

CLASS NOTES GEOGRAPHY OF INDIA

India Key Facts:

- Located in North East Hemisphere
- Located in South Asia, Indian Subcontinent
- Part of Tropical Zone , Sub Tropical Zone, Warm Temperate Zone
- 2.41 % World Land Area
- Support Approx 18 % World Population (17.6%)
- Support Approx 18 % World Livestock (Keep Part of Rural Economy)
- Forest cover and Tree Cover: 24.62 % (Target 33 % National Forest Policy, 1988)
- World Water Resources: 4 %
- Urban Population about 35 %
- Unorganised Sector employs 83 % Workforce: 17 % Organised Sector
- Informal Economy is More in India
- An <u>Informal economy</u> represents enterprises that are not registered, where employers do not provide social security to employees.
- Labour Force Employed in India : 80:20 (Informal Sector/ Unorganised: Formal Sector)

CHAPTER 1: INDIA: SIZE, LOCATION AND EXTENT

INDIAN SUBCONTINENT AND SOUTH ASIA

India is part of South Asia and India subcontinent

- Subcontinent means: a "subdivision of a continent which has a distinct geographical, political, or cultural identity"
- Bounded by the Himalayas in the North, Hindukush and Sulaiman ranges in the North west, Purvanchal Hills in the north east and by the large expanse of the Indian ocean In the south, India forms a great geographic entity known as Indian Subcontinent.
- ❖ Indian subcontinent, is a <u>physiographical region</u> in <u>Southern Asia</u>
- ❖ Geopolitically, the Indian subcontinent generally includes all or partof Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka, as well as the Maldives



[UPSC 2021] Why is India considered as a subcontinent? Elaborate your answer.

India's large size, distinct geographical features, unique geological history, diverse cultural heritage, and significant political and economic influence contribute to its designation as a subcontinent.

Geography

- India is geographically large, with an area of over 3.2 million square kilometres, making it significantly larger than most other countries. Its sheer size sets it apart from other nations and contributes to its subcontinental status.
- India is characterised by diverse geographical features, including the towering Himalayan
 Mountain range in the north, which acts as a natural barrier separating it from the rest of Asia.
- The presence of the Deccan Plateau in the south, bordered by coastal plains on both sides, further adds to its distinctiveness.

Geological History

India was once part of the Gondwana supercontinent, which separated and drifted northward
millions of years ago. This distinct geological history contributed to the development of unique
geological features and biodiversity.

Diversity

India boasts a rich tapestry of cultures, languages, religions, and traditions. This diversity is
reflected in its cuisine, festivals, clothing, architecture, and more. Various ethnic groups coexist
within its borders, contributing to the subcontinental identity.

History

India has a long and complex history, with civilisations dating back thousands of years. It has
been home to ancient civilisations such as the Harappan and Vedic civilisations, as well as being
a crucible for various empires, including the Maurya, Gupta, Mughal, and British Empires. This
rich historical legacy has shaped India's identity as a subcontinent.

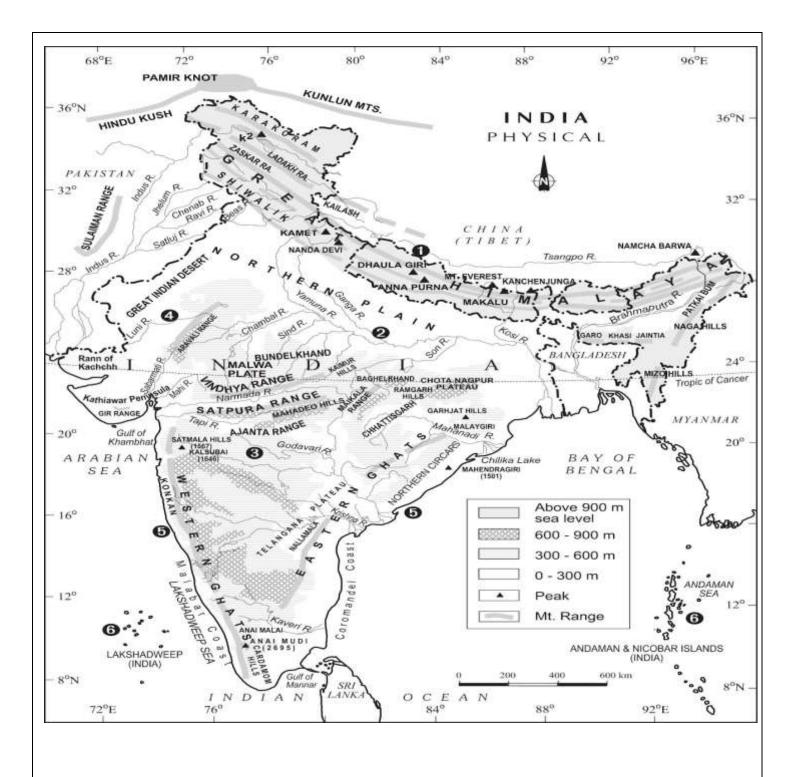
Unity

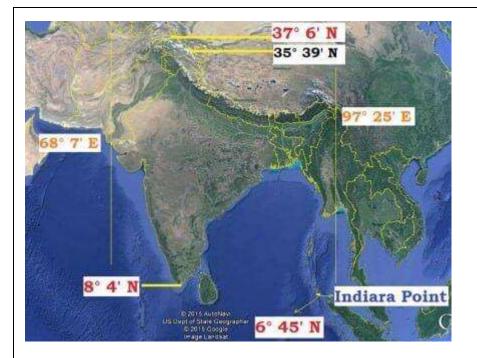
 Despite its cultural and linguistic diversity, India has maintained political unity for much of its history. Since gaining independence from British rule in 1947, India has remained a single nationstate, albeit with federal governance structures to accommodate its diversity.

