



# UNIVERSITY OF ENGINEERING & MANAGEMENT, KOLKATA

Course Name: **Geography**

## Indian Geography

Organised by

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Dept. of GS

UEM Kolkata

# **Syllabus**

## **ESP-4**

- **Rivers of India**
- **Transport in India**
- **Climate**
- **Vegetation in India**

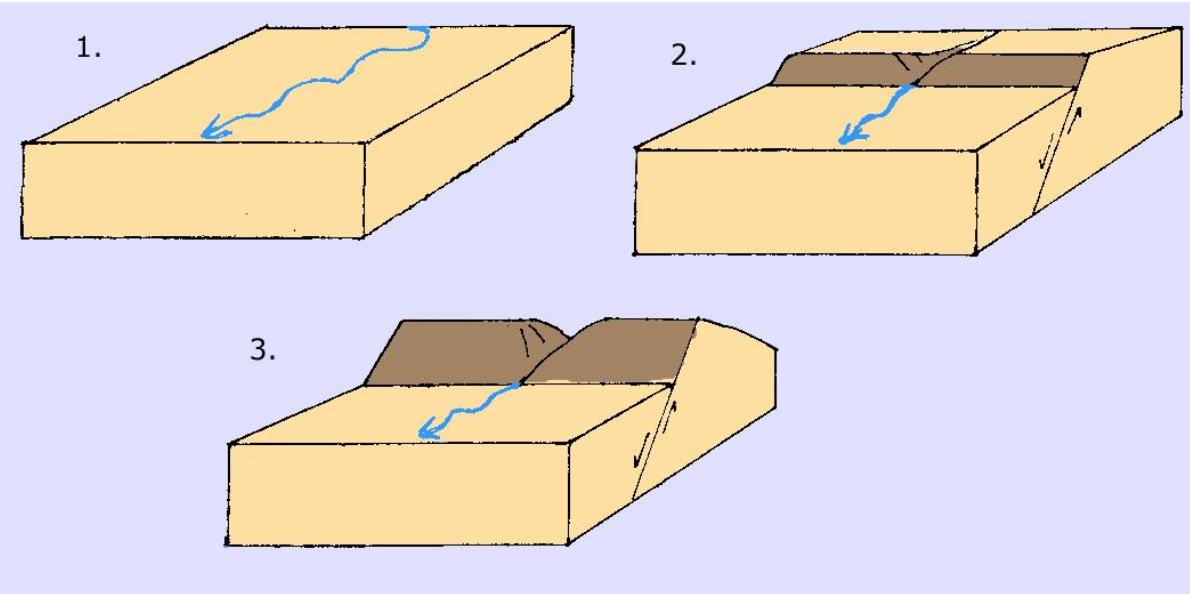
# Division of River systems



- The River Jhelum rises from a **spring at Verinag** situated at the foot of the Pir Panjal.
  - The Ravi River originates **Dhauladhar range** of the Himalayas in the Chamba district of HP. Ravi has its source in **Kullu hills near the Rohtang Pass** in Himachal Pradesh.
  - The Satluj River rises from the southern slopes of the Kailash Mountain near Mansarovar Lake from Rakas Lake. It enters HP at **Shipki La.**
  - Beas River, an important river of the Indus River System, emerges from **Rohtang pass in HP.**
- 
- The Chenab originates from near the **Bara Lacha Pass** in the **Lahul-Spiti** part of the **Zaskar Range**.

# Erosion process of rivers

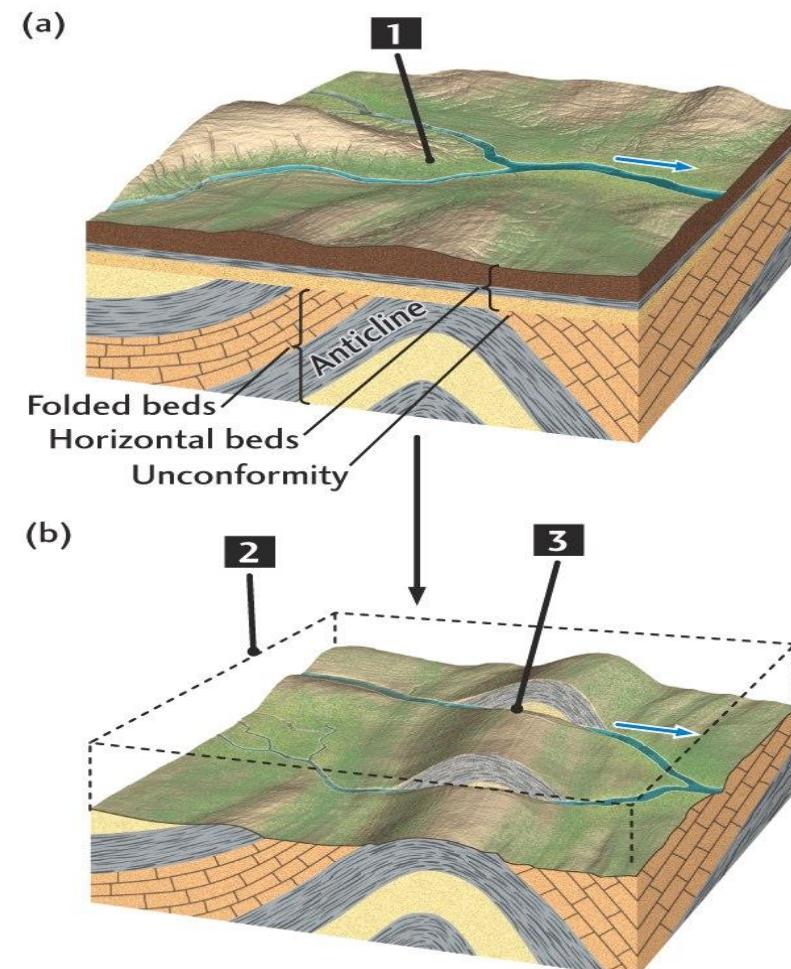
## Antecedent Rivers



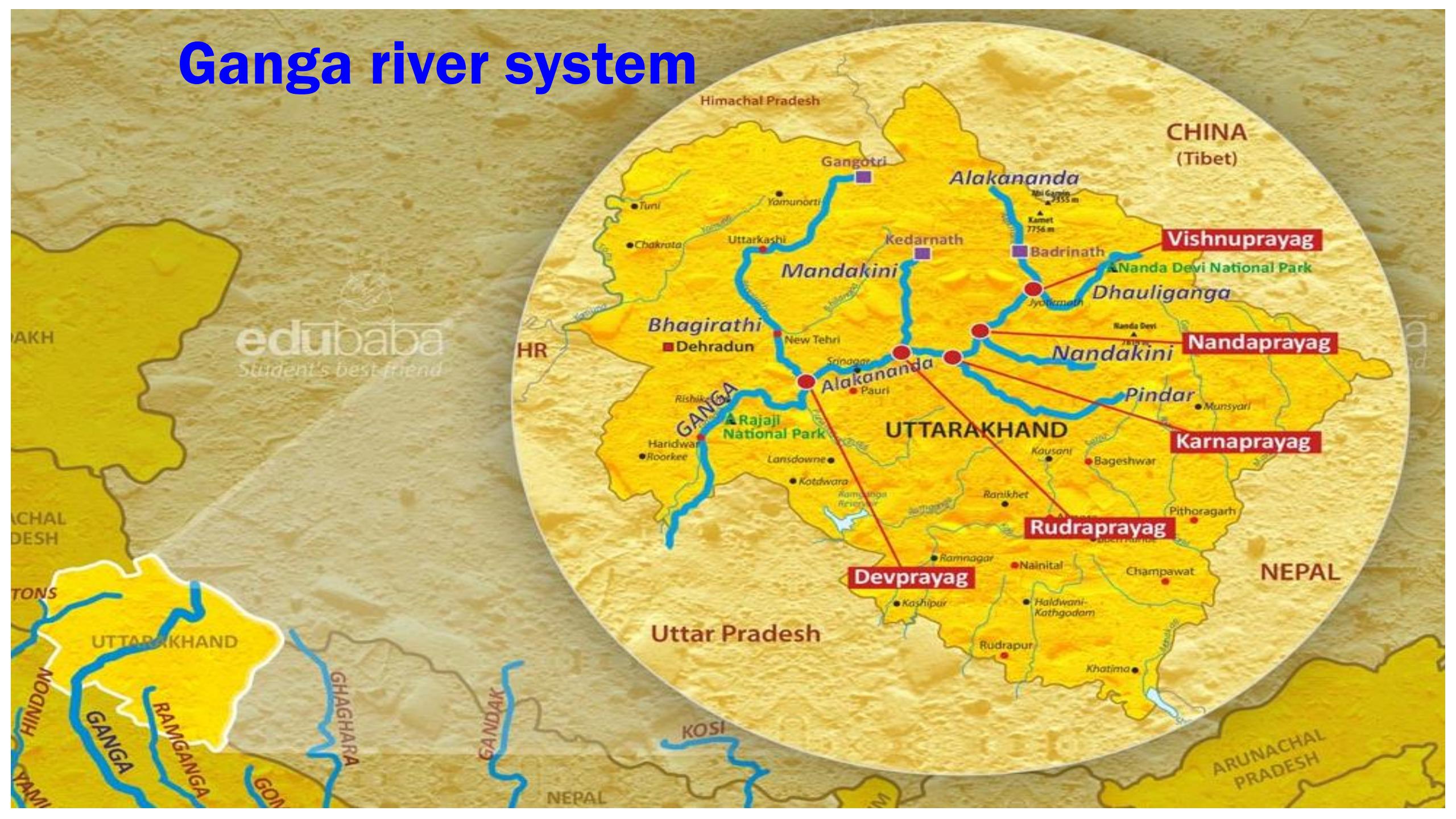
**ANT.R.:** Cut through the **newly formed landform** and maintain the same path == Himalayan Rivers.

**Sup. R. :** Cut deeper through **the existing landform** and maintain the same path == Some medium scale rivers of the Northern and Eastern peninsular India.

## Superimposed rivers



# Ganga river system



# Ganga river system



Map not to Scale

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# The Central Highlands

**The Central Highlands**

A map of India highlighting the Central Highlands in green. Major rivers are shown in blue: Chambal, Yamuna, Ganga, Son, and Betwa. A legend indicates the 'Central highlands' area. A compass rose shows cardinal directions (N, S, E, W). Labels for each river are placed near their respective river segments.

Chambal river

Yamuna river

Ganga river

Son river

Betwa river

Central highlands

N  
W E  
S

Chambal river

A photograph of a white signpost with the text 'चम्बल' (Chambal) in Devanagari script and 'CHAMBAL' in English, along with dimensions '2x18-30 M' and 'PSC BOX'.

Betwa river

A photograph showing the Betwa river flowing through a landscape with several traditional domed temples (bhujia) visible across the water.

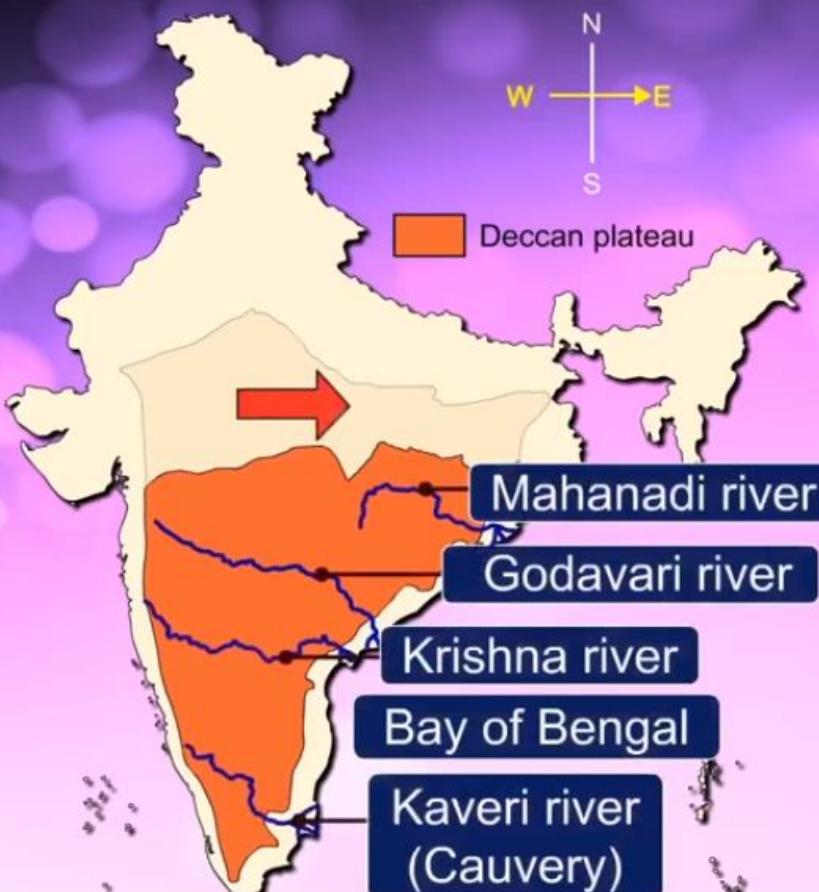
Son river

A photograph of the Son river with several small boats (likely jhukas) moored along the bank. In the background, there are buildings and trees.

They flow northwards to join the Ganga and the Yamuna.

# DECCAN PLATEAU

**Deccan Plateau**



Mahanadi river  
Godavari river  
Krishna river  
Bay of Bengal  
Kaveri river (Cauvery)



**Godavari river**  
**Mahanadi river**  
**Krishna river**  
**Kaveri river (Cauvery)**

Since the plateau slopes from west to east, most of its rivers too rise in the west and flow eastward.

# DECCAN PLATEAU



Moreover, the sediments deposited by the rivers in the Deccan Plateau build up deltas at the mouth.

# Dams, states and Rivers

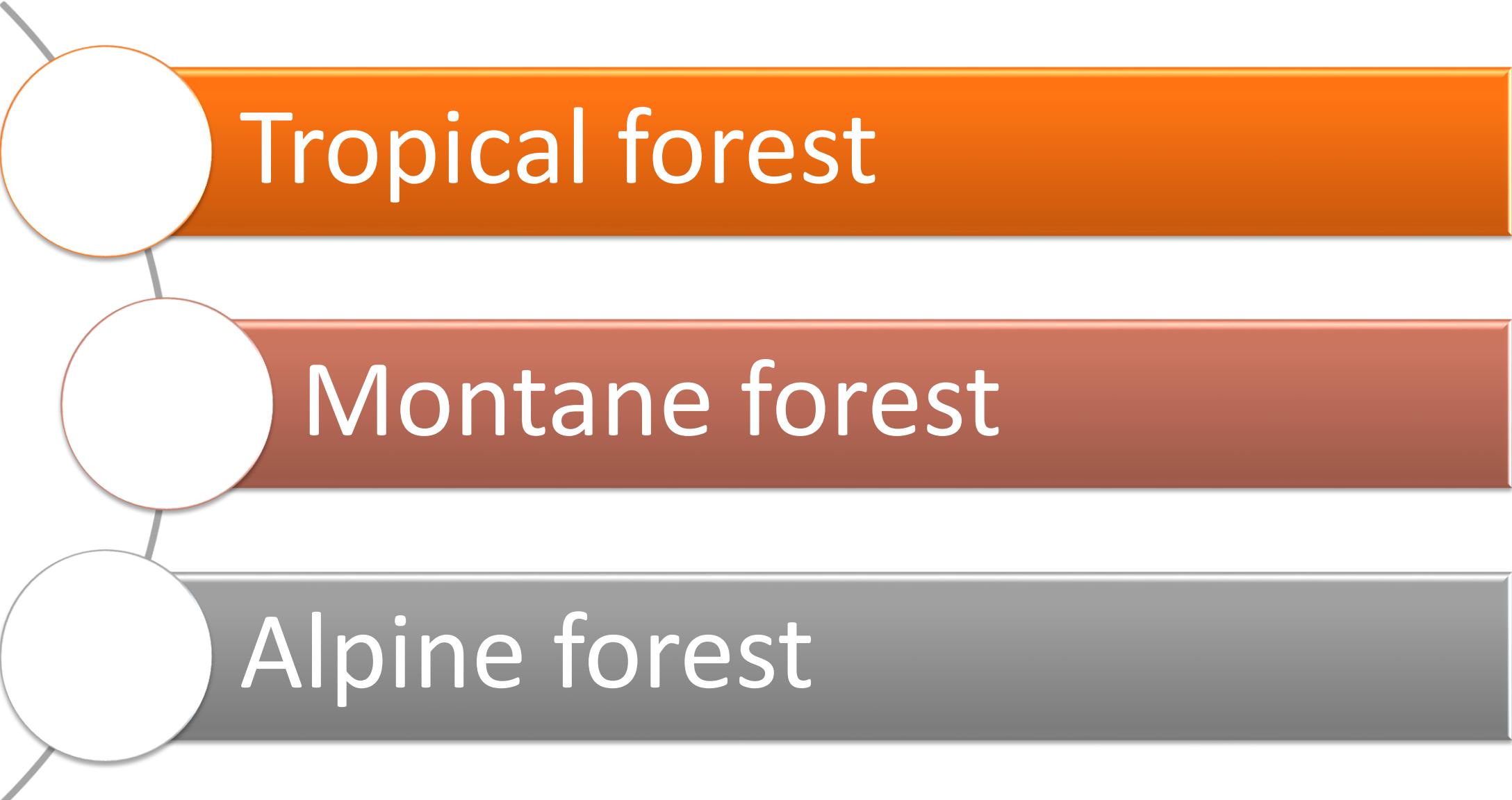
List Of Major Dams in India	State	River
Tungabhadra Dam	Karnataka	Tungabhadra
Rihand Dam	Uttar Pradesh	Rihand
Maithon Dam	Jharkhand	Barakar
Koyna Dam	Maharashtra	Koyna
Krishnarajasagar Dam	Karnataka	Kaveri
Indira Sagar Dam	Madhya Pradesh	Narmada
Sardar Sarovar Dam	Gujarat	Narmada
Nagarjuna Sagar Dam	Telangana	Krishna
Hirakud dam	Odisha	Mahanadi
Bhakra Nangal Dam	Punjab-Himachal Pradesh Border	Sutlej
Tehri Dam	Uttarakhand	Bhagirathi
Srisailam Dam	Krishna River	Telangana
Farakka	W.B.	Ganga

