

# MAPPING DOCUMENT - PART 1/4



## INDIA MAPPING (STATIC AND CURRENT) (FOR UPSC PRELIMS 2024)



### STATIC-

- 1) Drainage System
- 2) Manipur in detail
- 3) Rivers and Dams (NCERT)
- 4) Physiography of India with details
- 5) Mountain passes
- 6) Glaciers
- 7) Natural vegetation in details
- 8) Indian Soils
- 9) Major lakes (NCERT)
- 10) major ports (NCERT)
- 11) Conventional energy sources (NCERT)
- 12) Iron & Steel Plants (NCERT)
- 13) Important Minerals (NCERT)

### CURRENT-

- 1) 12 Maps appeared in INDIAN EXPRESS NEWSPAPER
- 2) Statewise coverage of some states which were in news repeatedly
- 3) places in news from various sources (other institute magazines, CA lectures etc)
- 4) Vision magazines extracts

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**Note – All our initiatives (both free and paid) are  
on these channels only.**

**OUR INITIATIVES (Running Currently)**

1. PRELIMS MENTORSHIP 2024 (BOTH FREE AND PAID)
2. ETHICS AND ESSAY EVALUATION – ER NEELESH AIR 442 UPSC\_CSE2021  
([https://t.me/UpscWithNeelesh\\_AIR442](https://t.me/UpscWithNeelesh_AIR442))
3. SOCIOLOGY FRAMEWORK - TELEGRAM – SOCIOLOGY WITH NEELESH  
(<https://t.me/SociologyWithNeelesh>)
4. FREE CSAT PROGRAM – ON YOUTUBE CHANNEL – CIVIL SERVICES WITH  
NEELESH
5. INTEGRATED MENTORSHIP FOR 2025 (PRELIMS AND MAINS) – YEARLONG  
MENTORSHIP
6. SHORT NOTES FOR ALL SUBJECTS (HANDWRITTEN)

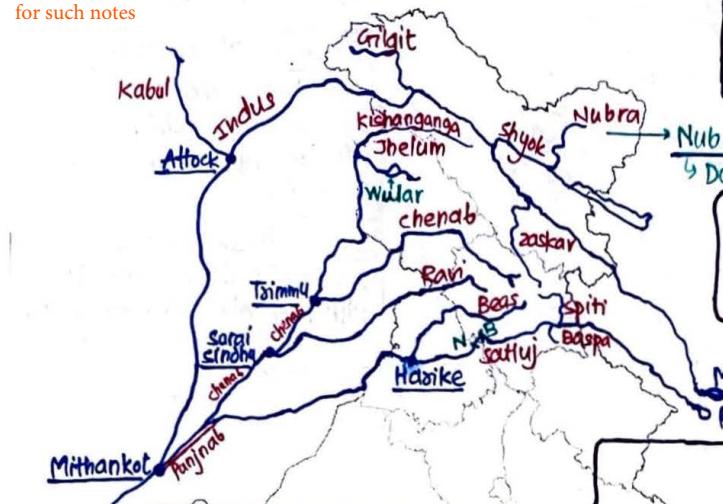
**UPCOMING INITIATIVES**

1. PRELIMS TEST SERIES FOR 2025
2. MAINS TEST SERIES FOR 2025
3. ESSAY VIDEO BATCH FOR 2024 AND 2025
4. ETHICS VIDEO BATCH FOR 2024 AND 2025
5. SOCIOLOGY VIDEO BATCH FOR 2025 BASED ON PYQ
6. CSAT VIDEO BATCH
7. MAINS MARATHON 2024 AND MUCH MORE

Connection C  
First Green Revol'

## Indus River System

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**Indus** • source - mansarovar

• Tributaries

↳ Right Bank - shyok, Nubra, Hunza, Gilgit, swat etc. kabul.  
↳ Left Bank - zaskar, soan, Jhelum, chenab, Ravi, Beas, Sutlej, Panjnad, Ghaggar-Hakra, Luni

• Dam → Tarbela, chasma (Pakistan)

• Wildlife → Indus River Dolphin, South Asian River Dolphin

Cetaceans (dolphin)  
acc. to WWF - if is one of the most threatened species.

Eurasian otter

• NPs - Hemis National Park

• Temple & famous place -

- mohenjodaro

- Thiksey monastery (ladakh UT)

• 25-30% of total Indus River basin, we have in India

Tibet → Ladakh → J&K → Pakistan  
In India \*\*\*

Joins  
chenab @  
Talimmo  
↑

**Jhelum** • source - Verinag Glaciers near (sheeshnag lake)

• Lakes - Wular, Dal

↳ Jhelum flows exactly through this

• Tributaries - kishanganga, lidder, sindh (Pak) in India

• Riverine Islands - Rupalank, Sonalank (inside lake) silver gold

• char chinari Island in Dal lake (small) (Big) Dal lake (lakut Dal) (Bud Dal)

• J&K (UT) → Pakistan

• Dam - Mangla dam (in Pakistan)

• Sonnagar is located on Bank of Jhelum

• NP - Dachigam National Park (nearby)

19<sup>th</sup> Sept 1960

Indus water Treaty

- Water of

- India's right on Western Rivers - Domestic, Non consumptive, Agri use.

• Saptasindhu -

(1) Saraswati

Nubra valley

↳ Double Humped camel

• Antecedent to all 3 ranges - Indus, Sutlej, Ganga, Kosi

• " - 2 ranges - (lesses Hima.) - Jhelum, Yamuna, Ganga

• " - only shivalik - Rapti, Beas

↳ (near Kailash range)

Mansarovar lake

Rakas Lake

↳ Maxam La (pass)

Eastern Rivers

RBSJ

Ravi

sathuj

Beas

water

chenab

Jhelum

Indus

water

eastern

CJI

is with

pakistan

chief Justice of

India

Royal Bank of Scotland

Royal Bank of

Scotland

(2) Sindhu-Indus (s) Ravi-Punjabhi

(3) Beas-Vipasha (e) Chenab-Asikni

(4) Jhelum-Vitasta (f) Sutlej-Shetrang

chenab

chandra

Part of Dhauladhar Range

Chandra

Bara lacha la

kullu hills

Chenab

• source - made up of two streams

• Tributaries - Chenab river valley meet at Tandi (HP)

Jhelum,

Ravi,

Tawi

• Largest tributary of Jhelum

• Dam - Baglihar Dam on Chenab River (J&K, India)

• Wildlife - Hog deer

• HP → J&K (UT) → Pak

India

Then the name

Chenab

• Rohtang pass

Beas River valley

• Source → Pakistan Tehsil of Kangra District (HP)

near Rohtang pass in Kullu Hills

• Dam - Thein Dam

(aka Ranjit Sagar), Chamera 1, Chamera 2

(all in India)

• Temple → Mukteshwar temple

• meets Chenab @ Sarai Sindhu in Pakistan

• Flows through Chamba Valley also

• HP → PJ → Pakistan

Beas

• source - Beeskund, Rohtang pass

• Joins Sutlej near Harsik

• Dams - Pandoh, Pong Dam Parvati Valley

• NP - Great Himalayan NP Tirthan Valley

• Temple - Hadimba Temple (Manali)

• Places - Kullu, Manali

Sutlej

• Source - Rakas Lake

• Enters India through Shipki La pass

• Dam - Bhakra - Nangal Dam

HP Dam Panjab Dam

• Govindsagar Lake (named on Sikh Guru)

• Nathpa Dam, Jhakori Dam

• Wetland → Harsik

Beas & Sutlej meets

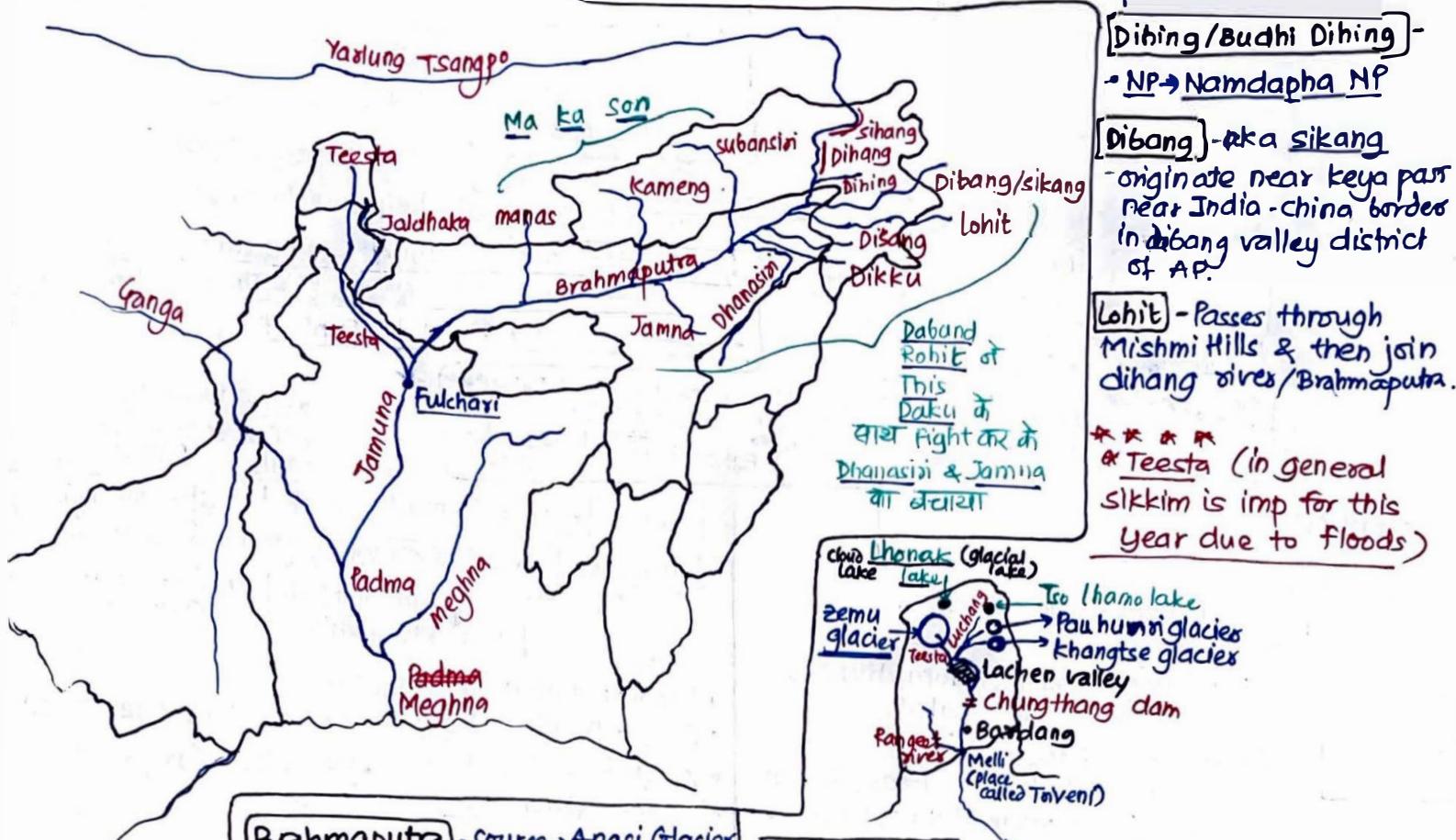
• Tributaries - Beas - Baspa, Spiti

(lahol Spiti district cold desert)

• Tibet → HP → PJ → Pak least population density

District in India

# Brahmaputra River system



source - Patkai hills

Dihing/Budhi Dihing

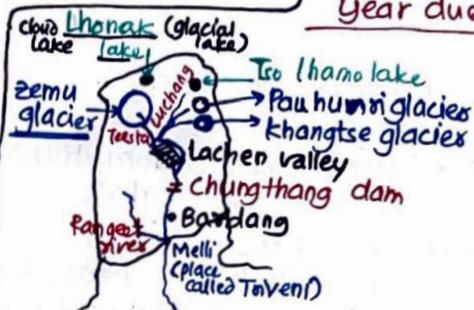
NP → Namdapha NP

Dibang - aka Sikang

- originate near keya pass  
near India-China border  
in Dibang valley district  
of AP.

Lohit - Passes through  
Mishmi Hills & then joins  
Dihang river/Brahmaputra.

\* \* \*  
\* Teesta (in general  
Sikkim is imp for this  
year due to floods)



## Brahmaputra

- Source → Angsi Glacier  
Schamzungdung glacier

- Majuli Is - world's largest Riversine Is  
↳ we have separate district also

- Umananda Is - world's smallest  
(near Guwahati) Riversine Island

- in complete NPs - River BR System
- Manas BR - Assam
- Dihang Dibang BR - Arunachal
- Orang NP
- Kaziranga NP
- Pobitora WS (one horned rhino)



## Teesta River

- Source - Zemu glacier

- Lu Chang river joins Teesta @ Chungthang dam

- Rangit River meets Teesta @ Melli / Taiveni

- Teesta River Joins Brahmaputra @ Fulchari  
in Bangladesh

## Jaldhaka - aka Dihu river

source - Kupup or Bitang lake in Sikkim

## Manas

- largest River system of Bhutan

- joins Brahmaputra @ Jogighopa (NW-2)

- NP → Royal Manas NP in Bhutan

- BR → Manas BR in India

## Kameng

- called -> Kameng in Arunachal  
Jia Bhoreli in Assam
- joins Brahmaputra @ Tezpur (NW)
- TRs → Pakke TR (AP)  
→ Namor TR (Assam)

## Subansiri

- joins Brahmaputra @ Lakhimpur.



## Mahanadi River system

## Godavari River system

## Krishna River system

## Kaveri River System

## Narmada River

# Tapi River

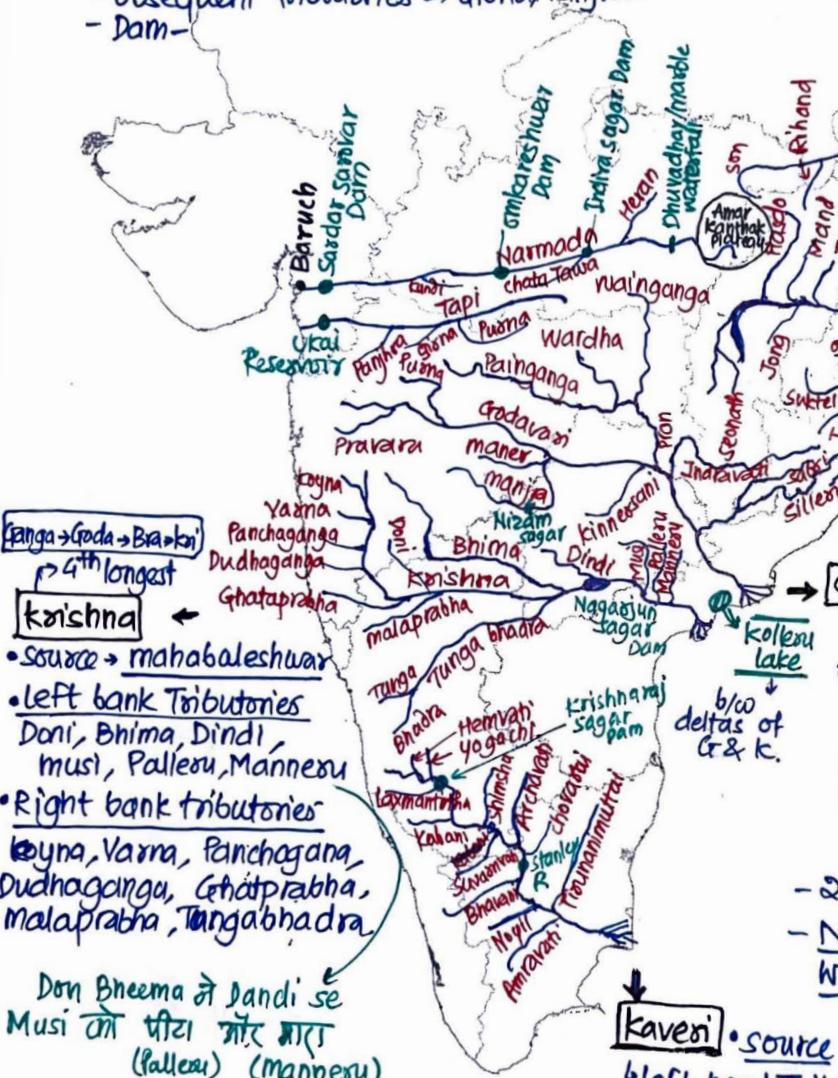
↗ Rift Valley River

Narmada • source - Amarkantak Plateau

- ↳ Temple - Omkareshwari Temple.
  - Chota Tawa → obsequent drainage (← )
  - Dams.

Tapi : Source - Multai in Betul District of MP

- obsequent tributaries → Ganga, Panjhra
  - Dam -



## Krishna River system

## Kaveri River System

## Narmada River

# Tapi River

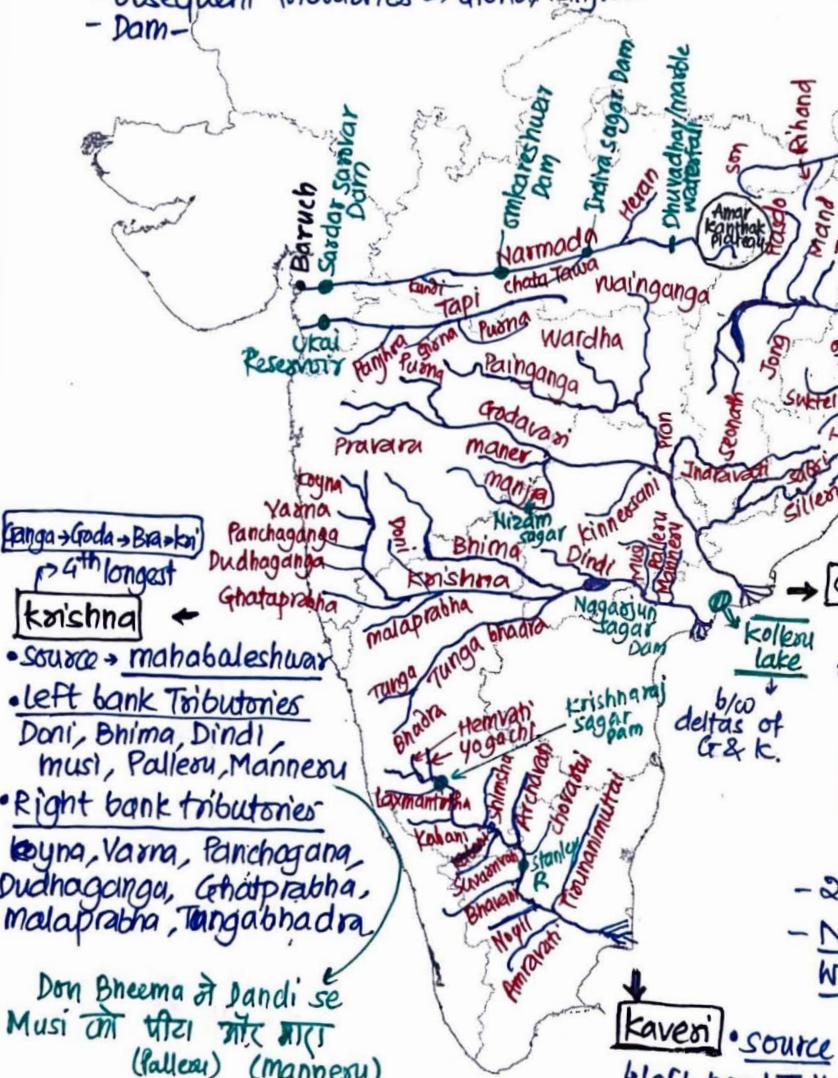
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  - Dam -



↳ left

**Dakshin Ganga** mand, Ib.  
odavari • source → Tryambakeshwara (Nasik)

- 4) Left bank tributaries - Puona, Pranabita, Indravati  
 5) Right bank - Pravara,  
Manjira, maner, kinnarsani  
 [P M I M K]  $\rightarrow$  PM के Man की  
 कहानी (k)  
 Nizamsagar Dam  
 on Manjira river

↳ Painganga, Sabri,  
 ↳ Wardha,  
 ↳ Neinganga  
 [P P P W W I S S]

