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ENLITE IAS

GEOGRAPHY

1. Son River (Source: The Hindu)

- **Origin:** Amarkantak hills of the Maikal Range in Madhya Pradesh.
- **Passing States:** Madhya Pradesh (around 500 km), Uttar Pradesh, Jharkhand, and Bihar.
- **Note:** It is the second-largest southern tributary of the Ganges (Ganga) River, after the Yamuna.
- **Tributaries:** Major tributaries of the Son River are Banas, Gopad, Rihand, Kanhar, and North Koel.
- **Geographical Setting:** The valley is bordered by the Kaimur Range to the north and the Chota Nagpur Plateau to the south.
- **Dispute:** Disputed between Bihar and Jharkhand, which recently reached an agreement.

2. Application of Copper (Source: The Indian Express)

- **Electrical and Electronics:** Copper is an excellent conductor of electricity, so it is widely used in electrical wiring, cables, motors, generators, transformers, circuit boards, and electronic equipment.
- **Construction:** It is used in plumbing pipes, roofing, heating and cooling systems because of its corrosion resistance, durability and easy fabrication.
- **Transport:** Copper is important in cars, railways, aircraft and ships. Its demand is particularly increasing with electric vehicles (EVs) because EVs require substantial electrical wiring, motors, and charging infrastructure.
- **Renewable Energy:** Copper is crucial for the energy transition. Solar panels, wind turbines, power grids, batteries and energy-storage systems require copper for transmitting electricity efficiently.
- **Telecommunications:** Copper cables are used in telephone networks, broadband connections and other communication infrastructure, although fibre optics have replaced copper in several applications.
- **Alloys:** Copper is combined with other metals to produce important alloys such as brass (copper + zinc) and bronze (copper + tin), used in machinery, instruments, coins and decorative products.
- **Defence and Aerospace:** It is used in military electronics, communication equipment, aircraft components, and naval systems because of its conductivity and reliability.
- **Household and Consumer Goods:** Copper is used in utensils, cookware, air conditioners, refrigerators, and various appliances.



3. Yamuna River System (Source: The Indian Express)

- **Origin:** It originates from the Yamunotri Glacier on the southwestern slopes of Bandarpoonch Peak in the Mussoorie range of the lower Himalayas.
- **Passing States:** It flows through the states of Uttarakhand, Himachal Pradesh, and Haryana. It then enters Delhi and merges with the Ganga near Prayagraj.
- **Fact:** It is the largest tributary of the Ganga in the northern plains.

- **Geographic Significance:** It creates the highly fertile alluvial Yamuna-Ganges Doab region between itself and the Ganges in the Indo-Gangetic plain.
- **Cities:** The cities of Bhagpat, Delhi, Noida, Mathura, Agra, Firozabad, Etawah, Hamirpur, and Allahabad lie on its banks.
- **Major Tributaries:** Tons, Chambal, Banas, Kali, Singh, Ken, Betwa, and Sindh rivers.

Tons River

- **Origin:** It originates from the lofty Bandarpooch massif in Uttarakhand and is one of the major tributaries of the Yamuna River.
- **Major Tributaries:** Its primary feeder stream is the Pabbar River.
- **Passing States:** Uttarakhand, Himachal Pradesh
- **Fact:** The Tons River is the largest tributary of the Yamuna River.
- **Key Project: Kishau Multipurpose Project**
 - **Location:** It is an inter-state river valley project between Uttarakhand and Himachal Pradesh.
 - **Type of Dam:** It is a gravity dam.
 - **States Agreement:** Himachal Pradesh, Uttarakhand, Delhi, Uttar Pradesh, Haryana, and Rajasthan agreed to sign a Memorandum of Understanding (MoU) for implementation of the project.

4. El Niño (Source: The Hindu)

El Niño (meaning “the little boy” in Spanish) is a climate pattern that describes the unusual warming of surface waters in the eastern Pacific Ocean, which occurs irregularly in 2 - 7 years.

Formation

- Trade winds weaken or reverse, reducing the westward push of warm water.
- Warm water shifts eastward toward the Americas.
- Upwelling of cold, nutrient-rich water off South America weakens.
- Walker circulation collapses/weakens, altering global weather patterns.

Impacts

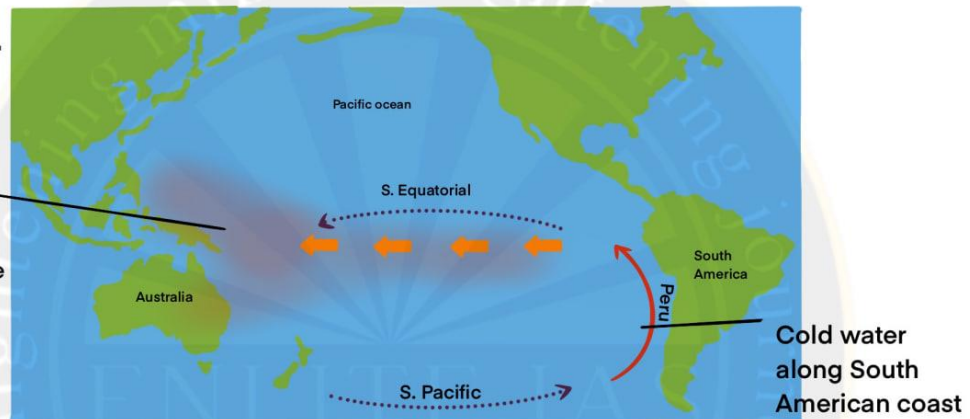
- El Niño weakens southwest monsoon result in below-normal monsoon rainfall and it also the onset of the southwest monsoon may be delayed.
 - Uneven distribution of rainfall causes drought-like situations.
- Poor monsoons fail to adequately replenish major reservoirs and underground aquifers, causing acute water stress for irrigation and drinking in the subsequent months.

- Deficient rainfall severely impacts Kharif (summer-sown) crops like rice, pulses, and sugarcane, leading to delayed sowing and lower crop yields.
- Lower agricultural output drives food inflation, reduces rural income and consumer demand, and strains government fiscal management through drought-relief spending.

THE EL NINO PHENOMENON

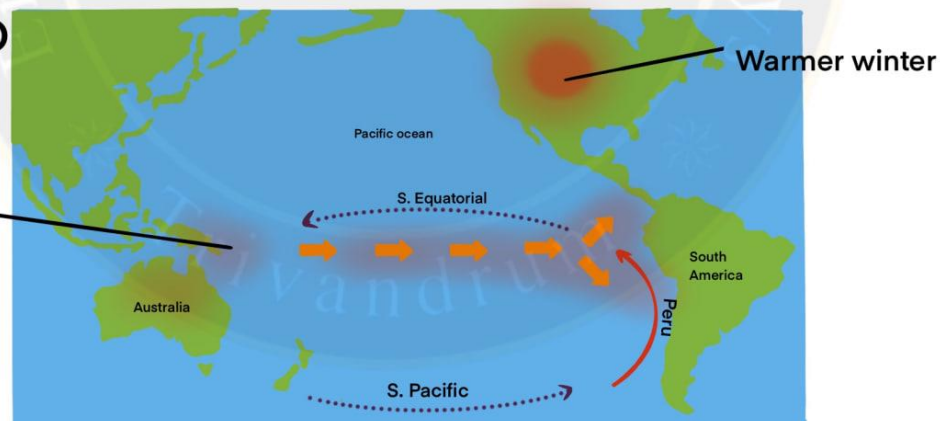
NORMAL YEAR

Equatorial winds gather warm water pool toward the west



EL NINO YEAR

Easterly winds weaken warm water to move eastward.



5. Brahmaputra River System (Source: The Indian Express)

- **Origin:** Chemayungdung glacier in Tibet, China.
- **Course**
 - It flows as the Yarlung Tsangpo River across southern Tibet to break through the Himalayas in great gorges and into Arunachal Pradesh, where it is known as Dihang.
 - The first major tributary is the Raga Tsangpo, meeting the Tsangpo near Lhatse Dzong.
 - West of the town of Sadiya, the Dihang turns to the southwest and is joined by two mountain streams, the Lohit and the Dibang, and below the confluence, the river is known as the Brahmaputra.
 - It flows through Bangladesh as the Jamuna, where it merges with the Ganga (Padma) to form a vast delta, the Sunderbans.
- **Facts**
 - The biggest and the smallest riverine islands in the world, Majuli and Umananda respectively, are situated in the river in the state of Assam.



Brahmaputra River System

Left Bank Tributaries

- **Dhansiri River**
 - It originates from the Naga Hills in Nagaland.
- **Lohit River**
 - The Lohit River originates in eastern Tibet.
 - The river flows through the Mishmi hills to meet the Siang at the head of the Brahmaputra valley.
 - The Lohit Valley is densely forested and features a mix of alpine and subtropical vegetation.
- **Dibang River**
 - Originates close to the Tibetan border at an altitude of more than 5000 m.
 - The Mishmi hills are found along the upper course of the Dibang River.

Right Bank Tributaries

- **Subansiri River**
 - Also called the Gold River, as it is famous for its gold dust.
 - Flows through Arunachal Pradesh and is ideal for kayaking.
- **Kameng River**
 - Kameng River in the eastern Himalayan mountains originates in the Tawang district of Arunachal Pradesh.
 - The Pakhui Wildlife Sanctuary and the Kaziranga National Park are located near the Kameng River.
- **Manas River**
 - Manas River is a transboundary river in the Himalayan foothills between southern Bhutan and India.
 - It flows through Royal Manas National Park in Bhutan and its contiguous Manas Wildlife Sanctuary in India.

6. Bauxite Mines in India and Uses of Bauxite (Source: The Hindu)

Bauxite Mines in India



Uses of Bauxite

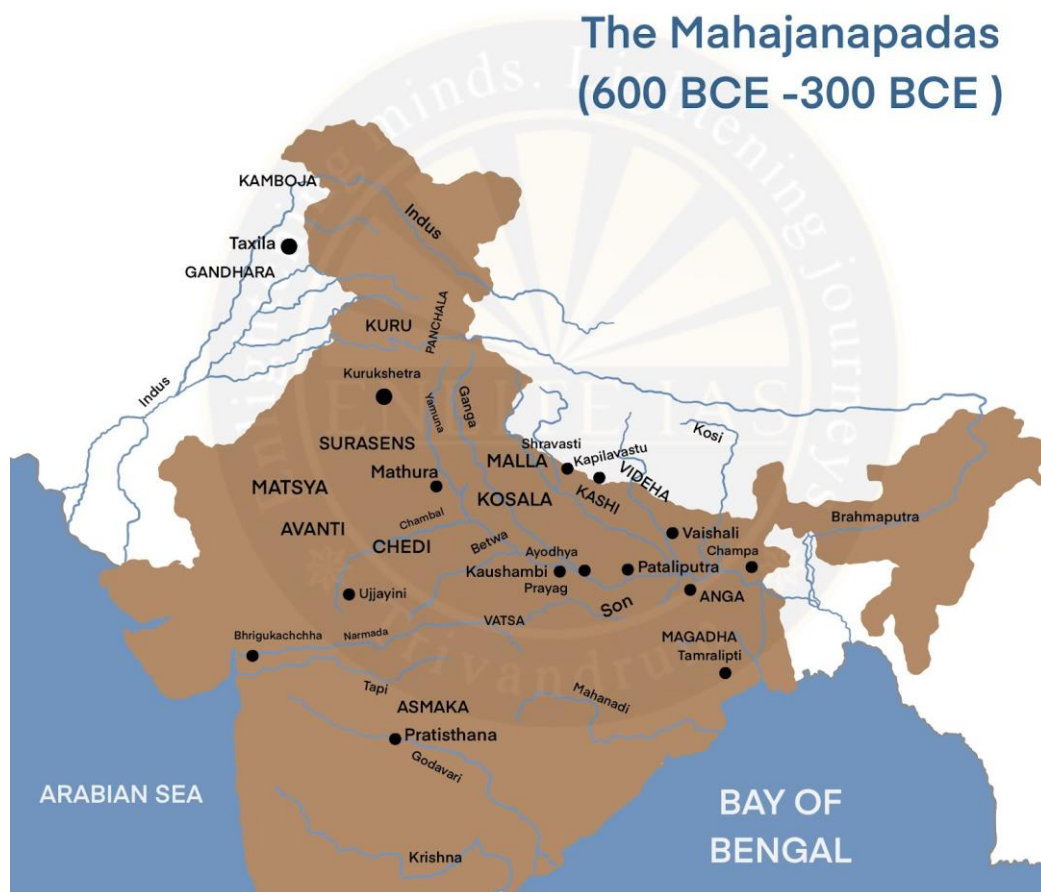
- **Aluminium Production:** Primary raw material for aluminium extraction, used in aircraft, automobiles, electrical equipment, and construction.
- **Construction Industry:** Aluminium obtained from bauxite is used in roofing sheets, doors, windows, bridges and structural components.
- **Transportation:** Used indirectly in manufacturing aircraft, railway coaches, automobiles and ships due to aluminium's lightweight and corrosion-resistant properties.
- **Refractory Industry:** Used in manufacturing heat-resistant bricks and furnace linings, particularly high-alumina refractories.
- **Chemical Industry:** Used to produce alumina-based chemicals, aluminium sulphate and other industrial compounds.
- **Abrasives:** Calcined bauxite is used in producing abrasives for grinding, polishing and surface finishing.
- **Cement Industry:** Used as a raw material in manufacturing high-alumina cement.
- **Electrical Industry:** Aluminium extracted from bauxite is used in power transmission cables and electrical conductors.
- **Packaging Industry:** Aluminium is widely used in beverage cans, food containers, foils and packaging materials.