Vegetation's in India

Climate of India

Power Projects in India

# Vegetation types in India

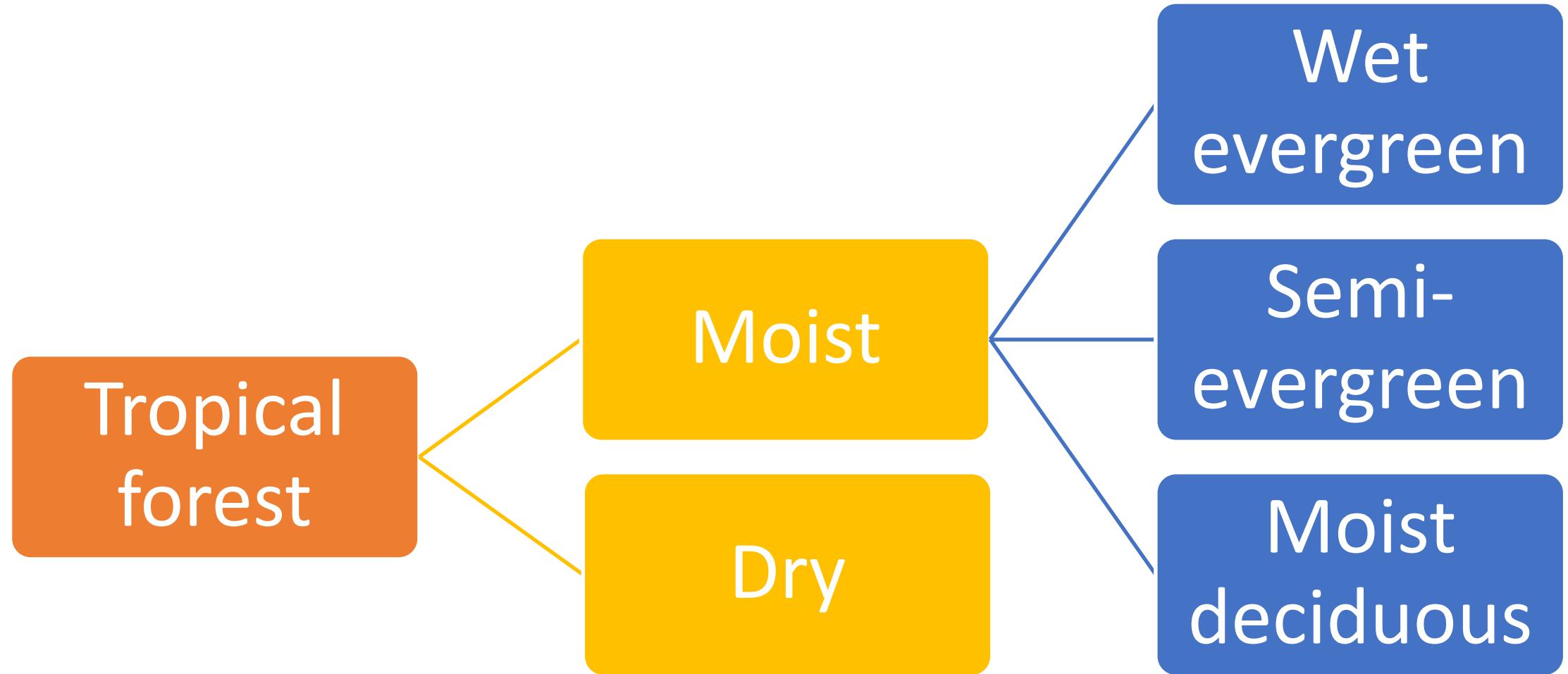


Tropical forest

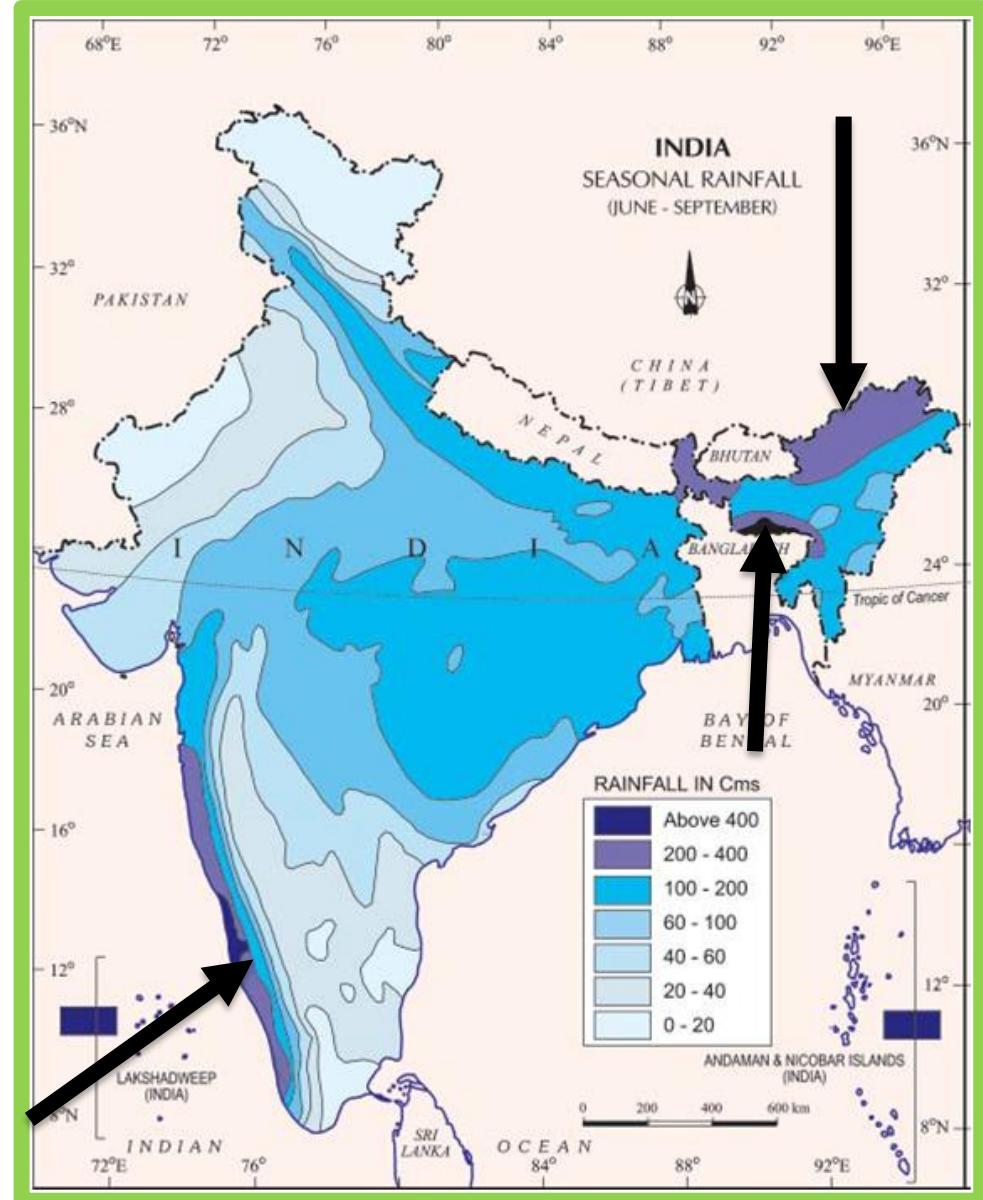
Montane forest

Alpine forest

# Tropical Forest



# Tropical Wet -Evergreen forest in India



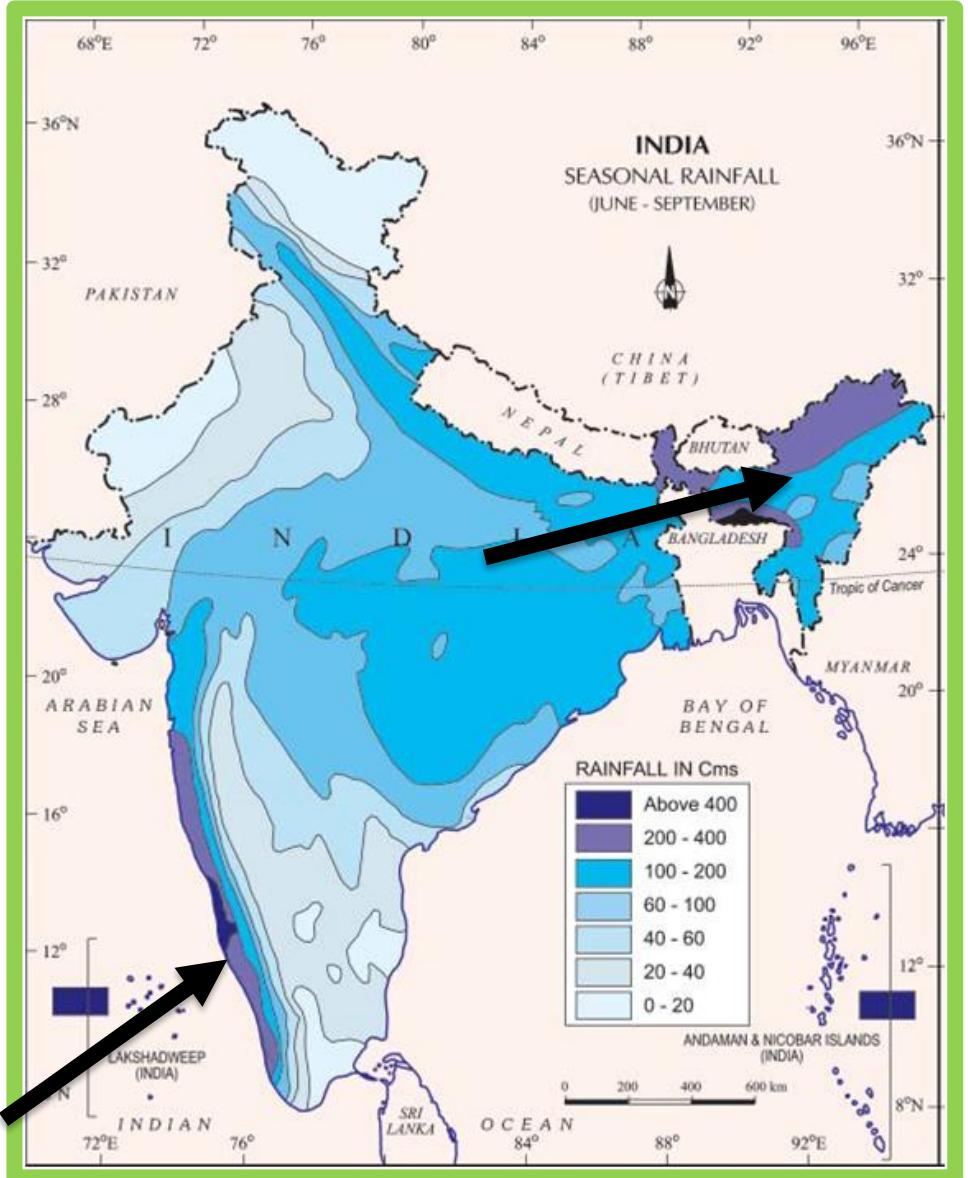
- Areas of very high rainfall
- More than 250cm
- Temperature 25-27 deg
- Western side of western Ghats, NE states and Andaman and Nicobar

# Tropical Wet- Evergreen forest in India



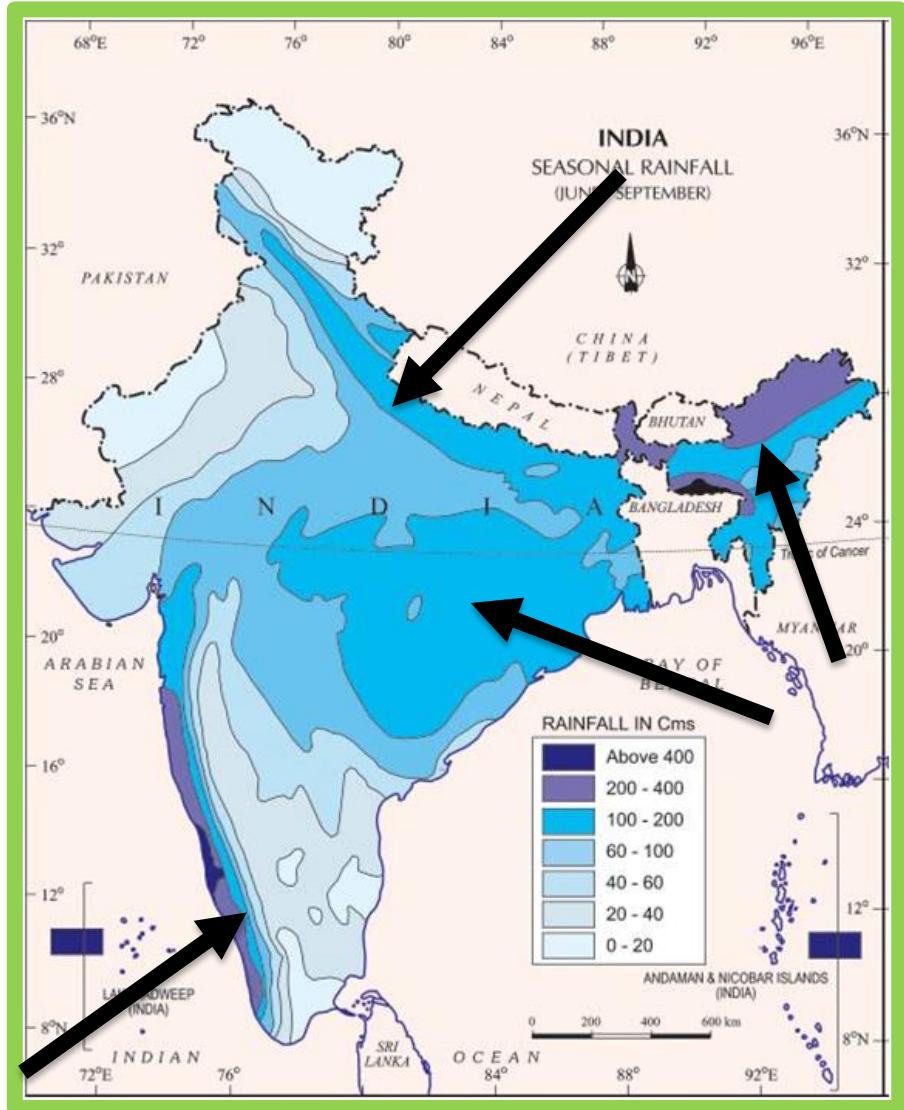
- Dense forest + dense undergrowth
- Pine, bamboo, Jamun
- Underdeveloped lumbering industry:
- Trees are not in pure stands
- Lack of transport facility

# Tropical Semi-evergreen forest in India



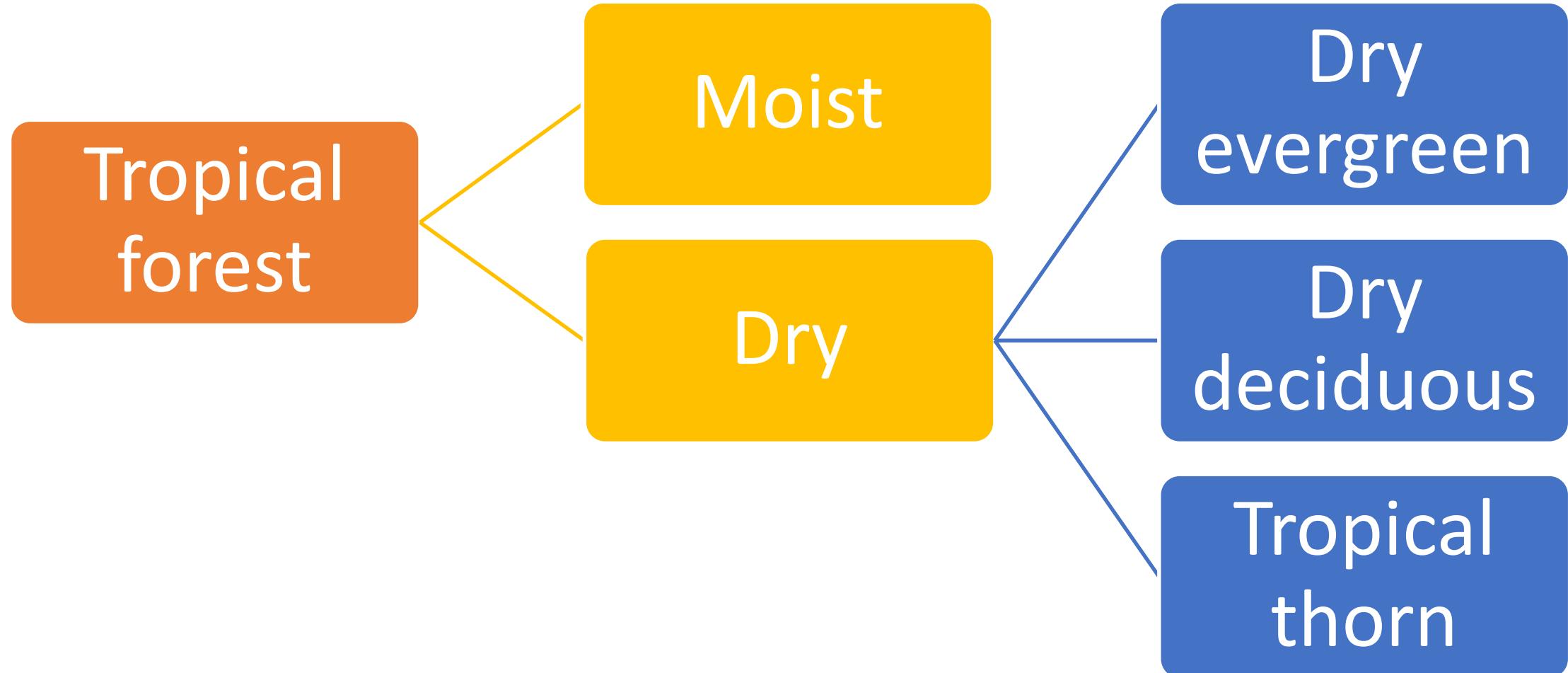
- Border areas of tropical evergreen forest
- Rainfall 200-250 cm
- Western coast, Assam, lower slopes of eastern Himalayas and A & N

# Tropical Moist deciduous forest in India

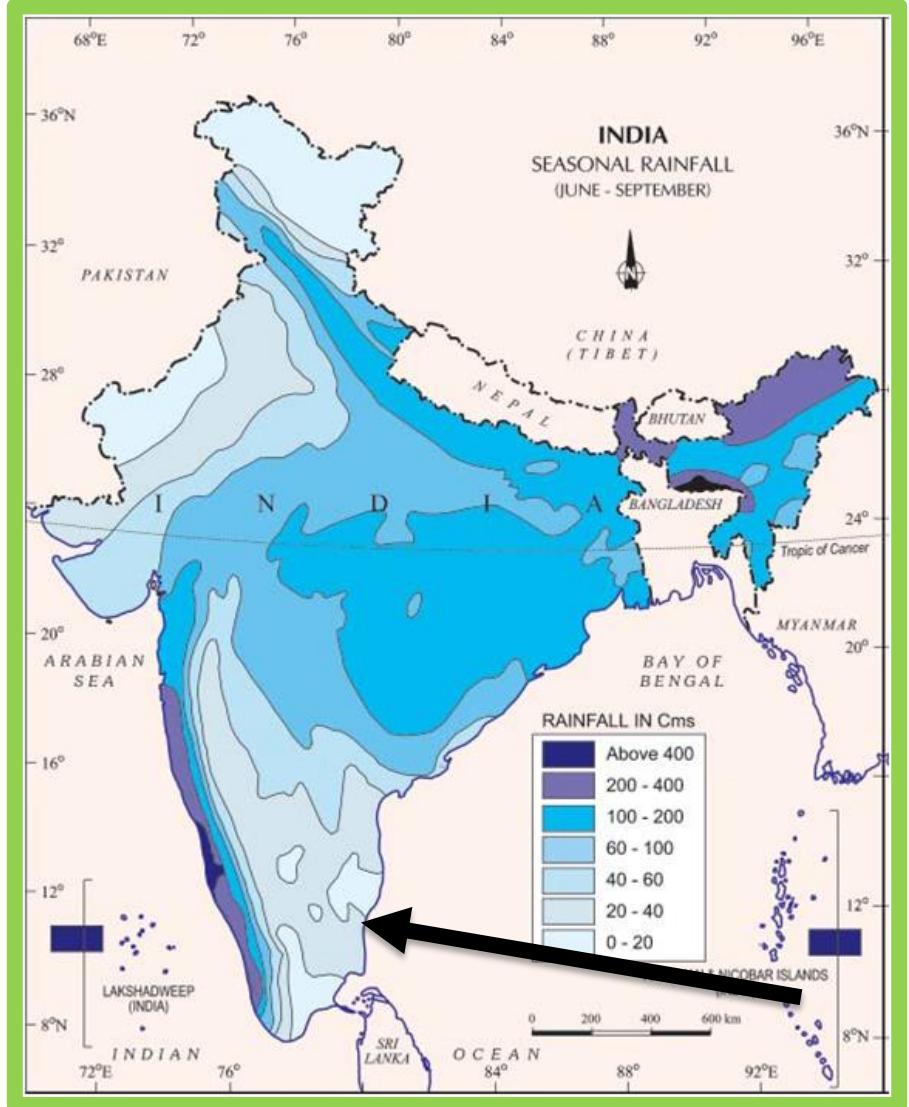


- Moderate rainfall 100-200 cm
- Both on western and eastern sides of western Ghats
- MP, Chhota Nagpur plateau
- Odisha, WB, A & N

# Tropical Forest



# Tropical Dry Evergreen forest in India



- Rainfall about 100 cm
- TN coast
- Winter rainfall + monsoon rainfall

# Tropical Dry Deciduous forest in India



- Rainfall about 75-100 cm
- Shed their leaves in dry season
- Transition type-between
- Wetter -> moist deciduous
- Drier ->tropical thorn