Strategic Location

India's geographic location at the crossroads of South Asia, Central Asia, and the Indian Ocean
has endowed it with strategic significance throughout history. Its position has made it a hub for
trade, commerce, and cultural exchange, further reinforcing its subcontinental status.







INDIA GEOGRAPHICAL GRID:

India is situated north of the equator between 8°4' north (the mainland) to 37°6' north latitude and 68°7' east to 97°25' east longitude

 The distance between the northernmost part of India in Ladakh and Kanyakumari is 3,214 km, while the distance from the Rann of Kutch to Arunachal Pradesh is 2,933 km.

East-West Extent (~30°)	68° 7' East to 97° 39' East longitude
North-South Extent of the mainland (Including POK) (~29°)	8° 4' North to 37° 6' North latitude
South-North Extent of India (Including POK and the Andaman and Nicobar Islands) (~31°)	6° 45' North to 37° 6' North latitude

The latitudinal and longitudinal extent of India is about 30 degrees. In contrast, the distance
measured from north to south extremity is 3,214 km, and from east to west is only 2,933 km. This
is because the distance between any two longitudes decreases towards the poles, whereas the
distance between any two latitudes remains the same everywhere.

Distance between two adjacent Latitudes (~111 km)	At the Equator	110.5 km
(The slight difference is because of the Geoid shape of the earth)	At Poles	111.7 km
Distance between two adjacent Longitudes	At the Equator	111.3 km
	At Poles	Zero

[UPSC 2000] Along which one of the following meridians did India experience the first light of the sunrise of the new millennium?

- a) 82°30' W
- b) 82°30' E
- c) 92°30' W
- d) 92°30' E

Explanation

- Sunrise occurs first in the east. Since India is located in the eastern hemisphere, the first light of
 the sunrise would be experienced at a location situated at the easternmost longitude.
- Longitude values increase from west to east. So, higher longitude values represent more eastward locations within India.
- Among the given options, 92°30' E is the highest eastern longitude.

Answer: d) 92°30' E

[UPSC 2015] Which one of the following pairs of States of India indicates the easternmost and westernmost State?

- a) Assam and Rajasthan
- b) Arunachal Pradesh and Rajasthan
- c) Assam and Gujarat
- d) Arunachal Pradesh and Gujarat

Explanation

- Arunachal Pradesh is the easternmost state of India, bordering Bhutan, China, and Myanmar.
 Its easternmost point, Kibithu, is located at 97°25'E longitude.
- Gujarat is the westernmost state of India, bordering Pakistan and the Arabian Sea. Its westernmost point, Sir Creek, is located at 68°7'E longitude.

Answer: d) Arunachal Pradesh and Gujarat

Since the Tropic of Cancer passes through the middle of India. Hence,

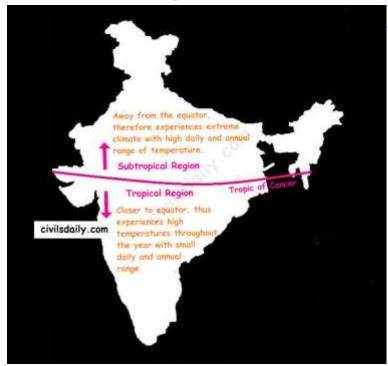
- It is located approximately at 23.5 degrees north latitude
- Northern India lies in the subtropical & temperate zone
- Southern India falls in the tropical zone.

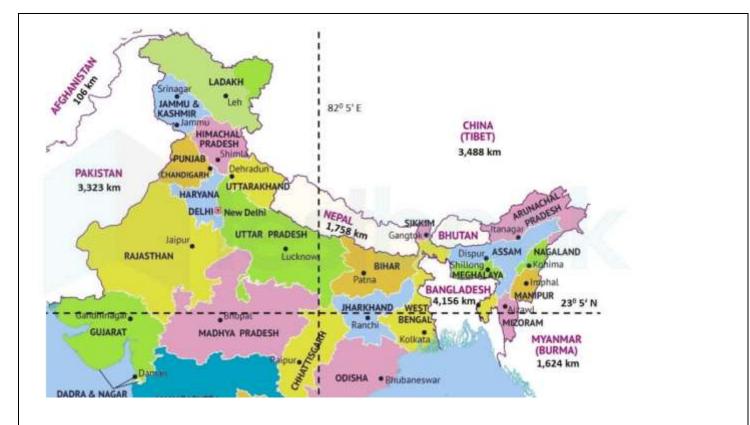


Image: The Tropic of Cancer sign near Bhopal, India. The Tropic of Cancer is marked as a yellow line at 23.5 degrees north latitude on the Bhopal-Sanchi Road



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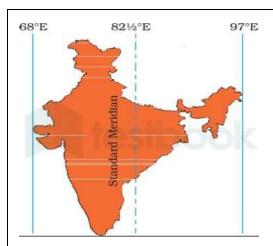




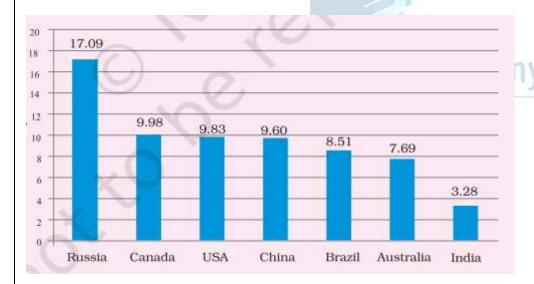
Tropic of Cancer: 8 States See in Map

The area north of Tropic of Cancer is twice the area south of it.