HISTORY/ART & CULTURE

1. Mahajanapadas (Source: The Hindu)

The Mahajanapadas were 16 large and powerful kingdoms that emerged in ancient India during the 6th century BCE.

- The Mahajanapadas were found in northern and eastern India.
- The modern-day states of Bihar, Uttar Pradesh, Haryana, and Madhya Pradesh were included.
- Magadha, Anga, Kashi, Kosala, Avanti, Vatsa, Gandhara, Kamboja, Chedi, Vajji, Malla, Kuru, Panchala, Matsya, Surasena, and Assaka were among the 16 Mahajanapadas.



Political Structure

- Mahajanapadas had monarchies, republics (Ganas/Sanghas), and oligarchies, with monarchies being the most common.
- Monarchies were ruled by a king, assisted by the Mantri-Parishad (Council of Ministers).
- Kings consulted Brahmanas, ministers, and Rajsabha on important matters.
- Republics were governed by a council or assembly, headed by an executive chief.
- Oligarchies were controlled by a small group of powerful people.
- Each Mahajanapada had a capital city and an organised administrative system.
- The king was responsible for defence, supported by an organised army.
- An efficient tax and revenue collection system supported the administration.

Socio-Economic Condition

- Society consisted of nobles, traders, peasants, artisans, and workers
- The caste system was evolving, and social distinctions became more prominent.
- Kassaka and Ksetrika were terms associated with cultivators or peasants.
- Slavery existed, with slaves employed in manual and domestic work.
- Marriage alliances were used to develop political relations between kingdoms.
- Agriculture was the principal occupation, making the economy predominantly agrarian.
- Expansion of trade routes and urban centres encouraged trade and commerce.
- Punch-marked coins, mainly made of silver and copper, facilitated commercial transactions.
- Coins generally carried symbols and marks punched onto the metal.

Reasons for the Development of Mahajanapadas

- **Agricultural Surplus:** Increased agricultural production generated surplus and supported larger political units.
- **Trade and Commerce:** Expansion of trade routes created wealth and encouraged control over important commercial centres.
- **Decline of Tribal/Vedic Order:** Older tribal political structures gradually gave way to more organised territorial states.
- **Competition for Resources:** Rivalry over fertile land, water, minerals and trade routes encouraged territorial expansion.
- **Population Growth:** Increasing population required stronger and more organised administrative systems.
- **Urbanisation:** Growth of towns created new centres of political and economic activity.
- **Social Stratification:** Emergence of powerful ruling and wealthy classes strengthened organised political institutions.
- **Iron Technology:** Iron tools facilitated forest clearance and agricultural expansion, while iron weapons strengthened armies.

2. Thirukkural (Source: The Indian Express)

Thirukkural (Tamil: "Sacred Couplets"), also called Kural, is a classic Tamil text written by Thiruvalluvar.

Structure

- Thirukkural contains 1,330 couplets (Kurals) arranged into 133 chapters, with 10 couplets in each chapter. It is broadly divided into three sections:
 - **Aram (Virtue):** Deals with morality, righteous conduct, compassion, self-discipline, and domestic as well as ascetic virtues.
 - **Porul (Wealth/Polity):** Discusses governance, kingship, administration, justice, ministers, diplomacy, warfare, agriculture, and social life.
 - **Inbam (Love):** Deals with love and emotional relationships.

3. Periyar E.V. Ramasamy (1879 - 1973) (Source: The Indian Express)

Political Career

- Started as a Congress worker but left due to disagreements, particularly over caste-based issues.
- Known for his opposition to Gandhi's compromise on separate dining for Brahmin and non-Brahmin students.

Self-Respect Movement

- Founded the Self-Respect Movement in 1925 to promote equality and challenge caste dominance, particularly of Brahmins.
- Focused on liberating non-Brahmins from social and political oppression.

Justice Party and Reservations

- After leaving Congress, Periyar aligned with the Justice Party, advocating for reservations for non-Brahmins in the bureaucracy.

Vaikom Satyagraha

- Gained national fame during the Vaikom Satyagraha (1924), a movement for lower castes to access public spaces near the Vaikom temple in Kerala.
- Earned the title Vaikom Veerar (Hero of Vaikom).

Opposition to Caste

- Criticized the caste system as an imposition by Aryan Brahmins, opposing the Aryanisation of the Tamil identity.

Formation of Dravidar Kazhagam (DK)

- In the 1940s, Periyar founded Dravidar Kazhagam, advocating for an independent Dravida Nadu comprising Tamil, Telugu, Malayalam, and Kannada-speaking regions.
- His ideas formed the basis of the Dravidian Movement, which later gave rise to major political parties in Tamil Nadu.

Social Reforms

- Promoted rationalism, gender equality, and social justice.
- Advocated for women's rights, including property ownership, divorce, and education. Urged people to reject caste suffixes in names and supported inter-caste dining.

4. Chola Empire (9th and 13th century CE)

(Source: **The Indian Express**)

Administration

- **Capital:** Tanjore
- **Symbol:** Tiger
- **Administrative Division:** Empire, Mandala, Valanadu, Ooru, Sabhas.
 - **Uttarameru Inscriptions:** Deal with local body elections
- **Administrative Structure:** The ruler was assisted in his task by a council of ministers. Higher-level officials were referred to as Peruntaram, and lower-level ones as Siruntaram.

Army

- The military consisted of infantry, cavalry, elephants, and a powerful navy.

Economy

- **Mercent Guilds:** Manigram
- **Source of Income**
 - The economy was predominantly agrarian and based on taxation.
 - Overseas trade flourished with China, Java, Sumatra, and Arabia.
 - Industries such as silk weaving at Kanchi and metal crafts prospered.
- **Taxation Terms**
 - **Kutimai:** Tax levied on cultivators
 - **Labour Dues:** Vetti/vettinai
 - **Natacci:** Taxes levied on residences and communal spaces.
 - **Cunkam:** Toll
 - **Tattar Pattam:** Tax on goldsmiths
 - **Kurai Kacu:** Tax on fabric
 - **Vetrilai:** Tariff on betel leaf
 - **Vannar Parai:** Tax on washermen
 - **Paci Pattam:** Tax on fishing
- **Coins:** Gold, silver and copper coins circulated.
- **Coastal Towns:** Poompuhar, Nagapattinam, Mamallapuram

Condition of Society

- The caste system was widely prevalent (2 major divisions among castes - valangai and idangai)
- Saivism and Vaishnavism continued to flourish.
- At the elite brahmadeya settlements, Brahmin landholders known as brahmadeya-kilavars were established with tax exemptions, displacing the local peasants (kudi neekki). Like in Brahmadeyams, temples received land known as devadana, which was tax-free.

- The temples became the centre of a number of activities throughout this time. The vellanvagai communities' landowners occupied the next position in the social structure.
- Land ownership was not permitted for Ulukudi (tenants), and they were compelled to work the properties owned by Brahmins and vellanvagai village holders.
- Landowners retained melvaram, or the majority of the harvest, while the ulukudi received kizh varam, or the lesser part. The lowest socioeconomic classes continued to be those of workers (paniceymakkal) and slaves (adimaigal).

Art and Architecture

- **Temple:** Dravidian temple architecture reached its peak during Chola rule.
 - Example: Darasuram, Gangaikonda Cholapuram, and Brihadeshwara Temple.
- **Painting:** Chola paintings have wide-open eyes. The paintings are vibrant and alive with energy.
- **Sculptures:** The Cholas created magnificent bronze sculptures of dancing Shiva and Nataraja by using the lost-wax method.

Education and Literature

- **Associated Inscriptions:** Ennayiram, Thirumukkudal, and Thirubhuvanai
- **Subjects Taught:** Vedas, Epics, mathematics, and medicine.
- **Tamil Literature**
 - Thiruthakkadevar and Kundalakesi penned Sivakasintamani.
 - Ramayana by Kambar and the Periyapuram or Tiruttondarapuram by Sekkilar.
 - The Kalinga war of Kulotunga I is described in Jayankondar's Kalingattupparani.
 - The Moovarula by Ottakuthar describes the lives of three Chola monarchs. The Nalavenba is written by Pugalandi.
 - Works on Tamil grammar include Kalladam by Kalladanar, Yapperungalam by Amirthasagarar, Jain, Nannul by Pavanandhi, and Virasoliyam by Buddhimitra, which were created during the Chola dynasty.



5. Vithalbhai Patel and Bhagat Singh (Source: The Indian Express)

Vithalbhai Patel (1873 - 1933)

- Who was Vithalbhai Patel?
 - Elder brother of Sardar Vallabhbhai Patel.
 - He was an Indian legislator and political leader, part of the freedom struggle.
- Contributions:
 - He became a member of the **Bombay Legislative Council**.
 - He left the Indian National Congress after the withdrawal of the Non-Cooperation Movement and co-founded the Swarajya Party.
 - He was elected to the Central Legislative Assembly in 1923.
 - The **first Indian to be elected as the President (Speaker) of the Central Legislative Assembly (1925)**

- Established an **independent office for the Assembly**, separate from Executive control.
- Instituted the convention of **neutrality of the Speaker**, exercising casting votes only to **maintain the status quo**.
- Bridged colonial legislative norms to independent India's parliamentary decorum.

Bhagat Singh (1907–1931)

Bhagat Singh was an Indian revolutionary freedom fighter (during the second phase of the revolutionary movement) and a socialist thinker.

- The Jallianwala Bagh Massacre (1919) deeply influenced his revolutionary outlook.

Revolutionary Activities

- **Naujawan Bharat Sabha (1926)**: Founded in Lahore to mobilise youth against British colonial rule and promote secularism.
- **Hindustan Republican Association (HRA)**: Joined the revolutionary organisation, which was reorganised as the Hindustan Socialist Republican Association (HSRA) in 1928.
- **Saunders Assassination (1928)**: Bhagat Singh, Rajguru and other revolutionaries participated in the killing of British police officer J. P. Saunders to avenge the death of Lala Lajpat Rai.
- **Central Legislative Assembly Bombing (8 April 1929)**: Bhagat Singh and Batukeshwar Dutt threw non-lethal bombs in the Assembly to protest against the Public Safety Bill and Trade Disputes Bill.

Ideology

- Socialism, Secularism, Revolution, Rationalism, Anti-imperialism

Fact

- Popularised the slogan Inquilab Zindabad, originally coined by Maulana Hasrat Mohani.

Important Works

- Why I Am an Atheist (1930)
- To Young Political Workers (1931)
- Letter to Young Political Workers

Death

- Bhagat Singh, Sukhdev and Rajguru were sentenced to death in the Lahore Conspiracy Case.
- Executed: 23 March 1931, at Lahore Central Jail.
 - Commemorated annually as Shaheed Diwas (Martyrs' Day).