Tropical  
Moist

Moist  
deciduous

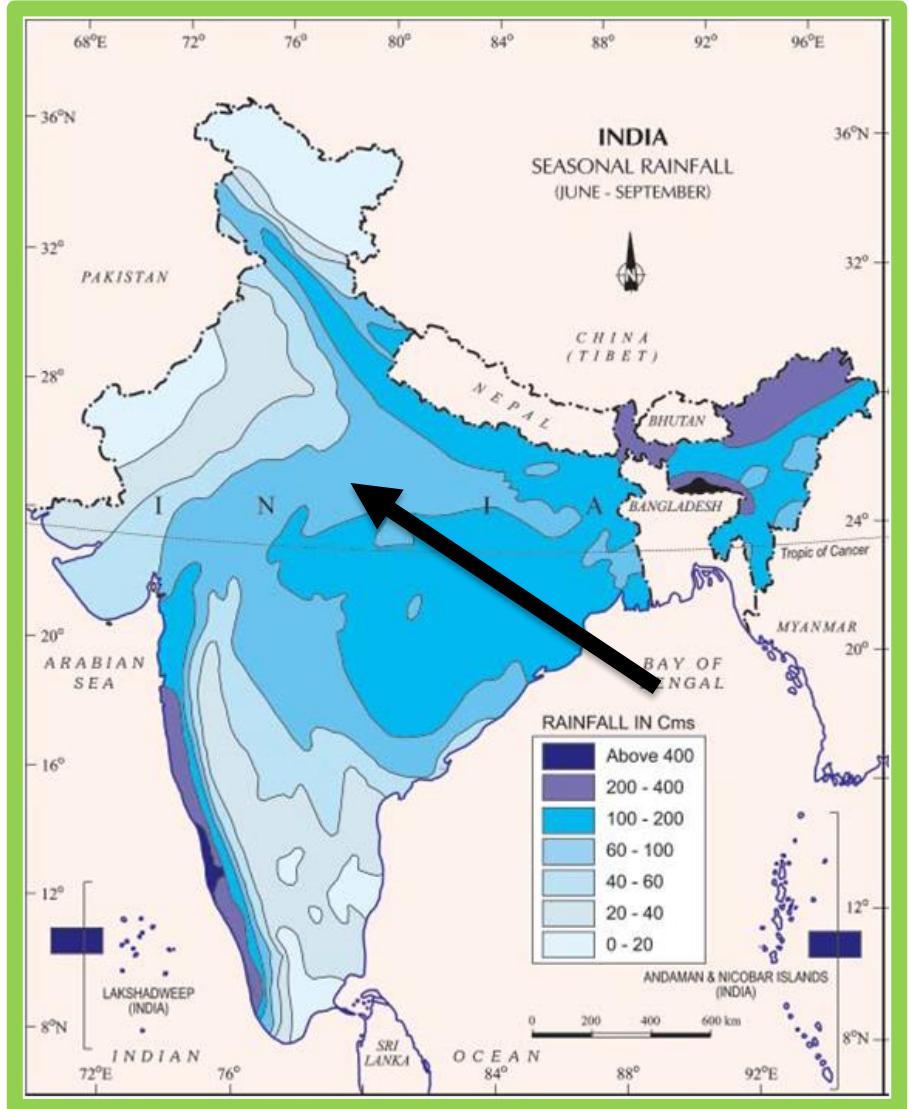
Tropical Dry

Dry Deciduous

Tropical Dry

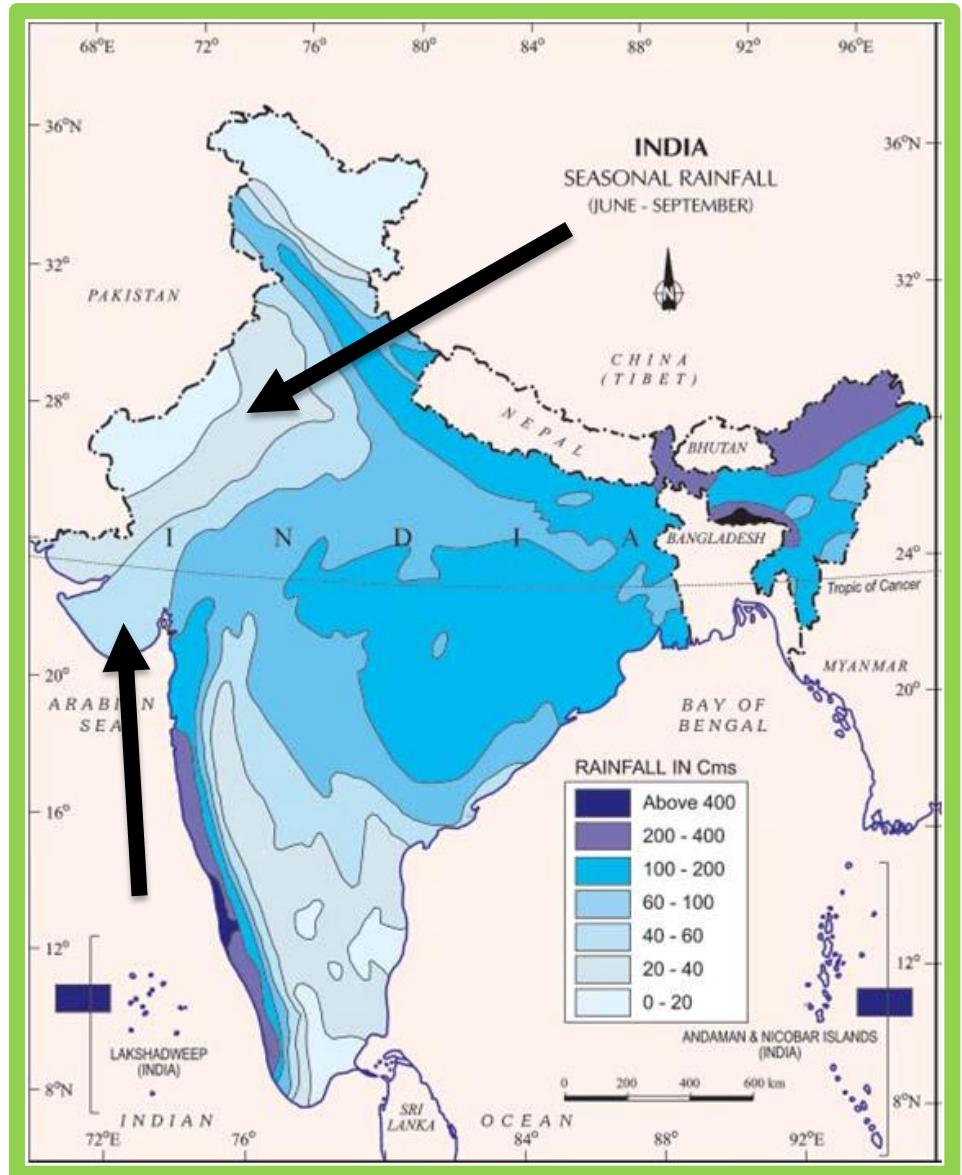
Tropical Thorn

# Tropical Dry Deciduous forest in India



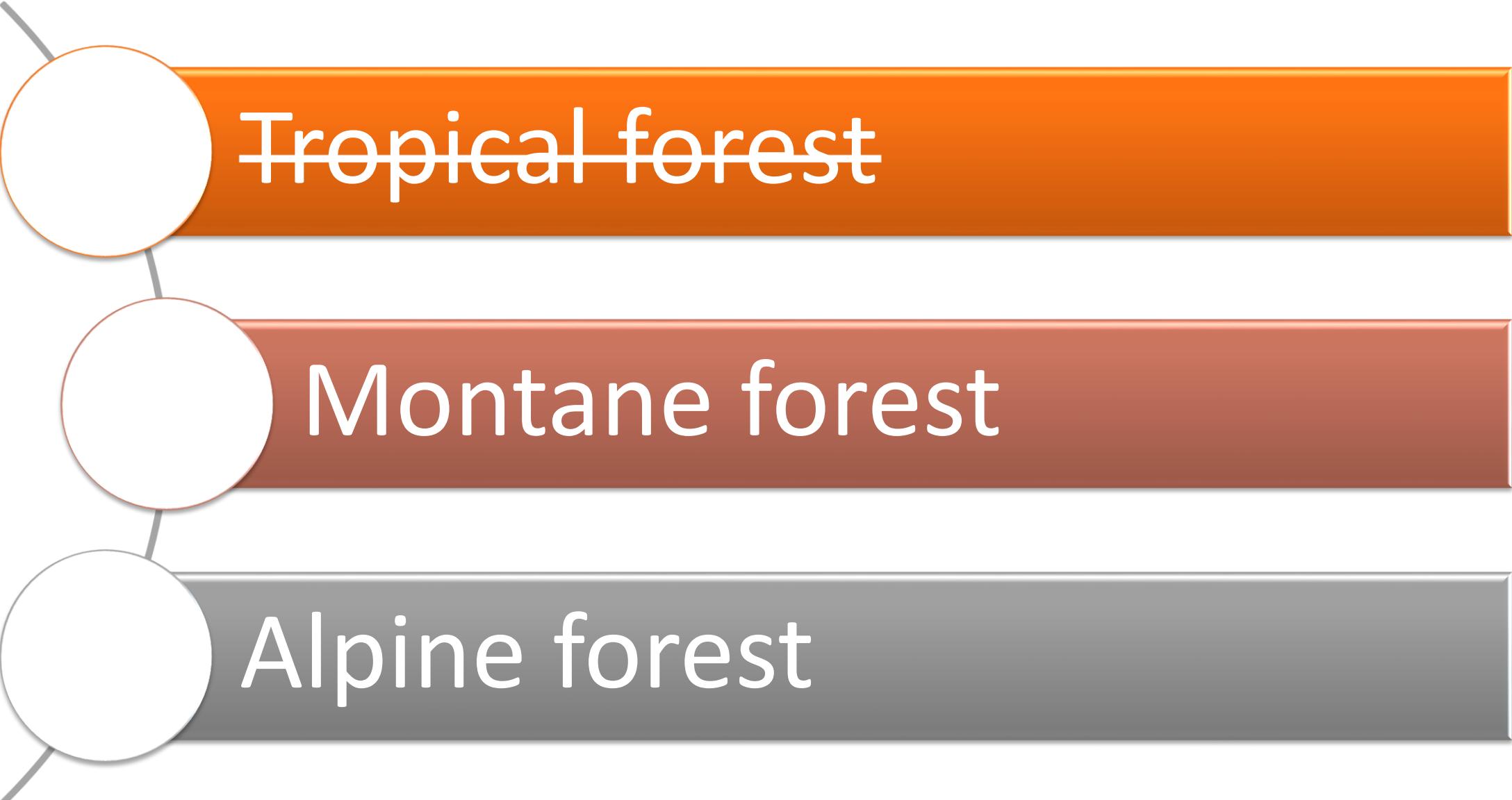
- Central India
- MP, RJ, Kathiawar, western Ghats
- Sal, Teak, Rosewood

# Tropical Thorn forest in India



- Less than 75 cm rainfall
- North-west part of the country
- RJ, Kutchh, Kathiawar

# Vegetation types in India



Tropical forest

Montane forest

Alpine forest

Montane  
forest

Sub-tropical forest  
(1000-2000m)

Temperate forest  
(1500-3000m)

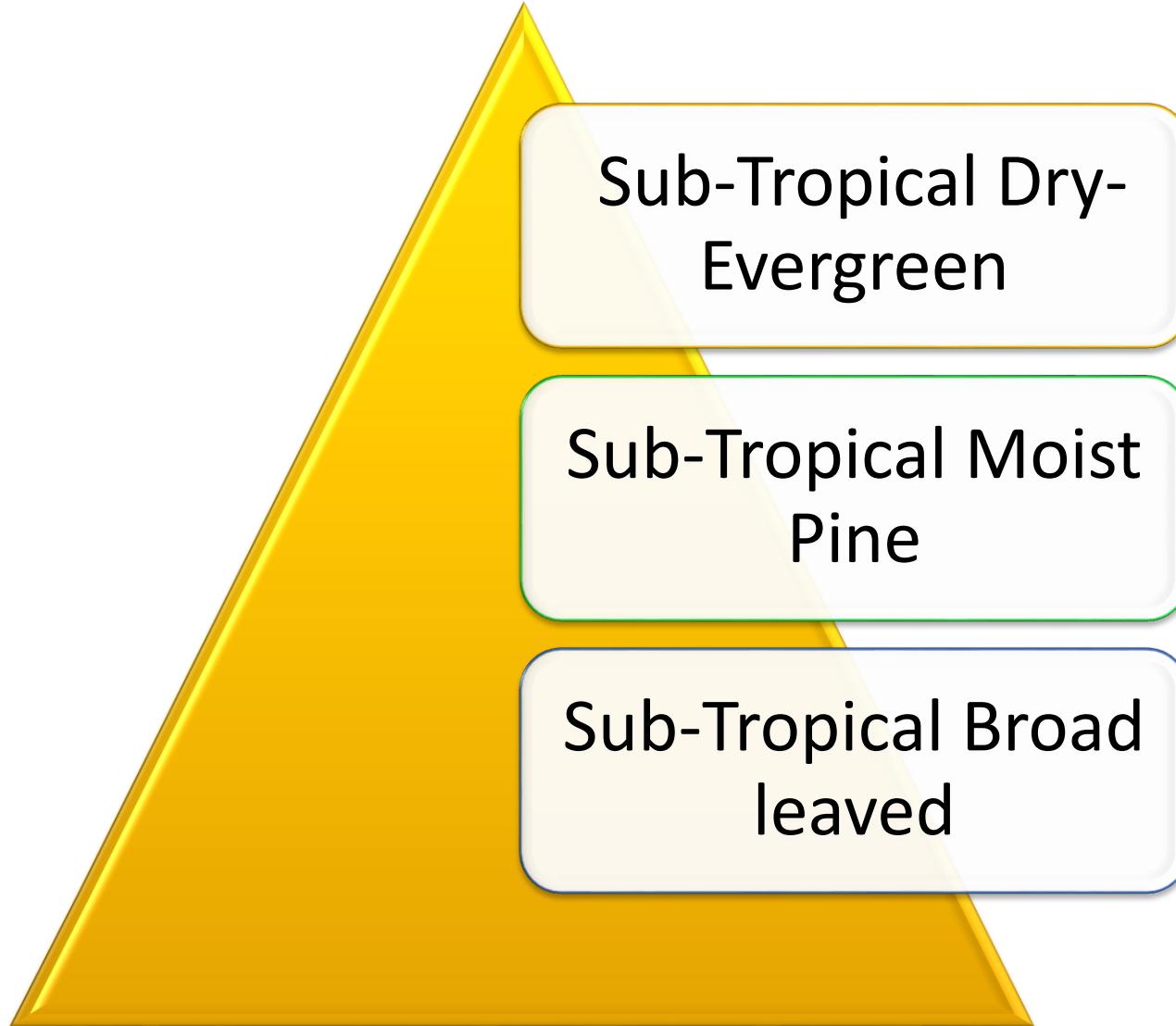
Montane Sub-tropical forest  
1000-2000m

Sub-tropical broad-leaves

Subtropical moist Pine

Sub-tropical dry evergreen

# Rainfall Decrease from bottom to top



# **Sub-tropical broad leaved forest**



- Height 1000-2000m
- Rainfall: 75-125 cm
- Evergreen dense
- Oak, Chestnut

# **Sub-tropical Moist Pine forest**



- Height 1000-2000m
- But Rainfall: about 100 cm
- Eastern Himalayas
- Chil/chir most abundant
- Chil/Chir is used for timber, resin and turpentine

# **Sub-tropical Dry evergreen forest**



- Height about 1000
- Rainfall: 50-100 cm
- Bhabhar, Shiwaliks – western Himalayas
- Stunted trees and shrubs

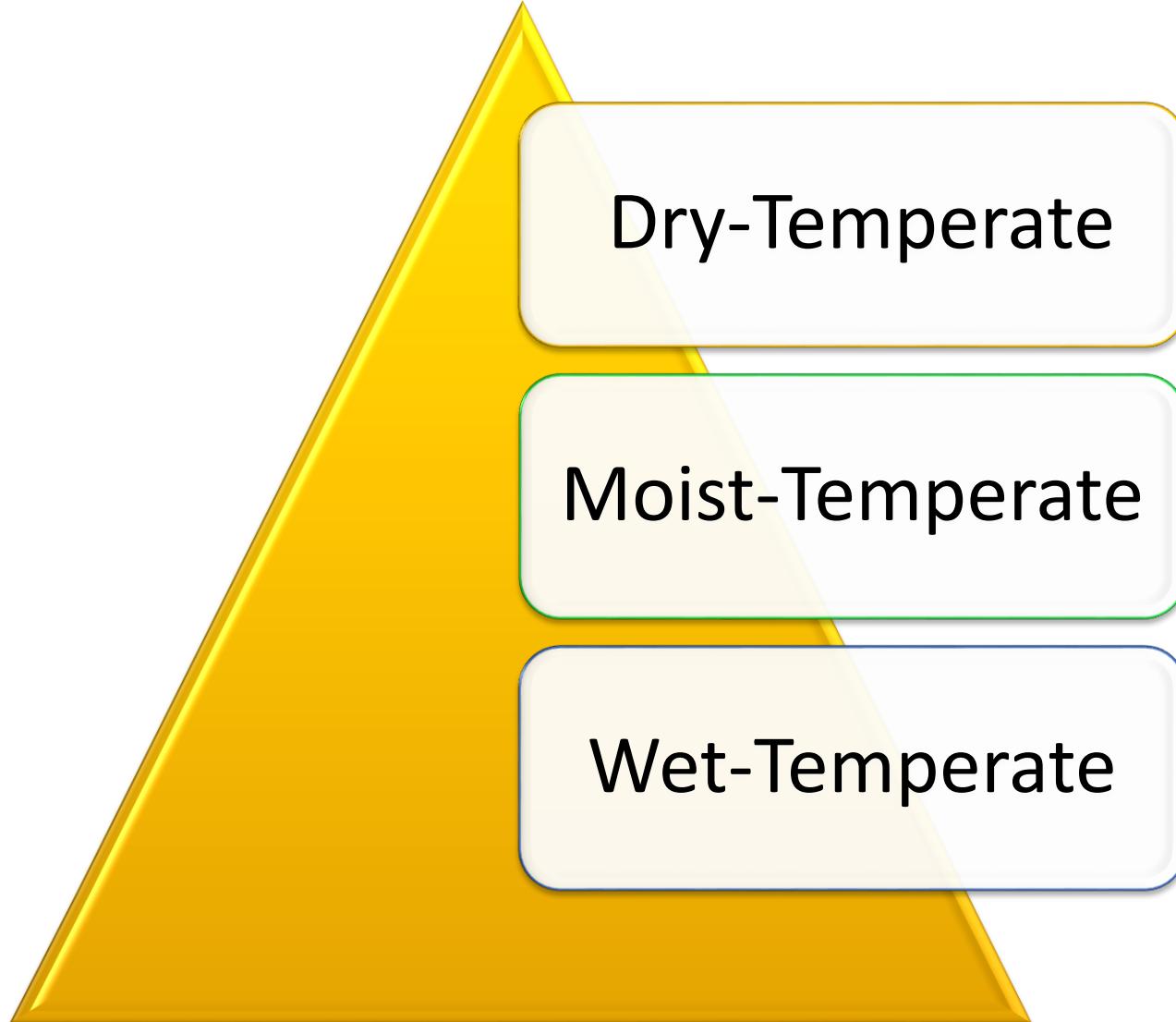
Montane  
Temperate forest  
1500-3000m

Wet-Temperate

Moist-Temperate

Dry-temperate

# Rainfall Decrease from bottom to top



# **Montane Wet Temperate forest**



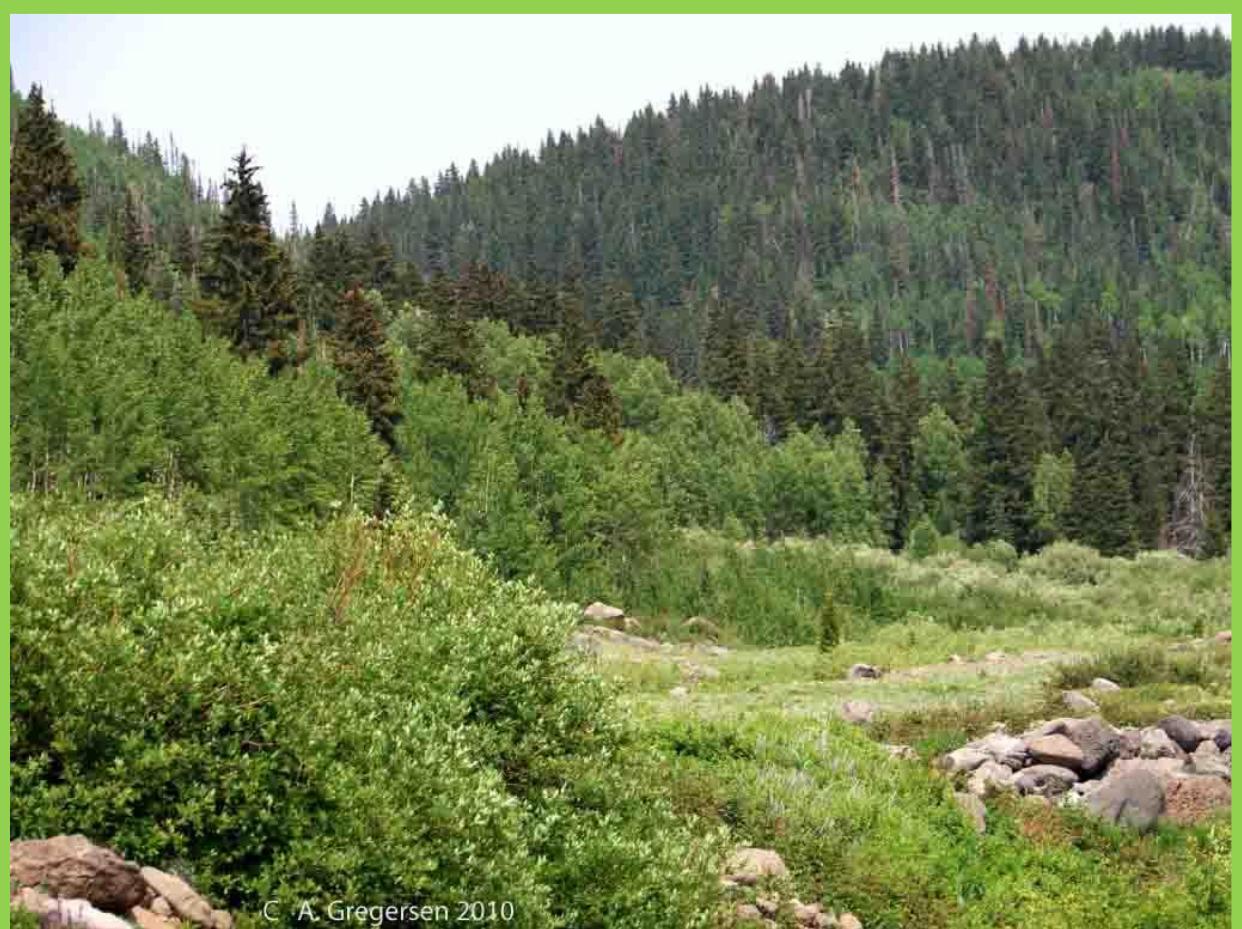
- Height: 1800-3000 m
- Rainfall 150-300 cm
- Eastern Himalayas
- Western Ghats above height of 1800 m
- Trees: evergreen, short, leaves dense and round
- Deodar, Birch, Plum

# **Montane Moist Temperate forest**



- Height: 1500-3300 m
- Rainfall: 150-250 cm
- Entire length of Himalayas
- Deodar dominates
- Deodar wood used for Timber, railway sleepers

