

April 2025



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हिन्दी माध्यम DELHI: 27 मई, 11 AM

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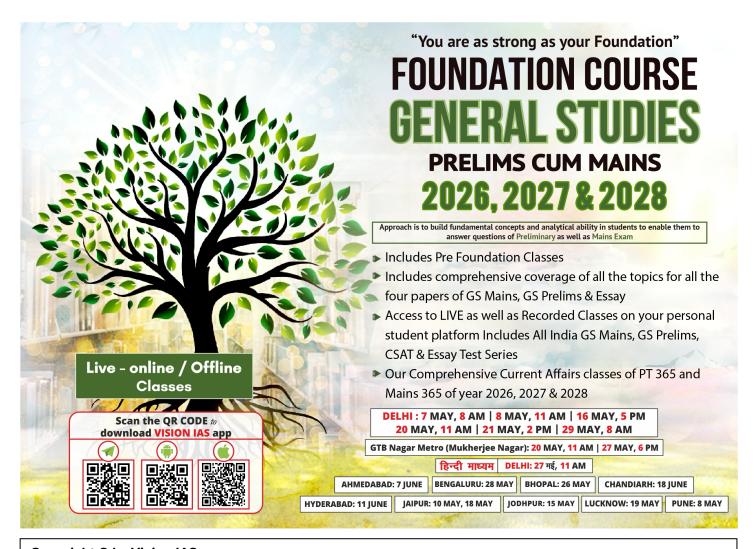
5 JUNE

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NOTE:

Dear Students,

Memorisation and recollection of information in Current Affairs is as important as understanding the articles. In order to enhance the learning outcomes from the Monthly Current Affairs Magazine, we are introducing following additions:



A thematic based colors has been used in the document in the boxes, tables etc to enable easy identification and recollection of various concepts and topics.



Questions are an important tool to assess and retain information. To enable this we are adding a Smart Quiz at the end of each section in the document for practicing the questions.



A wide variety of infographics have been added to ensure smoother learning experience and enhanced retention of the information. This will also help in effective presentation of information in the answer writing as well.



Places and persons in news are being presented in an objective manner through Maps, Tables & Pictures. This will help in easier recollection of factual information.



फाउंडेशन कोर्स सामान्य अध्ययन

प्रारंभिक एवं मुख्य परीक्षा 2026

इनोवेटिव क्लासरूम प्रोग्राम

- प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक का विस्तृत कवरेज
- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉवर प्वाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेत् करेंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- प्री फाउंडेशन कक्षाएं

- सीसैट कक्षाएं
- PT 365 कक्षाएं
- MAINS 365 कक्षाएं
- PT टेस्ट सीरीज
- मुख्य परीक्षा टेस्ट सीरीज
- निबंध टेस्ट सीरीज
- सीसैट टेस्ट सीरीज
- निबंध लेखन शैली की कक्षाएं
- करेंट अफेयर्स मैगजीन

नोट: ऑनलाइन छात्र हमारे पाठ्यक्रम की लाइव वीडियो कक्षाएं अपने घर पर ऑनलाइन प्लेटफॉर्म पर देख सकते हैं। छात्र लाइव चैट विकल्प के माध्यम से कक्षा के दौरान अपने संदेह और विषय संबंधी प्रश्न पूछ सकते हैं। वे अपने संदेह और प्रश्न नोट भी कर सकते हैं और दिल्ली केंद्र में हमारे कक्षा सलाहकार को बता सकते हैं और हम फोन/मेल के माध्यम से प्रश्नों का उत्तर देंगे।

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1. POLITY AND GOVERNANCE

1.1. SEPARATION OF POWERS

Why in the News?

Vice President of India emphasized on the principle of Separation of Power and stated that in a democracy, governance should be only by executive – the government – which is elected by the people and is accountable to them.

More on the News

- Vice President emphasized that principle of **separation of powers necessitates clear demarcation** of responsibilities to prevent institutional overreach.
- He stated that any incursion by the Legislature, Executive, or Judiciary in the domain of the other poses a challenge.

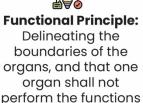
Idea behind the Separation of Powers

- Idea: Separation of Powers means demarcation of authorities and duties into three branches of government –
 Executive, Legislature and Judiciary.
 - The executive enforces laws made or enacted by the legislature and is responsible for the administration of the government.
 - The legislature makes laws, amends and replaces old laws, and controls, supervises, and scrutinises the activities of the executive.
 - The judiciary is concerned with the administration of justice, interpretation of laws and is the guardian of the Constitution.
- Origin: Aristotle for the first time classified the functions of the Government into three categories viz., deliberative, magisterial and judicial.
 - However, French Jurist Montesquieu is considered the modern exponent of the theory of the Separation of Power.
- Modern Theory: In his book *The Spirit of the Laws* (1748), Montesquieu enunciated and explained his theory of the Separation of Powers.









of the other.

Check and Balance
Principle: Check should be made on each other by these organs to look after the functions and duties performed are within the constitutional bounds.



Mutuality Principle: Creating concord, not discord, cooperation not confrontation, engagement not estrangement.

Separation of Powers in India

- Delicate Balance: The Indian Constitution is based on a delicate principle of limited separation of powers with sufficiently differentiated functions of different organs and checks and balances so that one organ cannot usurp the function of another.
 - Legislature is responsible for making the laws, the Executive is responsible for enforcing the law and the Judiciary is responsible for interpreting laws and resolving disputes.
- **Functional Overlap:** The Indian Constitution **does not expressly vest the three kinds of power** in three different organs, and the organs have **some overlapping domains**. For Instance,
 - The President, being the executive head, is also empowered to exercise legislative powers as in promulgating ordinances.

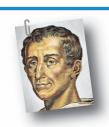
- Legislature exercises judicial function in the removal of the President and Judges, breach of its privilege, etc.
- The judiciary exercises legislative and executive power in issuing guidelines to executives and making certain legislative amendments.
- Part of Basic Structure: The Supreme Court held that the doctrine of separation of powers is part of the basic structure of the Constitution.
- Conflicts among Organs:
 - o Judicial Interventions: The Supreme Court, through its judgments, encroaches on the legislative domain.
 - > For instance, the Supreme Court ruled that the President must decide on State Bills, reserved by the Governor for Presidential assent, within three months.
 - Legislative encroachment: The Legislature enact laws encroaching on other domains like the National Judicial Appointments Commission (NJAC) Act, which included the Union Law Minister and two eminent persons in committee recommending judges.
 - **Executive overreach:** Many tribunals have a majority of executive members, negating the concept of separation of powers. Also, frequent promulgation of ordinances bypasses the legislature for law-making.

Conclusion

Separation of Powers aims to prevent the concentration of power in one hand so that the freedom and liberty of individuals remain safeguarded. However, organs of government cannot function in watertight compartments, and they operate in mutual cooperation and respect so that one does not usurp the functions of the other. Thus, a broad separation of power with some functional overlap and adequate checks and balances furthers the goal of democracy.



"There would be an end of everything, were the same man or same body, whether of the nobles or of the people, to exercise those three powers, that of enacting laws, that of executing laws, that of executing public resolutions, and of trying the causes of individuals."



Montesquieu

1.2. ASSENT TO STATE BILLS

Why in the News?

Recently, the Supreme Court (SC) in the **State of Tamil Nadu v. The Governor of Tamil Nadu** issued directions to ensure the timely approval of Bills passed by the **State Legislature.**

More on the News

- Background: Between November 2020 and April 2023, the state legislature passed 13 bills.
 - Of these, 10 were either withheld or sent back to the Assembly by the Governor without any communication.
 - When the Assembly re-passed them without any material changes, the Governor reserved them for the President instead of giving assent.

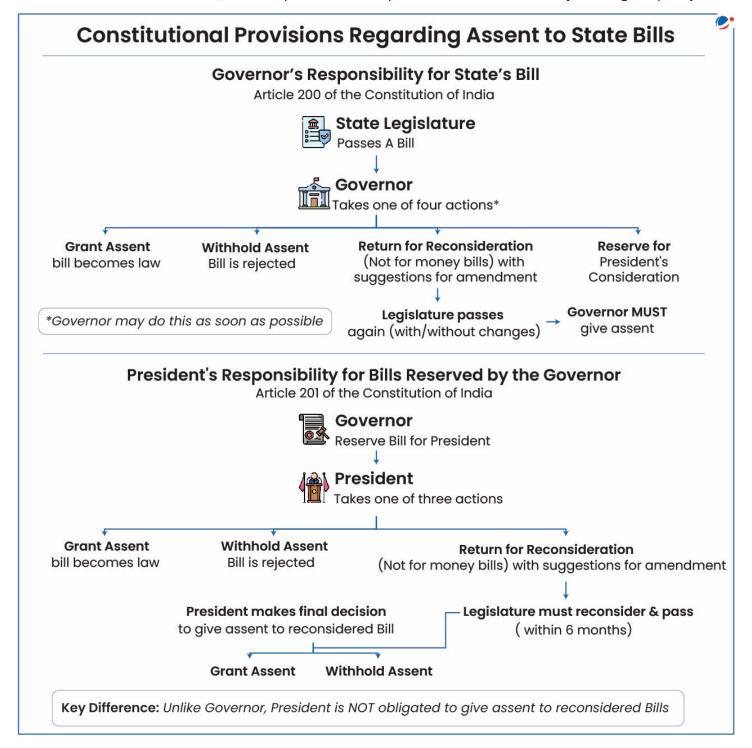
Do you know



> Under Article 168 of the Constitution, the Governor is part of the State Legislature, though not a member of its Houses.
For a Bill to become law, it must either get the Governor's assent or, if reserved, the President's assent.

- > In response, the **Tamil Nadu government filed a writ petition** challenging the Governor's prolonged inaction on important bills.
- o Court held that the Governor's inaction, reserving the Bills **after** re-passage, was **legally invalid**. Therefore, the President's actions on those Bills were also declared **null and void**.

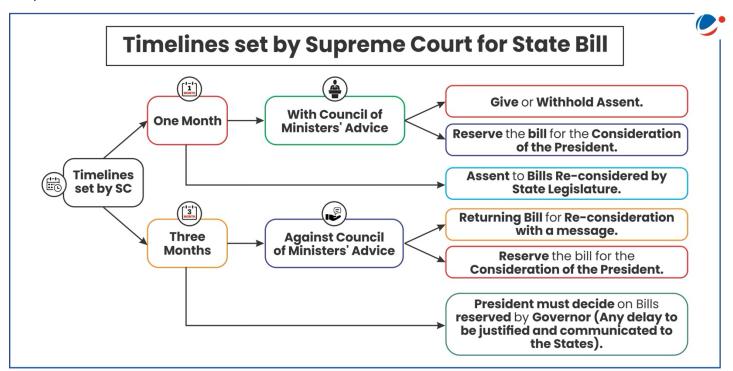
• Court used power under Article 142 of the Constitution: The Supreme Court exercise its inherent powers under Article 142 of the Constitution, which empowers the SC to pass a decree/order necessary for doing complete justice.



Key Highlights of the Judgement

- Inaction is unconstitutional: Despite there being no prescribed time limit, there is no Pocket or Absolute Veto available to the governor or President (under Article 200 or 201, respectively).
 - o In case the Governor/President exhibits inaction, the **State Government** could seek a **writ of mandamus from** a **competent court.**
 - > A writ of mandamus is an **order from a court to a government official** to **properly fulfill their official duties or correct an abuse of discretion.**

- Governor can't reserve a re-enacted Bill for President's Assent: The Bill can be reserved for the President's assent
 in the first instance itself.
 - o If a Governor decides to withhold assent for the Bill, then he must mandatorily send it back to the State Assembly.
 - When the Assembly re-enacts the Bill, the Governor cannot reserve it for the President.
 - > The **only exception** to this general rule is when the **bill presented in the second round** is **materially different** from the one presented to the Governor in the **first instance**.
- Prescribed timeline for assent of Bills: These time limits are not amendments to the Constitution, but judicial standards to ensure timely action and avoid arbitrariness. The Court introduced time limits to prevent misuse of powers.



- Governor Lacks Absolute Discretion Under Article 200: Article 163 (1) provides for the Council of Ministers to aid
 and advise the Governor, except in situations where the Governor is constitutionally required to act on his/her
 discretion.
 - Under Article 200, the Governor does not possess any discretion in the exercise of his functions and has to mandatorily abide by the advice tendered by the Council of Ministers except in following situations:
 - > **Second proviso to Article 200** (i.e., State Bills that would derogate the powers of the High Court must be reserved for the President).
 - > State Bills which will not become effective without assent of President
 - ✓ Bills imposing taxes on water or electricity in certain cases (Article 288).
 - ✓ Money Bills, or Financial Bills passed by State legislature to which special provisions of Article 207 apply during a Financial Emergency (Article 360).
 - ✓ Bill relating to a subject enumerated in the Concurrent List: If the Bill is inconsistent with the Union Law, or an existing law with respect to that matter [Article 254(2)].
 - ✓ **Bill relating to Restrictions on Interstate trade, commerce and intercourse:** Legislation imposing restrictions on trade and commerce requiring Presidential sanction (Article 304(b) read with Article 255)
 - > State Bills which require assent of the President to secure immunity from Articles 14 and 19: For Bills falling under
 - ✓ Article 31A (providing for acquisition of estates, etc.)
 - ✓ Article 31C (giving effect to certain directive principles).
 - Where the bill is of a nature that if allowed to take effect then it would undermine the Constitution
- **Discretionary power under Article 200 is subject to judicial review: Grant of assent** by the Governor or the President (usually taken upon the advice of the Council of Ministers) may **not be justiciable.**

- However, withholding assent or reserving a Bill using the Governor's discretion can be challenged in court, as this discretion is limited by the Constitution.
 - > If the Governor acts against the advice of the State Council and reserves a Bill for the President, the State Government can challenge it in the High Court or the Supreme Court.
 - > If the President then withholds assent, that action can also be challenged in the Supreme Court.
- President should consult the Supreme Court on Bills reserved for unconstitutionality: If a Governor reserves a
 Bill for the President's assent due to concerns of unconstitutionality:
 - The President should seek the Supreme Court's opinion under Article 143 (President's power to seek advisory opinions from the Supreme Court on questions of law or fact).
 - > The **President may disagree** with the Court's opinion **only for valid policy reasons** and must provide **clear justification** for doing so.
 - Such Consultation is important as:
 - > Governors cannot refer such matters to courts.
 - > The **Supreme Court is the final authority** on interpreting the Constitution and laws.
 - > The Court's opinion under Article 143 holds strong persuasive value and should generally be followed by both Parliament and the President.

1.3. STATES' DEMAND FOR AUTONOMY

Why in the News?

The Tamil Nadu government has formed a high-level committee to suggest ways to strengthen State autonomy and federalism.

More in the news

- The committee will be headed by former Supreme Court judge Justice Kurian Joseph.
- Mandate of the Committee:
 - o Review constitutional, legal, and policy aspects of Centre-State relations
 - Suggest ways to restore powers shifted from the State List to the Concurrent List
 - Recommend measures to help States overcome administrative challenges
 - Propose reforms for greater State autonomy without affecting national unity
 - Revisit recommendations of the Rajamannar Committee and similar reports
 - Consider current political, social, and economic conditions
- The committee is expected to submit its interim report by January 2026 and the final report within two years.
- Tamil Nadu has made the committee claiming erosion of State's right and negligence of the fact that India is a Union of States and not a unitary states.

Federal Scheme of the Indian Constitution

- India is a union of states, with the states lacking the right to secede from the Union.
 - There are common institutions and instruments between the Union and States, such as a single constitution, single citizenship, common all-India services, common election commission and a single unified judiciary.

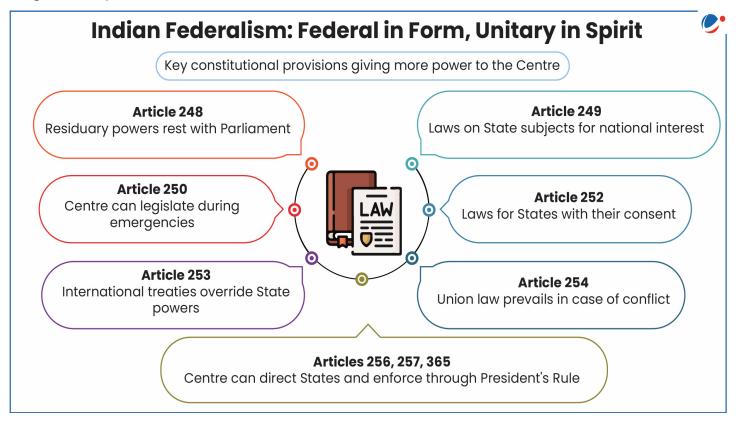
Previous committees and their recommendations

- Rajamannar Committee (1969): Appointed by the Tamil
 Nadu Government, it recommended for a High Power
 Commission to be constituted for the redistribution of the
 three lists.
- Anandpur Sahib Resolution (1973): Demanded Centre's powers to be restricted only to defence, foreign affairs, communication, currency, etc., with all other powers vested in the states.
- West Bengal Memorandum (1977): Demanded the removal of Article 356 (President's Rule) and the inclusion of the word "Federal" in the Constitution.

Division of Legislative Powers

- Article 246 Article 246 of the Constitution confers legislative powers on the Parliament and the State Legislatures on the subjects enumerated in the Seventh Schedule.
 - > Union list consisting of 97 entries
 - > State list consisting of 66 entries
 - > Concurrent list consisting of 47 entries

• Indian federalism has often been characterised as quasi-federal: Constitution envisages a stronger Centre and give it more power than States.



Why India Adopted Centralised Federalism?

A strong Centre was envisaged to:

- Safeguard Unity and Integrity of India: Legacy of partition created a general fear of fissiparous tendencies favouring a strong Central Government.
- Ensuring Equitable distribution of Wealth and Development: Centre's role was envisaged as an equalising force by facilitating transfer of wealth from rich to poor states.
- Promoting core Constitutional values: Indian Constitution aims to build a diverse, pluralistic and multicultural
 federal society to be achieved by promoting the principles of justice, parliamentary democracy, liberty, etc., that
 can be extended through strong centre.
- Promoting uniformity: Laws that set universal standards should be enacted by the Union creating a case for strong centre.

However, Over the years many states particularly Tamil Nadu have alleged strong domination of the centre not only on general policies but also in the spheres which exclusively belonged to the states drastically affecting the autonomy of the states.