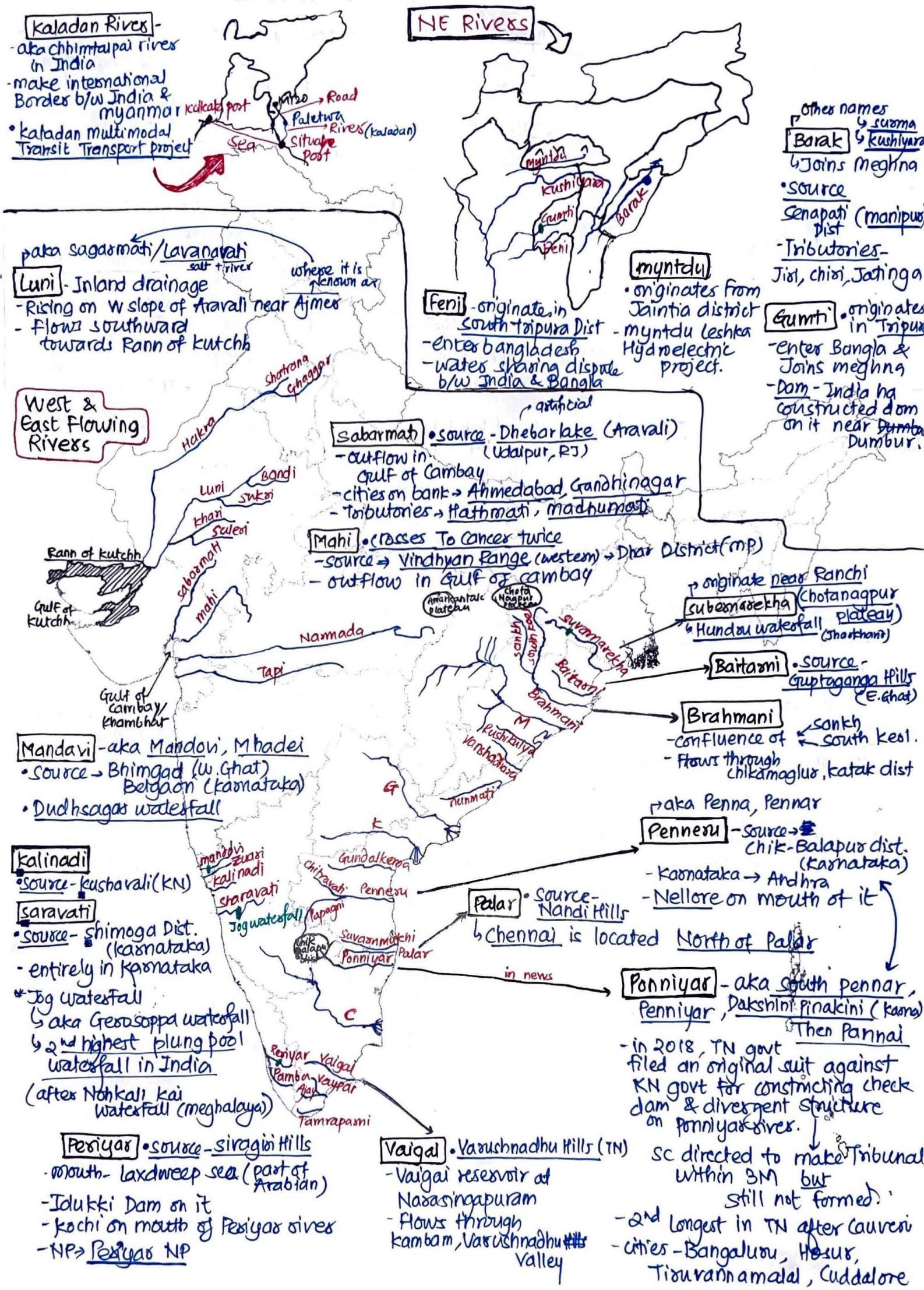
- 2<sup>nd</sup> longest River in India after Ganga
- NP → Parikrama NP

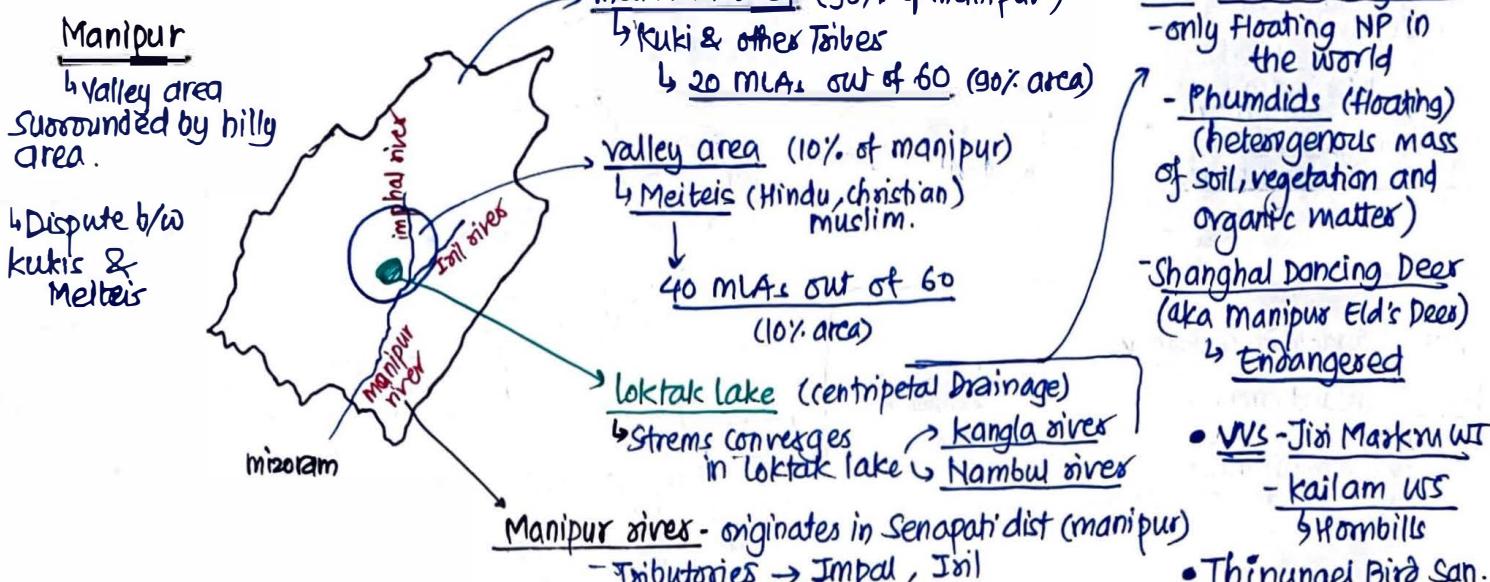
Papikonda NP

NS → R&B Coxinha WT

**Kaveri** • source - Brahmagiri hills / Tala kaveri  
↳ left hand tributaries - Hemavati, Hogenahalli

- ↳ Right Bank Tributaries -  
Laxmantirtha, Kabani, Suvarnavati, Bhavani, Noyil, Amaravati.
  - Krishnaraj Sagar Dam (Mysore Dam) on Cauvery.
  - Kaneri waterfall (b/w Suvarnavati & Shimsha)





- NP → keibul lamjao NP
  - only floating NP in the world
  - Phumdis (floating) (heterogeneous mass of soil, vegetation and organic matter)
- Shanghal Dancing Deer (aka Manipur Eld's Deer)
  - ↳ Endangered
- WLS - Jiri Markam WI
  - kailam WLS
  - ↳ Hornbills
- Thinungel Bird San.
  - first Bird sanct. of manipur

### International Water Sharing agreements

#### ① India-Nepal Cooperation -

- Pancheswar Multipurpose Project
  - ↳ Mahakali treaty
- Saptakosi High dam project and sunkosi storage cum diversion project scheme
  - ↳ Under process
- Kamla & Bagmati multipurpose project
  - ↳ Under process
- Karnali multipurpose project
  - ↳ Karnali in India is known as Ghagra.

↳ Loktak lake is largest freshwater lake in NE.  
 ↳ included in Montreux record in 1993 as a result of ecological problems such as deforestation in catchment area, infestation of water hyacinth & pollution.  
 ↳ invasive species.

#### ② India - Bangladesh cooperation

- Indo-Bangladesh Joint river commission
  - ↳ functioning since 1972.
- Discussion is going on in Bangladesh for sharing of water of Teesta, Feni, Manu, Muhuri, Khwai, Gomti, Jaldhaka, Torsa.
- latest Dev → Kushiyara treaty, 2022

#### ③ India-China cooperation -

- MoU upon provision of Hydrological information on River Brahmaputra.
- Satluj

- A scheme titled Comprehensive scheme for Establishment of Hydro-meteorological and flood Forecasting network on rivers common to India & Bhutan is in operation
- Network consists of 32 hydro meteorological stations located in Bhutan & being maintained by Royal Govt of Bhutan with funding from ~~India~~ India
- Data received from these stations is utilized by India for formulating flood

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CHINA

## **MYANMAR (BURMA)**

# Bay of engal

# **INDIA RIVERS & DAMS**

## **Country Boundary**

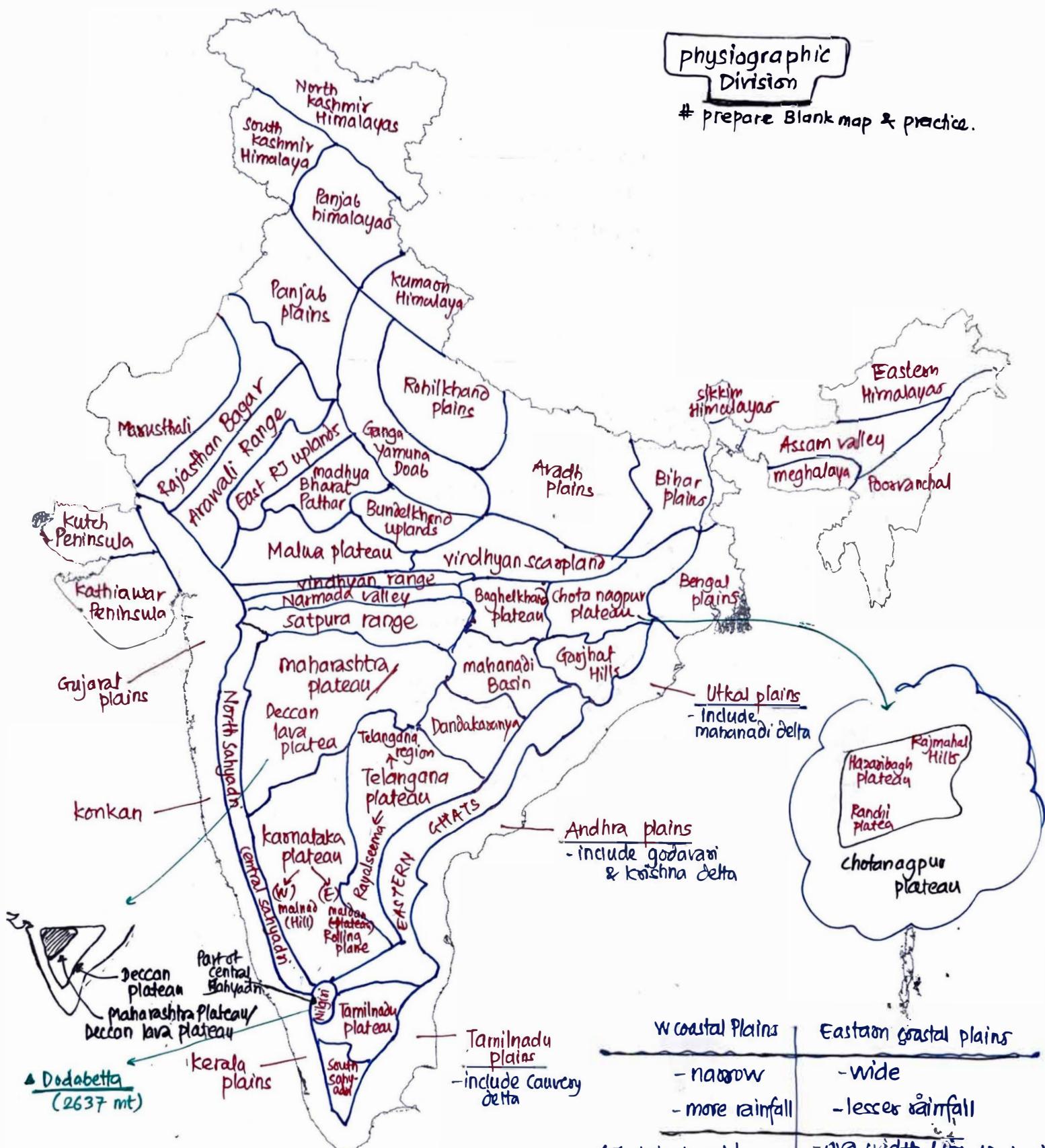
## River



Dam

**physiographic Division**

# prepare Blank map & practice.



**W coastal Plains**

- narrow
- more rainfall

**Eastern coastal plains**

- wide
- lesser rainfall

- GJ plain is wide  
(N & T rivers)

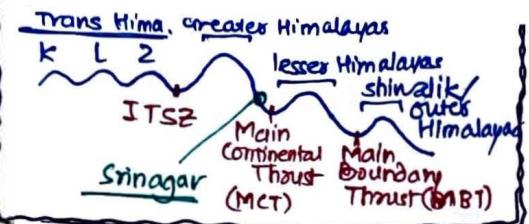
- Kannad plain is  
narrowest western  
coastal plain.

Sediments by both  
sea and River.

- from Rann of kutch  
to kanyakumari

- avg width - 100-130 km

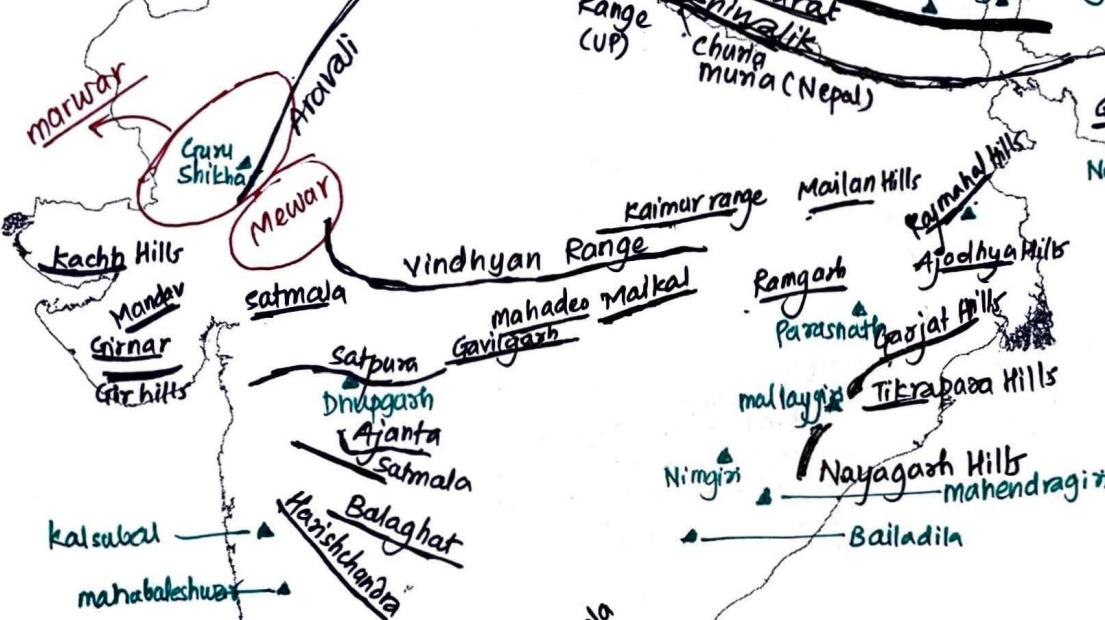
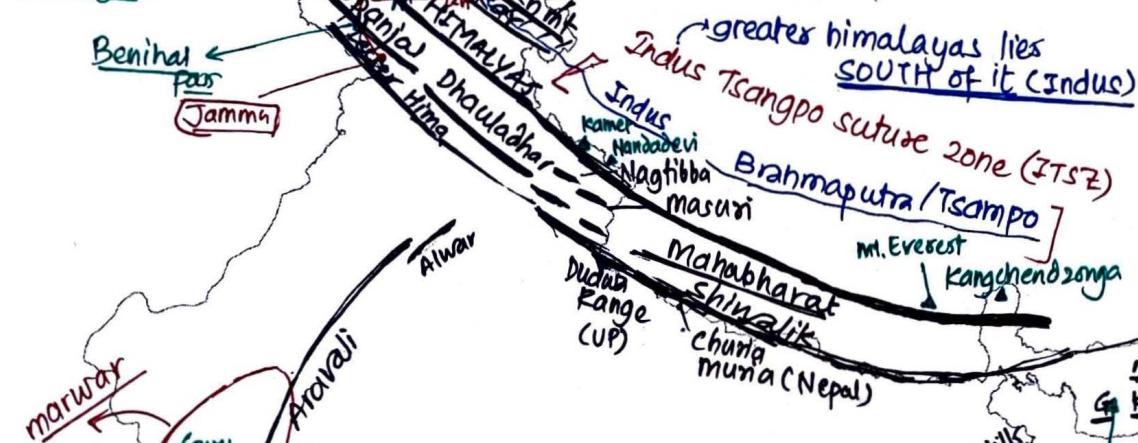
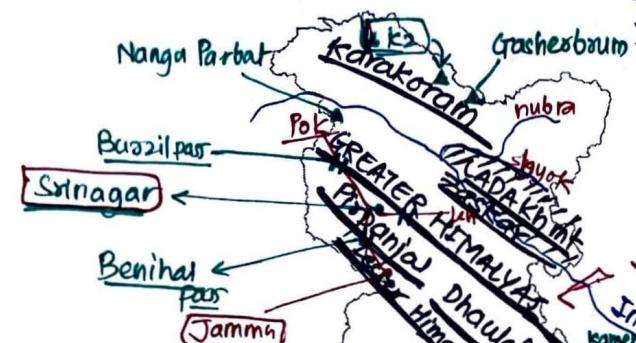
- from Ganga delta to  
Kanyakumari.



**Physiography of India**  
oldest Penn.  
Himalayas, great plains, plateau, coastal plains, Islands youngest

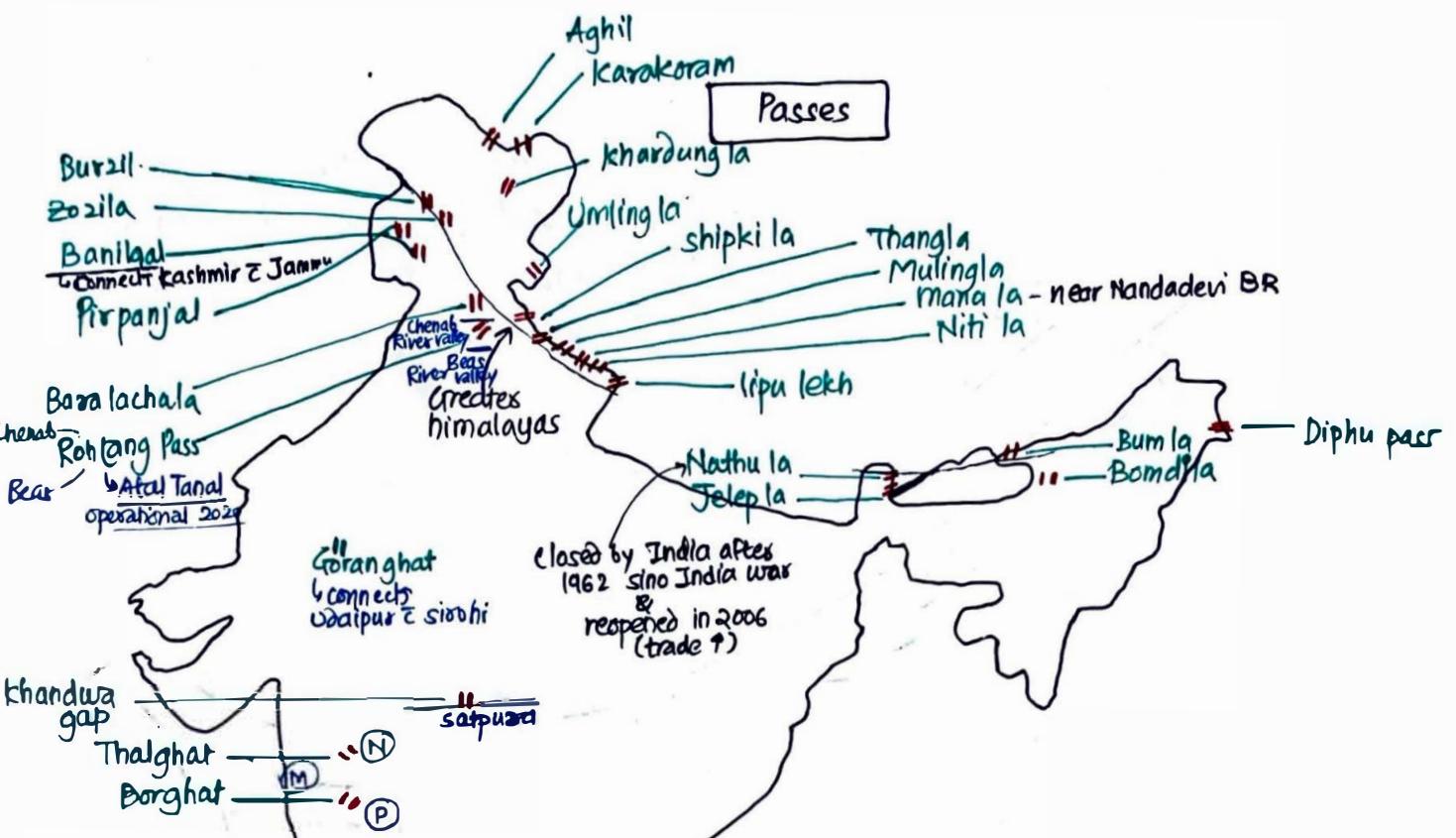
### Himalayas

J&K, Ladakh, Panjab, Haryana, Himachal, Uttarakhand, UP, WB, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Assam, Tripura. (13 states 2 UTs)