POLITY

1. Right To Equality (Source: The Hindu)

Article 14: Equality before Law and Equal Protection of Laws

- *Applicable to both citizens and foreigners.*
- **Concept of Equality before Law (British Origin)**
 - **Provisions**
 - The concept implies the absence of any special privileges in favour of any person.
 - The equal subjection of all persons to the ordinary law of the land administered by ordinary law courts.
 - No person (whether rich or poor, high or low, official or non-official) is above the law.
- **Concept of Equal Protection of Laws (American Origin)**
 - **Provisions**
 - The equality of treatment under equal circumstances, both in the privileges conferred and liabilities imposed by the laws.
 - The similar application of the same laws to all persons who are similarly situated.
 - The like should be treated alike without any discrimination.
- **Stand of Supreme Court:** The Supreme Court held that where equals and unequal are treated differently, Article 14 does not apply.
- **Exceptions to Equality**
 - The President of India and the Governors of States enjoy the following immunities (Article 361)
 - The President or the Governor is not answerable to any court for the exercise and performance of the powers and duties of office.
 - No criminal proceedings shall be instituted or continued against the President or the Governor in any court during his term of office.
 - No process for the arrest or imprisonment of the President or Governor shall be issued from any court during his term of office.
 - No civil proceedings against the President or the Governor shall be instituted during his term of office in any court in respect of an act done by him in his personal capacity, whether before or after he entered upon his office, until the expiration of two months after notice has been delivered to him.

- Protection from civil or criminal proceedings for publishing a true report of Parliamentary or State Legislature proceedings in newspapers, radio, or TV.
- No MP is liable for any court proceedings for speeches or votes in Parliament or its committees.
- Similar immunity applies to members of State Legislatures for speeches or votes in their Legislatures or committees.
- Laws implementing Article 39(b) or 39(c) are immune from challenges under Article 14.
- Supreme Court interpretation: "When Article 31-C applies, Article 14 does not."
- Foreign sovereigns, ambassadors, and diplomats are immune from criminal and civil proceedings in Indian courts.
- The United Nations and its agencies enjoy diplomatic immunity in India.

Article 15: Prohibition of Discrimination on Certain Grounds

- *Article 15 provides that the State shall not discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth.*
- **Meaning of Words**
 - The word 'discrimination' means 'to make an adverse distinction with regard to' or 'to distinguish unfavourably from others'.
 - The use of the word 'only' connotes that discrimination on other grounds is not prohibited.
- The second provision of Article 15 says that no citizen shall be subjected to any disability, liability, restriction or condition on grounds only of religion, race, caste, sex, or place of birth with regard to
- access to shops, public restaurants, hotels and places of public entertainment;
- the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly by State funds or dedicated to the use of general public.
- This provision prohibits discrimination both by the State and private individuals, while the former provision prohibits discrimination only by the State.

- **Exceptions to Equality**

- The state can make special provisions for women and children, such as seat reservations in local bodies or free education for children.
- Special provisions are allowed for socially and educationally backward classes, Scheduled Castes (SCs), and Scheduled Tribes (STs), including seat reservations and fee concessions in public educational institutions.
- The state can make special provisions for socially and educationally backward classes, SCs, and STs regarding admission to educational institutions, including private institutions (aided or unaided), except minority institutions.
- The State is empowered to provide for economically weaker sections (EWS) by reserving up to 10% of seats in educational institutions, including private ones (aided or unaided), except minority institutions.

Article 16: Equality of Opportunity in Public Employment

- *Article 16 provides for equality of opportunity for all citizens in matters of employment or appointment to any office under the State.*
- No citizen can be discriminated against or be ineligible for any employment or office under the State on grounds of only religion, race, caste, sex, descent, place of birth or residence.
- **Exceptions**
 - Parliament can set residence as a condition for employment in a state, union territory, local authority, or other authority, but this provision is no longer applicable, except in Andhra Pradesh and Telangana.
 - The state can reserve appointments for any backward class underrepresented in state services.
 - Laws may require that certain offices related to religious or denominational institutions be held by individuals of the relevant religion or denomination.
 - The state can reserve up to 10% of appointments for economically weaker sections (EWS) of citizens, in addition to existing reservations. EWS eligibility is based on family income and other economic indicators.

- **Associated Case:** Mandal Case (1992)

Article 17: Abolition of Untouchability

- *Article 17 abolishes 'untouchability' and forbids its practice in any form.*
- **Legal Backing**
 - In 1976, the Untouchability (Offences) Act, 1955 was comprehensively amended and renamed as the Protection of Civil

Rights Act, 1955 to enlarge the scope and make penal provisions more stringent.

- The Act defines civil rights as any right accruing to a person by reason of the abolition of untouchability by Article 17 of the Constitution.
- **Term Untouchability:** The term ‘untouchability’ has not been defined either in the Constitution or in the Act.
- **Stand of the Supreme Court:** The Supreme Court held that the right under Article 17 is available against private individuals, and it is the constitutional obligation of the State to take necessary action to ensure that this right is not violated.

Article 18: Abolition of Titles

- It prohibits the State from conferring any title (except a military or academic distinction) on any body, whether a citizen or a foreigner.
- It prohibits a citizen of India from accepting any title from any foreign state.
- A foreigner holding any office of profit or trust under the State cannot accept any title from any foreign state without the consent of the President.
- No citizen or foreigner holding any office of profit or trust under the State is to accept any present, emolument or office from or under any foreign State without the consent of the President.
- Conditions of Historical Titles - The hereditary titles of nobility like Maharaja, Raj Bahadur, Rai Bahadur, Rai Saheb, Dewan Bahadur, etc., which were conferred by colonial States, are banned by Article 18 as these are against the principle of equal status of all.

2. Forest Rights Act (FRA) of 2006 (Source: The Hindu)

Aims to recognize and vest forest rights and occupation in forest land to forest-dwelling Scheduled Tribes (STs) and other traditional forest dwellers (OTFDs), who have been residing in such forests for generations but whose rights have not been recorded.

- Also called the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act.

Key Features

- The act recognizes the rights of forest-dwelling Scheduled Tribes and other traditional forest dwellers to live in and cultivate forest land for habitation or self-cultivation.
- It provides for the vesting of forest rights and occupation in forest land to eligible individuals and communities.
- The act recognizes various types of rights, including land rights, ownership rights, habitat rights, and community forest rights.

- The Act outlines the process for the recognition and verification of forest rights by the concerned authorities at the gram sabha (village assembly) level.
- It establishes mechanisms for filing appeals and resolving grievances related to the recognition of forest rights.
- While recognizing the rights of forest dwellers, the Act also emphasizes the conservation and protection of forests, wildlife, and biodiversity.

3. Defence Acquisition Council (DAC) (Source: **The Hindu**)

The DAC is the highest decision-making body of the Defence Ministry on procurement.

- **Objective:** To ensure expeditious procurement of the approved requirements of the armed forces.
- **Formation:** It was formed after the Group of Ministers' recommendations on 'Reforming the National Security System', in 2001, post-Kargil War (1999).
- **Composition:**
 - The defence minister is the chairman of DAC.
 - Its members include the Chief of Defence Staff (CDS) and chiefs of the Army, Navy, and Air Force.

4. Article 371 (Source: **The Indian Express**)

These Articles provide special administrative and legislative arrangements for several Indian States to address their unique historical, cultural, and socio-economic needs.

- **Articles 371 to 371J form Part XXI of the Indian Constitution – “Temporary, Transitional and Special Provisions.”**

Key Articles

- **Article 371 (Maharashtra & Gujarat):** Governor to set up development boards for Vidarbha, Marathwada, Saurashtra & Kutch; ensure equitable fund allocation & employment.
- **Article 371A (Nagaland):** Parliament cannot legislate on Naga religion, social practices, customary law, land rights without State Assembly consent.
- **Article 371B (Assam):** President may form a committee in the Assembly with members from tribal areas.
- **Article 371C (Manipur):** Formation of Hill Areas Committee; Governor has special responsibility and reports to the President annually.
- **Articles 371D & 371E (Andhra Pradesh & Telangana):** Ensure equal opportunities in public employment & education; provision for a Central University.

- **Article 371F (Sikkim):** Protects laws, customs, and rights of Sikkimese people; ensures smooth integration into India.
- **Article 371G (Mizoram):** Safeguards Mizo customary law, religion, land rights, and justice systems.
- **Article 371H (Arunachal Pradesh):** Gives the Governor special responsibility for law and order; special legislative powers.
- **Article 371I (Goa):** The Legislative Assembly must have at least 30 members.
- **Article 371J (Karnataka (Hyderabad-Karnataka / Kalyana Karnataka)):** Development board, local reservations in jobs & education, regional development focus.

5. Census Towns (Source: The Hindu)

Census Towns are settlements classified as urban by the Census of India, although they are generally governed as rural areas.

Example

- **Kerala:** Avinissery, Kadamakkudy
- **Tamil Nadu:** Neyveli Township, Chitlapakkam, Pallavaram

Criteria for Declaring Census Towns

- **Population:** At least 5,000.
- **Population Density:** At least 400 persons per sq. km.
- **Occupation:** At least 75% of the male main working population engaged in non-agricultural activities.

Advantages

- **Economic Diversification:** Promotes shift from agriculture to industry and services.
- **Employment:** Generates non-farm job opportunities.
- **Regional Growth:** Acts as a growth centre for surrounding rural areas.
- **Reduced Migration:** Reduces migration pressure on large metropolitan cities.
- **Market Development:** Strengthens rural–urban economic linkages and local markets.
- **Infrastructure:** Encourages development of roads, transport, electricity and communication.
- **Social Development:** Improves access to education, healthcare and other services.

Challenges

- **Governance Gap:** Many Census Towns remain under rural local bodies despite their urban character.
- **Infrastructure Deficit:** Inadequate water supply, sanitation, drainage, roads, and waste management.
- **Unplanned Growth:** Leads to congestion and haphazard land-use patterns.
- **Financial Constraints:** Local bodies often lack adequate revenue and resources.
- **Service Deficit:** Public services may not keep pace with population and economic growth.
- **Environmental Stress:** Growing waste, pollution, and pressure on natural resources.
- **Administrative Transition:** Difficulties in shifting from rural to appropriate urban governance.

6. Allocation of Election Symbols in India and Classification of Political Parties (Source: The Hindu)

Allocation of Election Symbols in India

- **What is an Election Symbol?:** An election symbol is a pictorial representation allotted to a political party or candidate and printed on the ballot paper/EVM to help voters easily identify their choice.
- **Legal Basis:** The allocation of election symbols is governed by the Election Symbols (Reservation and Allotment) Order, 1968, issued by the Election Commission of India (ECI) under the Representation of the People Act, 1951.
- **Process of Allocation**
 - **Recognition/Registration:** A political party is recognised as a National or State Party, or registered as an unrecognised party. Independent candidates can also seek symbols.
 - **Claim/Request:** The party or candidate submits a request to the Election Commission for allotment of a symbol.
 - **Availability Check:** ECI checks the list of available free symbols. Reserved symbols are generally unavailable to others.
 - **Allotment:** A symbol is allotted according to applicable rules, party status, and preference/request.
 - **Publication:** The allotted symbols are officially published by the Election Commission.
 - **Locking:** Once allotted for an election, the symbol is fixed for the concerned party/candidate for that election.

- **Basis of Allocation / Priority**
 - **Recognised National Political Parties:** Have symbols reserved exclusively for them.
 - **Recognised State Political Parties:** Have reserved symbols subject to the provisions of the Symbols Order.
 - **Registered Unrecognised Political Parties (RUPPs):** Contest using available free symbols, subject to ECI rules.
 - **Independent Candidates:** Are allotted symbols from the list of free symbols.
- **Restricted Symbols**
 - National symbols such as the National Flag and State Emblem
 - Religious symbols
 - Symbols likely to promote enmity or offend a class
 - Matters affecting public order or morality
 - Symbols resembling registered trademarks
 - Other symbols restricted by the Election Commission

Classification of Political Parties

- **Conditions for Recognition as a National Party**
 - If it secures six per cent of valid votes polled in any four or more states at a general election to the Lok Sabha or to the legislative assembly; and, in addition, it wins four seats in the Lok Sabha from any state or states.
 - If it wins two per cent of seats in the Lok Sabha at a general election; and these candidates are elected from three states;
 - If it is recognised as a state party in four states.
- **Conditions for Recognition as a State Party**
 - If it secures six per cent of the valid votes polled in the state at a general election to the legislative assembly of the state concerned; and, in addition, it wins 2 seats in the assembly of the state concerned.
 - If it secures six per cent of the valid votes polled in the state at a general election to the Lok Sabha from the state concerned; and, in addition, it wins 1 seat in the Lok Sabha from the state concerned.
 - If it wins three per cent of seats in the legislative assembly at a general election to the legislative assembly of the state concerned or 3 seats in the assembly, whichever is more.
 - If it wins 1 seat in the Lok Sabha for every 25 seats or any fraction thereof allotted to the state at a general election to the Lok Sabha from the state concerned.