Key Issues Highlighting the Erosion of States' Autonomy

- Central interference in subjects under the State List: Southern States challenged the UGC draft regulations on the
 appointment and promotion of university teachers and Vice-Chancellors (V-C) that diminishes the autonomy of
 state universities.
 - Tamil Nadu opposed the National Eligibility cum Entrance Test (NEET) for entry to medical colleges imposed by the Centre.
 - Through **Constitution (42nd Amendment) Act, 1976** following 5 subjects were moved State List to Concurrent List:
 - > Education,
 - > Forests,
 - > Weights & Measures,

- > Protection of Wild Animals and Birds
- > Administration of Justice.
- Centralization of Fiscal Powers: Limited taxation powers under GST. Delays in tax devolution and cuts in grants-in-aid.
 - The grants-in-aid to States declined in absolute amount from ₹1.95 lakh crore in 2015-16 to ₹1.65 lakh crore in 2023-24.
- Uniform Policies Ignoring State Diversity: Tamil Nadu opposes the three-language policy demands, fearing dangers to its Tamil identity.
- Weak Institutional Checks: Planning Commission (now NITI Aayog), created by executive order, lacked constitutional accountability. Governor's delays in assenting to State laws (e.g., Tamil Nadu) raise concerns under Article 200.
- Increasing instances of Centralisation: The improper use of assenting powers of the Governor in Tamil Nadu under Article 200 recently brought to light the instance of centralisation
 - o Similarly, West Bengal opposed Central Bureau of Investigation (CBI) investigations without state consent.

Key Initiatives to Improve Centre-State Relations

- Inter-State Council: Set up under Article 263 to promote coordination between Centre and States.
- Replacement of Planning Commission: NITI Aayog promotes cooperative federalism with more state participation.
- Tax Devolution Increased: 14th Finance Commission raised states' share of central taxes from 32% to 42%.
- GST Council: A joint forum (Article 279A) with members from both Centre and States to decide GST policies.
- Fewer Centrally Sponsored Schemes (CSS): CSS reduced from 130 to 75, aiming for 50, allowing more flexibility for States.
- Decentralisation Strengthened: 73rd & 74th Amendments gave powers to Panchayats and Municipalities, creating a third tier of government.

Ways for Effectively Addressing the Demand for State Autonomy

- Implementing Sarkaria Commission's (1983) Key Recommendations
 - o Residuary Powers: Shift all residuary powers (except taxation) to the Concurrent List.
 - Consultation Before Legislation: Union must consult States before legislating on Concurrent List subjects.
 - o **Minimal Interference**: Union laws on concurrent subjects should ensure uniformity only on basic national issues; States should handle local details.
- **Promoting Equitable Development:** As recommended by the **Punchhi Commission** (2007) Increase financial transfers to underdeveloped States. Focus on boosting physical and human infrastructure.
- **Facilitate Institutional Dialogue:**Use **Inter-State Council** as for both collective and individual State consultations (Venkatachaliah Commission). Reinvigorate **Zonal Councils** as platforms for meaningful dialogue and cooperation.
- Enhancing Consensus through Key Institutions: Promote coordination and policy consensus through Inter-State Council, GST Council, NITI Aayog, and Other cooperative platforms

Conclusion

The demand for greater state autonomy stems not only from a perceived erosion of constitutional powers but also from deeper issues like the rise of regional parties, uneven regional development, and identity-based politics.

As Annadurai said in 1967, "Through mutual goodwill and understanding we should forge a fraternal and beneficial nexus." A balanced federal structure must respect both national unity and regional diversity.

1.4. 5 YEARS OF SVAMITVA SCHEME

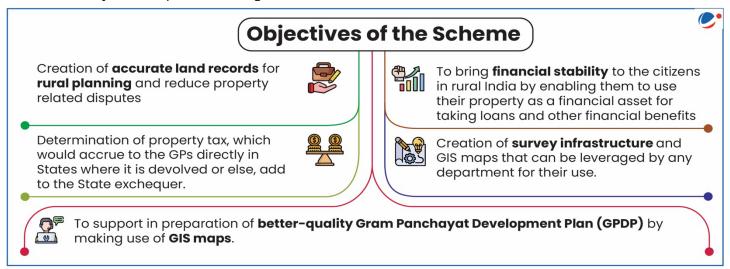
Why in the News?

The SVAMITVA (Survey of Villages and Mapping with Improvised Technology in Village Areas) Scheme has completed 5 years of its launch.

About SVAMITVA

- Launch: 2020.
- Implemented by: The Scheme is implemented with the collaborative efforts of the Ministry of Panchayati Raj, State Revenue Department, State Panchayati Raj Department and Survey of India.

- Key Technology Partner: Survey of India, and National Informatics Centre Services Inc. (NICSI)
- Major Components:
 - Establishment of Continuously Operating Reference Stations (CORS) network: Establishes Ground Control
 Points for accurate geo-referencing and land demarcation.
 - Drone Mapping: Survey of India maps rural inhabited areas using drones to create accurate property maps for issuing ownership rights.
 - o Information, Education, and Communication (IEC) Initiatives: Awareness programs educate local populations about the scheme's methods and benefits.
 - Gram Manchitra Enhancement: Digital spatial data from drone surveys powers analytical tools for Gram Panchayat Development Planning.



Significance of the scheme

- Legal Empowerment and Dispute Resolution: The scheme provides legal recognition of property ownership in rural areas through issuance of property cards, transforming the lives of millions of rural residents.
 - As of now 1,30,633 property cards have been distributed across India to resolve long standing land disputes.
- Economic Transformation Through Financial Inclusion: Property cards issued under SVAMITVA serve as valuable collateral, unlocking access to formal financial systems previously unavailable to rural residents.
 - A total of **67,000 sq.km of rural residential land has been surveyed, valued at Rs.132 lakh crore,** emphasizes the economic significance of the initiative.
- Governance Revolution and Resource Optimization: Villages like Ekhatpur-Munjvadi (Maharashtra) have experienced increased Own Source Revenue (OSR) through updated property records, while Bilkisganj (MP)
 Gram Panchayat transitioned from imprecise hand-drawn maps to data-driven spatial planning.
 - This shift optimizes resource allocation, improves service delivery, and empowers local self-governance institutions.
- Technological Innovation in Rural Development: The scheme represents a technological revolution in rural land mapping through its innovative use of survey-grade drones coupled with Continuous Operating Referencing System (CORS) networks.
 - This combination produces high-resolution maps swiftly and accurately, dramatically improving the efficiency of rural land demarcation.
 - This technological leap has enabled the scheme to achieve remarkable scale, with drone surveys completed in 92% of the notified villages across 31 States/UTs.
- Holistic Rural Transformation and Planning: States like Haryana and Uttarakhand, which have achieved 100% completion in both drone surveys and property card preparation, the scheme creates a blueprint for planned, sustainable rural development that can systematically address various challenges.

Challenges for the implementation of the scheme

- Unclear Legal Validity of Property Cards: Property cards may not be recognized as conclusive proof of ownership
 by financial institutions. It needs for states to enlist property cards as documents requiring stamp duty payment
 under Revenue Acts.
 - Without legal amendments, property cards risk becoming "just another legal document which does not conclusively prove ownership".
- Variations in State Land Laws and Record-Keeping Practices: Different states have diverse laws governing land records and practices vary significantly across states.
 - Andhra Pradesh maintains records of both registered and unregistered liabilities, whereas most other states only record registered mortgages.
- Limited Property Tax Collection Authority: Not all Gram Panchayats are empowered to collect property tax.
 - o States like Odisha have not empowered Gram Panchayats to collect property tax.
 - o In Uttar Pradesh and Uttarakhand, District Panchayats (not Gram Panchayats) collect property tax.
- Inadequate Protection for Marginalized Communities: There is risk of influential groups securing land titles at the expense of marginalized populations which include sharecroppers, Scheduled Castes, Scheduled Tribes, and women.
 - There is also inconsistency in legal frameworks across states for recognizing rights of marginalized communities.
 - > For Ex. While some states like Karnataka and Maharashtra extend coparcenary rights (division of property between the co-owners or joint owners who have inheritance to the Hindu joint family) to daughters, protection varies widely across regions.
- Data Management and Compliance Challenges: There is lack of clear framework for how this compliance will be
 achieved as there is also gap in provisions for making non-personal land data publicly accessible for
 transparency.

Way Forward

- Strengthen Legal Framework: Ensure property cards have legal recognition by financial institutions by amending state Revenue Acts to include property cards as stamp duty documents.
- Standardize Record-Keeping: Develop uniform procedures to record all liabilities on property cards. Train revenue officials to implement streamlined record-keeping practices.
- Enhance Local Governance: Empower all Gram Panchayats to collect property tax through legal amendments. Similarly implement comprehensive property classification systems for accurate assessment thorough ground verification during surveys.
- Protect Marginalized Communities: Train surveyors to recognize rights of SC/ST groups, women, and sharecroppers. Ensure active community participation in mapping and documentation.
- Enhance Data Management: Make non-personal land data publicly accessible to improve transparency. Implement uniform geospatial data standards across all states to develop clear governance framework for data sharing and management.

Scan the QR code to know more about the importance of technology in India's governance

Weekly Focus #95: Technology Governance- Forging a New Era of Public Policy



1.5. NEWS IN SHORTS

1.5.1. DEPUTY SPEAKER OF THE LOK SABHA

Long term vacancy since 2019 to the office of Deputy Speaker (DS) points to Constitutional anomaly.

About DS of the Lok Sabha

- Background: The office emerged in 1921 under Government of India Act, 1919.
 - Sachidananda Sinha first held this office in the Central Legislative Assembly.

- M. A. Ayyangar, became the first elected DS post-independence.
- Election: Article 93 provides that Lok Sabha, as soon as may be, choose two members of the House to be Speaker and DS.
 - As per a long-standing convention, the post of DS has been offered to the Opposition.
- Resignation and Removal: Article 94 deals with vacation, resignation and removal (by a resolution passed by a majority of all then members of the House).
 - Speaker may resign by submitting a resignation to the DS and vice-versa.
- Duties: As per Article 95, DS performs the duties of Speaker in case of vacancy, absence, etc.

Importance of the office of DS

- Constitutional Imperative: It is not merely ceremonial as the Constitution places it on an equal footing with the Speaker.
- Essential for continuity, stability, and institutional balance: As the DS acts as a second in command in case of emergency.
 - M.A. Ayyangar served as the acting Speaker after the sudden death of Speaker G.V. Mavalankar in 1956.
- Legislative Responsibilities: DS chairs key sessions,
 leads committees, and manages sensitive debates requiring neutrality and authority.

Centralisation of procedural power within the Speaker Disregard for Constitutional Mandate. May sideline the politics of Inclusivity and Consensus.

Conclusion

A **specific deadline** (E.g., 60 days of the first sitting of the new Lok Sabha) or a **statutory mechanism** could be introduced to ensure appointment within a **timeframe**.

1.5.2. INACTION BY SPEAKERS ON DEFECTION PETITIONS

Supreme Court (SC) condemned prolonged inaction by speakers on defection petitions.

- The SC said **Speaker could not use his indecision** to defeat the **worthy objective of the Tenth Schedule** (anti-defection law) of the Constitution.
- Question of Law in front of Supreme Court: Can constitutional courts direct Speakers, acting as quasi-judicial tribunals, to decide anti-defection disqualification petitions within a specific timeframe?

Supreme Courts Observations

- Court's Power Over Speaker's Inaction: The SC stated that it is not "powerless" if Speaker remains "indecisive" on disqualification petitions.
- Court's Right to Set a Reasonable Timeframe: While courts cannot dictate the outcome of a disqualification petition, they can direct the Speaker to decide within a reasonable period.
 - E.g., Keisham Meghachandra Singh v. Speaker, Manipur Legislative Assembly (2020).
- If the Speaker fails to act: The SC can invoke its extraordinary powers under Article 142.

Other SC Observations to Improve Implementation of Anti-Defection Law

- Judicial Review Over Speaker's Decisions: Courts should have the authority to intervene if the Speaker delays action.
 Case: Kihoto Hollohan v. Zachillhu (1992).
- Impartiality of the Speaker: The Speaker should act as a neutral adjudicator rather than a political figure. Case: Ravi S. Naik v. Union of India (1994).

Anti-defection Law

Concept

Introduced through 52nd Amendment Act, 1985, adding the Tenth Schedule to the Constitution to prevent political defections

Purpose

Ensure stability in legislatures by preventing arbitrary party switching

Grounds For Disqualification For a Member Of The House

Voluntarily giving up party membership Defying party whip during voting

Role Of Speaker/chairperson

Acts as a quasi-judicial authority Decides on disqualification petitions Final arbiter in the disqualification process



• Independent Tribunal for Disqualification Cases: Consider transferring disqualification powers from the Speaker to an independent tribunal. Case: Karnataka MLAs' disqualification case (2020).

1.5.3. IMMIGRATION AND FOREIGNERS BILL, 2025

The Bill is passed by the Parliament.

Key Highlights of the Bill

- **Objective:** To modernize immigration laws, enhance national security, and improve coordination among immigration authorities.
- Bills repealed:
 - o Passport Act, 1920
 - o Registration of Foreigners Act, 1939
 - o Foreigners Act, 1946
 - Immigration (Carriers' Liability) Act, 2000
- Immigration Regulation: A Bureau of Immigration will oversee visa issuance and entry-exit regulations.
- **Penalties**: Penalizes foreigners entering without valid passport or other travel documents with imprisonment of up to five years, fine up to five lakh rupees, or both.
- Power of arrest: Police officers not below the rank of a Head Constable can arrest without a warrant.

1.5.4. PANCHAYAT ADVANCEMENT INDEX (PAI)

Ministry of Panchayati Raj Introduced Panchayat Advancement Index (PAI) to Assess Gram Panchayat Performance.

- There are 2.5 lakh gram panchayats in the country. Out of these, data of around 2.16 lakh gram panchayats from 29 States have been assessed.
- Panchayat means an institution of self-government constituted under Article 243B, for the rural areas.

About Panchayat Advancement Index (PAI)

• **Concept:** PAI is a multi-domain and multi-sectoral index that is intended to be used to assess the overall holistic development, performance & progress of panchayats.

• Aims: Measure how well these grassroots institutions are achieving localized Sustainable Development Goals (SDGs).

Panchayat

Panchayat

Theme 1 - Poverty Free and

Enhanced Livelihoods

Theme 3 - Child Friendly

Theme 7 - Socially Just and Socially Secured Panchayat

Theme 5 - Clean and

Green Panchayat

Panchayat Development Themes

Themes

 Themes: The index evaluates panchayats based on nine key themes related to local development (See image).

- Categories in the PAI
 - Achiever (0%): No panchayat in India achieved the 'achiever' rank in this year's assessment.
 - Aspirant (61.2%): The largest percentage of panchayats fall under this category.
 - Performer (36%): A significant portion of panchayats has achieved moderate progress.
 - o Front-Runner: Gujarat topped the rankings with the highest number of panchayats in this category.



You can scan this QR code to practice the Smart Quiz of Polity at our open test online platform for testing your understanding and recalling of the concepts.



Theme 2 - Healthy Panchayat

Panchayat

Theme 4 - Water Sufficient

Theme 6 - Self sufficient

Theme 8 - Panchayat with

Good Governance

🙀) **Theme 9 -** Women Friendly Panchayat

Infrastructure in Panchayat

2. INTERNATIONAL RELATIONS

2.1. EMERGING WORLD ORDER

Why in the News?

At the BIMSTEC meeting, External Affairs Minister highlighted that the new world order will be regional and agenda-specific.

About World Order

- Definition: World order refers to the arrangement of power and authority that provides the framework for the conduct of diplomacy and world politics on a global scale.
 - In the world affairs, 'order' brings a certain method in the way one country conducts its affairs with other countries.

Factors contributing to Emergence of New World Order

- Decline of the Post-War Multilateral Order: For instance, the United Nations, once a pillar of global governance, appears outdated. Multilateralism is no longer effective in managing global threats.
 - **E.g.,** UN has struggled to address major conflicts like the Russia-Ukraine war and the Gaza crisis.
- Rise of Polycrisis and Global Instability: The world is facing simultaneous, interconnected crises (wars, climate change, populism).
 - E.g., Russia's invasion of Ukraine, trade war, cyber warfare, pandemic, etc.
- Rise of Regional & Agenda-specific geopolitics: For instance, the emerging world order emphasizes empowering the Global South by strengthening independent multilateral platforms.
 - E.g., BRICS aims to reduce over-reliance on traditional powers and enhance South-South cooperation.
 - There's a shift toward being "non-West" without being "anti-West".

Evolution Of The Modern World Order

Key Turning Points in Global Political Architecture (1648-Present)

1648 | (



Westphalian System
Sovereign states become the central actors in global politics.

Peace of Westphalia ends religious wars and shapes modern diplomacy.

1776-1800s



Age of Revolutions

Rise of liberal values, democracy, and legitimacy, sparked by American and French Revolutions

1919



X Post-WWI Idealism

League of Nations reflects shift to cooperation and peace. Self-determination emerges as a core principle

1945



Post-WWII & Cold War

Bipolar world: US vs USSR. Decolonization and rights movements expand international law

1991



Post-cold War Era

US unipolarity gradually gives way to multipolarity

- Rise of Multipolarity: The emerging world order is no longer dominated by one (unipolar) or two (bipolar) superpowers but shaped by several influential nations asserting autonomy.
 - o **For instance,** India demonstrated its independent stance by maintaining **'strategic autonomy'** and abstaining from UN votes condemning Russia during the Ukraine conflict.
- Rise of Strategic Self-Help: "World is moving to an era of self-help. Every region needs to look out for itself whether it is in food, fuel and fertilizer, vaccines or speedy disaster response." EAM S. Jaishankar
 - o **For instance,** shorter supply chains **(Near Shoring)** & immediate neighbours **(e.g., BIMSTEC countries)** have much more salience now.

Opportunities for India in an Emerging World Order

- India as Voice of the Global South: India's pluralistic, non-Western democratic model offers an alternative to existing world order that neglects the needs of the Global south.
 - E.g., India hosting the G20 under "Vasudhaiva Kutumbakam" theme; advocacy for Global South and its aspiration to be a "friend to the world" ('Vishvamitra).
 - o E.g., Convened "Voice of the Global South Summits" to foster dialogue among developing nations.

- Balanced Multipolarity: Diffusion of power can reduce hegemony and promote democratic internationalism.
 - E.g., India's balancing act in BRICS, SCO, QUAD and G20.
- Issue-based cooperation (food, tech, climate): Through compact, efficient platforms.
 - o E.g., BIMSTEC's focus on connectivity and disaster management; IPEF (Indo-Pacific Economic Framework).
- **Digital and Tech Leadership:** India leading with platforms like CoWIN, UPI, and Open Network for Digital Commerce (ONDC).
- Climate Diplomacy: Championing green growth and climate finance reform.
 - E.g., International Solar Alliance (ISA); Coalition for Disaster Resilient Infrastructure (CDRI).
- Cultural and Civilizational Soft Power: Promotion of India's civilizational ethos as a unifying force in a divided world.
 - o E.g., International Yoga Day, Indian diaspora diplomacy, Buddhism diplomacy with ASEAN.

Challenges Before India's Role in the Emerging World Order

- Fragmentation of global cooperation due to national interests: E.g., The weakening of the World Trade Organization (WTO) dispute settlement mechanism (U.S. blocking new appointments to the appellate body).
 - **Hence**, dysfunctional global institutions hinder India's trade potential, reflected in its low share of global trade (4.3% in 2023).
- Climate Justice Divide: Developed vs developing countries over climate finance and responsibility.
 - o **E.g.,** COP27 debate on Loss & Damage Fund.
- **Geopolitical Rivalries and Regionalism:** Shift from global institutions to regional/informal alignments weakens consensus-building.
- Deglobalization: Nationalism and protectionism reduce economic interdependence.
 - E.g., U.S.-China trade war; EU's CBAM (Carbon Border Adjustment Mechanism) will make India's export to EU costly and hence uncompetitive.
- Other challenges: Balancing relationships with competing global powers (US and China); Increasing on-the-ground diplomatic presence; Addressing long-standing border disputes and managing regional tensions, etc.