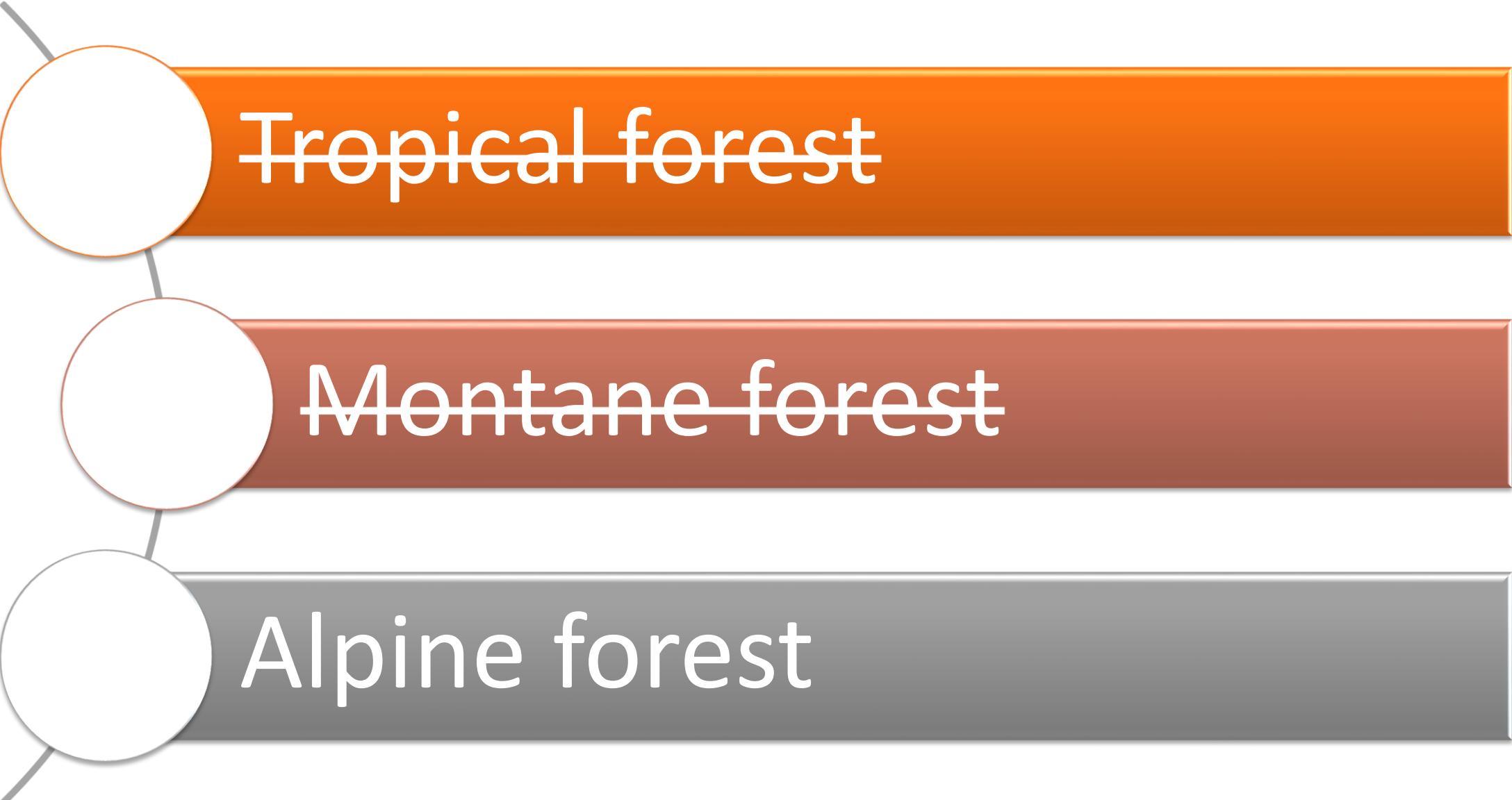
# **Montane Dry Temperate forest**



C. A. Gregersen 2010

- Rainfall: less than 100 cm
- Dry part of Himalayas
- Ladakh, Sikkim and Garhwa
- Coniferous forest
- Oak, ash, maple

# Vegetation types in India



Tropical forest

Montane forest

Alpine forest

# Alpine forest



- Height: 2900- 3800 m
- Mixture of coniferous trees, large scrubs, broad-leaved trees
- Then with increase in height - Alpine grass and scrub
- Fur, Spruce, Birch, Berberries

# Vegetation types in India



Tropical forest

Montane forest

Alpine forest

## Forest type - Area

Forest type	Percentage of total area
Tropical Moist Deciduous forest (100-200 cm)	37%
Tropical Dry Deciduous forest (~100cm)	28%
Tropical Wet Evergreen (>250cm)	8%
Montane Sub-Tropical Pine (Chir)	6.6%
Tropical Semi-Evergreen	4%

## Forest type - Area

Forest type	Percentage of total area
Montane Wet Temperate	3.6%
Montane Moist Temperate (Deodar)	3.4%
Sub-tropical Dry Evergreen (shiwaliks)	2.5%
Alpine	2.1%

## Forest type - Area

Forest type	Percentage of total area
Littoral-swamp	0.6%
Sub-tropical Broad leaved	0.4%
Montane Dry Temperate	0.3%
Tropical Dry Evergreen	0.2%

**Q. In India, which type of forest among the following occupies the largest area?**

- a) Montane wet forest**
- b) Sub-tropical dry evergreen**
- c) Tropical moist deciduous forest**
- d) Tropical wet evergreen forest**

UPSC

Prelims  
2010

- a) Montane wet forest -3.6%**
- b) Sub-tropical dry evergreen – 2.5%**
- c) Tropical moist deciduous forest – 37%**
- d) Tropical wet evergreen forest – 8%**

**Ans. C)**

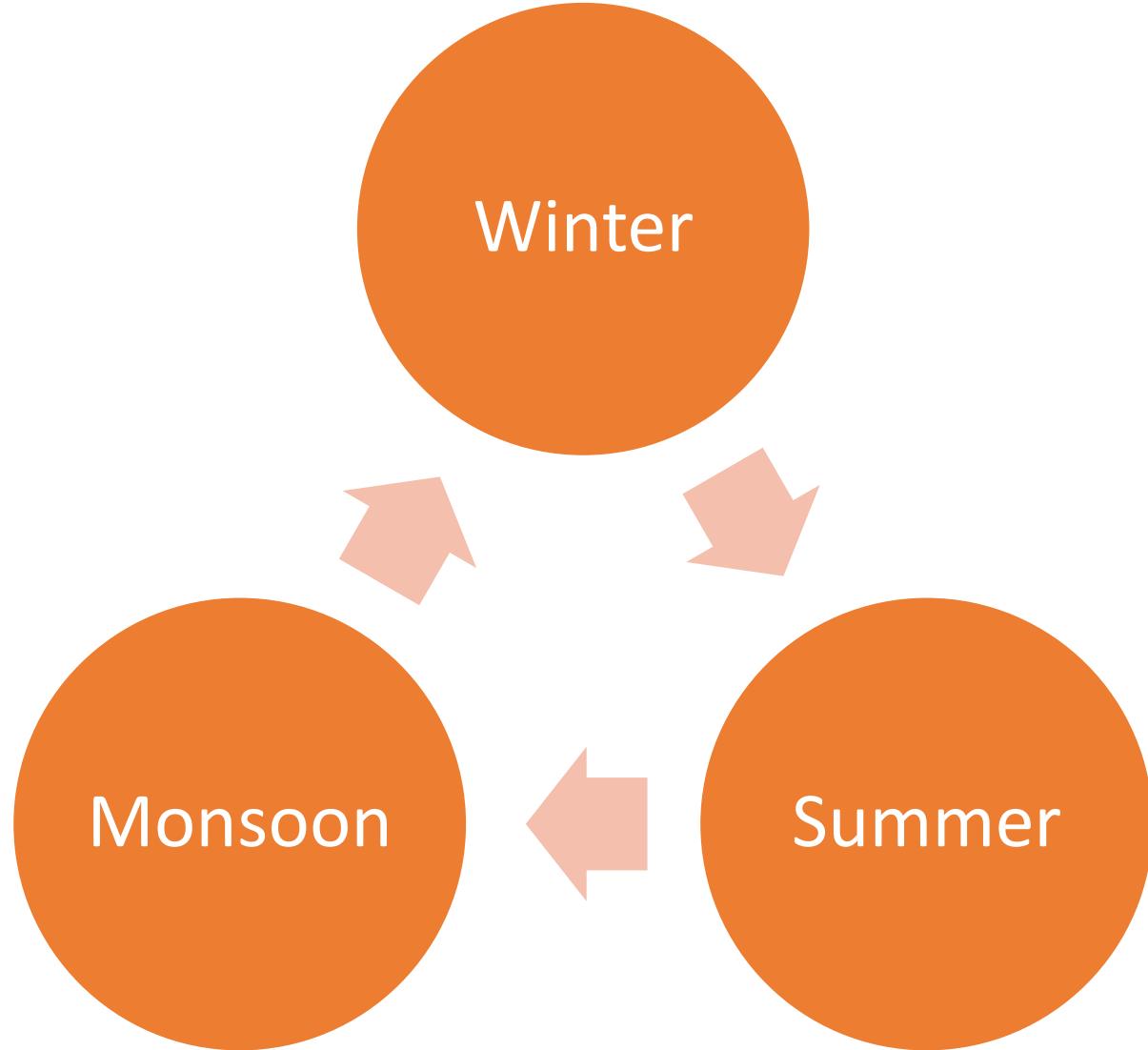
**UPSC**

**Prelims  
2010**

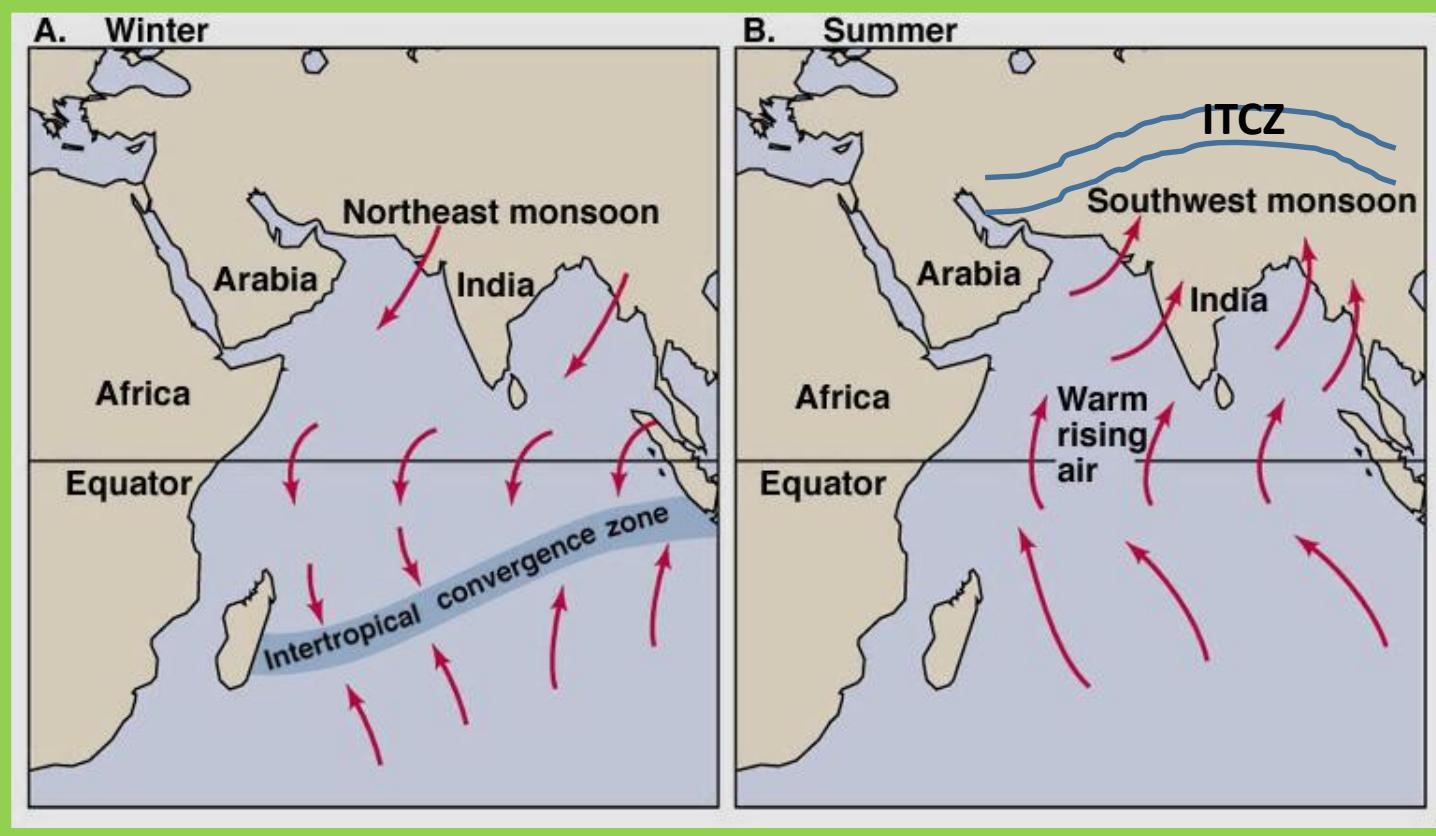


# Climatic regions of India

# Seasons of India

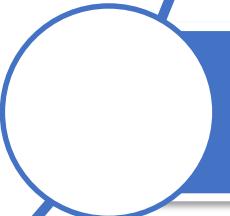


# Monsoon

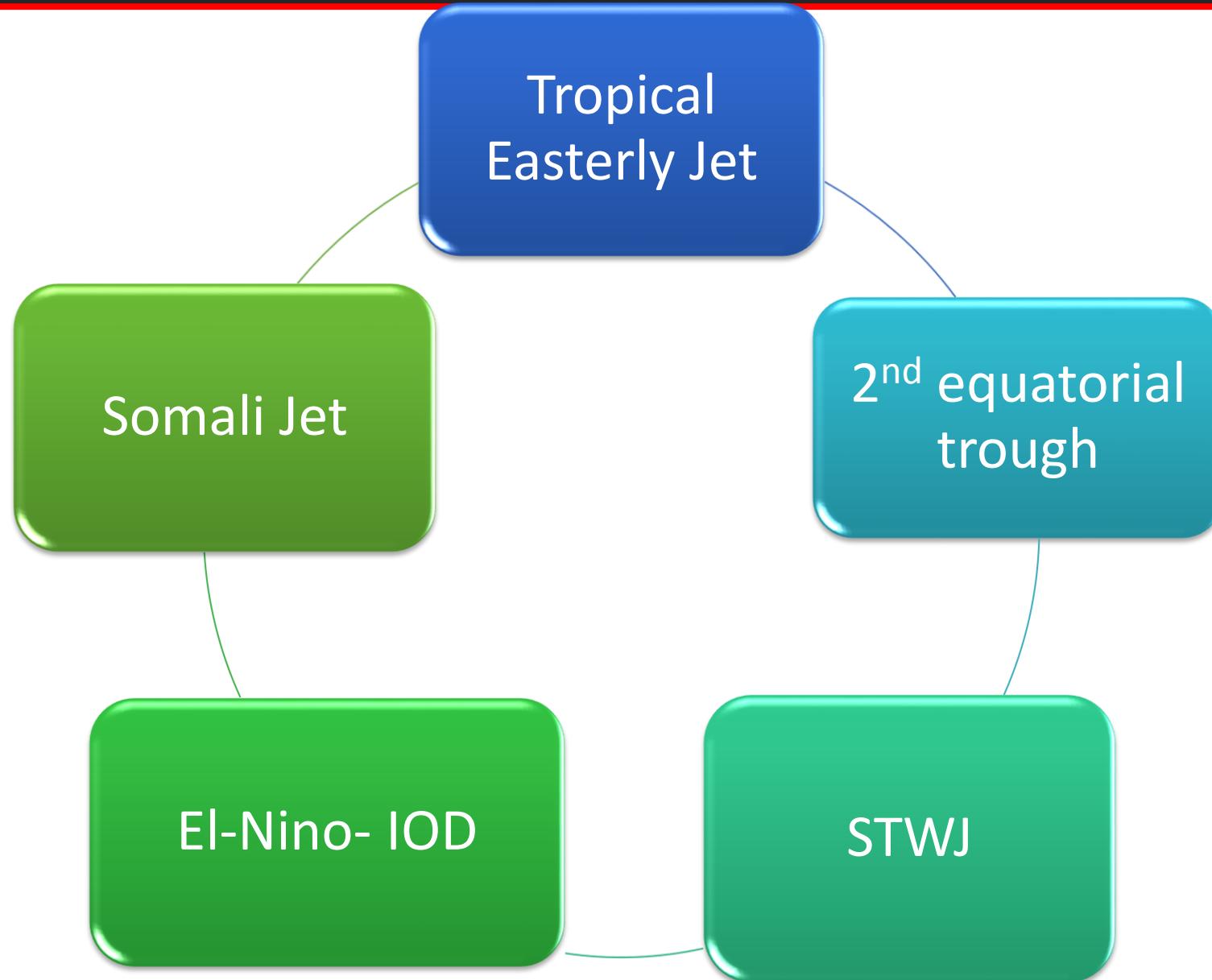


- Unique weather phenomenon
- “Mausam”= Seasonal reversal of winds

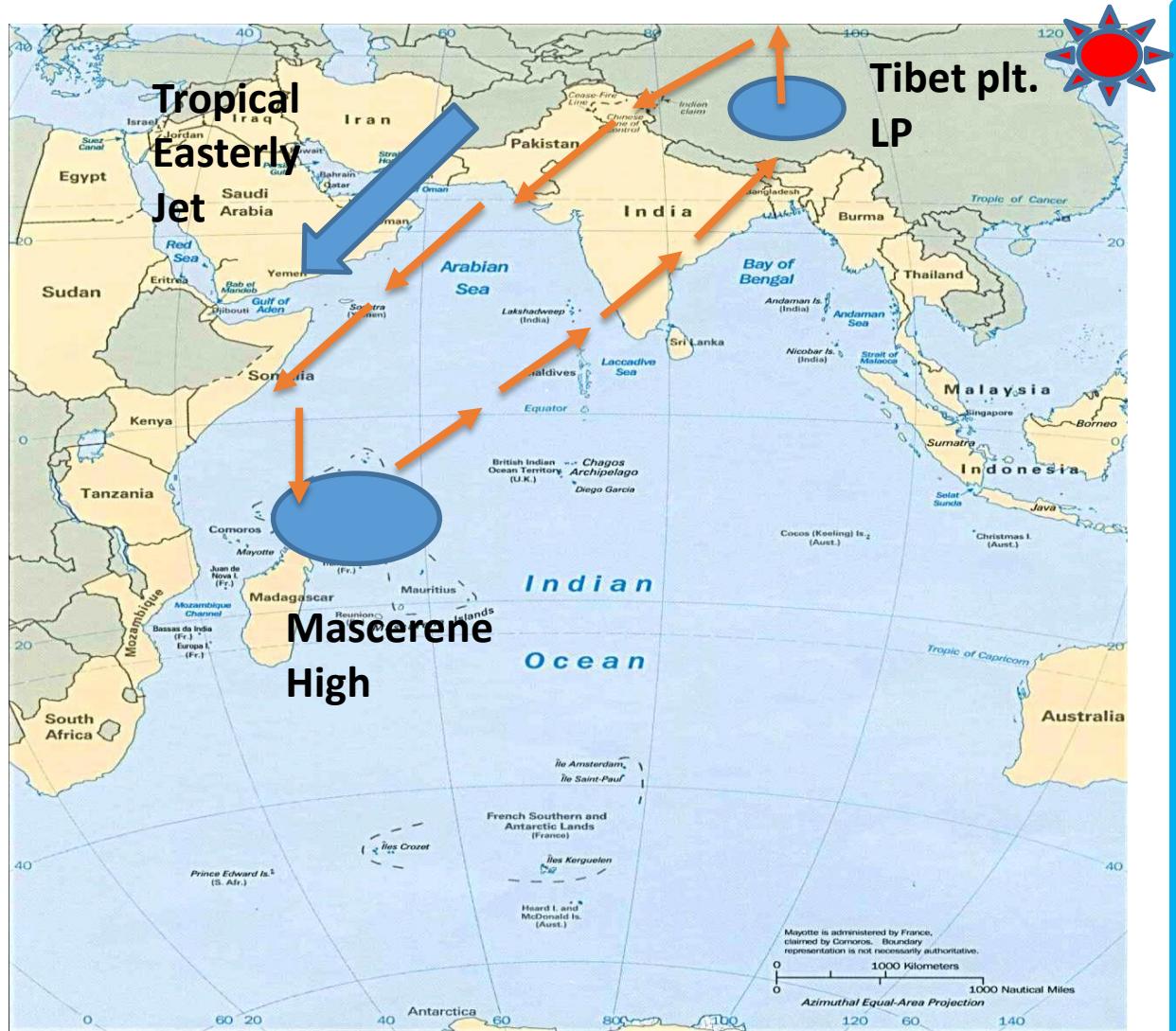
# India Monsoon: unique features

-  Sudden Onset
-  Gradual Advance
-  Gradual retreat
-  Variation – regional and temporal

