

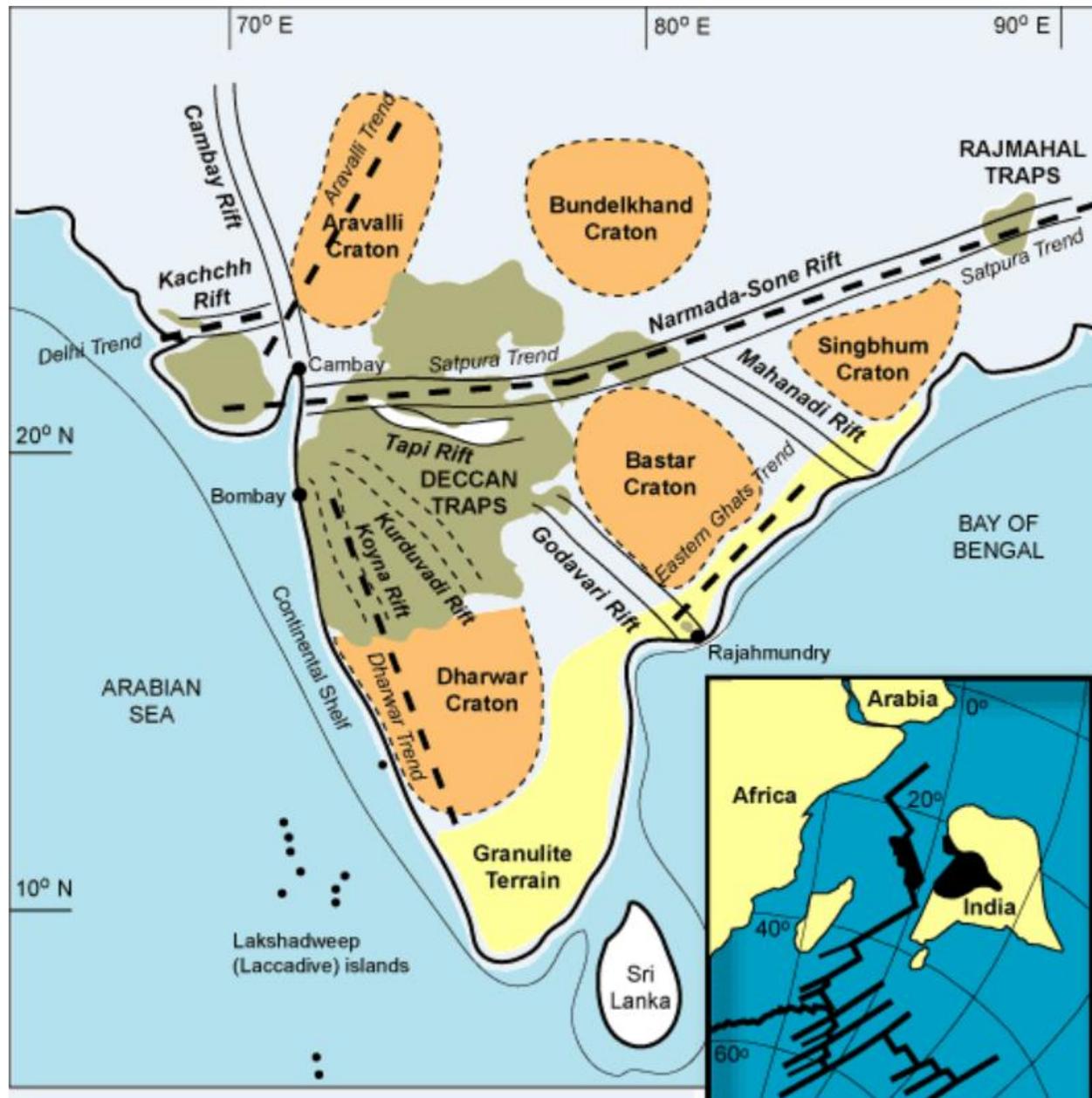
UPSC MAINS

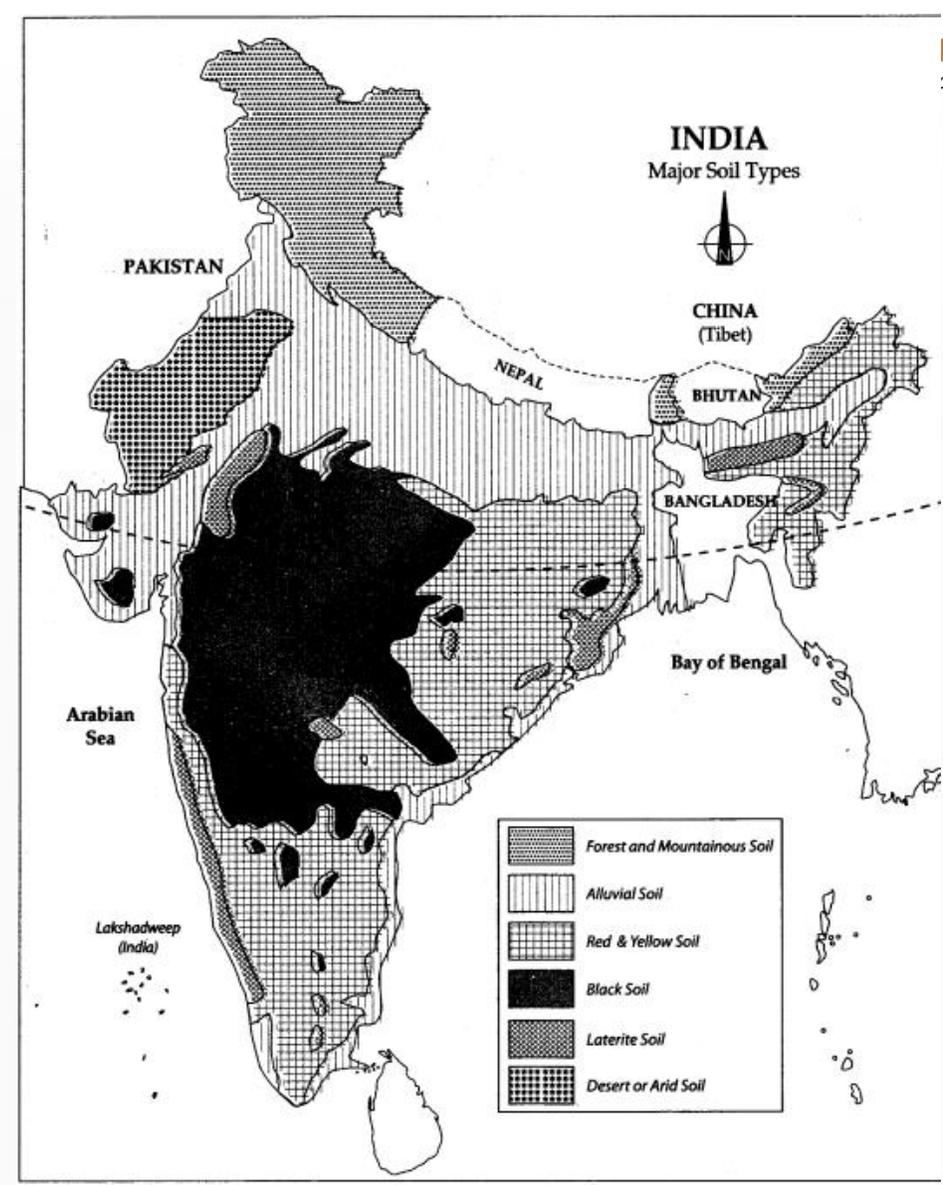