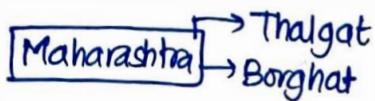
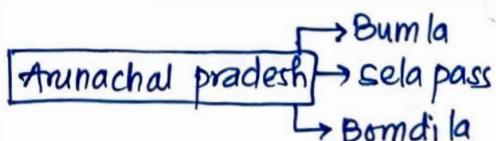
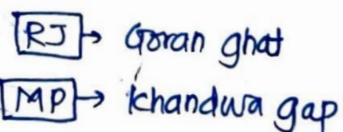
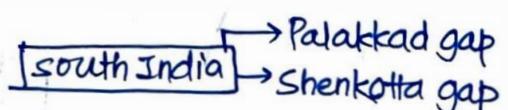
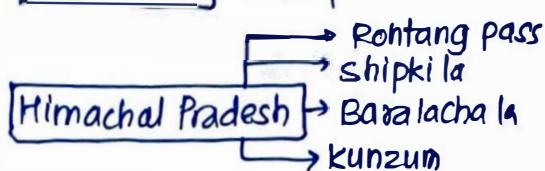
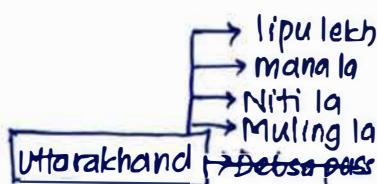
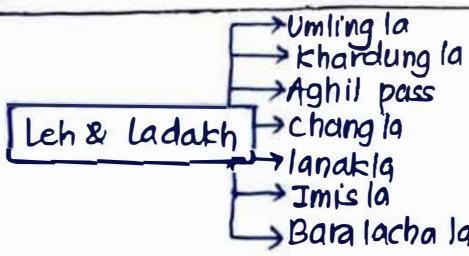
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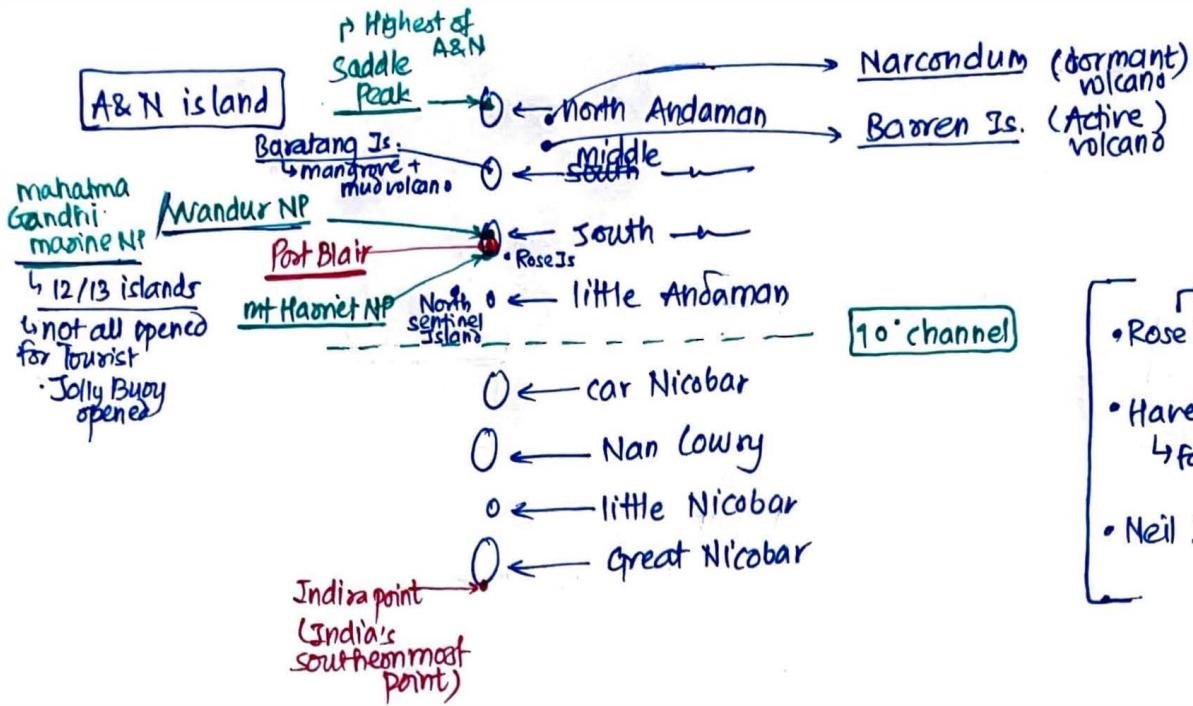
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Palakkad / Palghat gap  
 shenkottai gap  
 - Southern part of Western ghats is separated from main Sahyadri through this  
 - connects Tiruvananthapuram to madurai  
 - SW monsoon pass through this gap  
 - so more rainfall as comp. to rain shadowed surrounding

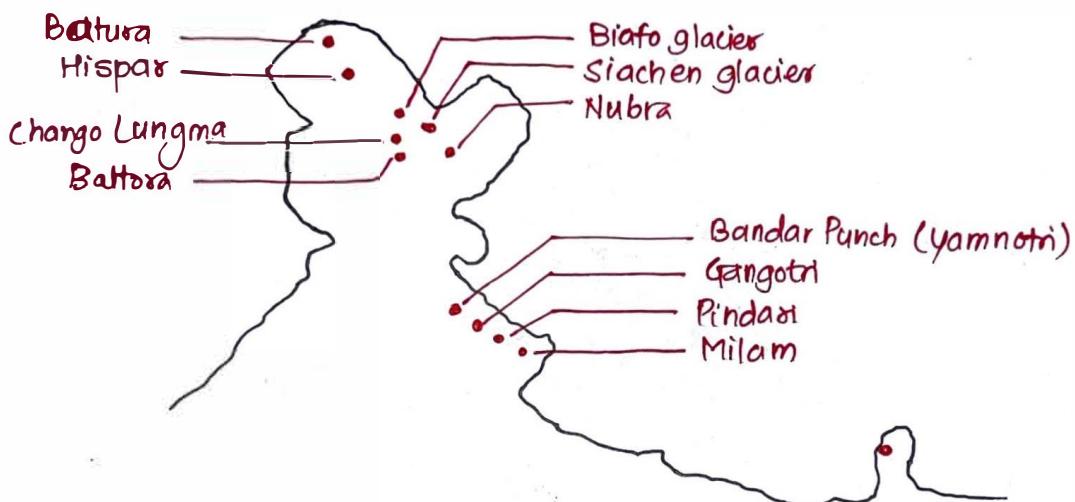
- connects Cochi & Coimbatore





- earlier British colony
- Rose Is ⇒ Netaji Subhashchandra Bose Dweep
- Havelock Is ⇒ Swaraj Dweep
  - famous for Radhanagar Beach
- Neil Is ⇒ Shaheed Dweep

## Glaciers



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- 7<sup>th</sup> largest in terms of area  
[RCCUGA]

- E-W / W-E  $\Rightarrow$   $\sim 30^\circ$  lat/long  
- standard longitude  $\rightarrow$  82.5°E



• Oldest fold mt system in world  $\Rightarrow$  Eastern Ghats

(3.2 bn yr old)

[both Aravali / Vindhya - 2-7 bn yr old]

• Major geological upheaval / tectonic events of peninsular block of India (After tectonic times)

The peninsular block / Indian plateau is basically the old cratonic shield. It is formed by fusion of 3 proto/micro continents along "Narmada, Godavari and Son-lineament"



- During Gondwana times (prior to tectonic times) ..

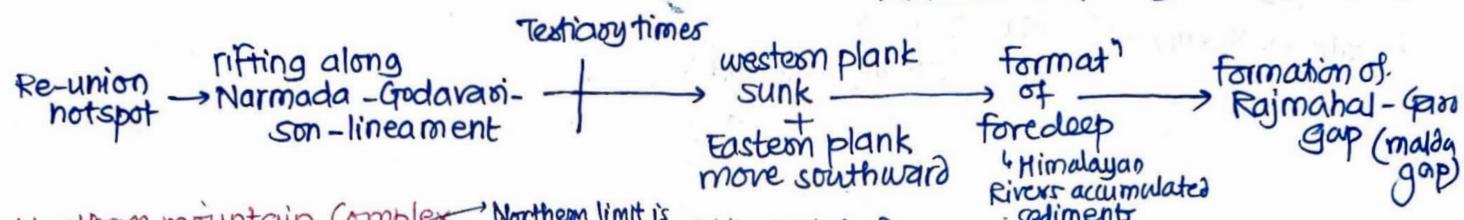
↳ re-activation of Narmada, Godavari & Son lineament

$\downarrow$  massive subsidence of forest & wildlife

$\downarrow$  this created the coal field of India.

(Narmada, Godavari, Mahanadi, Wardha, Damodar, Son)

$\therefore$  (90-95% of India's coal is Gondwana coal)  
 $\downarrow$  inferior in quality (bcz younger)



### 0 Northern mountain Complex

- Northern limit is marked by Pamir, Aghil mt & Yarkand River
- 1) Trans Himalayas  $\rightarrow$  1.1 Karakoram  
↳ youngest mt. system of world.
  - 2) Himalayas  $\rightarrow$  2.1 Great Himalayas (highest, oldest of all three)  
↳ 2.2 middle Himalayas  
↳ 2.3 Shivaliks
  - 3) Paurvanchal Hills

$\downarrow$  all three are fold mt.  
 $\downarrow$  upliftment of Tethyan Accretionary Prism.

**Great Himalayas**  $\rightarrow$  youngest  $\rightarrow$  less eroded  $\rightarrow$  so highest  
→ still uplifting  
→ As peninsular plateau is continuously underthrusting the Eurasian plate, there is a lever action.  $\rightarrow$  so continuous upliftment or thrusting of Tibetan plateau

$\therefore$  Tibetan plateau is called as  $\downarrow$  rooftop of the world

2.2) middle himalayas  $\rightarrow$  most discontinuous & complex of all  
lesser himalayas  
Himachal

$\rightarrow$  Pirpanjal  $\rightarrow$  Dhauladhar  $\rightarrow$  Nag Tibba  $\rightarrow$  Masoom  $\rightarrow$  Kumaon  $\rightarrow$  Gharwal

J&K

PJ / HP

Uttarakhand

2.3) shivaliks  $\rightarrow$  uplifted alluvial fans.  
outer himalayas  
sub himalayas



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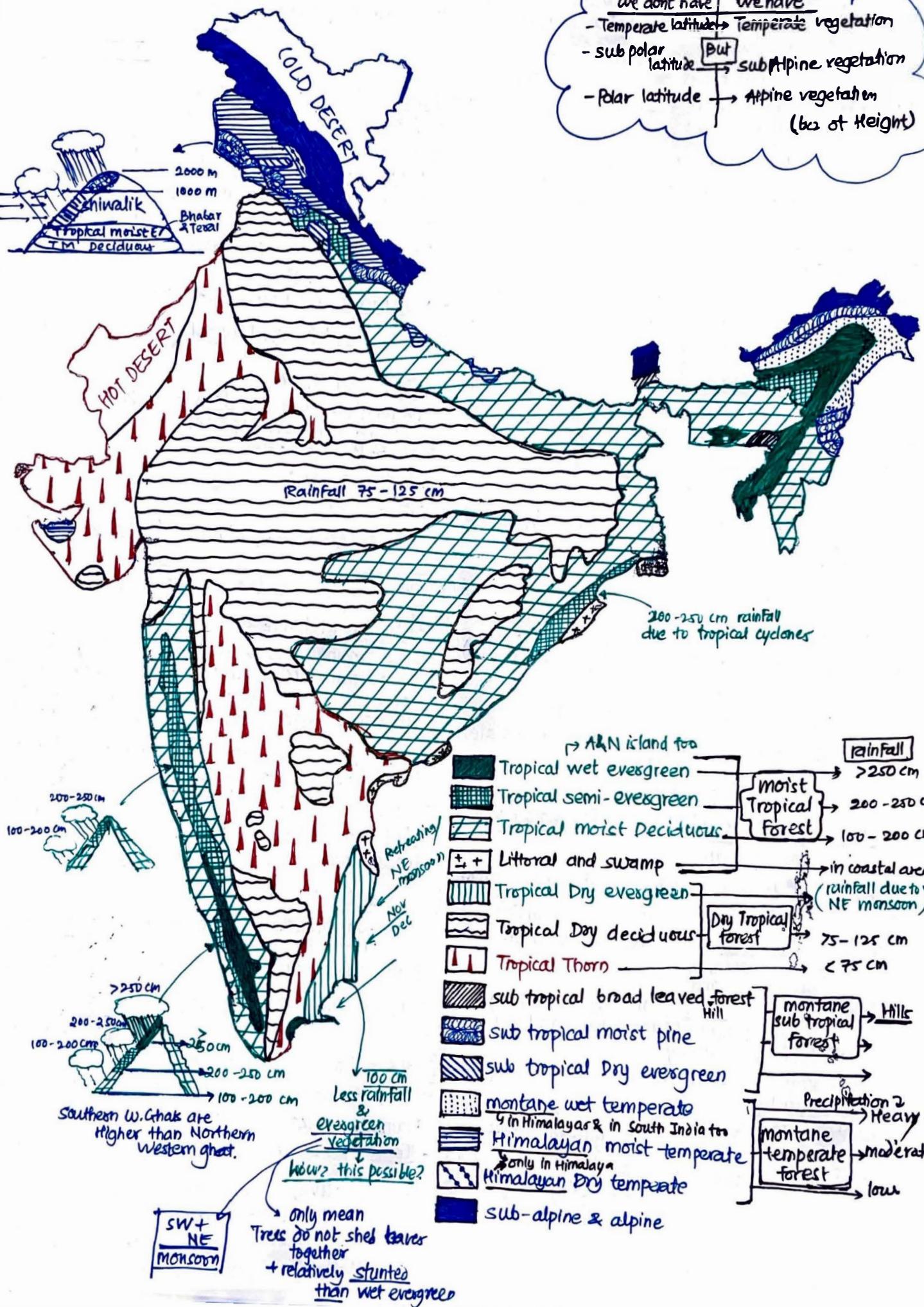
## Natural Vegetation

In India,

we don't have Temperate latitude → Temperate vegetation

- sub polar latitude → sub Alpine vegetation

- Polar latitude → Alpine vegetation  
(bcz of height)



## 5 main types

### ① Moist Tropical Forest

#### 1.1) Tropical Wet evergreen forest-

- area - western side of southern western Ghat
- Patches in TN
- NE states (some part of Arunachal pradesh, Upper Assam, Naga, Mani, Mizo, Tripura, Megha.)
- Some parts of A & N.
- rainfall → annual rainfall exceeds 250 cm
- avg annual temp → 25°C - 27°C
- avg annual relative humidity exceed 77%
- Trees - Mesua, white cedar, calophyllum, Palaeium, Hopea, Jamun, Pine.

#### 1.2) Tropical Semi evergreen forest -

- rainfall → 200-250 cm - temp - 24-27°C - relative humidity
- area → Northern part of western ghat
  - Western side of southern western ghat (bordering wet evergreen)
  - lower slope of Himalayas (Shivalik)
  - Some part of WB & Odisha
  - Some part of A & N (Bordering wet evergreen)
- Trees - kadam, laurel, Rosewood, mesua, as comp. white cedar, Indian chestnut, litsa wet eve. to less dense tree canopy with heavy climbers & Epiphytes in abundance.

#### 1.3) Tropical moist Deciduous forest -

- rainfall - 100-200 cm - temp - ~27°C - RH = 60-75%
- area - W & E slope of W ghat (surrounding the belt of evergreen forest)
  - strip along shivalik (including Terai & Bhabar)
  - NE (some part of Assam, Megha, Mani, Mizo)
  - Some parts of MP, Chh, Chota Nagpur plateau, Od, WB.
  - Some parts of A & N
- Trees - Teak\*, Sal\*, Laurel, Rosewood\*, Mahua\*, semul, Bamboo etc

- Trees shed their leaves in a particular season

#### 1.4) littoral & swamp -

- moist bcz of rainfall  
Tropical forest in tropical belt  
Coastal area  
marshy land
- area - we have dense mangrove along the delta of Ganga, Mahanadi, Godavari, Krishna & Cauvery
  - mangrove occur all along the coastline in India.

- Rainfall - 100-300 cm

- temp - 26° - 35°C

- RH → more than 90%

- Trees - Sundari (sunderban), Bursera, Heritiera, Sonneratia, Rhizophora, Palm etc.

### ② Dry Tropical forest

#### 2.1) Tropical Dry evergreen

- area - along the coast of Tamilnadu
- receive annual rainfall of about 100 cm mostly from NE monsoon winds in Oct to Dec.
- Trees - khirni, Kokko, Neem, Toddy palm, Gamarai cane
- characteristics of this forest are short Height trees (Height upto 12 m)

#### 2.2) Tropical Dry Deciduous forest

##### Rainfall - 75-125 cm

- area - irregular wide strip running from foot of himalayas to kanyakumari (Rainfall 75-125 cm except RJ, W ghat, WB, NE)
- it is similar to moist deciduous & shed their leaves in dry season
- Temp - 26-29°C
- relative humidity - 50-60%
- Trees - teak\*, Axlewood, Satinwood, khair\*

#### 2.3) Tropical thorn -

- NW part of country → Rain shadow region of W Ghat including RJ, SW PJ, W Haryana, GJ.
- Rainfall - < 75 cm
- Temp - 25-30°C
- RH - < 50%
- Trees - khair, Neem, Babool, Khanju.

### ③ Montane Sub-tropical forest

#### 3.1) ST Broad leave Hill forest -

- area - Mahabaleshwar, Nilgiri, Palni Hills, Satpura, Maikal range, Bastar plateau, Abut hills in RJ, Jaintia Hills and also found in some part of E. Himalayas (ast of 32°E)
- height - 1000 m to 2000 m above sea level.



- Rainfall - 125-150 cm

- avg annual temp - 18-21°C

- avg annual RH - ~80%

- Trees - oak, chestnut, sal, pine

#### 3.2) sub tropical moist forest -

- area - on shivalik (western + eastern himalayas) from 1000 to 2000 m above sea level

- Rainfall - 150 cm + - Temp - 18°C - RH - more than 70%

- Trees - chior, stunded oak, grassy floor & bulbous flowers & bulb shape plant

#### 3.3) sub Tropical Dry forest -

- area - found over shivalik upto 1000 mt height (mainly)

- Rainfall - 100-150 cm in E. Himalayas → more rainfall

- Temp - 20°C - RH - 60-70% so [Dry < moist]

- Trees - olive, acacia modesta, Pistacia, Palm Nonnorps ps

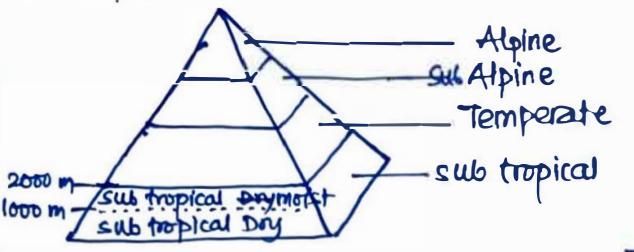
- \* scrub forest & stunted trees, shrubs, herbs & grasses. [scrubland = mixed]

only on mountains b/c In India we don't have temperate latitudes

#### ④ Montane Temperate forest

- area - Higher Hills of TN & Kerala, Eastern Himalayas
- @ Height of 1800 mt - 8000 mt Above sea level
- Precipitation - 150 cm to 300 cm
- Temp - 11° - 14°C (annual) RH - over 80% (annual)
- Trees - Deodar\*, Indian chestnut, Litsea, Blue pine, oak, Hemlock.

#### Himalayas



#### 4.2 Himalayan moist Temperate forest

- area - occurring in temperate zone of the himalayas between 1500 mt to 3300 mt above sea level.
- kashmir, HP, Utt, Sikkim.

\* (windward side of lesser & greater himalayas)

- Precipitation - 150 - 200 cm

- temp - 11° - 14°C (annual)

- RH - 60% - 75%

- Trees - Pine, cedar, silver fir, spruce

\* mainly consist of coniferous species.

#### 4.3 Himalayan Dry Temperate forest

- area - found in inner dry ranges of himalayas where south west monsoon is very weak & precipitation is below 100 cm (mostly snow)

#### (leeward side)

such areas are in Ladakh, Lahaul Spiti, Chamba, Kinnaur & part of Kumaon & Garhwal & some part of E. Himachal.

- temp - below 100 cm

- Precipitation - 11°C

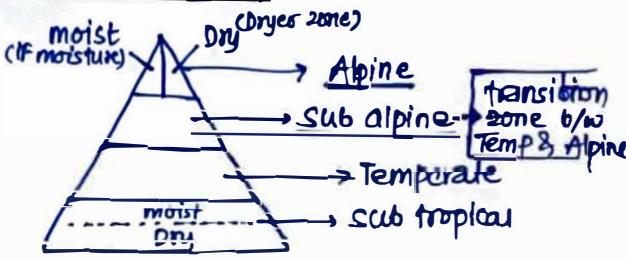
- RH - 50 - 60%

- Trees - Deodar, Chilgoza, oak, Maple, olive etc.