# Indian Monsoon: mechanism

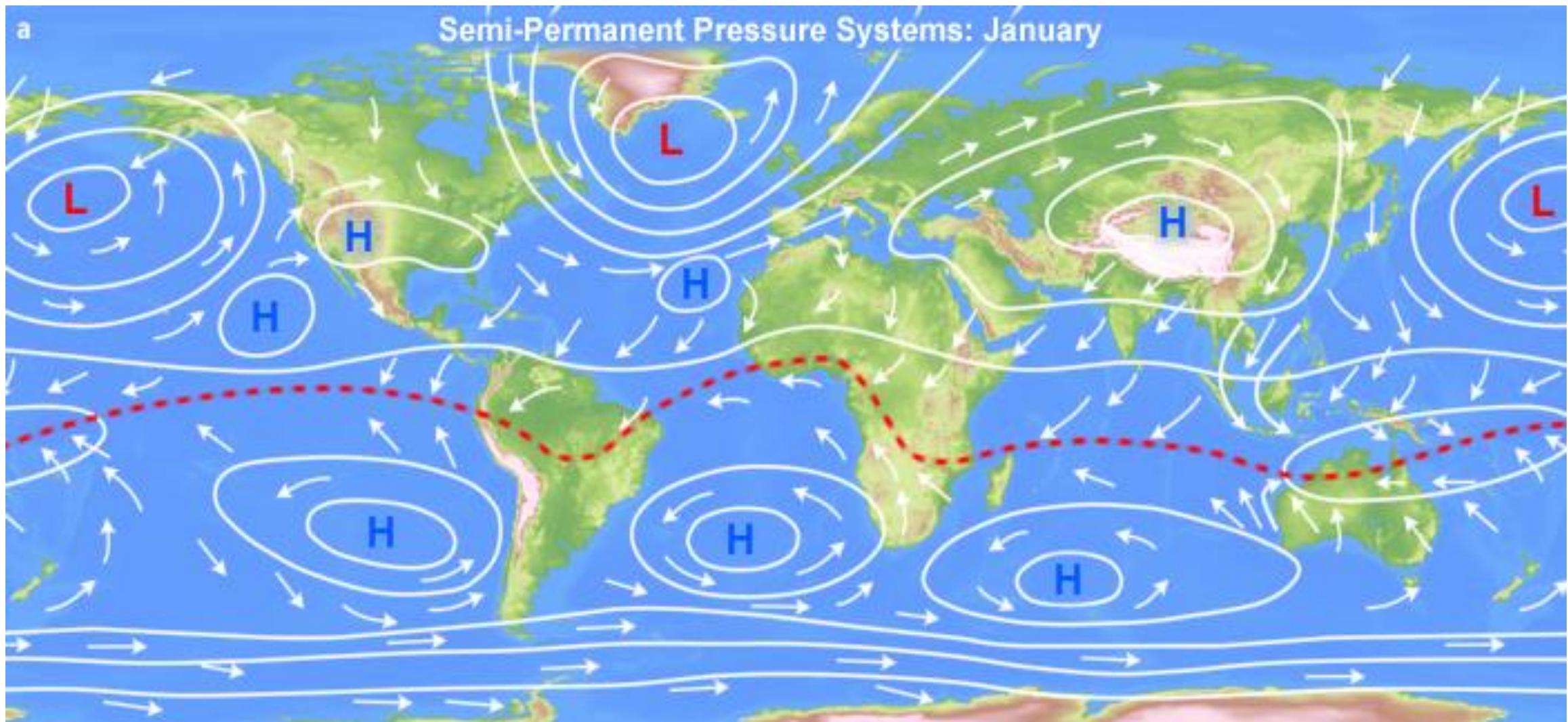


# Tropical Easterly Jet (TEJ)

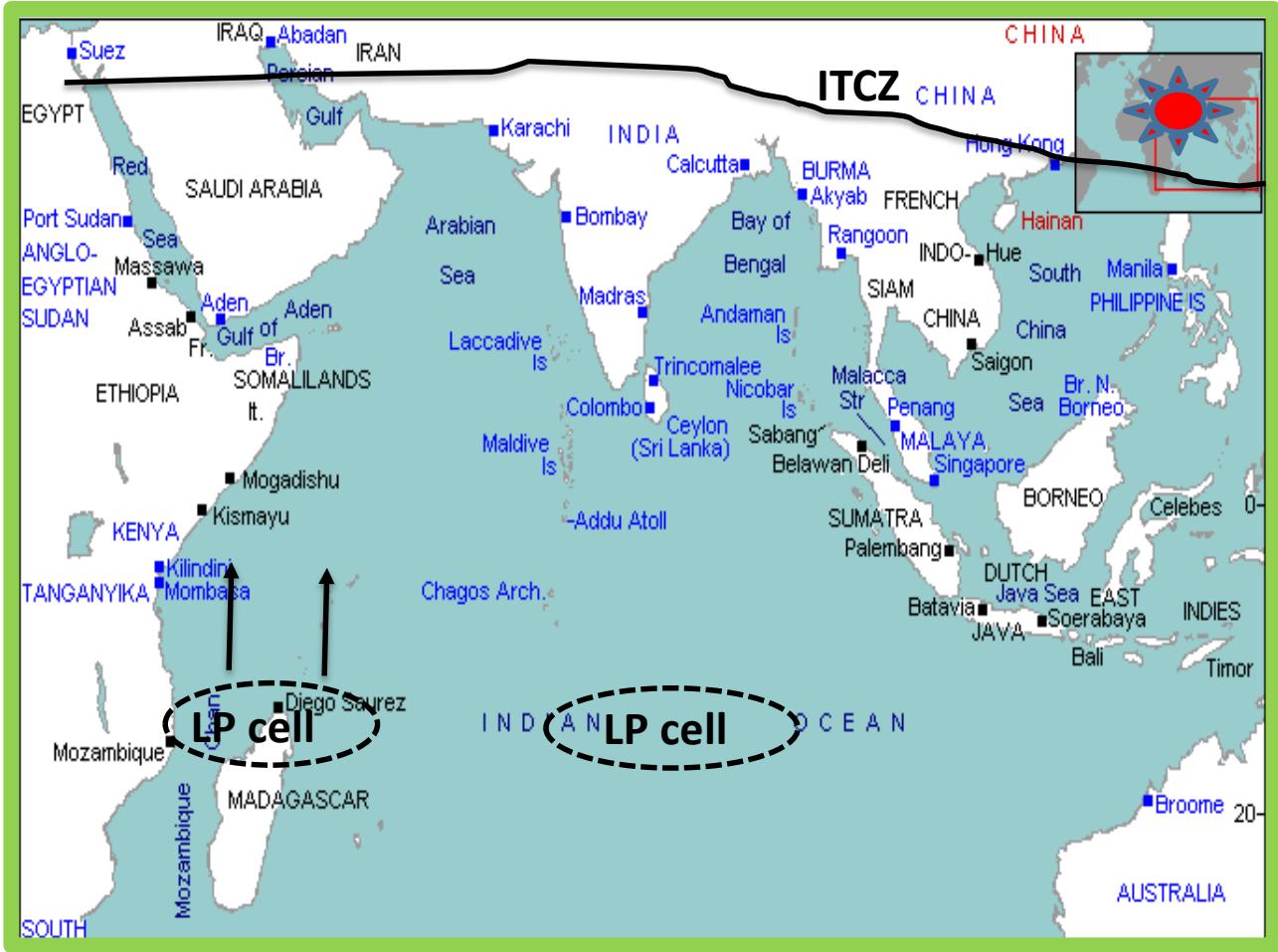


- Northward movement of the sun in summer
- Heating of Tibetan plt - LP
- Rising of the air
- Create TEJ above Tibet – move towards Mascarene High
- Strengthen Mascarene High pressure cell

# Pressure system on earth

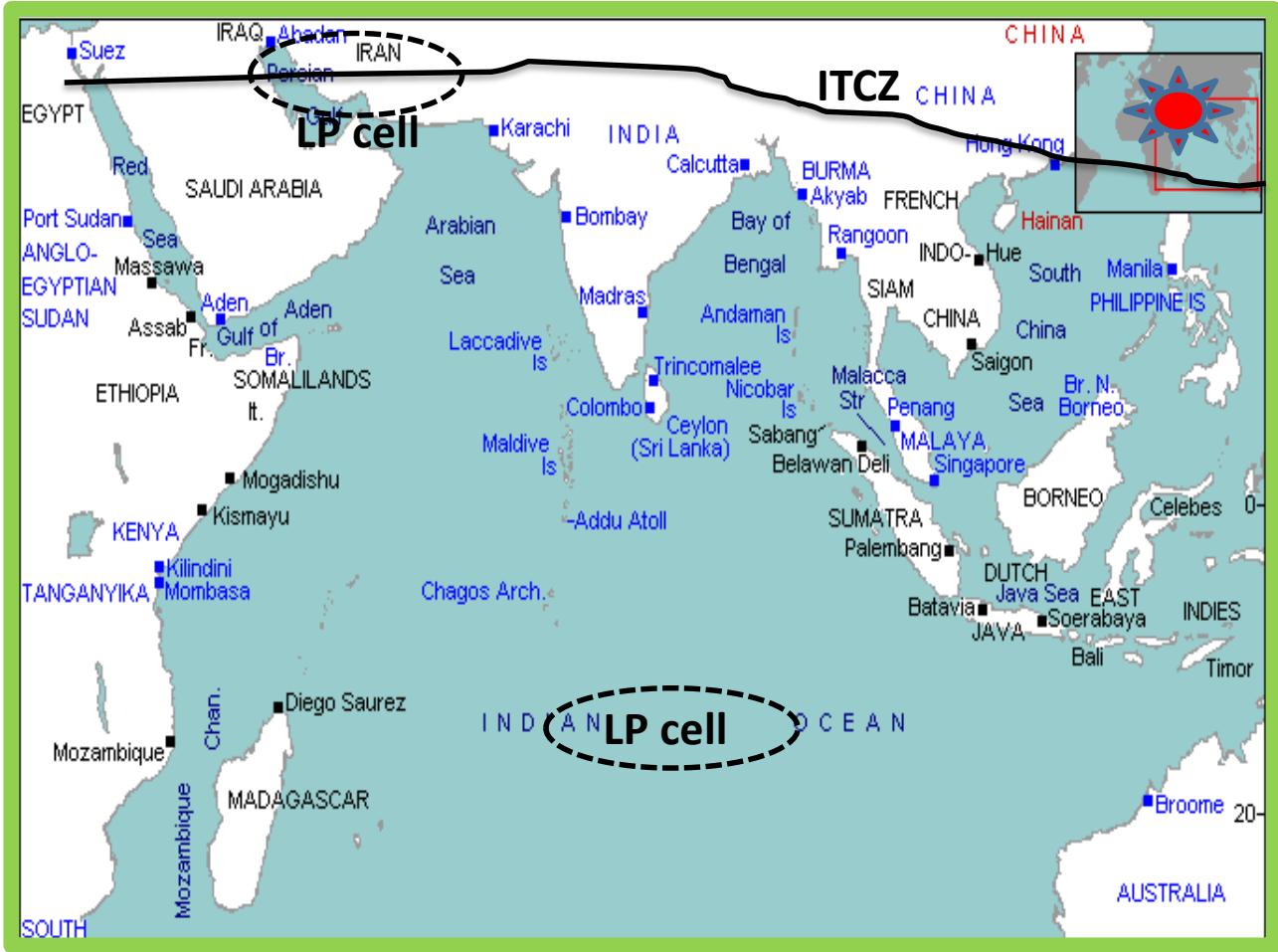


# Second equatorial trough



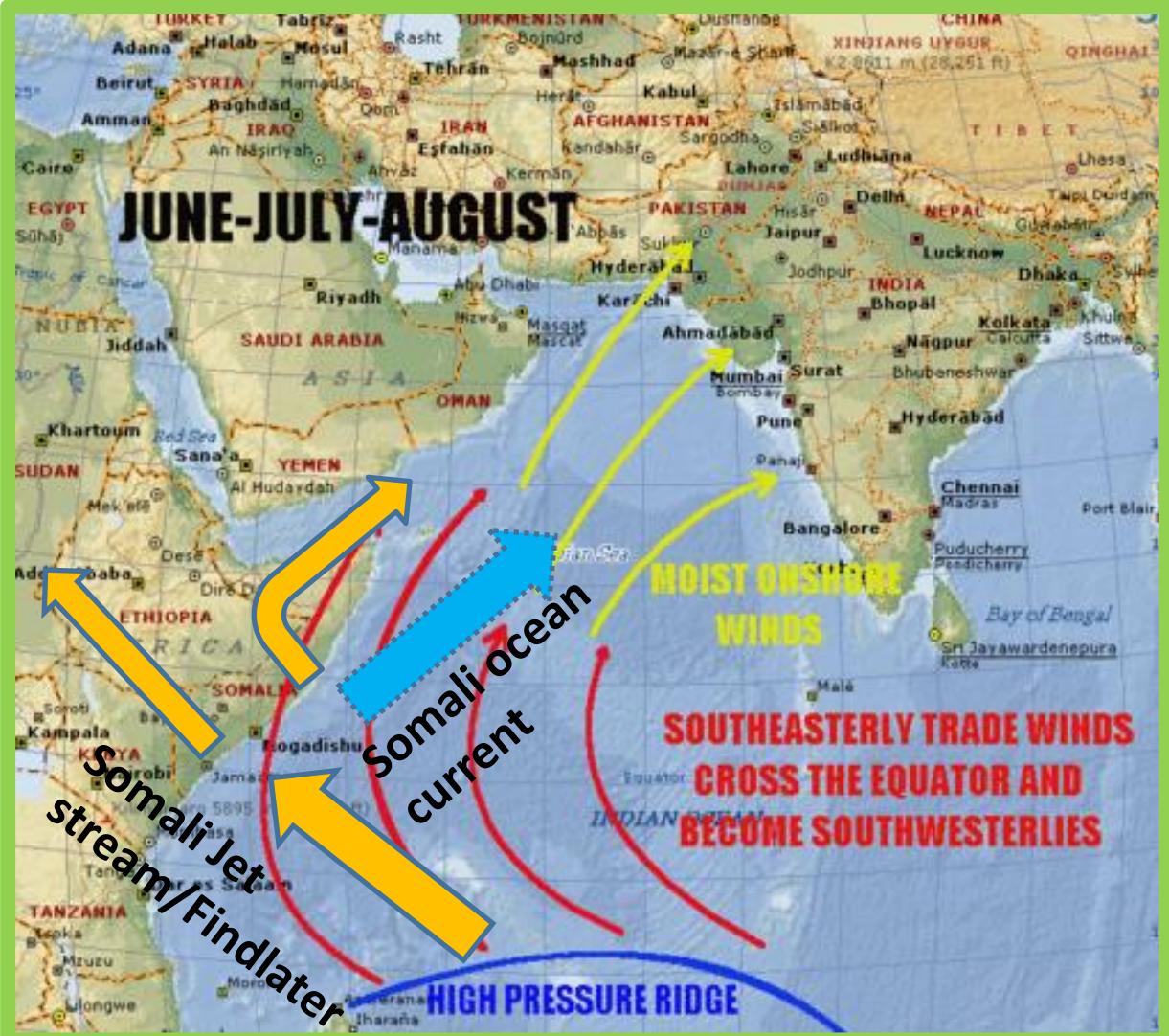
- **Summer: northward movement of sun, northward movement of ITCZ**
  - **Sometimes, LP cells of ITCZ do not merge with ITCZ on movement of ITCZ**

# Second equatorial trough



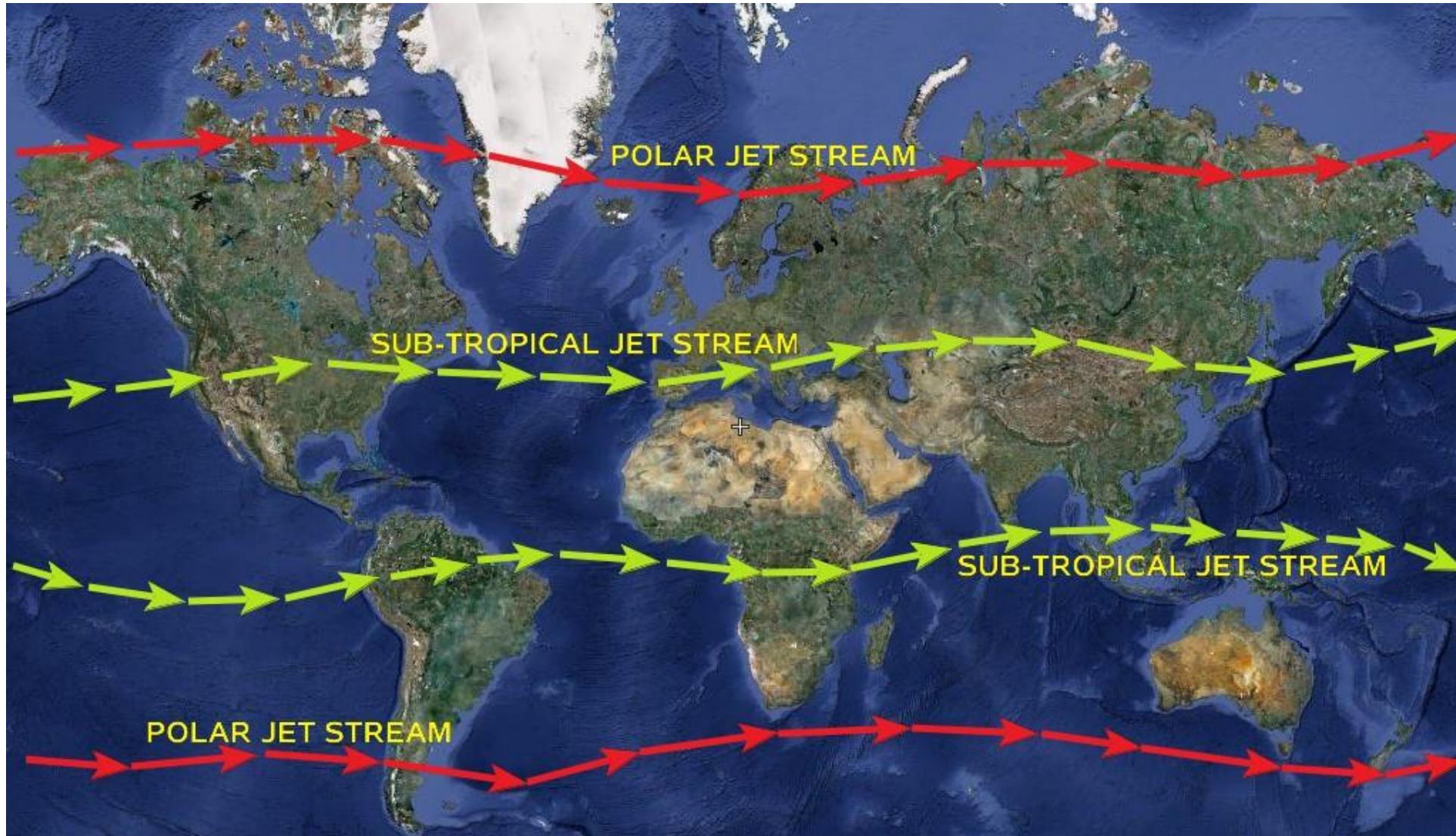
- When 2<sup>nd</sup> equatorial trough (LP cell of ITCZ) merges with main ITCZ
  - strengthen the LP of ITCZ
- Attract more monsoon winds towards India
- If not, then weak LP system over Tibet

