

GS Mains 3 Years' Papers' Analysis & Insights

Geography & Disaster Management

Syllabus - Geography

General Studies-I : Indian Heritage and Culture, History and Geography of the World and Society.

- ❑ Salient features of world's physical geography.
- ❑ Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
- ❑ Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

Syllabus

➤ **Physical Geography:** Salient features of world's physical geography.

- ✓ Origin and evolution of earth & Geomorphology
- ✓ Climatology
- ✓ Oceanography

➤ **Geophysical phenomena:** Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

➤ **Natural Resources:** Distribution of key natural resources across the world (including South Asia and the Indian sub-continent);

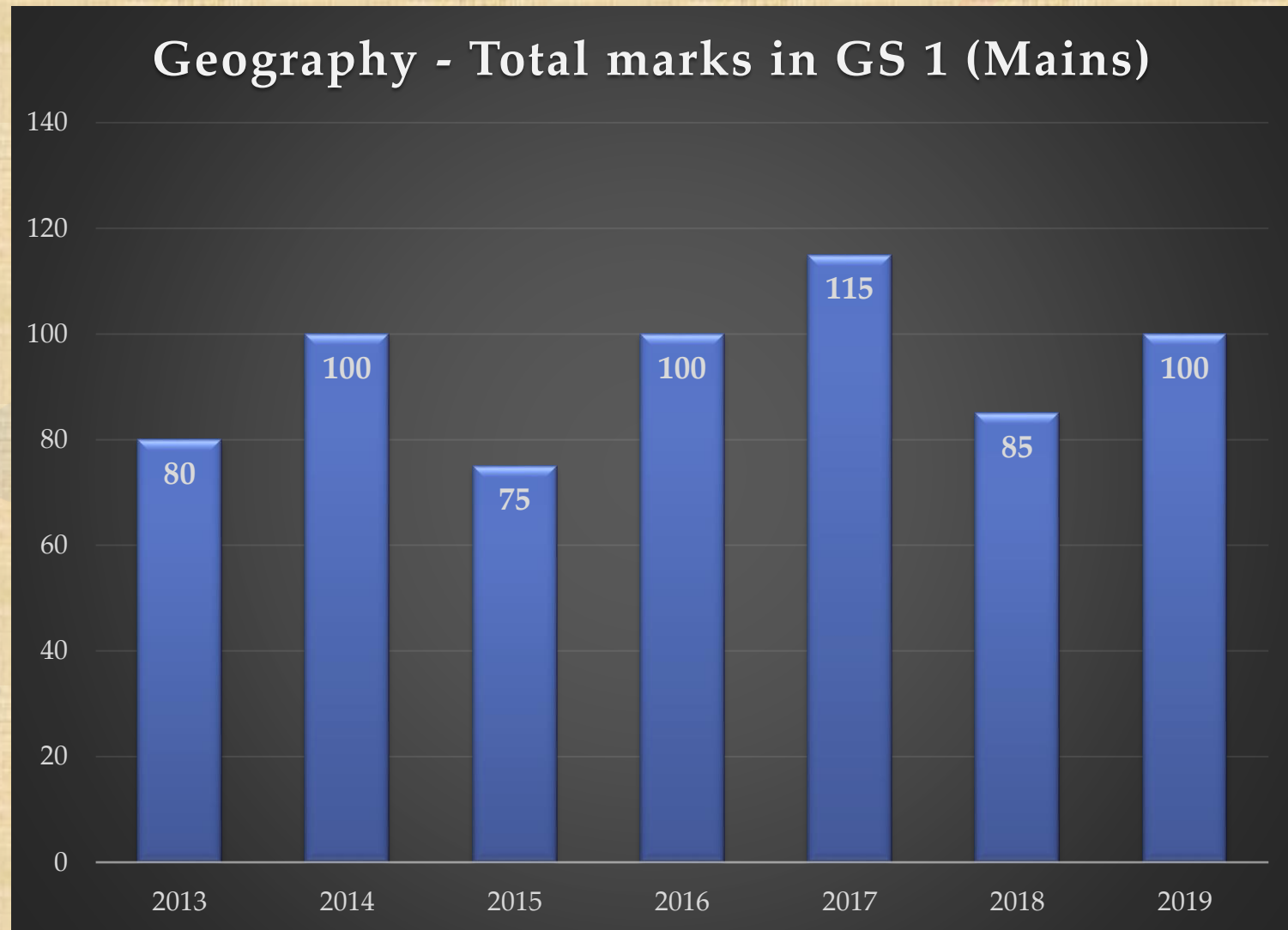
- ✓ Water resource
- ✓ Natural vegetation
- ✓ Mineral resources
- ✓ Energy resources