- If it secures eight per cent of the total valid votes polled in the state at a General Election to the Lok Sabha from the state or to the legislative assembly of the state.
- **Registered Unrecognised Political Party (RUPP)**
 - **Registered Under:** Section 29A of RPA, 1951.
 - **RUPP Include**
 - Newly registered parties.
 - Parties that did not secure enough votes/seats to be recognized as state or national parties.
 - Parties that have never contested elections since registration.
 - **Status and Benefits**
 - Do not enjoy benefits extended to recognized parties (e.g., reserved symbol, free airtime on state media).
 - Can contest elections but must choose from free symbols each time.
 - **Symbol Allocation**
 - Governed by the Election Symbols (Reservation and Allotment) Order, 1968.
 - Eligible for a common symbol if they contest at least 5% of the total seats in a legislative assembly election of a state.

7. Official Language Status by State (Source: The Hindu)

- *Article 345 (Part XVII) of the Indian Constitution deals with the power of a State to adopt one or more languages used in the State or Hindi for the official purposes of the State.*
 - The legislature of a State may, by law, adopt any one or more of the languages in use in the State, or Hindi, as the official language(s) for all or any of its official purposes.
 - The language chosen by a State does not have to be listed in the Eighth Schedule of the Constitution; it simply needs to be a language in use within that State (or Hindi).
 - Until the State Legislature enacts a law stating otherwise, English continues to be used for all State official purposes for which it was being used before the commencement of the Constitution.
 - Article 345 operates subject to provisions governing inter-State and Union–State communications (Article 346) and the President's power to recognize a language spoken by a substantial section of a State's population (Article 347).
- **Recent Update:** Tulu became the official language of Karnataka.

8. Article 22: Protection Against Arrest and Detention (Source: The Hindu)

- **Article 22 protects persons who are arrested or detained. Detention is of two types, namely, punitive and preventive.**
 - **Punitive Detention:** Punitive detention is to punish a person for an offence committed by him after trial and conviction in a court.
 - **Preventive Detention:** Preventive detention means the detention of a person without trial and conviction by a court. Its purpose is not to punish a person for a past offence but to prevent him from committing an offence shortly.
- **Rights available to the person under preventive detention**
 - Right to be informed of the grounds of arrest.
 - Right to consult and be defended by a legal practitioner.
 - Right to be produced before a magistrate within 24 hours, including the journey time.
 - Right to be released after 24 hours unless the magistrate authorises further detention.
 - Rights Not Available Cases - Arrest under the orders of a court, civil arrest, arrest on failure to pay the income tax, and deportation of an alien.
- **Protection to persons who are arrested or detained under a preventive detention law. This protection is available to both citizens as well as aliens.**
 - The detention of a person cannot exceed three months unless the advisory board reports sufficient cause for extended detention. The board is to consist of judges of a high court.
 - The grounds of detention should be communicated to the detent. However, the facts considered to be against the public interest need not be disclosed.
 - The detenu should be allowed to make representation against the detention order.
- **Article 22 also authorises the Parliament to prescribe**
 - The circumstances and the classes of cases in which a person can be detained for more than three months under a preventive detention law without obtaining the opinion of an advisory board.
 - The maximum period for which a person can be detained in any class of cases under a preventive detention law.
 - The procedure to be followed by an advisory board in an inquiry.

- **Amendments:** The 44th Amendment Act of 1978 has reduced the period of detention without obtaining the opinion of an advisory board from three to two months.

9. Rajya Sabha (Source: The Hindu)

Composition of Rajya Sabha

- *The maximum strength of the Rajya Sabha is fixed at 250, out of which 238 are to be the representatives of the states and Union Territories, and 12 are nominated by the President.*
 - The President nominates 12 members to the Rajya Sabha from people who have special knowledge or practical experience in art, literature, science and social service.
- *The Fourth Schedule of the Constitution deals with the allocation of seats in the Rajya Sabha to the states and union territories.*

Fact To Know

- **Chairperson:** The Vice President of India is ex officio chairperson of the Rajya Sabha
 - Dr. S. Radhakrishnan presided over the inaugural session (1952) as India's first Vice-President and ex-officio Chairman of the House.

Duration of Rajya Sabha

- It is a continuing chamber even though it has a 6-year term
 - Every 2 years. $\frac{1}{3}$ members vacate their seats
 - In the beginning of the third year, elections and presidential nomination are carried out.
 - Members who vacate earlier can be re-elected.

Election To Rajya Sabha

- Members of the Rajya Sabha are elected through an indirect election system using proportional representation and a single transferable vote.
 - **Electoral College Voters:** Elected members of State Legislative Assemblies (MLAs) and electoral colleges for applicable Union Territories.
 - **Exclusions:** Nominated members and non-elected legislative members do not vote

10. Qualifications Required for the Appointment of Supreme Court Judges and High Court Judges (Source: The Hindu)

Qualifications Required for the Appointment of Supreme Court Judges

- A person to be appointed as a judge of the Supreme Court should have the following qualifications:
 - He should be a citizen of India.
 - He should have been a judge of a High Court (or High Courts in succession) for five years; or
 - He should have been an advocate of a High Court (or High Courts in succession) for ten years; or
 - He should be a distinguished jurist in the opinion of the President.
- The Constitution has not prescribed a minimum age for appointment as a judge of the Supreme Court.

Qualifications Required for the Appointment of High Court Judges

- Under Article 217(2) of the Constitution of India, a person is qualified to be appointed as a Judge of a High Court if:
 - Must be a citizen of India.
 - Must have held a judicial office in the territory of India for at least 10 years;
 - Must have been an advocate of a High Court, or of two or more High Courts in succession, for at least 10 years.

11. Election Commission of India (Source: The Indian Express)

- *It is a constitutionally permanent independent body.*
- *According to Article 324, the Election Commission shall have the authority to supervise, direct, and regulate elections for the Indian Parliament, state legislatures, the President of India, and the Vice-President of India.*

Selection Process of the Election Commission of India as per the Chief Election Commissioner and Other Election Commissioners Act, 2023:

- **Search Committee**
 - **Composition:** Led by the Union Minister of Law and Justice, alongside two other members not below the rank of Secretary to the Government of India.
 - **Eligibility Standard:** Candidates must be serving or former officers holding a rank equivalent to Secretary to the Government of India, known for integrity, and possessing experience in election management.

- **Action:** The Search Committee prepares a panel of five candidates to submit to the Selection Committee.
- **Selection Committee**
 - **Composition:**
 - Prime Minister (Chairperson)
 - Leader of the Opposition (or the leader of the single largest opposition party in the Lok Sabha)
 - A Union Cabinet Minister nominated by the Prime Minister
 - The Selection Committee reviews the panel submitted by the Search Committee, selects the final candidate(s), and formally recommends them to the President.
- The President of India officially appoints the CEC and ECs by warrant under their hand and seal.

Removal of Election Commission

- *Grounds for Removal of CEC: The CEC can be removed only on two grounds under Article 124(4) (applicable via Article 324(5)):*
 - **Proved Misbehaviour:** Includes corrupt practices, abuse of office, or actions incompatible with the office of CEC; courts have interpreted this to cover failure to discharge official duties.
 - **Incapacity:** Refers to situations where the officer is unable to perform their duties.
- **Procedure for Removal of CEC**
 - Members of Parliament must bring a notice of motion explicitly alleging misbehaviour or incapacity. Minimum signatures required: Lok Sabha (at least 100 MPs) and Rajya Sabha (at least 50 MPs)
 - The Speaker/Chairman may consult people and materials to decide whether to admit or refuse the motion.
 - If admitted, a committee is formed to investigate evidence of misbehaviour or incapacity.
 - The motion must be passed by a special majority in both Houses
 - Once both Houses pass the motion, the President orders the removal of the CEC.

12. Anti-Defection Law (Source: The Hindu)

- *Introduced in India in 1985 under the 52nd Amendment to the Constitution of India*
 - **Mentioned in the Tenth Schedule to the Constitution**
- **What is it?:** It lays down the process by which legislators may be disqualified on grounds of defection.

- **Aim:** The main aim of this schedule was to prevent political defections and to strengthen democracy by bringing stability in politics and making members of parliament more responsible and loyal to their parties.
- **Deciding Authority:** Presiding officer of the house.
- **Grounds of Disqualification**
 - He voluntarily gives up his membership in a political party.
 - He disobeys the directions of his political party or votes or does not vote in the legislature contrary to the directions of his political party.
 - After the election, he joined another political party.
 - If a nominated member joins any political party within 6 months from the day he becomes a member of the legislature.
- **Exemption**
 - Disqualification of a member is not applied in case of a merger, provided that this merger with or into another party shall be done with the consent of at least two-thirds of its legislators.
 - It exempts the Speaker, Chairman, and Deputy Chairman of various legislative houses from disqualification on the grounds of defection.

INTERNATIONAL RELATIONS

1. Pacific Island Forum (Source: The Hindu)

Pacific Islands Forum (PIF) is the premier intergovernmental organization for political, economic, and policy cooperation in the Pacific region and was formed in 1971.

- **Headquarters:** Suva, Fiji
- **Members**
 - **Full Members (18):** Australia, Cook Islands, Federated States of Micronesia (FSM), Fiji, French Polynesia, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.
 - **Associate Members:** American Samoa, Guam, Tokelau, and Wallis and Futuna.
 - **Dialogue Partners:** Major external powers that engage annually with PIF leaders, including India, the United States, China, Japan, the European Union, and the United Kingdom.
- **Focus Areas**
 - Climate Change & Environmental Resilience
 - Regional Security & Governance
 - Economic Integration & Trade
 - Geopolitical Neutrality & Unity

2. International Atomic Energy Agency (Source: The Hindu)

The International Atomic Energy Agency (IAEA) is an autonomous intergovernmental organization established in 1957 under the United Nations system.

- *It aims to promote the safe, secure, and peaceful use of nuclear energy worldwide, while preventing its military use, including nuclear weapons proliferation.*

Objectives

- To assist its member states in applying nuclear science and technology for peace, development, and health;
- To develop and enforce nuclear safety and security standards, protecting people and the environment from ionising radiation;

- To verify through its inspection system that nuclear materials are used only for peaceful purposes, especially under treaties such as the Nuclear Non-Proliferation Treaty (NPT).

Facts To Know

- **Formation:** Formed on the principle of Atoms for Peace.
- **Headquarters:** Vienna, Austria.
- **Award:** Nobel Peace Prize in 2005.
- It reports to both the UNGA and the UNSC.
- The IAEA has 178 member states, with India being one of the founding members.

3. United Nations Security Council (UNSC) (Source: The Hindu)

The Security Council was established by the UN Charter in 1945. It is one of the six principal organs of the United Nations.

- Its primary responsibility is to work to maintain international peace and security.
- The council is headquartered in New York.

Membership

- The council has 15 members: the five permanent members and ten non-permanent members elected for two-year terms.
- The five permanent members are the United States, the Russian Federation, France, China and the United Kingdom.
- India is a non - permanent member of the council.
- Each year, the General Assembly elects five non-permanent members (out of ten in total) for a two-year term. The ten non-permanent seats are distributed on a regional basis.

4. BRICS: New Delhi Declaration 2026 (Source: The Hindu)

Trade & Tariffs

- BRICS opposed unilateral coercive measures and unjustified protectionist measures inconsistent with WTO rules.
- It also opposed unilateral, punitive, or discriminatory carbon border adjustment mechanisms.
- However, no retaliatory BRICS trade mechanism was announced.

Terrorism

- The declaration condemned terrorism in all forms and manifestations and specifically condemned the April 2025 Pahalgam terrorist attack in the strongest terms.

- It highlighted cross-border movement of terrorists, terror financing and safe havens, while calling for zero tolerance and rejecting double standards.
- It also recognised cooperation through the BRICS Counter-Terrorism Working Group (CTWG).

West Asia

- BRICS expressed deep concern over escalating tensions and supported resolving disputes through dialogue and diplomacy.
- On Palestine, it supported humanitarian access, opposed forced displacement, backed UNRWA, and reiterated support for a two-state solution based on the 1967 borders, with East Jerusalem as the Palestinian capital.

Local Currencies

- The declaration did not propose a common BRICS currency.
- Instead, it supported greater use of members' local currencies for trade settlements and investment to make cross-border payments faster, cheaper, and safer.
- The BRICS Payment Task Force is studying interoperability among payment and messaging systems.