# Somali current and Somali Jet stream

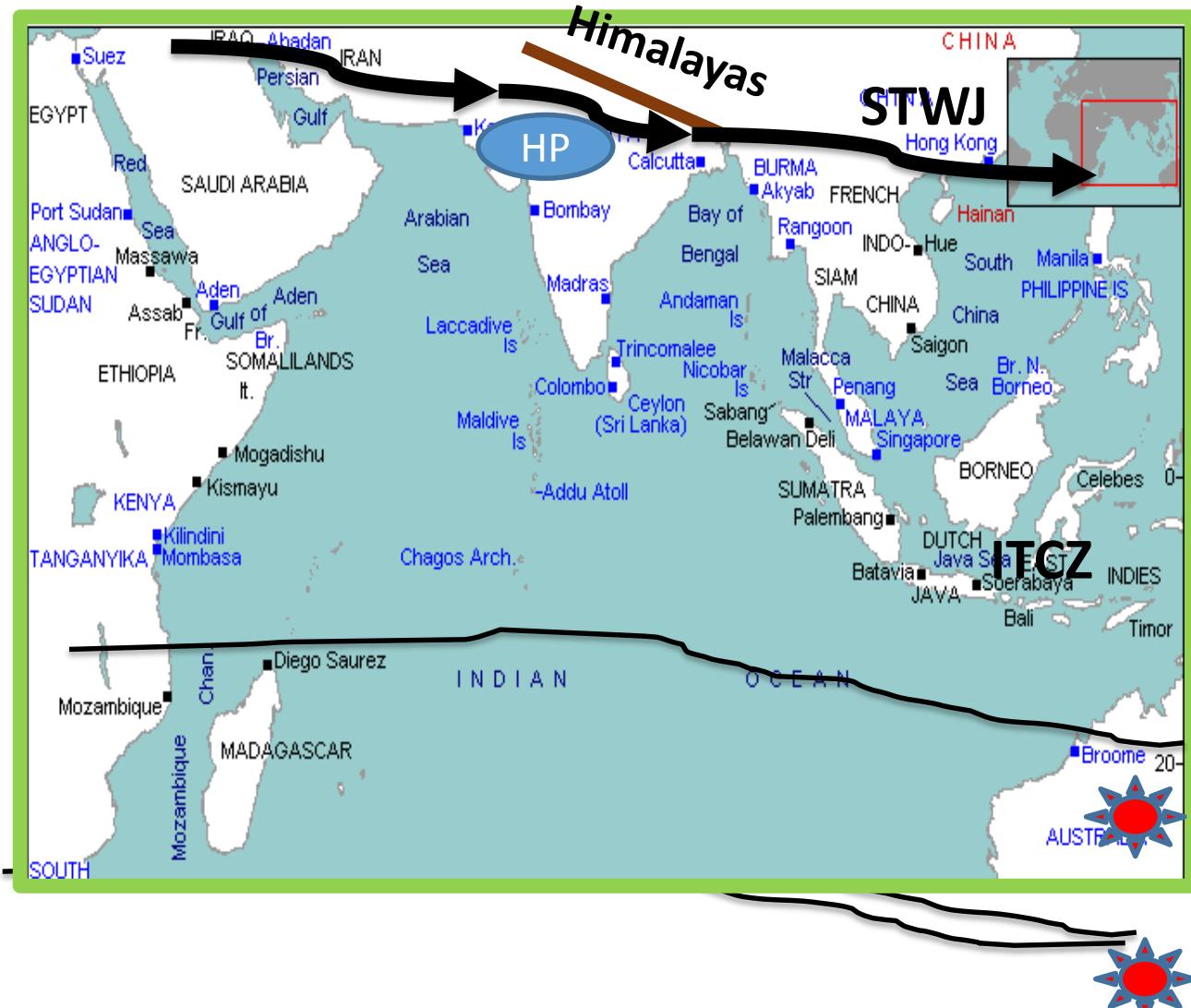


- Somali jet stream – low level, appear only in summer
- Intensify Somali ocean current
- Somali jet stream pushes monsoon winds towards India
- Stronger the Somali current, better d monsoon

# Permanent Jet stream in the world



# Sub-Tropical Westerly Jet



- Winter – entirely south of Himalayas – over north India
- STWJ maintain the High pressure over north India

# Sub-Tropical Westerly Jet

STWJ



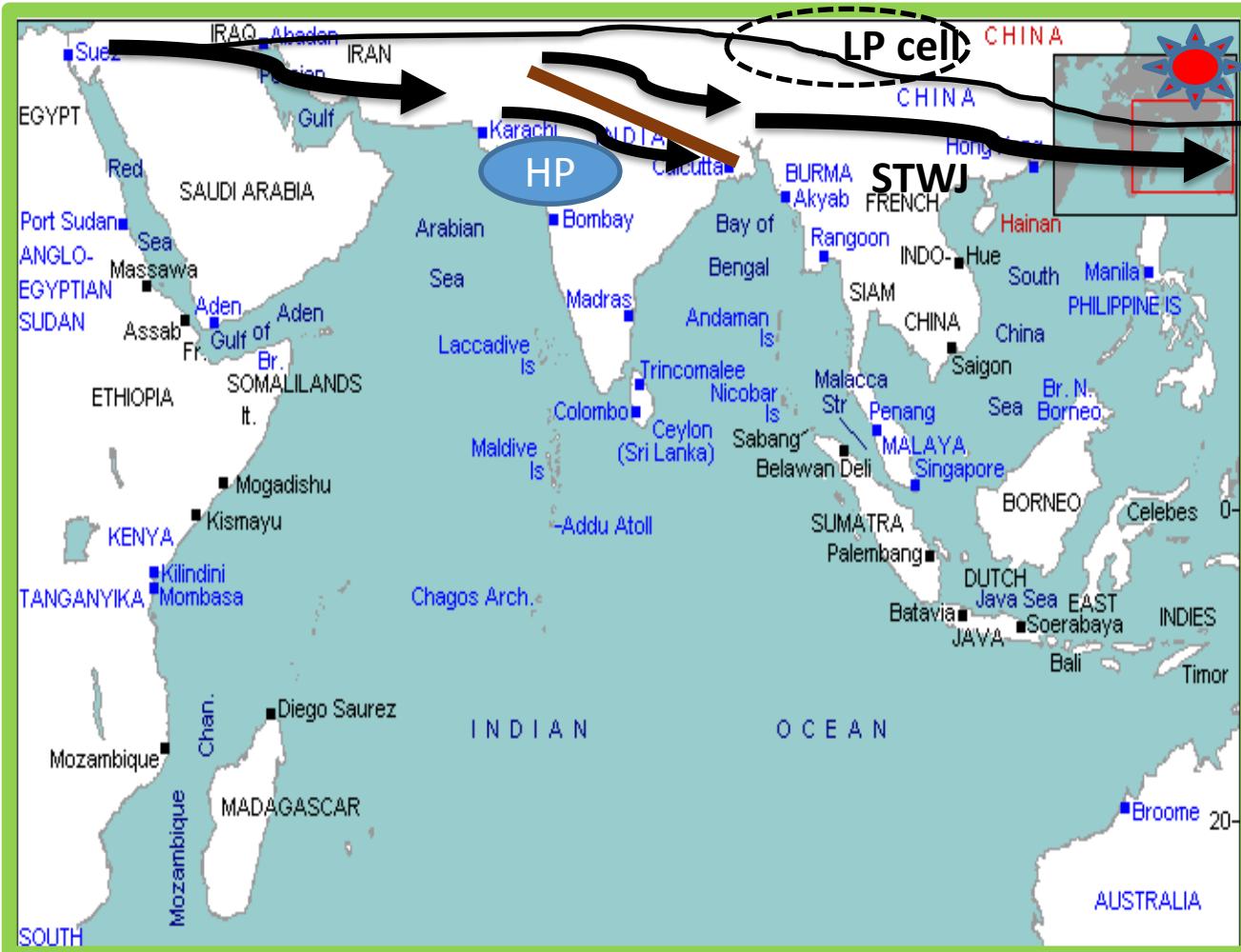
- Early summer – northward movement – bifurcation – southern branch still over northern India
- HP conditions

# Sub-Tropical Westerly Jet



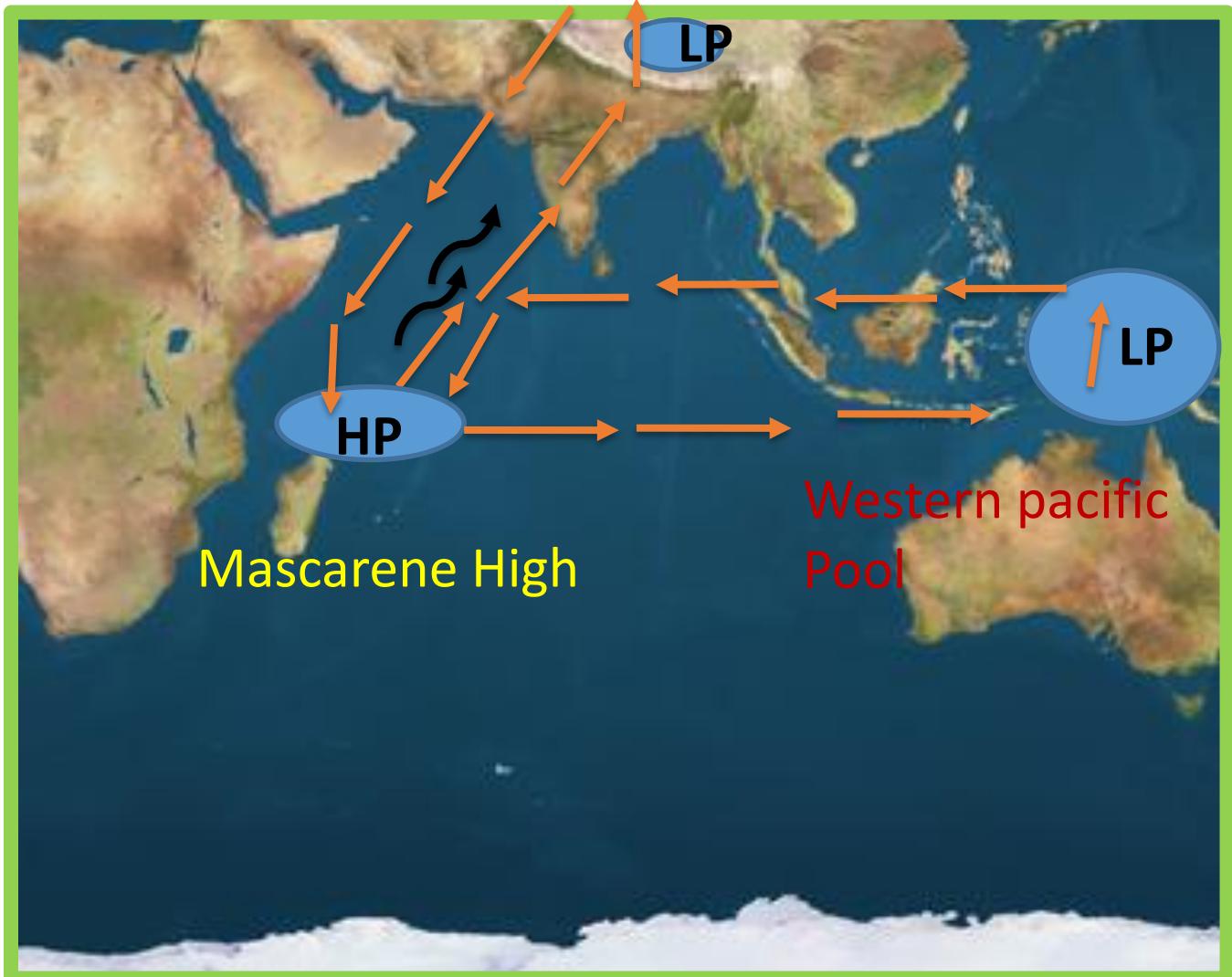
- Summer: STWJ entirely northward
- Allow Onset of monsoon (sudden burst)
- If southern branch re-establish- monsoon break

# Sub-Tropical Westerly Jet



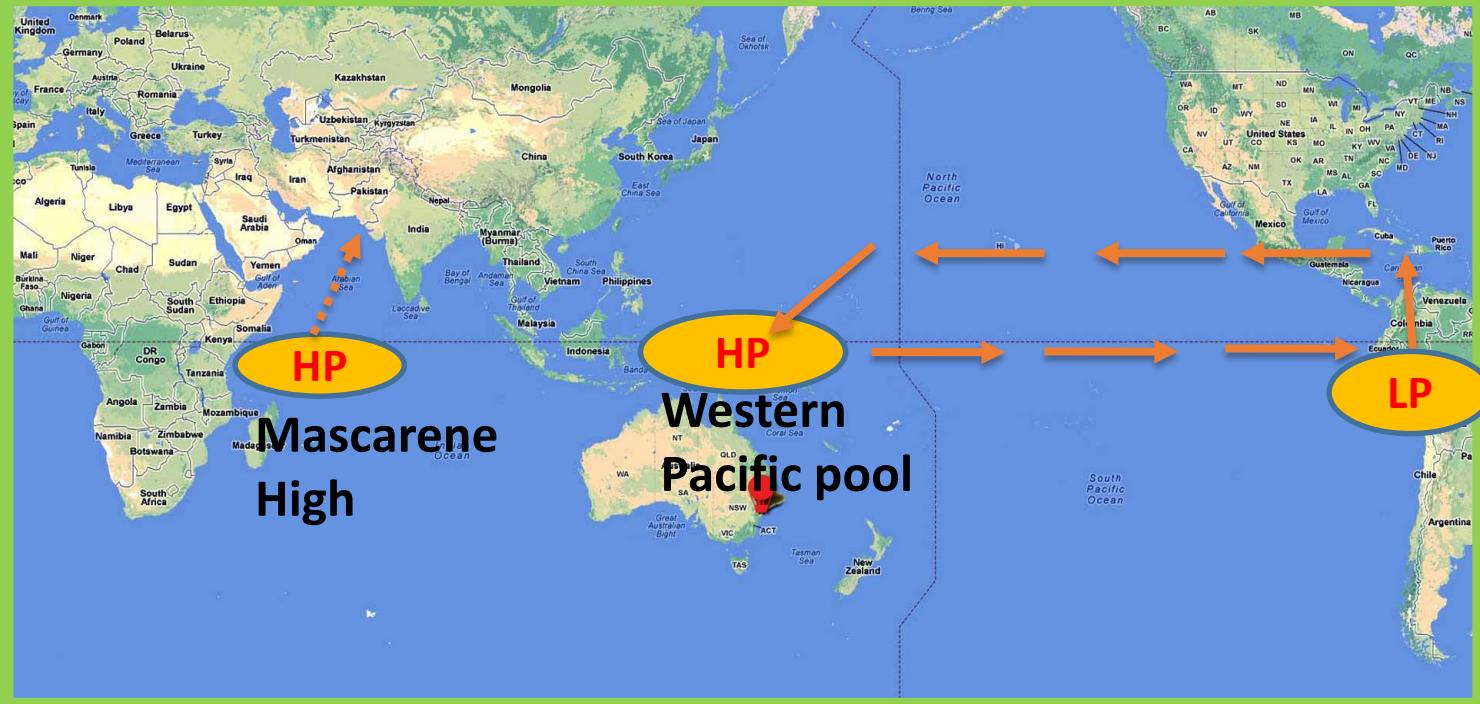
- Even after development of ITCZ over Tibet, and merging of 2<sup>nd</sup> equatorial trough, monsoon winds can't attract toward India
- If southern branch of STWJ is over north-India resist monsoon winds towards India

# Indian Ocean Dipole



- Association of Western Pacific Pool with Mascarene High
- Strong WPP- strong Mascarene High

# Indian Ocean Dipole



- El-Nino year:
- Weak WPP – weak Mascarene High
- Low push to SW monsoon winds to move towards India

# Fluctuation in Monsoon



1) If ITCZ does not develop properly over Tibet

# Fluctuation in Monsoon



2) If 2<sup>nd</sup> equatorial trough does not merge with ITCZ

# Fluctuation in Monsoon



**3) Southern branch of STWJ re-establish over north India**

# Fluctuation in Monsoon



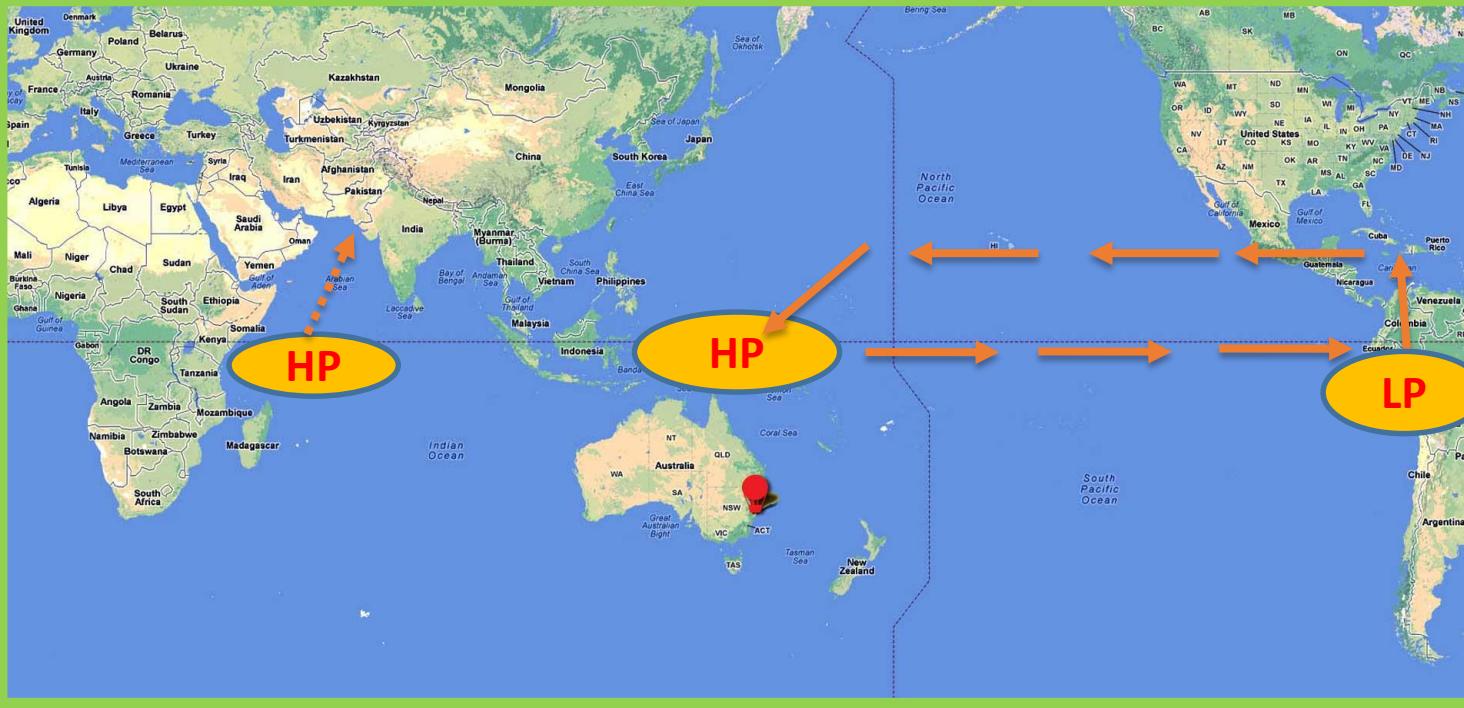
4) Inadequate heating of Tibetan plateau

