	112,077	Hyderabad	Telugu
Bihar	94,163	Patna	Hindi
West Bengal	88,752	Kolkata	Bengali

Arunachal Pradesh	83,743	Itanagar	Tribal
Jharkhand	79,714	Ranchi	Hindi
Assam	78,438	Dispur	Assamese
Himachal Pradesh	55,673	Shimla	Hindi
Uttarakhand	53,483	Dehradun	Hindi
Punjab	50,362	Chandigarh	Punjabi
Haryana	44,212	Chandigarh	Hindi
Kerala	38,863	Thiruvananthapuram	Malayalam
Meghalaya	22,429	Shillong	Khasi, Garo, English
Manipur	22,327	Imphal	Manipuri

Mizoram	21,081	Aizawl	Mizo, English
Nagaland	16,579	Kohima	Angami Ao
Tripura	10,486	Bengali, Tripuri	Agartala
Sikkim	7,096	Gangtok	Lepcha, Bhutia
Goa	3,702	Panaji	Marathi, Konkani
Union Territories	Area (sq. km)	Capital	Language
Andaman and Nicobar Is.	8,249	Port Blair	Andamanese, Nicobarese
Delhi	1,490	New Delhi	Hindi
Puducherry	492	Puducherry	Tamil, French

Dadra and Nagar Haveli and Daman and Diu	603	Daman	Gujarati, Marathi
Chandigarh	114	Chandigarh is itself the capital of two states i.e. Punjab and Haryana.	Hindi, Punjabi, and Haryanvi
Lakshadweep	32	Kavaratti	Malayalam
Jammu Kashmir	-	Srinagar (Summer capital) Jammu (winter capital)	Kashmiri, Urdu
Ladakh	-	Leh, Kargil	Urdu, Hindi, English

Physical Geography of India

- India has vast diversity in physical features.
- This diversity of landmass is the result of the large landmass of India formed during different geological periods and also due to various geological and geomorphological processes that took place in the crust.
- According to Plate Tectonic theory folding, faulting and volcanic activity are the major processes involved in the creation of physical features of Indian landscape.

For example, the formation of the Himalayas in the north of the country attributed to the convergence of Gondwana land with the Eurasian plate.

- The Northern part of the country has a vast expanse of rugged topography consisting of a series of mountain ranges with varied peaks, beautiful valleys and deep gorges.
- The Southern part of the country consists of stable table land with highly dissected plateaus, denuded rocks and developed series of scarps.
- The Great Northern Plains lies between these two landscapes.
- The physical features of India can be grouped under the following Physiographic Divisions:
 1. The Himalayas
 2. The Northern Plains
 3. The Peninsular Plateau
 4. The Indian desert
 5. The Coastal Plains
 6. The Islands

The Himalayas

- The longest range of this system is Pir Panjal Range.
- This range consists of famous valley of Kashmir, the Kangra and the Kullu Valley.
- The Outer most range of the Himalayas is called the Shiwaliks. They composed of unconsolidated sediments brought down by rivers from the main Himalayan range located farther north.
- The Longitudinal valley lying between lesser Himalayas and Shiwaliks are known as Duns. Example: Dehra Dun, Kotli Dun, Patli Dun.
- The highest peak of Himalayas is: Everest, Nepal (8848 m); Kanchenjunga, India (8598 m); Makalu, Nepal (8481 m)
- On the basis of relief, alignment of ranges and other geomorphological features the Himalayas can be subdivided into following
 - North-western or Kashmir Himalayas

- Himachal and Uttarakhand Himalayas
- Darjeeling and Sikkim Himalayas
- Arunachal Himalayas
- Eastern Hills and Mountains

North-Western or Kashmir Himalayas

- Important Ranges: Karakoram, Ladakh, Zaskar and Pir Panjal
- Important Glaciers: Siachen, Baltoro, Remo, etc.,
- Important Pass: Zoji la, Bara Lacha la, Banihal, rohtang, etc.,
- Important Peaks: Nanga Parbat, K2, etc.,
- Kashmir valley: lies between Greater Himalayas and Pir Panjal Range.
- Cold Desert: between Greater Himalayas and Karakoram Range.
- Important Lakes: Dal and Wular are freshwater lakes, whereas Pangong Tso and Tso Moriri are saltwater lakes.
- The Southernmost part of this region consists of longitudinal valleys known as Duns. Eg: Jammu dun, Pathankot dun, etc.,

Himachal and Uttarakhand Himalayas

- Important Ranges: Great Himalayas, Dhaoladhar, Shiwaliks, Nagtibha, etc.,
- Important River System: Indus and Ganga
- Important Hill Stations: Dharamshala, Mussoorie, Shimla, kausani, etc.,
- Important Pass: Shipki la, Lipu Lekh, Mana pass, etc.,
- Important Glaciers: Gangotri, Yamunotri, Pindari, etc.,
- Important Peaks: Nanda Devi, Dhaulagiri, etc.,
- Important Duns: Dehradun (largest), Harike Dun, Kota Dun, Nalagarh Dun, Chandigarh-Kalka Dun, etc.,
- This region is known for five Prayags (River Confluences). Valley of flowers is also situated in this region.

The Darjeeling and Sikkim Himalayas

- This lies between Nepal Himalayas in the west and Bhutan Himalayas in the east.
- It is the region of fast flowing rivers and high mountain peaks.
- Important Peaks: Kanchenjunga
- Duar formations replace the Shiwaliks (absent) in this region which enhanced the development of Tea gardens.
- Important Glaciers: Zemu Glacier
- Important Peaks: Nathu La and Jelep La

The Arunachal Himalayas

- This lies between Bhutan Himalayas and Diphu Pass in the east
- Important Peaks: Namcha Barwa and Kangto
- Important Rivers: Subansiri, Dihang, Dibang and Lohit
- Important Ranges: Mishmi, Abor, Dafla, Mihar, etc.,
- Important pass: Diphu pass

The Eastern Hills and Mountains

- These are the part of Himalayan Mountain system having their general alignment from the north to south direction.
- The Himalaya in the eastern boundary of the country is called Purvanchal. These are mainly composed of sandstones (sedimentary rocks).
- Important Hills: Patkai Bum, Naga Hills, Manipur Hills, Mizo hills, etc.

THE NORTHERN PLAINS

- The northern plain has been formed by the interplay of the three major river systems – the Indus, the Ganga and the Brahmaputra.
- **Bhabar** is a narrow belt ranging between 8-10 km parallel to the Shiwalik foothills at the break-up of the slope. The river after descending from the mountains deposit pebbles in a narrow belt. All the streams disappear in this belt.

- **Bhangar** is the region south of Terai region. This region is formed by older alluvium. The soil in this region contains calcareous deposits locally known as kankar.
- The region with new alluvium deposits is known as **Khadar**. They are renewed almost every year and are so fertile, thus ideal for intensive cultivation.
- Riverine Islands – these are the islands which are formed due to depositional work of rivers especially in the lower course due to the gentle slope and resultant decrease in the velocity of rivers. **Majuli** – in the Brahmaputra is the largest inhabited riverine island in the world
- Distributaries – the rivers in the lower course split into numerous channels due to deposition of silt are called distributaries.
- Doab – the area which lies behind the confluence of two rivers.

Major Mountain Peaks in India

Major Mountain Peaks in India	Description
Godwin Austen (K2)	Highest peak of Karakoram range in POK
Nanga Parbat	Jammu and Kashmir
Nanda Devi	Uttarakhand, Second highest mountain in India and the highest entirely within the country

Kanchenjunga	Nepal and Sikkim (B/w Teesta river in east & Tamur river in the west), the Highest mountain in India & 3rd highest mountain in the world
Nokrek	Highest point of the Garo Hills (Meghalaya)
Gurushikhar	Mt. Abu, Rajasthan, highest point of the Aravalli Range
Kundremukh	Karnataka
Doddabetta	Highest point in Tamil Nadu, near Udhagamandalam (Nilgiri Hills) Second highest peak in the Western Ghats only next to Anaimudi
Anaimudi	Located in Kerala, It is the highest peak in the Western Ghats and in South India
Agasthyamalai	Lie at the extreme southern end of Western Ghats, straddle both sides in Kerala and in Tamil Nadu
Saddle Peak	Highest point of the archipelago in the Bay of Bengal, located in North Andaman

Mount Hariet	Third highest peak in the Andaman and Nicobar archipelago only next to, Saddle peak (Highest of Andaman) and Mount Thullier (Highest of Nicobar)
Mahendragiri	Orissa, the Highest peak of Eastern Ghats (According to NCERT)
Arma Konda	Andhra Pradesh

Important Passes in India

State	Pass name	Comment
Jammu and Kashmir	Banihal Pass	Jammu to Srinagar
Jammu and Kashmir	Chang-La	Ladakh with Tibet
Jammu and Kashmir	Pir-Panjal pass	Between Jammu and Kashmir Valley
Jammu and Kashmir	Zoji La	important road link between Srinagar on one side and Kargil and Leh on the other side
Himachal Pradesh	Bara Lacha La	Connecting Mandi in Himachal Pradesh with Leh in Jammu and Kashmir
Himachal Pradesh	Rohtang Pass	road link between Kullu, Lahaul and Spiti Valleys

Himachal Pradesh	Shipki La	Himachal Pradesh and Tibet
Uttarakhand	Lipu Lekh	trijunction of Uttarakhand (India), Tibet (China) and Nepal borders
Uttarakhand	Niti Pass	Uttarakhand with Tibet
Sikkim	Nathu La	Sikkim with Tibet
Sikkim	Jelep La	Sikkim-Bhutan border
Arunachal Pradesh	Bom Di La	Arunachal Pradesh with Bhutan
Arunachal Pradesh	Dihang Pass	Arunachal Pradesh and Myanmar.

The Peninsular Plateau

- It is an irregular triangle in structure extends as Delhi ridge in the north-west, Rajmahal hills in the east, Gir range in the west and Cardamom Hills in the south.
- The important physiographic features of this are - block mountains, rift valleys, spurs, bare rocky structures, series of hummocky hills and wall like quartzite dykes offering natural sites for water storage.
- On the basis of relief features, the peninsular plateau is divided into three broad groups –
 - The Deccan Plateau
 - The Central Highlands
 - The North-eastern Plateau

The Deccan Plateau

- The Deccan Plateau is a triangular landmass that lies to the south of R. Narmada.
- It is bordered by the Western Ghats in the west, the Eastern Ghats in the east and the Satpura, Maikal and Mahadeo range in the north and north-eastern part.
- An extension of the peninsular plateau is also visible in the north-east known as Karbi-Anglong Plateau and North Cachar Hills.
- The Deccan Plateau is higher in the west and slopes gently eastwards.
- Western and Eastern Ghats are prominent features of the Deccan plateau, the comparison between these two ranges are mentioned in the following table

Western and Eastern Ghats

S. NO.	WESTERN GHATS	EASTERN GHATS
1.	They are continuous and can be crossed only through passes.	They are discontinuous and irregular
2.	Average Elevation – (900 – 1600)m	Average Elevation – 600 m
3.	The altitude increases from north to south	The altitude has no general pattern
4.	Important Hills – Nilgiri, Anaimalai, Cardamom, Babubudan, etc.,	Important Hills – Javadi, Palkonda, Nallamala, Mahendragiri, etc.,
5.	Important Peaks – Anaimudi (highest), Doda Betta (Ooty), Kodaikanal etc.	Important Peaks – Mahendragiri (highest) etc.