New Development Bank

- BRICS encouraged the NDB to expand local-currency financing, diversify funding sources and mobilise resources for development and infrastructure.
- Work will also continue on a proposed New Investment Platform.

BRICS Risk Lab

- Members expressed interest in further discussions on India's proposal to establish a BRICS Risk Lab at GIFT City International Financial Services Centre, Gujarat.

Artificial Intelligence

- BRICS called for wider access to AI resources while stressing safe, secure, inclusive, reliable, energy-efficient and trustworthy AI, particularly considering the requirements of the Global South.

Digital Public Infrastructure

- The declaration noted India's proposal for a BRICS repository for Digital Public Infrastructure (DPI) and pilot projects using DPI solutions across member countries.

5. Act East Policy (Source: The Indian Express)

It is a diplomatic initiative to promote economic, strategic, and cultural relations with the vast Asia-Pacific region at different levels.

- The ‘Act East Policy’ announced in 2014 is the upgrade of the “Look East Policy”.

Objectives

- It aims to promote economic cooperation, cultural ties, and develop a strategic relationship with countries in the Indo-Pacific region with a proactive and pragmatic approach, thereby improving the economic development of the North Eastern Region (NER), which is a gateway to the Southeast Asia Region.

Key Pillar

- It involves intensive and continuous engagement with Southeast Asian countries in the field of connectivity, trade, culture, defence and people-to-people contact at bilateral, regional and multilateral levels.

6. MERCOSUR Grouping (Source: PIB)

- **Established**: 1991 through the Treaty of Asunción (entered into force in 1995).
- **Headquarters**: Montevideo, Uruguay.
- **Nature**: A regional trade bloc and customs union in South America aimed at promoting free trade and regional integration.
- **Objectives**
 - Promote free trade and fluid movement of goods, people, and currency among member states.
 - Establish a common external tariff (CET) and adopt a common trade policy toward non-members.
 - Coordinate macroeconomic and sectoral policies (e.g., agriculture, industry, transportation).
 - Strengthen regional competitiveness and collective bargaining power in global trade negotiations.
- **Members**
 - **Founding Members**: Argentina, Brazil, Paraguay, Uruguay

- **Venezuela:** Admitted in 2012 but suspended in 2016 for violating democratic norms.
- **Associate Members:** Chile, Peru, Colombia, Ecuador, Guyana, and Suriname.
- **Observer States:** Mexico, New Zealand.

7. European Union (EU) (Source: **The Hindu**)

- The European Union was established in 1993 and comprises 27 European nations.
- Following the Maastricht Treaty, also known as the Treaty of the European Union (TEU), the EU came into force.
 - 28 nations ratified the treaty, and it entered into force in 1992. Recently, Britain exited the treaty.
- *It is an economic and political bloc of 27 countries; 19 countries use the EURO as their official currency.*
- The EU has developed an internal single market through a standardized system of laws that apply in all member states in matters where members have agreed to act as one.

8. Geneva Conventions (Source: **The Indian Express**)

The Geneva Conventions are the core treaties of International Humanitarian Law (IHL). Adopted in 1949 and came into effect in 1950, they seek to protect people who are not, or are no longer, participating in hostilities during armed conflicts.

Four Geneva Conventions

- **First Convention:** Protects wounded and sick members of armed forces on land, along with medical personnel and facilities.
- **Second Convention:** Protects wounded, sick, and shipwrecked members of armed forces at sea.
- **Third Convention:** Deals with the treatment of Prisoners of War (POWs). It requires humane treatment and prohibits torture and degrading treatment.
- **Fourth Convention:** Protects civilians during war, particularly civilians under enemy control and in occupied territories.

Additional Protocols

- **Additional Protocol I (1977):** Strengthens protection for victims of international armed conflicts.
- **Additional Protocol II (1977):** Provides protection in certain non-international armed conflicts, such as conflicts between state forces and organized armed groups.
- **Additional Protocol III (2005):** Introduced the Red Crystal as an additional protective emblem alongside the Red Cross and Red Crescent.

India's Stand

- India has ratified all four 1949 Geneva Conventions.
- India has not ratified the Additional Protocol.

Location: Geneva, Switzerland

9. Recent Military Exercises in News (Source: The Hindu)

Exercise	Features
Exercise Veer Guardian 2026	● Countries: Bilateral air combat exercise between India and Japan ● Host: Jodhpur, Rajasthan
Exercise Yudh Abhyas 2026	● Countries: Bilateral army exercise between India and the USA ● Host: Auli, Uttarakhand
Exercise SLINEX-26	● Countries: Bilateral naval exercise between India and Sri Lanka ● Host: Visakhapatnam

10. Partners for Multilateralism (P4M) Initiative (Source: The Hindu)

Partners for Multilateralism (P4M) is an international initiative launched to strengthen, safeguard, and reform the United Nations-based multilateral system.

- **Launch:** On the sidelines of the 81st UN General Assembly (UNGA) High-Level Week in New York.

Objectives

- Defend UN-based multilateralism and the principles of the UN Charter.

- Promote respect for international law, sovereign equality and territorial integrity.
- Support peaceful settlement of disputes and oppose the threat or use of force.
- Reform multilateral institutions to make them more effective, representative, inclusive and fit for purpose.
- Promote peace, stability, sustainable development and shared prosperity.
- Strengthen international cooperation on emerging global challenges

Members

- **Founding Initiators:** Leaders of the European Union (EU), Brazil, Canada, and Kenya.
- **Initial Co-Sponsors:** India, Australia, Barbados, Brazil, Canada, Kenya, and the European Union.

11. Global South (Source: The Indian Express)

The Global South refers to developing, less developed, or underdeveloped countries.

- These are primarily located in Africa, Asia, and Latin America

Common Features

- Many countries experienced colonialism and continue to face developmental challenges linked to historical inequalities.
- Generally characterized by lower or middle income levels, though the group also includes major emerging economies.
- Contains a large share of the world's population and a significant proportion of its young population.
- Poverty, food and energy security, debt, technology access, climate finance and infrastructure are major issues.
- Many Global South countries seek greater representation in institutions such as the UN Security Council, IMF and World Bank.
- There is no universally accepted list of Global South countries.

India's Stand

- India has sought to position itself as a prominent voice for developing countries, including through the Voice of Global South Summit.
- During its 2023 G20 Presidency, India also supported the African Union's admission as a permanent G20 member.
- India's engagement focuses particularly on South-South cooperation, development partnerships, digital public infrastructure, climate justice, food and energy security, capacity building and reform of multilateral institutions.

12. Enemy State under the UN Charter (Source: The Indian Express)

An “enemy state” means any state that, during the Second World War (1939–45), was an enemy of any signatory of the UN Charter.

- The provisions were directed primarily at the former Axis powers, notably Germany, Japan, and Italy, along with other states that fought against the Allied powers.

What are the provisions dealing in UN charter?

- Permitted certain enforcement measures through regional arrangements against an enemy state in the post-WWII context, subject to the conditions stated in the Charter. Article 53(2) provides the definition itself. United Nations Legal Affairs
- Concerns the International Trusteeship System and included territories detached from enemy states as a result of WWII.
- Provides that the Charter would not invalidate or prevent actions concerning former enemy states that were taken or authorised as a result of WWII by governments responsible for such actions.

Present Status

- The clauses still appear in the text of the UN Charter, but they are regarded as obsolete.

13. Exercise Tarang Shakti 2026 (Source: The Hindu)

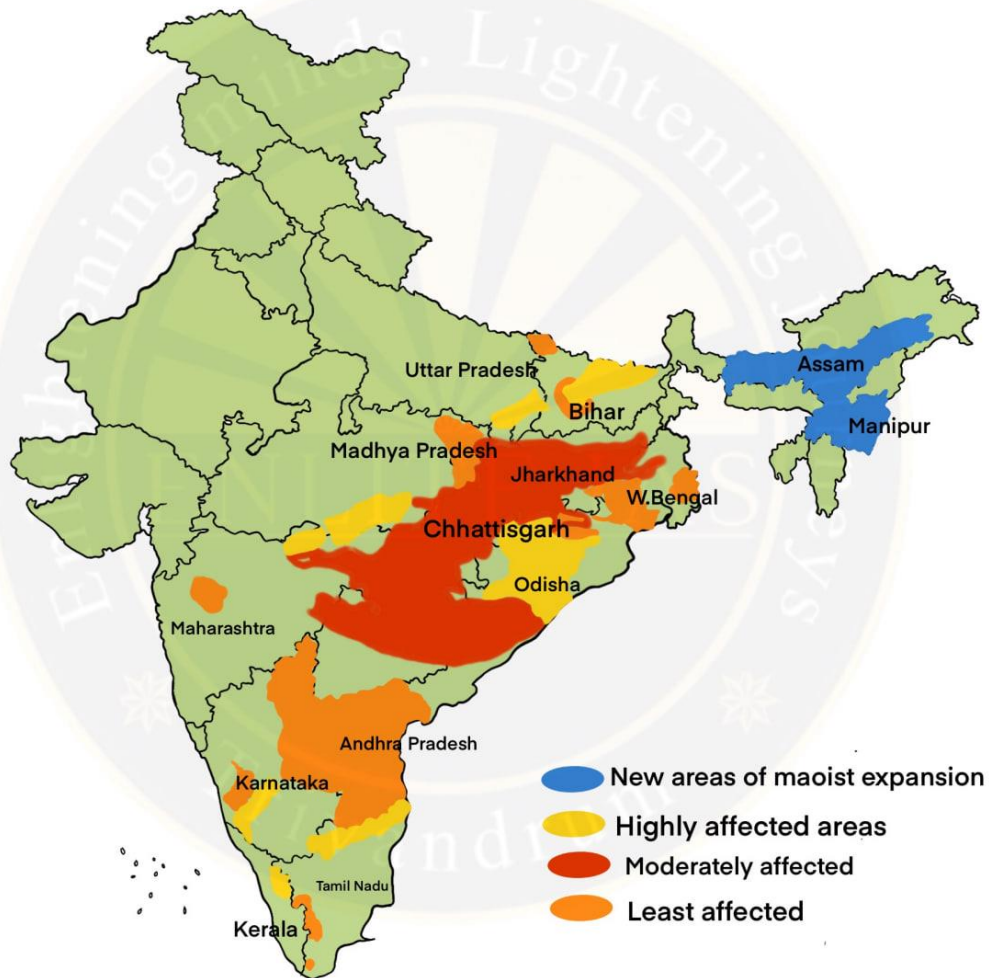
Exercise Tarang Shakti 2026 is the second edition of the Indian Air Force’s (IAF) largest multinational air exercise at Air Force Station, Jodhpur (Rajasthan) and adjoining air bases.

- **Participating Countries:** India, United States of America, France, Germany, Australia, Bangladesh, Sri Lanka and United Arab Emirates (UAE).
- **Objectives**
 - Enhance interoperability among diverse air forces.
 - Conduct joint planning & execution of complex air operations in a realistic battlespace.
 - Share tactics, techniques, procedures (TTPs) and best practices.
 - Integrate 5th-gen (F-35) with 4th/4.5-gen fighters and Indian platforms.
 - Showcase India’s aerospace capabilities and role as a net security provider.