# Fluctuation in Monsoon



5) Weak Mascarene  
High pressure cell

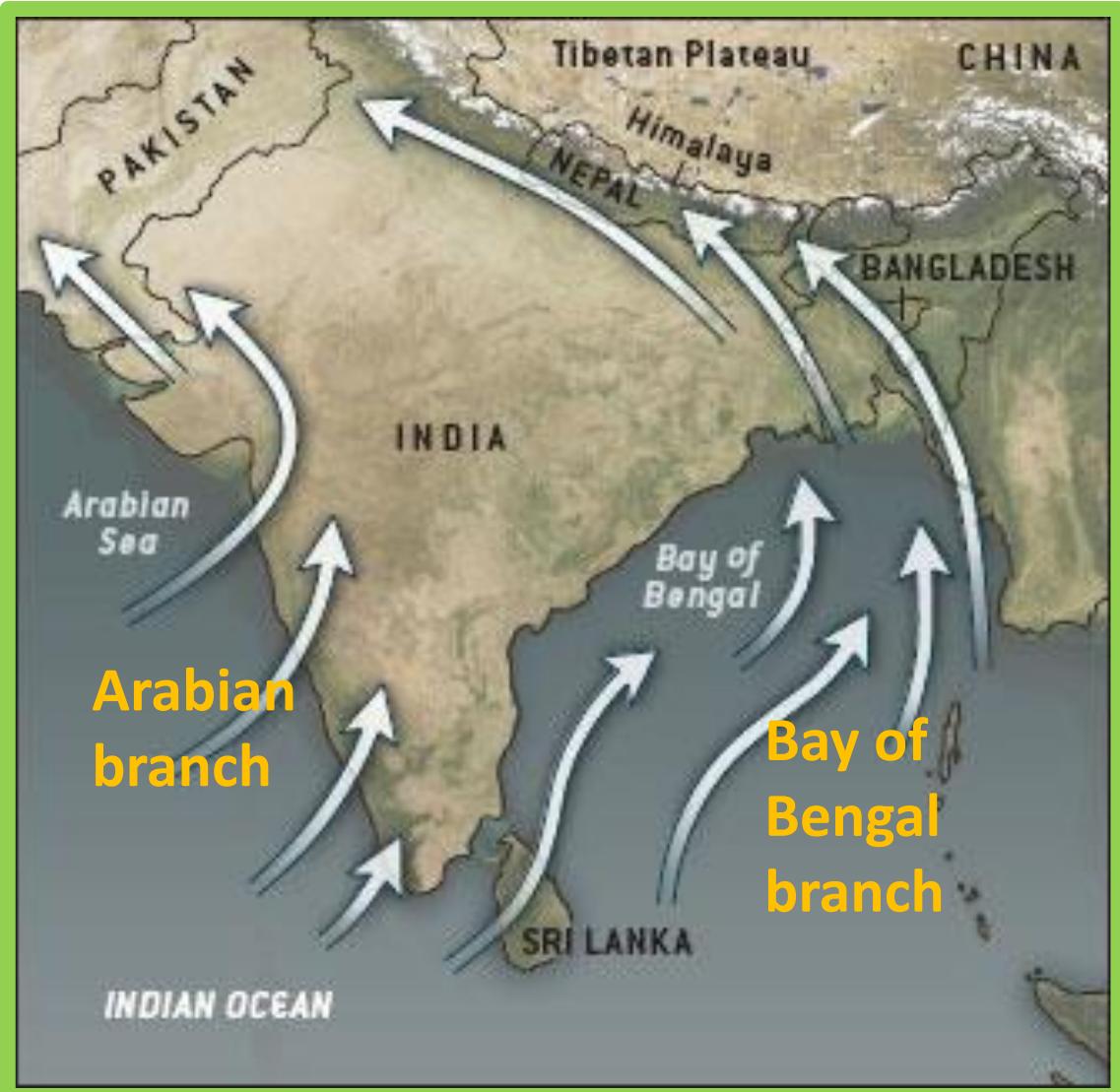
# Fluctuation in Monsoon



**6) Intensification of Indian ocean dipole/ El-Nino event**

**- If IOD intense= IOD negative – weak monsoon in India**

# Monsoon



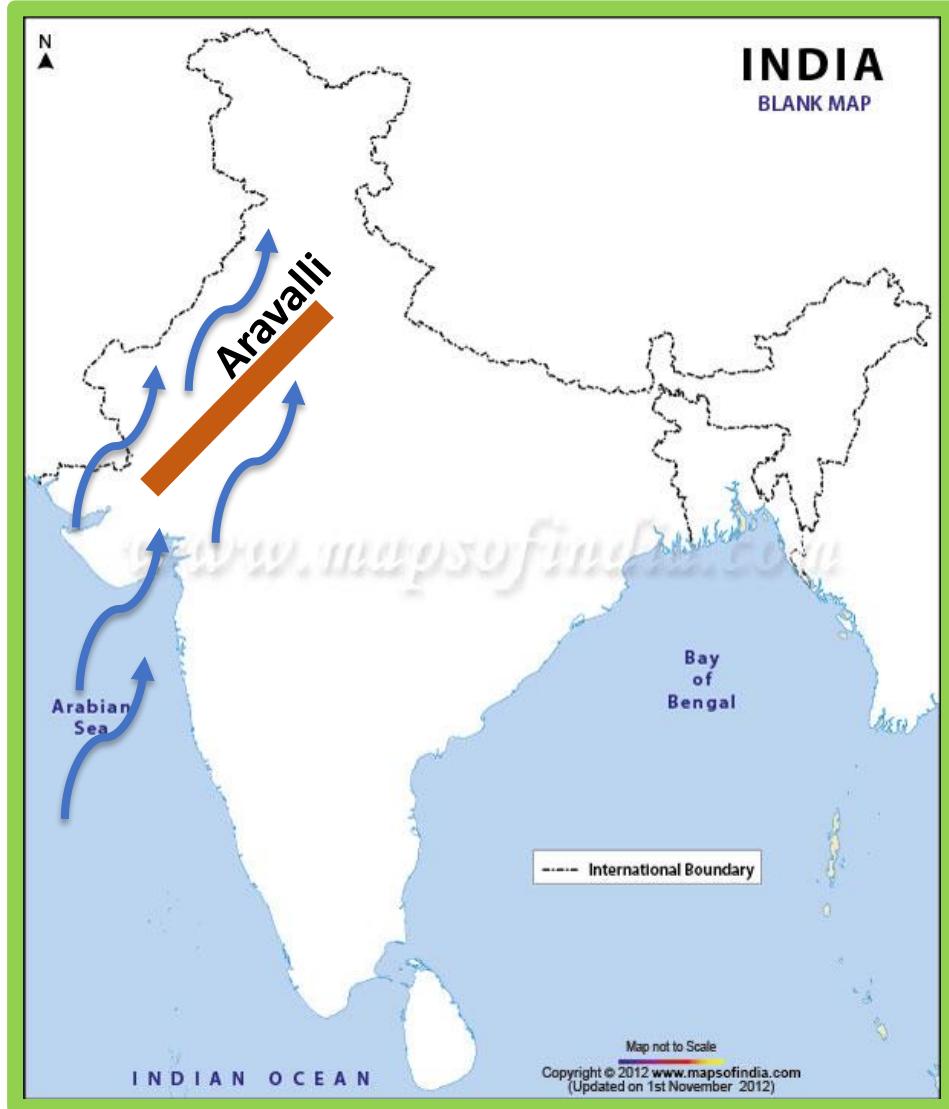
- **Burst of monsoon first on Malabar coast**
- **2 branches:**
  - 1) Arabian branch**
  - 2) Bay of Bengal branch**

# Monsoon: Arabian branch



- **Western Ghats blocks**
- **Rainfall in windward side**
- **South KN plateau, Rayalseema of AP remain dry**

# Monsoon : Arabian branch



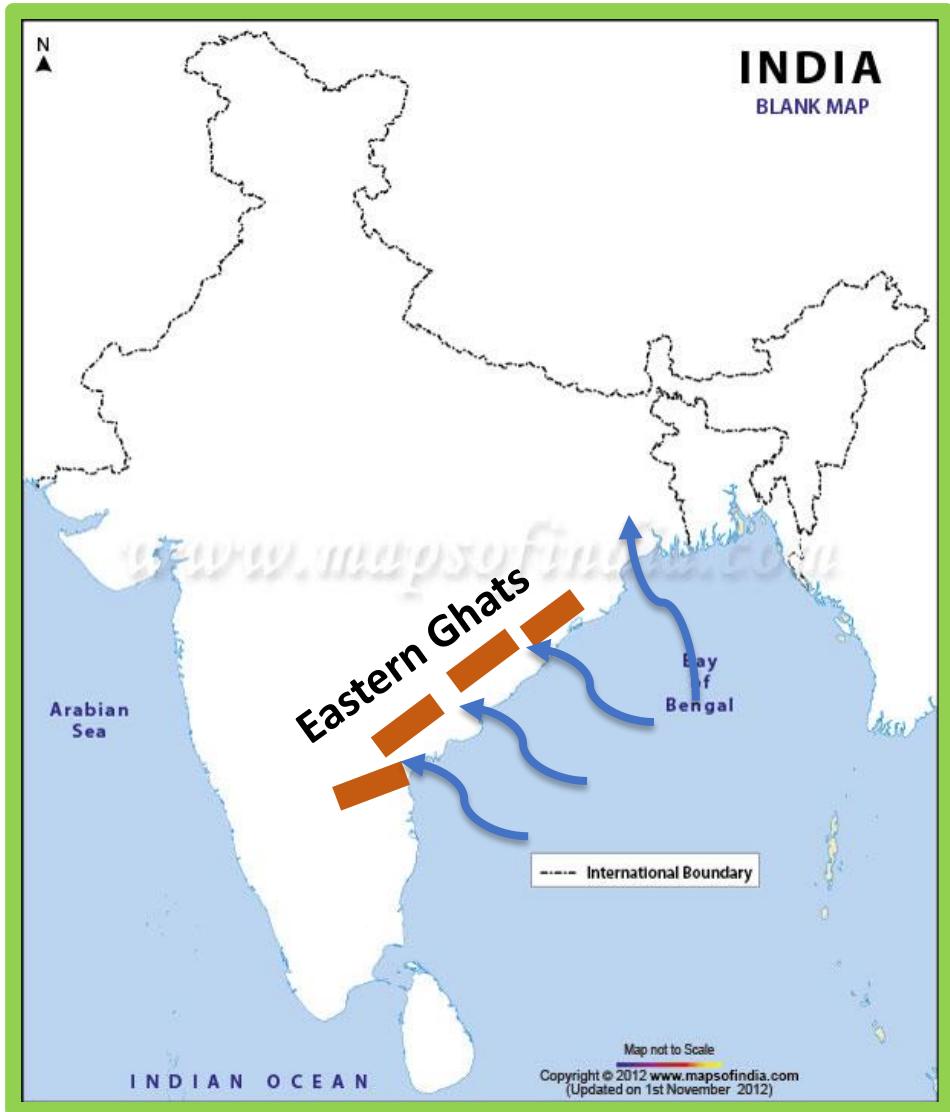
- No effective barrier in Gujarat or Rajasthan
- Aravalli parallel to the winds
- Low rainfall in GJ-RJ
- Rainfall along Kathiawar upland, south Aravalli

# Monsoon : Arabian branch



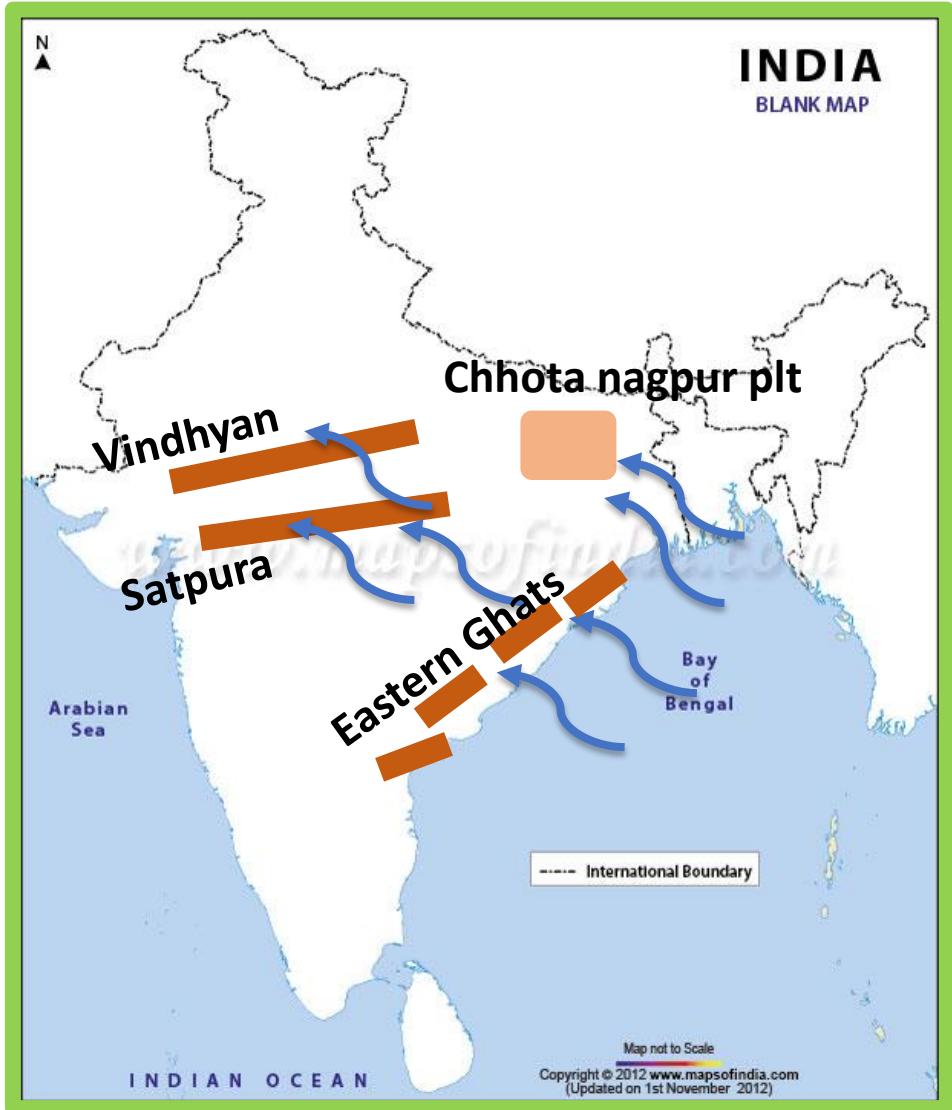
- Gaps between Western Ghats, river valleys – winds enter interior of India
- Wind reach up to Himachal Pradesh-Punjab

# Monsoon: Bay of Bengal branch



- **Eastern Ghats – low, discontinued – cannot block**
- **Large gaps, large river deltas – more winds can enter inland**

# Monsoon: Bay of Bengal branch



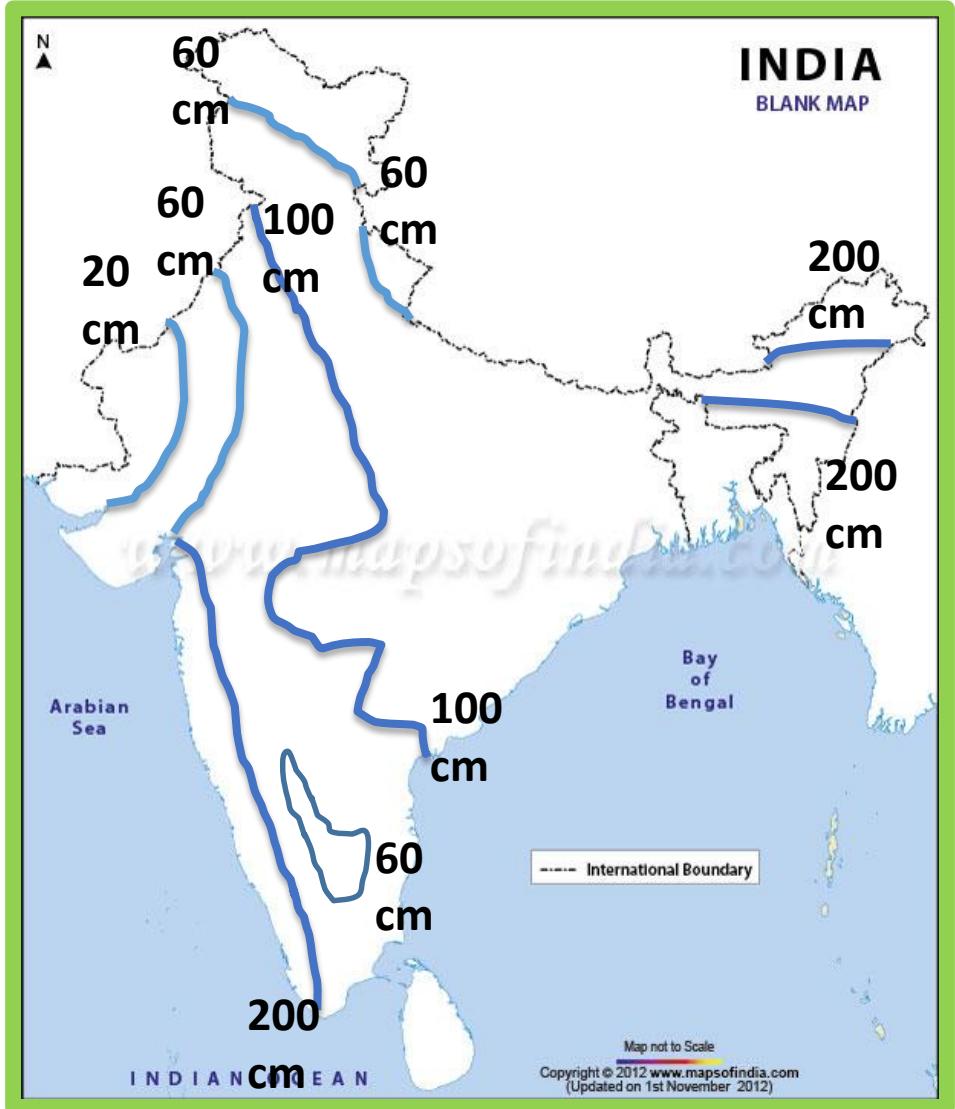
- Rainfall along chhotanagpur plateau, Vindhyan and Satpura range

# Monsoon: Bay of Bengal branch



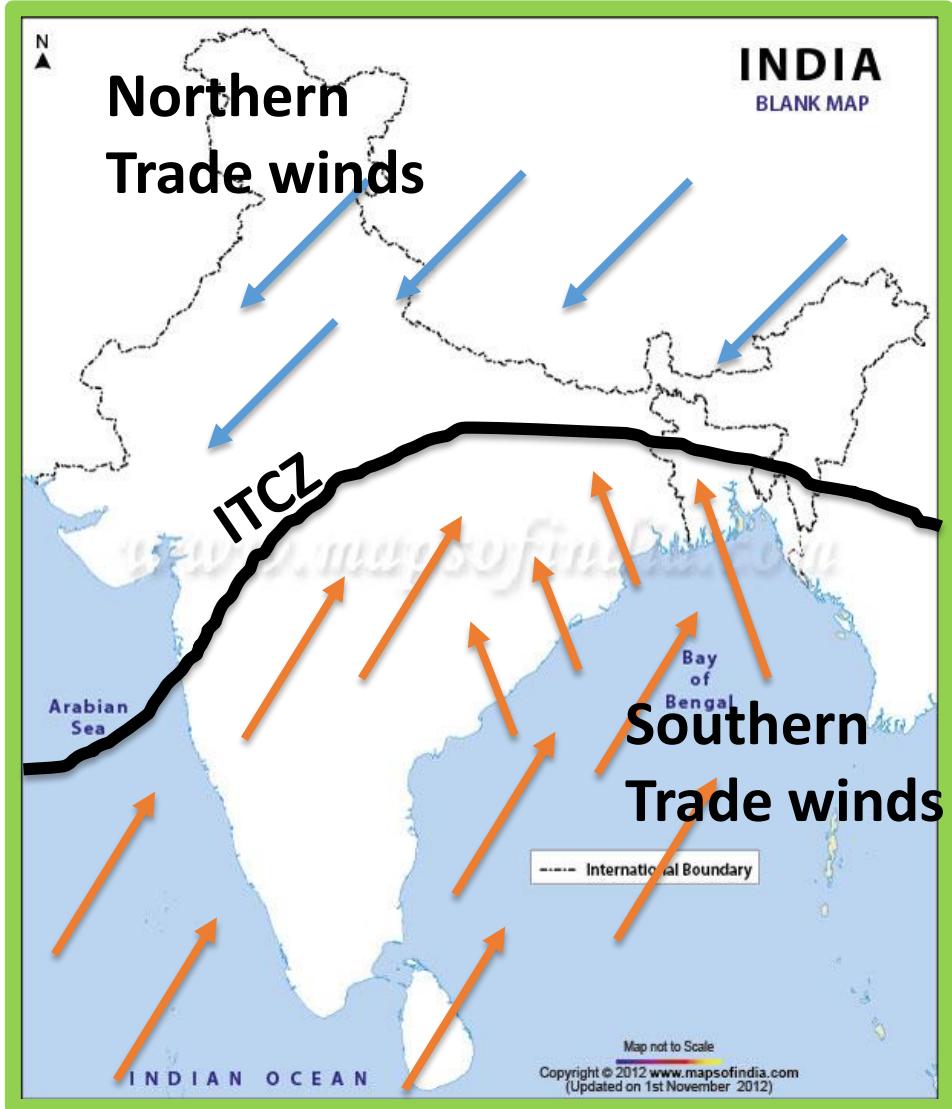
- Purvanchal – Meghalaya plateau –
- Funneling effect
- high rainfall
- Rainfall decrease from east to west
- Most of the rain from eastern branch

# Rainfall pattern



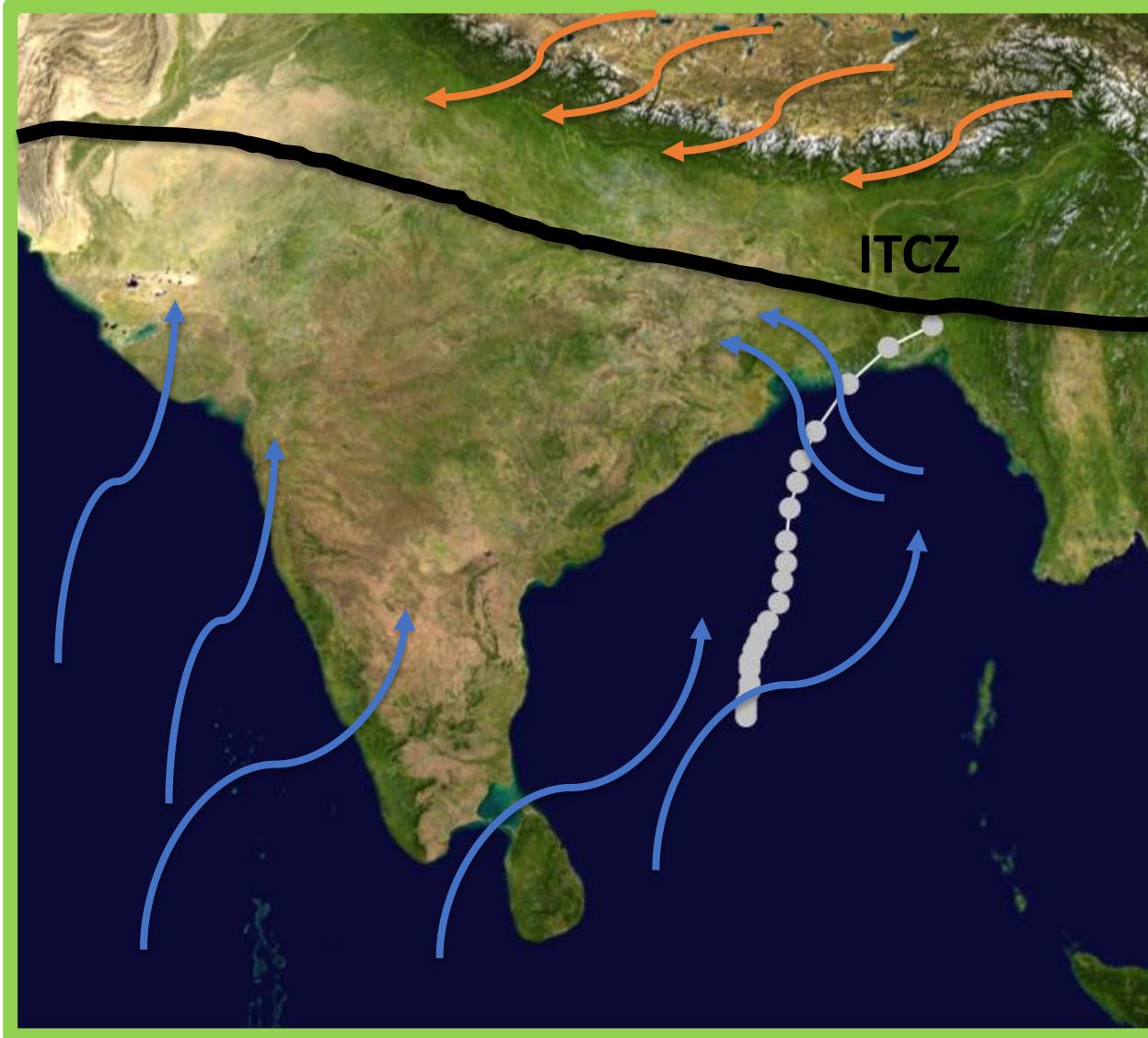
- **Highest rainfall: western Ghats, North-east**
- **Then East India**
- **Then GJ-RJ and J&K**
- **Then south KN-Rayalseema region**
- **Thar and Kutchh deserts**