Conclusion

As the emerging world order gives rise to new definitions of interstate relations, behaviours, and doctrines. India must seize this opportunity to translate its multipolar vision into action by leading the creation of fair, inclusive, and future-ready global rules and institutions.

Scan the QR code to know more about the World Order

Weekly Focus #90: World Order-The Rise and Potential Decline



2.2. INWARD-LOOKING DEVELOPMENT STRATEGIES

Why in the News?

The U.S. introduced a Reciprocal Tariff Plan proposing a 10% base tax on all imports and higher tariffs on countries that have trade surpluses with the U.S.

More on the News

- This move signals a shift towards inward-looking development strategies, moving away from earlier outwardoriented policies.
- It reflects the broader trend of deglobalization and is seen as a key factor behind ongoing trade wars, especially between the U.S. and China.
- Other Key Examples of Inward-looking development Strategies
 - China's strategic export controls of rare earth minerals like Germanium.
 - India's Make in India, Product Linked Incentive (PLI) scheme, Atmanirbhar (Self-Reliant) India campaign.

Inward-Looking Development Strategies

- Definition: Inward-looking development strategy focuses on indigenous raw materials and production oriented towards the internal market. It prioritizes domestic economic development through policies that protect local industries and minimize external dependencies.
- Genesis: Different countries have adopted these strategies at different time periods historically. For example,
 - Following the World War I and the Great Depression, countries in Latin America turned towards inward looking development strategy to counter the economic crises caused due to free trade that began in the 19th century.
 - o After independence, influenced by colonial exploitation and a desire for economic autonomy, the Indian government focused on building domestic industries and adopted a strong protectionist stance.

Development Strategies: Inward vs Outward Looking

Comparing approaches to economic development and integration



Inward-Looking Strategy

- 1. Part of the broader trend of deglobalization
- 2. Supports local industries through protective measures
- 3. Protects domestic jobs from foreign competition
- 4. Employs tariffs and subsidies to shield domestic producers
- 5. Limits foreign competition to nurture local businesses
- 6. Emphasizes self-sufficiency and reduced import dependence
- 7. Focuses on import substitution industrialization (ISI)
- 8. Aims to reduce trade deficits and foreign exchange outflows



Outward-Looking Strategy

- 1. Integral to globalization
- 2. Encourages free trade and removal of trade barriers
- 3. Welcomes foreign investment as catalyst for growth
- 4. Promotes global integration of domestic economy
- 5. Prioritizes economic efficiency through competition
- 6. Facilitates technological innovation through knowledge transfer
- 7. Embraces export-oriented industrialization
- 8. Seeks comparative advantage in global markets

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VS

What Are the Major Objectives and Approaches for Inward-Looking Development Strategies?

Objectives	Approaches			
National Security and Strategic Autonomy	 Countries develop domestic supply chains in key sectors (e.g. semiconductors, pharma, renewable energy) to reduce dependency on global markets to avoid supply shocks during crises like COVID-19 or geopolitical conflicts. For Example, United States' CHIPS Act provides subsidies to revitalize domestic semiconductor manufacturing. Japan's Economic Security Promotion Act (2022) aims to secure critical supply chains 			
Reclaiming	• Global trade rules and institutions such as the WTO and IMF often favor rich nations, limiting			
Economic	developing countries' control over their economies. Inward strategies provide more			
Sovereignty	autonomy. For example,			
	 India's Atmanirbhar Bharat Abhiyaan (₹20 lakh crore package) to boost local self-reliance. China's dual circulation policy promotes domestic consumption while maintaining selective external engagement. 			
Reviving	Gobalization has shifted many manufacturing jobs countries having lower labor costs.			
Domestic	Inward-looking policies push import substitution and domestic production, creating jobs.			
Manufacturing	For example,			
Employment and	o The Ministry of Defence has issued 5 Positive Indigenisation Lists , mandating certain			
Strengthening	items be sourced only from Indian industry.			
Economic	Germany's National Industrial Strategy 2030 specifically targets ten strategic sectors			
Competitiveness	for domestic development and protection.			
Addressing Trade Imbalances	Nations often implement tariff and non-tariff barriers to create a more level playing field against economically and technologically advanced compatitors.			
IIIDalailees	against economically and technologically advanced competitors. o For example, Indian government has reserved 75% of the defence budget for			
	procurement from domestic companies.			

What could be potential negative impacts of Inward-Looking Development Strategies?

- **Higher Consumer Prices:** Protectionist policies such as tariffs and import restrictions often lead to **increased production costs and reduced competition**.
 - These costs are ultimately passed on to consumers, resulting in higher prices and limited product choices in domestic markets.
- Loss of efficiency: While moving production back home (reshoring) or to allied nations (friendshoring) aims to reduce dependency on geopolitical rivals, it also leads to duplication of infrastructure and loss of efficiency.
 - o This transition can be costly and may not always deliver expected gains in resilience or job creation.
- Fragmentation of Global Supply Chains: Industries that rely on complex, multi-country inputs, such as electronics and automobiles, face delays, higher costs, and reduced innovation due to weakened international collaboration.
- **Escalation of Trade Tensions and Wars:** Protectionist strategies often trigger retaliatory measures from trade partners, escalating into trade wars.
- **Emergence of Trade Blocs and Bilateralism:** As multilateralism weakens, countries increasingly turn to regional trade blocs and bilateral agreements.
 - This fragmented trade environment can exclude smaller or developing nations and reduce the effectiveness of global trade norms.

Conclusion

While inward-looking strategies can protect **vulnerable industries** and ensure economic sovereignty, they may lead to reduced **economic efficiency** and higher prices for consumers. Successful implementation typically requires complementary policies to enhance **domestic productive capacity**, technological capabilities, and human capital development. The optimal approach often involves **selective protectionism** in strategic sectors rather than complete economic isolation.

2.3. INDUS WATERS TREATY

Why in the News?

India announced the **Indus Waters Treaty (IWT) of 1960** with Pakistan will be held 'in abeyance' with immediate effect, until Pakistan stops its support for **cross-border terrorism**, after recent terror attack.

More on the news

- The term 'abeyance' refers to a state of temporary disuse or suspension, but it is not a legally recognized concept under international treaty law.
- **Neither IWT** nor the **Vienna Convention on the Law of Treaties, 1969 (VLCT)** provides 'abeyance' as a basis for halting or suspending treaty obligations.

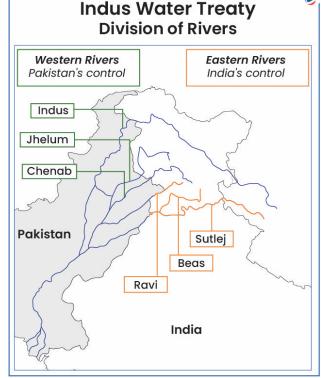
The Vienna Convention on the Law of Treaties (VCLT) is the leading international Convention on treaties, which codifies the customary laws governing how states approach agreements, and is therefore commonly referred to as 'the treaty on treaties'.

- The IWT does not have a provision allowing for unilateral suspension.
 - Article XII (4) of the IWT states the treaty "shall continue in force until terminated by a duly ratified treaty concluded for that purpose.

About the Indus Waters Treaty

- **Origin:** Signed in 1960 between **India and Pakistan** with the help of the **World Bank**, which is also a signatory.
- Objective: To determine the distribution of the waters of the Indus and its tributaries between India and Pakistan.
- Division of water:
 - Eastern Rivers: (Ravi, Beas, and Sutlej) for India's unrestricted use.
 - Western Rivers: (Indus, Jhelum, and Chenab) are allocated to Pakistan but India allowed for specific nonconsumptive uses like navigation, flood protection or flood control, Domestic use, Agricultural use, Generation of hydro-electric power etc.
 - According to Article III (1) of the Treaty, "India is under obligation to let flow" waters of the Western Rivers to Pakistan.
 - **Exchange of Data:** IWT provides for data exchange with respect to the flow in, and utilization of the waters of, the Rivers regularly between the Parties.
- Dispute Resolution: IWT provides 3 Step Dispute Resolution Mechanism viz.
 - o **Step 1: Permanent Indus Commission (PIC):** Disputes are first decided at the level of the Indus Commissioners.
 - > The treaty required the creation of a **PIC**, with a commissioner from each country for communication.
 - > PIC is mandated to meet regularly at least once a year, alternately in India and Pakistan.
 - o Step 2: Neutral Expert: Appointed by World Bank and involves rendering a binding decision.
 - Step 3: Court of Arbitration (CoA): If a neutral expert fails, the dispute goes to CoA. It is a generally sevenmember ad-hoc arbitral tribunal, determines its procedures and decisions by majority vote.

	Implications of the suspension of the Indus Waters Treaty						
On India		On Pakistan					
 Credibility as a responsible international actor: Unilaterally violating the IWT can be seen as violation of treaty. 			Food insecurity: According to the World Bank's report, the Indus system irrigates over 80% of the Pakistan's food crops.				
	• Ecological imbalance: New water infrastructure projects could have	•	Economy: Wheat, rice and cotton majorly dependent on Indus river system are major exports items that earned USD 4.8 billion in 2022.				



- consequences in the biodiversity-rich and seismically sensitive Indus basin.
- Weaponising water resources: Same strategy can be used by China with respect to Brahmaputra.
- **Electricity and water stress:** One-third of Pakistan's electricity comes from hydropower also Pakistan is a water-stressed country.

Other issues with IWT

- Pakistan's objections to Indian dams: Kishanganga (Jhelum) and Ratle (Chenab) dams are objected by Pakistan.
- Not following dispute resolution mechanism: Pakistan on India's Kishanganga Hydroelectric Project bypassed the Neutral Expert mechanism and proceeded directly to arbitration at the Permanent Court of Arbitration (PCA) in The Hague.
 - It violates the treaty's dispute resolution framework, which mandates a sequential escalation from technical mediation to legal arbitration.
- **Biodiversity Impact:** Shahpurkandi (Ravi), Ujh (Ravi) projects can alter the flow of Ravi, affecting Indus River dolphins and their habitat.
- **Climate Change:** The Standing Committee on Water Resources in 2021 in India has urged to renegotiate IWT with Pakistan to factor in the impact of climate change and pollution on the Indus River.
- **State-sponsored terrorism:** In 2016, after a terrorist attack in Kashmir, India warned that "water and blood cannot flow together".
- **No regular data sharing as planned in the treaty:** The flow data sharing is significantly important to understand the dynamics of the river basin in totality.

International principles on international water sharing

- **Helsinki Rules,** 1966: Adopted by the International Law Association and regulating "the use of water of an international drainage basin".
- Helsinki Convention, 1992: Provides a legal framework for preventing and controlling water pollution across national borders.
- UN Watercourses Convention, 1997: United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (UN Watercourses Convention) codified international law on trans boundary water resources.
 - o India, China and Pakistan has not signed.

Conclusion

India's use of the term 'abeyance' is not about rejecting its international duties. Instead, it's a strategic message, i.e. treaty agreements must consider real-world politics, and they can only last if all sides stay credible and do not harm India's interests.

2.3.1. SIMLA AGREEMENT

Why in the News?

Pakistan declared it would hold "in abeyance" its participation in all bilateral agreements with India, including the Simla Agreement.

Shimla Agreement

- **Background:** The Agreement was signed between India and Pakistan in 1972 as a peace measure after the India-Pakistan 1971 War.
 - o The 1971 war led to the creation of the new nation of Bangladesh out of East Pakistan.
- Key Provisions of the Shimla Agreement
 - o **Normalization of Relations:** The principles and objectives of the United Nations Charter shall govern the relations between the two countries.
 - > The agreement outlined steps to resume communications, trade, cultural exchanges, and people-to-people contacts.

- > It also facilitated the **repatriation of prisoners of war and civilians** detained during the conflict, marking a humanitarian gesture.
- o **Bilateral Resolution:** To settle differences by peaceful means through bilateral negotiations or by any other peaceful means mutually agreed upon between them.
- Establishment of the Line of Control (LoC) in Jammu and Kashmir: The agreement converted the 1971 ceasefire line into the LoC.
- o **Respect for Sovereignty and Territorial Integrity:** Both sides pledged to respect each other's sovereignty, territorial integrity, and political independence and refrain from interference in internal affairs.
- o **Provisions for future meetings**: Between the heads of government to further peace efforts and address unresolved issues.



Implications of the suspension of the Shimla Agreement

- **Symbolic and Diplomatic Impact:** Pakistan's suspension is mainly symbolic, as the agreement's practical relevance has diminished due to repeated violations.
 - The bilateral dialogue mechanism envisioned under the deal has been dormant, with high-level talks suspended after major incidents like the 2019 Pulwama attack.
- Strategic Implications for the LoC: Pakistan's non-recognition of the LoC as a de facto border could lead to attempts to alter the status quo, as seen in past conflicts like Kargil.
 - o However, India's military preparedness mitigates immediate tactical consequences.
- **Regional Stability:** The suspension undermines regional stability, particularly in the context of nuclear-armed neighbours.
 - o It could escalate diplomatic and military brinkmanship, derailing prospects for dialogue.
- International Perspectives: Pakistan's move may invite criticism for violating international commitments, strengthening India's narrative of Pakistan's unreliability.
- India's Strategic Advantage: The suspension paradoxically benefits India by removing diplomatic constraints.
 - o India can pursue more harder line against **cross-border terrorism**, **revisit claims over Pakistan-Occupied Kashmir (PoK)**, and intensify diplomatic efforts to isolate Pakistan.
 - The absence of the agreement may also prompt India to reassess other bilateral treaties, such as visa regimes and trade agreements, aligning them with national security interests.

Other important agreements between India and Pakistan

- The Nehru-Liaquat pact: Signed in 1950 relates to the treatment of minorities in their respective countries.
- Indus Waters Treaty 1960: For the utilization and distribution of water of Indus river system.
- The Bilateral Protocol on Visits to Religious Pilgrimages: Signed in 1974 facilitates hundreds of Hindu and Sikh pilgrims to 15 temples and gurdwaras in Pakistan, as well as Muslim pilgrims to five mosques and shrines in India.
- Agreement on the Prohibition of Attack Against Nuclear Installations and Facilities between India and Pakistan in 1988: Both countries are to inform each other on 1st January of every calendar year of the nuclear installations and facilities.
- Agreement on prevention of air space violations and for permitting over flights and landings by military aircraft 1991: To avoid violations of each other's airspace and co-operation.

- Agreement On Pre-Notification Of Flight Testing Of Ballistic Missiles, 2005: Advance Notification of the flight test that it intends to undertake of any land or sea launched, suface-to-suface ballistic missile.
- Kartarpur corridor agreement in 2019: Facilitating visa-free travel for Indian pilgrims to Gurdwara Darbar Sahib Kartarpur in Pakistan.

Conclusion

The Shimla Agreement has the potential to reset India-Pakistan relations as its principles of bilateralism and peaceful coexistence provided a framework for stability. Moving forward, both nations may draw upon the spirit of the Shimla agreement to overcome historical grievances and foster mutual trust.

2.4. 75 YEARS OF INDIA-CHINA RELATIONS

Why in the news?

Marking 75 years of diplomatic ties, Chinese President called for a "**Dragon-Elephant tango**" relations between India and China to symbolize a harmonious partnership between the two nations.

More on the News

- The term "Dragon-Elephant Tango" is a metaphorical phrase used to describe a vision of peaceful and cooperative relations between China and India.
- **Dragon** represents **China** (a symbol from Chinese mythology) and **Elephant** represents **India** (a culturally significant and strong symbol in Indian heritage).
- Tango (a dance form) symbolizes coordination, harmony, and mutual understanding.

Significance of Stable India-China Relations

- **Regional Peace and Stability:** Reduces the risk of conflict along the disputed border and contributes to broader stability across South Asia and the Indo-Pacific region.
 - De-escalation allows both countries to redirect resources from military buildup towards socio-economic development and other pressing domestic priorities.
- **Prosperity and Peace in Indo-Pacific Region:** Stable India—China relations are vital for fostering a prosperous and peaceful Indo-Pacific region by reducing strategic tensions and encouraging cooperative development.
- **Trade and Investment:** A stable relationship fosters a predictable environment for bilateral trade and investments, benefiting various sectors in both economies.
 - E.g., China is a major source of Active Pharmaceutical Ingredients (APIs) for India's pharmaceutical industry, and a significant investor in India's startup ecosystem.
- Access to Critical Resources for India: China dominates the production of rare-earth metals, crucial for emerging technologies. Stable ties can ensure India's access to these vital resources.
 - India also relies on China for solar modules & cells, essential for its renewable energy goals.
- **Global Influence:** As major Asian powers, stable India–China ties enable constructive roles in global governance and amplify their influence through joint efforts in multilateral forums like BRICS and SCO.
 - Cooperation between India and China can offer a counterweight to Western influence in international affairs, pushing for reforms in institutions like the WTO, IMF, and UN.
- Countering Global Challenges: Stable India—China relations facilitate collaboration on global challenges like climate change, public health, and energy security, while promoting joint action on broader transnational issues.

Key concerns in India-China Relations

- **Unsettled Borders:** Along the 3,488-kilometer Line of Actual Control (LAC), the lack of mutual agreement between the two countries has led to multiple military clashes.
 - The recent clashes include Doklam standoff in 2017 and the Galwan Valley clash in 2020.
- Trade imbalance: India's trade deficit with China rose to USD 85 billion (2023-24) against USD 83.2 billion (2022-23). India is also dependent on China for Semiconductors, Pharma APIs etc.
 - o Currently, China is the largest trading partner of India with bilateral trade of USD 118.4 billion (2023-2024).
- China-Pakistan Nexus: India views the China-Pakistan Economic Corridor (CPEC) passing through Pakistanoccupied Kashmir (PoK) as a violation of its sovereignty and territorial integrity.

- China's Assertiveness: Particularly in South Asia through strategies like String of Pearls, presence in Maldives, Sri Lanka, assertion over South China Sea, etc. create insecurities in Indo-Pacific.
 - o India, meanwhile, is strengthening ties with like-minded nations through platforms like the Quad (India, US,

Japan, Australia), seen as a counter to China's assertiveness.

 Water Power: China has control over India's water supply to the northeast region. It has constructed several dams (Zangmu, Dagu, Jiexu, and Jiacha Dams) and can use water as a geostrategic weapon against India.

Way Forward

- Diplomatic engagements: Maintaining open channels of communication through bilateral or regional cooperation like in BRICS, SCO, etc.
 - Both countries are members of BRICS, SCO, G20, and AIIB.
- Building a relationship based on mutual respect and understanding: Both countries need a "durable base" for rebuilding the relations based on a threefold formula of mutual respect, mutual sensitivity and mutual interest.
- Strategic balancing: India must balance strategic caution with engagement, maintaining sovereignty while avoiding unnecessary escalation.
- Water resource management: Enhancing cooperation on sharing hydrological data for Transboundary Rivers and exploring mechanisms for joint management to mitigate potential conflicts.
- Confidence Building Measures (CBMs): Expanding CBMs beyond military interactions to include economic and cultural exchanges in border regions could foster greater trust.