➤ **Economic Activities:** Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

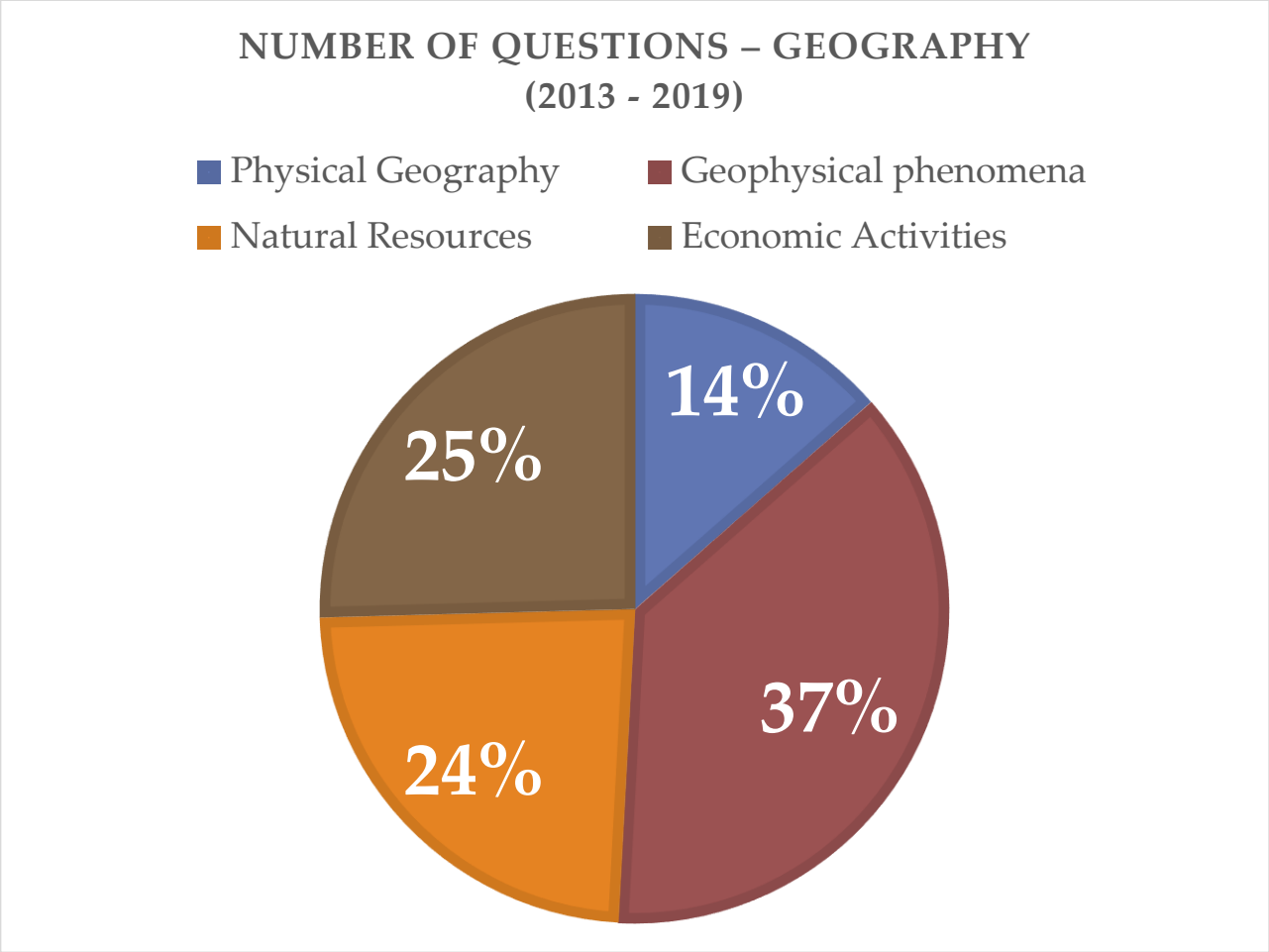
- ✓ Agriculture
- ✓ Industry
- ✓ Services

✓ Transportation and infrastructure

Year	Geography – total marks
2013	80
2014	100
2015	75
2016	100
2017	115
2018	85
2019	100



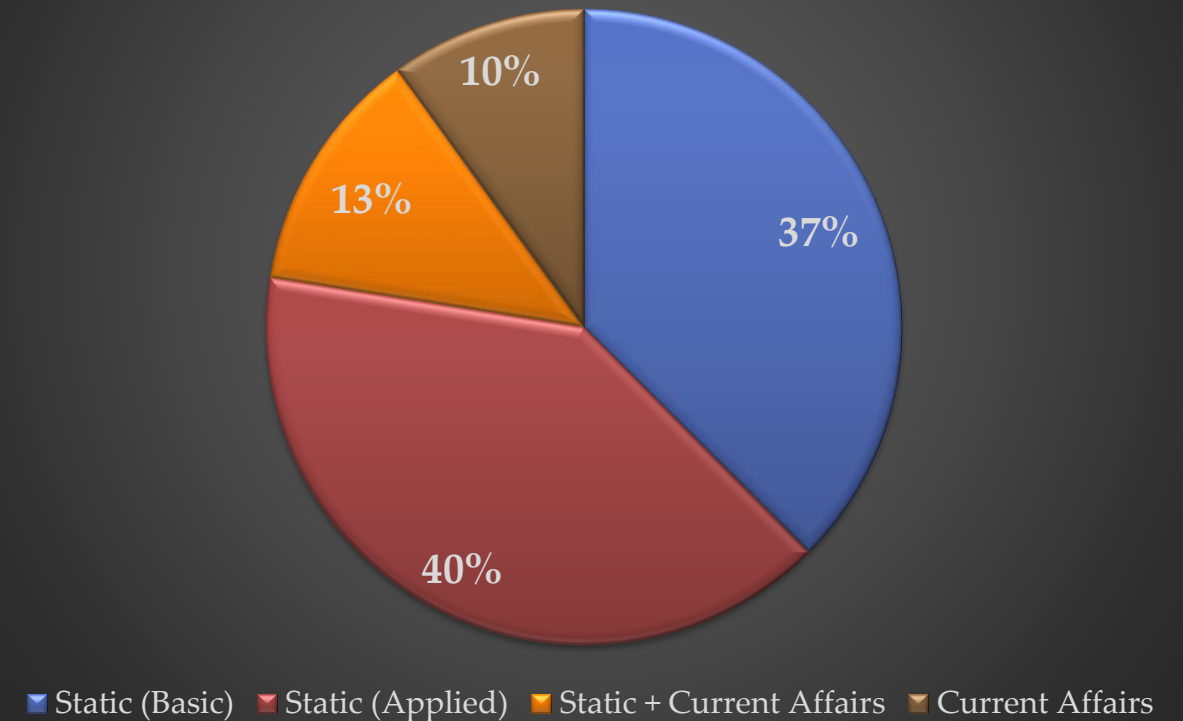
Section	Number of questions
Physical Geography	8
Geophysical phenomena	22
Natural Resources	14
Economic Activities	15



Question Nature

1. Static (Basic)
2. Static (Applied)
3. Static + Current Affairs
4. Current Affairs

Nature of Questions - Geography



Sources

➤ NCERTs

- ✓ 11th - Fundamentals of Physical Geography
- ✓ 11th - India Physical Environment
- ✓ 12th - Fundamentals of Human Geography
- ✓ 12th - India - People and Economy