INTERNAL SECURITY

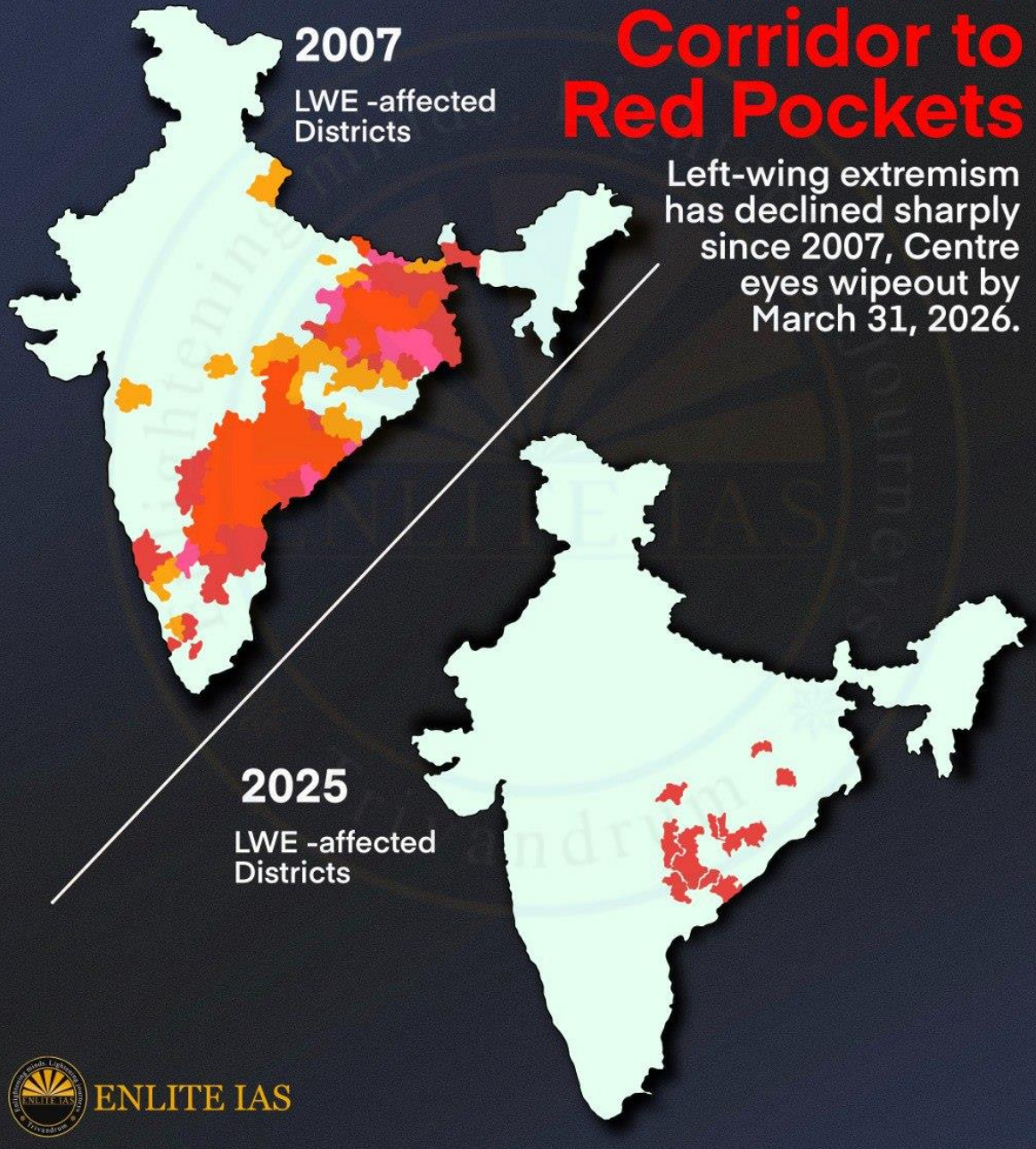
1. Red Corridor (Source: The Indian Express)

Red Corridor



From Red Corridor to Red Pockets

Left-wing extremism has declined sharply since 2007, Centre eyes wipeout by March 31, 2026.



ECONOMY

1. Foreign Exchange Reserves (Forex Reserves) (Source: The Hindu)

Forex reserves are assets held in reserve by a central bank (RBI) in foreign currencies like the dollar, which can include bonds, treasury bills, and other government securities.

Need To Know

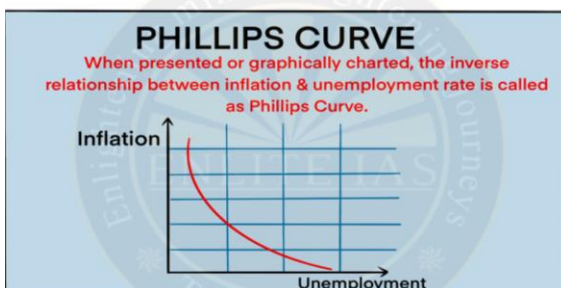
- They are an important component of the **Balance of Payment (BoP)**
- **Components of India's Forex Reserves**
 - Foreign Currency Assets (FCA) (largest contributor)
 - Gold reserves (second largest contributor)
 - **Special Drawing Rights:** It is not a currency, but its value is determined by a basket of 5 major currencies: the US dollar, euro, Chinese renminbi, Japanese yen, and British pound sterling.
 - **Reserve Tranche Position (RTP) with the IMF:** RTP is a country's quota-based access to IMF resources, available for borrowing without strict conditions, used for BoPs or financial stability.

How much forex reserve does India have?

- **Foreign Currency Assets:** about US\$564.68 billion
- **Gold Reserves:** about US\$104.74 billion
- **Special Drawing Rights (SDRs):** approximately US\$18.65 billion
- **Reserve position with the IMF:** approximately US\$4.80 billion

2. Phillips Curve (Source: The Hindu)

The Phillips curve states that inflation and unemployment have an inverse relationship; higher inflation is associated with lower unemployment and vice versa.



3. Variable Rate Repo (VRR) (Source: The Hindu)

VRR is a type of liquidity adjustment tool used by the RBI, where banks can borrow funds for the short term at market-determined interest rates through an auction mechanism.

How does it work?

- RBI conducts VRR auctions where banks bid for funds, specifying amounts and interest rates they are willing to pay. The RBI accepts the lowest (most favourable) bids to determine the cutoff rate, which becomes the variable repo rate for that auction, typically for tenures of 1-14 days.

Features

- Market-driven rates, unlike the fixed repo rate set by RBI's Monetary Policy Committee.
- Provides flexibility during liquidity shortages when banks avoid fixed-rate borrowing.
- Ensures rates stay above the reverse repo rate floor for monetary stability.

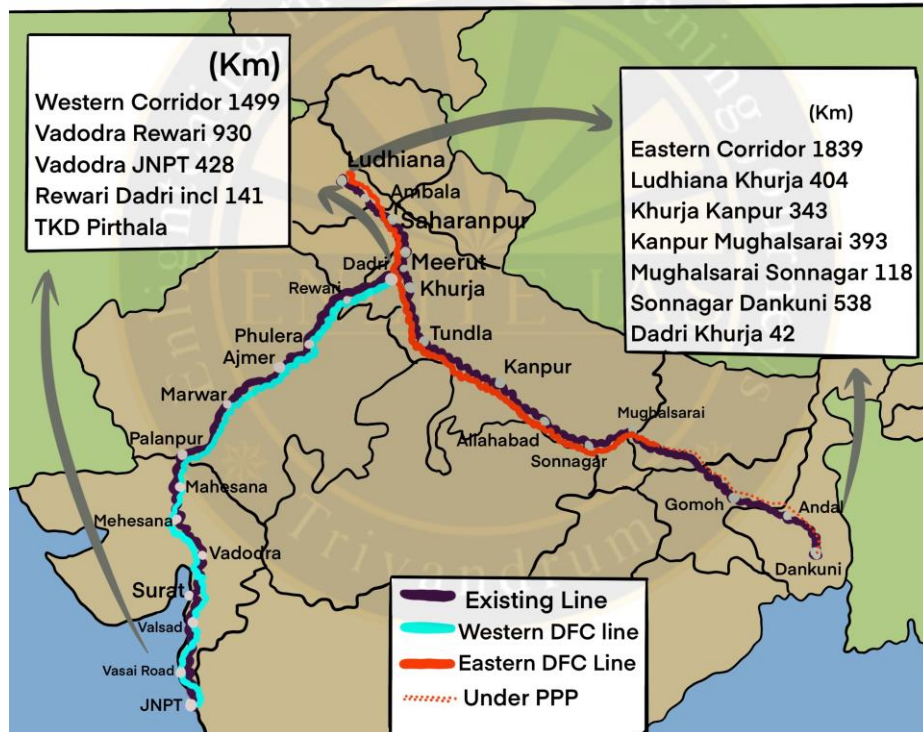
4. Dedicated Freight Corridor (DFC) (Source: The Hindu)

It is a high-speed and high-capacity railway corridor that is exclusively meant for the transportation of freight

Two Points

- **Eastern Dedicated Freight Corridor (EDFC)**
 - It starts at Sahnewal (Ludhiana) in Punjab and ends at Dankuni in West Bengal.
 - The EDFC route covers Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand, and West Bengal.
 - The World Bank is funding a majority of the EDFC.
 - Major industries part of EDFC are World Bank-funded.
- **Western Dedicated Freight Corridor (WDFC)**
 - WDFC runs from Dadri in Uttar Pradesh to Jawaharlal Nehru Port Trust in Mumbai, touching all major ports along the way.
 - The WDFC covers Haryana, Rajasthan, Gujarat, Maharashtra, and Uttar Pradesh.
 - It is being funded by the Japan International Cooperation Agency.

EASTERN AND WESTERN DEDICATED FREIGHT CORRIDOR



5. Non-Banking Finance Company (NBFC) (Source: The Hindu)

An NBFC is a company registered under the Companies Act, 1956, engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by the Government or local authority, or other marketable securities.

Regulation

- Regulated by the RBI within the framework of the RBI Act, 1934.
- The repayment of deposits by NBFCs is not guaranteed by the Reserve Bank of India.

Activities Allowed

- NBFCs are allowed to accept/renew public deposits for a minimum period of 12 months and a maximum period of 60 months.

Activities not allowed

- NBFCs cannot accept demand deposits.
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on themselves.
- The deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs.

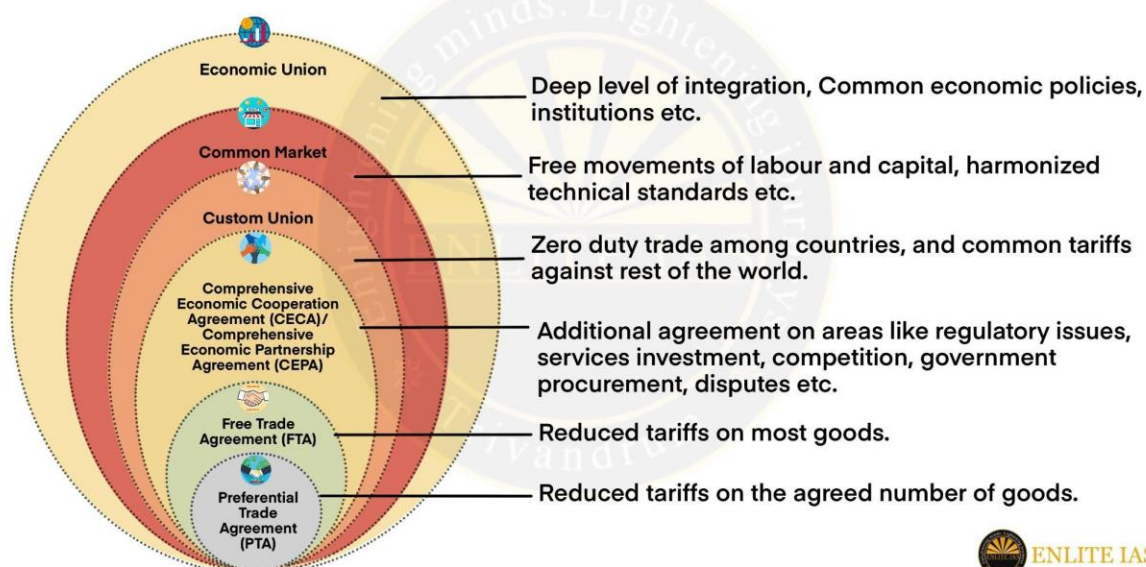
6. Free Trade Agreement (FTA) (Source: The Hindu)

FTA refers to eliminating tariffs and quotas on most goods and services among members, but each retains its own external tariffs. Examples include NAFTA (now USMCA) and EFTA.

Levels of Economic Integration

- **Preferential Trade Agreement (PTA):** Countries offer reduced tariffs on select goods to each other while maintaining individual trade policies with outsiders. This is the shallowest form.
- **Free Trade Area (FTA)**
- **Customs Union:** Adds a common external tariff (CET) on non-members to an FTA, harmonizing trade policy toward outsiders. The EU began as one.
- **Common Market:** Extends customs union by allowing free movement of factors like labor and capital across borders.
- **Economic and Monetary Union:** Harmonizes fiscal and monetary policies, and often adopts a single currency, with supranational institutions. The Eurozone exemplifies this.
- **Complete (Political) Union:** Full unification of economic, fiscal, and political policies under a central authority, with synchronized sovereignty.

Hierarchy of Trade Agreements



ENVIRONMENT

1. United Nations Environment Programme (UNEP) (Source: **The Indian Express**)

Establishment:

- UNEP was established on 5th June 1972 by the United Nations General Assembly during the United Nations Conference on the Human Environment in Stockholm, Sweden.

Mandate:

- UNEP's primary goal is to promote international cooperation on environmental issues, address environmental challenges, and encourage sustainable development globally.