6.	Most of the peninsular rivers originate here and acts as a water divide between west-flowing and east-flowing rivers.	They are dissected by major rivers like Mahanadi, Godavari, Krishna, Cauvery, etc., which are draining into the Bay of Bengal
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The Central Highlands

- The Central Highlands is a part of Peninsular Plateau lying north of R. Narmada covering a major area of Malwa plateau, Vindhyan Range covers the southern extent and Aravalis in the north-west.
- The plateaus like Bundelkhand, Bagelkhand, Chotanagpur makes the eastern extension of the central highlands.
- This region has undergone metamorphic processes in its geologic history, which can be corroborated by the presence of metamorphic rocks such as marble, slate, gneiss, etc.

The North-Eastern Plateau

- This region consists of many plateaus like Meghalaya Plateau, Karbi Anglong Plateau, etc.,
- Important Hills – Khasi, Garo, Jaintia, etc.,

The Indian Desert

- The Great Indian Desert lies in the north-western region of the country.
- The prominent desert features are – Mushroom Rocks, Shifting Dunes and Oasis.
- It is a land of undulating topography dotted with longitudinal dunes and Barchans.
- Most of the rivers in this region are ephemeral. Example: R. Luni
- Low precipitation and evaporation make it a water deficit region.

- The desert can be divided into two regions: Northern part sloping towards Sindh and the Southern part towards the Rann of Kachchh.

The Coastal Plains

- The Peninsular plateau is covered by marine water in 3 sides: the Indian Ocean in the South; the Bay of Bengal in the east and the Arabian Sea in the West.
- The extent of coastline in the country is 6100 km in the mainland and 7517 km in the entire geographical coast of the country (including Islands).
- On the basis of the location and active geomorphological processes, it can be broadly divided into two: the Western Coastal Plains and the Eastern Coastal Plains.

The Islands

- Besides the vast physical features in the mainland of the country, there are two major island groups located in both sides of the peninsular plateau.
- The island groups provide the site for Fishing and Port activities.
- Though more than 4000 islands present in Indian territory Andaman and Nicobar and Lakshadweep are the two major island groups.

ANDAMAN & NICOBAR ISLANDS

- Duncan passage lies between south Andaman and Little Andaman.
- Important Peaks: Saddle Peak, North Andaman (738 m); Mount Diavolo, middle Andaman (515 m); Mount Koyob, South Andaman (460 m); Mount Thuiller, Great Nicobar (642 m).

Note

- **Ten Degree Channel**- Between Little Andaman and Car Nicobar
- **Duncan Passage**- Between great Andaman and Little Andaman

THE LAKSHADWEEP ISLANDS

- Kavaratti Island is the administrative headquarters of Lakshadweep islands.
- Minicoy is the largest island in this group.
- This island group consists of storm beaches consisting of unconsolidated pebbles, shingles, cobbles and boulders.

Note

- **Nine Degree Channel**- Minicoy is separated from rest of the Lakshadweep
- **Eight Degree Channel**- Lakshadweep Group separated from the Maldives

Other Islands

- Newmoore Island- located in the Bay of Bengal on the mouth of Ganga.
- Pamban Island- located in the Gulf of Manner between Sri Lanka and India.

INDIAN DRAINAGE SYSTEM

Comparison between Himalayan and the Peninsular Rivers of India

S. No.	Aspect	Himalayan River	Peninsular River
1.	Place of origin	Himalayan mountain covered with glaciers	Peninsular plateau and central highland
2.	Nature of flow	Perennial; receive water from the glacier and rainfall	Seasonal; dependent on monsoon rainfall

3.	Type of drainage	Antecedent and consequent leading to the dendritic pattern in plains	Superimposed, rejuvenated resulting in trellis, radial and rectangular patterns
4.	Nature of river	Long course, flowing through the rugged mountains experiencing headward erosion and river capturing; In plains meandering and shifting of course	Smaller, the fixed course with well-adjusted valleys
5.	Catchment area	Very large basins	Relatively smaller basin
6.	Age of the river	Young and youthful, active and deepening in the valleys	Old rivers with the graded profile, and have almost reached their base levels

Important Rivers of India

Himalayan rivers come from the Himalayas and flow through the Northern Plains.

The major rivers in the Himalayan System are:

- The Indus River System
- The Ganga River System
- The Yamuna River System
- The Brahmaputra River System

The main source of Peninsular River System or Peninsular Drainage is the Western Ghats. Because the Western Ghats are forming a 'water divide,' these rivers either flow eastward into Bengal Bay or westward into the Arab Sea. Peninsular rivers are rivers that are essentially rain-fed.

The major rivers in the Peninsular system are:

- Mahanadi
- Godavari
- Krishna
- Cauvery

Drain into the Bay of Bengal as they flow on the plateau eastward and create 'delta' at their mouths; while the Narmada Tapti-the west-flowing rivers fall into the Arab Sea and create 'estuaries.'

Not from glaciers, but from rain-fed rivers. During summer, these rivers significantly decrease or dry up.

THE HIMALAYAN RIVERS

Indus River System

In the early Hindu mythological texts, the mention of Indus River or Sindhu River is witnessed. The river comes from Tibet near Lake Mansarovar. In Jammu and Kashmir, it flows westward into India, flows further through Himachal Pradesh, Punjab, and reaches Pakistan.

It enters the Arab Sea near Karachi, flowing further west. Indus is Pakistan's biggest river and the national river of the country. Its Indian tributaries are Zaskar, Nubra, Shyok, and Pakistan's Hunza. Sutlej, Ravi, Beas, Chenab and Jhelum are their other tributaries named after the state of Punjab.



Ganga River System

The Ganga river system (Ganges) is India's largest river system. It originates in the glaciers of Gangotri. The upstream Bhagirathi joins the other stream at Devprayag called Alaknanda to form the Ganga River. Ganga has tributaries on both banks; the Yamuna and Son are its right-bank tributaries.

Some of the left bank tributaries are Gomti, Ghaghara, Gandak, Kosi. The Ganges flows through the Uttarakhand, Uttar Pradesh, Bihar, and West Bengal Indian countries. It lastly reaches the Bay of Bengal.

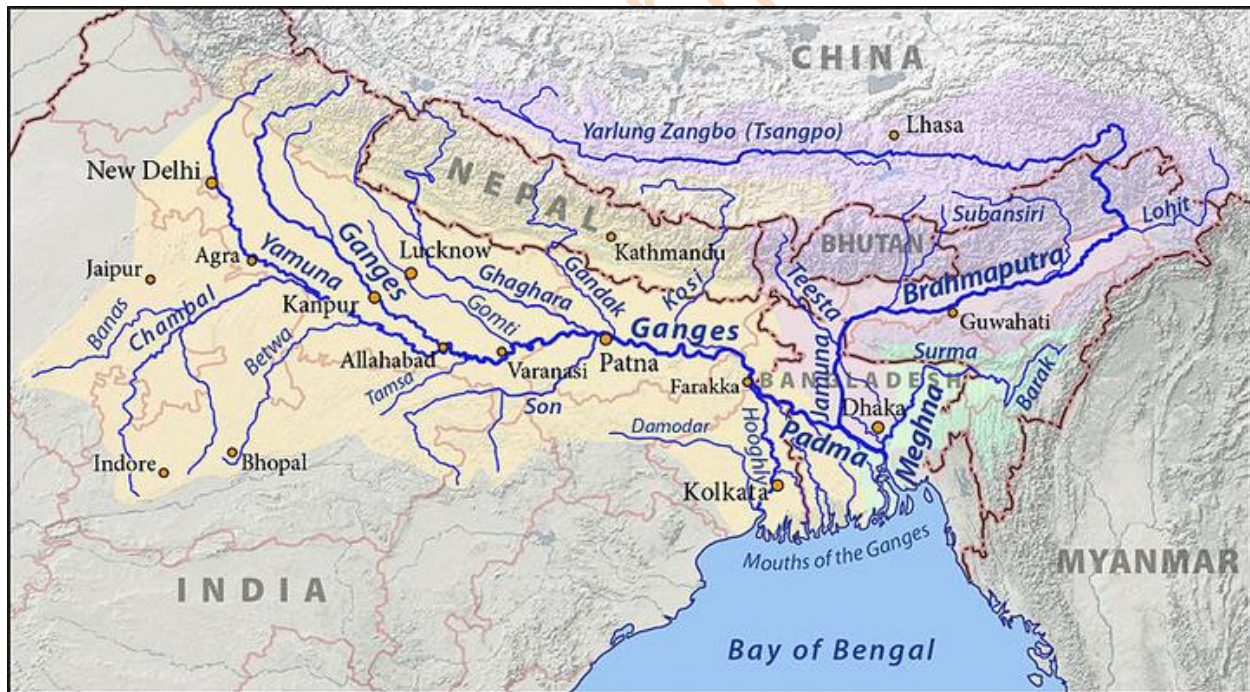
Yamuna River System

The Yamuna is Northern India's main river system. The river flows through Uttarakhand, Uttar Pradesh and Haryana from Yamnotri. It crosses Delhi, Mathura, Agra and meets the Chambal, Betwa and Ken rivers to lastly join the Allahabad Ganga. Tons, Chambal, Hindon, Betwa and Ken are Yamuna's major tributaries.

Brahmaputra River System

The Brahmaputra, one of India's main rivers, originates in Tibet's Himalayan Angsi glacier. It's called the Tsangpo River there. In Arunachal Pradesh, it enters India and is known as Dihang River.

Dibang, the Lohit, the Kenula are tributaries which form the primary Brahmaputra River and flow through Assam, its longest course, enter Bangladesh and lastly falls into the Bay of Bengal. The Brahmaputra has the largest water quantity of all India's rivers.



THE PENINSULAR RIVERS

Mahanadi

The Mahanadi in East-central India is a significant river. It originates in Chhattisgarh's Sihava hills and flows through the state of Orissa (Odisha) through its main course. This river deposits more silt on the Indian subcontinent than any other river. Mahanadi runs through Sambalpur, Cuttack and Banki cities.