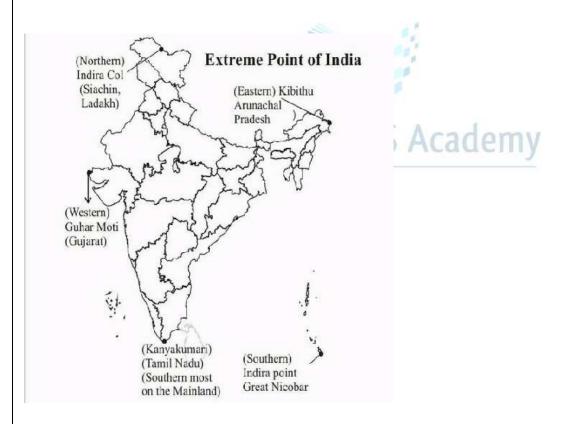


- IST: 5 States: UP MP- Chhattisgarh-Odhisa- Andhra Pradesh
- IST passes through: Russia, Kazakhstan, China and Nepal and not passes through Srilanka, Bangladesh, Bhutan
- India's national timekeeper, Council of Scientific & Industrial Research-National Physical Laboratory(CSIR-NPL) located in New Delhi
- *
- ❖ land mass of India has an area of 3.28 million square km. (3287263 sq km)
- ❖ India's total area accounts for about 2.4 per cent of the total geographical area of the world
- India has a land boundary of about 15,200 km and the total length of the coastline of the mainland, including Andaman and Nicobar and Lakshadweep, is 7,516.6 km.
- Areawise: 7 th largest country[after Russia, Canada, USA, China, Brazil, Australia, India, Argentina, Kazakhstan and Algeria]



Rank	Country	Capital City	Continent	Area (km²)
1	Russia	Moscow	Europe	1,70,98,242
2	Canada	Ottawa	North America	99,84,670
3	USA	Washington DC	North America	98,26,675
4	China	Beijing	Asia	95,96,961
5	Brazil	Brasi <mark>l</mark> ia	South America	85,14,877
6	Australia	Canberra	Oceania	77,41,220
7	India	New Delhi	Asia	32,87,263
8	Argentina	Buenos Aires	South America	27,80,400
9	Kazakhstan	Astana	Asia	27,24,900
10	Algeria	Algiers	Africa	23,81,741

- Second in World Population, after India, China, US, Indonesia, Pakistan, Nigeria, Brazil, Bangladesh Russia, Ethiopia Mexico and Japan.
- 17.78% Population of World in India, (China 17.72%, USA 4.23 %)



Extreme Points of India

Northern Most Point: Indira Col, Siachen Glacier, Karakoram Range

Eastern Most Point : Kibithu, in Anjaw district, small town in Arunachal Pradesh

Western Most Point: Ghuar Moti, located in the Kutch District of Gujarat.

Southern most Point: Pygmalion point / Indira Point, Andaman Sea, Great Nicobar Island. Cape Comorin, Kanyakumari is southern most point of Indian Mainland.



Situation and Spatial Relationship of India: India and Adjacent Countries

The Length of India's Land Borders with Neighbouring Countries

- India's longest border is with Bangladesh, while the shortest border is with Afghanistan.
- The length of India's land borders with neighbouring countries is given in the table below.

Neighbours Border Length		Border Length	Frontier States/UTs
1.	Bangladesh	4,096.7 km	5 States: WB, Assam, Meghalaya, Tripura and Mizoram.
2.	China	3,488 km	4 States / 1 UT: Ladakh, HP, Uttarakhand, Sikkim and AP
3.	Pakistan	3,323 km	3 States / 2 UTs: Gujarat, Rajasthan, Punjab, J&K, and Ladakh
4.	Nepal	1,751 km	5 States: Uttarakhand, UP, Bihar, West Bengal and Sikkim
5.	Myanmar	1,643 km	4 States: Arunachal Pradesh, Nagaland, Manipur and Mizoram
6.	Bhutan	699 km	4 States: Sikkim, West Bengal, Arunachal Pradesh and Assam
7.	Afghanistan	106 km	1 UT: Ladakh
To	tal	15,106.7 km	16 states and 2 UTs

Department of Border Management : Ministry of Home Affairs

The domestic threats to national security have been categorised by the Ministry of Home Affairs in four groups:

- (i) terrorism in the hinterland of the country,
- (ii) cross-border terrorism in Jammu & Kashmir,
- (iii) militancy in the North Eastern States; and
- (iv) left-wing extremism in certain states.