➤ ICSE

- ✓ 10th - Total Geography

➤ G C Leong - Certificate Physical and Human Geography

➤ Savinder Singh - Physical Geography

➤ Current Affairs - News Papers, Vision IAS current affairs magazine, Yojana, Down to Earth Magazine

Answer Writing in Geography

- ❖ Analyze the previous papers
- ❖ Most of the questions are simple and direct
- ❖ Maps and figures
- ❖ Examples and facts
- ❖ Diversify the content
- ❖ Introduction and Conclusion
- ❖ Pointwise / Paragraph

2017	Petroleum refineries are not necessarily located nearer to crude oil producing areas, particularly in many of the developing countries. Explain its implications. (250 words)	15	Economic Activities
2017	Mention the advantages of the cultivation of pulses because of which the year 2016 was declared as the International Year of Pulses by the United Nations (150 words)	10	Economic Activities
2017	"The growth of cities as I.T. hubs has opened up new avenues of employment, but has also created new problems." Substantiate this statement with examples. (250 words)	15	Economic Activities
2017	How does the cryosphere affect global climate? (150 words)	10	Geophysical phenomena
2017	In what way can floods be converted into a sustainable source of irrigation and all-weather inland navigation in India? (250 words)	15	Geophysical phenomena
2017	"In spite of adverse environmental impact, coal mining is still inevitable for development." Discuss (150 words)	10	Natural Resources
2017	Account for variations in oceanic salinity and discuss its multi-dimensional effects. (250 words)	15	Physical Geography
2017	What characteristics can be assigned to monsoon climate that succeeds in feeding more than 50 percent of the world population residing in Monsoon Asia? (250 words)	15	Physical Geography
2017	How does the Juno Mission of NASA help to understand the origin and evolution of the Earth ? (150 words)	10	Physical Geography

2018	Why is Indian Regional Navigational Satellite System (IRNSS) needed? How does it help in navigation?	10	Economic Activities
2018	Defining blue revolution, explain the problems and strategies for pisciculture development in India.	15	Economic Activities
2018	What is the significance of Industrial Corridors in India? Identifying industrial corridors, explain their main characteristics.	15	Economic Activities
2018	Define mantle plume and explain its role in plate tectonics.	10	Geophysical phenomena
2018	What are the consequences of spreading of 'Dead Zones' on marine ecosystem?	10	Geophysical phenomena
2018	Why is India taking keen interest in resources of Arctic region?	10	Natural Resources
2018	"The ideal solution of depleting ground water resources in India is water harvesting system." How can it be made effective in urban areas?	15	Natural Resources

2019	Can the strategy of regional resource-based manufacturing help in promoting employment in India?	10	Economic Activities
2019	Discuss the factors for localisation of agro-based food processing industries of North-West India.	10	Economic Activities
2019	How is efficient and affordable urban mass transport key to the rapid economic development of India?	15	Economic Activities
2019	Assess the impact of global warming on the coral life system with examples.	10	Geophysical phenomena
2019	Discuss the causes of depletion of mangroves and explain their importance in maintaining coastal ecology.	10	Geophysical phenomena
2019	How can the mountain ecosystem be restored from the negative impact of development initiatives and tourism?	15	Geophysical phenomena
2019	What is water stress? How and why does it differ regionally in India?	15	Natural Resources
2019	How do ocean currents and water masses differ in their impacts on marine life and coastal environment? Give suitable examples.	15	Physical Geography

Syllabus – Disaster Management

General Studies-III: Technology, Economic Development, Bio diversity, Environment, Security and Disaster Management

- ❑ Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.
- ❑ Conservation, environmental pollution and degradation, environmental impact assessment.
- ❑ **Disaster and disaster management.**
- ❑ Linkages between development and spread of extremism.

Syllabus – Disaster Management

Topics

1. Basic concepts – hazard, disaster, risk reduction, vulnerability,
Disaster Management Cycle
2. Disaster Management in India and International initiatives
3. Disasters in India

2013	III	How important are vulnerability and risk assessment for pre-disaster management? As an administrator, what are key areas that you would focus on in a Disaster Management System?	10	Disaster Management
2013	I	Bring out the causes for more frequent occurrence of landslides in the Himalayas than in the Western Ghats.	5	Geography
2014	III	Drought has been recognized as a disaster in view of its spatial expanse, temporal duration, slow onset and lasting effects on vulnerable sections. With a focus on the September 2010 guidelines from the National Disaster Management Authority (NDMA), discuss the mechanisms for preparedness to deal with likely El Nino and La Nina fallouts in India.	12.5	Disaster Management
2015	III	The frequency of earthquakes appears to have increased in the Indian subcontinent. However, India's preparedness for mitigating their impact has significant gaps. Discuss various aspects.	12.5	Disaster Management
2015	I	The states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand are reaching the limits of ecological carrying capacity due to tourism. Critically evaluate.	12.5	Geography
2016	III	The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing the reasons for urban floods, highlight the mechanisms for preparedness to reduce the risk during such events.	12.5	Disaster Management
2016	III	With reference to National Disaster Management Authority (NDMA) guidelines, discuss the measures to be adopted to mitigate the impact of recent incidents of cloudbursts in many places of Uttarakhand.	12.5	Disaster Management
2016	I	"The Himalayas are highly prone to landslides." Discuss the causes and suggest suitable measures of mitigation.	12.5	Geography
2016	I	Major cities of India are becoming vulnerable to flood conditions. Discuss.	12.5	Geography
2017	III	On December 2004, tsunami brought havoc on 14 countries including India. Discuss the factors responsible for occurrence of Tsunami and its effects on life and economy. In the light of guidelines of NDMA (2010) describe the mechanisms for preparedness to reduce the risk during such events.	15	Disaster Management
2017	I	In what way can floods be converted into a sustainable source of irrigation and all-weather inland navigation in India? (250 words)	15	Geography
2018	III	Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing 'Sendai Framework for DRR (2015-2030)'. How is this framework different from 'Hyogo Framework for Action, 2005'?	15	Disaster Management
2019	III	Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters. (Answer in 150 words)	10	Disaster Management
2019	III	Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help in disaster mitigation in the case of landslides.	15	Disaster Management
2019	I	How can the mountain ecosystem be restored from the negative impact of development initiatives and tourism?	15	Geography