\* These are coniferous forests & Xerophytic shrubs

very less precipitation

#### ⑤ Sub-Alpine & Alpine



- Sub alpine - it is a mixture of coniferous and broad leaf trees where coniferous trees attain a height about 30 mt while broad leaf trees reach upto 10 mt.

↳ How's possible?

↳ they are not directly in contact w/ snow



(as comp. to needle leaves  
they are broad.)

- Trees - fir, kail spruce, rhododendron, plum, Yew.

- Moist Alpine scrub - these are found over a height of 3000 mt above sea level and extend upto snow line (only ice) veget.

- Trees - Rhododendrons, birch, honeysuckle.

- Dry alpine scrub - It is the uppermost limit of xerophytic scrub over 3500 mt above sea level & found in dry areas.

- Trees - Juniper, Honeysuckle

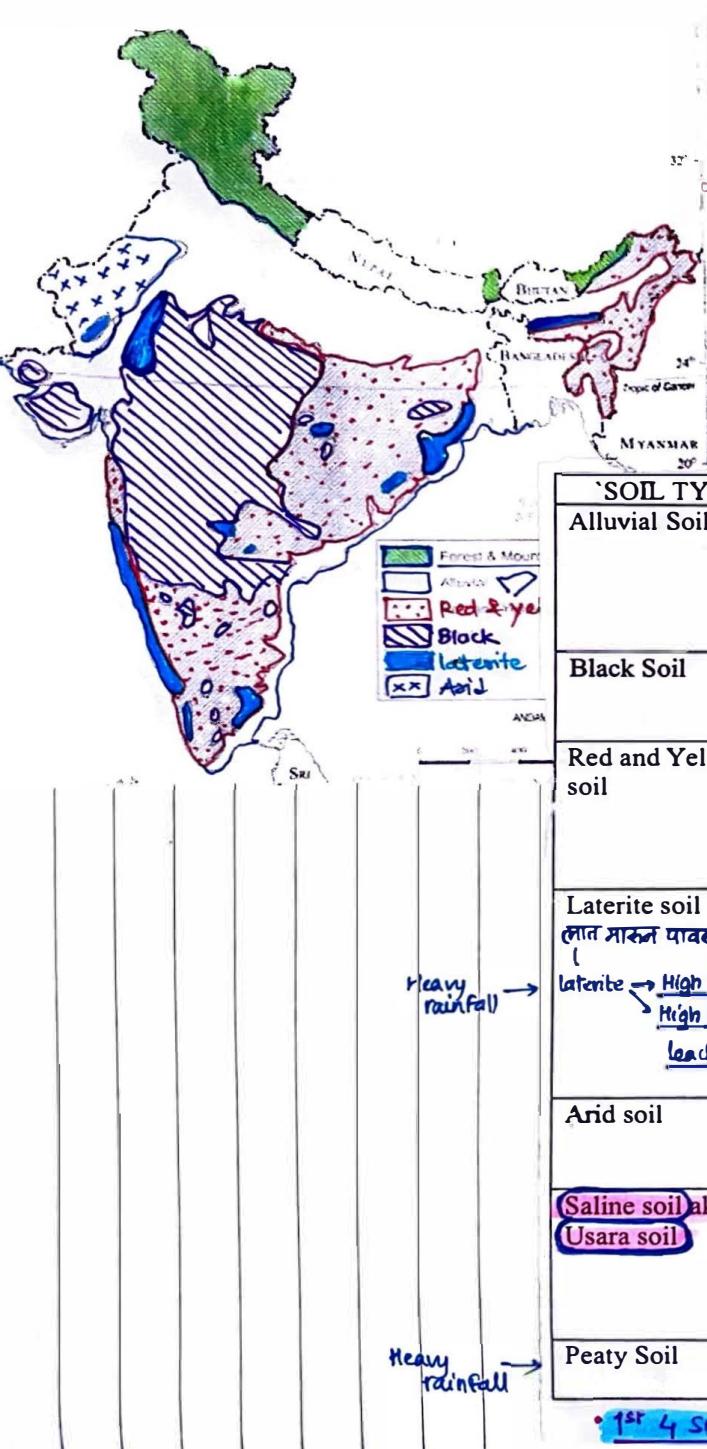
Please share these notes to help fellow aspirants

Join me in telegram - UPSC PRELIMS WITH NEELESH (in telegram) for such notes

For free CSAT Videos - Join YouTube - CIVIL SERVICES WITH NEELESH

NEELESH KUMAR SINGH

ALL INDIA RANK 442 UPSC CSE 2021



- Rice - 47% of all crops - Highest (WB), entire Ganga plains, PJ, RJ, Andhra, TN, MH, Assam
  - Wheat - RJ, PJ, HR, MP (western states) - Rainfall in winter
  - Jowar - central Indian belt - Black soil - MH, Karnataka, Andhra, Telangana, GU

sown during monsoon  
harvested @ end of monsoon

- Sugarcane
- Rice
- cotton
- ground nut

**Rabi**

- sown - during winters
- Harvested - end of March/April
- wheat
- mustard
- gram
- almond
- pea

- sow twice a year
- cucumber
- watermelon

During summer  
b/w Rabi &  
Kharif

SOIL TYPE	CLIMATE/ EXPLANATION	REGION	RICH	POOR
Alluvial Soil	1. Khadar- new alluvium नवीनी चार्हाड़ी 2. Bhangular- old alluvium वृत्ति चार्हाड़ा    → पोश (चार्हाड़ा) Rich in Potash	1. Northern plains + Brahmaputra 2. GJ via narrow corridor thr RJ 3. peninsular river delta	1. Potash	1. Phosphorous, Nitrogen, Humus
Black Soil	1. slow absorption and loss of moisture- long retention	1. Deccan plateau 2. MH, MP, KR, GJ, AP and N. TN	1. Lime, iron, Magnesia, Alumina 2. Potash	1. Phosphorous, Nitrogen, Humus
Red and Yellow soil	1. Dev on crystalline igneous rocks in areas of low rainfall 2. red due to iron in crystalline and metamorphic rock 3. yellow- when hydrated	1. Parts of Odisha and CH + southern middle gangetic plains + South india 2. N.E. states		1. Phosphorous, Nitrogen, Humus
Laterite soil  लात मासुन पावसान Laterite → High temp High Rainfall leaching	1. High temp and High rainfall 2. result of intense leaching due to tropical rain 3. not suitable for agri 4. South-tree crops 5. Contains Clay minerals, 6. lacks silica	Higher areas of peninsular plateau 1. TN, AP, kerala, KR, Mp, hilly odisha and Assam	1. Iron oxide, aluminium 2. Excess- Potash and Iron oxide	1. organic matter, nitrogen, phosphate, calcium
Arid soil	1. sandy and saline 2. dry climate+ high temp 3. lower horizons- kankar	W. Rajasthan	1. Phosphate- Normal	1. moisture and humus 2. Nitrogen
Saline soil aka Usara soil	1. infertile, do not support ANY vegetative growth 2. Arid, semi-arid, waterlogged, swampy region	1. W. GJ, deltas of eastern coast, sunderbans 2. alluvial turning saline due to >> overirrigation >> capillary action (PN, HR)	1. Sodium, Potassium, magnesium	1. Nitrogen, calcium
Peaty Soil	1. areas of heavy rainfall and heavy humidity	1. N. Bihar, S. Uttaranchal, 2. coastal WB, Odisha, TN	1. humus and organic content	

- 1<sup>st</sup> 4 soils → Rich in Potash + Poor in Phosphorous

- All soils → Poor in Nitrogen



## **INDIA**

### **MAJOR PORTS AND SEA ROUTES**

A small black compass rose icon with the letter 'N' at the top.

**INDIA**  
MAJOR PORTS AND SEA ROUTES

Map showing Major Ports and Sea Routes in India and surrounding regions. Key features include:

- Neighboring Countries:** PAKISTAN, NEPAL, CHINA (TIBET), BHUTAN, BANGLADESH, MYANMAR.
- Sea Areas:** ARABIAN SEA, BAY OF BENGAL, OCEAN.
- Major Ports:** Mumbai, Kandla, Marmagao, Mangaluru, Kochchi, Tuticorin, Chennai, Haldia, Paradip, Calcutta, Port Blair, Colombo, Yangon.
- Distances:**
  - Mumbai to Karachi: 500 NM
  - Aden to Mumbai: 1660 NM
  - Colombo to Calcutta: 780 NM
  - Calcutta to Port Blair: 1250 NM
  - Chennai to Port Blair: 700 NM
  - Chennai to Yangon: 1020 NM
  - Chennai to Penang: 1300 NM
  - Mumbai to Colombo: 850 NM
  - Cape Town to Mumbai: 4600 NM
  - Mahe to Mumbai: 1750 NM
  - Mumbai to Colaba: 850 NM
  - Kandla to Mumbai: 500 NM
  - Mumbai to Kandla: 500 NM
- Handwritten Notes:**
  - Mumbai: natural Harbour - Dev by British
  - JNP: Developed as satellite port - To reduce Pressure - largest container port
  - Vishakhapatnam: landlocked
  - @ mahanadi delta - Deepest harbour Paradip
  - on Hoogly river - Dev by British
  - Kolkata: Haldia
  - Chennai: artificial (1859)
- Geographical Labels:** Tropic of Cancer, 36°N, 32°N, 28°N, 24°N, 20°N, 16°N, 12°N, 8°N, 72°E, 76°E, 80°E, 84°E, 88°E, 92°E.
- Scale:** 0 to 600 km.

**Fig. 8.4 : India - Major Ports and Sea Routes**

VII

- 36°N

36°N

## INDIA CONVENTIONAL ENERGY RESOURCES



PAKISTAN

- 32°

32°

- 28°

Sonipat  
Delhi  
Gurgaon  
Aonla

CHINA  
(TIBET)

NEPAL

Shahjahanpur  
Auraiya  
Jagdishpur

BHUTAN

Anta  
Singarauli

BANGLADESH

24°

Kalol  
Vadodara  
Jhabua  
Vijaypur

Bokaro  
Jharia  
Raniganj

MYANMAR

20°

- 20°  
Bassien  
Mumbai High  
ARABIAN  
SEA

BAY OF  
BENGAL

- 16°

Singareni

LAKSHADWEEP  
(INDIA)

- 12°

Neyveli

12°

INDIAN

- Coal Fields
- Coal Mines
- Oil Fields
- Major Natural Gas Reserves
- HVJ Natural Gas Pipeline

0 200 400 600 km

ANDAMAN & NICOBAR ISLANDS  
(INDIA)

OCEAN

8°N

SRI  
LANKA

90°

90°

76°

80°

84°

88°

36°N

PAKISTAN

32°

# INDIA

## IRON AND STEEL PLANTS



36°

32°

CHINA  
(TIBET)

NEPAL

BHUTAN

BANGLADESH

24°

Tropic of Cancer

Bokaro  
Bumpur  
DurgapurJamshedpur  
Rourkela

Bhilai

Vishakhapatnam

MYANMAR

20°

ARABIAN  
SEABAY OF  
BENGAL

16°

Vijaynagar

Bhadrapati

Salem

LAKSHADWEEP  
(INDIA)ANDAMAN & NICOBAR ISLANDS  
(INDIA)

INDIAN

72°E

76°

SRI  
LANKA

OCEAN

84°

88°

92°E

0 200 400 600 km

8°N

# INDIA

## IMPORTANT MINERALS

PAKISTAN

CHINA  
(TIBET)

BHUTAN

BANGLADESH

Tropic of Cancer

MYANMAR

ARABIAN  
SEA

BAY OF  
BENGAL

Ratnagiri

GOA  
Marmagao

Chitradurga

Shivmagi

Kudremukh

Mangalore-Chittarayapatna

Katni

Amarkantak

Balaghat

Nagpur

Bhandara Maikala Hill

Chandrapur

Baladila

Koraput

Hazaribagh

Sundergarh

Gua

Durg

Bilaspur

Kendujhar

Paradwip

Vishakhapatnam

Paradwip

Vishakhapatnam

LAKSHADWEEP  
(INDIA)

INDIAN

76°

SRI  
LANKA

OCEAN

84°

88°

92°

0 200 400 600 km

8°N

12°N

16°N

20°N

24°N

28°N

32°N

36°N

- IRON ORE FIELDS
- ▲ IRON ORE MINES
- IRON ORE EXPORTING PORTS
- ◆ MANGANESE
- ◆ BAUXITE
- ★ MICA

ANDAMAN & NICOBAR ISLANDS  
(INDIA)

72°E

76°

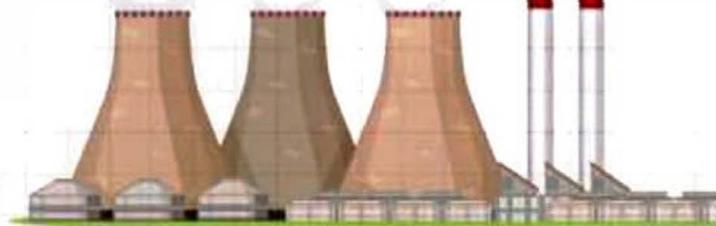
84°

88°

92°

8°N

# Nuclear Power Plants under operation in India



RAJASTHAN ATOMIC POWER PLANT-1 (RAPS-1), (RAPS-2), (RAPS-3), (RAPS-4), (RAPS-5), (RAPS-6)

KOTA, RAJASTHAN

KAKRAPAR ATOMIC POWER PLANT-1 (KAPS-1), (KAPS-2)

TAPI, GUJARAT

TARAPUR ATOMIC POWER PLANT-1 (TAPS-1), (TAPS-2), (TAPS-3), (TAPS-4)

BOISAR, MAHARASHTRA

KAIGA GENERATING STATION-1 (KGS-1), (KGS-2), (KGS-3), (KGS-4)

KAIGA, KARNATAKA

NARORA ATOMIC POWER PLANT-1 (NAPS-1), (NAPS-2)

NARORA, UTTAR PRADESH

MADRAS ATOMIC POWER PLANT-1 (MAPS-1), (MAPS-2)

KALPAKKAM, TAMIL NADU

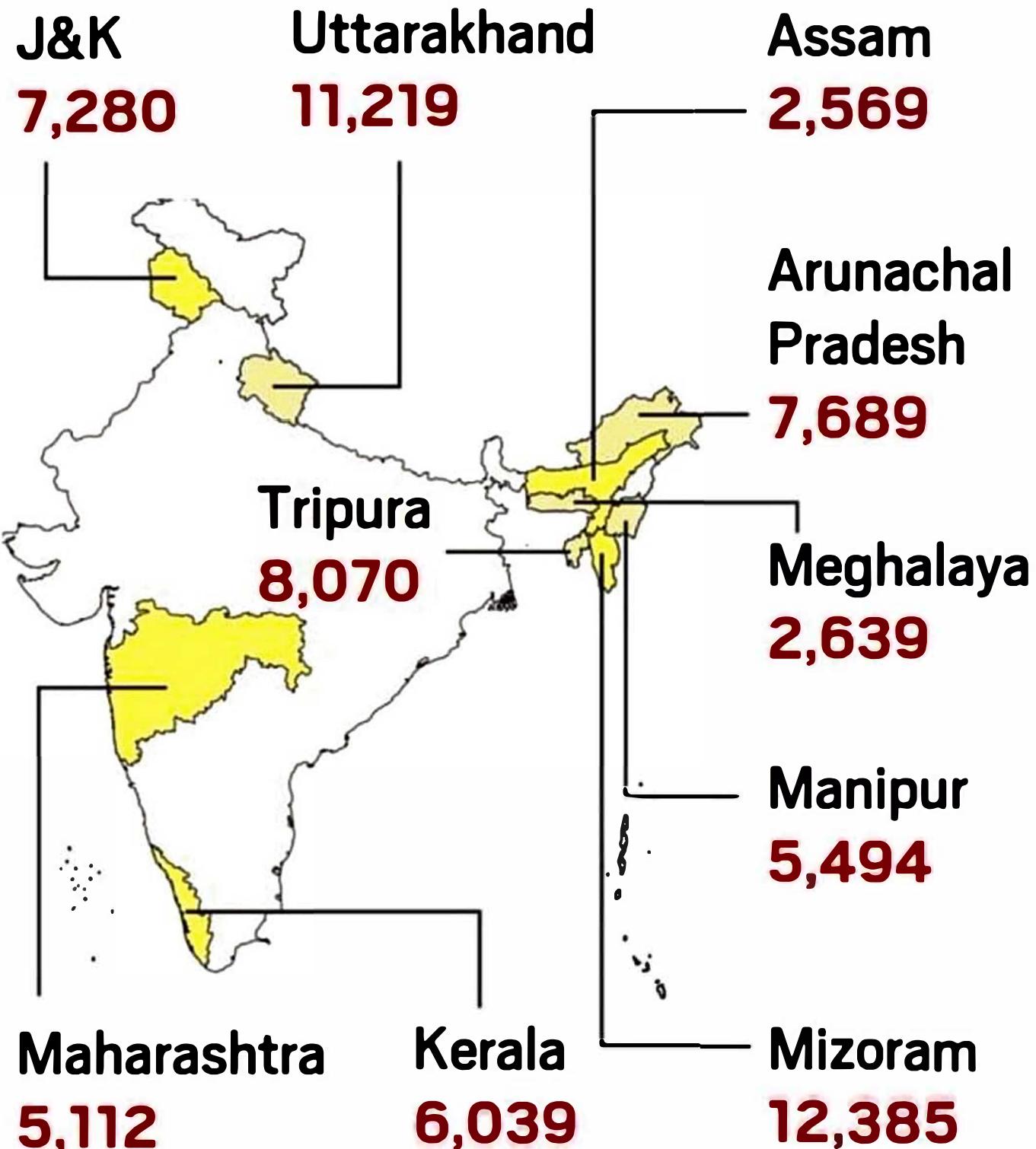
KUDANKULAM NUCLEAR POWER STATION-1 (KKNPS-1), (KKNPS-2)

KUDANKULAM, TAMIL NADU

THE TOP 10



# LANDSLIDE HOTSPOT AREAS IN INDIA (1998-2022)



# ISRO centres and units in India



**Chandigarh, Punjab**  
Semi-Conductor Laboratory (SCL)

**Ahmedabad, Gujarat**  
Development and Educational Communication Unit (DECU), Space Applications Centre (SAC)

**Bangalore, Karnataka**  
Department of Space and ISRO HQ, Human Space Flight Centre (HSFC), ISRO Telemetry, Tracking and Command Network (ISTRAC), Laboratory for Electro-Optics Systems (LEOS), U R Rao Satellite Centre (URSC)

**Thiruvananthapuram, Kerala**  
ISRO Inertial Systems Unit (IISU), Liquid Propulsion Systems Centre (LPSC), Vikram Sarabhai Space Centre (VSSC)

**Dehradun, Uttarakhand**  
Indian Institute of Remote Sensing (IIRS)

**Bhopal, Madhya Pradesh**  
Master Control Facility (MCF)

**Hyderabad, Telangana**  
National Remote Sensing Centre (NRSC)

**Nellore, Andhra Pradesh**  
Satish Dhawan Space Centre (SDSC) SHAR

**Mahendragiri, Tamil Nadu**  
ISRO Propulsion Complex (IPRC)

- Indian Space Research Organisation (ISRO) was formed on August 15, 1969.
- It is India's space agency.
- The Department of Space (DOS), GOI, executes the Indian Space Programme primarily through various Centres or units within ISRO.
- DOS was set up and ISRO was brought under DOS in 1972.