Seven Maritime Boundary country: Bangladesh, Myanmar, Thailand Indonesia, Maldives, Srilanka, Pak





Maritime Border Country Near India and Key Locations

- Bangladesh New Moore Island (Now Part of India)
- Indonesia- Indira Point (Great Nicobar Island)
- Myanmar Landfall Island (Northern Most Island of Andaman Region, India)
- Pakistan Sir Creek (Dispute Region Between India and Pakistan)
- Thailand Part of Thailand (Maritime Border India and Thailand)
- Srilanka- Katchatheeva (Part of Srilanka , disputed region)
- Maldives- Minicoy Island or Maliku Kandu

India is bounded by the young fold mountains in the northwest, north and northeast. South of about 22° north latitude, it begins to taper, and extends towards the Indian Ocean, dividing it into two seas, the Arabian Sea on the west and the Bay of Bengal on its east

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Sri Lanka is separated from India by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar, while Maldives Islands are situated to the south of the Lakshadweep Islands

- ❖ K2 highest point in india, 8611 m. The Kanchanjhunga, in the Indian state of Sikkim, at 8,586 m (28,169 ft)
- The southernmost point of the country is the **Pygmalion Point** and Parsons Point now called **Indira Point** is located at **6° 45' N latitude**.
- latitudinal and longitudinal extent are roughly about 30 degrees, the actual distance measured from north to south extremity is 3,214 km and that from east to west is only 2,933 km difference because:
- ❖ 85% area is vulnerable to one or multiple disaster and about 57% in high seismic zone

The Tropic of Cancer (23° 30'N) divides the country into almost two equal parts. To the southeast and southwest of the mainland, lie the Andaman and Nicobar islands and the Lakshadweep islands in Bay of Bengal and Arabian Sea respectively

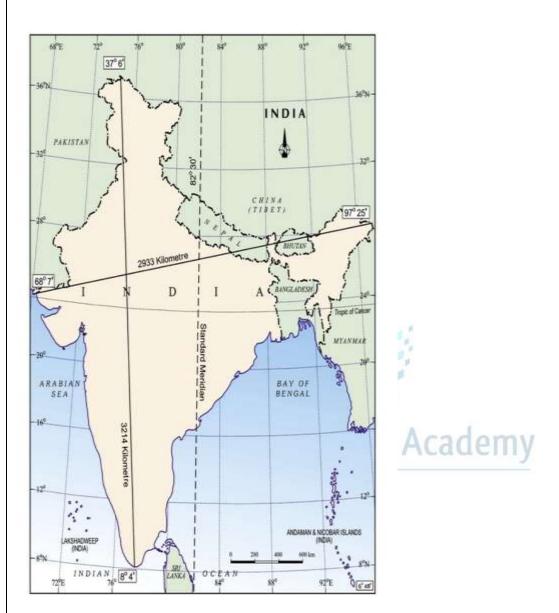
East-West time difference is nearly 2 hrs.

The latitudinal and longitudinal extent of India, they are roughly about 30 degrees,

- The earth moves [rotation and revolution] around its axis through 360° in 24 hours. Thus, a difference of 1° longitude will
 make a difference of 4 minutes in time.
- Therefore the difference of local time between western-most point and eastern-most point is 30 x 4 = 120 minutes or 2 hours.

Que UPSC: The sun rises in Arunachal Pradesh two hours before it does in Dwaraka in Gujarat. This is because the former is

- a) higher in elevation than Dwaraka
- b) situated further north than Dwaraka
- c) situated further east (about 30º longitude) than Dwaraka
- d)situated about 30 º east of Dwaraka and the earth rotates from west to east



Tropic of Cancer passes through the middle of the country and crosses the states of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura, and Mizoram.

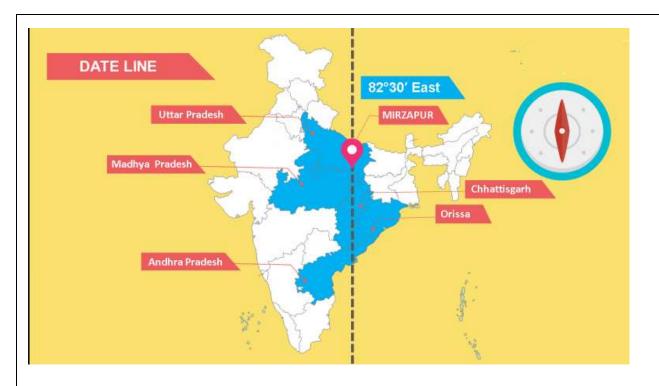
Longitude: In the eastern hemisphere, India stretches from" The 820 30' E longitude, west of the town of Mirzapur, near Allahabad in the state of UP is taken as Standard Time Meridian of India, as it passes through the middle of India.

A clock tower at the Allahabad Observatory (25.15° N 82.5° E) calculates local time, though the **National Physical Laboratory**, **New Delhi** has been entrusted with the official time-keeping devices."

Call: 9623466180

States through which IST passes: UP, Madhya Pradesh, Chhattisgarh, Odisha, and Andhra Pradesh.