Physical Geography

2017	Account for variations in oceanic salinity and discuss its multi-dimensional effects. (250 words)	15
2017	What characteristics can be assigned to monsoon climate that succeeds in feeding more than 50 percent of the world population residing in Monsoon Asia? (250 words)	15
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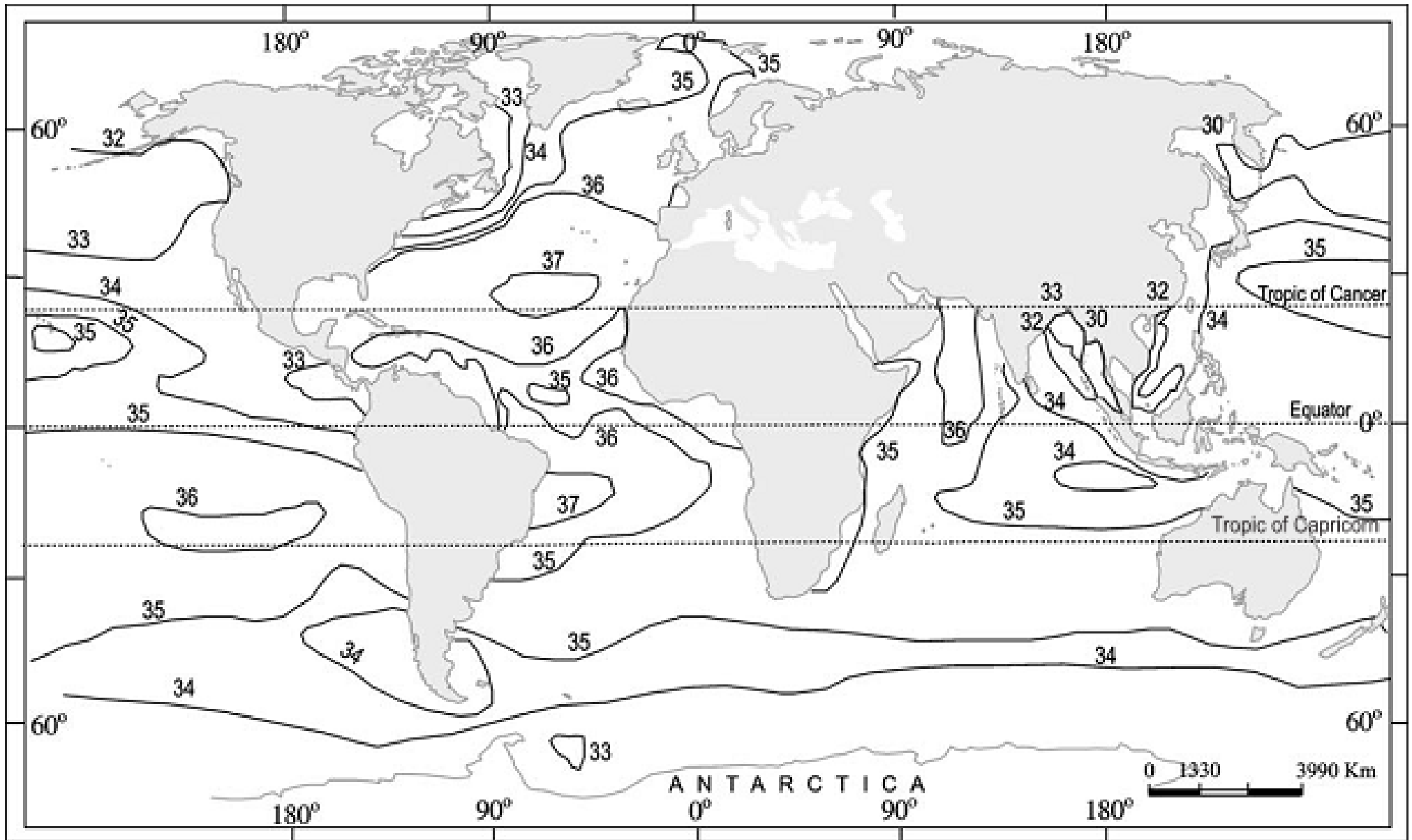
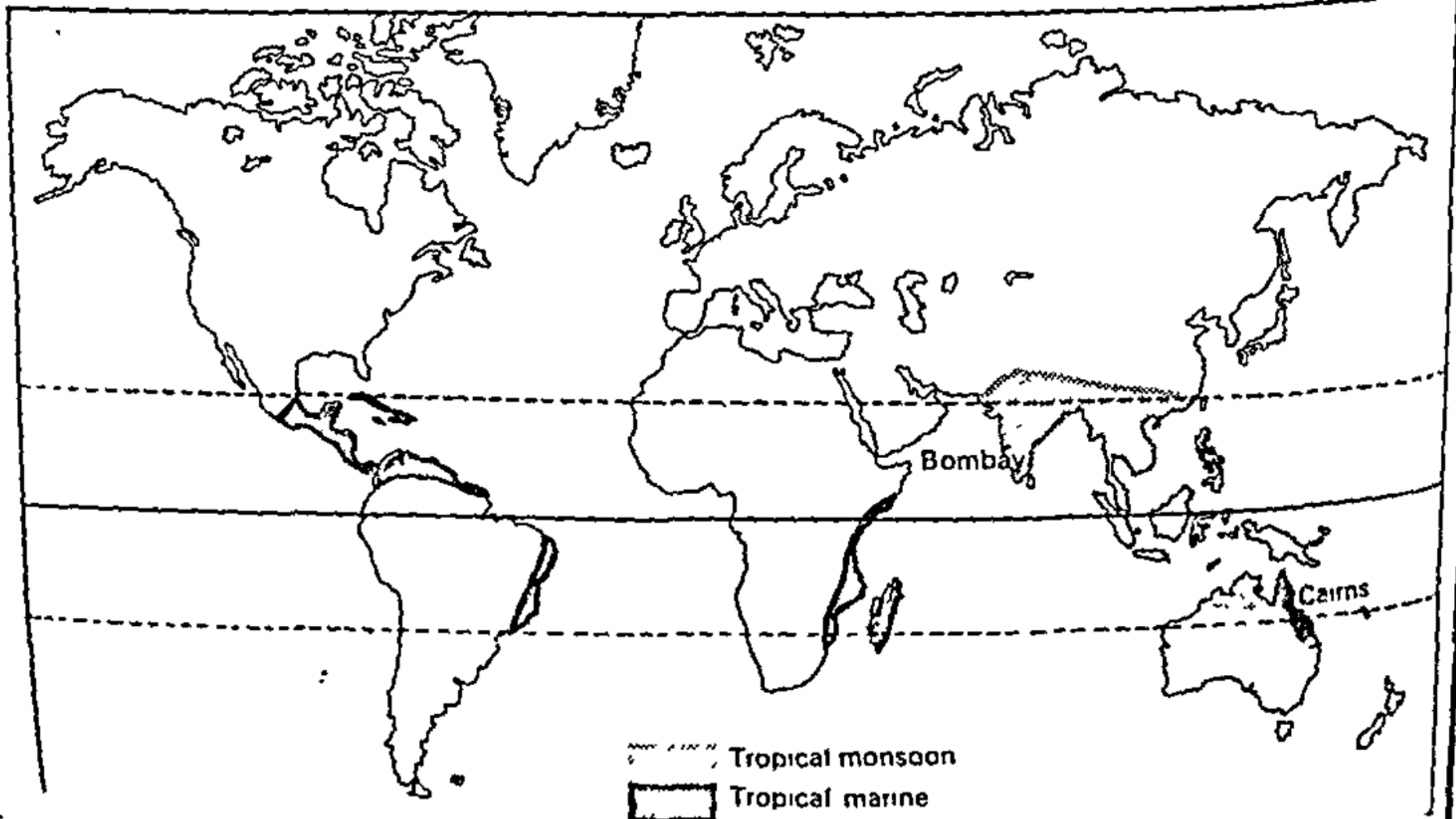