Conclusion

Foreign Minister of India **Dr. S. Jaishankar** in his book '*The India Way: Strategies for an Uncertain World*' argued that managing China is about realism, agility, and strategic clarity. In this context, it would be prudent for India to pursue a steady course of **balancing engagement with deterrence**, **leveraging global partnerships**, and **asserting its interests without becoming a proxy in larger power rivalries**. In this uncertain world, managing China is not about reaching a final settlement, but about **sustaining equilibrium through strength**, **diplomacy**, and **foresight**—hallmarks of a mature global power.

The String of Pearls

- The String of Pearls refers to a geopolitical and strategic framework in which China is developing a network of commercial and military assets (or "pearls") along the Indian Ocean Region (IOR) to secure its energy routes and expand its influence.
- **Network of Ports and Bases:** China has invested in and developed port facilities in countries like Pakistan (Gwadar), Sri Lanka (Hambantota), Bangladesh (Chittagong), and Myanmar (Sittwe and Coco Islands), and has a military base in Djibouti.

India's Response - Necklace of Diamonds" strategy

A multi-pronged approach often referred to as the "Necklace of Diamonds" strategy, includes -

- Developing Naval Bases and Access: E.g., Iran (Chabahar), Oman, Singapore (Changi Naval Base), etc.
- Strengthening Regional Partnerships: Act East Policy and enhanced ties with ASEAN, Japan, and Australia. Strategic partnerships through Quad and Indo-Pacific initiatives.
- SAGAR (Security and Growth for All in the Region) & MAHASAGAR India's vision for maritime cooperation.



2.5. CHINA'S RARE EARTH ELEMENTS EXPORT CONTROL

Why in the News?

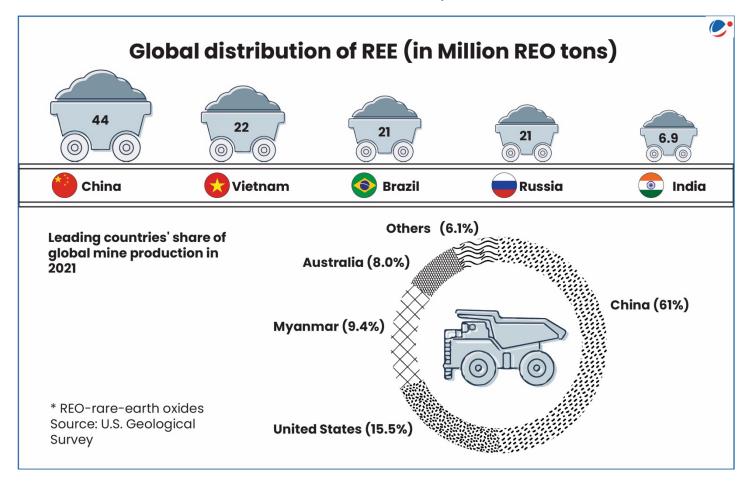
China's Ministry of Commerce imposed export restrictions on seven rare earth elements (REEs) and magnets used in the defence, energy, and automotive sectors in response to U.S. tariff increases.

More on the News

- The new restrictions apply to 7 of 17 REEs: It requires companies to secure special export licenses to export these minerals and magnets.
- The new restrictions are not a ban: They require firms to apply for a license to export rare earths.

What are Rare Earth Elements (REE)?

- Misnomer: According to the **United States Geological Survey (USGS),** most REEs are not as rare as their name suggests and are found in abundance in the Earth's crust.
 - However, they're rarely found in concentrations that are economically viable for mining.
- They were named "rare-earth elements" because most were identified during the 18th and 19th centuries as "earths Elements" and, in comparison to other "earths Elements," such as lime or magnesia, they were relatively rare.
 - o **Earth's Elements** are defined as materials that cannot be changed further by heat.
- Rare Earth Elements (RREs): As per the International Union of Pure and Applied Chemistry (IUPAC) in 2005, are a group of 17 elements.
 - These elements share similar properties such as high density and high conductivity.
 - cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium I, ytterbium (Yb), and yttrium (Y).
- Source: Main sources of REEs are minerals such as bastnasite, loparite and monazite.



Geostrategic significance of recent export control of REE

- **To gain upper hand in the tariff war:** Retaliation against the USA's reciprocal tariffs, which may hurt the Chinese industry due to a fall in exports.
- Implications on Critical technologies: Yttrium and Dysprosium, which are widely used in the manufacturing of jet engine components, defence equipment, and advanced electronics.
 - o For importing nations, supply disruptions can cripple industries, inflate costs, and delay technological advancements.
- Global supply Chain disruption: Due to crunch in supply may affect major REE-consuming countries like the US, Japan, Vietnam, and Germany.
- **Weaponisation of REE:** China first weaponized rare earths in 2010 when it banned exports to Japan over a fishing trawler dispute.
 - Between 2023 and 2025, China began imposing export restrictions of strategic materials including gallium, germanium etc.
- **Geostrategic alternatives:** Longer-term consequences include diversification of supply, reshoring and friend-shoring of manufacturing, and acceleration of recycling.
 - o Reshoring means bringing back the **production to the home country**, and Friend shoring is where businesses source or produce goods in **countries with shared values**.
 - o Countries are seeking alternatives in Africa (notably the Democratic Republic of Congo and Malawi), South America, and Australia.

Global efforts to reduce dependence on China for REE

- **Critical Minerals Mapping Initiative (CMMI) in 2019:** Formed by the US, Australia and Canada to conduct research on critical mineral resources, including REEs.
- The UN Secretary-General's Panel on Critical Energy Transition Minerals: To discuss proper management and a roadmap for Critical energy transition minerals such as rare earth elements.
- Mineral Security Partnership (MSP): Partnerships between countries, including India to focuses on the supply chain of minerals and metals that are most relevant for advanced technologies, defence, energy, and industrial processes

Indian Initiatives for REE production

- Launch of the National Critical Mineral Mission (NCMM): Announced in Budget for 2024-25, to secure India's critical mineral supply chain.
- The Mines and Minerals (Development and Regulation) Amendment Act, 2023: Now allows private companies to bid for the exploration of critical minerals, including REEs.
- Bilateral and Multilateral Cooperation: Such as India-Australia Critical Minerals Investment Partnership, for co-investing in Australian Rare Earth Element (REE) projects.
- Exploration efforts: Department of Atomic Energy discovered around huge source of in-situ Rare Earth Elements Oxide (REO) in Balotra, Rajasthan.

Conclusion

To reduce dependence on China for rare earth elements (REEs), countries may build strategic inventories, boost domestic production, and invest in advanced refining technologies. Deep-sea exploration and recovery from secondary sources offer additional supply avenues. Streamlined regulations and private sector incentives are essential to accelerate self-reliance in the REE value chain.

2.6. INDIA – SRI LANKA RELATIONS

Why in the News?

Prime Minister of India was honoured with Sri Lanka's highest civilian award, **Mithra Vibhushana** during his two-day state visit to Sri Lanka.

Key Outcomes of the Visit

• **Defence cooperation:** India and Sri Lanka signed a **comprehensive MoU on defense cooperation**, consolidating existing understandings into a structured framework.

- Also, Sri Lankan President reaffirmed no use of its territory against India, addressing concerns over China's regional influence.
- Energy Collaboration: India, Sri Lanka, and the UAE agreed to jointly develop an energy hub in Trincomalee.
- Digital Transformation: Both countries signed MoU on Cooperation in the Field of Sharing Successful Digital Solutions Implemented at Population Scale for Digital Transformation.
 - India announced support for Sri Lanka's Unique Digital Identity project.
- Grant Assistance: India announced grant assistance for the development of Thirukoneswaram temple in Trincomalee, Sita Eliya temple in Nuwara Eliya, and Sacred City Complex project in Anuradhapura.

Others:

- India agreed on the conversion of 100 million US dollars in loans to grants.
- India announced a 2.4 billion Lankan rupees package for the **Eastern Province**.
- India also announced comprehensive **capacity-building programme** in India covering 700 Sri Lankans annually.

Significance of India- Sri Lanka Relations

For both Nations

- Cooperation at International forums: India supports Sri Lanka's application to become a member of BRICS.
 - Sri Lanka has extended its support to India's candidature for a non-permanent seat on the UN Security Council for 2028-29.
- Shared maritime security interests in Indian Ocean Region (IOR): Both are committed to countering traditional and non-traditional threats and to ensure a free, open, safe and secure IOR.
- Energy cooperation: Several projects are at different stages of discussions, for instance, plans for inter-grid connectivity, a multi-product petroleum pipeline between the two countries, supply of LNG, and the underpreparation Sampur Power Project.
- Regional and multilateral cooperation: Both are part of, commonwealth Group, Indian Ocean Rim Association (IORA), and **BIMSTEC**.
- Military collaboration: Joint exercises like SLINEX (Naval) and MITRA SHAKTI (Army) are held annually.
 - o Sri Lanka also participates in **MILAN**, the multilateral naval exercise hosted by the Indian Navy.

For Sri -Lanka For India Financial Aid: Nearly USD 4 billion was provided by India in Security of Indian Ocean: Sri Lanka is various kinds of aid in 2022 and 2023 to help the country navigate its economic crisis. o Indian provided assistance for renovating the Kankesanthurai Port in Jaffna. stability. IMF Bailout: India was among the first countries to provide financing assurances to IMF, a prerequisite for the IMF's \$2.9

- billion bailout package approved in 2023. Economic Importance: India has been Sri Lanka's largest trade partner, top FDI contributor, & largest source of tourists.
- Humanitarian Assistance: India acts as a 'first responder' for Sri Lanka in the field of Humanitarian Assistance and Disaster Relief. E.g., During COVID-19 pandemic, India sent 500,000 vaccines to Sri Lanka.
- India's closest maritime neighbour and plays crucial role in preventing territorial actions inimical to India's security/ Alignment with India's policy: Sri Lanka
- has a central place in India's 'Neighbourhood First' policy and MAHASAGAR (Mutual and Advancement for Security and Growth Across Regions) vision.
- Indian Origin Tamils (IOTs): Around 1.6 million IOTs, primarily employed in tea and rubber plantations, with a significant presence in Colombo's business sector.

Irritants in India-Sri Lanka Relations

- Chinese Influence: China's growing influence through financial aid and projects like Hambantota Port increases its leverage over Sri Lanka, impacting India's interests.
 - Chinese vessels (Shi Yan-6, Yuan Wang-5) conduct data collection activities may potentially aid future military operations against India.
- Fishermen Disputes: Sri Lanka opposes use of bottom trawlers by Indian fishermen and frequent entry into Sri Lankan waters citing concerns regarding environmental damage and overfishing.

- Also, territorial dispute over this Kachchatheevu Island, ceded to Sri Lanka in 1974, remains a contentious issue, with Indian fishermen claiming traditional fishing rights.
- **Tamil Ethnic Issue:** Slow reconciliation efforts, e.g., delay in implementation of 13th Amendment (in Sri Lanka's Constitution) post **Tamil-Sinhala conflict** impact India's domestic politics.
 - The amendment was a result of Indo-Lanka Accord (1987). Sinhala nationalists oppose it as an imposition while Tamil groups seek broader powers.

Way Forward

- India's Five "S" Approach: Samman (Respect), Samvad (Dialogue), Sahyog (Cooperation), and Shanti (Peace); to create conditions for universal Samriddhi (Prosperity).
- **Constructive engagement**: Establish a permanent bilateral institutional mechanism to address fishermen disputes, moral persuasion and developmental support to push for effective implementation of the 13th Amendment, etc.
- **Soft power and cultural diplomacy:** Joint promotion of religious tourism under Buddhist circuit and Ramayana Trail with infrastructure support, digital platforms, and diaspora engagement.
- Multilateral cooperation: Effective utilization of institutions like BIMSTEC and Indian Ocean Rim Association (IORA) to create common positions on regional maritime security, climate change, and economic integration.

Scan the QR code to know more about India's Neighbourhood Policy

Weekly Focus #108: India's Neighbourhood Policy: Prospects and Challenges



2.7. INDIA-SAUDI ARABIA RELATIONS

Why in the News?

Recently Prime Minister visited Saudi Arabia.

List of Outcomes

- Strategic Partnership Council (SPC): The 2nd India-Saudi Arabia SPC created 2 new Ministerial Committees on Defence Cooperation & Tourism and Cultural Cooperation under it.
 - Formed in 2019, India is the 4th country after UK, France and China to form such a council with Saudi Arabia.
- High Level Task Force on Investment (HLTF): Aims to fast-track Saudi Arabia's \$100 billion investment in energy, tech, infrastructure, and other key sectors in India.
 - Also, both sides agreed to collaborate or establishing two refineries in India.
- MoUs/Agreements Signed: Space (for Peaceful Purposes), Anti-Doping Education and Prevention, health, etc.

Significance of Bilateral Relations

For Both Countries

- India-Saudi ties reflect India's Middle East policy shift: From a past limited to remittances and religious diplomacy, India has entered a new era—of investment flows, strategic dialogues, joint defence platforms, etc.
 - Hence, India's engagement with the Saudi Arabia is not an outreach. It is a realignment of relation.
 - E.g., Upgradation of "hydrocarbon energy partnership" to a "comprehensive energy partnership" for renewable, petroleum and strategic reserves.



- Strengthening Bilateral Relations: Diplomatic relations between India and Saudi Arabia were established in 1947.
 - Consequently, the Riyadh Declaration (2010) elevated ties to a Strategic Partnership.
 - o Bilateral Defence Engagements: Al Mohed Al Hindi (Naval), SADA TANSEEQ (Army).
- Both Partners in Regional Maritime Security and Trade Corridor: E.g., Indian Ocean Naval Symposium (IONS), Combined Maritime Forces (CMF), Conference on Interaction and Confidence Building Measures in Asia (CICA).

For India

- Saudi Arabia is a Key Supplier of Crude and Petroleum Products: For instance, Saudi Arabia remained India's 3rd largest source of crude oil and petroleum products (2023–24). Also, it was the 3rd largest LPG supplier (2023–24).
- Strong and Growing Economic Partnership: For instance, Bilateral trade reached ~USD 43 billion
 (2023-24). Also, Saudi Arabia is currently India's 5th largest trading partner.
- Saudi Arabia is the guardian of Islam's two holiest sites—the Al-Haram Mosque in Mecca and the Prophet's Mosque in Medina, making it a central pillar of the Muslim world.

[.]Do you know

- Khaliji Capital and Investment: India aims to leverage Khaliji capital (sovereign wealth funds) for its economic growth.
 - For instance, Saudi Arabia has invested around USD 10 billion in India so far and in 2019, it announced plans to invest USD 100 billion more.
- Strengthening People-to-People and Cultural Ties:
 - o Remittances: In 2024, Saudi Arabia contributed 6.7% of India's total inward remittances.
 - o Religious Ties: India's Hajj quota for 2025 has increased, reflecting deepening religious cooperation.
- Counter-Terrorism and Strategic Cooperation: Saudi Arabia has consistently supported India's fight against terrorism and transnational crime. For example:
 - Facilitated arrest of Zabiuddin Ansari (2008 Mumbai attack) & deported Abdul Salam (fake currency racket)
 - o Also, during "Operation Kaveri," it enabled the evacuation of 3,500 Indians from conflict-hit Sudan.
- Support for Moderate Islam and Regional Stability: Saudi Arabia's promotion of moderate Islam under Crown Prince's reforms is vital for India, given the religious and political interlinkages between the Middle East and South
 - For instance, radical ideologies from the Middle East often spill into South Asia, home to 600 million Muslims, including 400 million in India.

For Saudi Arabia

- India–Saudi Arabia Economic Relations: India is Saudi Arabia's 2nd largest trading partner. Indian investments in Saudi Arabia have also increased in recent years, reaching a cumulative figure of approximately USD 3 billion as of 2023.
- **Vision 2030 Synergy:** Saudi Arabia's Vision 2030 aims to diversify its economy, and India is seen as a key partner in this transformation.

Challenges in India-Saudi Arabia Relations

- **Labor and Migration Policies**: Saudi Arabia's "Saudization" policy mandates local hiring quotas, limiting jobs for expatriates, including Indians.
- **Trade Imbalance**: In FY 2022-23, India's trade deficit with Saudi Arabia reached a record high of approximately USD 31.3 billion.
- **Delayed Strategic Projects**: The proposed \$50-billion West Coast refinery project, a joint venture involving Saudi Aramco, has faced delays due to land acquisition challenges and environmental clearance issues in Maharashtra.
- Stalled Free Trade Agreement (FTA) Negotiations: Efforts to finalize a Free Trade Agreement between India and the Gulf Cooperation Council (GCC), of which Saudi Arabia is a key member, have been ongoing since 2004.
- **Geopolitical Divergences**: Saudi Arabia's continued economic support to Pakistan presents a complex dynamic, given India's strategic concerns in the region.
- **Geopolitical Misalignments**: India's close ties with Iran and Saudi Arabia's deepening partnership with China create strategic divergences.

Conclusion

The last decade of engagement has highlighted the growing significance of unconventional areas such as defense and security cooperation, food and environmental security, and cultural exchange, while reaffirming the importance of traditional sectors and strengthening the strategic partnership between India and Saudi Arabia.

2.8. INDIA-UAE RELATIONS

Why in the News?

The recent visit of Crown Prince of Dubai, was his first official to India.

Key Announcements during the visit

- Bharat Mart & Virtual Trade Corridor (VTC): To boost bilateral trade and strengthen the India-Middle East-Europe Economic Corridor (IMEEC).
 - The Bharat Mart is India's warehousing facility which would help the Indian exports showcase their products under one roof. This is similar to China's Dragon Mart.
- Ship Repair Clusters (Kochi & Vadinar): Expected to enhance India's maritime sector with global best practices.
- Other Initiatives: India-UAE Friendship Hospital (in Dubai), IIM Ahmedabad's Dubai campus and Dubai Chamber of Commerce's India office to further deepen economic collaboration.

Significance of Bilateral Relations

For Both Countries:

- Growing Political Relationship: Since PM's 2015 visit—first in 34 years—relations have significantly deepened, from what used to be a buyer-seller relationship into a Comprehensive Strategic Partnership (2017).
 - UAE was invited as a Guest Country (only 9 guest countries were invited) to the G20 Summit held under India's Presidency.
- Strategic Global Partnership: Both countries actively engage in key international groupings such as BRICS, I2U2 (India-Israel-UAE-USA), and the UAE-France-India (UFI) Trilateral.
- India-UAE's Expanding Role in Regional Cooperation:
 - o India-Middle East Economic (IMEEC) Corridor: The Agreement for an Intergovernmental Framework on the India-Middle East Economic Corridor facilitates multilateral cooperation between India and the UAE.
 - o Indian Ocean Naval Symposium (IONS): Both collaborate to ensure free sea lanes.
 - Naval Engagements & Joint Exercises: Bilateral drills, e.g., Gulf Star 1 and PASSEX, alongside Desert Cyclone (India-UAE) and trilateral Desert Knight (India-France-UAE), strengthen maritime cooperation.