Indian states by area

Rank	State/UT	Area		Share	Country	W	
		(sq km)	(sq mile)	(%)		rank	
1	Rajasthan	342,239	132,139	10.4	Congo, Rep.	65	
2	Madhya Pradesh	308,252	119,017	9.38	Oman	72	
3	Maharashtra	307,713	118,809	9.36	Oman	72	
4	Uttar Pradesh	240,928	93,023	7.33	Uganda	81	
5	Gujarat	196,244	75,770	5.97	Senegal	88	
6	Karnataka	191,791	74,051	5.83	Senegal	88	
UT1	Ladakh	166,698	64,362	5.07	Suriname	91	
7	Andhra Pradesh	162,970	62,923	4.96	Tunisia	93	
8	Odisha	155,707	60,119	4.74	Bangladesh	93	
9	Chhattisgarh	135,192	52,198	4.11	Greece	96	
10	Tamil Nadu	130,060	50,216	3.96	Nicaragua	98	
11	Telangana	112,077	43,273	3.41	Honduras	103	
12	Bihar	94,163	36,357	2.86	Hungary	109	
13	West Bengal	88,752	34,267	2.70	Serbia	112	
14	Arunachal Pradesh	83,743	32,333	2.55	Austria	115	
15	Jharkhand	79,716	30,779	2.42	Czech Republic	116	
16	Assam	78,438	30,285	2.39	Czech Republic	117	
17	Himachal Pradesh	55,673	21,495	1.69	Croatia	126	
UT2	Jammu & Kashmir	55,538	21,443	1.69	Croatia	126	
18	Uttarakhand	53,483	20,650	1.63	Bosnia and Herzegovina	126	
19	Punjab	50,362	19,445	1.53	Costa Rica	128	
20	Haryana	44,212	17,070	1.34	Estonia	131	
21	Kerala	38,852	15,001	1.18	Bhutan	134	
22	Meghalaya	22,429	8,660	0.682	Israel	149	
23	Manipur	22,327	8,620	0.679	Israel	149	
24	Mizoram	21,081	8,139	0.641	El Salvador	150	
25	Nagaland	16,579	6,401	0.504	Swaziland	156	
26	Tripura	10,486	4,049	0.319	Lebanon	164	
UT3	A. & N. Islands	8,249	3,185	0.251	Puerto Rico	167	
27	Sikkim	7,096	2,740	0.216	West Bank and Gaza	167	
28	Goa	3,702	1,429	0.113	French Polynesia	172	

NCT 4	Delhi	1,483	573	0.0451	Faeroe Islands	176
UT5	Dadra & Nagar Haveli and Daman & Diu	603	233	0.0183	St. Lucia	187
UT6	Puducherry	490	189	0.0149	Andorra	189
UT7	Chandigarh	114	44	0.00347	Liechtenstein	207
UT8	Lakshadweep	32	12	0.00091	Tuvalu	212
	India	3,287,469	1,269,298			

Largest Union Territory Of India By Area

8. Lakshadweep

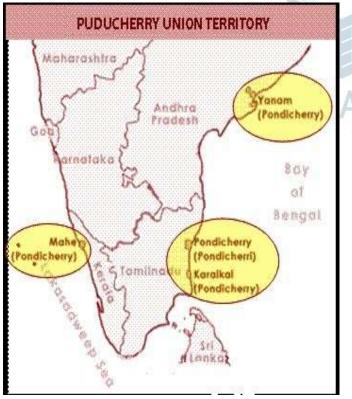
India has **8 Union Territories** The erstwhile state of Jammu and Kashmir has been bifurcated into two UT's of J&K and Ladakh and Daman and Diu, and Dadra and Nagar Haveli have been merged into one.

No. I	Name	Area	(Km²)
1. Lada	kh .	59146	
2.J & K		42241	
3. And	and Nic Is	8249	
4. NCT	Delhi	1483	
5. <u>Dadr</u>	a and Nagar Haveli and Dama	n and Diu	603
6. Pudu	ucherry	479	
7. Char	ndigarh	114	

Note :in August 2019, the Indian Parliament passed a resolution to divide the state of Jammu and Kashmir into two Union Territories, Jammu & Kashmir (J&K) and Ladakh, which came into action on 31 October 2019

And Dadra and Nagar Haveli and Daman and Diu come into force on the 26th day of January, 2020.

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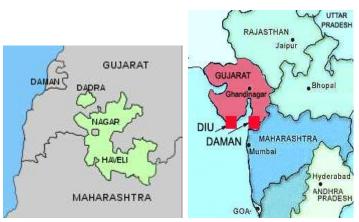


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Dadra and Nagar Haveli and Daman and Diu is composed of four distinct areas located in Western India.

- 1. Dadra is a small enclave within the state of Gujarat.
- 2. Nagar Haveli is a C shaped enclave located between the states of Gujarat and Maharashtra.
- 3. Daman is an enclave on the coast of Gujarat and
- 4. Diu is an island off the coast of Gujarat.

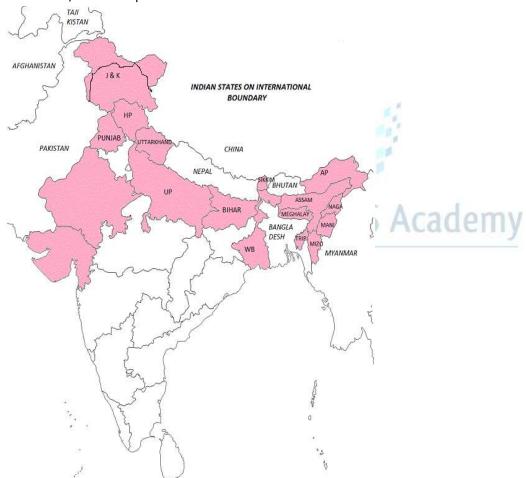




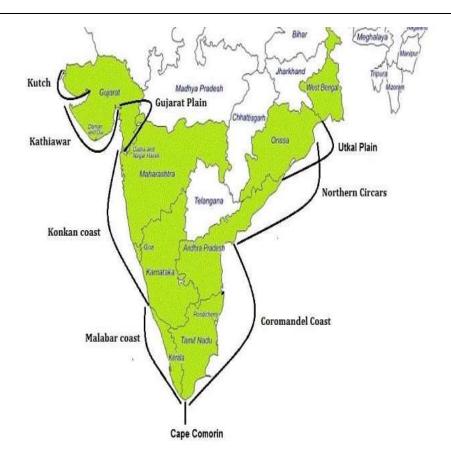
This Whole Territory would be governed under the jurisdiction of the Bombay High Court.