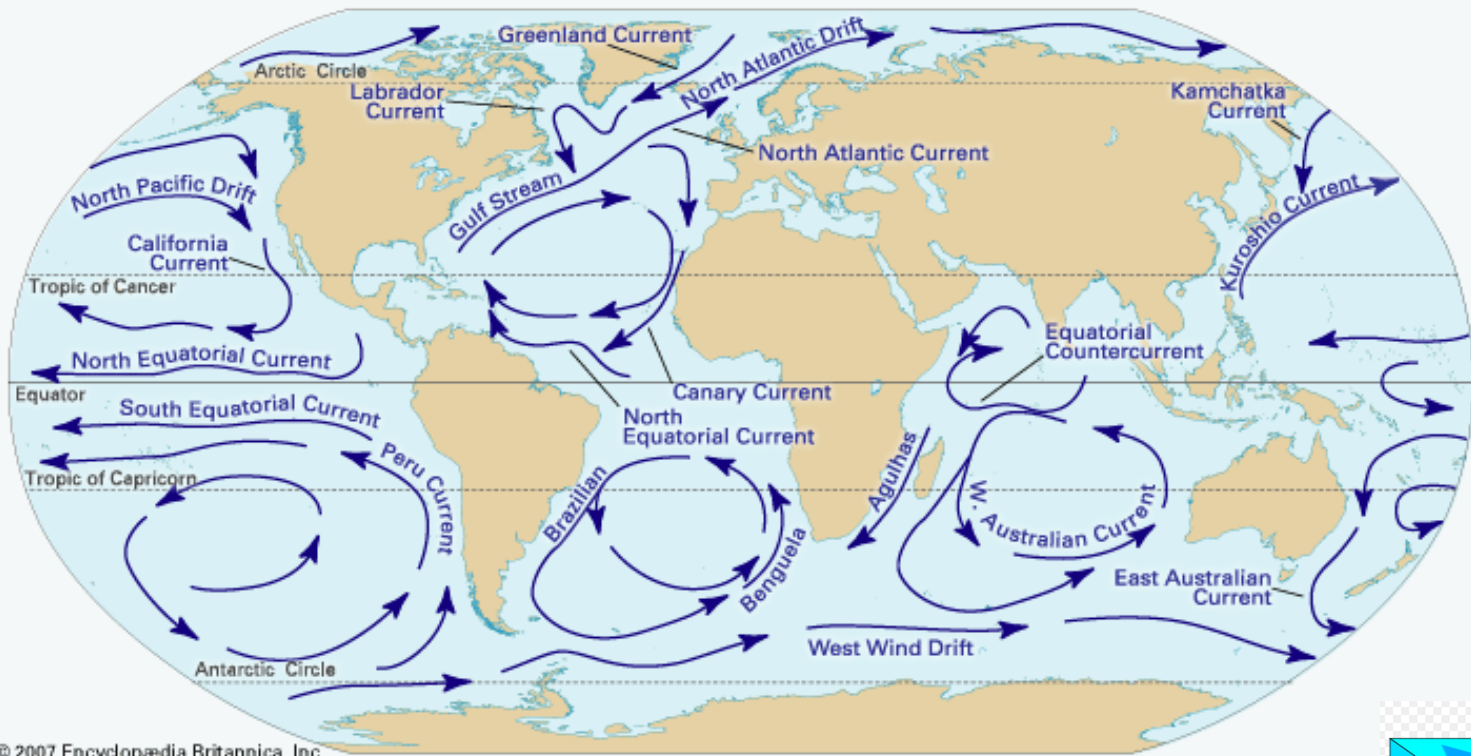
Figure 13.5 : Surface salinity of the World's Oceans