For India

- UAE's Pivotal Role as India's Key Energy Partner: For instance, UAE is India's 4th largest source of crude oil and the 2nd largest source of LNG & LPG.
 - o **Strategic Oil Reserves**: UAE is the only nation in the region to offer to store strategic oil reserves in India.
- Robust Trade Relations: For instance, Bilateral trade reached \$85 billion (2022-23), with India exporting goods worth approximately \$32 billion.
 - o It makes the UAE India's 3rd largest trading partner and 2nd largest export destination.
- Deepening Economic Integration & Investment: UAE is the only country with which India has both a trade agreement—CEPA, 2022—and an investment agreement—Bilateral Investment Treaty (BIT, 2023).
 - Comprehensive Economic Partnership Agreement (CEPA) target: To take bilateral non-oil trade to USD 100 billion level by 2030.
 - o Also, UAE is the 7th largest in the total FDI received in India (2000-2024).



- **Strengthening People-to-People and Cultural Ties:** The Indian expatriate community in the UAE numbers approximately **3.5 million**, making it the **largest ethnic group** in the country.
 - Remittances: The UAE was a key contributor to India's remittance inflows in FY24, accounting for 19.2% (approximately \$11.7 billion) of the total.
 - Cultural Milestone: 'BAPS Mandir', first Hindu temple in UAE, is the largest of its kind in the Gulf region.

For UAE

- India as a Major Destination for UAE Investments: For instance, India accounts for approximately 5% of UAE's total Overseas Direct Investments (2000 2024).
- UAE'S Enhanced Market Access under CEPA: E.g., Tariff reductions/eliminations on over 80% of products entering India from UAE.
 - For instance, Following CEPA, UAE's exports to India rose by 7%.
- India Provides Food Security: As UAE's agricultural vulnerability—only 0.7% arable land—makes it highly dependent on food imports, India (extensive agricultural base) is a natural partner.
 - E.g., Platforms like Agriota, links Indian farmers directly with UAE markets.

Challenges in India-UAE relationship

- Migration and Labor Issues: The UAE's Kafala system has been criticized for contributing to labor abuses and forced labor.
 - The Kafala system is a sponsorshipbased labor system in Gulf countries, where employers have control over foreign workers' legal status, including their visas and employment conditions.
- Trade Imbalances: In FY 2022, the India's trade deficit with UAE reached US\$16.78 billion.
- As an OPEC member, the UAE supports policies that may not align with India's stance as a major oil importer, especially when it comes to controlling oil prices.
- **Air Services Agreement Disputes:** The UAE wants to increase the number of flights and destinations to India, but India has limited the expansion to protect its domestic airlines.
- **Regional Crises:** The war in Gaza and Houthi attacks in the Red Sea have affected some regional cooperation, including the India-Middle East Corridor.
- India-Iran vs. UAE-China Dynamics: India's strategic relationship with Iran, especially over regional security and energy interests, can sometimes clash with the UAE's growing ties with China.

Conclusion

India-UAE relations have evolved into a strategic partnership, marked by strong trade ties and cooperation. However, challenges like geopolitical balancing, energy debates, and labor concerns must be navigated carefully.

2.9. 6TH BIMSTEC SUMMIT

Why in the News?

The 6th BIMSTEC (**Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation**) Summit with the theme "**BIMSTEC: Prosperous, Resilient and Open**", concluded in Bangkok under the chairmanship of Thailand.

Major India -Led Initiatives launched at 6th BIMSTEC Summit

- **BIMSTEC Centres of Excellence:** To be set up in India on Disaster Management, Sustainable Maritime Transport, Traditional Medicine, and Research and Training in Agriculture.
- **BODHI (BIMSTEC for Organized Development of Human Resource Infrastructure):** For skilling the youth through training & scholarships to professionals, students, researchers, etc.



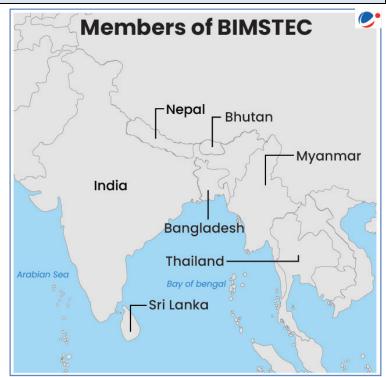
- **Digital Public Infrastructure:** India to conduct a pilot study assessing its need in the region.
- Strengthening people-to-people linkages: India to host first BIMSTEC Games in 2027. India would also host BIMSTEC Traditional Music Festival.

Other Outcomes

- Establishing BIMSTEC Chamber of Commerce: With the organization of BIMSTEC Business Summit annually.
- **BIMSTEC Bangkok Vision 2030:** First-ever vision outlining a strategic plan to build a Prosperous, Resilient and Open or "**PRO BIMSTEC" by 2030** focusing on economic integration, connectivity, and human security.
- Agreement on Maritime Transport Cooperation
- MoUs with Indian Ocean Rim Association (IORA) and Uns Office on Drugs and Crime (UNODC): To institutionalize partnership in shared priority areas.
- Adoption of Rules of Procedure for the BIMSTEC Mechanisms

About BIMSTEC

- Genesis: It is a regional organization established in
 1997 with signing of the Bangkok Declaration.
 - It was originally formed with 4 Members (Bangladesh, India, Sri Lanka & Thailand) with the acronym 'BIST-EC'.
- Secretariat: Dhaka, Bangladesh
- **Member States (7):** Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand.
- BIMSTEC Charter: Foundational document that outlines the goals, principles, and structure of the BIMSTEC. It was finalized in the 5th Summit (2022) in Sri Lanka.
 - Charter confers legal personality on the grouping and paves the way for external partnerships and admission of observers and new members.
- Objective: To create an enabling environment for rapid economic development and social progress and maintain peace and stability in the Bay of Bengal region.



- 7 Priority Areas/Pillars (each led by 1 Member country): Trade & Investment (Bangladesh); Environment & Climate Change (Bhutan); People-to-People Contacts (Nepal); Agriculture & Food Security (Myanmar); Science & Technology and Innovation (Sri Lanka) and Connectivity (Thailand).
 - India is the Lead Country for Security pillar under which there are 3 sub-sectors Counter-Terrorism and Transnational Crime, Disaster Management and Energy Security.

How BIMSTEC can help realize India's foreign policy objectives?

- Alternative to SAARC: SAARC's progress has been hampered by India-Pakistan tensions. BIMSTEC excludes Pakistan, offering India a more functional platform for regional cooperation.
 - o SAARC (South Asian Association for Regional Cooperation) remains largely defunct due to geopolitical tensions, especially India-Pakistan rivalry.
- Aligned with India's Foreign Policy: BIMSTEC aligns closely with India's 'Act East' and 'Neighbourhood First' policies.
 - o It could also be seen as aligning with India's broader goal of enhancing trade and security in the IOR and supporting the Indo-Pacific vision championed by **QUAD countries**.
- Strategic bridge between South Asia and Southeast Asia: Effectively linking India with ASEAN countries through member states like Thailand and Myanmar, which are part of ASEAN.
 - A stronger partnership between ASEAN and BIMSTEC could create a **broader Indo-Pacific framework** that connects continental and maritime Asia.

- **Blue Economy and Maritime security:** Promotes India's interests in Bay of Bengal and helps in securing maritime trade routes, anti-piracy operations, and disaster management.
 - This also effectively aligns with India's SAGAR (Security and Growth for All in the Region) and MAHASAGAR
 (Mutual and Holistic Advancement for Security and Growth Across Regions) in Indian Ocean Region.
- South Asian integration: Focuses on infrastructure, energy, and transport connectivity, promoting regional integration through projects like the BIMSTEC Master Plan for Transport Connectivity

Issues with BIMSTEC

- **Slow Organizational Progress:** The charter enforced after 27 years of formation. Just 6 summits, including the current one, have been held in the last 27 years.
 - o BIMSTEC didn't have an official headquarters or secretariat until 2011. However it presently suffers from inadequate financial & manpower assistance for its operational activities.
- Geopolitical Challenges: China's growing influence in member countries through the Belt and Road Initiative (BRI) creates strategic concerns for India.
 - All BIMSTEC member countries except India and Bhutan are part of BRI projects, giving China strategic leverage across South and Southeast Asia.
- **Low Intra-Regional Trade:** Despite its potential, intra-BIMSTEC trade remains relatively low i.e., around **6-7**% of total trade, indicating a lack of deep economic integration.
 - The BIMSTEC FTA, initiated in 2004, remains unimplemented despite numerous negotiations, hindering trade liberalization and economic integration within the region.
- Infrastructural and Connectivity Gaps: Poor physical connectivity among member states due to stalled connectivity projects or delays in execution limits trade, people-to-people contact, and integration.
 - E.g., India-Myanmar-Thailand (IMT) Trilateral Highway, Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement etc. are facing considerable delays.
- **Political Instability:** Internal political crises and conflicts in member states like **Myanmar**, **Nepal**, and **Sri Lanka** divert attention and resources, hindering regional cooperation.
 - o Strained Relations between Members e.g. **Bangladesh-Myanmar** relations over the **Rohingya refugee crisis**, the India-Nepal border issue, etc. also hinders cooperation.

Conclusion

BIMSTEC represents a **functional, forward-looking grouping** that aligns well with India's geopolitical and economic interests, especially in light of SAARC's stagnation. It exemplifies India's **strategic pivot towards subregional and transregional cooperation** to bypass the limitations of older frameworks and enhance regional integration under India's leadership.

2.10. INDIAN DIASPORA

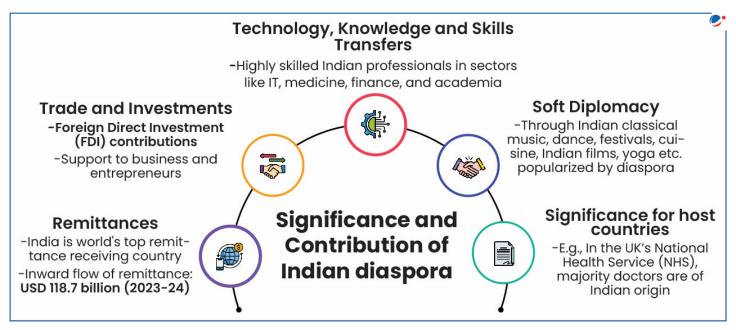
Why in the News?

Standing Committee on External Affairs (2024-25) released report on Indian Diaspora Overseas.

About Indian Diaspora

- **Definition:** They refer to those people of Indian origin **who had migrated to foreign lands** from India either several generations ago or in the recent past on long term Visas issued by other countries and have since settled abroad.
- Indian Diaspora includes:
 - Persons of Indian Origin (PIOs): A person who or whose any of ancestors was an Indian national and who is
 presently holding another country's citizenship/ nationality i.e. he/she is holding foreign passport.
 - Overseas Citizens of India (OCIs): A person registered as Overseas Citizen of India (OCI) Cardholder under section 7A of The Citizenship Act, 1955.
 - > Note: PIO and OCI cardholders have been merged under one category OCI in 2015.
 - o **Non-Resident Indians (NRIs):** An Indian citizen who is ordinarily residing outside India and holds an Indian Passport.
- **Current Status:** As of January 2024, the population of Indian Diaspora was about **35.42 million** (15.85 million NRIs and 19.57 million PIOs and OCIs).

• **Geographical Distribution:** Major countries with significant Indian populations include the United States, United Kingdom, Canada, Gulf countries, Australia, South East Asia, and Caribbean.



Key-Concerns related to Indian Diaspora highlighted by the Committee

- Limited voting Rights to NRIs: As per existing norms, NRIs who have enrolled in voters list have to be present physically to cast their votes.
 - Due to logistical and practical problems, only a few among the registered voters come down for voting.
- Transfer of Sentenced Persons from Foreign Jails: The Committee find that despite having bilateral and multilateral agreements, only 8 Indian prisoners were transferred from foreign countries to India in last 3 years.
- Professionals trapped in job Rackets: E.g., dubious firms involved in fake recruitment job offers through social
 media channels to South-East Asian countries (Cambodia, Myanmar, Lao PDR) to keep them as bonded labourers to
 carry out cybercrime.
- Re-integration of migrants: The Committee note that about 5.95 lakhs emigrants have returned to Indian from foreign countries from 2019 to 2024 due to economic disruptions, stricter immigration policies and reduction in job opportunities.
 - National level policy on re-integration of migrant returnees is still awaited.
- Safety and security of Indian Students abroad: It is noted that 403 incidents of death of Indian students abroad have been reported from 2018 to 2024 due to natural causes, accidents and medical condition etc.

Initiatives taken by India for Indian diaspora

- Pravasi Bharatiya Bima Yojana (PBBY): It was launched in 2017 to provide an insurance cover of Rs. 10 Lakhs in
 case of accidental death or permanent disability and other benefits at a nominal insurance premium of Rs 275 (for
 two years) and Rs 375 (for 3 years).
- Know India Programme (KIP): It is an initiative launched in 2003 for Indian Diaspora between the age group of 21-35 years to familiarize the People of Indian Origin (PIO) youth with contemporary India.
- Knowledge Sharing Programmes: Visiting Advanced Joint Research (VAJRA) Faculty Scheme, Pravasi Bharatiya Academic and Scientific Sampark (PRABHASS), Vaishvik Bharatiya Vaigyanik (VAIBHAV) fellowship programme etc.
- **Pravasi Bhartiya Divas (PBD):** January 9 marks the day Mahatma Gandhi returned to India from South Africa in 1915, to Honor this event PBD was initiated in **2003** to celebrate the contributions of the Indian diaspora.
- Indian Community Welfare Fund (ICWF): It was established in 2009 in the Indian Missions of 17 Emigration
 Clearance Required (ECR) Countries and Maldives to meet contingency expenditure incurred by them for carrying
 out various on-site welfare activities for Overseas Indian Citizens under stress.

Way Forward: Recommendation of the Committee

- Voting rights to NRI: Solutions like Electronically Transmitted Postal Ballot System (ETPBS) can be looked into for extending the voting rights of NRIs.
- Transfer of Sentenced Persons from Foreign Jails: Amend existing agreements or create new ones to facilitate smoother repatriation of prisoners and enhance diplomatic efforts and negotiations with other countries.
- Protecting professionals from trap: Foreign employers should require Ministry of Human Resource Development (HRD) and MEA-attested certificates and maintain professional websites with clear contacts and employee feedback on platforms like Glassdoor or LinkedIn.
- Integration of Returnee Migrants: Kerala is the only State in India that offers economic reintegration and welfare programmes for returning migrants, which are worth emulating by other States and even other countries.
- **Safety of foreign student**: Evolving policy framework is needed to protect Indian students, especially in conflict-prone areas, including a real-time database of those studying abroad.
- Need to Prioritize Emigration Bill 2024: Committee have underscored the pressing need for a comprehensive legislative overhaul to replace the outdated provisions of Emigration Act 1983. Also, need to address Student Migration in the Emigration Bill.

Scan the QR code to know more about India's Diaspora

Weekly Focus #116: India Abroad: Legacy of Indian Diaspora



2.11. NEWS IN SHORTS

2.11.1. SAARC VISA EXEMPTION SCHEME

The Indian government has announced that Pakistan nationals will not be permitted to travel to India under the SAARC Visa Exemption Scheme (SVES).

About SAARC Visa Exemption Scheme

- Launched: In 1992, following the decision at the 4th SAARC Summit held in Islamabad in 1988.
- Aim: Promote people-to-people contact and enhance regional cooperation among SAARC members.
- Currently, the list included 24 categories of entitled persons, which include Dignitaries, Judges of higher courts, etc.

2.11.2. BRICS LABOUR & EMPLOYMENT MINISTER'S MEET 2025 ADOPTS DECLARATION

The declaration addresses two pivotal themes: "Artificial Intelligence (AI) and the Future of Work" and "The Impacts of Climate Change on the World of Work and a Just Transition".

• The meeting, held under Brazil's Presidency in Brasília, was convened under the theme "Strengthening the Cooperation of the Global South for More Inclusive and Sustainable Governance".

Key Highlights of the Declaration

- Supported by: ILO for advancing labour rights.
- The declaration commits BRICS nations to:
 - o **Promote inclusive AI policies** that balance innovation with worker protection.
 - o Advance social dialogue to ensure fair climate transitions.
 - o **Strengthen South-South cooperation** on labour governance, digital inclusion, and green job creation.

Significance of declaration for workers

- Harnessing Al for Decent Work: Equitable access to Al means ensuring that workers have a voice, through meaningful social dialogue.
 - BRICS countries are uniquely placed to shape the transformations needed regarding the rights-based use of Al at work through South-South cooperation." (ILO)
- **Just Transition Green Jobs, Inclusive Policies:** 1.2 billion livelihoods are under threat from ecosystem collapse; 2.4 billion workers endure dangerous heat levels.

- **Universal Social Protection:** Protection gap is increasingly widening, including for platform workers with no safety net and the 83 per cent of people even lack basic coverage.
- Impetus to Social Justice: ILO commits to support BRICS through Global Coalition for Social Justice, offering normative guidance, research, and technical cooperation.

To know more about BRICS, refer to Article 2.5. BRICS in October 2024 Monthly Current Affairs Magazine.

2.11.3. ASEAN-INDIA TRADE IN GOODS AGREEMENT (AITIGA)

India hosts 8th Meeting of Joint Committee on ASEAN-India Trade in Goods Agreement (AITIGA).

• The Association of Southeast Asian Nations (ASEAN), established in August **1967** in Bangkok, Thailand, is a group of **10 countries**.

About AITIGA

- Genesis: Signed in 2009 and entered into force in 2010.
- Mandates: Each party shall accord National Treatment to goods of other parties in line with GATT, 1994.
- Trade: Bilateral trade between India and ASEAN reached USD 121 billion (2023-24).
 - o ASEAN constitutes for about 11% share in India's global trade.

To know more about ASEAN, refer to Article 2.4. ASEAN in October 2024 Monthly Current Affairs Magazine.

2.11.4. EXTRADITION

26/11 Mumbai Terror Attack Accused Extradited to India From the US

- According to the UN Office on Drugs and Crime (UNODC), extradition means the surrender of any person who is sought by the requesting State for criminal prosecution for an extraditable offence.
- Extraditable offence refers to an offence provided for in extradition treaty with that State or the offence is punishable with at least 1 year of imprisonment either in India or in foreign State (in case of no treaty).

What is the framework for Extradition?

- In India:
 - The Extradition Act 1962 (substantially modified in 1993) consolidated the law relating to the extradition of criminal fugitives from India to foreign states.
 - > The Ministry of External Affairs is the nodal authority for Extradition in India.
 - India has extradition treaties with 48 nations, including Bangladesh and the USA.
 - The Government of India finally decides on Extradition and this decision can be appealed in a higher court.
- Globally: United Nations Model Treaty on Extradition (1990), UN Model Law on Extradition (2004), United Nations Convention against Transnational Organized Crime (2000), etc. are some of the international frameworks which deal with various principles of extradition.