# TIGERS IN INDIA

No. of camera  
trapped tigers

Shivalik Hills and  
Gangetic Plains  
**804**



North-East  
**194**

Western  
Ghats  
**824**

▲ Tiger presence  
from genetics

■ Camera trap  
with tiger captures

Sunderbans  
**100**

Central India and  
Eastern Ghats  
**1,161**

**3,080**  
2022

**2,461**  
2018

**2,226**

2014

**1,706**  
2010

No. of tigers  
photograph

**76,651** : **97,399**  
2018 : 2022



# Biodiversity heritage sites in India



Sacred Grove at Sural Bhatori Monastery, Himachal Pradesh

High Altitude Meadow, Himachal Pradesh

Birch-pine Forest Patch, Himachal Pradesh

Naro Hills, Madhya Pradesh

Amarkantak, Madhya Pradesh

Patalkot, Madhya Pradesh

Landorkhori, Maharashtra

Ganeshkhind Garden, Maharashtra

Schistura Hiranyakeshi, Maharashtra

Bambarde Myristica Swamps, Maharashtra

Purvatali Rai, Goa

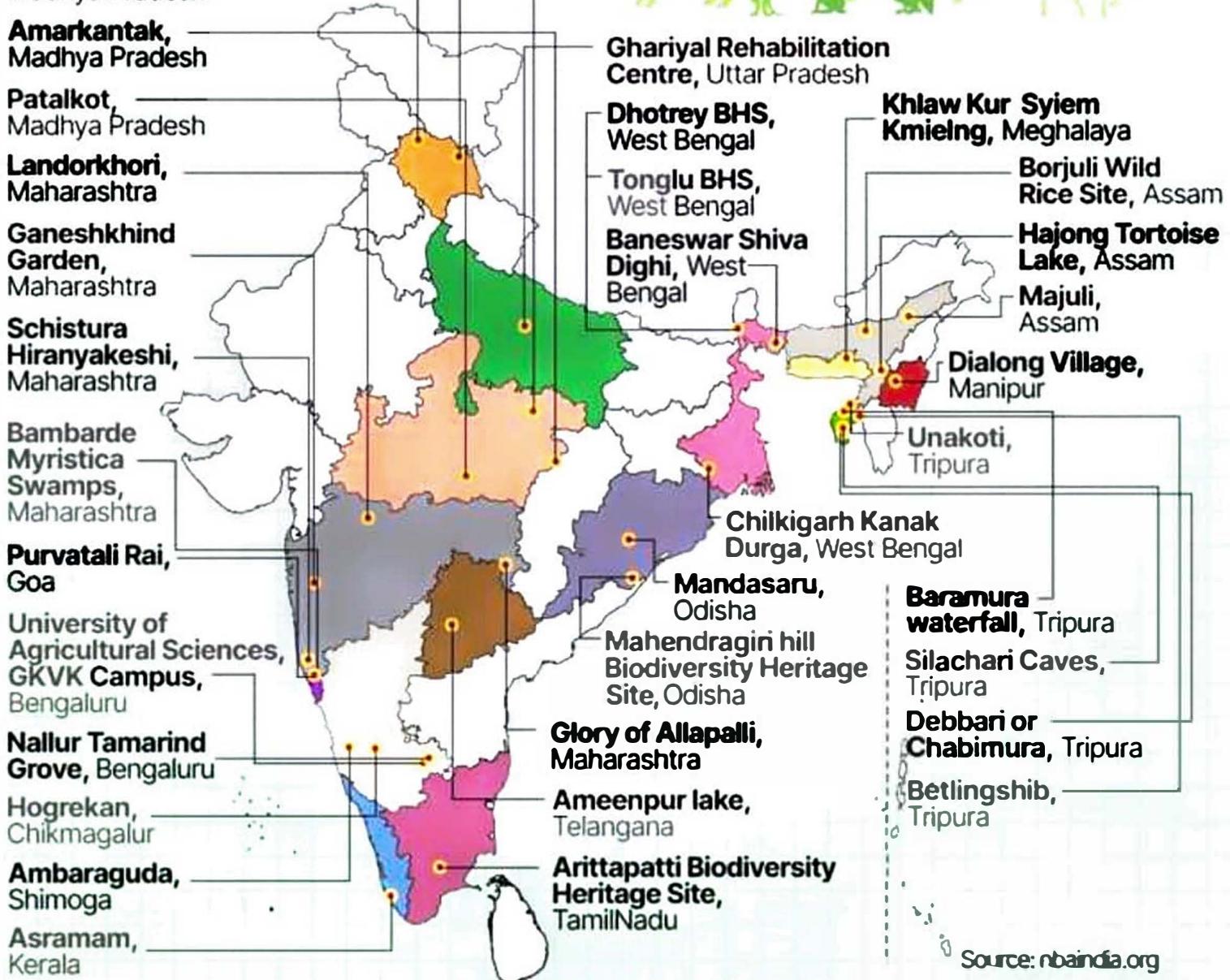
University of Agricultural Sciences, GKVK Campus, Bengaluru

Nallur Tamarind Grove, Bengaluru

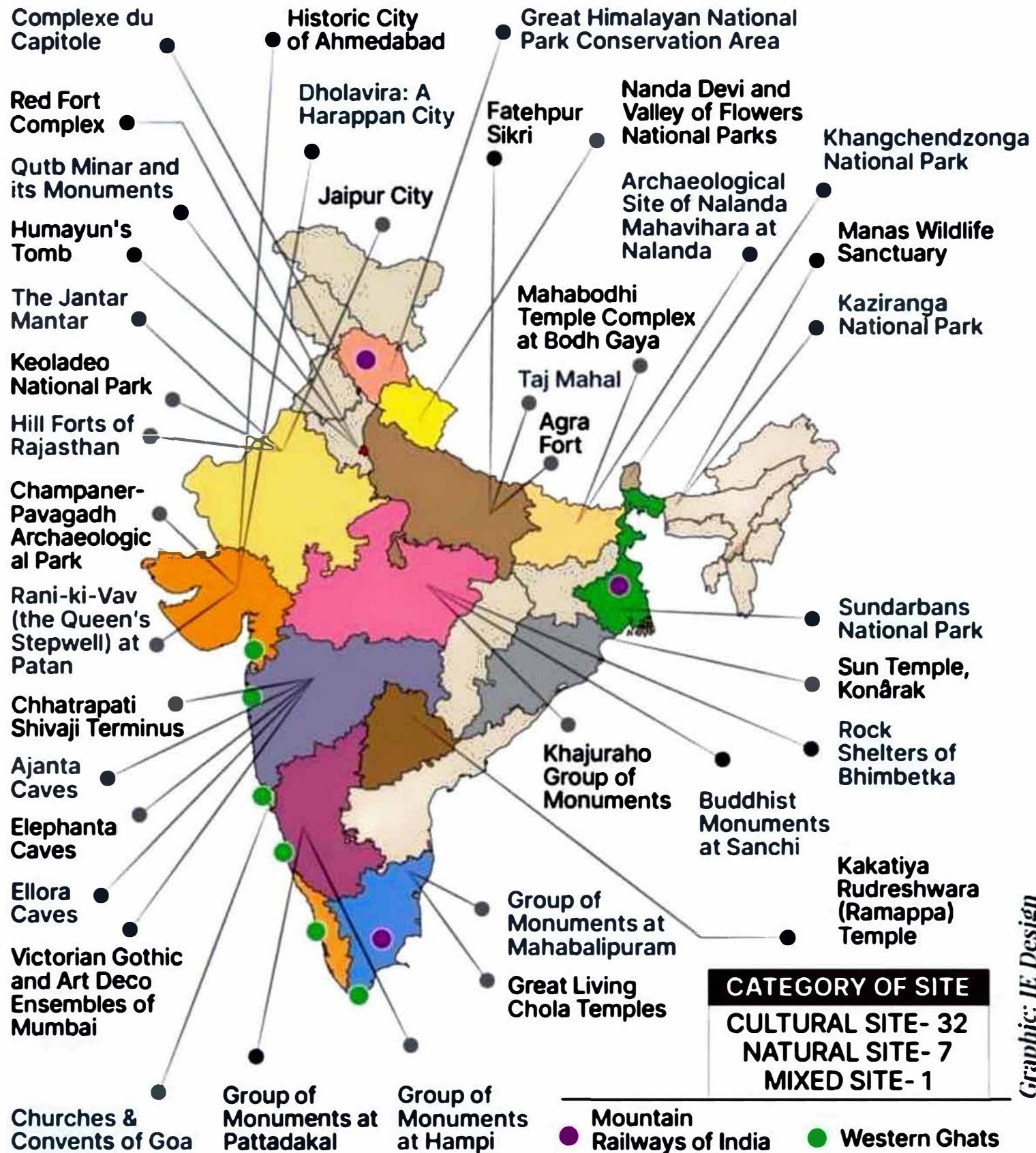
Hogrekan, Chikmagalur

Ambaraguda, Shimoga

Asramam, Kerala

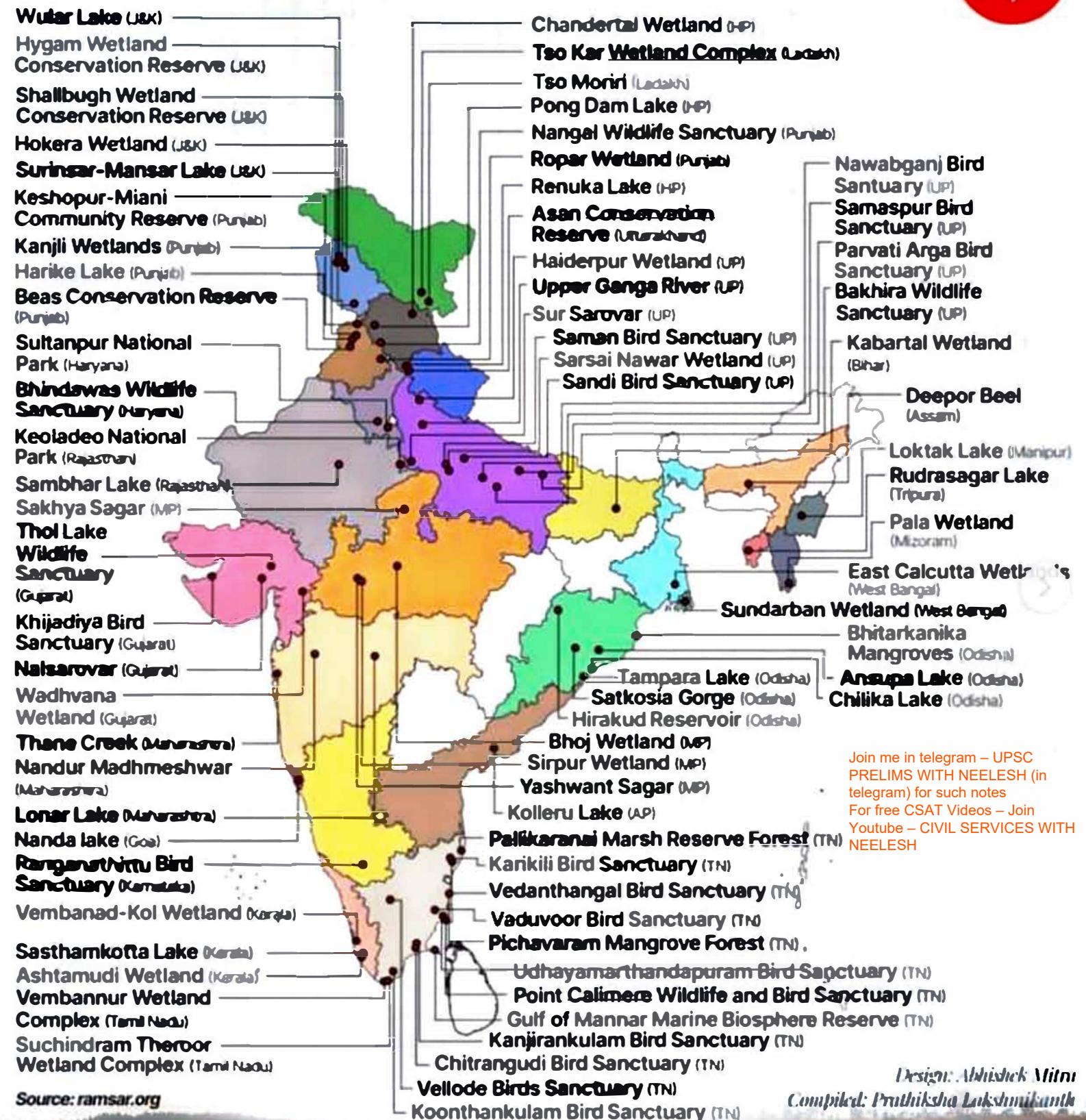


# List of UNESCO world heritage sites in India





# Ramsar sites in India



Source: ramsar.org

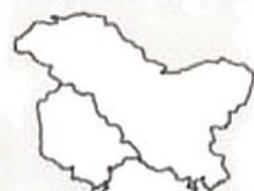
# 50 years of Project Tiger: No. of tiger reserves in India



Project Tiger began in 1973 at the Corbett national park.

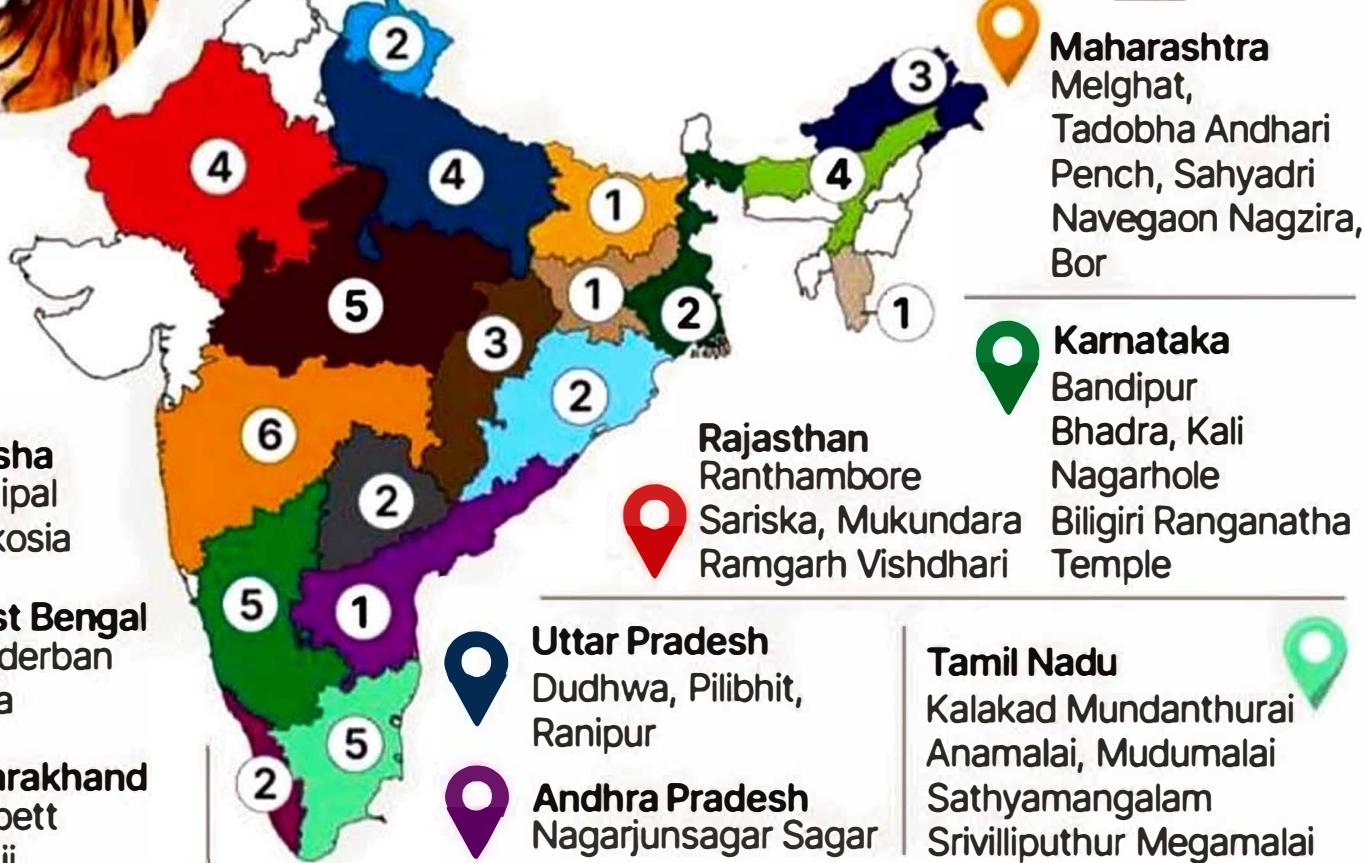


Tiger reserves spread over 75,000 sq km area.



India has more than 3,000 Tigers in 53 tiger reserves.

India accounts for 70% of the world's wild tiger population.



# Elephant reserves in India

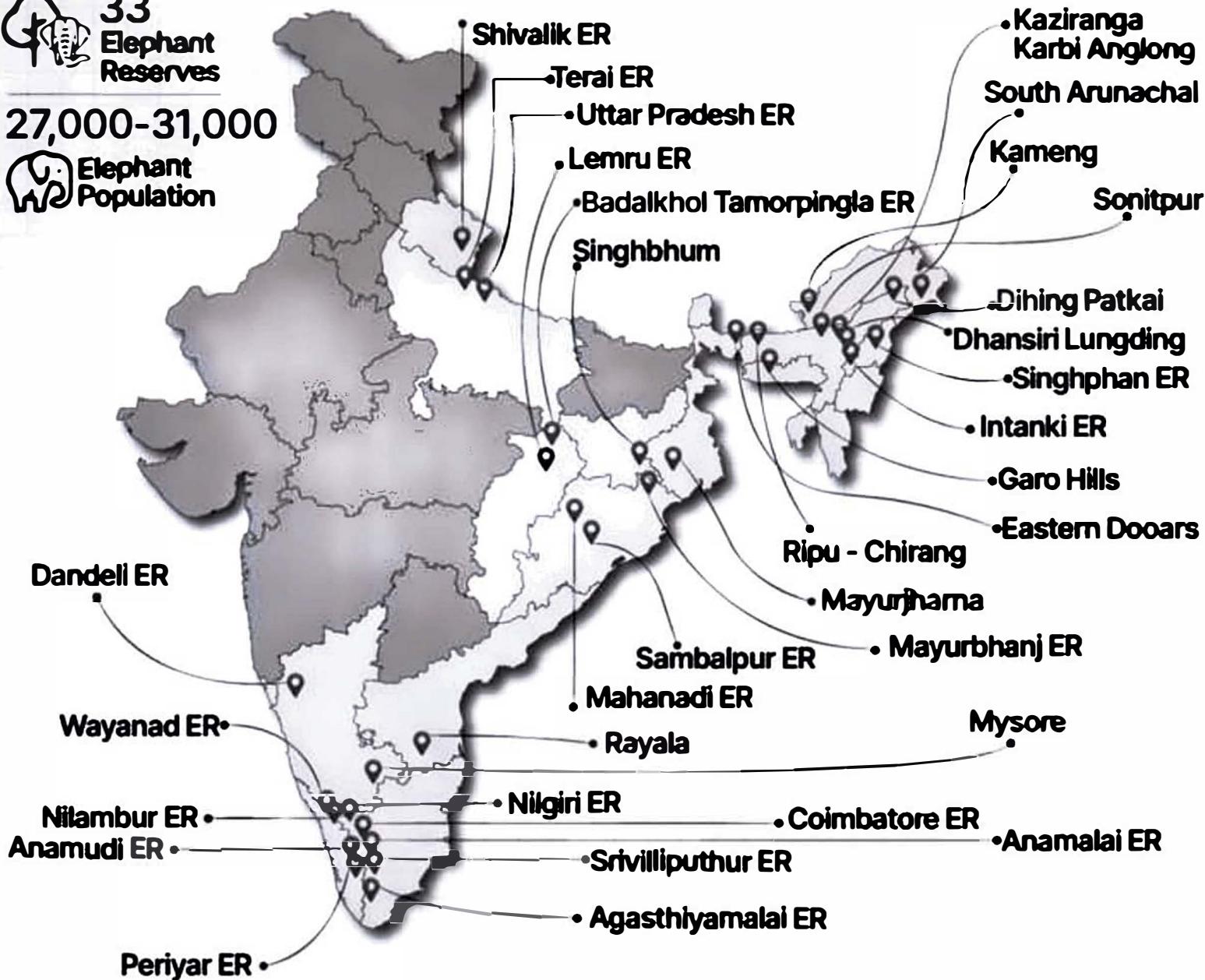


Total

33  
Elephant  
Reserves

27,000-31,000

Elephant  
Population

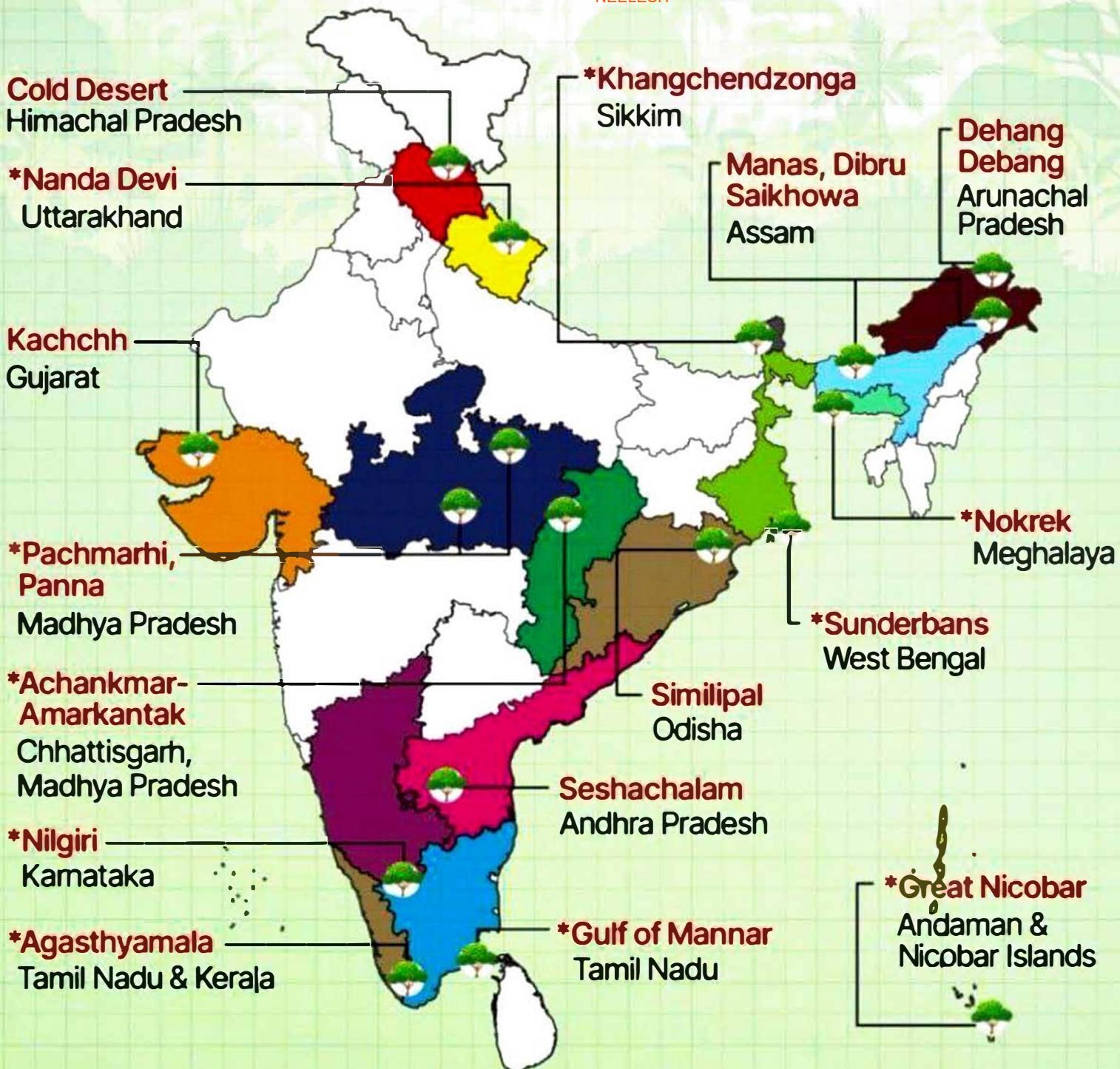




# Biosphere Reserves in India



Join me in telegram – UPSC PRELIMS WITH NEELESH (in telegram) for such notes  
For free CSAT Videos – Join Youtube – CIVIL SERVICES WITH NEELESH



\*World Network of Biosphere Reserve (NAB-UNESCO)

Source: moef.gov.in

Map not to scale.