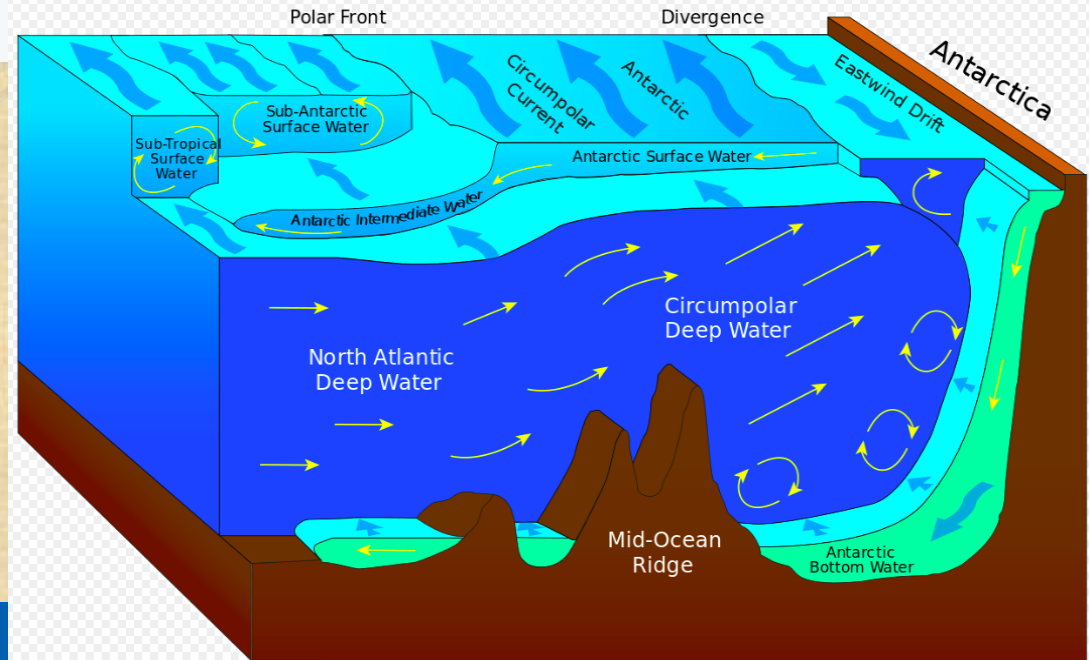
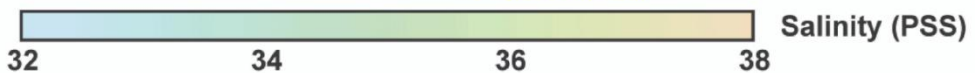
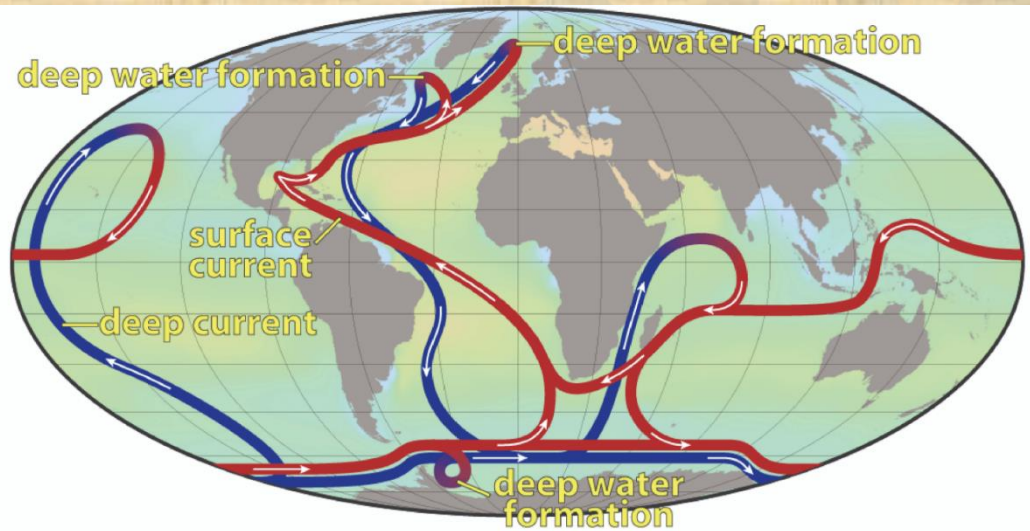
124 The tropical monsoon and marine regions

Physical Geography

2019	How do ocean currents and water masses differ in their impacts on marine life and coastal environment? Give suitable examples.	15
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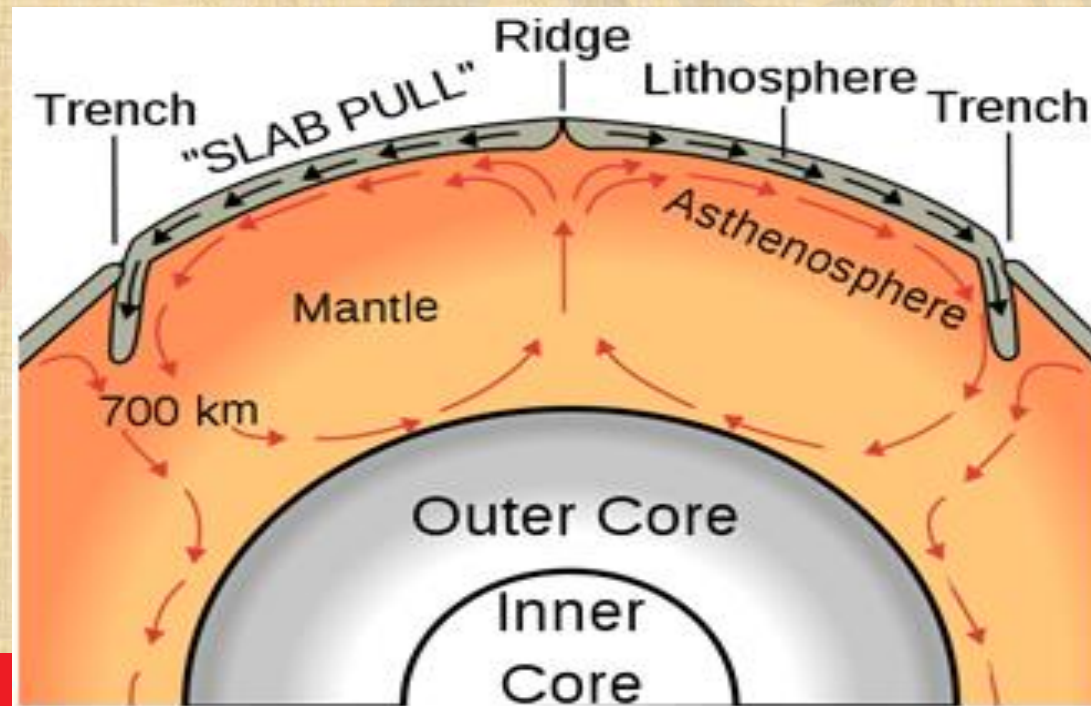