# Retreating Monsoon



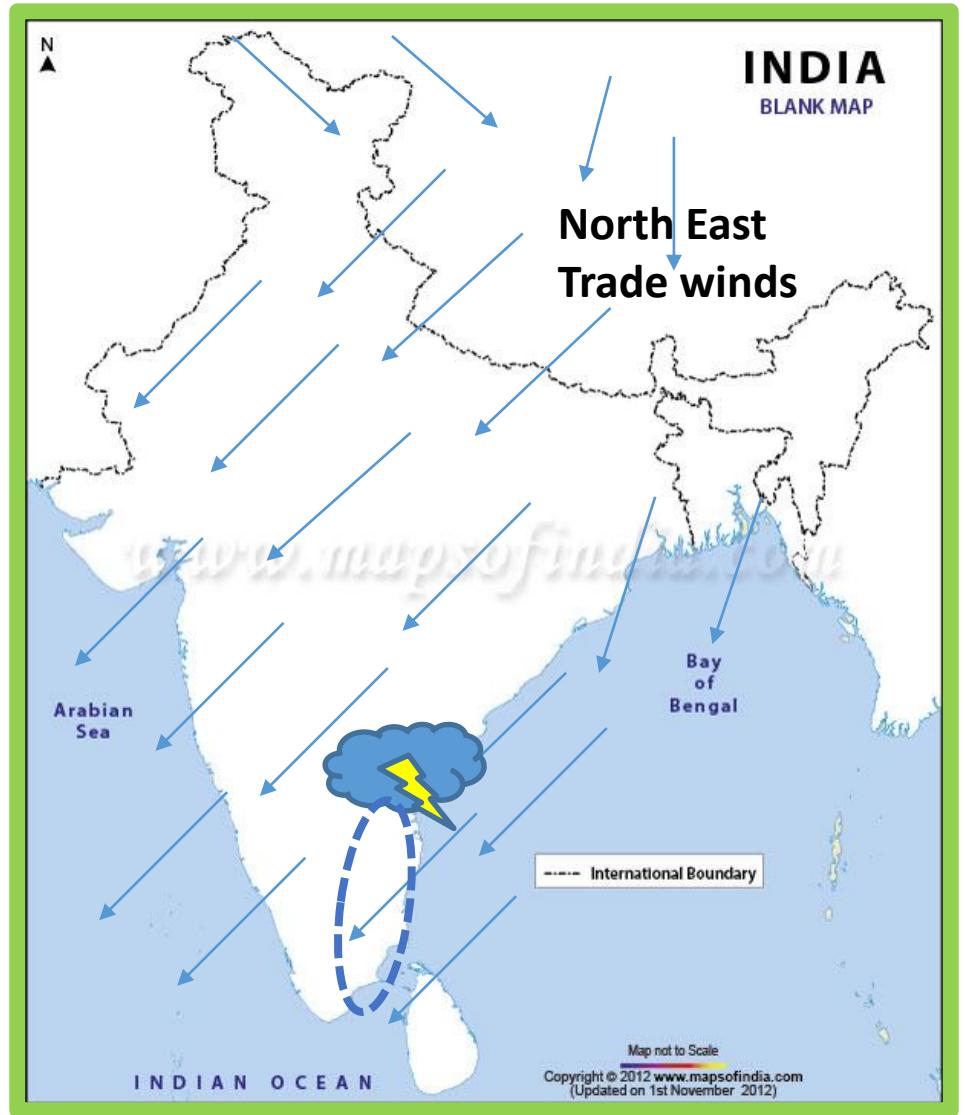
- Southward movement of ITCZ
- SW monsoon winds and NE winds co-exist
- Gradual withdrawal of SW monsoon winds – first eastern then western branch

# Retreating Monsoon: tropical cyclone



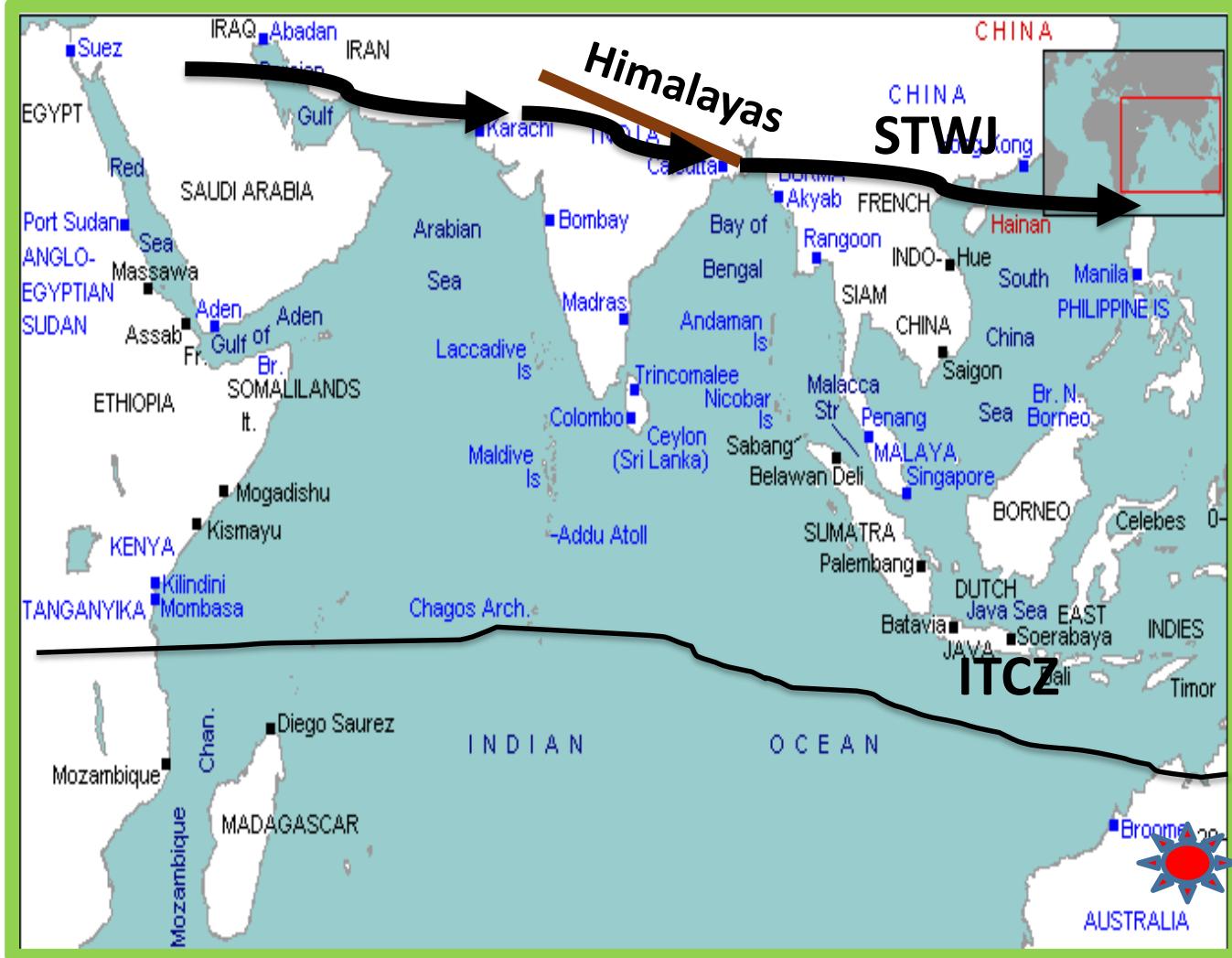
- Increase in SST of Bay of Bengal and Arabian sea
- Possibility of Tropical cyclone
- Retreating SW monsoon branch drag them towards Eastern coast

# Winter: rain in TN coast



- NE winds – coming from land – dry winds
- But passing through Bay of Bengal- become moist
- Coastline of TN
- Rainfall in TN

# Winter: western Disturbances



- STWJ from Mediterranean sea
- Brings disturbances to north India
- Winter rainfall - western disturbances

# Summer



- Northward apparent movement of Sun
- Temperature increases
- LP but resisted by STWJ
- Local heating convectional rainfall
- Pre-monsoon thunder storm
- Kalbaishakhi (WB), Mango shower, Blossom shower

# **Transport of India**

# Types

- ▶ Road
- ▶ Rail
- ▶ Coastal shipping
- ▶ Air transport

# Ministry of road transport and highway

- ▶ The Ministry has two wings: Roads wing and Transport wing.
- ▶ **Road Wing**
  - ▶ Deals with development and maintenance of National Highway in the country
- ▶ **Transport Wing**
  - ▶ Deals with matter relating to Road Transport

# Road

National Highways	State Highways	District Roads	Rural Roads
<ul style="list-style-type: none"><li>• These roads are the primary roads of the country and connects large cities and major industrial centers.</li><li>• There development &amp; maintenance is the responsibility of the central government.</li></ul>	<ul style="list-style-type: none"><li>• These roads links all important centres of industry, trade and commerce of the state and national highways.</li></ul>	<ul style="list-style-type: none"><li>• These roads connect different parts of the districts, important industrial centres and market centres and usually leads to local railway stations.</li></ul>	<ul style="list-style-type: none"><li>• These roads connects villages.</li><li>• They are of two types:</li><li>• Metalled (Pucca) Road.</li><li>• Non Metalled (Kutcha) Road.</li></ul>

**Roads (Total length: 5.47million Kms)**

**State highways**

Total length: 1,61,487 kms

Share: 3 per cent of the total roads in India

**National Highways**

Total length: 1,03,933 kms.

Share: 2 per cent of the total roads in India

**District and Rural roads**

Total length: 52,07,044 kms

95 per cent of the total roads in India

The development and maintainace of national highway under 3 org

National highway  
authority of India

State public works  
department  
(PWDs)

Border road  
organization  
(BRO)

The major initiative undertaken by the government for the development of road sector are:

### Largest by NHAI

- The National Highway Development Project (NHDP).
- Pradhan Mantri Bharat Jodo Pariyojana (PMBJP): linking of major cities to National Highways.
- Pradhan Mantri Gram Sadak Yojana (PMGSY): Construction of

## 2 project under NHDP

- The “Golden Quadrilateral”: The Golden Quadrilateral” project will connect the four major metropolitan cities (Delhi, Mumbai, Chennai & Kolkata) with 4-6 lane highways, with a total length of about 5,850 km.

The “North South – East West” projects: The “North South – East West” project will connect the Northern most point of the country to the Southernmost, and similarly from East to West, with a total length of about 7,300 km

# Highlights of Bharatmala Pariyojana

- It calls for **improvement in efficiency of existing corridors** through development of Multimodal Logistics Parks and elimination of choke points.
- It enhances focus on **improving connectivity in North East** and leveraging synergies with Inland Waterways.
  - North East Economic corridor enhancing connectivity to state capitals and key towns.
  - Multimodal freight movement via 7 Waterway terminals on River Brahmaputra – Dhubri, Silghat, Biswanath Ghat, Neamati, Dibrugarh, Sengajan, Oriyamgh.
- It emphasis on the **use of technology & scientific planning** for project preparation

# other

- It calls for seamless connectivity with **neighboring countries**:
  - 24 Integrated check posts (ICPs) identified
  - Transit through Bangladesh to improve North East connectivity
  - Integrating Bangladesh – Bhutan – Nepal and Myanmar – Thailand corridors which will make NorthEast hub of East Asia
- Satellite mapping of corridors to identify upgradation requirements

# Longest national highway

- The NH 44 is the longest National Highway In India. National Highway 44 (NH 44) was previously known as National Highway 7(Varanasi-kannakumari).

NH 44 is 3,745 km long and covers the North-South Corridor of NHDPL from Srinagar in the north and ends in Kanyakumari in the south. The highway has come into being by merging seven major national highways numbers that include NH 1A, NH 1, NH 2, NH 3, NH 75, NH 26 and NH 7.



# Setu bharatam project

- ▶ Construction of bridges in the national highways across the country.

# National green highway project

- ▶ **Ecofriendly national highway**
- ▶ **plantation drive** on 1,500 km
- ▶ Theme “**Green Highways Projects: Way Ahead**”.

# Border Roads Organization

- BRO was conceived and raised in 1960 by Pandit Jawaharlal Nehru for coordinating the speedy development of a **network of roads in the North and the North Eastern border** regions of the country.
- It works under the administrative control of the **Ministry of Defence**.
- It has diversified into a large spectrum of construction and development works comprising **airfields, building projects, defence works and tunneling** and has endeared itself to the people.

- ▶ Project dantak:-road in Bhutan
- ▶ Also work in Afghanistan and myanmar



# Road Safety Initiatives in India

- **National Road Safety Policy** outlines various policy measures such as promoting awareness, establishing a road safety information database, encouraging safer road infrastructure, application of intelligent transport, enforcement of safety laws etc.
- **National Road Safety Council** as the apex body to take policy decisions in matters of road safety.
- A dashboard for road accident data, through which people can access related data and information both state-wise and the national averages, has been introduced.
- **VAHAN** (an ICT-based solution for vehicle registration) and **SARATHI** (for licencing) apps have been launched to curb malpractices in issuing licences and vehicle registration.

# Imp National Highways

NH	STATES THROUGH WHICH PASSING	LENGTH (KMs)
1	J&K	477
2	Assam, Nagaland, Manipur, Mizoram	1324
3	PN, HP, J&K	712
4	A&N Islands	330
7	Haryana, Himachal Pradesh, Punjab, Uttarakhand	838
966 B	Kerala (Earlier same highway was known by 47A)	5.92
<b>GOLDEN QUADRILATERAL</b>		
16 GQ	Andhra Pradesh, Orissa, Tamil Nadu, West Bengal	1620
19 GQ	Bihar, Delhi, Haryana, Jharkhand, Uttar Pradesh, West Bengal	1268
48 GQ	Delhi , Gujarat , Haryana , Karnataka , Maharashtra , Rajasthan , Tamil Nadu	~2400
<b>EAST-WEST &amp; NORTH-SOUTH CORRIDOR</b>		
27 EW	Assam, Bihar, Gujarat, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal	3507
44 NS	Andhra Pradesh , Delhi, Haryana , Himachal Pradesh , Jammu and Kashmir , Karnataka ,Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Telangana, Tamil Nadu, Uttar Pradesh	4112

# **Airports and Cities**

1.	Indira Gandhi International Airport	Delhi	Indira Gandhi International Airport, Delhi is the most busiest Airport in terms of flight traffic in India.
2.	Chhatrapati Shivaji International Airport	Mumbai, Maharashtra	
3.	Kempegowda International Airport	Bangalore, Karnataka	
4.	Chennai International Airport	Chennai, Tamil Nadu	Also called Annadurai International Airport. It Serves as the regional headquarters of the Airports Authority of India for South India.
5.	Netaji Subhas Chandra Bose International Airport	Kolkata, West Bengal	It was earlier known as Dum Dum Airport.
6.	Rajiv Gandhi International Airport	Hyderabad, Telangana	It is the Biggest Airport (5,495 Acres) in terms of Area.

7.	Cochin International Airport	Kochi, Kerala	It is the first airport in India developed under a public-private partnership (PPP) model and world's first Airport to be completely run on Solar Power.
8.	Sardar Vallabhbhai Patel International Airport	Ahmedabad, Gujarat	
9.	Goa International Airport	Goa	It was built by Portuguese India. The Airport is owned by Government of Goa & Indian Navy.
10.	Pune International Airport	Pune, Maharashtra	The Airport is owned by Indian Airforce.
11.	Chaudhary Charan Singh International Airport	Lucknow, Uttar Pradesh	It is named after fifth Prime Minister of India Chaudhary Charan Singh.
12.	Thiruvananthapuram International Airport	Thiruvananthapuram, Kerala	It is the first international airport in a non-metro city in India.

13.	<b>Coimbatore International Airport</b>	<b>Coimbatore, Tamil Nadu</b>	
14.	<b>Calicut International Airport</b>	<b>Calicut, Kerala</b>	
15.	<b>Biju Patnaik International Airport</b>	<b>Bhubaneswar, Odisha</b>	
16.	<b>Dr. Babasaheb Ambedkar International Airport</b>	<b>Nagpur, Maharashtra</b>	<b>This airport is slated to be the multimodal international hub airport, which will reduce the overload on other busy airports in India.</b>
17.	<b>Sheikhul Aalam International Airport</b>	<b>Srinagar</b>	<b>It has been named after the Kashmiri saint Sheikhul Aalam &amp; owned by Indian Air Force and the Airports Authority of India.</b>
18.	<b>Jay Prakash Narayan International Airport</b>	<b>Patna, Bihar</b>	

19.	Mangaluru Airport	Mangaluru, Karnataka	
20.	Chandigarh International Airport	Chandigarh	It is operated under Indian Air Force & Airports Authority of India
21.	Lal Bahadur Shastri International Airport	Varanasi, Uttar Pradesh	
22.	Veer Savarkar International Airport	Port Blair	The Airport is named after the Indian freedom fighter Vinayak Damodar Savarkar
23.	Sri Guru Ram Dass Jee International Airport	Amritsar	It is named after Guru Ram Das, the fourth Sikh Guru.
24.	Tiruchirappalli International Airport	Tiruchirappalli, Tamil Nadu	The airport was established by the British during World War II and was primarily used by the British Air force.
25.	Lokpriya Gopinath Bordoloi International Airport	Guwahati, Assam	It also known as Guwahati International Airport named after Gopinath Bordoloi who was a freedom fighter and also the first chief minister of

# Railway Zones (16)

- 1) **Central Railway (CR)** – 3905 km – 5 November 1951 – Mumbai  
Mumbai, Nagpur, Bhusawal, Pune & Sholapur.
- 2) **Eastern Railway (ER)** – 2414 km – 14 April 1952 – Kolkata  
Howrah, Sealdah, Malda & Asansol.
- 3) **East Central Railway (ECR)** – 3628 km – 1 October 2002 – Hajipur  
Donapur, Mughalsarai, Dhanabad, Sonpur & Samastipur.
- 4) **East Coast Railway (ECoR)** – 2677 km – 1 April 2003 – Bhubaneswar  
Khurda Road, Sambalpur & Waltair (Visakhapatnam).
- 5) **Northern Railway (NR)** – 6968 km – 14 April 1952 – New Delhi  
Delhi, Ambala, Lucknow, Moradabad & Firozpur.
- 6) **North Central Railway (NCR)** – 3151 km – 1 April 2003 – Allahabad  
Allahabad, Jhansi & Agra.
- 7) **North Eastern Railway (NER)** – 3667 km – 14 April 1952 – Gorakhpur  
Izzatnagar, Lucknow & Varanasi.

- 8) **North Frontier Railway (NFR)** – 3907 km – 15 January 1958 – **Guwahati**  
**Katihar, Alipurduar, Rangiya, Lumding & Tinsukia.**
- 9) **North Western Railway (NWR)** – 5459 km – 1 October 2002 – **Jaipur**  
**Jaipur, Ajmer, Jodhpur & Bikaner.**
- 10) **Southern Railway (SR)** – 6844 km – 14 April 1951 – **Chennai**  
**Chennai, Madurai, Tiruchirappalli, Salem, Palakkad & Thiruvananthapuram.**
- 11) **South Central Railway (SCR)** – 5951 km – 2 October 1966 – **Secunderabad**  
**Secunderabad, Hyderabad, Vijayawada, Guntakal, Nanded & Gunter.**
- 12) **South Eastern Railway (SER)** – 2631 km – 1 August 1955 – **Kolkata**  
**Adra, Ranchi, Kharagpur & Chakradharpur.**
- 13) **South East Central Railway (SECR)** – 2447 km – 1 April 2003 – **Bilaspur**  
**Bilaspur, Nagpur & Raipur.**
- 14) **South Western Railway (SWR)** – 3177 km – 1 April 2003 – **Hubli**  
**Hubli, Bangalore & Mysore.**
- 15) **Western Railway (WR)** – 6182 km – 5 November 1951 – **Mumbai**  
**Mumbai Central, Ratlam, Rajkot, Ahmedabad, Bhavnagar & Vadodara.**
- 16) **West Central Railway (WCR)** – 2965 km – 1 April 2003 – **Jabalpur**  
**Jabalpur, Bhopal & Kota.**

# Other Important Information

- ❑ Longest train: **Dibrugarh - Kanyakumari Vivek Express**
- ❑ Fastest train: Vande-Bharat (160 KMPH)

# Major Indian port



Thanks  
FOR YOUR  
**Kind Attention**  
**and**  
**Patient Hearing**



TODAY IS YOUR  
OPPORTUNITY  
TO BUILD THE  
Tomorrow  
YOU WANT