Godavari

The Godavari River, after the Ganga, covers India's second-longest course. The river originates from Triambakeshwar in Maharashtra and flows along with its tributaries (Pravara, Indravati, Maner Sabri etc.) through the countries of Maharashtra, Chhattisgarh, Madhya Pradesh, Orissa (Odisha), Telangana, Andhra Pradesh, Karnataka and Puducherry to lastly flow into the Bay of Bengal. The river is defined as Dakshina Ganga because of its lengthy course.

Krishna River

The Krishna is India's third-longest river, about 1300 km long. It originates from the Mahabaleshwar region of Maharashtra and flows through Karnataka, Telangana, and Andhra Pradesh to lastly pour into Bengal Bay.

Kaveri River

The Kaveri (Cauvery) is a significant river in southern India and originates in Kogadu, Karnataka.

As many tributaries like Hemavati, Moyari, Shimsha, Arkavati, Honnuhole, Kabini, Bhavani, Noyill and Amaravati join it, Kaveri River expands.

Narmada and Tapti

The Narmada & Tapti river is the only major flowing rivers into the Arab Sea. Narmada's complete length flowing through Madhya Pradesh, Maharashtra, and Gujarat countries is equal to 1312 km. Amarkantak is Narmada's location of origin in Shahdol, Madhya Pradesh. From east to west, Narmada flows primarily through Central India and flows into the Arabian Sea.

The Tapti river follows a parallel course to the south of Narmada, flowing through the Maharashtra and Gujarat states on their way into the Gulf of Khambat. Purna, Girna and Panjhra are its three main tributaries.

Like most ancient religions, rivers are considered sacred by the Hindu faith and its mythology. The Ganges, Yamuna (a Ganges tributary), Brahmaputra, Mahanadi,

Narmada, Godavari, Tapi, Krishna, and Kaveri are nine major Indian rivers. Indian soil also flows through parts of the Indus River.

The Indian river system comprises eight important rivers together with their various tributaries. Most rivers discharge their waters into the Bay of Bengal; nevertheless, there are a number of rivers whose itineraries take them across the west end of India and into the Arab Sea in the east direction.

Northern parts of the Aravalli range, Ladakh parts, and the barren Thar Desert regions have Inland Drainage.



River Systems of India

Name	Length of River	Originates From	Area Covered	Ends in
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Indus	3180/ 1114 in India	Tibet in northern slopes of Mount Kailash	India and Pakistan	Arabian sea
Ganga (Bhagirathi)	2525	Gangotri in Uttarakhand	Uttar Pradesh, Uttarakhand, Bihar, West Bengal	Bay of Bengal
Yamuna (Jamuna)	1376	Yamunotri in Garhwal	Delhi, Haryana and UP	Bay of Bengal
Brahmaputra	916 - in India	Angsi Glacier	Assam, Arunachal Pradesh	Bay of Bengal
Kaveri	765	Brahmagiri hills in Kogadu, Karnataka	Karnataka and Tamil Nadu	Bay of Bengal
Godavari (Dakshin Bharat ki Ganga)	1465	Triambakeshwar in Maharashtra	South-eastern part of Andhra Pradesh	Bay of Bengal
Krishna	1400	Mahabaleshwar in Maharashtra	Maharashtra & Andhra Pradesh	Bay of Bengal
Narmada	1312	Amarkantak in Madhya Pradesh	Madhya Pradesh and Maharashtra	Arabian Sea
Tapti	724	Betul, Madhya Pradesh district in the Satpura region	Madhya Pradesh and Maharashtra	Arabian Sea
Mahanadi	858	Sihava mountains of Chhattisgarh	Jharkhand, Chhattisgarh, Orissa	Bay of Bengal
Vaigai	258	Varusanadu Hills	Madurai in Tamil Nadu	Bay of Bengal
Periyar	244	Sivagiri peaks of Sundaramala, Tamil Nadu.	Tamil Nadu and Kerala	Bay of Bengal

Important dams in India

Some Facts about dams

- Tallest dam in the world- Nurek dam (Tajikistan)

- Longest dam in the world- Hirakund dam (Orissa)
- Longest dam in India- Hirakund dam (Orissa)
- Highest dam in India- Tehri dam (Uttarakhand)
- Highest straight gravity Dam in India- Bhakra dam
- First dam of India-Kallanai Dam (Grand Anicut) on river Kaveri (Tiruchirapalli, Tamilnadu)

Important Dams in India

State	Dam	River
Andhra Pradesh	Nagarjuna Sagar Dam	Krishna
	Srisailem Dam	Krishna
	Polavaram Project	Godavari
Arunachal Pradesh	Ranganadi Dam	Ranganadi River, a tributary of the Brahmaputra River
Chhattisgarh	Minimata (Hasdeo) Bango Dam	Hasdeo
	Dudhawa Dam	Mahanadi
Gujarat	Ukai Dam	Tapti
	Sardar Sarovar Dam	Narmada
Himachal Pradesh	Pong Dam	Beas
	Bhakra Dam	Satluj

Jammu and Kashmir	Baglihar Dam	Chenab
	Uri Dam	Jhelum
	Kishenganga Dam	KISHANGANGA
Jharkhand	Panchet Dam	Damodar
	North Koel	North Koel
Karnataka	Krishnarajasagar Dam	Cauvery
	Tungabhadra Dam	Tungabhadra
Kerala	Cheruthoni Dam	Cheruthoni
	Idukki Dam	Periyar
Madhya Pradesh	Ban Sagar Dam	Son
	Gandhi Sagar Dam	Chambal
	Indira Sagar Dam	Narmada
	Omkareshwar Dam	Narmada
Maharashtra	Bhatsa Dam	Bhatsa and chorna
	Koyna Dam	Koyna
Odisha	Hirakud Dam	Mahanadi

	Indravati Dam	Indravati
Punjab	Ranjit Sagar Dam	Ravi
Rajasthan	Jawahar Sagar Dam	Chambal
	Rana Pratap Sagar Dam	Chambal
Tamil nadu	Mettur Dam	Kaveri
Telangana	Nagarjuna Sagar Dam	Krishna (Some Part of Dam also in Telangana)
	Srisaillam Dam	Krishna (Some Part of Dam also in Telangana)
Uttarakhand	Tehri Dam	Bhagirathi
	Ramganga Dam	Ramganga
Uttar Pradesh	Rihand Dam	Rihand

Important Lakes in India (State Wise)

- Largest freshwater lake in India – Wular Lake, Jammu and Kashmir
- Largest Saline water lake in India – Chilka Lake, Orissa
- Highest lake in India (Altitude) – Cholu lake, Sikkim
- Longest Lake in India – Vembanad lake, Kerala
- Largest Artificial Lake in India – Govind Vallabh Pant Sagar (Rihand Dam)

Lakes in India

<u>S.No</u>	Name	State	District	Type of Lakes	Facts/Description
1	Pulicat Lake	Andhra Pradesh	Nellore	Brackish Water	It encompasses Pulicat Lake Bird Sanctuary; Satish Dhawan Space Centre located here
2	Kolleru Lake	Andhra Pradesh	West Godavari	Freshwater	Home to migratory birds
3	Nagarjuna Sagar	Telangana	Nalgonda	Freshwater	Artificially constructed; Krishna river
4	Maharana Pratap Sagar	Himachal Pradesh	Kangra	Freshwater	Ramsar site
5	Pangong Tso	J & K	Ladakh	Endorheic Lake (saline water)	Indo-China Border
6	Wular lake	J & K	Bandipora	Tectonic lake (fresh water)	Largest freshwater lake in India
7	Tso Moriri	J & K	Ladakh	Saltwater	High altitude lake

8	Ashtamudi Kayal	Kerala	Kollam	Brackish water	Ramsar wetland site
9	Lonar lake	Maharashtra	Buldhana	Crater lake	National Geo-Heritage monument
10	Loktak lake	Manipur	-	Lenticular freshwater	Ramsar wetland; Phumdis (Floating Islands); Multipurpose project
11	Chilika lake	Orissa	Puri	Brackish water	India's largest brackish water lake; lagoon
12	Sambhar lake	Rajasthan	Sambhar Lake-town	Saltwater	Ramsar wetland; largest inland saltwater lake in India
13	Hussain Sagar	Telangana	Hyderabad	Artificial lake	Artificial Gibraltar rock island
14	Govind Ballabh Pant Sagar	Uttar Pradesh	Sonbhadra	Man-made lake	Rihand dam

Soil and Agriculture in India

Soil Profile and Horizon of soil

- O - Horizon containing a high percentage of soil organic matter.
- A - Horizon darkened by the accumulation of organic matter.
- E - Horizon formed through the removal (eluviation) of clays, organic matter, iron, or aluminium. Usually lightened in colour due to these removals.
- B - Broad class used for subsurface horizons that have been transformed substantially by a soil formation process such as colour and structure development; the deposition (illuviation) of materials such as clays, organic matter, iron, aluminium, carbonates, or gypsum; carbonate or gypsum loss; brittleness and high density; or intense weathering leading to the accumulation of weathering-resistant minerals.
- C - A horizon minimally affected or unaffected by the soil formation processes.
- R - Bedrock.

Types of Indian Soil:

1. Alluvial Soil

- This type of soil mainly found in the Indo-Ganga and Brahmaputra plain i.e. the whole northern plain and in some parts of the river basin in the south and some plateau region.
- This soil is also found in the deltas of the Mahanadi, Godavari, Cauvery and Krishna.
- Alluvial soil can be broadly categorised in two types i.e. New alluvial soil (Khadar) and old alluvial soil (Bhangar). Both the Khadar and Bhangar soils contain calcareous concretions (Kankars).
- Crops Grown: the Alluvial soil is suitable for the Rabi and Kharif crop like cereals, cotton, oilseeds and sugarcane.
- They are generally rich in potash but poor in phosphorous.

2. Regur or Black soil

- The regur or black soils have developed extensively upon the Lava Plateaus of Maharashtra, Gujarat, Madhya Pradesh mainly Malwa and are formed due to volcanic activities.
 - These soils are very fertile and contain a high percentage of lime, iron and a moderate amount of potash.
 - The type of soil is especially suited for the cultivation of cotton and hence sometimes called 'black cotton soil.'
- Crops Grown: Cotton, Jowar, Wheat, Linseed, Gram, Fruit and Vegetable.
- The black soil is highly retentive of moisture.