Reason For Merging:

- 1. in view of fruitful utilization of manpower, improve administrative efficiency, reduce administrative expenditure and improve service delivery .
- 2. merger would bring about administrative convenience, speedy development and effective implementation of central and state government flagship schemes. It would also ensure better cadre management of employees
- 3. To check /reduce duplication of works.



Coastal States of India: India has a coastline of 7516.6 km-- 5422.6 km of mainland coastline and 1197 km of Indian islands touching 9 Indian States and two Union Territories. Daman and Diu and Puducherry. The two Island territories of India are-Andaman and Nicobar Islands in Bay of Bengal and Lakshadweep Islands in the Arabian Sea.



[UPSC 2008] In India, how many states share the coastline?

- a) 7
- b) 8
- c) 9
- d) 10

Explanation

- There are nine states in India that share the coastline:
 - West Coast: Gujarat, Maharashtra, Goa, Karnataka and Kerala.
 - * East Coast: Tamil Nadu, Andhra Pradesh, Odisha and West Bengal.
- Additionally, there are four Union Territories with a coastline:
 - Lakshadweep Islands in the Arabian Sea
 - Dadra and Nagar Haveli and Daman and Diu on the Arabian Sea
 - Puducherry on the Bay of Bengal
 - Andaman and Nicobar Islands on the Bay of Bengal

Answer: c) 9

Nine Coastal States of India:

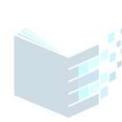
- 1. Gujarat
- 2. Maharashtra
- 3.Goa
- 4. Karnataka
- 5. Kerala
- 6. Tamil Nadu

- 7. Andhra Pradesh
- 8. Odisha
- 9. West Bengal

Four Union Territories

- 1. Daman & Diu
- 2. Puducherry
- 3. Andaman & Nicobar Islands (Bay of Bengal)
- 4. Lakshadweep Islands (Arabian Sea)

Length of the Coastline of India						
State/UT	Length (in Km)					
Gujarat	1214.7					
Andhra Pradesh	973.7					
Tamil Nadu	906.9					
Maharashtra	652.6					
Kerala	569.7					
Odisha	476.4					
Karnataka	280					
West Bengal	157.5					
Goa	101					
Andaman & Nicobar Islands	1962					
Lakshadweep	132					
Puducherry	47.6					
Daman & Diu	42.5					
Total	7,516.6					



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India and Bangladesh share fifth longest land border in the world. The length of the border is 4,096 kms.

Country with longest border line with India – Bangladesh

Country with smallest border line with India – Afghanistan (Only officially)

- Indian State with longest International Border line Rajasthan
 Indian State with smallest International border line Sikkim
 Indian State with maximum number of International Borders Arunachal Pradesh....
- Indian state with longest coastal line Gujarat
- Indian state which is smallest in area Goa
- maximum neighbouring states (9* States including Delhi): UP
- Assam and Chhattisgarh are two States which share border with 7 states.
- two states which has 6 neighbouring states Maharashtra and Karnataka
- Meghalaya + Sikkim two Indian states which has only one neighbouring state
- West Bengal, Andhra Pradesh, Madhya Pradesh, Jharkhand and Rajasthan are four Indian states which has 5 neighbouring states.
- Telangana and Odisha are two Indian state which borders with 4 states.

Extremit	Name	Altitude	Location	State	Coordinate
У					S

(undisput ed)	The second secon		India-Nepal border		N 88.14833° E	
Highest (disputed , claimed)	K2	8,611 m	Border between Gilgit- Baltistan (administered by Pakistan) and Xinjiang (administe red by China)	Gilgit- Baltistan, Pakist an	35.88250° N 76.51333° E	
Highest (undisput ed and entirely within India)	Nanda Devi	7,816 m (25,643 f t)	Garhwal Himalaya	Uttarakhand	30.37667° N 79.97083° E	
Lowest	Kuttanad	-2.2 m (-7.2 ft)	Alappuzha district	Kerala	9.15360°N 76.47300° E]

North Sikkim on the

Sikkim

27.70250°

Call: 9623466180

The southernmost point of the Indian Union—'Indira Point' got submerged under the sea water in 2004 during the Tsunami.