Geophysical phenomena

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Geophysical phenomena

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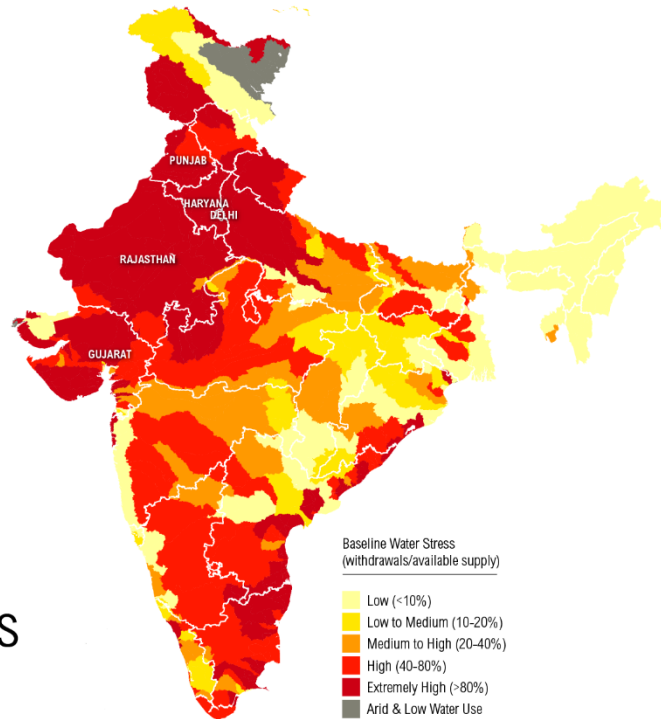
Natural Resources

2017

"In spite of adverse environmental impact, coal mining is still inevitable for development." Discuss (150 words)

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54%
of India
Faces
**High to
Extremely
High**
Water Stress



Natural Resources

2018	Why is India taking keen interest in resources of Arctic region?	10
2018	"The ideal solution of depleting ground water resources in India is water harvesting system." How can it be made effective in urban areas?	15



Natural Resources

2019

What is water stress? How and why does it differ regionally in India?

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Economic Activities

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IRNSS: INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM

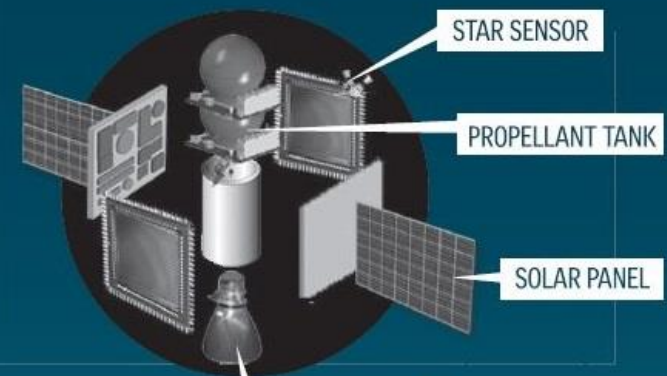
7 SATELLITES

3 GEOSTATIONARY

ORBIT ALTITUDE 36,000 KM

4 GEOSYNCHRONOUS

COST ₹ 1,420 CRORES



Covers India and up to **1,500** km beyond its borders

3 extremely accurate rubidium atomic clocks in each satellite

GPS receivers will not work; need special receivers (yet to be developed)

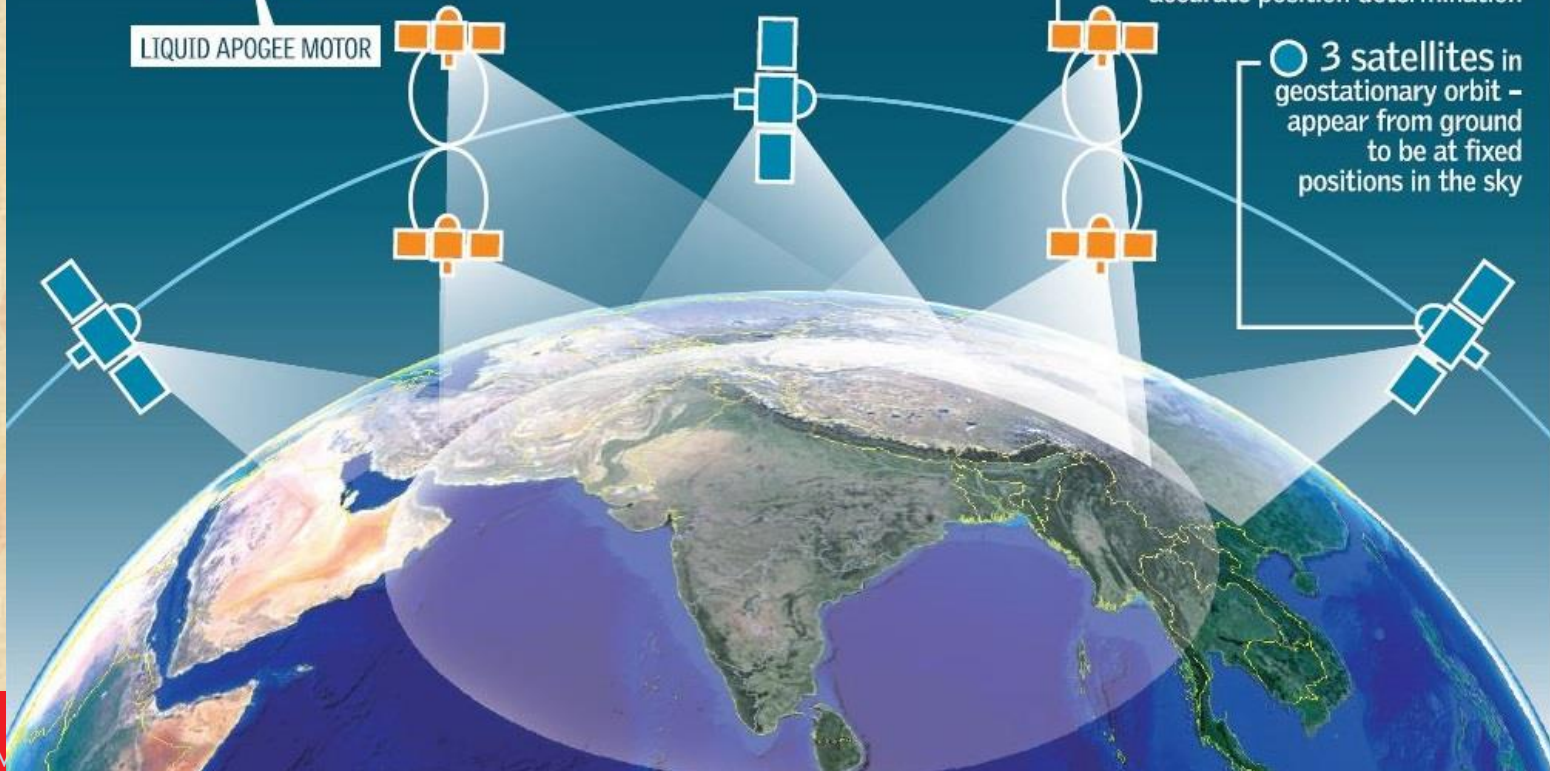
IRNSS provides Standard Positioning Service