Headquarters:

- Nairobi, Kenya.

Funding:

- UNEP relies on voluntary contributions from member states, organisations, and donors to finance its programs and activities.

Reports

- Emissions Gap Report (annual)
- Adaptation Gap Report
- Production Gap Report
- Global Environment Outlook (GEO)
- Frontiers Report
- Environment Rule of Law Report

Initiatives

- Global Methane Assessment (with CCAC).
- Clean Seas Campaign against marine plastic pollution.
- #BeatPollution / #BeatPlasticPollution initiatives.
- Faith for Earth Initiative.
- UNEP organises World Environment Day (WED) on 5th June every year.

2. Green Climate Fund (GCF) (Source: Down To Earth)

The Green Climate Fund (GCF) is the world's largest dedicated climate finance mechanism, created under the UNFCCC to help developing countries mitigate and adapt to climate change.

Formation

- **Established:** 2010 at COP 16 (Cancun) under the United Nations Framework Convention on Climate Change (UNFCCC).
- **Operationalised:** At COP 17 (Durban, 2011) as an operating entity of the UNFCCC's financial mechanism.
- **Headquarters:** Songdo, Incheon, Republic of Korea.
- **Governance:** Managed by a Board with equal representation from developed and developing countries.

Objectives

- Channel climate finance from developed to developing countries.
- Support a paradigm shift towards low-emission and climate-resilient development pathways.
- Help developing nations implement their Nationally Determined Contributions (NDCs) under the Paris Agreement.
- Prioritise the needs of particularly vulnerable countries (LDCs, SIDS, African states).

3. UN Loss and Damage Fund (Source: Down To Earth)

It is a climate finance mechanism under the UNFCCC to help vulnerable developing countries cope with unavoidable and irreversible climate impacts that cannot be addressed through mitigation or adaptation.

Development

- **2013:** Warsaw International Mechanism (WIM) on Loss and Damage established at COP19 to address loss and damage associated with climate change.
- **COP27 (2022, Sharm El-Sheikh):** Parties agreed to establish a dedicated Loss and Damage Fund.
- **COP28 (2023, Dubai):** Fund's governance, structure and initial capitalisation were finalised; the Fund became operational.

Note

- World Bank serves as the interim trustee/host for an initial period.
- Voluntary contributions, not mandatory assessed shares.

Loss and Damage

- **Loss**
 - Economic losses: infrastructure, homes, crops, livelihoods, reconstruction costs.
 - Non-economic losses: lives, health, biodiversity, ecosystems, cultural heritage, indigenous knowledge, territory.
- **Covers**
 - Extreme events: floods, cyclones, heatwaves, GLOFs.
 - Slow-onset events: sea-level rise, desertification, salinisation, glacier retreat.

4. Carbon Credit Trading Scheme and Carbon Border Adjustment Mechanism (CBAM) (Source: The Hindu)

Carbon Credit Trading Scheme

- *The **Carbon Credit Trading Scheme (CCTS)** is a market-based mechanism to reduce greenhouse gas (GHG) emissions by creating a national carbon market.*
- It enables industries to trade carbon credits, thereby encouraging cost-effective emission reductions.
- CCTS is notified under the **Energy Conservation (Amendment) Act, 2022**.
- Jointly Implemented By:
 - Bureau of Energy Efficiency (**BEE**) – Ministry of Power
 - Ministry of Environment, Forest and Climate Change (**MoEFCC**)

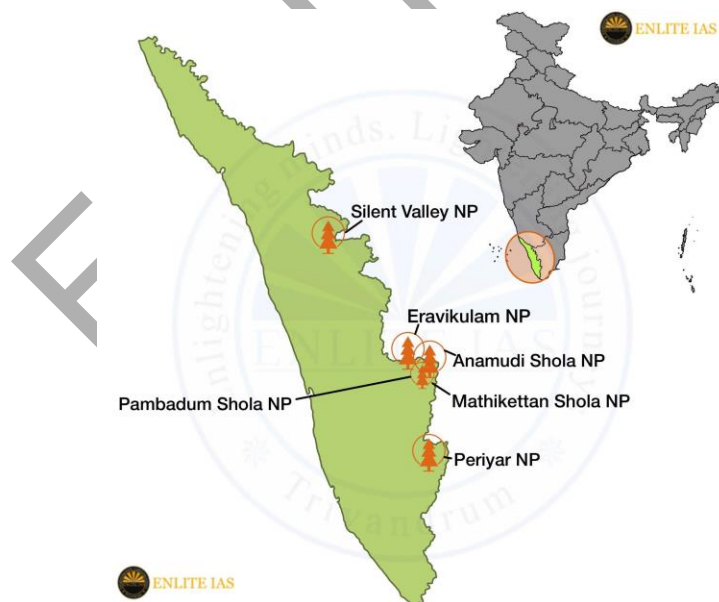
Carbon Border Adjustment Mechanism (CBAM)

- *Carbon Border Adjustment Mechanism (CBAM) is a key component of the European Union's (EU) European Green Deal, aimed at preventing "carbon leakage" and ensuring fair competition between EU industries and foreign producers subject to different climate regulations.*
- **Sectors Covered under CBAM**
 - Covers high-emission sectors like cement, iron and steel, aluminium, fertilisers, electricity, and hydrogen.
- **Concerns for India**
 - **Impact on Exports:** Carbon-intensive Indian exports may become less competitive in the European market.

- **Small and Medium Enterprises:** Smaller firms may face difficulty in measuring, verifying, and reporting product-level emissions.
- **Administrative Burden:** Indian exporters need reliable systems for carbon accounting, emissions verification, and documentation.
- **Developmental Concerns:** Developing countries argue that they should not face the same obligations as historically high-emitting developed economies.
- **Question of Carbon Sovereignty:** India may lose revenue if carbon-related charges are collected by the EU rather than through an Indian carbon-pricing system.
- **Risk of Protectionism:** India argues that environmental objectives could be used as a justification for protecting European industries.

5. Mathikettan Shola National Park (Source: **The Hindu**)

- **Location:** Idukki district, Kerala (Part of the Western Ghats).
- **Vegetation:** Montane evergreen (shola) forests
- **Fauna:** Lion-tailed macaque, Nilgiri tahr, gaur, sambar, and elephants
- **Note:** One of the smallest national parks in Kerala.
- **Conservation:** Lies within the UNESCO World Heritage-listed Western Ghats.



6. Great Indian Bustard (Source: The Indian Express)

Rajasthan's state bird, it is one of the heaviest flying birds in the world.

Need To Know

- **Ecological Habitat:** Grasslands
- **Threats:** Electrocution with power transmission lines, hunting, and Habitat loss
- **Protection Status:**
 - **IUCN Status:** Critically Endangered
 - **CITES:** Appendix 1
 - **Convention on Migratory Species (CMS):** Appendix I
 - **Wildlife (Protection) Act, 1972:** Schedule 1

7. Paris Agreement (Source: The Hindu)

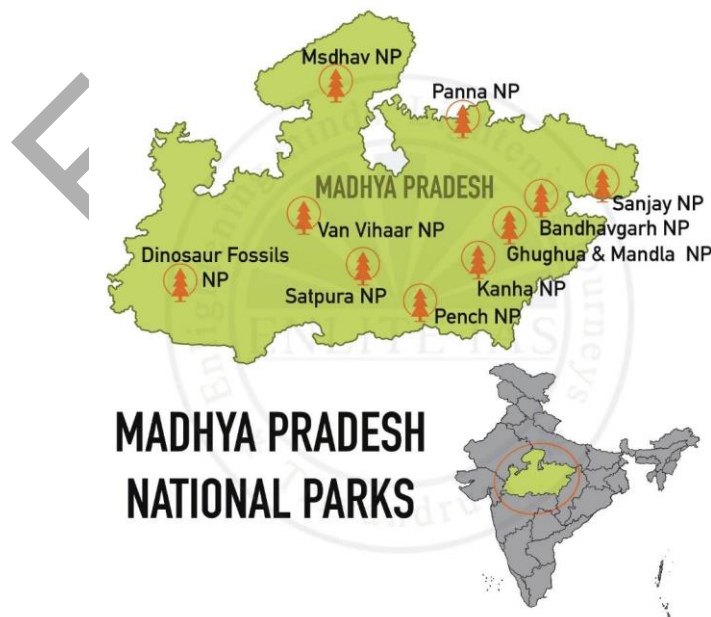
- **Adoption:**
 - Signed in December 2015 during COP21 in Paris by 196 parties.
 - **Aims:** To combat climate change and transition to a low-carbon future.
- **Goals:**
 - **Temperature Target:** Limit global warming to well below 2°C; aim for 1.5°C above pre-industrial levels.
- **Key Focus Areas :**
 - **Adaptation:** Build resilience to climate impacts.
 - **Mitigation:** Reduce greenhouse gas (GHG) emissions.
 - **Finance:** Mobilize resources for developing nations.
- **Features:**
 - **Nationally Determined Contributions (NDCs):** Countries set and update their emission reduction targets every five years.
 - **Global Stocktake:** Reviews collective progress every five years.
 - **Transparency Framework:** Ensures accurate reporting of emissions and actions.
 - **Climate Finance:** Developed nations pledged \$100 billion annually to support developing countries until 2025.

8. Agasthyamalai Biosphere Reserve (Source: The Hindu)

- **Location:** Southern Western Ghats (Kerala and Tamil Nadu)
- **Peak:** Agasthyarkoodam
- **Fact:** Part of the UNESCO World Network of Biosphere Reserves
- **Ecological Significance:** Western Ghats biodiversity hotspot
- **Vegetation:** Tropical evergreen, semi-evergreen, moist deciduous and montane forests.
- **Key Fauna:** Nilgiri tahr, lion-tailed macaque and Nilgiri langur.

9. Kuno National Park (Source: The Hindu)

- **Location**
 - It is a national park in Madhya Pradesh.
 - It is nestled near the Vindhyan Hills.
- **Major Rivers:** Kuno River, a tributary of the Chambal River.
- **Vegetation:** The region has tropical dry deciduous forests, savannah grasslands, and riverine forests.
- **Fact:** It was selected under the 'Action Plan for Introduction of Cheetah in India'.
- **Major Fauna:** Sloth bear, leopard, tiger.
- **Major Tribe:** Saharia tribe.



10. Forever Chemicals (Source: The Hindu)

Forever chemicals, also known as Per- and Polyfluoroalkyl Substances (PFAS), are a large group of man-made chemicals known for their persistence in the environment and potential health risks.

Sources

- PFAS are used in a wide range of consumer products due to their beneficial properties. Some common examples include:
 - Non-stick cookware
 - Waterproof clothing and textiles
 - Food packaging (pizza boxes, popcorn bags)
 - Carpets and furniture
 - Cosmetics (mascara, foundation)
 - Firefighting foams

Harmful Effects

- They cause a variety of health risks that are attributed to PFA exposure, including decreased fertility, developmental effects in children, interference with body hormones, increased cholesterol levels, and increased risk of some cancers.

11. United Nations Framework Convention on Climate Change (UNFCCC) (Source: The Hindu)

It is an international treaty formed at the Rio Earth Summit (1992) to coordinate the global response to climate change.

- **Headquarters:** Bonn, Germany
- **Objectives**
 - The primary role of UNFCCC is to provide a framework for negotiating specific international treaties, known as “protocols.”
 - UNFCCC itself sets no binding limits but aims to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level preventing dangerous consequences.
- **Funding:** Under the Green Climate Fund (GEF)
- **Major COPs and Outcomes**
 - **COP 3 (1997):** Kyoto Protocol (First treaty with binding emission reduction targets for developed countries)
 - **COP 7 (2007): Marrakech Accords** (Detailed rules for Kyoto Protocol; established **Adaptation Fund** for developing countries)

- **COP 11 (2005):** Montreal Action Plan (Extended Kyoto Protocol beyond 2012; negotiated deeper emission cuts)
- **COP 13 (2007):** Bali Action Plan
- **COP 16 (2010):** Established the Green Climate Fund (GCF).
- **COP 21 (2015):** Paris Agreement and Nationally Determined Contributions (NDCs).
- **COP 26 (2021):** Glasgow Climate Pact (First explicit mention of "phasing down coal")
- **COP 27 (2022):** Loss and Damage Fund established for vulnerable nations; Sharm el-Sheikh Implementation Plan; kept 1.5°C alive
- **COP 28 (2023):** Dubai Agreement (First Global Stocktake; signaled "beginning of the end of fossil fuel era"; tripling of climate finance)
- **COP 29 (2024):** \$300 billion/year climate finance target by 2035 for developing countries; operationalized Paris Agreement Articles 6.2 & 6.4.
- **COP 30 (2025):** Belém Package (Tripled adaptation funding by 2035; launched Just Transition Mechanism; strengthened tropical forest protection)

12.Oil Spills (Source: The Hindu)

An oil spill is the accidental or deliberate release of petroleum products, such as crude oil, diesel, or fuel oil, into oceans, seas, rivers, or coastal environments, resulting in water pollution and ecological damage.