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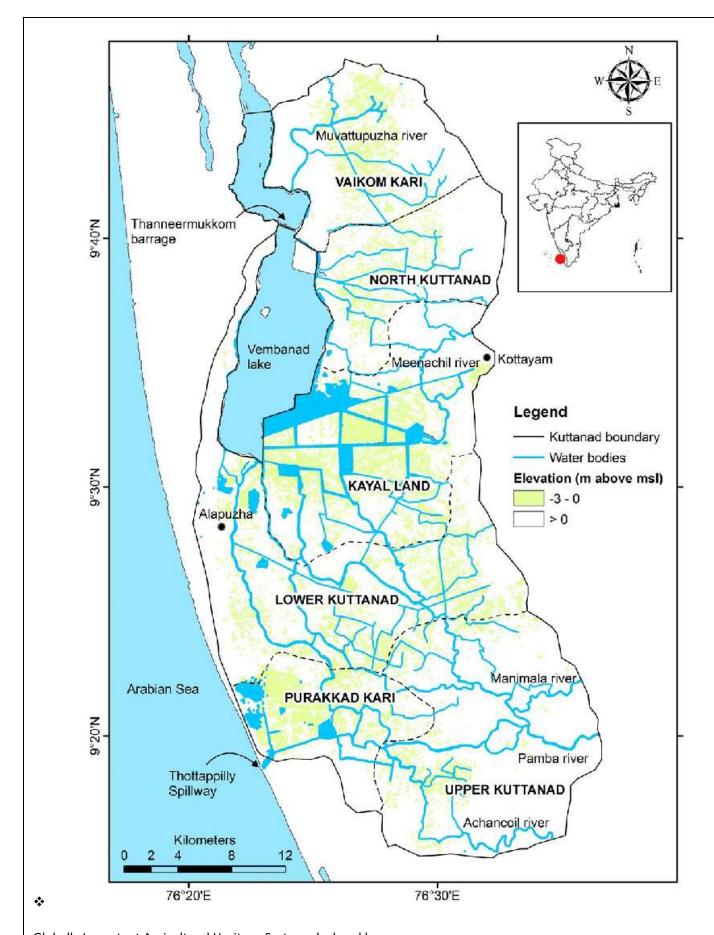
Note:

Highest

Kangchenjunga

8,586 m

- Kuttanad Location 9 degree , Kerala (Region is lowest Altitude in India)
- Kuttanad, the 'Rice Bowl of Kerala', lies at the very heart of the backwaters in Alappuzha district. Its wealth of paddy crops is what got it this unique nickname
- famous for Kayal Cultivation (Backwater Paddy Cultivation)
- ❖ It has been speculated that it is perhaps the only place in the world where farming is done up to 2 meters below sea level. The area is serviced by 4 major rivers: Pampa, Meenachil, Achankovil and Manimala.
- Kuttanad Below Sea Level Farming System: The only system in India that has been practicing rice cultivation below sea level since the past 2 centuries
- Kuttanad is a delta region of about 900 sq. km situated in the west coast of Kerala State, India.
- It is part of the largest wetland complex and Ramsar site in India, the Vembanad-Kol ecosystem



Globally Important Agricultural Heritage System declared by

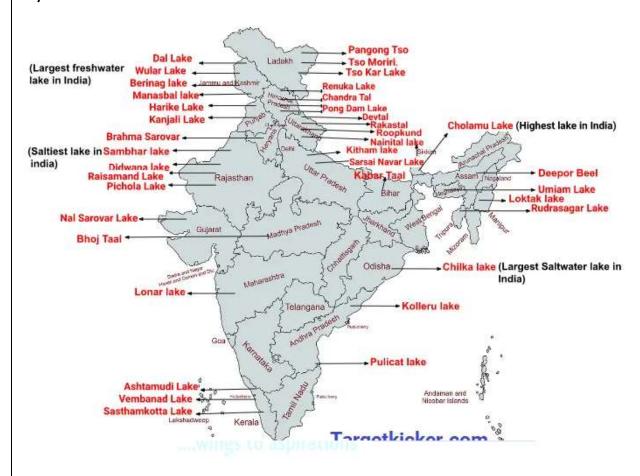
- a) UNESCO
- b)WTO
- c) FAO
- d)UNEP

<u>Food and Agriculture Organization</u> (FAO) has declared the Kuttanad Farming System as a <u>Globally Important Agricultural</u> Heritage System (GIAHS) in 2013.

The three GIAHS in India are:

- 1. Koraput Traditional Agriculture, Odisha
- 2. Kuttanad Below Sea Level Farming System, Kerala
- 3. Pampore Saffron Heritage, Jammu & Kashmir

Key Lakes of India:



THE BIGGEST / LARGEST LAKE IN INDIA:

- Wular lake, freshwater lake, it is Ramsar wetland site,
- The lake basin was formed as a result of tectonic activity and is fed by the Jhelum River.
- It once occupied an area of 272 sq. km but has since shrunk to 72 sq. km, with only 24 sq. km of open water left. It faces various environmental threats.

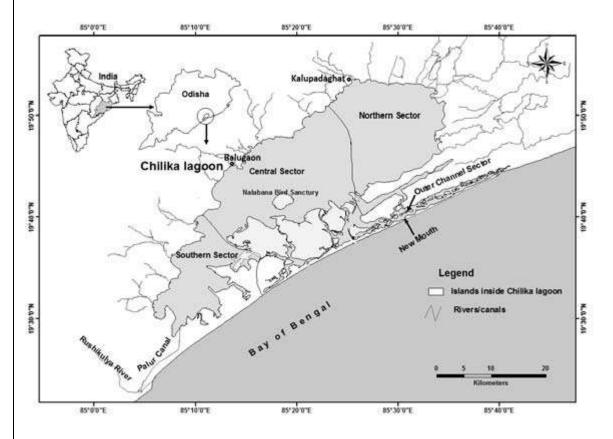
LONGEST LAKE IN INDIA:

- Vembanand Lake (Largest in the State of Kerala)
- Famous for Kuttanad Kayal Cultivation : Rice Fields
- The Nehru Trophy Boat Race is conducted in a portion of the lake.
- This lakes is also Shrinking from 230 km² in 1968 to 179.25 km² as of 1983
- It is situated at the <u>sea level</u>, and is separated from the <u>Laccadive Sea</u> by a narrow <u>barrier island</u>
- Part of Ramsar Site (International Wetland Site)
- <u>Kumarakom Bird Sanctuary</u> is located on the east coast of the lake.