Graphic: IE Design

**CIVIL SERVICES WITH NEELESH**  
**(TELEGRAM CHANNEL – UPSC PRELIMS WITH  
NEELESH)**  
**(YOUTUBE CHANNEL – CIVIL SERVICES WITH  
NEELESH)**

**Note – All our initiatives (both free and paid) are  
on these channels only.**

**OUR INITIATIVES (Running Currently)**

1. PRELIMS MENTORSHIP 2024 (BOTH FREE AND PAID)
2. ETHICS AND ESSAY EVALUATION – ER NEELESH AIR 442 UPSC\_CSE2021  
([https://t.me/UpscWithNeelesh\\_AIR442](https://t.me/UpscWithNeelesh_AIR442))
3. SOCIOLOGY FRAMEWORK - TELEGRAM – SOCIOLOGY WITH NEELESH  
(<https://t.me/SociologyWithNeelesh>)
4. FREE CSAT PROGRAM – ON YOUTUBE CHANNEL – CIVIL SERVICES WITH  
NEELESH
5. INTEGRATED MENTORSHIP FOR 2025 (PRELIMS AND MAINS) – YEARLONG  
MENTORSHIP
6. SHORT NOTES FOR ALL SUBJECTS (HANDWRITTEN)

**UPCOMING INITIATIVES**

1. PRELIMS TEST SERIES FOR 2025
2. MAINS TEST SERIES FOR 2025
3. ESSAY VIDEO BATCH FOR 2024 AND 2025
4. ETHICS VIDEO BATCH FOR 2024 AND 2025
5. SOCIOLOGY VIDEO BATCH FOR 2025 BASED ON PYQ
6. CSAT VIDEO BATCH
7. MAINS MARATHON 2024 AND MUCH MORE

# CA mapping

## State of Odisha



- called as Utkal plains
- made up of 6 rivers
- Subarnarekha, Burdhabalang, Baltrani, Brahmani, Mahanadi, Rushikulya (called as Hexadeltaic plains)

### # Mahanadi In news

- origin - sihawa in Amarkantak Hills (ch)
- maximum in Mahanadi
- narrow in North & More narrow in South.

- Malai Range - Borders of MP & Chattisgarh  
Salkasia Gorge ↳ Amarkantak Hills is a part of it.

↳ Amarkantak Hills is a part of it.

### Tributaries of Mahanadi

- Jong, Seonath, Hoasdo, Mand, Ib, Tel, Ong
- Nuna, Daya, Bhargavi, Devi, Prachi

### wildlife

- Olive Ridley Turtles
- Irrawaddy Dolphin
- Estuarine crocodile

Amravada - mass nesting sites

Temp. of env decides sex of egg laying hatchlings

↑ temp → female

↓ temp → male

mass nesting sites

Rushikulya, Gahirmatha

mouth of Devi, Bhitarakanika

### Subarnarekha

origin - chotanagpur plateau (Jharkhand)

### Tributary - Kharkai

origin → Simlipal Hills

### Burdhabalang

origin - Eastern Ghats odisha

### Baltrani

south kochi - Brahmani

### Rushikulya

Rushimala Hills, odisha (daring badi) Hills

### Vanshadhara

- Eastern ghat.

## E. Ghats

### Nagavali River

→ Andhra coast - BOB  
↳ Dam - Janjaioti Dam (1st rubber Dam in India)

### Mountains :-

- Simlipal mt
- Gajhat Hills
- Tikrapara Hills
- Nayagarh Hills
- Bihin mela (Seed festival)
- Niyamgiri hills (SW odisha near Andhra)  
peak - Niyam Dongar
- Dongria Kondh Tribes (overall odisha)  
People protests

### Salkasia WLS / TR / Gorge

- sal forest

↳ salkasia Gorge = Ramsar site  
Part of eastern Ghat formed by mahanadi river

- India's 1st Interstate tiger translocation project  
MP & odisha (failure)

(Male) Kanha TR → Sotkota TR (Declining Tiger popul.)  
(Female) Bandhagash TR

### Simlipal TR / ER / BR

- Burdhabalang River flows through it
- known for Black melanistic Tiger (it is the only place)
- world's 1st melanistic tiger safari

- Barehipani Waterfalls due to inbreeding

↳ Burdhabalang river in Simlipal TR

↳ Joranda waterfall

### Debrigash WS → 3rd TR in odisha

- near Hirakud Dam

↳ formed by Mahanadi

- human settlement voluntary relocation

### Tikrapara WS - Mahanadi flows through it

- formed by Salkasia Gorge

### Puri In news (G20 - background wheel)

### Jagannath Temple → one of the Char Dham

↳ annual

Rathyatra

Jagannatha

incarnation

of Lord Vishnu

given by

Stantrik

Dwarakpur

Kedarnath

Badrinath

Puri Jagannath

Rameshwara temple

### Konark sun temple - UNESCO WHS

### Golden sand Beach

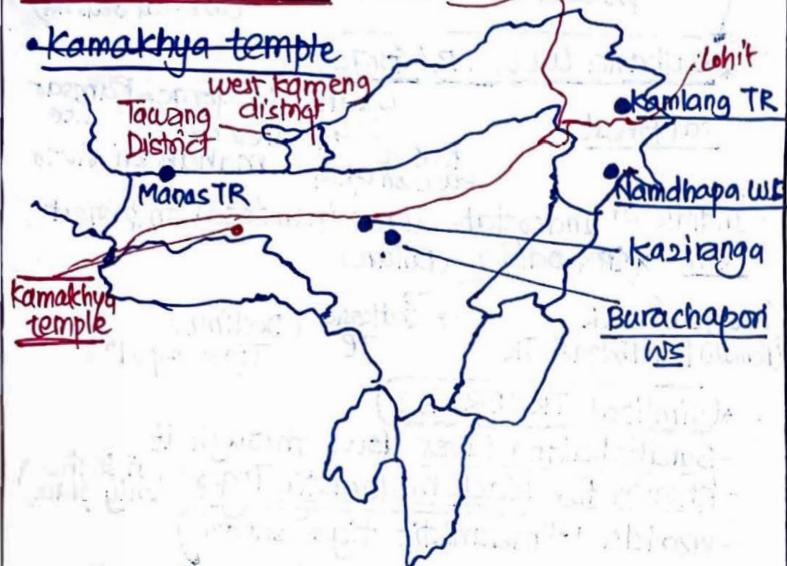
### Pattachitra Paintings → depicting mythological

Gotipua dance → Male dress as females to praise Lord Krishna & Jagannath.

↳ also in Odissi style but differs in terms of technique, costume, presentation.

- Deomali Peak - highest in Odisha
- Patsil valley (Odisha)
- Kalam Island (earlier called as Wheeler Is.)  
- integrated test range missile testing facility  
- part of Bhitarakanika NP
- Mahendragiri Peak (new-mahendragiri)  
↳ (easternghat) (watership)  
↳ Rivers flow through the region  
↳ Mahendragiri WS.

## North East India



- Kamakhya temple (Guwahati, Assam)
  - ↳ Ambubachi festival (takes place during monsoon)
  - ↳ Gaka mahakumbh of east
  - ↳ Goddess Kamakhya undergoes menstruation.
- Guwahati - on banks of Brahmaputra.
- Umananda Is - smallest inhabited river island
  - ↳ another name of Parvati aka peacock island (so assoc. with Shiva & Parvati)
- Majuli - largest riverine island. (Buddhist)
  - ↳ Tauwang monastery
  - ↳ shares borders with Bhutan & China
- West Kameng & Tawang District
  - ↳ Yak Chuoppi got GI Tag
  - ↳ Dairy product made up of milk of yak.
- Sela pass → connects Tawang & rest of Arunachal Pradesh.
- Kamlang TR - Kamlang river flows through the region
  - ↳ spread near to Namdapha WS
  - ↳ Na Dihing River
  - ↳ 4 Big cats present in both areas (High altitude valley area)
    - ↳ Snow leopard, Tiger, Clouded leopard, Leopard.
  - ↳ Dri & Longpu both the rivers pass through Kamlang TR.

- Brahmaputra - Tributaries
  - ↳ Rivers → Brahmaputra, Dhanasiri, Diphlu
  - ↳ Barail, Mikir Hills
  - ↳ Bengal Tiger, Asiatic wild water Buffalo, elephants, swamp deer (Barasingha); One horned Rhino.
- Kaziranga NP - UNESCO WHS
  - ↳ largest population of wild Buffalo in Kaziranga.
- Rhino vision 2020
  - ↳ 2000 Rhino → Kaziranga > Manas > Orang
  - ↳ 1900 80 20
  - ↳ equitable distribution of Rhino population across 7 protected areas of Assam as per carrying capacity.

NP, WS, community Res, conservation Res, TR → land owned by community  
Protected areas as per WPA, 1972  
- Elephant Res (✓) - wetland (✓) - Ramsar sites (✓) - Jasper Act

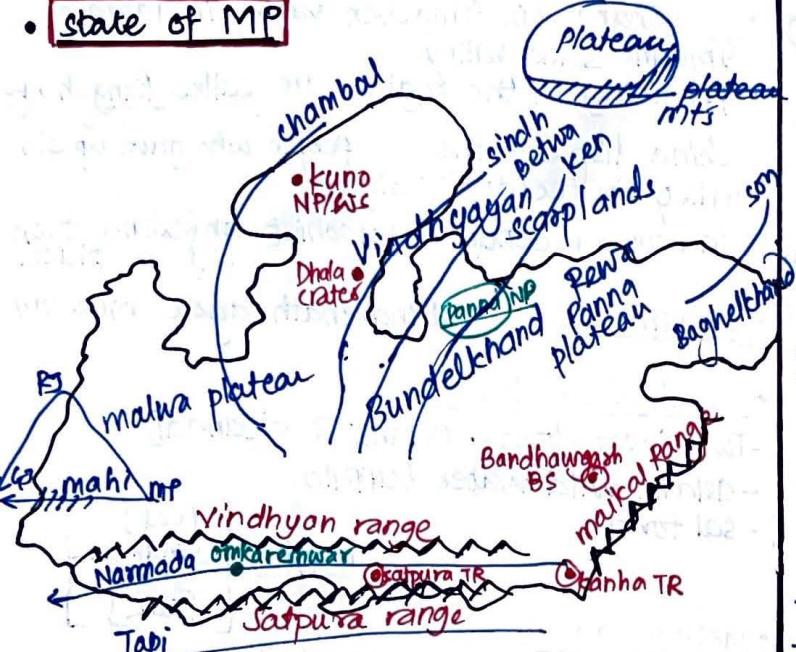
- Burachapori WS
  - ↳ present near to Kaziranga NP
  - ↳ on banks of Brahmaputra River in Karbi Anglong landscape
  - ↳ Uniqueness → it has freshwater mangroves
    - ↳ Halophytes ie, mangroves are saline plants are saline resistant
    - ↳ needed specific condition for its survival
    - ↳ Intertidal zone in Tropical world.
    - ↳ Facultative means it requires (Avg tem 19°C & above)
    - ↳ can survive in both saline & freshwater ecosystem.
- Great one horned Rhino, Tiger, Leopard, Wild Buffalo.

- Karbi-Anglong landscape - present in Assam
  - ↳ Mikir hills region & surrounding area
  - ↳ extension of peninsula plateau.
  - ↳ region has 50% of Assam's elephant biodiversity 70% tiger 50% one horned Rhino

- Indian Hog Deer
  - ↳ Distribution → in plains of Indus, Ganga and NE part of India

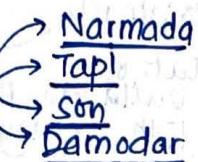
- Pigmy Hog
  - ↳ smallest wild pig in foothills of Himalayas
- Manas NP/TR/ER/BR/U WHS / Imp Bird area
  - ↳ Rivers → Manas, Beki river
  - ↳ Tigers, Elephants, One Horned Rhino, Assam Roofed Turtle, Pigmy Hog, Clouded Leopard, Hispid Hare, Golden Langur

## • state of MP



### • 4 soft valley rivers in India

↳ do not form deltas



• Omkareshwar - statue of Adi Shankaracharya  
- one of the 12 has been recently unveiled.  
Jotirlinga shrine

- town in Mandhata island in Narmada River  
- Panchakashi Parikrama  
↳ pilgrimage circuit around mandhata island.

↳ forms gorges & erodes marble rocks

• Mandla - village selected as Best tourist village in the world by UN World Tourism org.

- present near Panna TR.

- ken river flows through river

↳ also form Gorges

↳ ken Gharial sanctuary

↳ fish eating crocodiles (bcz long snout)

### • Ken Betwa Interlinking of Rivers -

- to transfer surplus river water from ken to Betwa river basin.  
to irrigate drought prone region of Bundelkhand plateau

- 1st project under Nat" perspective of plan for Interlinking of Rivers.

↳ Dam in UP thus interstate project.

Betwa

Ken

- Dhaudhan Dam to be constructed on ken river within the panna TR to transfer the surplus water.

↳ It's a multipurpose reservoir for drinking, irrigation, 103 MW of HEP purposes.

### • Bandhavgarh NP/TR/WS

↳ in news → transferred / relocated some of the swamp deer / Barasingha to Kanha NP.

- high popul" of Bengal tigers.

→ stat animal of MP & UP

→ Distributed in C, N & NE India

- most Endangered mammal in India

→ endemic to India & Nepal.

↳ antlers are extension of their bones

↳ 7 fold

### • Satpura TR

- found a Rock painting dating 10 000 yrs ago

- 7 fold watershed area b/w Narmada & Tapi

- has more than 50 rock shelter dating 1500 to 10000 years back

- part of Deccan plateau

\* has species of Both nilgiris

↳ Narmada, Tawa, Denwa rivers flows through it

• Dholi crater - in Shivpuri District of MP.

- formed due to Meteorite impact mn years ago

- largest impact structure in India.

- surrounding place - madhav NP

↳ Chandevi known for Silk sarees architecture

### • Kuno Palpur NP/WS

→ Cheetah reintroduction

- Kuno river flows through

\* Kardhai Tree - it is believed that this tree can absorb moisture from atmosphere & remain green even before arrival of monsoon

- only NP in India to be the home of cheetahs

smaller Anadic less prominent spots

↳ CR IUCN

1-India - not naturally found

↳ last died in 1947

↳ In chhattisgarh

↳ declared extinct in India in 1952

bigger African cheetah

↳ TH IUCN

↳ Prominent spots on face

↳ Cheetah experts  
WI  
MP Forest Dept

- Iran has it

↳ CR implemented by NTCI

• Project Cheetah - world's 1st intercontinental large wild carnivore

- introduced from Namibia & South Africa

- project claims to have achieved short term success in → 50% survival of introduced cheetah

→ estab. of Home Range

→ Reproduct" / Birth of Cubs in Kuno

→ Revenue gen. for local communities

- Project also identifies more places as cheetah reintro. sites.

- \* cheetah lives in Arid & semi Arid ecosystem regions in grassland ecosystems. (Habitat)
- It is a fastest of land animal
- gestational period  $\rightarrow$  90 - 95 days (3 months)
- requires large land area (100s of km)  $\hookrightarrow$  (low density individuals) (1-2 individual)
- hunts during sunrise and sunset (crepuscular animals)

Tiger  $\Rightarrow$  daytime (diff niche)

### Places in News

#### Abohar WS (Punjab)

- entire WS is community own property of 13 Bishnoi villages.
- in News  $\rightarrow$  Black Buck in Punjab  $\rightarrow$  close towards extinction
- $\hookrightarrow$  antelope native to India & Nepal
- $\hookrightarrow$  exhibit sexual dimorphism

$\hookrightarrow$  distributed Male (black) Female (yellowish) in Northern, Southern & Eastern regions (especially in states of RJ, GJ, MP, TN, OD)

$\hookrightarrow$  Habitat  $\Rightarrow$  Grassland ecosystem

#### Kareti lake (Himachal Pradesh)

- aka Kumanwah lake - in Dhauladhar Range
- fresh high altitude lake, shallow lake  $\hookrightarrow$  above elevat' of 3 km
- Source of water  $\rightarrow$  melting of glaciers from Dhauladhar range

#### Shanan Powerhouse (Himachal Pradesh)

- HEP project on Uhl river (tributary of Beas)
- one of the oldest power house, was providing water for entire undivided panjab

Powerhouse given  $\leftarrow$  before Independence to Panjab (state @ that time)

On lease of 99 yrs (next year ending)

#### Adi Kailash (Uttarakhand)

- considered as one of the 5 Kailash mts located in Pithorgagh in Utt.  $\rightarrow$  ghost villages
- situated in Kumaon Himalayas (families outmigrate)
- replica of Kailash mansarovar

#### Beki River - origin - Bhutan - aka Kuosi river

- tributary of Brahmaputra.
- cases high amount of discharge of water every year into plains of Assam.

- \* Zemithang - (in Pangchen valley in Tawang) means sand valley
- ppl living in the region are called Pangchenpa
- China disputes the people who gave up sin valley for territories rights.
- in news  $\rightarrow$  recently a buddhist conference took place

#### Shantiniketan - Rabindranath Tagore - museum

##### Udanti Sitanadi TR

- Two rivers flows  $\rightarrow$  Udanti & Sitanadi
- Asiatic wild water buffalo,
- sal forest

roughly



#### Golkonda fort

- originally called as Mankal a mud fort mud structure
- later build air fortified structure during 14<sup>th</sup> & 17<sup>th</sup> century by Bahamani kingdom & Qutub Shahi dynasty.

#### Girni Waterfall

- seasonal waterfall in state of GJ in W Ghats
- located on Kapri tributary of Ambika river in 6 states
- $\hookrightarrow$  major west flowing river
- $\hookrightarrow$  catchment in both MH & GJ
- $\hookrightarrow$  origin  $\rightarrow$  Sodpura hills mouth  $\rightarrow$  Arabian sea

- \* Safdarjung Tomb - last garden tomb in mughal style built during times of mughal emperor mohammad shah
- built on square plan, central dome made up of marble & sandstone, interior of dome is made up of marble & gold leaf.
- It's a smaller version of Humayun's Tomb.

#### Ranjit Sagar Dam / aka Thein Dam

- Dam on Ravi River in Punjab
- $\hookrightarrow$  originates from Khangra district (HP)

#### Pangong Tso - World's highest saltwater lake

- $\hookrightarrow$   $1/3 \in$  India &  $2/3 \in$  China
- high grassland lake
- lake is known for changing its colour
- saline lake + endorheic lake
- $\hookrightarrow$  inland lake which has no outflow to river/ocean.