Challenges in Extradition Law

- **Misuse of Double Criminality Principle:** Fugitive criminals often exploit this by fleeing to countries where their actions do not constitute an offense, thereby evading extradition.
- Time-Consuming Procedures: due to extensive documentation and bureaucratic requirements.
- Limited number of Treaties: India has extradition treaties with only a limited number of countries.



2.11.5. INDIA-THAILAND STRATEGIC PARTNERSHIP

India-Thailand inked joint declaration towards establishing strategic partnership.

 Strategic partnership, though less formal, is based on cooperation between the states on shared common objectives, primarily security but also extends to trade, economy, technology, etc.

Significance of India-Thailand Strategic Partnership

- Mutually-Beneficial Goals: Both have shared interests in a free, open, transparent, rules-based, inclusive, and resilient Indo-Pacific and support for ASEAN (Association of Southeast Asian Nations) Centrality.
 - 'ASEAN centrality' emphasizes the role of ASEAN as the driving force behind the geopolitics or geoeconomics of the region.
- Overview of India-Thailand Relations

 Diplomatic:
 Diplomatic relations dates back to the year 1947.

 Economic:
 Bilateral trade reaching approximately USD 15 billion in 2023-24.

 Defence:
 Exercise MAITREE, INDO-THAI CORPAT, etc.
- Strategic Location: Thailand is India's Maritime Neighbour with key interest in regional peace.
- Complementing Policies: India's "Act East" and Thailand's "Act West" policies complement each other.
- Role in its Regional and Sub-regional Groupings: Thailand is an important partner of India in the ASEAN; Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), etc.

Other Key Agreements Inked

- MoUs on cooperation in various sectors: Development of National Maritime Heritage Complex (NMHC) at Lothal,
 Development of North Eastern Region (MDoNER), etc.
- Facilitate People-to People Contact: Establishment of an India-Thailand Consular Dialogue.
- Trade facilitation: Exploring the establishment of local currency-based settlement mechanism.

2.11.6. INDIA'S EXTENDED CONTINENTAL SHELF CLAIM

Recently, India has increased its **claim in the Central Arabian Sea**, as part of its **'extended continental shelf'** by nearly 10,000 square km but also **modified an earlier claim to avoid a long-standing dispute with Pakistan**.

Dispute over the maritime boundary

- Exclusive Economic Zone: Coastal countries have an "exclusive economic zone," (EEZ) which gives exclusive mining and fishing rights, upto 200 nautical miles from their coastlines.
 - This area extends unbroken from their landmass all the way till the sea bed.
 - All of this oceanic area is considered part of a country's extended continental shelf.
- India made its first claim in 2009 in vast stretches of sea to a UN body, called the Commission on the Limits of the Continental Shelf (CLCS).
- Pakistan in 2021 objected claiming that the area was under 'dispute', specifically, Sir Creek.
- In March 2023, CLCS rejected the entirety of India's claim in the Arabian Sea region. However, the Commission allowed countries to submit 'modified claims.'

Commission on the Limits of the Continental Shelf (CLCS) Objective: To facilitate implementation of the United Nations Convention on the Law

Objective: To facilitate implementation of the **United Nations Convention on the Law of the Sea** in respect of the establishment of the outer limits of the continental shelf beyond 200 nautical miles from the baseline.

Meeting: Meets at the UN Headquarters in New York.

Governance: Wildlife Institute of India's governance is run under the Society, chaired by the Union Minister of Environment & Forests.

Members: 21 members (elected by States Parties to the Convention)

Nature of Recommendations: Final and binding on coastal states.

Secretariat: Provided by the Secretary-General of the United Nations.

About Sir Creek

- It is a 96-km-long disputed tidal estuary.
- It extends into the Arabian Sea and roughly divides the Sindh province of Pakistan from the Kutch region of Gujarat.
- In 1947, India wanted it to be settled according to international principles of maritime law, called the **Thalweg Principle** (boundary can be fixed only in the middle of the navigable channel) in 1947.
 - Pakistan, however, claimed that Sir Creek was not navigable, so the dispute could not be settled according to the Thalweg principle.

2.11.7. TRANSSHIPMENT FACILITY FOR BANGLADESH

India formally revoked transshipment facility for Bangladesh exports from India.

- The 2020 agreement facilitated export of Bangladeshi goods through Indian Land Customs Stations (LCSs) to ports for destinations in third countries in Europe, West Asia, and beyond.
- India cited logistical challenges such as significant congestion at Indian ports and airports hindering India's own export processes, as primary reason for revoking the agreement.
- However, decision also follows strained bilateral relations and recent remarks by Bangladesh government's Chief Advisor that Bangladesh is the only guardian for all in the Indian Ocean Region (IOR), denouncing India's role as Net Security Provider.

India's role as Net Security Provider in IOR

- Geo-Strategic: India's central position in the IOR, with a 7,500-km coastline and proximity to key chokepoints (e.g., Strait of Malacca, Bab al-Mandab).
 - India's MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions) Vision, 2025 as an extension of the 2015 SAGAR doctrine.
- Maritime Security: India undertakes anti-piracy and counter-trafficking operations in the IOR, ensuring security of Sea Lines of Communication.
- Development and Humanitarian Assistance: India's rapid response to the 2004 Indian Ocean tsunami, water crisis in Maldives (2004), economic crisis in Sri Lanka (2022), etc. establish its credentials as the first responder to the crisis in the IOR.

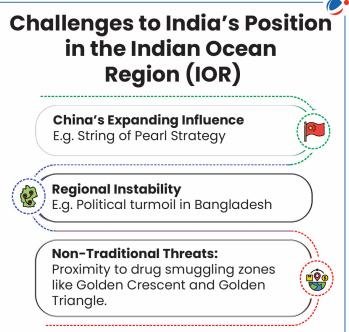
2.11.8. HEARD AND MCDONALD ISLAND

US President announced reciprocal 10% tariffs for several US trade partners, including Heard and McDonald Island

• The President called April 2 "Liberation Day" and declaring it "one of the most important days in American history.

About Islands

- Heard Island and McDonald Islands are uninhabited subantarctic islands in the Southern Ocean, with no permanent human population.
- They are administered by Australia.
- As the **only volcanically active subantarctic** islands they 'open a window into the earth', thus providing the opportunity to observe ongoing geomorphic processes and glacial dynamics.
- They are listed as UNESCO World Heritage Sites.

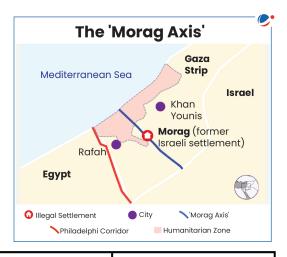


2.11.9. MORAG AXIS

Israel has completed the takeover of a **new security corridor known as the Morag axis.**

Morag axis

- This area consists mainly of **agricultural land located between Khan Younis and Rafah**, stretching from east to west across the Gaza Strip.
- The name "Morag" refers to an illegal Israeli settlement that was established in the region between 1972 and 2005.





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3. ECONOMY

3.1. INNOVATION ECOSYSTEM FOR DEEP TECH

Why in the News?

Union Minister for Commerce and Industry urged Indian startups to focus more on Deep tech innovation.

What are Deep Tech Startups?

- Deep Technology or Deep Tech refers to innovations founded on advanced scientific and technological breakthroughs, encompassing various technologies (refer infographic).
- DeepTech startups utilize existing advanced technologies to create novelto-market solutions for complex and often unresolved problems or to invent even more advanced technologies rooted in core science and engineering fundamentals.

Deep Tech Startup Ecosystem in India

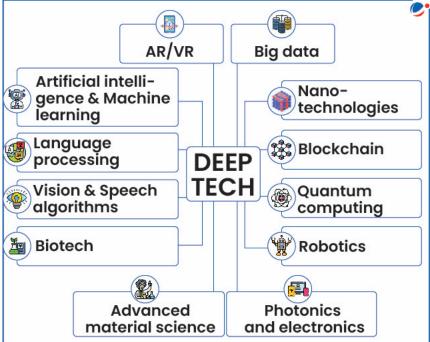
- Extent: India's deep-tech ecosystem, currently at around 4,000 start-ups, is expected to reach 10,000 by 2030 according to estimates by the Department for Promotion of Industry and Internal Trade.
- Global Standing: Despite having third largest pool of DeepTech startups, India ranked 6th among the top 9
 DeepTech ecosystems in the world in 2023 (Nasscom).
- **Funding:** As per Nasscom, India's 4,000 deep-tech startups attracted \$1.6 billion in 2024, a 78 per cent increase year-on-year.

Examples:

- o Agnikul Cosmos startup launched the world's first rocket with a single-piece 3d-printed rocket engine.
- ImmunoAct, IIT Bombay and Tata Memorial Hospital developed an indigenous CAR-T cell therapy to treat
 Cancer.
- ideaForge Technology is revolutionizing the UAV market with its advanced drones.

Why are Deep Tech Startups lagging in India?

- Lagging Institutional Support: According to a study commissioned by the Office of the Principal Scientific Advisor, only one in six public-funded research and development organisations provide support to 'deep tech' startups in India
- Inconsistent Funding: In 2023, Indian Deep Tech startups saw a decline in funding over the previous year, but it increased in 2024.
 Also, India's venture capital (VC) landscape prioritises quick
 - Also, India's venture capital (VC) landscape prioritises quick returns over patient capital.
- Long Gestation Period: Deep tech startup provides Extended development timelines and high capital intensity, and also carry large technical uncertainty, which presents a large risk.
- Focus on Consumption-Driven Startups: India's startup boom has largely been fuelled by consumer-facing businesses rather than deep-tech breakthroughs.
- **Regulatory Hurdles:** Lack of universal consensus in regulations relating to Deep Tech, policy uncertainty like scrapped angel tax, red tape and a risk-averse investment culture hinder progress.



Spinouts are companies formed based on

owned by the University.

academic research generated within and

- **Education and Research Infrastructure:** Indian universities rarely rank among global leaders in original research, and this quality gap results in the migration of Indian talent to foreign destinations.
- **Limited Academia-Industry Collaboration:** It hinders prototyping and commercializing of research outcomes, hindering the development of the Deep Tech ecosystem.

Initiatives for India's Deep Tech Ecosystem Deep Tech Fund of Funds Draft National Deep Tech Startup Policy Proposed in Union Budget 2025-26. A policy framework to create Fund of Funds and enhance technology commercialization. and R&D **ADITI Scheme** Anusandhan National Research Foundation Grants for developing critical and strategic Creating a "Cloud of Research and Innovadefense technologies. tion Infrastructure" providing access to underused scientific equipment and facilities. **Thematic Missions International Collaborations** Initiative on Critical and Emerging Technol-National strategy on Blockchain, AIRAWAT, National Quantum Mission, India Al Mission ogy (ICET) with USA, Partnership for Resilient Semiconductor Supply Chain with Japan and QUIN by Quad Members.

Way Forward

- Spinouts: Enabling and facilitating labs/institutes to generate more spinouts can lead to a self-perpetuating cycle
 of the generation of deep-tech startups and generate external revenue for labs/institutes to advance further
 research.
- **Infrastructure Creation:** Identify and strengthen innovation clusters, especially in five focus sectors (Medical Devices, Space, Defence, Agriculture, and Manufacturing).
 - Also, establish dedicated R&D facilities with high-performance computing resources, simulation tools and testbed environments.
- **Foster Investment Ecosystem:** Establish co-investment programs with Venture Capitalists (VCs), introduce government-backed instruments and simplify regulatory processes related to VC investments.
 - Also, India needs to bridge the gap in investor knowledge regarding DeepTech and address challenge of investor security through loan guarantees, regulatory sandboxes etc.
- **Policy Incentives for R&D:** Provide grants/access to regulatory sandboxes to prototype and test, facilitate platforms connecting startups with enterprises and introduce tax credits for DeepTech R&D expenditure.
- Implementation of National DeepTech Startup Policy (NDTSP): Develop a comprehensive roadmap for the implementation of NDTSP and establish monitoring and evaluation mechanisms to track the progress.

3.2. ELECTRONICS COMPONENT MANUFACTURING SCHEME

Why in the News?

Ministry of Electronics and Information Technology notified the Electronics component manufacturing scheme.

About Electronics Component Manufacturing Scheme (ECMS)

Ministry: Ministry of Electronics and Information Technology (MeiTY)

- Objective: To develop robust component manufacturing ecosystem by attracting investments (global/domestic) across the value chain by integrating its domestic electronic industry with the Global Value Chains (GVCs).
- Targeted Segments:
 - o **Subassemblies** (e.g. for display module and camera module)
 - o Bare Components (e.g. Multi-layer Printed Circuit Board etc.)
 - Selected bare components (e.g. Flexible printed circuit board etc.),
 - Supply chain ecosystem and capital equipments (e.g. Capital goods used in electronics manufacturing etc.)
- Types of Fiscal incentives offered for different segments:
 - o Turnover-linked (on incremental turnover/sales) for Sub-assemblies and Bare components
 - Capex-linked (on eligible capital investment) for Supply chain ecosystem and capital equipment for electronics manufacturing
 - o Hybrid Incentive of both, based on industry needs for Selected bare components.

• Tenure:

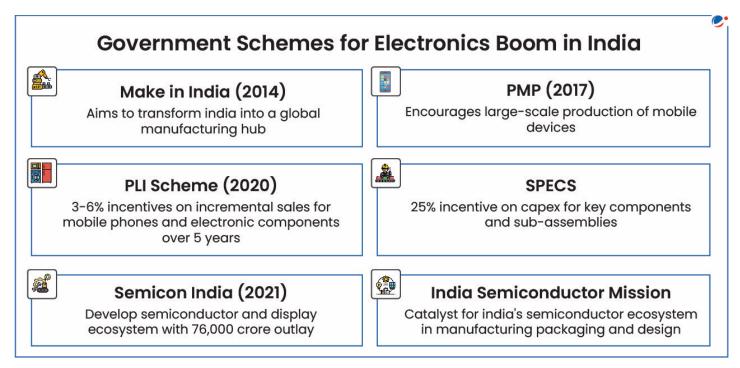
- o **Turnover Linked Incentive:** 6 years with one year of gestation period
- Capex Incentive: 5 years
- Eligibility: Greenfield as well as brownfield investment for the target segment shall be eligible under the scheme.
- Implementation agency: MeiTY through a nodal agency, which shall act as a Project Management Agency (PMA).

Significance of Electronic Components Sector India

- **Economic Potential:** The electronics industry is one of the fastest-growing sectors in India, with **5 times** growth in Domestic production of electronic goods (FY2014-15 to FY2023-24).
 - India's electronics sector is worth more than \$150 billion today and by the end of this decade, the target is of \$500 billion in production.
- **Export Growth:** The sector contributed **\$29.12 billion** to India's total exports in **FY24** with **>20%** Compound Average Growth Rate (CAGR) in exports of electronic goods (FY2014-15 to FY2023-24).
- National Security: Reliance on foreign electronics especially in defense, poses risks such as data breaches and supply chain disruptions.
 - o India's first ever national security semiconductor fabrication plant will be set up under India-US joint cooperation to produce chips for military hardware.
- **Drives Technological Innovation in industries:** E.g., 5G Technology Enabling Remote Surgery and Autonomous Vehicles.

Challenges faced by electronic component sector in India

- **High cost of manufacturing:** Multiple tariff slabs and surcharges, high material and logistics costs etc. make India's products globally uncompetitive.
 - o Tariffs and material costs result **4%-5% disadvantage for components compared to China** due to the high cost of inputs.
 - Scale up challenge: Scale up exists in manufacturing of low-complexity or locally produced components such as casings, glass, etc.
- Lack of R&D and design ecosystem: India spends less than 1% of GDP on R&D, far behind the USA and China (over 2.5%).
- Lack of access to global demand: Major global brands control 80% of the electronic market but most have not tapped India for exports.
- **Heavy dependence on imports of Critical minerals:** It exposes the sector to global supply chain disruptions and price volatility.
- Weak Component Ecosystem: Component production lags behind overall electronics growth due to high capex needs and has a lower turnover-to investment ratio, which makes current thresholds unattractive.
 - Long Gestation Period: A gestation period of 1-2 years exists between investment and production in component manufacturing.
- **Technological Challenges:** Indian manufacturers currently lack the necessary technologies and skillsets for advanced electronics and components manufacturing, making technology transfer a critical need.



Way Forward (Niti Aayog's Electronics: Powering India's Participation in Global Value Chains (GVCs)

Fiscal Interventions

- Fiscal incentive for Components manufacturing:
 - > **Opex support for scaling manufacturing** of low complexity / locally produced components (non-SMT grade, casing, glass, etc.).
 - > Capex support for high-complexity components (Mechanics, capital goods, special components (SMD grade), Lithium-lon cells).
 - > Hybrid support for high-complexity components (SMD grade, 8 layer+ PCB passives etc.)
- o Innovation scheme to promote SMEs/R&D centers of Indian firms to invest in product design and R&D.
- Develop large-size scaled clusters, provide Worker's housing facilities, Provision for localized regulations (e.g., labor laws) and cluster governance etc.

Non-Fiscal Interventions

- o Rationalize tariffs / duties on inputs to improve competitiveness of Finished Goods for exports
- Attract overseas high-level talent for high precision manufacturing and design through expedited visa approvals for training.
- o Foster collaboration between academia & industry for advanced manufacturing and high-tech skills.
- o Simplify the process of Tech transfer and fast track approvals required for components manufacturing.

3.3. PRADHAN MANTRI MUDRA YOJANA (PMMY)

Why in the News?

On 8 April 2025, India marks 10 years of the Pradhan Mantri MUDRA Yojana (PMMY).

About PMMY

Ministry: Ministry of finance

Launch year: 2015

Objective of PMMY



To provide **collateral free access to credit** in a seamless manner **to micro enterprises** in the country.

To **fund the unfunded** by bringing MSMEs to the formal financial system and extending affordable credit to them





To provide financial inclusiveness and support to the marginalized and hitherto socio-economically neglected classes

- Mudra loans under PMMY can be availed of from nearby branch office of a Bank, Micro Finance Institutions and NBFCs, Regional rural banks etc
 - Borrowers can also file online application for MUDRA loans on Udyamimitra portal
- MUDRA (Micro Units Development and Refinance Agency Ltd) provides refinance support to its intermediaries viz.

 Banks, Micro Finance Institutions and NBFCs.

 Welve Addition to Addition to the NAMED Addition to the Name and NBFCs.
 - MUDRA is a refinance agency and not a direct lending institution.
 - MUDRA also monitor the PMMY data by managing the web portal, facilitate offering guarantees for loans granted under PMMY and take up other activities assigned to it from time to time.

Categories of the loan

- Shishu: covering loans upto 50,000/-
- o **Kishor:** covering loans above 50,000/- and upto 5 lakh
- o Tarun: covering loans above 5 lakh and upto 10 lakh
- o **Tarun Plus:** covering loans above 10 lakh and upto 20 lakh for those entrepreneurs who have availed and successfully repaid previous loans under the 'Tarun' category.
- Nature of Assistance: Term Loan, Overdraft Limit, Working Capital and Composite Loan for Acquiring Capital.
 - The overdraft amount of `10,000 sanctioned under Pradhan Mantri Jan Dhan Yojana (PMJDY) has been also classified as MUDRA loans under PMMY.