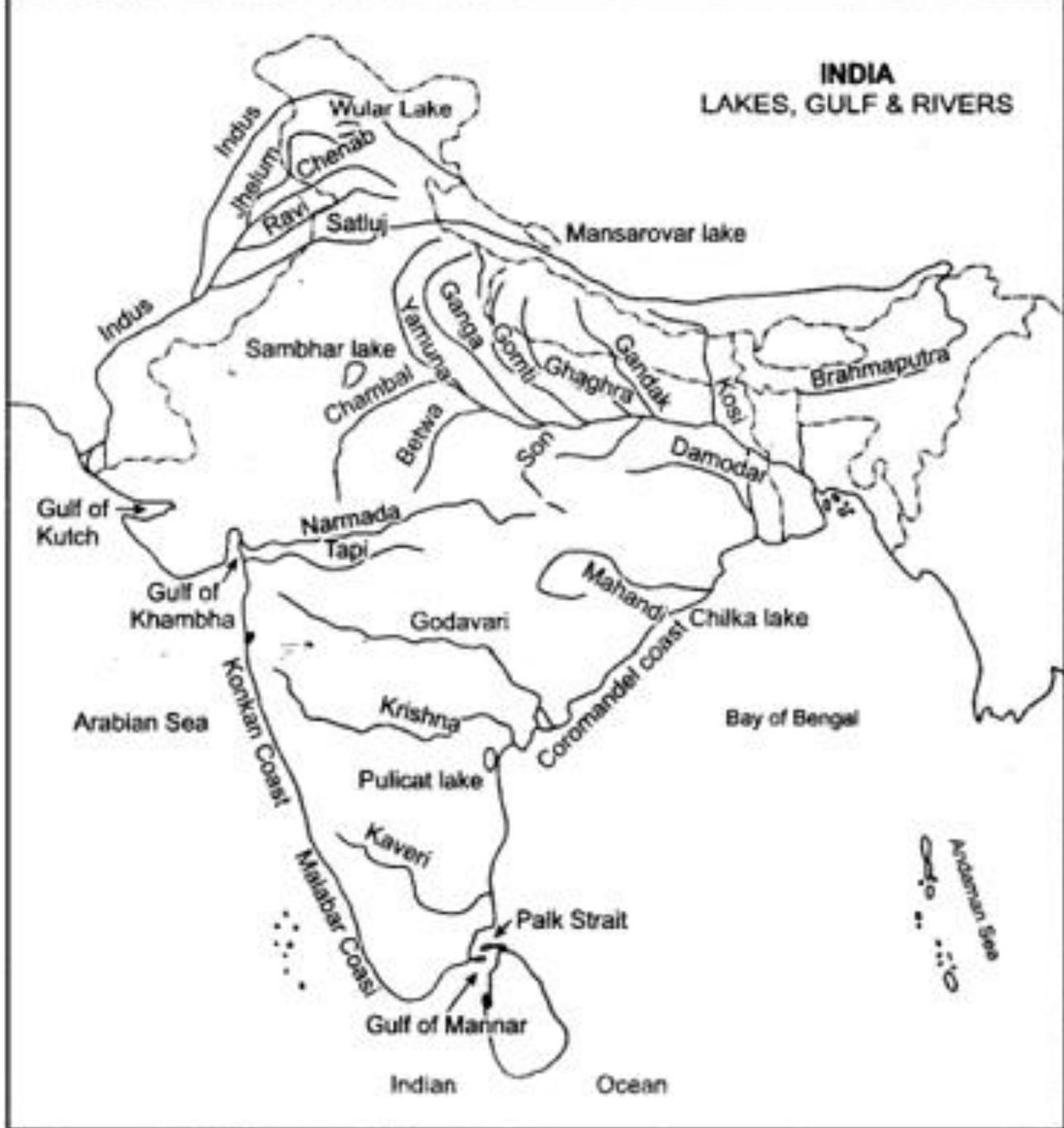
GEOGRAPHY - ANALYSIS