#### Sohagi Barma WS - in UP

- near to borders of Nepal & Bihar
- rivers flows  $\rightarrow$  Gandak, Pyas, Rohin
- major flora  $\rightarrow$  sal, grassland

#### Burachapori WS

• Rudragiri Hill rock - in E. ghats in Andhra  
in news bcz there found prehistoric Rock painting  
(mesolithic time period)  
↳ fresco painting

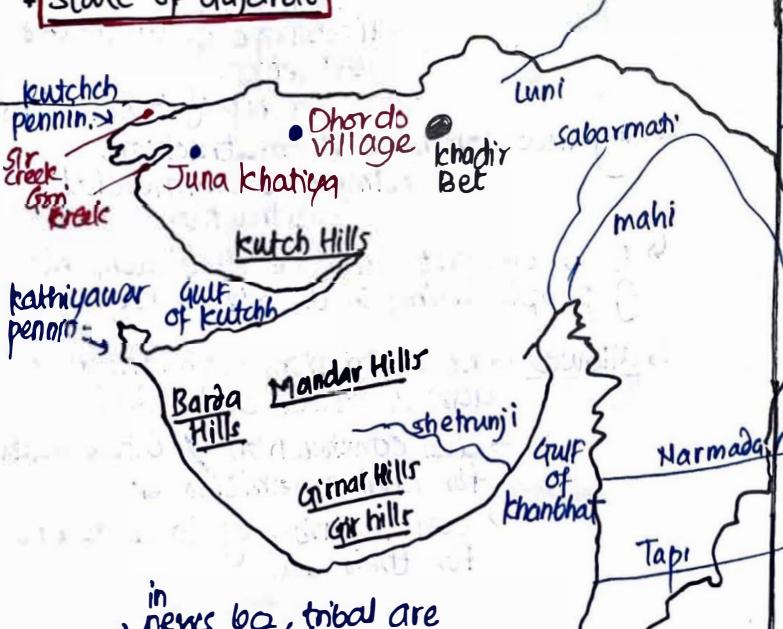
• Sriharikota - sit a barrier island separator  
↳ satellite launch pad  
↳ pulicat lake from Bob  
↳ Bird sanctuary  
↳ 2nd largest Brackish water lake in India (1st - chilika)  
↳ b/w Andhra & TN

• Puttaparthi - known for Satya Sai Baba's birthplace  
- located on Chitravathi River (seasonal river)  
(KN → Andhra) Origin → Nandi Hills in Karnataka

• Mekedatu Reservoir (proposed) (dispute)  
- on Cauvery river close to TN border  
- The project is proposed @ the confluence of Arkavati & Cauvery  
↳ tributary of Cauvery  
- Aim - to provide drinking water to Bengaluru & to generate 400 MW of HEP.

\* Cauvery Rivers-water Dispute Tribunal  
↳ states parties → Kerala, TN, Karnataka, Puducherry.

### \* State of Gujarat



• Dahod - in news bcz tribal are used as a gift in £ 20  
- Gujarat hangings made by Bhil & Patel tribes  
• Eastern part of GJ has sloth bear

• Budhimati River - origin Aravallis  
- flows through RJ & GJ  
- tributary of Sabarmati.

• Dhordo village  
- recognised as Best tourism village by UN World tourism organisation.  
- near to Gon creek  
- Indian wild ass sanctuary is located in the region.  
- festival celebrated Rann Utsav

• Juna khatiya - Burial  
- in news - Early Harappan site excavation  
- located in Kutchh  
- Kutchh desert WS ↳ both located in the region Narayan Sarovar WS

• Luni river originates from Aravali's and disappears in Rann of Kutchh desert. It doesn't have mouth in sea.

• Khadir bet (Island)  
- Harappan site near Dholavira  
UNESCO heritage site

### \* State of J&K

• Salal Haimana area -  
↳ GSI identified good amount of lithium resource (~5 mn tonne) (huge)  
↳aka white gold  
↳ soft silvery white non ferrous metal  
↳ lightest metal  
↳ can be used in both chargable & rechargeable batteries.  
↳ ex heart pacemaker  
↳ It converts chemical energy into electrical energy

- largest lithium reserve  
↳ Bolivia > Argentina > Chile, USA, Australia  
- ABC triangle ↳ China, India border  
↳ Catamarca region of Argentina  
- In India we're it in  
↳ India's coop.  
↳ Mandya (Karnataka), Salal Haimana (J&K), Rajasthan, Rewant hills, Degana, Nagaur (RJ)  
↳ Newspaper says - yes  
↳ GSI refuted.

- Ratte HEP - on Chenab river
  - ↳ Run off River - Kishtwar district of J&K.
  - ↳earliest proposed not commissioned

### Karakoram

- study investigated why glaciers in Karakoram range has not been affected by CC.
- part of Pamir mts., Hindukush & Himalayas
- spreads across (Trans) Afghanistan, Pak, India, China
- glaciers include → Siachen, Hispar, Bibfo, Batua, Baltora,
- major peaks
  - ↳ K2, Gasherbrum 1, Gasherbrum 2,

### State of Uttarakhand

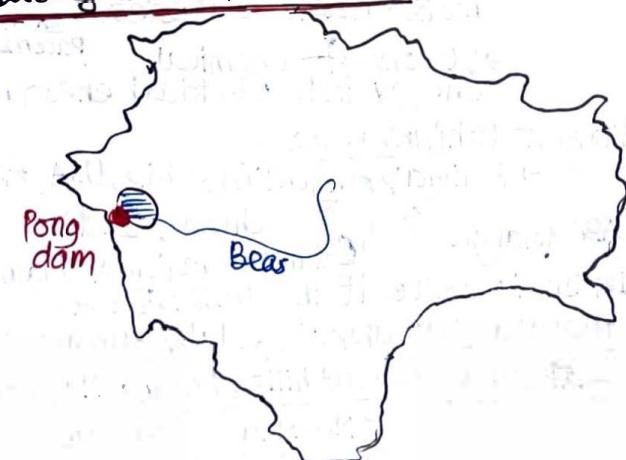
- Rudraprayag - Alaknanda & Bhagirathi confluence
    - ↳ after that river will be called as Ganga.
- 
- The diagram illustrates the confluence of two rivers at Rudraprayag. The Alaknanda river flows from the top left, and the Bhagirathi river flows from the top right. They meet at a point labeled 'Rudraprayag'. From this point, the river continues downwards and to the right, labeled 'Ganga'.

- New - Rudraprayag & Tehri district has highest risk of landslides according to satellite data collected by ISRO.

### Binsar WLS (in Uttarakhand)

- for the 1st time Tiger is seen sighted in Binsar
- present in Almora district of Uttarakhand in Kumaon Himalayas.
- WLS is named after Brindeshwar Mahadev temple, an ancient rock temple.

### State of Himachal Pradesh



- Pong Dam - (Maharana Pratap Sagar)
  - ↳ Ramsar site + wetland of Nat'l Impo.
  - ↳ located on Beas river.
  - in new bc, some of villages in PJ got affected by the dam. → submerged
- Beas river
  - origin → Beaskund near Rohtang Pass
  - PJ & HP
- Pong WLS - in new bc MoEFCC has declared one km from the boundary of Pong Dam WLS as eco-sensitive zone
  - ↳ areas notified by MoEFCC around the protected areas, NP, WLS.
  - ↳ obj → to protect env and avoid its degradation from anthropogenic load
    - create a barrier/buffer/shock absorber for the protected areas.
    - It acts as a transition zone b/w the areas of high degree of protection & areas of low degree of protection.
  - ↳ aka ecologically fragile areas.
  - ↳ in general, esensitive zones shall be 10 km surrounding protected areas but in reality its extent varies.
    - (range 0km - 47 km)
  - ↳ SC verdict in 2022 has stated all states shall have mandatory 1km ESZ surrounding boundary.
  - ↳ activities that are prohibited in ESZ
    - commercial mining
    - major HEP
    - Hazardous & polluting industries
    - discharge of untreated effluents.
    - setting up of Brick kilns
    - ↳ any new commercial construction
    - any new commercial construction.
  - ↳ ESZ doesn't involve displacement of people living in the ~~ESZ~~ region
  - ↳ allowed → no restriction/prohibition on agri & allied activities.
  - strict construction of infrastructure for civil amenities &
  - construction of local people for their use

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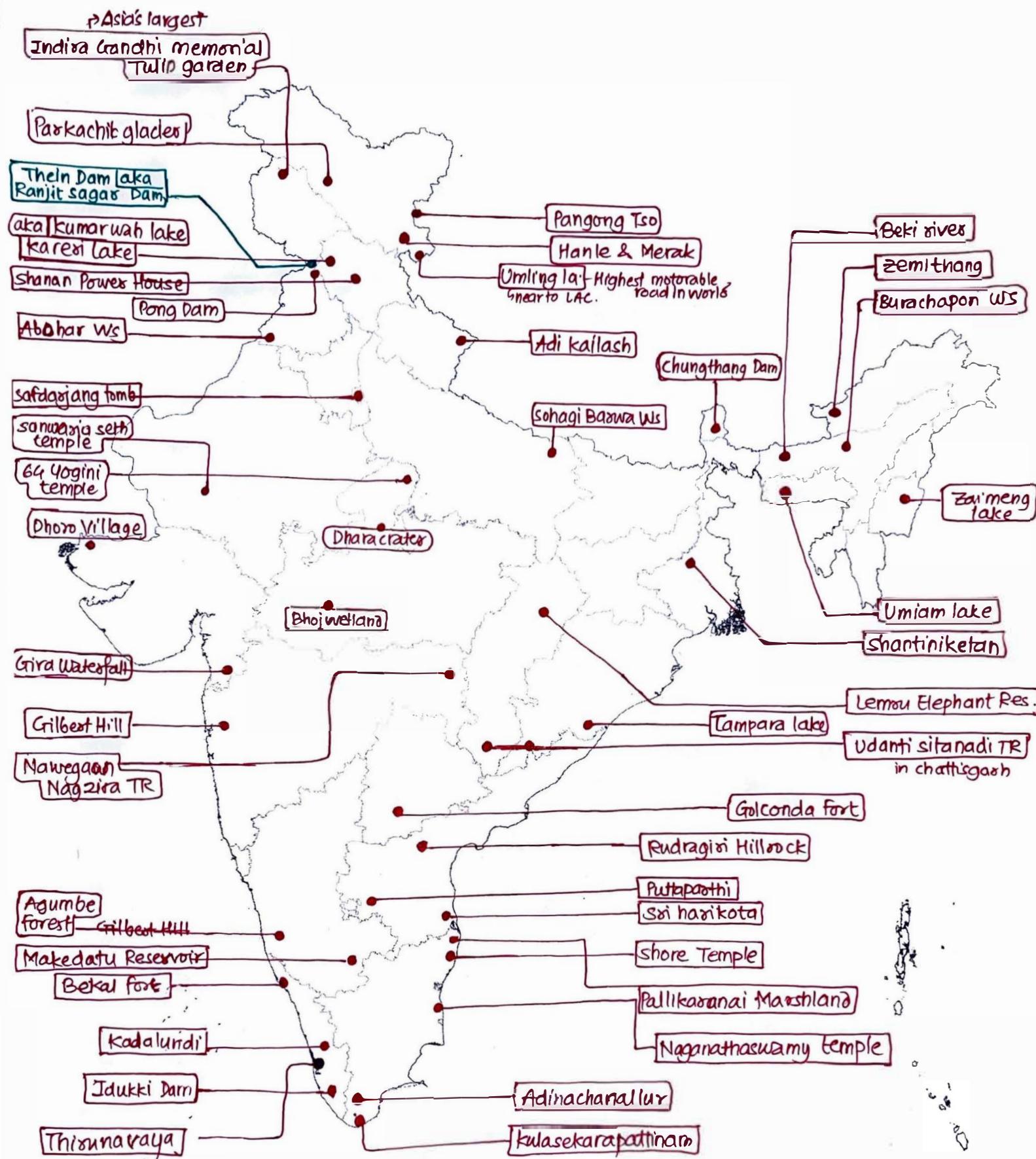
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## Places in News

- Parkachik glacial - located in kaengil, Ladakh
  - snow leopards flows near to the region.
  - present in Zanskar range
  - Snow leopard, Klang (tibetan wild ass), Bharal (Bluesheep), - largest wild ass.  
Asiatic Ibex (goat variety) - Ladakh, Utt, HP.  
Himalayan Tahr (goat)
- Pong Dam - already covered.
- Tampara lake (Odisha)
  - freshwater lake in Rushikulya river.
  - Ramsar wetland site.
  - ↳ TN has max sites in India  $\Rightarrow$  India has 80 in total (that is max)  
↳ GJ has max area of wetland in south Asia
- Adichanallur - Historic Iron age burial site
  - located in Thoothukudi & Tiruvarur, TN.
  - located on banks of Tamirabarani River.
- Kulasekharapatnam -
  - This will become the second space port in TN
  - derives its name from a Pandyan ruler.
  - Small satellite launch vehicle, nanosat, microsat will be launched on commercial basis as well.
- Thirunavaya - historic site
  - megalithic Hot stones were found
  - located on Banks of Bhavatpuzha River
- Umiam lake - in Meghalaya
  - The catchment is Shillong hills/plateau
  - created by Damming Umian river
  - one of the largest artificial lake in Meghalaya
  - aka Barapani lake - in news bcz Meghalaya govt used AI & robotics to keep lake pollution free.
- Zaimeng lake
  - Nagaland Manipur
  - marshland
  - new species of salamander is found  
↳ amphibian (land + water)



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# Places in News: India



## Changthang Wildlife Sanctuary (Ladakh)

- A new Indian Air Force base would be set up in Changthang Wildlife Sanctuary.



## Neeru Stream (Jammu and Kashmir)

- Eurasian otters spotted in Neeru stream of Chenab catchment.



## Tashiding Monastery (Sikkim)

- Bumchu Festival was celebrated in Tashiding Monastery.



## Namdapha National Park (Arunachal Pradesh)

- Tiger was spotted after a gap of 8 years.



## Barda (Gujarat)

- Project Lion proposes Barda as second home for Asiatic lions.



## Gateway of India (Maharashtra)

- Few cracks were found on the surface.



## Pushpagiri Kshetram (Andhra Pradesh)

- Temple ruins were discovered at Pushpagiri Kshetram in Kadapa district.



## Keibul Lamjao Park (Manipur)

- Centre has advised state government to take steps for the protection of Keibul Lamjao Park and Loktak Lake.



## Butterfly EcoPark (Tripura)

- Butterfly EcoPark at Chottakhola is the first butterfly park of northeast.



## Sisupalgarh (Odisha)

- ASI has sought Odisha government intervention to protect Sisupalgarh from land mafia.



## Gandhamardan Hill Range (Odisha)

- Gandhamardan Hill Range declared as a Biodiversity Heritage Site.

# Places in News: India



## Hemis and Thiksey Monasteries (Ladakh)

- Delegates of G20 summit visited Hemis and Thiksey Monasteries.



## Gandhisagar Sanctuary (Madhya Pradesh)

- Will be developed as a second home for cheetahs.



## Hingoli (Maharashtra)

- Cabinet approves LIGO-India, gravitational-wave detector to be built in Hingoli.



## Parambikulam Reserve (Kerala)

- High Court orders translocation of wild tusker Arikompan to Parambikulam reserve.



## Eravikulam National Park (Kerala)

- Got its first fernarium.



## Mudumalai Tiger Reserve (Tamil Nadu)

- PM visited Theppakadu Elephant Camp in Mudumalai Tiger Reserve.



## Zemithang (Arunachal Pradesh)

- Buddhist Conference hosted.



## Dibang Wildlife Sanctuary (Arunachal Pradesh)

- Indigenous Idu Mishmis protesting a proposed tiger reserve.



## Kibithoo village (Arunachal Pradesh)

- Union Home Minister launched Vibrant Villages Programme.



## Kongthong village (Meghalaya)

- Development report presented on Kongthong village, India's only whistling village.



## Char Balidanga and state Horticulture Research and Development Station, Namthing Pokhar, Amkhoi Fossil Park (West Bengal)

- Notified as Biodiversity Heritage Sites



## Anantapur (Andhra Pradesh)

- Big deposits of 15 rare minerals found.



# Places in News: India



## Uhl River (Himachal Pradesh)

- HP and Punjab to face off over ownership of Shanan power project located on Uhl river.



## Siri Fort (Delhi)

- Tomb-like structure discovered at siri fort.



## Khirki Mosque (Delhi)

- Restoration of Khirki Mosque initiated.



## Lothal (Gujarat)

- Government to Develop National Maritime Heritage Complex.



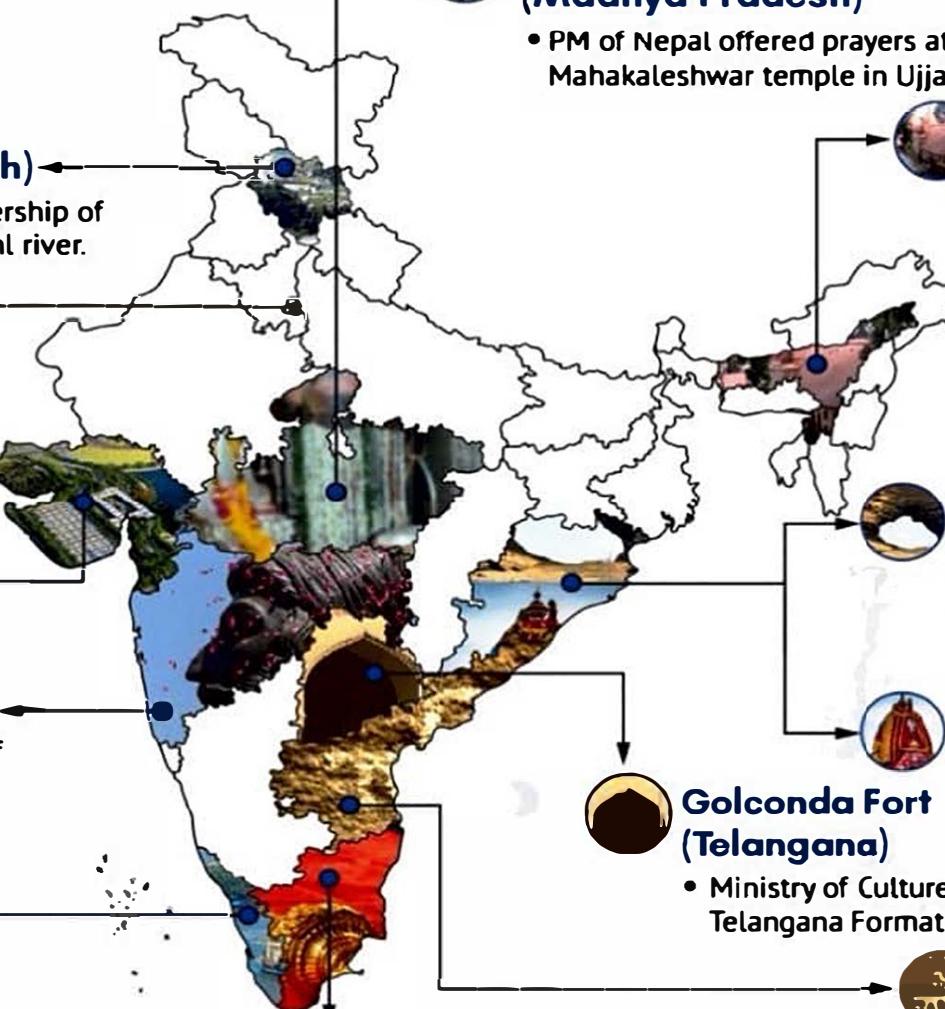
## Raigad Fort (Maharashtra)

- Celebrations of 350th anniversary of coronation of Chhatrapati Shivaji Maharaj were started.



## Cochin Port (Kerala)

- Centre rolled out renovation of Cochin Port.



## Mahakaleshwar temple (Madhya Pradesh)

- PM of Nepal offered prayers at Mahakaleshwar temple in Ujjain.



## Kamakhya temple (Assam)

- Ambubachi Mela begun at Kamakhya temple located atop Nilachal hills.



## Sundargarh Forest Division (Odisha)

- Proposal to declare 'Natural Arch' in Kanika range of Sundargarh forest division as a Geo Heritage site.



## Jagannath Temple (Odisha)

- Jagannath Puri Rath Yatra held.

## Golconda Fort (Telangana)

- Ministry of Culture celebrated the Telangana Formation Day at Golconda Fort.



## Orvakallu Village (Andhra Pradesh)

- Mesolithic Era painting discovered.

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# Places in News: India



## Parkachik Glacier (Ladakh)

- Likely to have three lakes of different dimensions due to rapid ice melt.



## Pangong Tso lake (Ladakh)

- Both India and China are ramping up infrastructure on north bank of lake.



## Khadir Bet and bela region, Kutch (Gujarat)

- New species of shrub discovered.



## Dhala crater (Madhya Pradesh)

- Study suggests that Ureilite meteorite has formed Dhala crater.



## Kaas Plateau (Maharashtra)

- Study of sediments from a seasonal indicated a major shift in Indian Summer Monsoons.



## Palamau Tiger Reserve (Jharkhand)

- Four soft-release centres for Cheetals are under construction.



## Hampi Group of Monuments (Karnataka)

- Third G20 Culture Group (CWG) meet held in Hampi.



## Amravati (Maharashtra)

- PM MITRA Textile Park launched.