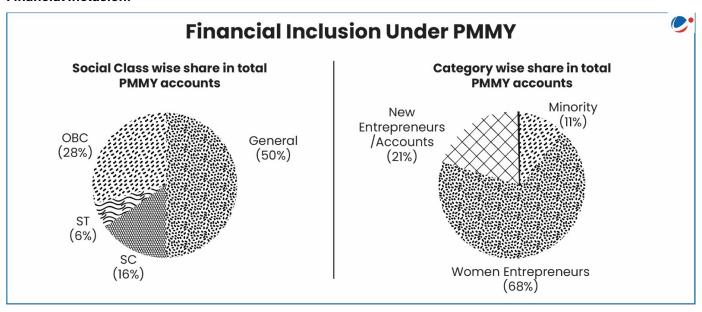
Key features PMMY

- Collateral free loan: No collateral security or any guarantor is required for availing loan under Mudra scheme.
 - Loans are guaranteed by Credit Guarantee Fund for Micro Units (CGFMU) which is the Trust Fund set up by Government of India, managed by NCGTC as a Trustee.
- Interest rate: The interest rates are deregulated
 - O However, to improve implementation of the Scheme, Interest Subvention of 2% on prompt repayment of Shishu loans extended under PMMY for a period of 12 months to all eligible borrowers.
 - Also, MUDRA extends a reduction of 25bps in its interest rates to MFIs / NBFCs, who are providing loans to women entrepreneurs.
- Progressive Lending (From Shishu to Tarun): The share of Kishor loans has grown from 5.9 percent in FY16 to 44.7 percent in FY25, indicating a shift from micro to small enterprises.
 - The **Tarun category** is also gaining momentum, proving that Mudra is not just about starting businesses but helping them scale.
- Helps in reducing regional disparity: The proportions allocated to developed regions have declined, while
 underdeveloped regions such as Bihar, UP, Odisha, and the North East have experienced significant gains (SBI
 Report).
- **Promote first time entrepreneur:** Out of the 52 crore loans given under MUDRA, over 10.6 crore have gone to first-time entrepreneurs.

Value Addition by MUDRA

- Mudra Card: It provides a facility of working capital arrangement in the form of an overdraft facility to the borrower.
- Mudra Mitra: It is a mobile phone application. It guides a loan seeker to approach a Banker in availing MUDRA loan under PMMY.

Financial Inclusion:



 Synergies with other programs: MUDRA, being an initiative for promoting micro enterprises, fits well with Make in India initiative, National Urban Livelihood Mission, National Rural Livelihood Mission for supporting these micro enterprises.

Issues associated with PMMY

- High NPAs in MUDRA Loans: The non-performing assets (NPAs) under the PMMY in FY25 are 2.21 percent overall.
 PSU banks reported a higher average NPA of 3.6 percent.
 - However, NPA's Under Mudra loan is improving in recent past.
- Issues in Scheme Design:
 - Ceiling of 15% on pay out under CGFMU (maximum amount the CGFMU is willing to cover for a defaulted loan)
 restricts the benefits of the banks.
 - o Other issues: High Guarantee fee; high refinancing rates; security risk due to Lack of collateral etc.
- **Implementation challenge**: Borrowers lack knowledge of basic documentation. Most rejection of loan applicants happens at CIBIL check level and as a failure to submit the required documents.
- Lack credit discipline: Sometimes loan is diverted for personal use leading to repayment defaults.
- **Poor monitoring and Evaluation:** Lack of standardized process for monitoring performance of micro entrepreneurs as frequent migration of borrowers happens from one category to another.

Measures to be taken to improve Mudra loan

- **Increase financial awareness:** This will empower entrepreneurs with the knowledge to manage their finances effectively, reduce default rates, improve financial health, and enhance business operations.
- Enhanced Credit Guarantee Scheme (ECGS): This would help to encourage banks to lend more to small and micro enterprises.
- Increase Ticket Size for Women Entrepreneurs: Provide higher limits, interest subvention, or targeted schemes for women-led enterprises to enhance impact.
- Implement a Robust Monitoring and Evaluation Framework (RMEF): Leverage technology to track loan disbursements, utilisation, and repayments in real-time. This will ensure transparency, minimize misuse, and improve the scheme's efficiency, building stakeholder trust.

Conclusion

The rise in average loan size, growing share of MSME credit, and the shift from micro to small enterprises reflect its growing impact. PMMY is not only fuelling self-employment and job creation, but also strengthening India's grassroots economy and advancing equitable growth.

3.4. ONE STATE, ONE RRB

Why in the News?

Recently, Department of Financial Services notified **amalgamation of 26 Regional Rural Banks (RRBs)** on the principles of "One State One RRB".

More on the news

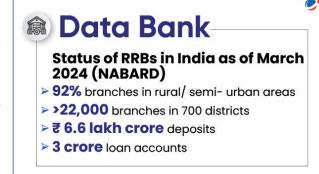
- The amalgamation was done by the Central Government in exercise of the powers conferred under Regional Rural Banks Act, 1976.
- This is the fourth phase of amalgamation and post amalgamation, there will be 28 RRBs (down from 43 earlier) in 26 states and 2 UTs.
 - E.g., Baroda U.P. Bank, Aryavart Bank and Prathama U.P. Gramin Bank in the State of Uttar Pradesh have been amalgamated into a single RRB Uttar Pradesh Gramin Bank.
- The **first phase of amalgamation** (FY 2006 to FY 2010) was based on recommendations of the **Dr. Vyas Committee** with focus on **merging RRBs under the same sponsor bank** within a state.

About Regional Rural Banks

- **Genesis:** Regional Rural Banks were established in **1975** based on the recommendations of the **Narasimham Working Group.**
 - The first five RRBs were set up on 2nd October 1975 through an **ordinance**, which was later replaced by the **Regional Rural Banks Act, 1976.**
- Ownership: Jointly owned by Government of India (50% stake), the concerned State Government (15%), and the sponsoring commercial bank (35%).
- Regulation and Supervision: RRBs are regulated by the Reserve Bank of India (RBI) under the Banking Regulation
 Act, 1949 and supervised by the National Bank for Agriculture and Rural Development (NABARD).
 - o For tax purposes, they are treated as cooperative societies under the Income Tax Act, 1961.
- Requirements:
 - Must allocate 75% of ANBC (Adjusted Net Bank Credit) or CEOBE (Credit Equivalent of Off-Balance Sheet Exposure) whichever is higher to Priority Sector Lending (PSL).
 - Must maintain a Capital to Risk-Weighted Assets Ratio (CRAR) of 9%, as per RBI norms.

Significance of One State One RRB

- Accelerated business growth: Total RRB business as a percentage of India's GDP is expected to reach ~5.2%6 by FY30 from ~3.7%6 as of FY24.
- Financial Benefits: The amalgamated RRB will have-
 - Greater capital base to meet RBI mandated capital adequacy norms;
 - Improved liquidity position owing to increased availability of funds and improved efficiency due to economies of scale.



- **Improved compliance**: A unified RRB can centralise compliance functions, such as anti-money laundering checks, KYC verification and reporting to the RBI and NABARD.
- Strengthened lending capacity: This enables higher credit flow to rural sectors, particularly MSMEs and agriculture.
 - o In 2022-23, Regional Rural Banks accounted for 11.2% of total agricultural ground level credit
- **Promoting financial inclusion:** Improved tech and infrastructure can expand digital reach and support product innovation aligned with government schemes.
 - For instance, some RRBs have successfully implemented customer-centric digital services such as **Micro-ATMs**, call centres, net banking, Video KYC, RTGS, and IMPS.
- **Enhanced competitiveness:** Pooled resources and expertise may allow diversified and locally tailored products which will boost market position and rural outreach.

- o Products such as microfinance options for small businesses, seasonal crop-linked savings schemes and products bundled with insurance plans etc. can be offered.
- Consolidated IT and technological infrastructure: It can result in superior overall capabilities for the merged entity including improved cybersecurity, fraud prevention, big data analytics etc.
- Other benefits:
 - Operational efficiency through rationalization of branch network, elimination of redundant processes and reduction in operational overheads.
 - Availability of a large pool of capable personnel with diverse skills.
 - o Enhanced oversight and operational guidance by aligning RRBs with regionally strong sponsor banks can.

Challenges in Amalgamation of RRBs		
Operational	Governance and stakeholder management	
 Differences in operational and organizational structure of amalgamated banks Unexpected delays and downtime, with impact on customers Operational difficulty associated with physical movement and maintenance of documents and files 	 Issues related to workforce realignment and employee movement among amalgamated banks Difficulties in tracking updates across departments and technology service providers 	
Financial	Technological	
 Inconsistencies in the chart of accounts and variability in the mapping of branch and corporate ledgers Possibility of an adverse impact on the CRAR ratio after amalgamation Complications in the movement of securities, funds and investments 	 Issues related to ensuring secure migration of CBS data High volume of data related to transaction histories and migrated data backups 	

Conclusion

To ensure the success of the "One State-One RRB" amalgamation, it is crucial to harmonize HR policies, integrate digital systems, streamline branch operations, and tailor products to local needs. Strengthening NPA recovery, forming state-level monitoring committees, and conducting regular financial reviews will help address challenges and promote financial stability and rural inclusion.

3.5. NEWS IN SHORTS

3.5.1. INDIA'S EXTERNAL DEBT

As per Finance Ministry's **Quarterly External Debt Report (December 2024)**, **External Debt** has **risen by 10.7%** (from December 2023) mainly due to **Valuation Effect.**

• Valuation effect occurs due to the appreciation of US dollar vis-à-vis the Indian Rupee.

Other Key Highlights of the Report

- External Debt to GDP ratio: Stood at 19.1% (December, 2024) from 19.0% (September, 2024).
- Composition: US dollar Denominated Debt and Loans constituted the largest component.
- Debt service (Principal repayments plus interest payments): Declined by 0.1% (September December, 2024).
- Long Term Vs Short Term Debt: Former recorded a marginal increase while the latter observed a marginal decline.

About External Debt

 Meaning: Refers to the money borrowed from sources outside the country, by both the Central Government and Corporations (External Commercial Borrowings).

- Predominantly denominated in other currencies viz., US Dollar, SDR, etc.,
- Sources: Could be foreign commercial banks, international financial institutions like IMF, World Bank, etc., or foreign governments.

Challenges with rising External Debt

- Repayment Burden: Since, it is usually denominated in other currencies, changes in exchange rate affects its repayment burden.
- Rising Inflation: Prolonged inflation further increases the interest rates, slowing down growth, resulting in a higher external debt to GDP ratio.
- Global Scenario: Global threat of stagflation may lower the demand for India's exports affecting the debt service ratio.



3.5.2. MOSPI RELEASES CAPEX (CAPITAL EXPENDITURE) SURVEY

The Forward-Looking Survey on Private Sector Capex Investment Intentions (Capex Survey), the first of its kind by the National Statistics Office (NSO) (under MOSPI), was conducted under the Collection of Statistics Act, 2008.

Key Findings

- Private sector CAPEX grew 66% from FY22 to FY25, reaching ~Rs 6.5 lakh crore.
- Manufacturing enterprises accounted for 48% of total private sector CAPEX in FY24-25.
- In 2024-25, most enterprises focused CAPEX on core assets, with others investing in value addition, opportunistic assets, and diverse strategies.

Significance of Capital Expenditure (CAPEX)

- Competitive Advantage: By investing in Capex, companies can enhance their operational efficiency, innovate products or services, and stay ahead of competitors.
- Asset Maintenance and Upgrades: Capex is needed to upgrade technology, or expand production capacity.
- **Investor Confidence:** Capex signals to investors that the company is committed to its long-term growth and value creation.
- **Strategic Decision-Making:** Capex decisions reflect strategic priorities, indicating where resources are allocated to drive future growth.

Challenges hindering private sector Capital Expenditure

- Difficulty in mobilizing large equity and affordable debt.
- Project structuring issues related to risk estimation and mitigation.
- **Delays** in clearances and land acquisition.

About Capital Expenditure

- **Definition**: Capital expenditure is the money spent by the government on the development of machinery, building, health facilities, education, etc.
- Capital expenditure includes money spent on the following: Acquiring fixed and intangible assets; Upgrading an existing asset; & Repayment of loan.

Aspect	Capital Expenditure	Revenue Expenditure
Nature	Creates assets for the future	Does not create assets or reduce liabilities
Impact	Results in long-term benefits or returns	Day-to-day operational spending.
Duration	One-time or infrequent spending	Ongoing, recurring spending

3.5.3. COASTAL SHIPPING BILL, 2025

Recently, the Lok Sabha passed the Coastal Shipping Bill, 2025.

Aim of the Coastal Shipping Bill, 2025

- To consolidating laws related to regulation of coastal shipping.
- To regulate all types of vessels, including ships, boats, sailing vessels, and mobile offshore drilling units.
- To repeal Part XIV of the Merchant Shipping Act, 1958, which regulates ships other than sailing vessels engaged in trade within coastal waters.

Know the term

➤ Under the Bill, "coastal waters" means any part of the territorial waters of India, along with any part of the adjoining maritime zones of India within the meaning of the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, for undertaking coasting trade.

Key Provisions of the Coastal Shipping Bill, 2025

- License for Coasting Trade: License issued by the Director General of Shipping (DGS) is mandatory for foreign vessels while Indian vessels are exempted.
 - "coasting trade" means carriage of goods or passengers by sea from any port or place in India to any other port or place in India, or performing any service within coastal waters but shall not include fishing of any kind.
- Strategic Plan and Database: It mandates the formulation of a National Coastal and Inland Shipping Strategic Plan (revised biennially) and formation of a National Database for Coastal Shipping.
- Authority to DGS: It grants DGS the authority to seek information, issue directions, and enforce compliance.
- **Power to Central Government:** It empowers the Central Government to provide exemptions and regulatory oversight, ensuring streamlined and efficient coastal shipping operations in India.
- Other Provisions: Regulates foreign vessels chartered by Indian entities, outlines penalties for violations, provides participation of States/UTs in key mechanisms.

3.5.4. NEW STEEL POLICY

The Ministry of Steel has notified the revised **DMI&SP Policy 2025** (Domestically Manufactured Iron & Steel Products).

What is DMI&SP Policy?

- Launched in 2017; revised in 2019, 2020, and now in 2025.
- Gives preference to domestically produced steel in government procurement.

Key Highlights of the Revised Policy

- Nodal Ministry: The Ministry of Steel
- **Applicability**: All government ministries, departments, and affiliated agencies—including public sector undertakings (PSUs), societies, trusts, and statutory bodies.
 - o Covers all procurement above ₹5 lakh.
- Materials covered: Steel in the "Melt & Pour" condition. E.g. flat-rolled steel, bars, etc.
 - Melt & Pour refers to the steel that has been produced in a steel-making furnace and poured into its first solid shape.
- Restrictions on Global Tenders: No Global Tender Enquiries (GTE) for most iron and steel products barring some exception.
- Emphasis on Domestic value addition (DVA): Capital goods used in production of the alloy, such as furnaces and rolling mills, must achieve at least 50% DVA.

• Reciprocal clause: Bans suppliers from countries that bar Indian firms in their government steel procurement unless the Ministry allows it.

Why Was the Policy Revised?

- **Rising Threat from Steel Imports**: India is a **net importer of finished steel**. There was a surge in cheap steel imports from China, Japan, and South Korea while exports fell.
- Stagnation in global markets: There have been issues of over capacities in production, slump in global steel demand etc.
- **Strategic Role of Government Procurement**: Governemnt buys **25–30**% of India's finished steel for infrastructure, railways, and defence.
 - o Revised policy will support local industry through government demand.

To read more about the **Steel sector**, kindly refer to **Article 3.9- Steel Sector in India** of the **October 2024** monthly current affairs magazine.

3.5.5. TAX COLLECTED AT SOURCE

Income Tax department has recently notified list of luxury items on which taxpayers will have to pay 1% Tax Collected at Source.

About Tax Collected at Source (TCS)

- It is a tax payable by a seller which he collects from the buyer at the time of sale of goods.
- Section 206 of the Income Tax Act mentions the list of goods on which the seller should collect tax from buyers.
- **Section 52 of the CGST Act, 2017** provides for Tax Collection at Source, by e-Commerce Operator in respect of the taxable supplies
- **Seller is categorized as any individual or organization** authorized under TCS which includes Central Government, State Government, Local authority, Partnership Firms, etc.

3.5.6. SAFE HARBOUR

Central Board of Direct Taxes (CBDT) notifies amendments in Income-Tax Rules, 1962 to expand the scope of safe harbour rules.

- Scope of safe harbour rules has been expanded by:
 - o **Increasing threshold** for availing safe harbour from Rs. 200 Crore to Rs. 300 Crore.
 - Including Lithium-Ion Batteries for use in electric or hybrid electric vehicles in definition of core auto components.

Safe Harbour

- Safe harbour is generally defined as circumstances in which the tax authority shall accept the transfer price declared by the taxpayer to be at arm's length.
- Income-tax Act, 1961 empowers CBDT to make safe harbour rules.

3.5.7. LIQUIDITY COVERAGE RATIO (LCR)

The Reserve Bank of India has come up with new guidelines regarding LCR.

- RBI also said that banks need to assign a lower run-off factor on retail deposits.
 - Run-off factor refers to the percentage of deposits that could be withdrawn by depositors in a stress scenario.

About Liquidity coverage ratio (LCR)

- It is the amount of High-Quality Liquid Assets (HQLAs) that financial institutions must have on hand to ensure they can meet their short-term obligations in the event of market turmoil.
- The LCR is a result of updates to the Basel Accords, regulations created by the Basel Committee on Banking Supervision.
- High LCR decreases money supply by requiring banks to hold a larger proportion of highly liquid assets.

3.5.8. IMF'S GLOBAL FINANCIAL STABILITY REPORT

The report, which is released semiannually, assessed the impact of geopolitical risks on global financial stability.

 According to the Report, Global geopolitical risks remain elevated, raising concerns about their potential impact on macro financial stability.

Geopolitical Risks

- Multiple threats to supply chains: Geopolitical rivalries, conflict, competition for resources, cyberattacks, etc.
- **Tectonic shifts in power, economic centers and trade:** New trade alliances and investment hubs are redefining global power dynamics.
- A fragmented tax environment. E.g., Minimum global tax is becoming adopted by many countries, while others are withdrawing from multilateral tax policy.
- **Demographic, technological and cultural pressures on workforces: E.g.,** Aging populations, mass retirement, falling birth rates (in developed markets), culture wars, AI integration, etc.

Implications of geopolitical risks

- Sovereign Risk: Increased military spending and economic downturns raise public-debt-to-GDP ratios, escalating fiscal sustainability concerns and sovereign risk.
- **Financial Contagion:** Geopolitical risks can **spill over to other economies** through **trade** & **financial linkages**, raising the risk of contagion.
- Macroeconomic Impact: Increased geopolitical risk can lead to economic disruptions, such as supply chain disruptions and capital flow reversals.
- Investor Confidence: Geopolitical risks generally lower investor confidence, leading to market uncertainty and increased volatility.
 - E.g., The U.S.-China trade war significantly impacted stock prices in both economies.