HIGHEST LAKE OF INDIA

- Cholamu lake or Tso Lhamo lake , Sikkim
- Gurudongmar Lake ,Sikkim (Second Highest Lake In India) (Both 5km apart)
- located in Great Himalayas
- considered sacred by Buddhists and Sikhs.
- he lake is named after Guru <u>Padmasambhava</u>—also known as Guru Rinpoche—founder of <u>Tibetan Buddhism</u>, who visited in the 8th century.
- Nested amidst the mountains at 5,183 meters, the freezing alpine lake is amongst
- the major sources of the river Teesta.
- It is fed by waters from <u>Zemu glacier</u>, Kangtse glacier or Pauhunri glacier, and is the source of the <u>Teesta river</u>.



LARGEST BRACKISH LAKE IN INDIA

- Chilka Lake is largest Brackish Water Lake
- second largest <u>coastal lagoon</u> in the world after the <u>New Caledonian barrier reef.</u>
- spread over the <u>Puri</u>, <u>Khordha</u> and <u>Ganjam</u> districts of <u>Odisha</u> state on the <u>east coast</u> of <u>India</u>
- The land-based system comprises distributaries of the Mahanadi River
- Shrinkage of water surface area
- largest wintering ground for <u>migratory</u> birds, on the <u>Indian sub-continent</u>.

Nalbana Island, Nalbana Bird Sanctuary is the core area of the Ramsar designated wetlands of Chilika Lake

LARGEST INLAND SALT LAKE

- Sambhar Lake, Jaipur district of Rajasthan
- source of most of Rajasthan's salt production
- designated as a Ramsar site
- key wintering area for tens of thousands of pink <u>flamingos</u> and other birds that migrate from northern Asia and <u>Siberia</u>.

DEEPEST LAKE IN INDIA

- Mansa bal Lake: freshwater lake located in Safapora area of Ganderbal District in Jammu and Kashmir, India.
- Issue is Eutrophication

KOLLERU LAKE

- largest freshwater <u>lakes</u> in India .In Andhrapradesh
- Ramsar Site
- the lake is located between the Krishna and Godavari deltas
- Atapaka Bird Sanctuary located inside the Lake
- It serves as a habitat for migratory birds.
- Major portion of the lake has dried up
- under severe threat as agua ponds continue to encroach

PULICAT LAKE- ANDHRA PRADESH

- The massive barrier island known as Sriharikota divides the lake from the Bay of Bengal; it is the second-largest brackishwater lake or lagoon in India.
- The Satish Dhawan Space Center, located near it .
- Location: Coromandal Coast AP (96 %) and Tamilnadu Border

LOKTAK LAKE - MANIPUR

- North-East India's largest freshwater lake
- KeibulLamjao, the only floating national park in the world and the final remaining habitat of the critically endangered sangai or Manipur brow-antlered deer, floats above it.
- The Ramsar Convention named it a wetland of world importance in 1990.

SASTHAMCOTTA LAKE - Kerala Kerala's largest freshwater lake.



About Pangong Tso Lake:

- means "high grassland lake".
- is an <u>endorheic lake</u> spanning eastern <u>Ladakh</u> and <u>West Tibet</u>
- endorheic lake means: drainage basin that normally retains water and allows no outflow to other.

- Having ribbon shaped lake and India holds one-third of the 135 km-long boomerang-shaped Pangong lake.
- 50 % China, 40 % India and 10 % disputed and de facto buffer zone between India and China.
- situated at an elevation of 4,225 m
- It is the world's **highest saltwater lake.**
- Type of Soda lake (Saline Lake) Reason: Located in Rain-shadow of Great Himalayas)
- The <u>Line of Actual Control</u> (LAC) passes through the lake
- Pangong lake is its ability to change colour. The shades range from light green to crystal blue and sometimes even golden, red and pink. Experts believe that change in sky colour and refraction at high altitudes causes this phenomenon.
- It is also **known to change colors**, appearing blue, green, and red at different times of a day .











Tso Moriri or Lake Moriri or "Mountain Lake", is a lake in the Changthang Plateau of Ladakh in India. The lake and surrounding area are protected as the Tso Moriri Wetland Conservation Reserve. it is ramsar site .The lake is at an altitude of 4,522 m. world's highest salt water lake at 14836 ft.

Lakes in India Facts						
Criteria	Name of the Lake	State/UT				
Largest freshwater lake in India	Wular Lake	Jammu and Kashmir				
Largest Artificial Lake in India	Govind Vallabh Pant Sagar	Sonbhadra district, Uttar Pradesh				
Highest lake in India (Altitude)	Cholamu lake	Sikkim				
Largest Saline water lake in India	Chilka Lake	Odisha				
Longest Lake in India	Vembanad lake	Kerala				