3. Red Soil

- Red soils develop on granite and gneiss rocks under low rainfall condition i.e. due to weathering of the metamorphic rocks.
- These soils are red in colour due to the high concentration of Iron Oxide.
- These soils are friable and medium fertile and found mainly in almost whole of Tamil Nadu, South-eastern Karnataka, North-eastern and South-eastern Madhya Pradesh, Jharkhand the major parts of Orissa, and the Hills and Plateaus of North-east India.
- These soils are deficient in Phosphoric acid, organic matter and nitrogenous material.
- Crops Grown: Wheat, Rice, Millet's, Pulses.

4. Laterite Soil

- Laterite is a kind of clayey rock or soil formed under high temperature and high rainfall and with alternate dry and wet period.
- Laterite and lateritic soils are found in South Maharashtra, the Western Ghats in Kerala and Karnataka, at places in Odisha, small parts of Chottanagpur and in some parts of Assam, Tamil Nadu, Karnataka, and in western West Bengal (particularly in Birbhum district).

- Crops Grown: Coffee, Cashew etc.
- This type of soil is unsuitable for agriculture due to the high content of acidity and inability to retain moisture.

5. Desert soil

This type of soils found in Rajasthan, Haryana and the South Punjab, and are sandy.

- In the absence of sufficient wash by rainwater, soils have become saline and rather unfit for cultivation.
- In spite of that cultivation can be carried on with the help of modern irrigation.
- Wheat, bajra, groundnut, etc. can be grown in this soil.
- This type of soil is rich in Phosphates and Calcium but deficient in Nitrogen and humus.

6. Mountain Soil

- Soil found in higher altitude on the mountain is called as Mountain soil.
- The characteristics of this type of soil are changed according to the altitudes.
- This type of soil is suitable for the cultivation of potatoes, fruits, tea coffee and spices and wheat.

Type of Soils based on the size of particles

1. Sandy Soil

- Particles are larger in size.
- The particles cannot fit close together and hence there is enough space among them.
- It is not fit for vegetation as it does not retain water.
- However, millets can be grown on sandy soil.

2. Clayey Soil

- Particles are very small in size.

- Very little space among the particles.
- Water does not drain quickly through clayey soil because of less space among particles.
- So, clayey soil is not well aerated and retains more water.

3. Loamy Soil

- Particles are smaller than sand and larger than clay.
- Loamy soil is the mixture of sandy soil, clayey soil and silt.
- Silt is the deposit in river beds.
- The soil has the right water holding capacity and is well aerated.
- It is considered the best soil for the growth of plants.

Types of Agriculture in India

There are different types of farming activities performed in India which are as follows:

Subsistence Farming

- Subsistence farming is a type of farming in which nearly all the crops or livestock raised are used to maintain the farmer and farmer's family leaving little.
- Subsistence farms usually consist of no more than a few acres, and farm technology tends to be primitive and of low yield.

Mixed farming

- Mixed farming is an agricultural system in which a farmer conducts different agricultural practice together, such as cash crops and livestock
- The aim is to increase income through different sources and to complement land and labour demands across the year.

Shifting cultivation

- Shifting cultivation means migratory shifting agriculture.

- Under this system, a plot of land is cultivated for a few years and then, when the crop yield declines because of soil exhaustion and the effects of pests and weeds, is deserted for another area.
- Here the ground is again cleared by slash-and-burn methods, and the procedure is repeated.

Other Names of Shifting Cultivation

Shifting Cultivation Name	Country
Chena	Sri Lanka
Ladang	Java and Indonesia
Jhum	North-eastern India
Podu	Andhra Pradesh
Milya	Mexico and Central America
Konuko	Venezuela
Roka	Brazil
Milpa	Yucatan and Guatemala

Extensive Farming

- This is a system of farming in which the farmer uses the limited amount of labour and capital on a relatively large area.
- This type of agriculture is practised in countries where population size is small and land is enough.
- Per acre yield is low but the overall production is in surplus due to less population.
- Here machines and technology are used in farming.

Intensive Farming

- This is a system of farming in which the cultivator uses a larger amount of labour and capital on a relatively small area.
- This type of farming is performed in countries where the population to land ratio is high i.e. the population is big and the land is small.
- Annually two or three types of crops are grown over the land.
- Manual labour is used.

Plantation Agriculture

- In this type of agriculture, cash crops are mainly cultivated.
- A single crop like rubber, sugarcane, coffee, tea is grown.
- These crops are major items of export.

Major Crops & Cropping Patterns in India

Major crops are generally classified as:

Food Crops Rice, Wheat, Millets, Maize, and Pulses.

Cash Crops Sugarcane, Oilseeds, Horticulture crops, Tea, Coffee, Cotton, Rubber, and Jute.

Cropping Season in India

	Kharif crops	Rabi crops	Zaid crops
Time	Kharif crop also known as the autumn crop or monsoon crop are the plants which are cultivated in the monsoon season which extends from June to September.	Also known as winter crops. They are cultivated during the period typically extending between September to April. These plants are cultivated in spring seasons.	These are summer season crops. These crops are grown between April and September or between Rabi season and Kharif season
Condition	Require wet and hot conditions to grow	Require cold and relatively dry conditions to grow	Mostly sown in Gangetic belts of the region.

Examples	Rice(Paddy), Maize, Groundnut, cotton, Soybean, Pigeon Pea(arhar), Mung bean, Red chilies, Sugarcane, Turmeric, Millets like Ragi, Jowar, Bajra	Wheat, Chickpea, mustard, linseed, barley, Sesame, Sunflower, Coriander, Peas, Onion, Potato, Tomato etc	Cucumber, watermelon, bitter gourd, Muskmelon, pumpkin, ridged gourd
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Major Food Crops

Rice

- **Soil Type:** Deep clayey and loamy soil.
- **Temperature:** Between 22-32°C with high humidity.
- **Rainfall:** Around 150-300 cm.
- **Top Rice Producing States are West Bengal > Punjab > Uttar Pradesh > Andhra Pradesh > Bihar.**
- In **Odisha**, three varieties of paddy crops are grown in a year which is **Aus, Aman, and Boro**.
- **China** is the top rice-producing country in the world. **India comes 2nd**.

Wheat

- **Soil Type:** Well-drained fertile loamy soil
- **Temperature:** Between 10-15°C (Sowing time) & 21-26°C (Ripening & Harvesting) with bright sunlight.
- **Rainfall:** Around 75-100 cm.
- **Top Wheat Producing States in India: Uttar Pradesh > Punjab > Madhya Pradesh**
- India is the **2nd largest producer** after China.

Millets

Soil Type: It Can be grown in an inferior alluvial or loamy soil

- **Jowar-** Rainfed crop is grown in moist areas with less or no irrigation.
- **Bajra-** Sandy soils & shallow black soil.
- **Ragi-** Red, black, sandy, loamy & shallow black soils. (dry regions)

Temperature: Between 27-32°C

Rainfall: Around 50-100 cm.

Top Millets Producing States in India: Rajasthan > Karnataka > Maharashtra

- **Jowar:** Maharashtra > Karnataka > Madhya Pradesh
- **Bajra:** Rajasthan > Uttar Pradesh > Gujarat
- **Ragi:** Karnataka > Tamil Nadu > Uttarakhand

These are also known as **coarse grains**. They have a **high nutritional value**. E.g., **Ragi** is very rich in **calcium, iron, other micronutrients** and **roughage**.

Maize

- **Soil Type:** Old alluvial soil.
- **Temperature:** Between 21-27°C
- **Rainfall:** High rainfall.
- **Top Producing States:** Karnataka > Maharashtra > Madhya Pradesh
- India is the **seventh-largest producer**

Pulses

- **Soil Type:** Sandy-loamy soil.
- **Temperature:** Between 20-27°C
- **Rainfall:** Around 25-60 cm.
- **Top Producing States:** Madhya Pradesh > Rajasthan > Maharashtra
- India is the **largest producer** as well as the largest **consumer** of pulses in the world.
- Major pulses grown in India are **urad, tur (arhar), moong, masur, peas and gram**.
- Pulses are **leguminous crops**. They help in restoring soil fertility by **fixing nitrogen from the air (Except Arhar)**. This is why these crops are grown in rotation with other crops.

Sugarcane

- **Soil Type:** Deep rich loamy soil.
- **Temperature:** Between 21-27°C with a hot & humid climate.
- **Rainfall:** Around 75-100 cm.
- **Top Producing States:** Uttar Pradesh > Maharashtra > Karnataka
- India is the **2nd largest producer of sugarcane after Brazil**.
- It is the main source of **sugar, khandsari, gur (jaggery), and molasses**.

Oilseeds

- **Soil Type:** Loam to clayey loam & well-drained sandy loams.
- **Temperature:** Between 15-30°C
- **Rainfall:** Around 30-75 cm.
- **Top Producing States:** Madhya Pradesh > Rajasthan > Gujarat
- The main oilseeds produced in India are **groundnut, coconut, mustard, sesamum (til), soyabean, cotton seeds, castor seeds, linseed & sunflower**.
- **Groundnut is a Kharif crop** & accounts for about **half of the major oilseeds produced** in the country.
- **Sesamum is a Kharif crop in north & rabi crop in south India**.
- **Linseed and mustard are rabi crops**.
- **Castor seed is grown in both seasons i.e. rabi & Kharif**.

Tea

- **Soil Type:** Deep & fertile well-drained soil, rich in humus and organic matter.
- **Temperature:** Between 20-30°C
- **Rainfall:** Around 150-300 cm.
- **Top Producing States:** Assam > West Bengal > Tamil Nadu.
- India- **2nd largest producer** of tea plants.
- Slopes of eastern hills have **humid climate & evenly distributed rainfall without waterlogging** which are optimal conditions for **terrace farming** of tea plants.
- Tea is a **labor-intensive industry**. Tea requires abundant, cheap, and skilled labor. It is processed within the tea garden to retain its freshness.

Coffee

- **Soil Type:** Well-drained and deep friable loamy soil.
- **Temperature:** Between 15-28°C
- **Rainfall:** Around 150-250 cm.
- **Top Producing States:** Karnataka > Kerala > Tamil Nadu
- India is the **seventh-largest producer**.
- **Hills that have well-defined shade canopy, comprising evergreen leguminous trees** give the optimal condition for coffee cultivation which is why it is mainly concentrated in the hilly regions.
- **'Arabica'** is the Indian variety of coffee which is famous worldwide.

Rubber

- **Soil Type:** Rich well-drained alluvial soil.
- **Temperature:** Above 25°C with a moist & humid climate.
- **Rainfall:** More than 200 cm.
- **Top Producing States:** Kerala > Tamil Nadu > Karnataka.
- It is an **equatorial crop**. But under special conditions, it can **also be grown in tropical and sub-tropical**.