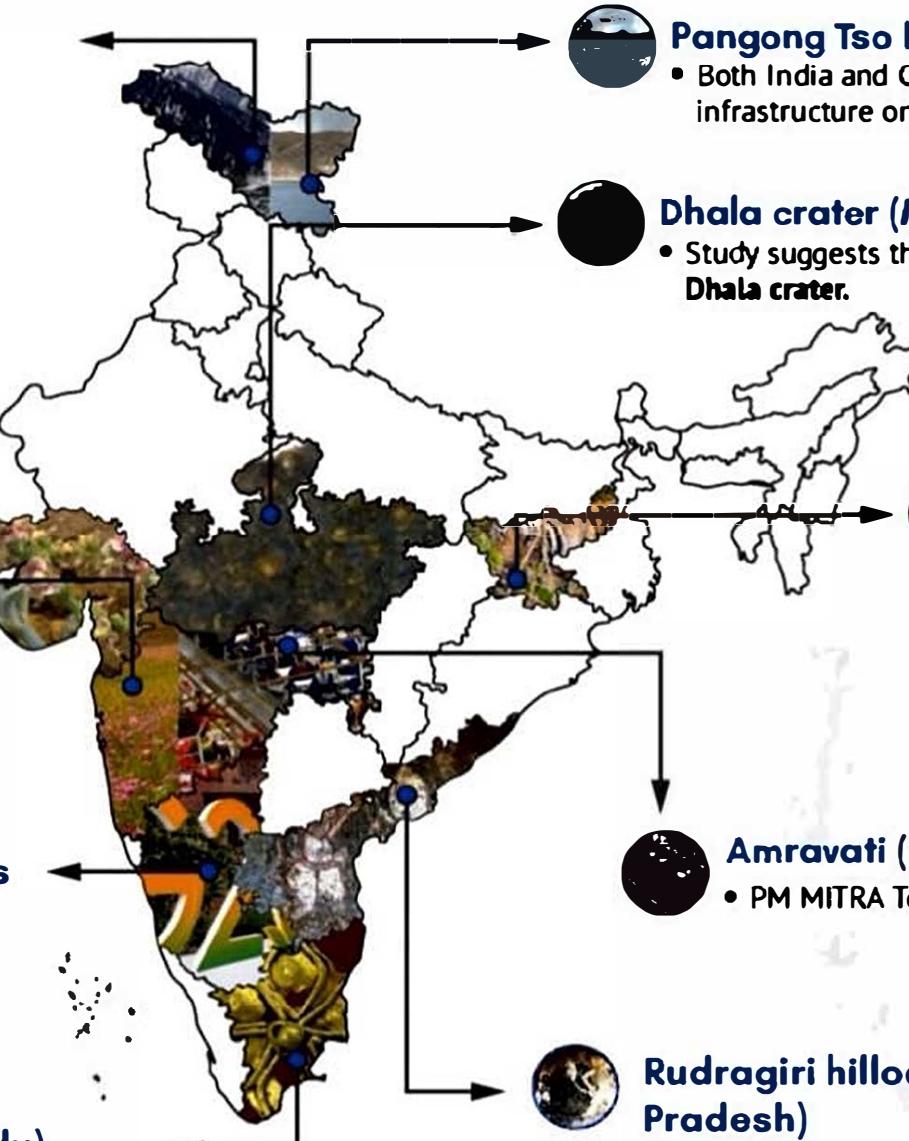
## Porpanaikottai site (Tamil Nadu)

- Items belonging to Sangam Age have been excavated.



## Rudragiri hillock, Guntur (Andhra Pradesh)

- Fusion of Rock Art found.



# Places in News: India



## Dachigam National Park (Jammu and Kashmir)

- Population of Hangul (Kashmir stag) has registered a 10 percent increase.



## Leh (Ladakh)

- India's first-ever hydrogen buses deployed.



## Jaisalmer (Rajasthan)

- Fossil of new dinosaur species 'Tharosaurus Indicus' found.



## Pong Dam (Maharana Pratap Sagar) Himachal Pradesh

- Release of water submerged a number of villages in the adjoining area



## Gandhinagar (Gujarat)

- First WHO Global Summit on traditional Medicine held



## Udaipur (Rajasthan)

- 9<sup>th</sup> India Region Conference of the Commonwealth Parliamentary Association (CPA) held



## Gaganachukki waterfalls (Karnataka)

- Restriction on tourism due to a heavy discharge of water upstream from Kabini reservoirs.

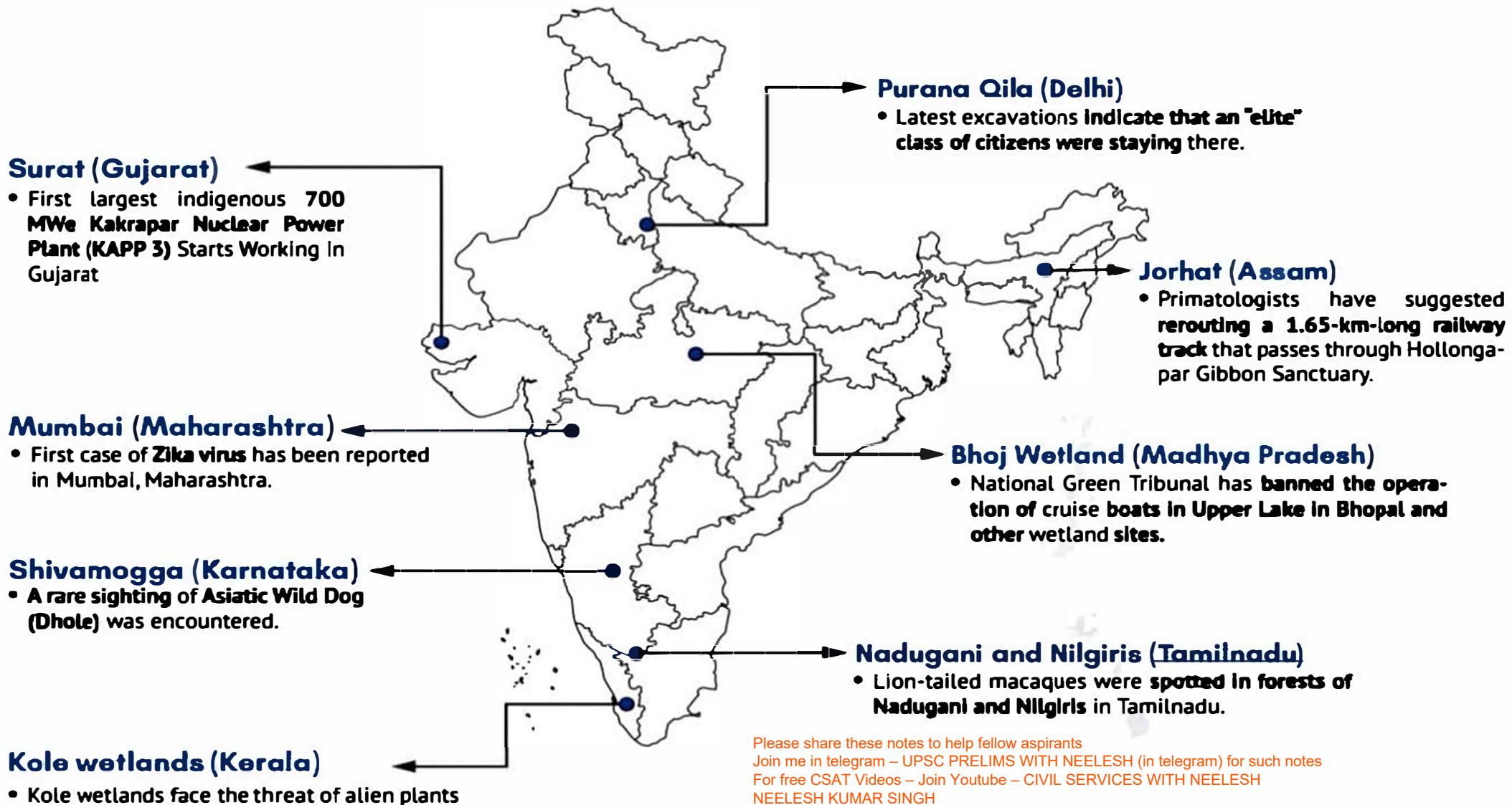


## Keeladi (Tamil Nadu)

- Archeological excavation is being processed.



# Places in News: India

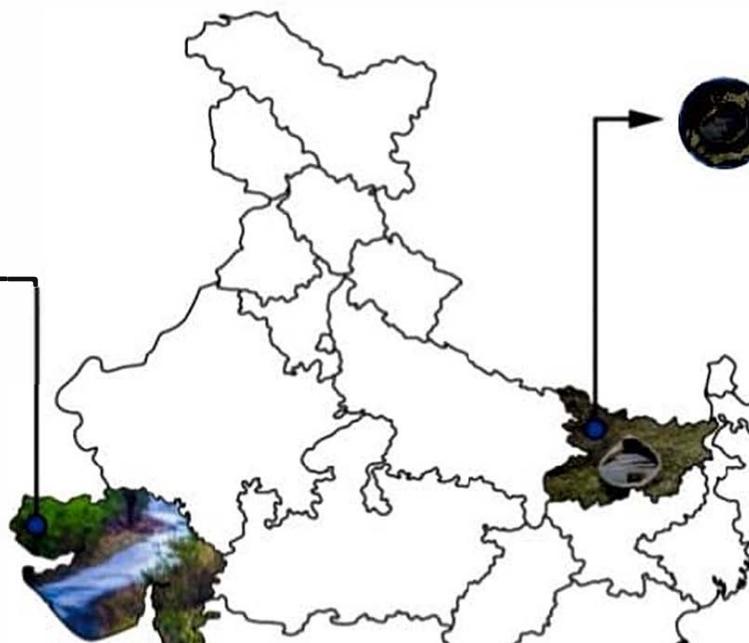


# Places in News: India



## Dhordo village (Gujarat)

- Got one of the Best Tourism Villages award by UN World Tourism Organization (UNWTO)



## Kanwar lake (Kabartal Wetland) (Bihar)

- Kanwar Lake is facing threat of running dry.



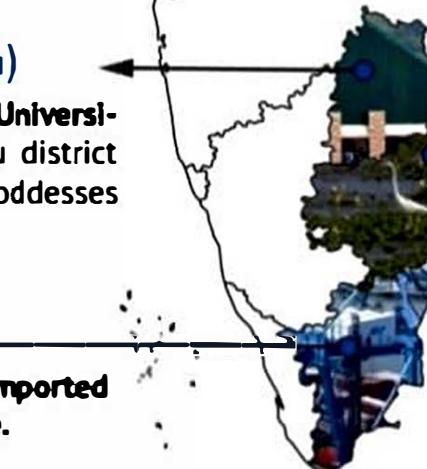
## Milak River (Nagaland)

- Recently, a new fish species *Badis Limaakurni* was found



## Mulugu district (Telangana)

- PM announced that **Central Tribal University** will be established in Mulugu district (Telangana), named after tribal goddesses Sammakka- Sarakka.



## Kolleru wildlife sanctuary (Andhra Pradesh)

- An inventory of land use and other activities adjacent to **Kolleru Wildlife Sanctuary** is underway for declaring it an eco-sensitive zone.



## VOC Port (Tamil Nadu)

- Green Ammonia from Egypt imported through VOC Port, for the first time.



# Places in News: India

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## Sutlej river (Punjab)

- Researchers found the presence of tantalum in the Sutlej river sand in Punjab.

## Sambhar lake (Rajasthan)

- A researcher unveiled the capability of **Picocystis Salinarum** (green algae) found in hypersaline soda lake Sambhar to survive extreme environments.

## Dhordo (Gujarat)

- Declared Ghel species as the state fish at the Global Fisheries Conference India 2023.

## Panaji (Goa)

- 54<sup>th</sup> International Film Festival of India (IFFI) commenced in Panaji.

## Kadalundi river; Kozhikode (Kerala)

- Shrinking mudflat ecosystem of Kadalundi river is impacting **Kadalundi Vallikunnu Community Reserve (KVCR)**.
- Kozhikode joined the UNESCO Creative Cities Network (UCCN).

## Gwalior (Madhya Pradesh)

- Gwalior joined the UNESCO Creative Cities Network (UCCN).

## Loktak Lake (Manipur)

- Manipur Government raised concern that Loktak Lake's hydroelectric plan may affect Sangai deer.

## Mudichu Thalapalli (Telangana)

- A 3,000-year-old Iron Age Geoglyph circle was discovered in Telangana.

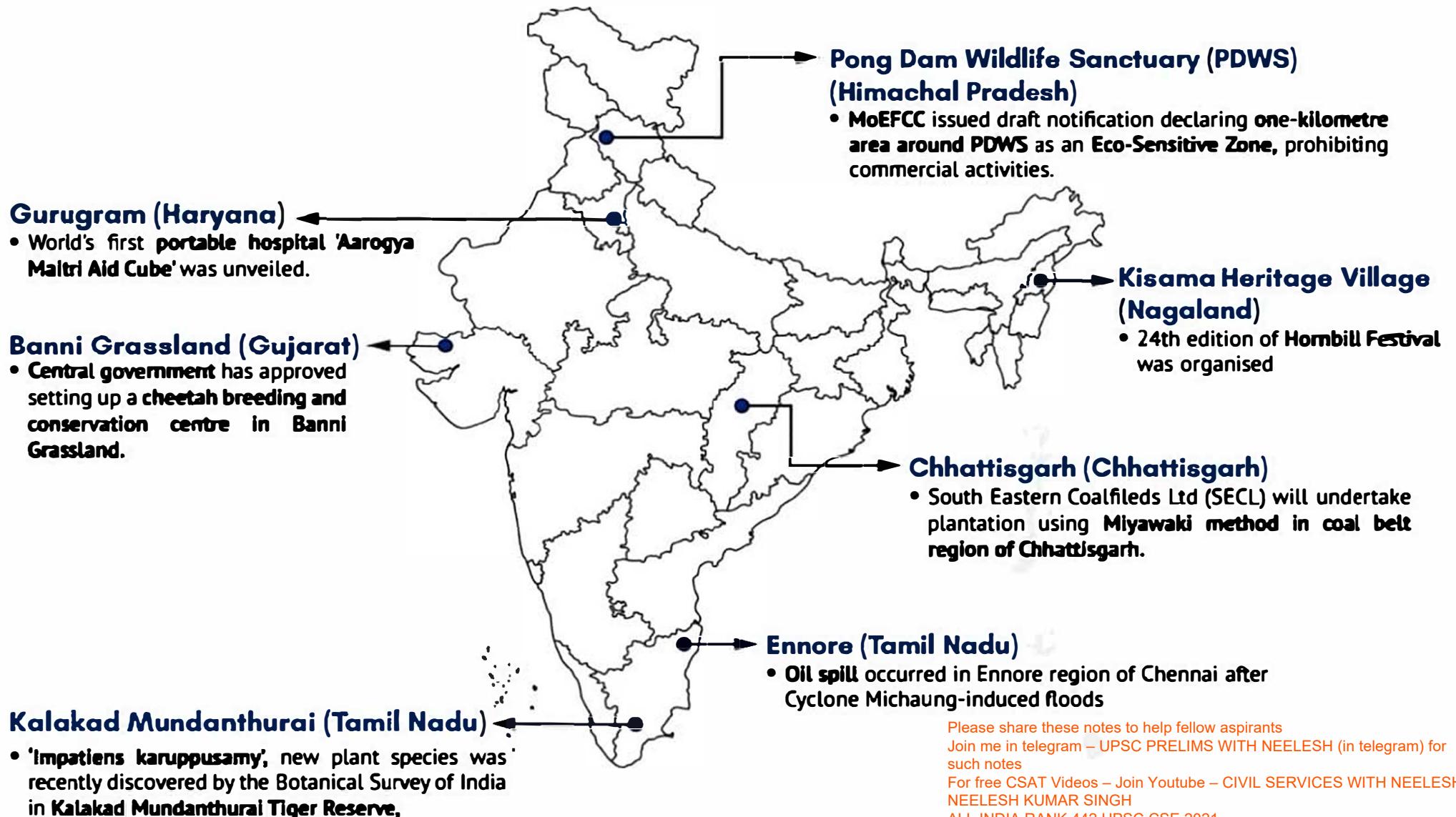
## Kurnool district (Andhra Pradesh)

- 'Banni' festival held at Devaragattu in Kurnool district

## Bengaluru (Karnataka)

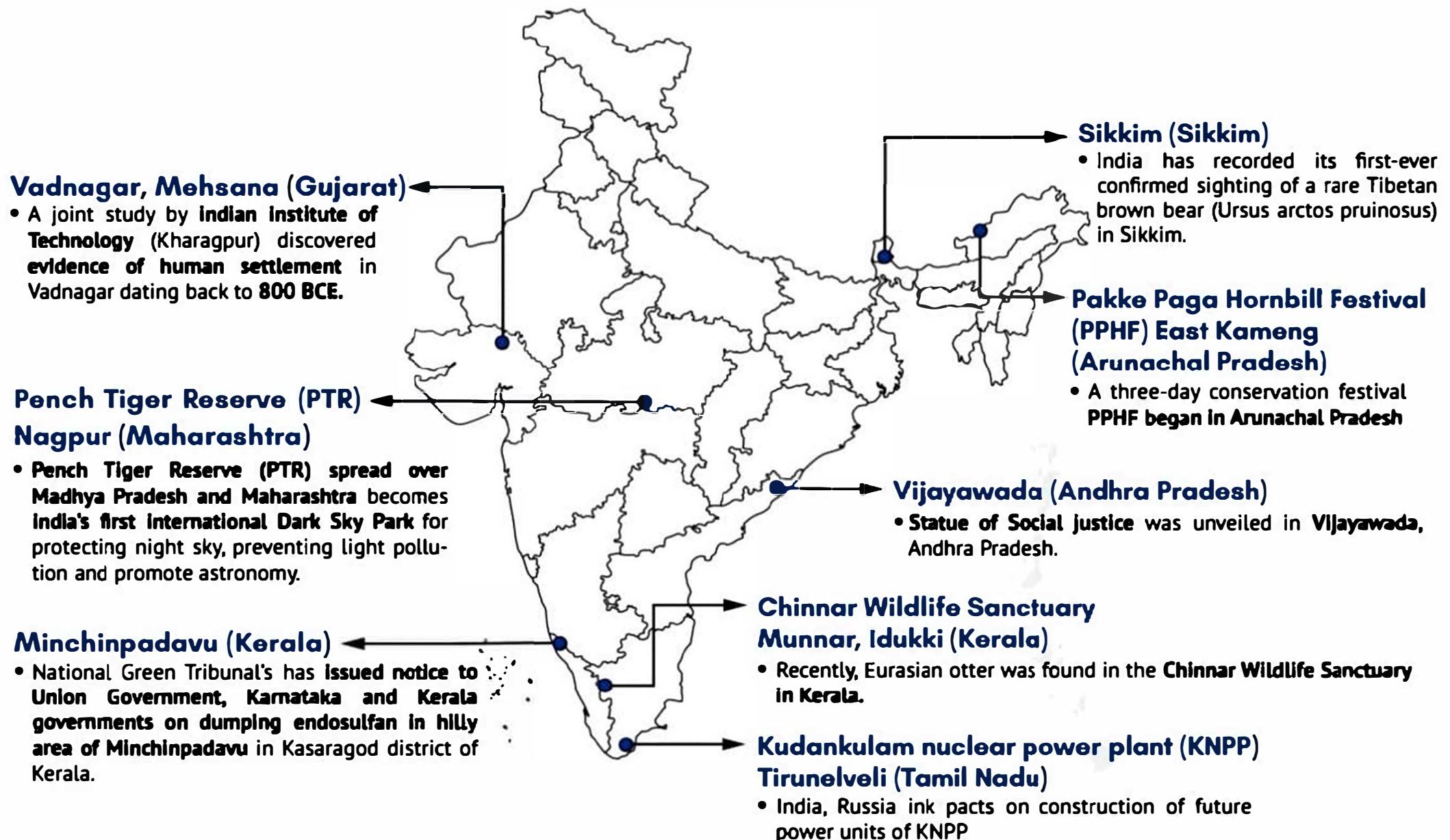
- Bengaluru Climate Action Plan** unveiled in line with the city's commitment to C40 Cities.

# Places in News: India



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NEELESH KUMAR SINGH  
ALL INDIA RANK 442 UPSC CSE 2021

# Places in News: India



**CIVIL SERVICES WITH NEELESH**  
**(TELEGRAM CHANNEL – UPSC PRELIMS WITH  
NEELESH)**  
**(YOUTUBE CHANNEL – CIVIL SERVICES WITH  
NEELESH)**

**Note – All our initiatives (both free and paid) are  
on these channels only.**

**OUR INITIATIVES (Running Currently)**

1. PRELIMS MENTORSHIP 2024 (BOTH FREE AND PAID)
2. ETHICS AND ESSAY EVALUATION – ER NEELESH AIR 442 UPSC\_CSE2021  
([https://t.me/UpscWithNeelesh\\_AIR442](https://t.me/UpscWithNeelesh_AIR442))
3. SOCIOLOGY FRAMEWORK - TELEGRAM – SOCIOLOGY WITH NEELESH  
(<https://t.me/SociologyWithNeelesh>)
4. FREE CSAT PROGRAM – ON YOUTUBE CHANNEL – CIVIL SERVICES WITH  
NEELESH
5. INTEGRATED MENTORSHIP FOR 2025 (PRELIMS AND MAINS) – YEARLONG  
MENTORSHIP
6. SHORT NOTES FOR ALL SUBJECTS (HANDWRITTEN)

**UPCOMING INITIATIVES**

1. PRELIMS TEST SERIES FOR 2025
2. MAINS TEST SERIES FOR 2025
3. ESSAY VIDEO BATCH FOR 2024 AND 2025
4. ETHICS VIDEO BATCH FOR 2024 AND 2025
5. SOCIOLOGY VIDEO BATCH FOR 2025 BASED ON PYQ
6. CSAT VIDEO BATCH
7. MAINS MARATHON 2024 AND MUCH MORE

**BY- NEELESH KUMAR  
SINGH, AIR 442, UPSC  
CSE 2021**



**“ MAKE THIS ATTEMPT,  
YOUR LAST ATTEMPT.”**