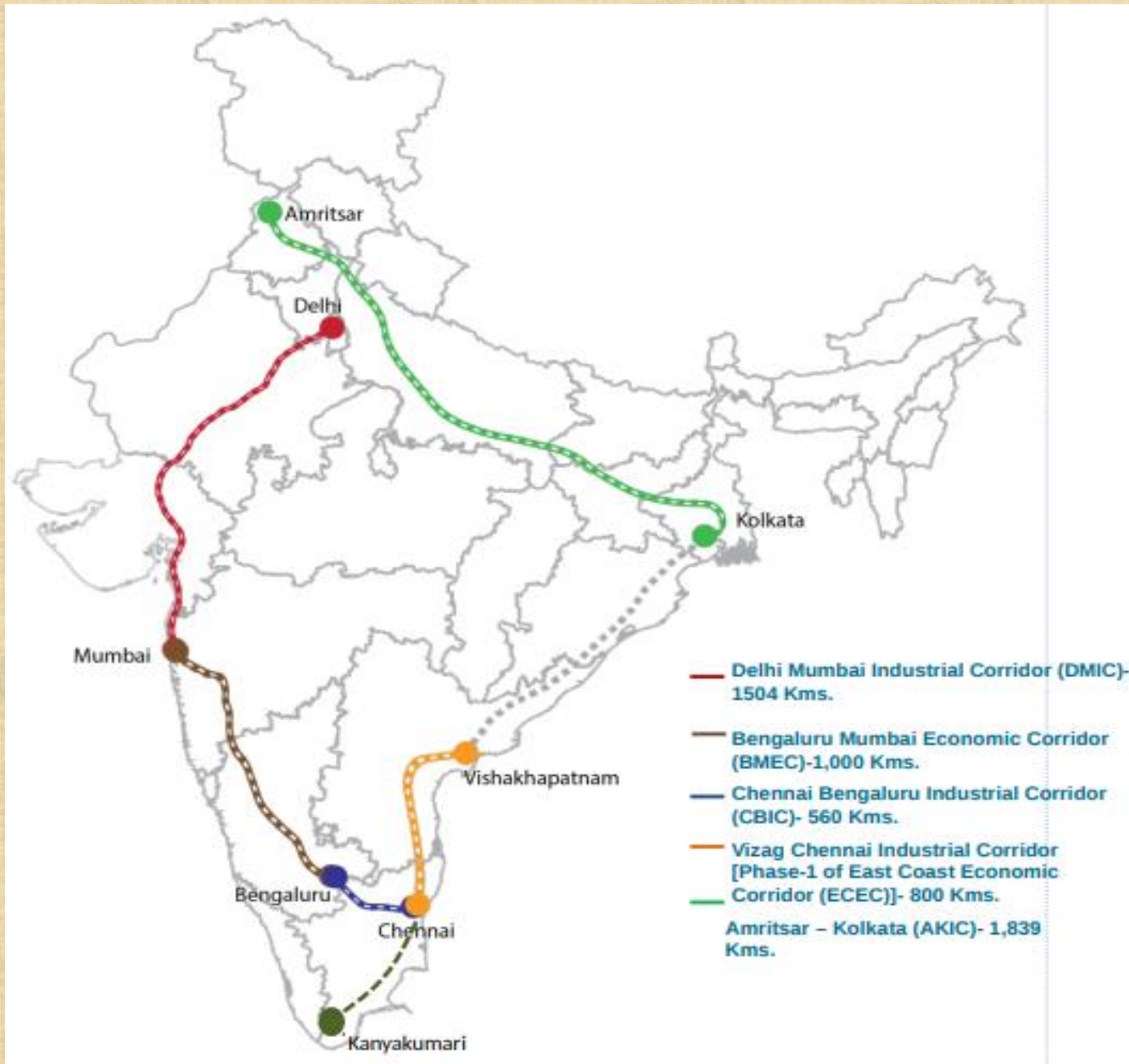
Open to all users

Accuracy better than 20 metres

● **4 satellites** in geosynchronous orbit – in pairs, move in two inclined orbits – appear from ground to travel in figure '8' – assist in accurate position determination

○ **3 satellites** in geostationary orbit – appear from ground to be at fixed positions in the sky





VISION

Economic Activities

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Disaster Management

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DISCUSSION & QUESTIONS

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