Cotton

- **Soil Type:** Cotton requires Well-drained black cotton soil of Deccan Plateau.
- **Temperature:** Between 21-30°C
- **Rainfall:** Around 50-100cm.
- **Top Cotton Producing States:** Gujarat > Maharashtra > Telangana
- Cotton needs **210 frost-free days & bright sun-shine** for its growth.
- Cotton is a **Kharif crop** and requires 6 to 8 months to mature.

Jute

- **Soil Type:** Well-drained alluvial soil
- **Temperature:** Between 25-35°C
- **Rainfall:** Around 150-250 cm
- **Top Producing States:** West Bengal > Bihar > Assam

- Jute is **mainly concentrated in eastern India** because of the **rich alluvial soil of Ganga-Brahmaputra delta**.
- It is known as the **golden fiber**.

India is the **largest producer of jute**.

Natural Vegetation, Different Types of Forests of India

Tropical Deciduous Forests

- These are the most widespread and the most extensive forests of India.
- They are also known as monsoon forests.
- These are connected with those parts of India which receive annual rainfall between 200 cm and 70 cm.
- Here rainfall is seasonal in nature.
- In this forest type, trees shed their leaves for about six to eight weeks in dry summer.
- The animals found in these are: *lion, tiger, pig, deer, elephant, a variety of birds, lizards, snakes, tortoise, etc.*

(i) Tropical Moist Deciduous Forests

- Annual rainfall between 200 & 100 cm.
- Found in: (a) an eastern part of India- northeastern states, along with the foothills of Himalayas, (b) Jharkhand, West Orissa and Chhattisgarh, (c) on the eastern slopes of the Western Ghats.
- Examples: *teak, bamboos, sal, shisham, sandalwood, khair, kusum, arjun, mulberry, etc.*

(ii) Tropical Dry Deciduous Forests

- Annual rainfall between 100 & 70 cm.

- Found in: (a) the rainier parts of the peninsular plateau and (b) the plains of Uttar Pradesh and Bihar.
- *Examples: teak, sal, peepal, neem etc.*

Tropical Thorn Forests

- These are connected with those parts which receive rainfall less than 70 cm.
- Here, rainfall is erratic, irregular and inconsistent.
- Xerophytes dominate regions covered with the tropical thorn.
- Found in the north-western part including *semi-arid areas of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh and Haryana.*
- Main plant species here are *acacias (babool), palms, euphorbias, Cactus, khair, , keekar etc.*
- In this vegetation type, stem, leaves and roots of plants are adapted to conserve water.
- Stem is succulent and leaves are mostly thick and small to minimize evaporation.
- Common animals here are *rats, mice, rabbits, fox, wolf, tiger, lion, wild ass, horses, camels, etc.*

Tropical Montane Forests

- The decrease in temperature with the rise in altitude is responsible for the corresponding change in natural vegetation.
- There exists the same hierarchy from foothills of the mountain to the top of it as is observed from tropical to tundra region.
- Mostly found in the southern slopes of Himalayas, places having high altitude in Southern and Northeastern India.
- Upto 1500 m of height, tropical moist deciduous forests exist with *shesham* as the main tree.
- Between 1000-2000m of height, wet temperate type of climate persist wherein evergreen broad-leaf trees like *oaks and chestnut*

- Between 1500-3000 m of height, temperate forests covering coniferous trees like *Chir, pine, deodar, silver fir, spruce, cedar, etc.*
- At higher altitudes above 3500m wet temperate grasslands are common like *Merg (Kashmir), bugyals (Uttarakhand), etc.*
- Common animals that are found in these forests are *Kashmir stag, spotted deer, wild sheep, jackals, yak, snow leopard, rare red panda, sheep and goats with thick fur, etc.*
- In India, there are studied under two groups: Northern Montane Forests and Southern Montane Forests.
- Northern Montane Forests: These are connected with Himalayan mountain ranges. Vegetation types are controlled by sunlight, temperature and rainfall which is described above.
- Southern Montane Forests: These are connected with hills of *Nilgiris, Anaimalai and Cardamom*. These are wet temperate forests which have great endemic biodiversity and these are described as Shola forests.

Mangrove Forests

- Mangrove forests are connected with deltaic regions of tropical and sub-tropical zones.
- These are also known as tidal forests and littoral forests as these are connected with the inter-tidal region.
- Their biodiversity and forest density are comparable with equatorial rainforest and tropical evergreen and semi-evergreen forests.
- Mangroves are salt tolerant plants with roots being adapted to become pneumatophores (these roots emerged from the ground and grow in upward direction).
- Mangrove ecosystem is a unique ecosystem as it has tolerance for periodic flooding and dryness; and mild salinity as well.
- India has the largest cover of Mangrove forest in the world.
- Sunderban, Mahanadi, Godaveri-Krishna and Kaveri delta are most importantly covered with these forests.

- *Sunderban* is the largest mangrove in the world. It is famous for *Sundari tree* which provides durable hard timber.
- Some other example are *Rhizophora*, *Avicennia* etc.
- *Palm*, *coconut*, *keora*, *agar*, etc. also grow in some parts of the delta.
- *Royal Bengal Tiger* is a famous animal in these forests.
- *Turtles*, *crocodiles*, *gharials*, *snakes*, are also found in these forests.
- Bhitarkanika mangrove of Mahanadi delta is also famous for its rich biodiversity.

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World Geography

1. Important Mountain Ranges and Peaks of the Worlds

Sr.	Mountain Range	Important/Highest Peaks	Location	Description
1.	Rocky Mountains	Mt. Elbert (highest peak in the Rockies)	North America	It is one of the longest fold mountains in the world and extends from Canada to Western US (New Mexico State)
2.	Appalachian Mountains	Mt. Mitchell, North Carolina, US (highest peak of Appalachian Mountains)	North America	It is a fold mountain with rich in mineral resources
3.	Alps	Mont Blanc (French –Italian border)	Europe	It is a folded mountain and source for rivers like Danube, Rhine, etc.
4.	Sierra Nevada	Mt. Whitney	California, USA	Habitat for many Red Indian tribes

5.	Alaska Range	Mt. McKinley	North America	Mt. McKinley highest peak in North America
6.	Altai Mountains	Belukha mountain	Central Asia	Young folded mountain which extends from Kazakhstan to northern China.
7.	Andes Mountains	Mt. Aconcagua	South America	Longest mountain chain in the world
8.	Atlas Mountains	Mt. Toubkal	Northwestern Africa	Young fold mountain spreading over Morocco and Tunisia.
9.	Drakensberg Mountains	Mt. Lesotho	South Africa	Young folded mountain
10.	Caucasus Mountain	Mt. Elbrus	Europe	Located between the Black Sea and the Caspian Sea
11.	Ural Mountains	Mt. Narodnaya	Russia	This mountain range act as a boundary between Europe and Asia.

12.	Hindukush Mountains	Mt. Trich Mir	Pakistan and Afghanistan	Folded mountain with rugged topography which makes it difficult for transportation.
13.	Himalayas	Mt. Everest	Asia	Young fold mountains in Asia which separates Indian sub-continent from Asian plains
14.	Arakan Yoma	Mt. Kennedy peak	Myanmar	It extends from north to south direction. Shifting cultivation is practised.
15.	Kunlun Mountains	Mt. Muztag	North of Tibetan plateau and western China	It is one of the young folded mountains.

16.	Vosges	Mt. Grand Ballon	Eastern France, Europe	Famous for the cultivation of grapes and manufacture of wines.
17.	Great Dividing Range	Mt. Kosciuszko	Australia	This range is the source for the rivers Darling and Murray.

2. List of Important Rivers of the World

Sr. No.	RIVER	LOCATION	DESCRIPTION
1.	River Amazon	South America	It is the second longest river which flows through Peru, Columbia, Brazil and drains into the Atlantic Ocean.
2.	River Mississippi	North America	It forms a bird-foot like a delta at the Gulf of Mexico, River Missouri is an important tributary of it.

3.	River St. Lawrence	North America	It drains into Gulf of St. Lawrence which is an important transport corridor of North America.
4.	River Orange	South Africa	Longest river of South Africa and contains diamond beds along its mouth.
5.	River Congo	Africa	This river crosses the equator twice and drains into the south Atlantic Ocean.
6.	River Nile	Africa	It is the longest river in the world, originates near Lake Victoria and drains in the Mediterranean Sea.
7.	River Rhine	Western Europe	It flows through Germany and Netherlands. It is one of the busiest waterways of Europe.
8.	River Danube	Europe	It passes through Germany, Hungary, Austria, Slovakia, Serbia, Romania and drains into the Black Sea.
9.	River Volga	Europe, Russia	It is the longest river in Europe, it drains into the Caspian Sea.

10.	River Tigris	Turkey, Iraq	Cities like Mosul, Baghdad, Basra were located along its banks and it drains into the Gulf of Persia.
11.	River Euphrates	Turkey, Syria, Iraq	Main source of water for Syria. It drains into the Persian Gulf.
12.	River Irrawaddy	Myanmar	Drains into Gulf of Martaban
13.	River Mekong	China, Laos, Cambodia, Vietnam	It is also called 'Danube of the east', and it merges with south china sea.
14.	River Yangtze	China	It originates from the Tibetan plateau and ends in east china sea. It is the longest river in China.

3. Important Lakes of The World

Sr. No.	NAME	LOCATION	FACTS
1.	Titicaca lake	South America	It is the highest navigable lake in the world located in the Andes mountains.

2.	Great bear lake	Canada, North America	It is a big glaciated lake of Canada. The Eskimos of Canada camp here during the summer season.
3.	Great lakes	North America	This comprise of five large lakes of North America such as Lake Superior, Michigan, Huron, Erie, Ontario. Lake Superior is the second largest lake in the world.
4.	Lake Malawi	Central Africa	It is the third largest lake of Africa and borders Tanzania, Mozambique.
5.	Lake Tanganyika	East Africa	It is deepest and second largest lake of Africa.
6.	Lake Victoria	Africa	Largest river of Africa and passes through the equator.
7.	Lake Kainji	Africa	Largest manmade lake of Africa, used for irrigation purposes.
8.	Dead sea	West Asia	It is bordered by Jordan in the east and Palestine, Israel in the west. It is known for high salinity.

9.	Aral Sea	Central Asia	Located between Uzbekistan and Kazakhstan. It is shrinking rapidly in recent years.
10.	Lake Baikal	Russia	It is the largest freshwater lake in Asia and deepest in the world.
11.	Caspian Sea	Eurasia	It is the largest lake in the world and is surrounded by Russia, Kazakhstan, Turkmenistan, Iran and Azerbaijan.