AGENDA OF THE LECTURE

- 1) Line of Thought
- 2) Structure + Content
- 3) How to Enrich your Answer

Q- Discuss the natural resource potentials of 'Deccan trap'.
(Answer in 150 words) 10





Natural Resource Potential - Line of Thought

- Minerals - Oil and Gas – Ankleshwar and Halisa Oilfields + Wardha Coal Field

Major mineral constituents are olivine, pyroxenes, and plagioclase, as well as certain Fe-Ti-rich oxides.

- Soil - Black Soil – Cotton

Agriculture - Sugarcane and Groundnut

- River System - Kaveri and Godavari - Hydroelectric potential + Irrigation Projects

- Wind Potential - Land Breeze & Sea Breeze

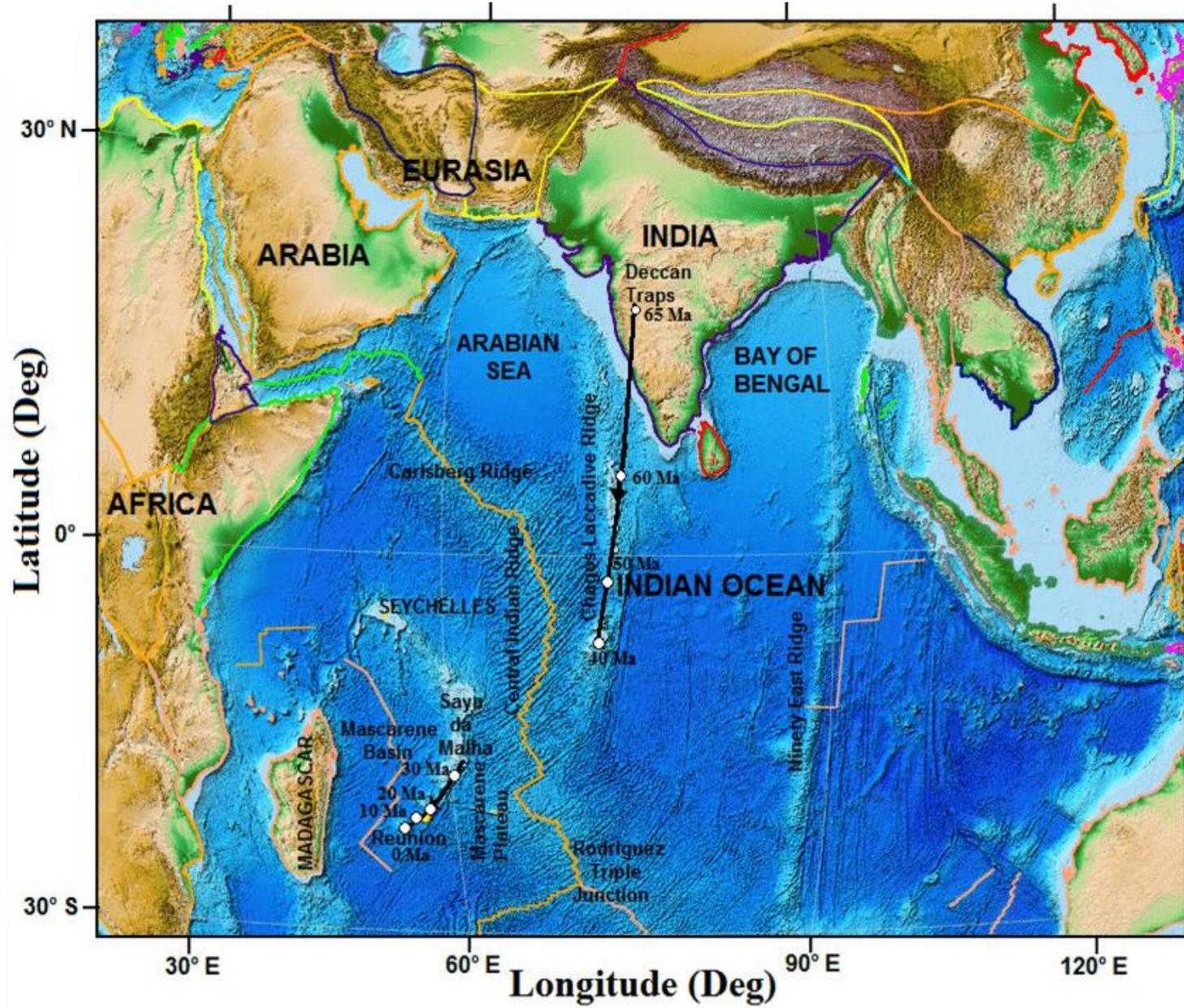
Gujarat – Second largest Installed Capacity + Maharashtra – Third largest Installed Capacity

- Vegetation - The South Deccan Plateau dry deciduous forests is a tropical dry forest ecoregion. Sal found here is used for house construction while teak, a durable timber, is used for ship building and furniture.