Cause

- Accidents involving oil tankers and cargo ships.
- Leakage from offshore oil drilling platforms.
- Damage to underwater oil pipelines.
- Illegal discharge of oily waste from ships.
- Natural disasters affecting oil storage and transportation facilities.

Ecological Impact of Oil Spill

- **Marine Biodiversity:** Toxic hydrocarbons can kill fish, plankton, shellfish, and other marine organisms.
- **Birds and Mammals:** Oil coats feathers and fur, reducing insulation and buoyancy, potentially causing hypothermia and death.
- **Coral Reefs:** Toxic substances damage coral tissues, affecting growth and reproduction.
- **Mangroves:** Oil blocks root structures and interferes with gas exchange, leading to mangrove degradation.

- **Food Chain:** Toxic hydrocarbons can enter marine food webs and accumulate in organisms.
- **Photosynthesis:** Surface oil slicks reduce light penetration, affecting phytoplankton and aquatic plants.
- **Reproduction:** Oil exposure can impair the growth, reproduction, and survival of marine species.
- **Long-term Impact:** Persistent oil residues contaminate coastal sediments, beaches and sensitive habitats.

Who Looks After Oil Spill Control in India?

- The Indian Coast Guard, under the Ministry of Defence, is the Central Coordinating Authority for oil spill response in India's maritime zones. It was assigned this responsibility in 1986.

ENLITE IAS

SCIENCE AND TECHNOLOGY

1. Nancy Grace Roman Space Telescope (Source: The Indian Express)

The Nancy Grace Roman Space Telescope is NASA's newest infrared space observatory, launched on 30 August 2026 to study dark energy, dark matter, exoplanets, and the large-scale structure of the universe.

- **Launch:** SpaceX Falcon Heavy from Kennedy Space Center, Florida.
- **Orbit:** Heading to the Sun–Earth L2 Lagrange point.
- **Mission Duration:** 5-year primary mission, with a goal to operate up to 10 years.
- **Named After:** Dr. Nancy Grace Roman, NASA's first chief of astronomy, known as the “Mother of Hubble”

2. Coal Gasification (Source: The Hindu)

Coal gasification is a process that transforms Coal into a Synthetic gas (Syngas), consisting of a mixture of gases such as Carbon monoxide (CO), Hydrogen (H₂), Carbon dioxide (CO₂), Methane (CH₄), and Water vapor (H₂O).

- Syngas can be used to produce a wide range of Fertilizers, Fuels, solvents, and synthetic materials.

Process

- **Preparation:** Coal is crushed into a fine powder to increase its surface area and enhance the chemical reactions during the process.
- **Gasification Reactor:** The crushed coal is introduced into a high-temperature and high-pressure reactor along with limited oxygen or air and steam.
- **Chemical Reactions:** In the absence of sufficient oxygen for complete combustion, the coal undergoes a series of complex chemical reactions.
- **Gas Cleaning:** The raw syngas produced from the reactor contains impurities like tar, sulfur, and dust. These impurities need to be removed through a gas cleaning process before the syngas can be used further.

Advantages

- Gasification boosts efficiency to 50%+ in integrated gasification combined cycle (IGCC) plants versus 30–40% in traditional coal plants, via gas turbine plus steam recovery.
- It cuts local pollutants (sulfur, particulates) through pre-use cleaning and enables >90% CO₂ capture potential.

- Applications include power, hydrogen, liquids (CTL), and chemicals, reducing oil import reliance.

3. Zika Virus (Source: The Hindu)

Zika virus is a mosquito-borne flavivirus (genus Flavivirus, family Flaviviridae) transmitted mainly by day-biting Aedes aegypti and Aedes albopictus mosquitoes.

Fact To Know

- First identified in 1947 in Zika Forest, Uganda, in a rhesus monkey; human cases were confirmed in the 1950s in Africa.

Other Ways of Transmission

- It can also spread through sexual contact, blood transfusion, and from an infected mother to her baby during pregnancy or childbirth.

Common Symptoms

- Low-grade fever, maculopapular rash, conjunctivitis (red eyes), muscle and joint pain, headache, malaise.

Diagnosis and Treatment

- **Diagnosis:** RT-PCR (early), serology (IgM/IgG) as per guidelines.
- **Treatment:** No specific antiviral, no licensed vaccine; supportive care only.

4. Lithium and the Application of Lithium (Source: The Hindu)

Lithium (Li) is a soft, silvery-white alkali metal with atomic number 3. It is the lightest metal and is highly reactive. Lithium occurs mainly in pegmatite minerals, salt-lake brines, clay deposits, and geothermal brines.

Application of Lithium

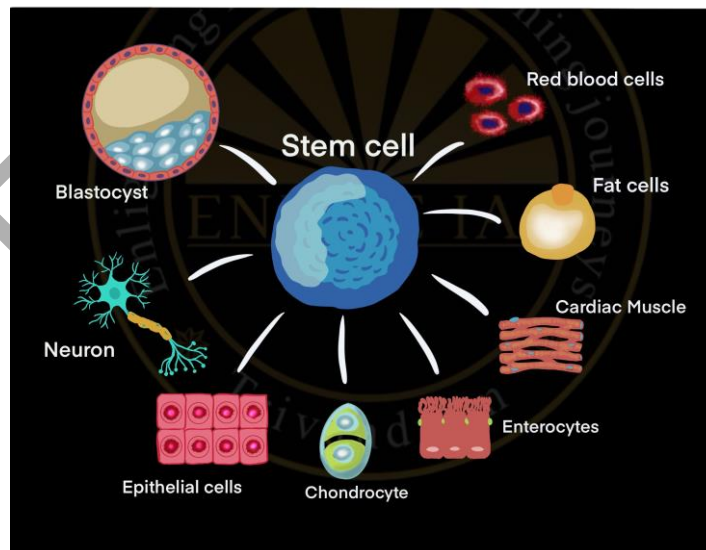
- **Rechargeable Batteries:** Lithium is extensively used in lithium-ion batteries for electric vehicles, smartphones, laptops, power tools, and other portable electronic devices. Battery chemistries such as Lithium Iron Phosphate (LFP) and Nickel-Manganese-Cobalt (NMC) depend on lithium.
- **Energy Storage:** Lithium batteries are used in grid-scale energy-storage systems. They store electricity generated from intermittent renewable sources such as solar and wind and release it when required, improving grid stability.
- **Ceramics and Glass:** Lithium compounds are used to manufacture heat-resistant glass, ceramics, and cookware. They improve thermal resistance, strength and durability.
- **Lubricating Greases:** Lithium-based greases have good heat resistance and stability and are widely used as lubricants in automobiles, industrial machinery, and aerospace equipment.

- **Medicine:** Certain lithium salts, particularly lithium carbonate, have established medical uses, including the treatment and management of bipolar disorder under medical supervision.
- **Nuclear Applications:** The isotope Lithium-6 has applications in nuclear technology, particularly in fusion research and tritium production.
- **Alloys and Metallurgy:** Lithium is combined with metals such as aluminium to produce lightweight alloys. Aluminium-lithium alloys are particularly useful in the aerospace sector because they help reduce weight while maintaining structural performance.

5. Stem Cell (Source: The Hindu)

- Stem cells are undifferentiated cells capable of self-renewal and of developing into specialized cells such as nerve, muscle, or blood cells.
 - Sources of stem cells: Bone marrow, Umbilical cord blood, Adipose tissue, Allografts, Amniotic fluid.

STEM CELL



6. Brain-Eating Amoeba (Naegleria) (Source: The Hindu)

- It is a free-living amoeba (a single-celled living organism)
- It was first discovered in Australia (1965).
- It is commonly found in warm freshwater bodies (hot springs, rivers, and lakes).
- It enters the human body through the nose.
- The infection caused by this amoeba is PAM (Primary Amebic Meningoencephalitis), which destroys brain tissue.
- It has a very high mortality rate.
- No vaccine is available, but PAM can be treated with proper drug combinations.

SCHEMES

1. Deep Ocean Mission (Source: The Hindu)

Ministry and Objective

- **Ministry:** Ministry of Earth Sciences
- **Objective:** To explore the deep ocean for resources and develop deep-sea technologies for the sustainable use of ocean resources.

Components of Deep Ocean Mission

- **Deep-Sea Mining & Manned Submersible:** Development of technologies for mining polymetallic nodules and a manned submersible capable of carrying three persons to about 6,000 m depth.
- **Samudrayaan Mission:** India's manned deep-ocean exploration programme. The indigenous submersible MATSYA 6000 is being developed for this purpose.
- **Ocean Climate Advisory Services:** Study long-term changes in the ocean and develop models to understand their influence on climate and weather.
- **Deep-Sea Biodiversity:** Exploration and conservation of deep-sea flora, fauna, and microbial resources, including their potential sustainable uses.
- **Deep-Ocean Survey:** Identification and mapping of hydrothermal minerals and other resources in the Indian Ocean.
- **Ocean Energy & Freshwater:** Development of technologies for energy generation and freshwater production from the ocean.
- **Marine Station for Ocean Biology:** Development of facilities for research and innovation in marine biology and biotechnology.

PLACES IN NEWS

1. Greece (Source: The Hindu)

- **Location:** Greece is a country in Southeast Europe, situated on the southern tip of the Balkan Peninsula.
- **Capital:** Athens
- **Bordering Countries:** Albania, North Macedonia, Bulgaria and Turkey
- **Bordering Waterbodies:** Aegean Sea, Ionian Sea, Sea of Crete and the Mediterranean Sea
- **Climate:** Mediterranean Climate
- **International Relations:** Greece is a member of NATO and the European Union



2. Black Sea (Source: The Hindu)

- **Location:** Between Eastern Europe and Western Asia
- **Bordering Mountain Ranges:** Pontic, Caucasus, and Crimean Mountains.
- **Connecting Straits**
 - **Dardanelles Strait:** Connects the Sea of Marmara with the Aegean and Mediterranean seas
 - **Bosporus Strait:** Connects the Black Sea to the Sea of Marmara
 - **Strait of Kerch:** Connects Black Sea to the Sea of Azov

- **Bordering Countries:** Russia, Ukraine, Georgia, Turkey, Bulgaria, and Romania.



3. Chagos Archipelago (Source: The Hindu)

The Chagos Archipelago consists of over 60 small islands located in the central Indian Ocean, south of the Maldives, and east of Seychelles.

- The largest island, Diego Garcia, hosts a key US-UK military base.
- It is the world's largest marine protected area.
- It is of coral origin.

Archipelago

- An archipelago is a cluster or chain of islands located in a sea or ocean, often formed by volcanic activity, tectonic movements, or coastal erosion. Major examples include the Indonesian and Philippine archipelagos.



4. East Sea (Source: The Hindu)

- **Location:** The East Sea (known internationally and predominantly as the Sea of Japan) is a marginal sea of the western Pacific Ocean located in East Asia.
- **Borders:** It is bordered by the Japanese archipelago (Honshu, Hokkaido, and Kyushu) and Sakhalin Island, the Korean Peninsula, and the Russian mainland (Primorsky Krai).
- **Connections:** It connects to neighboring seas and the Pacific Ocean via several narrow straits, including the Korea Strait, Tsugaru Strait, La Pérouse (Sōya) Strait, and the Strait of Tartary.
- **Major Ocean Basins:** Japan Basin, Yamato Basin, and Tsushima Basin.



5. Morocco (Source: The Hindu)

- **Location:** Morocco is a country in the Maghreb region of North Africa.
- **Capital:** Rabat
- **Border Countries:** Algeria
- **Bordering Waterbodies:** Atlantic Ocean, Mediterranean Sea
- **Associated Geographical Feature:** Borders Western Sahara to the south.
- **Climate:** Mediterranean climate
- **Membership in International Organisation:** African Union (AU), Arab League, Organisation of Islamic Cooperation (OIC), the Non-Aligned Movement.