Important Ocean Currents:

Major Ocean Currents of the Atlantic Ocean

Warm currents of the Atlantic Ocean	Cold Current of the Atlantic Ocean
1. North Equatorial Current which bifurcates into Antilles Current and Caribbean Current.	1. Labrador Current - Originates in the Baffin Bay drifts south eastwards Baffin and Greenland and merges with Gulf stream off New Foundland.
2. South Equatorial Current bifurcates at the Current protruding landmass of northeast Brazil into northern Cayenne Current and the southern Brazilian Current (South Atlantic Ocean).	2. The Irminger Current of Greenland Current Flows between Greenland and Iceland and merges with North Atlantic Drift.
3. Gulf stream - One of the strongest ocean system which originates in the Gulf of Mexico. It consists of (i) Florida Current - From the Strait of Florida to Cape Hatteras (USA) (ii) Gulf Stream (cold wall) - From Cape Hatters to the Grand Bank (Northeast USA) (iii) North Atlantic Drift - From the	3. Canaries Current - Continuation of North Atlantic Drift along the western coast of the Iberian Peninsula and North Africa in the southern direction.

Grand Bank, near New Foundland to western Europe.	
4. Counter Equatorial Current - Flows from west to east in between the North and South Equatorial Current.	4. Falkland Current - Flows northwards along the eastern coast of South America up to Argentina.
	5. South Atlantic Drift - Under the influence of westerlies at about 40°S latitude, Brazilian Current continues as the South Atlantic Current.
	6. Benguela Current - Flows northwards along the western coast of South Africa.

Major Ocean Currents of the Pacific Ocean

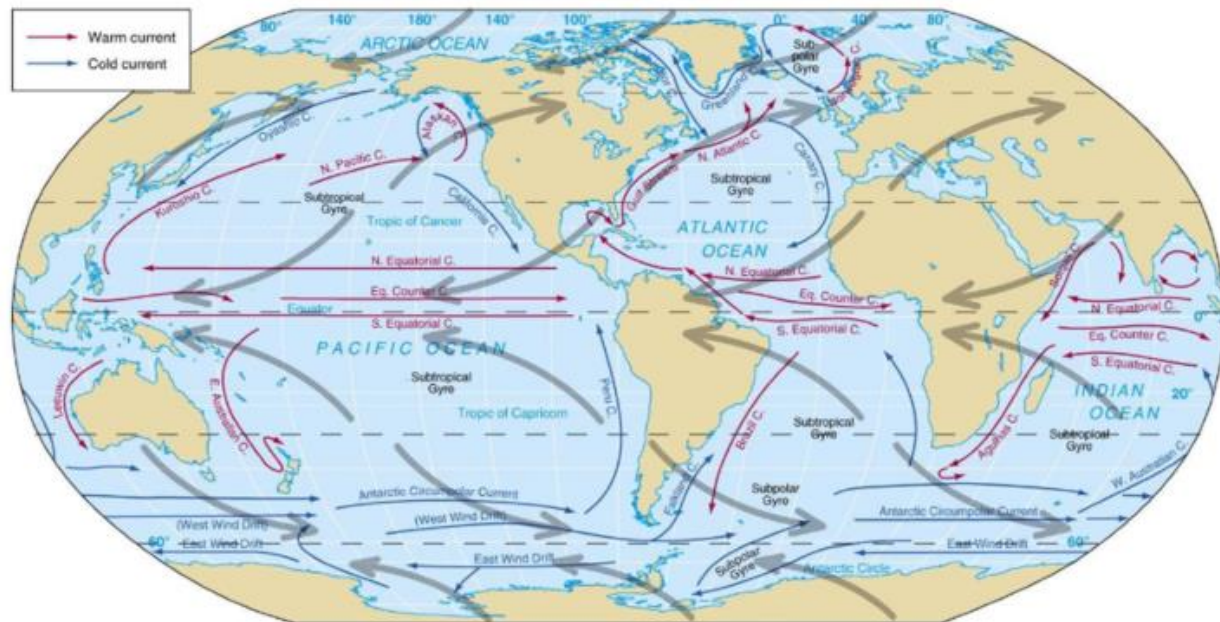
WARM CURRENTS OF THE PACIFIC OCEAN	COLD CURRENTS OF THE PACIFIC OCEAN
1. North Equatorial Current - Flows westwards from the western coast of Mexico to the Philippines.	1. Oyashio (Kurile) Current - Bering Current or Alaskan Current and Okhotsk Current meet to form Oyashio Current.
2. South Equatorial Current - Flows westwards in the southern Pacific Ocean and bifurcates into northern and southern branches near New Guinea.	2. California Current - Flows along with the west-tern cost of USA and finally merges with North Equatorial Current (Warm) to complete the circulation.
3. Counter Equatorial Current - Flows between north and south Equatorial Current in the opposite direction.	3. West Wind Drift - Flows from west to east in the zone of 40°-50°S latitude under the influence of Westerlies.
4. Kuroshio or Japan Current - Flows from Taiwan to Bering Strait.	4. Peruvian (Humboldt) Current - Flows northwards along the western coast of South America is actually the continuation of West Wind Drift.

Major Ocean Currents of the Indian Ocean

WARM CURRENTS OF THE INDIAN OCEAN

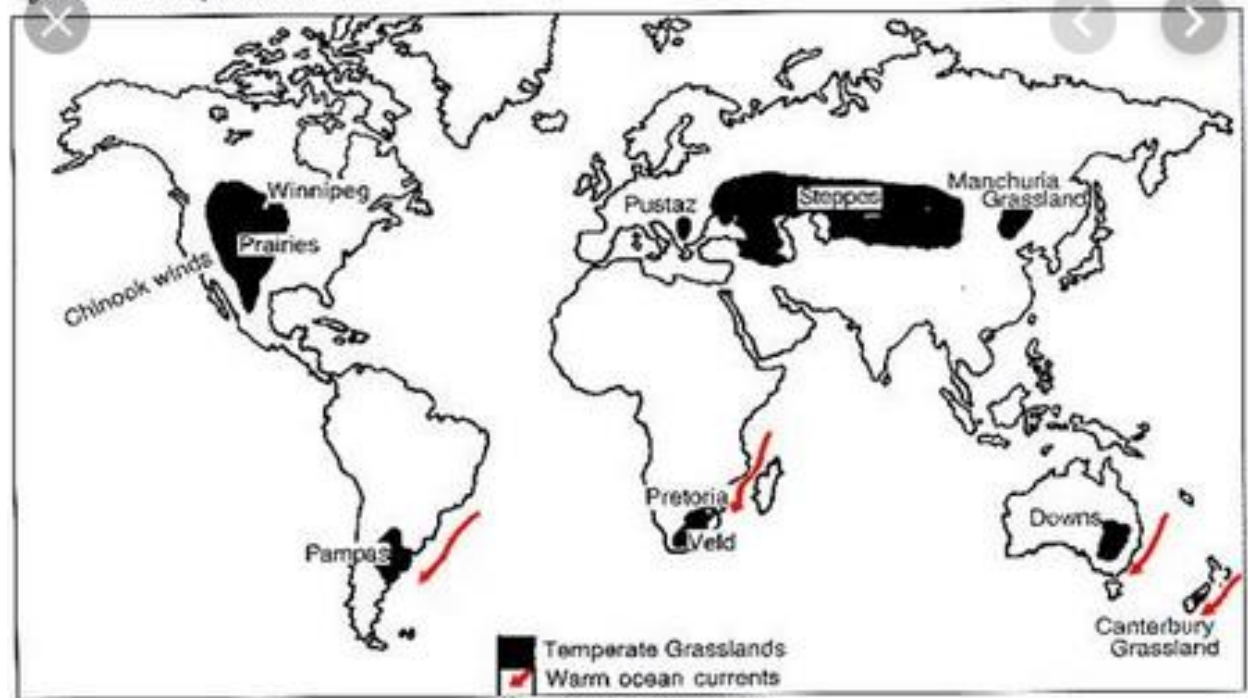
1. Indian Equatorial Current: Flows westwards in the south Indian Ocean, bifurcates at Madagascar and flows as Mozambique and Agulhas Current in the southern direction.
2. South West Monsoon Current: Flows along the coasts of India in an easterly direction.
3. North-West Monsoon Current: Flows along the eastern coasts of India during winter.

Major Ocean Routes of the World



List of temperate Grasslands and their location:

Fig. 137 The Temperate Grasslands



Distribution

- They lie in interiors of continents, bordering deserts and away from the Mediterranean region.
- Placed under the Westerly wind belt.
- In the northern hemisphere, grasslands are entirely continental and extensive.
- In Eurasia, they are called Steppes stretched from shores of Black sea eastwards to foothills of Altai Mountains.
- Grasslands are known by different names as given below:

Region	Grassland
Hungary and plains of Manchuria	Pustaz
North America	Prairies
Argentina and Uruguay	Pampas
Northern South Africa	Bush-Veld (more tropical)
Southern South Africa	High Veld (more Temperate)
Murray-Darling basin of Australia	Downs
New Zealand	Canterbury

Hot and Cold Local winds and their locations:

- Local Winds are caused by the local difference in temperature and pressure.
- Local Winds are of four types including hot, cold, conventional, and slope.
- These Winds effects only the smaller areas.
- Local Winds blow during a particular period of the day or year in a smaller area.
- These winds are found in the lowest levels of the troposphere.



- There are many such winds that blow all over the world, some of them are cool, some are warm, some wet and some dry.
- **Cold Winds** includes Bore, Mistral, Gregale, Chinook, Purga, etc.
- **Warm Winds** include Zonda, Sirocco, Chinook, Loo, etc.
- **Moist wind** includes Elephanta.
- **Dry wind** includes Calima.

Countries around important water bodies:

1. Countries surrounding Caspian Sea

Russia, Iran, Azerbaijan, Kazakhstan and Turkmenistan

2. Countries surrounding Black Sea

Ukraine , Russia, Georgia, Turkey, Bulgaria, Romania

3. Countries surrounding Red Sea

Eastern shore: Saudi Arabia. Yemen.

Western shore: Egypt. Sudan. Eritrea. Djibouti.