Discuss the natural resource potentials of 'Deccan trap'.
(Answer in 150 words) 10

Content Enrichment

- Introduction - Formation of Deccan Traps
- Diagram - Deccan Trap



Q- Discuss the meaning of colour-coded weather warnings for cyclone prone areas given by India Meteorological department.

(Answer in

150 words) 10

Discuss the meaning of colour-coded weather warnings for cyclone prone areas given by India Meteorological department.

(Answer in 150 words) 10

Stage of warning	Colour code
Cyclone Alert	Yellow.
Cyclone Warning	Orange.
Post landfall out look	Red.

The cyclone warnings are issued to state government officials in four stages. The First Stage warning known as "PRE CYCLONE WATCH" issued 72 hours in advance contains early warning about the development of a cyclonic disturbance in the north Indian Ocean, its likely intensification into a tropical cyclone and the coastal belt likely to experience adverse weather. This early warning bulletin is issued by the Director General of Meteorology himself and is addressed to the Cabinet Secretary and other senior officers of the Government of India including the Chief Secretaries of concerned maritime states.

The Second Stage warning known as "CYCLONE ALERT" is issued at least 48 hrs. in advance of the expected commencement of adverse weather over the coastal areas. It contains information on the location and intensity of the storm likely direction of its movement, intensification, coastal districts likely to experience adverse weather and advice to fishermen, general public, media and disaster managers. This is issued by the concerned ACWCs/CWCs and CWD at HQ.

The Third Stage warning known as "CYCLONE WARNING" issued at least 24 hours in advance of the expected commencement of adverse weather over the coastal areas. Landfall point is forecast at this stage. These warnings are issued by ACWCs/CWCs/and CWD at HQ at 3 hourly interval giving the latest position of cyclone and its intensity, likely point and time of landfall, associated heavy rainfall, strong wind and storm surge alongwith their impact and advice to general public, media, fishermen and disaster managers.

The Fourth Stage of warning known as "POST LANDFALL OUTLOOK" is issued by the concerned ACWCs/CWCs/and CWD at HQ at least 12 hours in advance of expected time of landfall. It gives likely direction of movement of the cyclone after its landfall and adverse weather likely to be experienced in the interior areas.

Discuss the meaning of colour-coded weather warnings for cyclone prone areas given by India Meteorological department.

(Answer in 150 words) 10

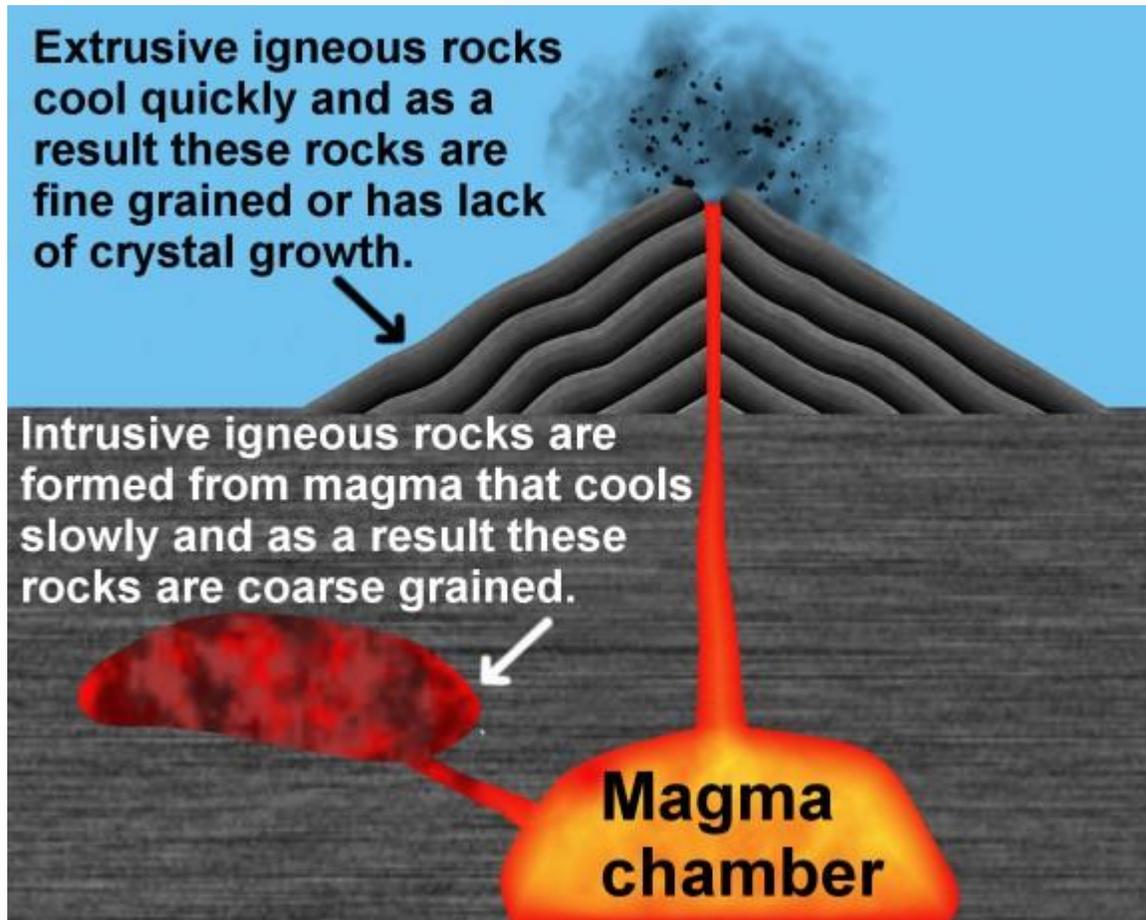
Content Enrichment

- Intro - About Cyclones and diasters
- Need of Color Coding
- Example - Cyclone Yaas (2021) The Indian Meteorological Department (IMD) has issued rainfall warning in the following regions.

Q- Describe the characteristics and types of Primary Rocks.

(Answer in 150 words) 10

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Describe the characteristics and types of Primary Rocks.

(Answer in 150 words) 10

Line of Thought

Rock particles or grains are formed for the first time + Begin rock cycle+
Cooling or crystallization of magma + Having their origin under
conditions of high temperatures the igneous rocks are unfossiliferous.

Intrusive and Extrusive - Granitic Rocks and Basalt

Granitic Rocks - Grain Size Large + Silica Content High (73%) + Density low

Basaltic Rocks - Grain Size small + Silica Content Low (50%) + Density high

Describe the characteristics and types of Primary Rocks.

(Answer in 150 words) 10

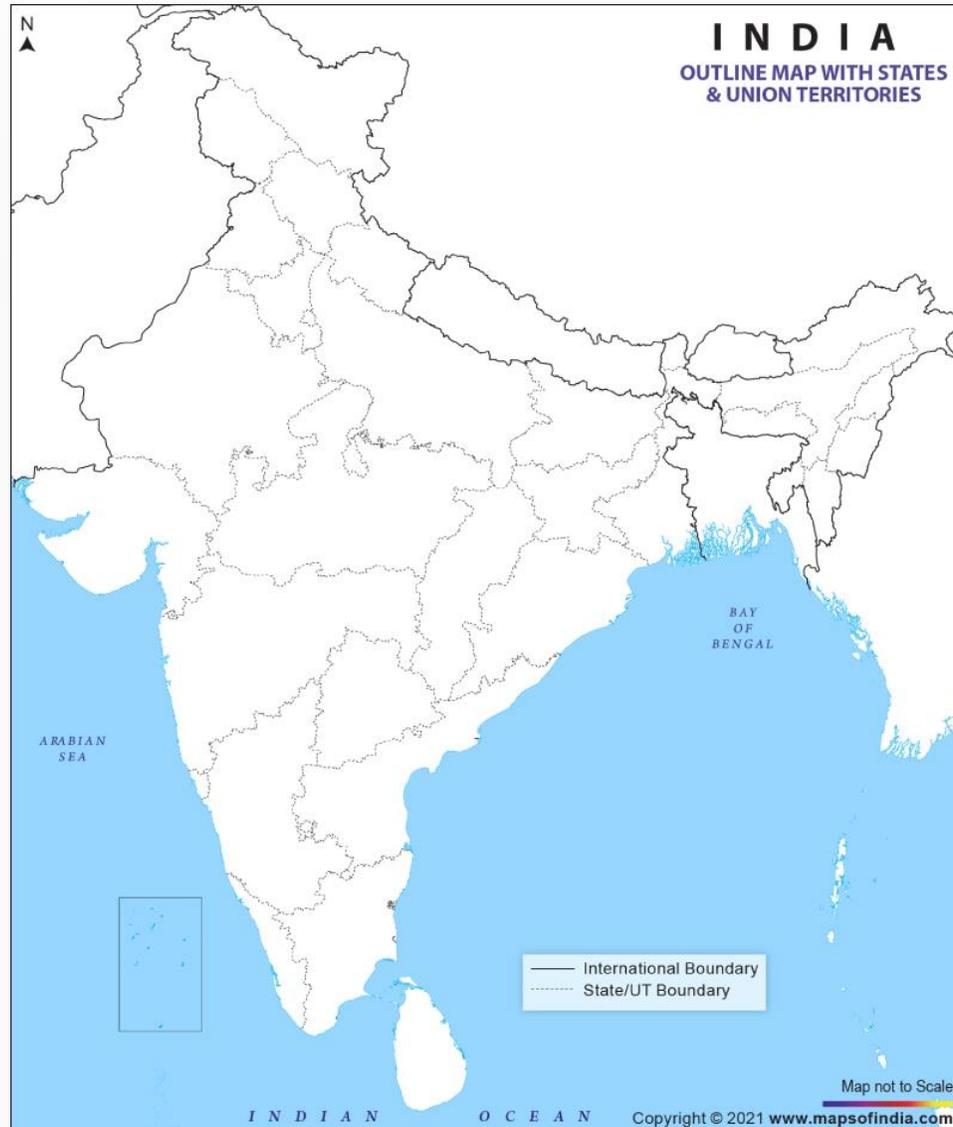
How to best attempt the Question

Structure

- 1) Primary Rocks and Characteristics
- 2) Types of Primary Rocks
- 3) Diagram

Q- Examine the potential of wind energy in India and explain the reasons for their limited spatial spread. (Answer in 150

words) 10



Examine the potential of wind energy in India and explain the reasons for their limited spatial spread.