4. Countries surrounding the Adriatic Sea

Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro and Slovenia

5. Countries surrounding Mediterranean Sea

Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, and Turkey

Top Mineral Producer in India (State-wise) and other Countries

Mineral	Type	Mines	Top Producers (States)	Top Producers (Countries)	Top Reserves (States)
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IRON ORE	Metallic	Barabil – Koira Valley(Orissa) Bailadila Mine (Chattisgarh) Dalli-Rajhara(CH) – the largest mine in India	1. Orissa 2. Chattisgarh 3. Karnataka	1. Australia 2. Brazil 3. China 4. India	1. Orissa 2. Jharkhand 3. Chattisgarh
MANGANESE	Metallic	Nagpur-Bhandara Region (Maharashtra) Gondite Mines, Khondolite deposits (Orissa)	1. Madhya Pradesh 2. Maharashtra	1. China 2. Gabon 3. South Africa 5. India	1. Orissa 2. Karnataka 3. Madhya Pradesh
CHROMITE	Metallic	Sukinda Valley (Orissa) Hasan Region (Karnataka)	1. Orissa 2. Karnataka 3. Andhra Pradesh	1. South Africa 2. India 3. Russia	1. Sukinda Valley (OR) 2. Guntur Region (AP)
NICKEL	Metallic	Sukinda Valley (Orissa) Singhbhum Region (Jharkhand)	1. Orissa 2. Jharkhand	1. Phillipines 2. Russia 3. Canada	1. Orissa 2. Jharkhand 3. Karnataka

COBALT	Metallic	Singhbhum Region(Jharkhand) Kendujhar (Orissa) Tuensang (Nagaland)	1. Jharkhand 2. Orissa 3. Nagaland	1. Democratic Republic of Congo 2. China 3. Canada	
BAUXITE	Metallic	Balangir(Orissa) Koraput (Orissa) Gumla(Jharkhand) Shahdol (Madhya Pradesh)	1. Orissa 2. Gujarat	1. Australia 2. China, 3. Brazil	1. Junagarh (GJ) 2. Durg (CH)
COPPER	Metallic	Malanjkhand Belt (MP) Khetri Belt(Rajasthan) Kho- Dariba(Rajasthan)	1. Madhya Pradesh 2. Rajasthan 3. Jharkhand	1. Chile 2. China 3. Peru	1. Rajasthan 2. MP 3. Jharkhand
GOLD	Metallic	Kolar Gold Field (Karnataka) Hutti Gold Field (Karnataka) Ramagiri Mines (Andhra Pradesh) Sunarnarekha Sands (Jharkhand)	1. Karnataka 2. Andhra Pradesh	1. China 2. USA 3. South Africa	1. Bihar 2. Rajasthan 3. Karnataka
SILVER	Metallic	Zawar Mines (Rajasthan) Tundoo Mines (Jharkhand) Kolar Gold Fields (Karnataka)	1. Rajasthan 2. Karnataka	1. Mexico 2. Peru 3. China	1. Rajasthan 2. Jharkhand

LEAD	Metallic	Rampura Aghucha (Rajasthan) Sindesar Mines (Rajasthan)	1. Rajasthan 2. Andhra Pradesh 3. MP	1. China 2. Australia 3. USA	1. Rajasthan 2. Madhya Pradesh
TIN	Metallic	Dantewada (Chhattisgarh)	Chhattisgarh (only state in India)	1. China 2. Indonesia 3. Peru	Chhattisgarh
MAGNESIUM	Metallic	Chalk Hills (Tamilnadu) Almora (Uttarakhand)	1. Tamil Nadu 2. Uttarakhand 3. Karnataka	1. China 2. Russia 3. Turkey	1. Tamil Nadu 2. Karnataka
LIMESTONE	Non-Metallic	Jabalpur (Madhya Pradesh) Satna (Madhya Pradesh) Cuddapah (AP)	1. Rajasthan 2. Madhya Pradesh	1. China 2. India	1. Andhra Pradesh 2. Rajasthan 3. Gujarat
MICA	Non-Metallic	Gudur Mines (Aandhra Pradesh) Aravalis (Rajasthan) Koderma (Jharkhand)	1. Andhra Pradesh 2. Rajasthan 3. Orissa	1. India 2. Russia	
DOLOMITE	Non-Metallic	Bastar, Raigarh (Chhattisgarh) Birmitrapur (Orissa) Khammam Region (Aandhra Pradesh)	1. Chhattisgarh 2. Andhra Pradesh	1. India	1. Chhattisgarh 2. Orissa
ASBESTOS	Non-Metallic	Pali (Rajasthan) – largest mine	1. Rajasthan	1. Russia 2. China	1. Rajasthan

		Cuddapah (Andhra Pradesh)	2. Andhra Pradesh 3. karnataka		2. Andhra Pradesh
GYPSUM	Non-Metallic	Jodhpur, Bikaner, Jaisalmer-Rajasthan	1. Rajasthan 2. Tamil Nadu 3. Gujarat	1. China 2. USA 3. Iran	1. Rajasthan 2. Tamil Nadu 3. J & K
DIAMOND	Non-Metallic	Majhgawan Panna Mines (MP) – only active diamond mine in India	1. MP – only diamond producing state	1. Russia 2. Bostwana 3. Democratic Republic of Congo	
COAL	Non-Metallic	Korba Coalfield, Birampur-Chhattisgarh Jharia Coalfield, Bokaro Coalfield, Girdih –(Jharkhand) Talcher field – (Orissa) Singaruli coalfields (Chhattisgarh) - Largest	1. Chhattisgarh 2. Jharkhand 3. Orissa	1. China 2. USA 3. India	1. Jharkhand 2. Orissa 3. Chhattisgarh
PETROLEUM	Non-Metallic	Lunej, Ankleshwar, Kalol-Gujarat Mumbai high Maharashtra – largest oil field	1. Maharastra 2. Gujarat	1. Russia 2. Saudi Arabia 3. USA	1. Gujarat 2. Maharastra

		Digboi–Assam– Oldest oil field in India			
URANIUM	Atomic	Jaduguda mine (Jharkhand) Tummalapalle mine (Andhra Pradesh) – largest mine Domiasiat Mine (Meghalaya)	1. Andhra Pradesh 2. Jharkhand 3. Karnataka	1. Kazakhstan 2. Canada 3. Australia	1. Jharkhand 2. Andhra Pradesh 3. Karnataka
THORIUM	Atomic		1. Kerala 2. Jharkhand 3. Bihar	1. Australia 2. USA 3. India	1. Andhra Pradesh 2. Tamil Nadu 3. Kerala

List of Major Straits of the World

Sr. No.	Strait Name	Remarks
1	PALK STRAIT	It connects the Bay of Bengal with the Gulf of Mannar.
2	STRAIT OF GIBRALTAR	It connects the Atlantic Ocean with the Mediterranean Sea and separates Gibraltar and Spain in the north from Morocco in the south.
3	DUNCAN PASSAGE	It is a strait separating Rutland to the North and Little Andaman to the south.

4	NINE DEGREE CHANNEL	This Channel connects Laccadive Islands of Kalapeni, Suheli Par & Maliku Atoll.
5	TEN DEGREE CHANNEL	It separates the Andaman Islands from the Nicobar Islands in the Bay of Bengal.
6	STRAIT OF HORMUZ	It lies between UAE and Oman on the south-west and Iran on the north-east. It connects the Persian Gulf with the Gulf of Oman. It is strategically very important as it controls the oil trade from the Gulf countries.
7	STRAIT OF BAB-EL-MANDAB	It connects the Red Sea with the Gulf of Aden and separates Asia from Africa.
8	MALACCA STRAIT	It separates Peninsular Malaysia from Sumatra island of Indonesia. It connects the Pacific Ocean to the Indian Ocean. It provides a shorter route from the Andaman Sea to the South China Sea and therefore is the busiest waterway of the world.
9	SUNDA STRAIT	It connects the Java Sea to the Indian Ocean and separates Java island of Indonesia from its Sumatra island.
10	BERING STRAIT	It separates Russia and Alaska and connects the East Siberian Sea in the

		Arctic Ocean with the Bering Sea in the Pacific Ocean.
11	ORANTO STRAIT	Connect the Adriatic Sea with the Ionian Sea and separates Italy from Albania.
12	BOSPHORUS STRAIT	Connects the Black Sea with the Sea of Marmara. It is the world's narrowest navigable strait.
13	DARDANELLES STRAIT	It lies between the Asian Turkey and European Turkey and connects the Aegean Sea with the Sea of Marmara. It is a vital link of transportation between the Black Sea and the Mediterranean Sea.
14	LA PAROUSES STRAIT	It lies between the Sakhalin island and Hokkaido island of Japan and connects the Sea of Okhotsk with the Sea of Japan.
15	STRAIT OF TARTARY/TARTAR	It separates Russian Island Sakhalin from Mainland Asia. It connects the Sea of Okhotsk in the north to the Sea of Japan in the south.
16	TSUGARU STRAIT	It lies between Hokkaido and Honshu in northern Japan and connects the Sea of Japan to the Pacific Ocean.

17	TAIWAN STRAIT OR FORMOSA STRAIT	It lies between Taiwan (Republic of China) and Mainland China (People's Republic of China). It connects South China Sea with the East China Sea.
18	MOZAMBIQUE STRAIT	It lies in the Indian Ocean between Mozambique from Madagascar.
19	YUCATAN STRAIT	It lies between Mexico and Cuba and connects the Gulf of Mexico with the Caribbean Sea.
20	FLORIDA STRAIT	It lies between the Florida state of the USA and Cuba.
21	HUDSON STRAIT	It connects the Hudson Bay (Canada) with the Labrador Sea.
22	DAVIS STRAIT	It connects the Baffin Bay with the Atlantic Ocean.
23	COOK STRAIT	It lies between the North and the South islands of New Zealand and connects the Tasman Sea with the South Pacific Ocean.
24	BASS STRAIT	It separates Tasmania from the Australian mainland.
25	TORRES STRAIT	It lies in the Pacific Ocean, between Cape York Peninsula of Australia and Papua New Guinea

26	MAGELLAN STRAIT	It separates Mainland South America from Tierra Del Fuego (an archipelago off the southern-most tip of the South American Mainland)
27	DOVER STRAIT	It lies in the narrowest part of the English Channel, connecting it with the North Sea. It separates Britain from Continental Europe.
28	NORTH CHANNEL	It separates Ireland from Scotland and connects the Irish Sea with the Atlantic Ocean.

Climate and its Factors

The Atmosphere

- Gases and vapours form the atmosphere. When they receive solar energy, it gives rise to 'Climate'. Thus, the climate is defined as the *average atmospheric conditions of an area over a considerable period of time*. When this consideration of atmospheric condition is about certain place at certain time then it is called weather.
- There are five layers of the atmosphere. Those are:



Elements of climate

1. Temperature
2. Precipitation
3. Rainfall
4. Pressure and planetary winds
5. Land and sea breezes
6. Cyclonic activity

Temperature

Temperature decides the following factors-

- Amount of water vapour, the moisture-carrying capacity of the air.
- Rate of evaporation and condensation, governing degree of stability of the atmosphere.
- Relative humidity affecting nature and types of cloud formation and precipitation.