(Answer in 150 words) 10

- **Statewise Potential :**
 - More than 95% of commercially exploitable resources are located in seven states: Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu.
 - **Tamil Nadu, Gujarat, Maharashtra, Karnataka and Rajasthan** are the top 5 wind-energy potential states in India
 - **Quote Examples** – Muppandal Wind Farm – Tamil Nadu + Jaisalmer Wind Park – Rajasthan
- **Region wise Potential**
 - **Coastal Regions** - Tamil Nadu + Maharashtra
 - **Gujarat** - According to official data, wind power generation capacity in the state has increased a staggering ten times in the last six years
 - **Northern Plains + Mountainous regions high winds** - **Ex** - Ladakh
 - **Offshore Wind Potential – Gujarat and Tamil Nadu**

Examine the potential of wind energy in India and explain the reasons for their limited spatial spread.

(Answer in 150 words) 10

- Limited Spatial Spread:

- Topography + Intermittent Nature + Initial Capital + Land Acquisition + + Fauna impacted + Availability of Components

- Content Enrichment

Intro - The country currently has the fourth highest wind installed capacity in the world.

Conclusion - Target

Q- What are the forces that influence ocean currents? Describe their role in fishing industry of the world. (Answer in 250 words) 15

The primary forces that influence the currents are + Examples

1. Heating by solar energy

2. Wind System

3. Earth Rotation + Gravity

• The secondary forces that influence the currents are:

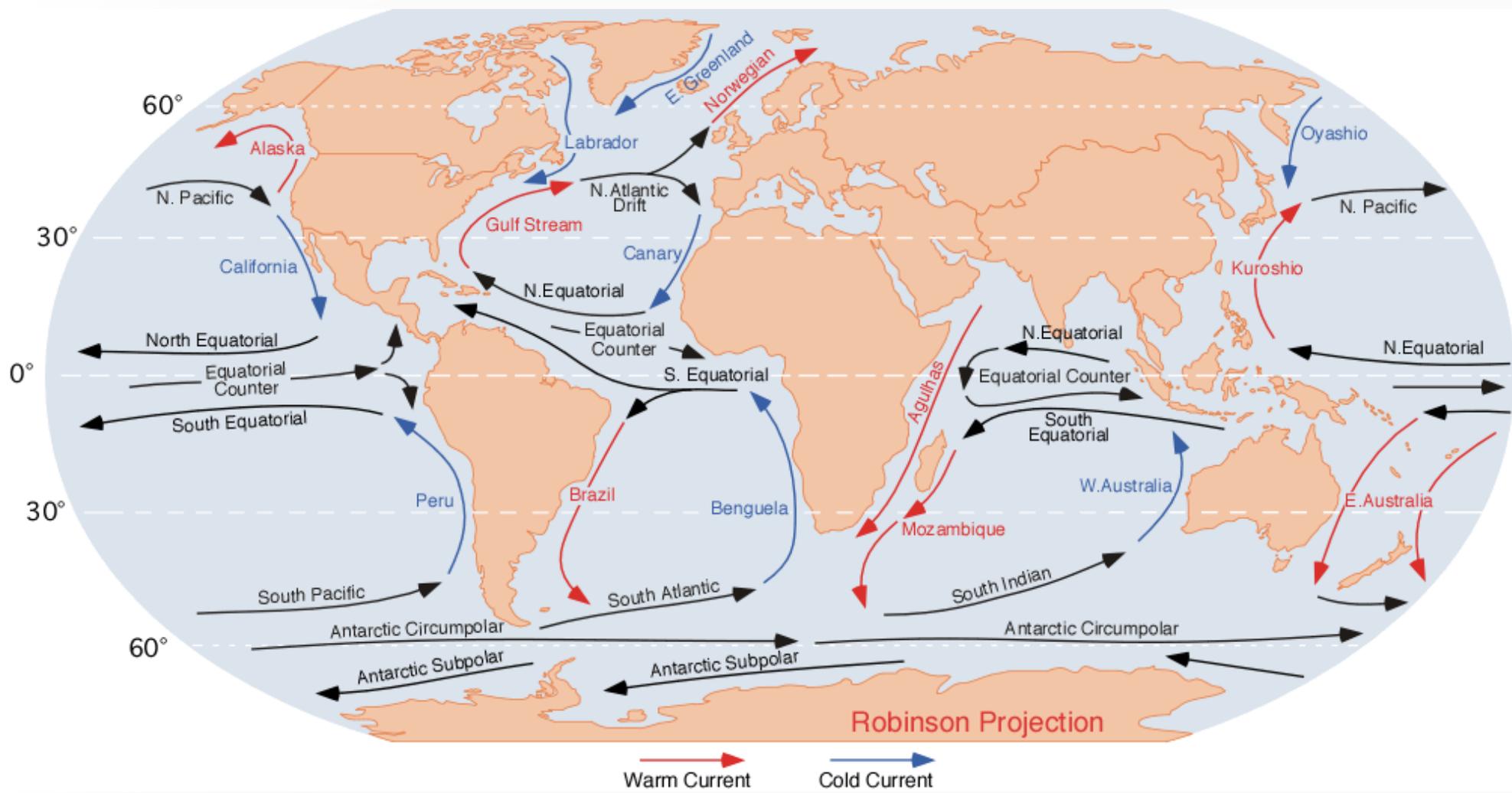
1. Temperature difference

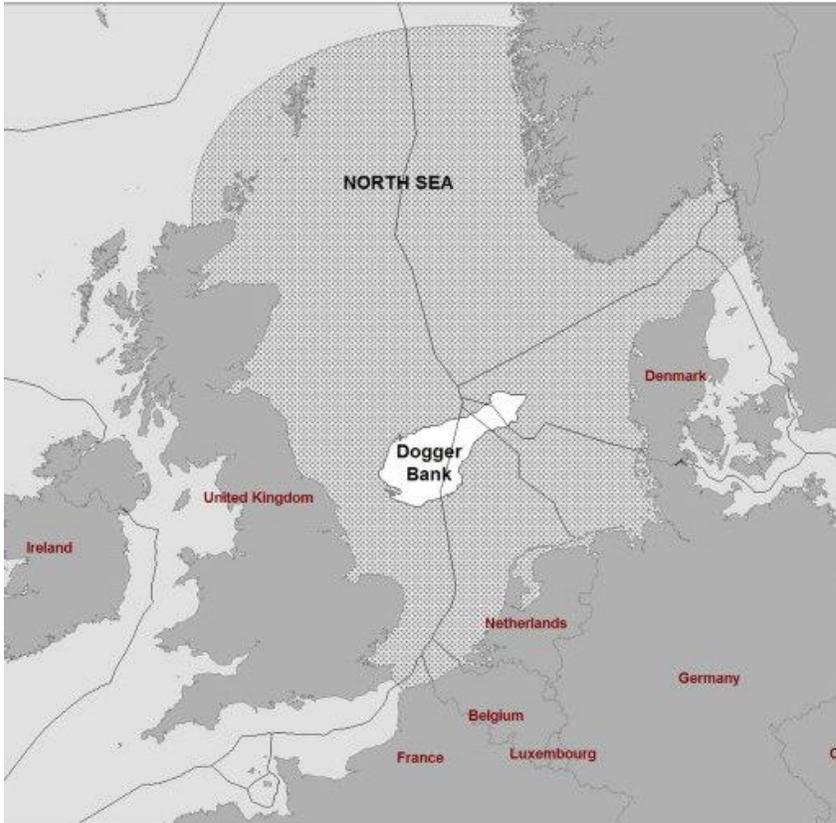
2. Salinity difference

3. Shape of Coastline

Fishing :

- Mixing of cold and warm ocean currents bear richest fishing grounds in the world - **Do give examples** - Dogger Bank + New foundland
- Upwelling Zones - **Do give examples** - Peruvian Coast
- Japan Fishing Industry





What are the forces that influence ocean currents? Describe their role in fishing industry of the world. (Answer in 250 words) 15

Content Enrichment :

Focus on Examples

Mark the currents and fishing grounds on Map

Q- Troposphere is a very significant atmospheric layer that determines weather processes. How?

Important Keywords :

- Gravity, combined with the compressibility of air, causes the density of an atmosphere to fall off exponentially with height, such that Earth's troposphere contains 80% of the mass and most of the water vapor in the atmosphere, and consequently most of the clouds and stormy weather.
- Vertical mixing is an important process in the troposphere.
- Cyclones, anticyclones, storms and precipitation occur here, as all water vapour and solid particles exist here .
- The troposphere is influenced by seasons and jet streams.

Troposphere is a very significant atmospheric layer that determines weather processes. How?

Content Enrichment

- Weather - Temp + Pressure + Humidity (Consider diff between Climate and Weather)
- Zone of Mixing – because all weather phenomena occur here only.
- Extra Point- Climate Change - GHG emissions
- Diagram

Q- Describing the distribution of rubber producing countries, indicate the major environmental issues faced by them.

(Answer in 250 words) 15

Keywords

Distribution of Rubber Producing Countries

Environmental Issues

Hidden : Conditions for Rubber Production

DO MARK THE COUNTRIES ON MAP

Conditions :Temperature above 25 degree Celsius

- C Moist climate + Rubber trees require moist and humid climates with heavy rainfall of more than 200cm
- It grows well in **equatorial climate and temperature above 25-degree Celsius.**
- Overall, the nine big rubber producing countries are **Thailand, Indonesia, Malaysia, India, Vietnam, China, Sri Lanka, Philippines and Cambodia.**

Env Issues faced by these Countries:

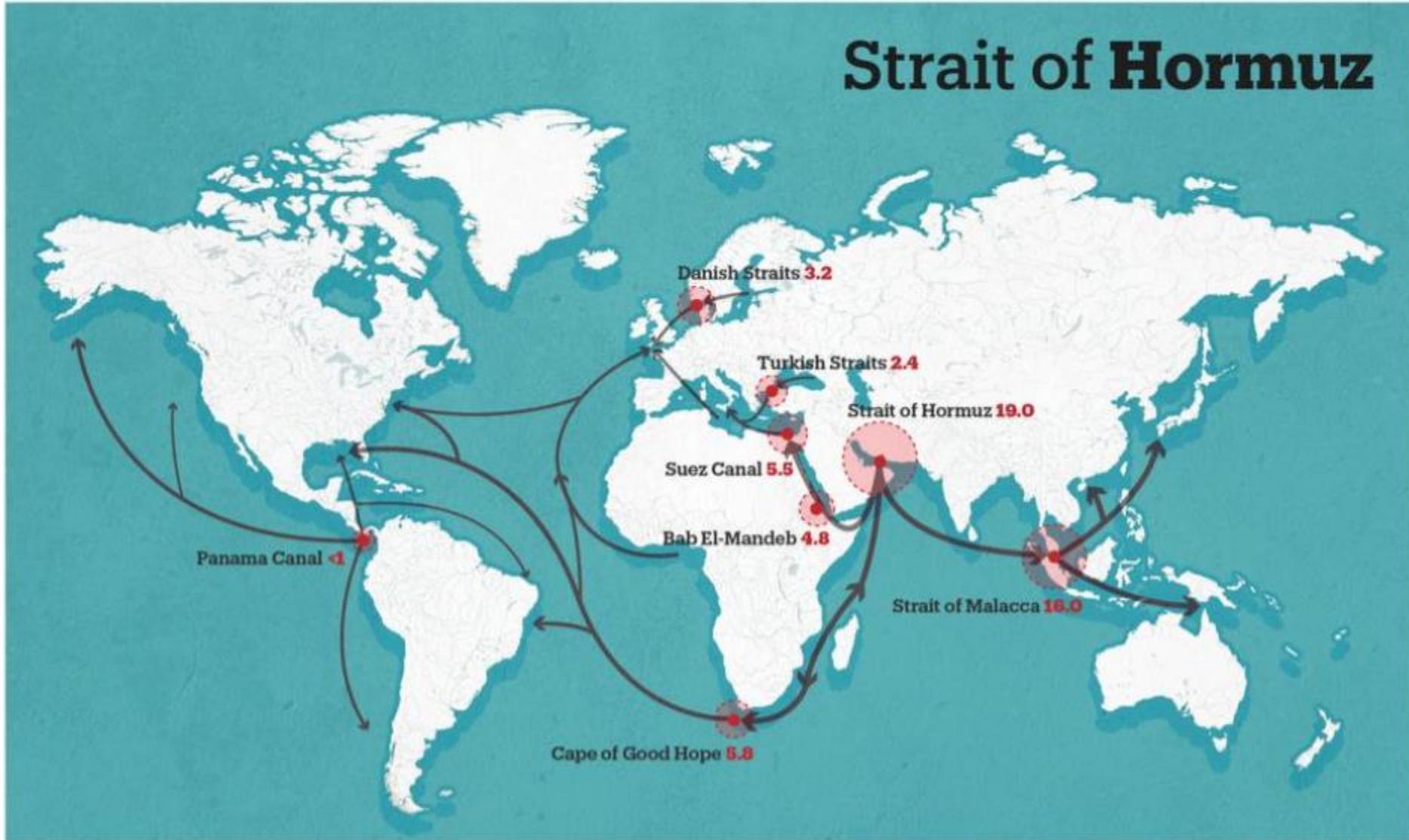
- **Let us work on your line of thought**

Inherent Issues

Man Made Issues

Climate Change

Q- Mention the significance of straits and isthmus in international trade.
(Answer in 250 words) 15



- **Strait of Hormuz**
it is of great strategic and economic importance, especially as oil tankers collecting from various ports on the Persian Gulf must pass through the strait.
- **OPEC members** Saudi Arabia, Iran, the UAE, Kuwait and Iraq **export most of their crude via the Strait.**
- **One third LNG + one sixth Oil**

Note : Piracy affects Commercial Shipping

Strait of Malacca

- **facilitates not just shipping** and the movement of people in the surrounding communities but is a confluence of **trade, cultures, ideas, and knowledge between the East and West.**

Note : KRA CANAL

Strait of Bab-el-Mandab

- It is a key strategic channel for commerce and trade, with an estimated **4 percent of global oil supply passing through it.**

Note : Piracy affects Commercial Shipping

Gibraltar Strait

- most significant global sea lanes because it provides a means of seaborne transit for shipping between the Atlantic and Mediterranean
- **REMEMBER** : Economic Costs + Transport Duration

- **Indian Context – Palk Strait**

Sethusamudram Ship Canal Project (SSCP) is a 167 km long shipping canal, and envisages the creation of a navigable canal from the Gulf of Mannar to the Bay of Bengal to facilitate the movement of ships

- **Bosphorous Strait** - The Bosphorus is also one of the world's most important chokepoints for the maritime transit of oil

Over 3 per cent of global supply or three million barrels per day, mainly from Russia and the Caspian Sea, passes through the waterway.

The route also ships vast amounts of grains from Russia, Ukraine and Kazakhstan to world markets.

Isthmus of Suez

- It provides the shortest maritime route between Europe and the lands lying around the Indian and western Pacific oceans.
- It is one of the world's most heavily used shipping lanes, carrying over 12% of world trade by volume.
- It provides a crucial link for oil, natural gas and cargo being shipped from East to West.

Example - As one of the world's busiest trade routes, the canal obstruction by Ever Given had a significant negative impact on trade between Europe, Asia and the Middle East - 10 Billion Trade per day

• Isthmus of Panama

It allows ships to go from the Caribbean Sea to the Pacific without sailing around South America.

REMEMBER : Economic Costs + Transport Duration

Mention the significance of straits and isthmus in international trade.

(Answer in 250 words) 15

Value Addition

- Define and Draw
- Plot the locations on a map

THANK YOU