Factors that affect temperature:

1. Latitude – Temperature diminishes from equatorial regions to poles because of the earth's inclination. Direct rays travel a shorter distance and heat up smaller surface whereas oblique rays travel a longer distance and heat up large area.
2. Altitude – Temperature of air decreases with increasing height above sea level. This rate of decrease in temperature with increasing altitude is called as 'Lapse rate'. This rate is not constant. The lapse rate is greater by day than at night, greater on elevated highlands than on level plains.
3. Continentality – Land surface gets heated more quickly than water surface because of the higher specific heat of the water. (Specific heat is energy required to raise the temperature of giving volume by 1 degree Fahrenheit)
4. Ocean currents and winds – Both transport their heat or coldness into adjacent regions. On-shore winds carry ocean currents landwards thereby affecting the temperature of an area. Local winds also change temperature according to their own temperature.
5. Slope, shelter and aspect – Steep slope show a rapid change in temperature than a gentle slope. Sheltered slope (north facing) has less temperature than sunny slope (south-facing).
6. Natural vegetation and soil – Thick vegetation has less temperature than open spaces. Colour of soil (light or dark) give rise to slight variation in temperature.

Precipitation

- When condensation occurs at ground level, haze, mist or fog are formed.
- When condensation of water vapour takes place in the atmosphere at a temperature below freezing point, snowfall occurs.

- When moist air ascends rapidly cooler layers of the atmosphere, water droplets freeze and fall to the earth as hail or hailstone.
- Frozen raindrops melt and refreeze forming sleet.

Rainfall

- **Convictional rain:** When earth surface gets heated by conduction, it comes into contact with air. This heated air contains the capacity to hold moisture. This air rises up and cools down. When saturation point is reached, rainfall occurs. In regions with high relative humidity, this moisture carrying capacity is huge, resulting in torrential downpours. Convection current goes through the process of expansion, cooling, saturation and finally condensation.
- **Orographic rain:** When moist air ascends the windward side of a mountain barrier, it cools down until complete saturation and orographic clouds form. Precipitation occurs on the upwind side. Leeward side acts as a rain shadow area where usually low precipitation occurs.
 - **Cyclonic or frontal rain:** When air masses with different temperatures and different physical properties meet, warmer air rises over cooler air. In ascent, air expands and cools. Condensation takes place in the form of frontal rainfall.

Important facts of Census 2011

Census 2011

- Census is a process of collecting, compiling, analyzing, evaluating, publishing and disseminating statistical data regarding the population of a country.
- It covers demographic, social and economic data.
- It is conducted every 10 years.
- It started in 1871.
- Census 2011 data was released on 31st March 2011 by Union Home Secretary and RGCCI (Registrar General and Census Commissioner of India) of India.
- Census 2011 was the 15th census of India & 7th census after Independence.
- The motto of census 2011 was “Our Census, Our future”.

- Registrar General & Census Commissioner under whom census 2011 was conducted – C.Chandra Mouli
- Present Registrar General & Census Commissioner – Shri Sailesh,
- Total Population – 1,210,569,573 (1.21 Billion)
- India in 2nd rank in the population with 17.64% decadal growth.
- Increase in population during 2001 – 2011 is 181 Million
- Census 2011 was held in two phases:
- Houselisting & Housing Census
(April to September 2010)
- Population Enumeration
(9th to 28th February 2011)
- Number of Administrative Units in Census 2011
 - States/UTs 35
 - Districts 640
 - Sub-districts 5,924
 - Towns 7,936
 - Villages 6.41 lakh

Facts about districts

- Thane district of Maharashtra is the most populated district of India.
- Dibang Valley of Arunachal Pradesh is the least populated.
- Kurung Kumey of Arunachal Pradesh registered highest population growth rate of 111.01 Percent.
- Longleng district of Nagaland registered negative population growth rate of (-)58.39.
- Mahe district of Puducherry has the highest sex ratio of 1176 females per 1000 males.
- Daman district has the lowest sex ratio of 533 females per 1000 males.
- Serchhip district of Mizoram has the highest literacy rate of 98.76 Percent.
- Alirajpur of MP is the least literate district of India with the figure of 37.22 Percent only.

- North East Delhi has the highest density with the figure of 37346 people per square kilometre.
- Dibang Valley has the least density of 1 person per sq. km

Facts about cities

- Mumbai city of Maharashtra is the most populated city in India.
- Kapurthala city of Punjab is the least populated.
- Kozhikode of Kerala has the highest sex ratio of 1093 females per 1000 males.
- Bhiwandi city of Maharashtra has the lowest sex ratio of 709 females per 1000 males.
- Aizawl city of Mizoram has the highest literacy rate of 98.76 Percent.
- Sambhal of UP is the least literate city in India with the figure of 48 Percent only.
- North East Delhi has the highest density with the figure of 37346 people per square kilometre.

FEATURE	INDIA	TOP 3 STATES	BOTTOM 3 STATE	OTHER FACT
Average annual growth rate	1.64 %	1. Meghalaya (2.49 %) 2. Arunachal Pradesh (2.3 %) 3. Bihar (2.26 %)	1. Goa (.79%) 2. Andhra Pradesh (1.07%) 3. Sikkim (1.17%)	During 2001-2011, as many as 25 States/UTs with a share of about 85% of the country's population registered an annual growth rate of Less than 2%.
Decadal growth rate	17.60%	1. Meghalaya (27.8 %) 2. Arunachal Pradesh (25.9 %) 3. Bihar (25.1 %)	1. Nagaland (- 0.5 %) 2. Kerala (4.9 %) 3. Goa (8.2 %)	<ul style="list-style-type: none">● Nagaland is only the state that has negative growth rate.

				<ul style="list-style-type: none"> Districts with highest and lowest decadal growth rate were Kurung Kumey and Longleng respectively.
Population Density	382	1. Bihar (1,106 per sq km) 2. West Bengal (1030 per sq km) 3. Kerala (859 per sq km)	1. Arunachal Pradesh (17 per sq km) 2. Mizoram (52 per sq km) 3. J&K (56 per sq km)	<ul style="list-style-type: none"> Top 2 Districts: North East (NCT of Delhi) and Chennai Bottom 2 district: Dibang Valley and Samba.
Population (in terms of numbers)	Total - 1210.19 million Males – 623.7 million (51.54%) Females – 586.46 million (48.46%) Rural population– 833 million	Total 1. Uttar Pradesh (19.9 million, 16.5%) 2. Maharashtra (11 million - 9.28%) 3. Bihar (10 million - 8.6%)	Total 1. Sikkim (6.07 lakh - 0.05%) 2. Mizoram (10.9 lakh - 0.09 %) 3. Arunachal Pradesh (13.8 lakh - 0.11%)	<ul style="list-style-type: none"> Top Metros 1. Mumbai (18,394,912) 2. Delhi 3. Chennai The population of India is almost equal to the combined population of U.S.A., Indonesia, Brazil, Pakistan, Bangladesh and Japan put together (1214.3 million)! Top 2 Districts: Thane(Maharashtra) and North Twenty

	Urban population - 377 million			<p>Four Parganas (West Bengal)</p> <ul style="list-style-type: none"> ● Bottom 2 Districts: Dibang Valley and Anjaw (Arunachal Pradesh).
Sex ratio	940	1. Kerala (1084) 2. Tamil Nadu (996) 3. Andhra Pradesh (993)	1. Haryana (879) 2. Jammu and Kashmir (889) 3. Sikkim (890)	<ul style="list-style-type: none"> ● Top 2 Districts: Mahe and Almora ● Bottom 2 Districts: Daman and Leh
Fertility rate (2013)	2.3	1. Bihar (3.4) 2. U.P. (3.17) 3. Meghalaya (3.1)	1. Sikkim (1.45) 2. West Bengal (1.64) 3. Tamil Nadu (1.7)	
Literacy Rate	Overall -74% Male – 82.14% Female - 65.46	Overall 1. Kerala (93.9%) 2. Mizoram (91.6%) 3. Tripura (87.8%)	Overall 1. Bihar (63.80%) 2. Arunachal Pradesh (67%) 3. Rajasthan (67.11%)	<ul style="list-style-type: none"> ● Highest literacy rate according to Religion – Jain (94 %) > Christian (80%) > Buddhist (74%) ● Top 2 Districts: Serchhip and Aizwal ● Bottom 2 Districts: Alirajpur and Bijapur

Work participation rate	Overall (39 %) • Male (45 %) • Female (14 %)	1. Mizoram	1. Kerala 2. Goa	
Tribe	550 tribes • 8.2% of the total Population of India • 10 million population	Population wise 1. MP (1.5 million) 2. Maharashtra (1.0 million) 3. Gujrat (.89 million) Tribal density wise 1. Mizoram 2. Nagaland 3. Meghalaya	Population wise 1. Punjab (zero) 2. Haryana (zero) 3. Goa (32,000) Tribal density wise 1. Punjab (zero) 2. Haryana (zero)	
State (Area)	32.87 Lakh km ²	1. Rajasthan (3.42 Lakh km ²) 2. M.P. (3.08 Lakh km ²) 3. Maharashtra (3.07 Lakh km ²)	1. Goa (3702 km ²) 2. Sikkim (7096 km ²) 3. Tripura (10,486 km ²)	
Urbanization		1. Goa (62%) 2. Mizoram (52%) 3. Tamil Nadu (48%)	1. Himachal Pradesh (10%) 2. Bihar (10.29%) 3. Assam (14%)	Maharashtra has highest no. of cities – 18 in numbers

Child sex ratio	914	1. Mizoram (971) 2. Meghalaya (970) 3. Chhattisgarh (964)	1. Haryana (830) 2. Punjab (846) 3. J&K (859)	The Child Sex Ratio at India level (914) is lowest since Independence
Per Capita Net State Domestic Product at Current Prices (2011-12)	60972 Rs.	1. Goa (1,92,000 Rs) 2. Haryana (1,09,000 Rs) 3. Tamil Nadu (84,000 Rs)	1. Bihar (24,000 Rs) 2. U.P. (29,000 Rs) 3. Jharkhand (32,000 Rs)	
Age structure	Adolescent (36.5 %) Adult (56.7%) Old (6.8 %)			
Major language	Hindi (40%) Bengali (8%) Telugu (7.8%)			
	Language family 1. Indo – European (Aryan – 73%) 2. Dravidian (20%) 3. Austric (Nishad - 1.3%)			
Religion- Percentage of population	Hindu 96.63 crore (79.8 %) Muslim 17.22 crore (14.2%) Christian 2.78 crore (2.3%) Sikh 2.08 crore (1.7%) Buddhist 0.84 crore (0.7%) Jain 0.45 crore (0.4%)		Hindu, Muslim, Christian, and Sikhs are in majority in 28,4,2,1 state respectively.	