Key Policy Recommendations for Geopolitical Risks



Enhance Financial Oversight: Integrate country-specific geopolitical risks into financial institution supervision.



Strengthen Capital Buffers: Maintaining adequate capital and liquidity



Deepen Financial Markets with robust regulations



Maintain Macroeconomic Buffers: Adequate fiscal space and international reserves are crucial.



Improve Crisis Preparedness: Strengthening frameworks to manage financial instability

3.5.9. GLOBAL TRADE OUTLOOK AND STATISTICS 2025

It is released by the World Trade Organisation (WTO).

Major findings

• Under current conditions, the volume of world merchandise trade is likely to fall by 0.2% in 2025.

- The decline is expected to be particularly steep in North America, where exports are forecasted to drop by 12.6%
- Severe downside risks exist, including the application of "reciprocal" tariffs and broader spillover of policy uncertainty.
- The report contains for the first time a forecast for services trade to complement its projections for merchandise trade.
- The **volume of services trade** is forecasted to grow by 4.0% in 2025.

3.5.10. UNCTAD RELEASES TECHNOLOGY AND INNOVATION REPORT 2025

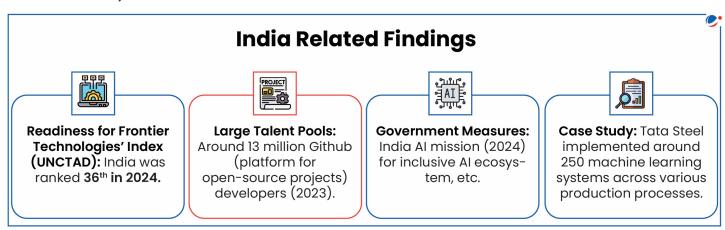
Report provides a roadmap for ensuring AI (Artificial Intelligence) drives **inclusive growth** rather than **deepening divides.**

Key Findings of the Report

- Potential of AI: Globally, AI is expected to reach \$4.8 trillion in market value by 2033.
- **Impact on jobs:** Al could impact **40% jobs** worldwide, offering productivity gains along with concerns regarding automation and job displacement.
- Market dominance at National and Corporate Levels:
 - o 40% of global corporate R&D spending stems from 100 firms mainly in US and China.
 - US accounts for 70% of global AI private investment.

Way Forward on Inclusive AI

- **Promoting AI Adoption in Developing countries:** By redesigning AI solutions around **locally available digital** infrastructure, lowering the skill barriers; building international partnerships, etc.
- Adopting Worker Centric Approach: Job workflows and tasks should be rearranged to integrate AI effectively.
- Role of the Government: Assessment of the national AI capacities across the three leverage points of infrastructure, data and skills.



3.5.11. INTERNATIONAL STANDARDS OF ACCOUNTING AND REPORTING (ISAR)

India secured an uncontested position in the **United Nations Intergovernmental Working Group of Experts ISAR for 2025–2027 term.**

About ISAR

- About: ISAR is a UN global forum of policy-makers, regulators, standard-setters and lead experts in the area of
 enterprise accounting and reporting.
- Mandate: To assist member States to improving the quality and international comparability of financial reporting and non-financial disclosure, such as environmental issues, corporate governance and corporate social responsibility.
- Mission: To facilitate investment, development and economic stability by promoting good practices in corporate transparency and accounting through policy frameworks and guiding tools.

- Sessions: It holds its annual sessions in Geneva to address emerging issues in enterprise accounting and reporting.
- Membership: ISAR allows for 34 formal members to serve three-year terms.
 - These members include nine African, seven Asian, six Latin American, three Eastern European, and nine Western European and Other States.

3.5.12. BOMBAY STOCK EXCHANGE (BSE)

The year 2025 marks the 150 years of the Bombay Stock Exchange (BSE).

About BSE

- Established as 'The Native Share & Stock Brokers' Association' in 1875, it is Asia's first & world's fastest Stock
 Exchange.
 - In 2017, BSE became 1st listed stock exchange of India.
- Role: BSE provides an efficient and transparent market for trading in equity, currencies, debt instruments, derivatives, mutual funds.
- Regulated by: Securities Exchange Board of India (SEBI).
 - O SEBI is a statutory body under SEBI Act, 1992.

3.5.13. CAPE TOWN CONVENTION AND PROTOCOL

Rajya Sabha passed 'The Protection of Interests in Aircraft Objects Bill, 2025' aiming to align it as per Cape Town Convention (Convention on International Interests in Mobile Equipment) and Protocol on Matters Specific to Aircraft Equipment.

About Cape Town Convention and Protocol

- Aim: Standardize transactions involving movable property, particularly high-value assets like aircraft, engines, and helicopters, to ensure creditors can enforce their rights in case of default.
- Adoption: Jointly by International Civil Aviation Organisation (ICAO) and UNIDROIT (International Institute for the Unification of Private Law) in 2001.
- Parties: 65 Parties (2016) [India signed in 2008].

3.5.14. NANO SULPHUR

TERI scientists have developed nano sulphur which reportedly increased mustard yield by 30-40%.

• DMH-11 is the genetically-modified mustard.

About TERI's Nano-sulphur

- It is a **completely green product** that uses biological agents like plant promoting bacteria that secrete enzymes and metabolites.
 - This makes it different from other nono-fertilizers such as nano urea and nano diammonium phosphate.
- Nano-sulfur has antibacterial and insecticidal properties.
- **Benefits:** Acts as a plant growth promoter, enhancing plant stress resistance, and improving the nutritional quality of plants, etc.

To know more about the use of Nanotechnology in Agriculture, refer to **Article 7.4.1.** Nanotechnology in Agriculture in May 2024 Monthly Current Affairs Magazine.

3.5.15. SALINE AQUACULTURE HUBS

Union Government is pushing for saline aquaculture hubs in Haryana, Punjab, Rajasthan, and Uttar Pradesh.

About Saline Aquaculture

• **Meaning:** It refers to the **use of saline-affected lands** (often unsuitable for traditional agriculture) for inland saline aquaculture.

- Aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants for enhancing production.
- Significance: Generate employment and livelihood opportunities by tapping the potential of saline land resources for aquaculture, Increase Aquaculture productivity, etc.
- Potential in India:
 - Only 2, 608 hectares of the 58,000 hectares identified saline area from the above 4 states is being currently utilized.
 - India stands as the second-largest producer of cultured shrimp globally, earning 65% of its seafood export value from shrimp alone, which can be better realized through Saline Aquaculture.

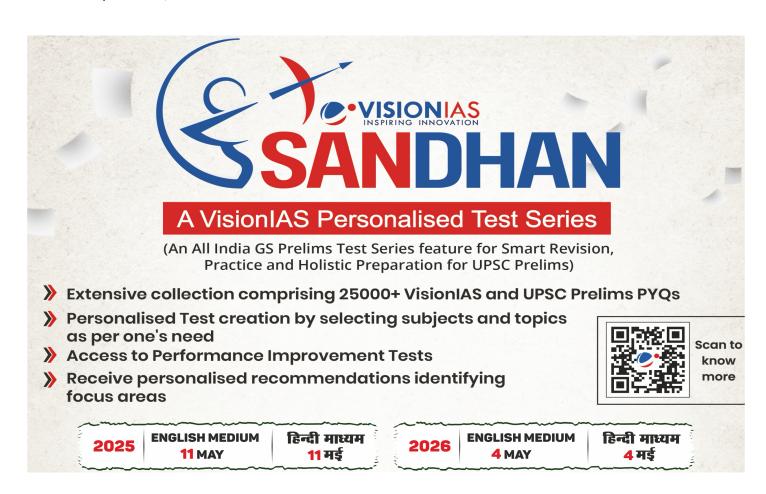
Measures to tap the potential of Saline Aquaculture

- Policy Reforms: Increasing the area limit from 2 hectares to 5 hectares, a National Level Committee to prepare a roadmap for the sustainable development of saline aquaculture in North Indian states.
- Key Challenges Faced by
 Farmers for Saline
 Aquaculture

 China's Expanding Influence
 E.g. String of Pearl Strategy

 Regional Instability
 E.g. Political turmoil in Bangladesh

 Non-Traditional Threats:
 Proximity to drug smuggling zones like Golden Crescent and Golden
 Triangle.
- Improved marketing channels: Recommendations for establishment of an Integrated Aqua Park in Sirsa to improved marketing channels to be considered.
- **Dissemination of Technical Knowledge:** States to leverage **Krishi Vigyan Kendras (KVKs)** to identify new areas for saline aquaculture, and conduct outreach-based research.



4. SECURITY

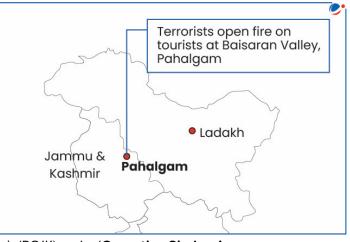
4.1. TERRORISM IN JAMMU AND KASHMIR

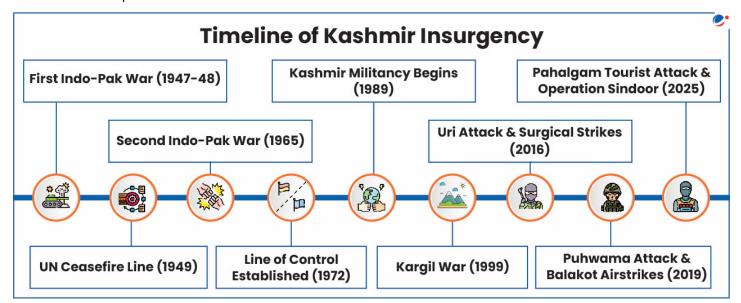
Why in the News?

The Resistance Front (TRF), an offshoot of the Pakistanbased terrorist organization **Lashkar-e-Taiba (LeT)**, killed 26 tourists in Baisaran Valley in Pahalgam, Jammu and Kashmir.

More on the News

- In Response, India took several measures: e.g. suspending Indus Waters Treaty, Closing the Integrated Check Post at Attari, Scrapping the SAARC Visa Exemption Scheme for Pakistani nationals, suspending visa services for Pakistani nationals etc.
- India also launched precise airstrikes at 9 locations
 inside Pakistan and Pakistan Occupied Jammu and Kashmir (POJK) under 'Operation Sindoor'.
 - These strikes have targeted strongholds of various terrorist organizations like LeT, Jaish-e-Mohammed (JeM) and other non-state actors which act as proxy of Pakistan to carry out terrorist activities in Jammu and Kashmir and other parts of India.





Recent Trends in Kashmir Terrorism:

- As per Ministry of Home Affairs' Annual Report of 2023-24, there has been a continuous decline in terrorist and militant attacks in the Union Territory (UT) of Jammu and Kashmir since 2019.
 - Also, the economic activities related to tourism and other infrastructure development has been on rise,
 taking the UT towards political stability and economic prosperity.
- Experts believe that these recent attacks were carried out to derail the development journey of Jammu and Kashmir and create communal disharmony in other parts of India as well.

Factors behind terrorism in Jammu and Kashmir

External Factors:

 Pakistan's Proxy War: Pakistan state agencies provide training, arms, safe havens, and logistical support to groups like Lashkar-e-Taiba (LeT), Jaish-e-Mohammed (JeM), Hizbul Mujahideen (HM) and The Resistance Front (TRF).

- > Pakistan uses these proxies as part of its 'hybrid war' against India as it finds difficult to defeat India in a direct military-to-military confrontation.
- o **International Non-Consensus**: Inconsistent international pressure allows Pakistan to sustain proxy warfare without significant punitive measures. For e.g., **China often uses Veto** to protect Pakistan based non-state actors (like Masood Azhar) from being listed as terrorists in UNSC.
- o **Global Ideological Influence**: Radical Islamist ideologies (e.g., ISIS), spread through transnational networks and ties between LeT and groups like Hamas, fuel radicalization.
- o **Porous borders facilitating infiltration**: Challenging terrain along the LoC and international borders makes it difficult to completely seal the border, allowing for movement of militants and weapons.

Internal Factors:

- o **Radicalization**: Online platforms (e.g., Telegram, YouTube) and local networks radicalize youth; these youth are later recruited by terrorist organizations.
- o **Political Alienation**: Historical grievances, including use of **Armed Forces Special Powers Act (AFSPA) of 1958**, perceived lack of political representation, etc. deepen separatist sentiments.
- **Economic Challenges**: High unemployment and limited opportunities make youth vulnerable to recruitment by terror groups.
- Over Ground Workers (OGWs): OGWs play significant role in sustaining militancy through fund management, recruitment, propaganda and misinformation, etc.
- Terror Finance: E.g. separatist political outfits in Kashmir such as Hurriyat Conference, Duktaran-e-Milat, and Jammu Kashmir Liberation Front (JKLF) have channelized Hawala money from Pakistan to encourage local militancy.

Challenges in tackling terrorism in Jammu and Kashmir

- Hybrid Terrorist and Virtual Terrorist Outfits: Unlike traditional terrorists who are formally affiliated with terrorist
 organizations, hybrid terrorists are often unlisted, loosely connected, or self-radicalized individuals who carry
 out acts of terrorism while maintaining a low profile in society.
 - o In addition, security forces have noted proliferation of virtual terrorist groups like Jammu Kashmir Ghaznavi Force and TRF, which are nothing but front organisations for LeT and other terrorist outfits.
- **Porous Borders:** The **Line of Control (LoC)** in Jammu and Kashmir, due to its **difficult terrain,** enables infiltration and the smuggling of arms and personnel.
- Pakistan's information warfare: E.g. Use of social media platforms to stir anti-India propaganda.
- Intelligence Gaps: Fragmented coordination among central, state, and local agencies undermines timely responses.
- Evolving Technology: Terrorists use drones, encrypted apps, Al-generated propaganda, and advanced weaponry (often diverted from conflict zones like Afghanistan), complicating detection and response.
- **Changing Tactics**: Terrorists have shifted from large-scale attacks to targeted killings and attacks on soft targets like tourists and minorities.

Initiatives Taken to tackle terrorism in Jammu and Kashmir:	
Crackdown on Terrorist Groups and their Ecosystem	 Counter terrorism Operations: E.g. Hot pursuit and surgical strikes (e.g., in 2019 after Pulwama attacks & Op Sindoor in 2025), crackdown on OGWs. Security: Operation All-Out (2017), Multi-Agency Centre for better intelligence gathering, etc. OGWs: India banned Jamaat-e-Islami Jammu Kashmir' in 2019 under UAPA, 1967 for its involvement in fomenting terrorism and anti-India propaganda through a network of OGWs. Rehabilitation Process: Habilitating terrorists, orphans and women to ensure Social welfare e.g., Operation Sadbhavana and rehabilitation policy of ex-militants
Tackling Cross-Border Militant Infiltration	Deployment of smart border technologies: E.g. Laser fencing, drones, thermal imaging is being deployed to check infiltration (Border Infrastructure and Management (BIM) Scheme).

Developmental Steps	 Programs like HIMAYAT (skill development), UMEED (women's empowerment), and policies promoting tourism and handicrafts aim to integrate youth and drive economic growth. Also, large scale infrastructure creation, for e.g., Chenab Bridge, and running Vande Bharat trains help in bringing investments and rise of tourism industry.
Political	Abrogation of Article 370, delimitation exercise for a representative government, and efforts to restore democratic processes through local governance and timely elections address political alienation.
Diplomatic	 India has asked the IMF to review its aid programme to Pakistan and FATF to once again put Pakistan in the Grey List. India leverages the UNSC 1267 Committee to raise Pakistan's role in terrorism at global forums.

Way Ahead

- Strengthen Intelligence: Enhance inter-agency coordination and invest in Al-driven analytics to counter cyber-radicalization, drone threats, illicit financing and OGWs.
 - Develop strategies to reinforce HUMINT (Human Intelligence) to complement TECHINT (Technological Intelligence).
- **Border Security**: Faster implementation of installing smart fencing, thermal imaging, and surveillance along the LoC (As per **recommendations of Madhukar Gupta Committee**) to curb infiltration and smuggling.
 - Improving inter-agency coordination between the Army, CRPF, Border Security Force, and JK Police is crucial.
- **De-radicalization Programs**: Scale up localized initiatives (e.g., education, sports, cultural integration) to counter extremist narratives and reduce youth vulnerability.
 - Also, trust-building with local communities by winning of hearts and minds in terrorism-affected areas (e.g.,
 Operation Sadbhavana) to disrupt OGWs networks with the help of local intelligence.
- **Economic Development**: Prioritize job creation, infrastructure, and tourism promotion to address economic grievances and foster stability.
- **Political Process**: Ensure **inclusive governance** to address political alienation and restore democratic trust through **conducting of free and fair elections**.
- International Pressure: India should utilize international platforms like UNSC (e.g., highlighting role of Pakistan in cross-border terrorism), FATF and take support of like-minded countries (e.g., Saudi Arabia and UAE) to put pressure on Pakistan to curb non-state actors operating from its soil.

4.2. INDIA'S DEFENCE EXPORTS

Why in the News?

India's defence exports have surged to a record high of ₹23,622 crore (approx. US\$ 2.76 billion) in the Financial Year (FY) 2024-25.

Trends in India's Defence Exports

- **Sector Contribution:** The private sector and Defence Public Sector Undertakings (DPSUs) have contributed Rs 15,233 crore (64.5%) and Rs 8,389 crore, respectively in defence exports of 2024-25.
 - DPSUs have shown a significant increase of 42.85% in their exports in the FY 2024-25.
- **Trend:** In the past 10 years, from 2015 to 2025, India has cumulatively exported defence goods and equipment worth ₹1,09,997 crore.
- Target: India aims to increase its defence exports to ₹50,000 crore by 2029.
- Export Destinations: India now exports defence equipment to over 100 countries, with the USA, France, and Armenia emerging as the top buyers in 2023-24.
- Export Portfolio: Include missile systems like the Akash Surface-to-Air Missile (SAM), Advanced Towed Artillery Gun Systems (ATAGS), naval platforms such as fast attack craft and offshore patrol vessels, as well as aerospace assets like the Light Combat Aircraft (LCA) Tejas and Advanced Light Helicopters (ALH Dhruv).



Initiatives for Improving Defence Exports

- Innovations for Defence Excellence (iDEX): Launched in 2018, By engaging MSMEs, startups, individual innovators, R&D institutes, and academia, iDEX has provided grants of up to ₹1.5 crore for developing innovative technologies.
- **Defence Industrial Corridors (DICs):** Two DICs have been set up in Uttar Pradesh and Tamil Nadu to boost defence manufacturing.
- Ease of Doing Business in the Defence Sector:
 - Simplification of industrial licensing procedure by removal of parts and components from license regime, reducing items requiring license and extending licence validity to 15 years.
 - Simplification of SOP for grant of Export Authorisation and introduction of an end-to-end digital export authorisation system.
- **Liberalised FDI Policy:** Foreign Direct Investment (FDI) in the defence sector was liberalised in 2020 to attract foreign investment, allowing up to 74% FDI through the automatic route and above 74% through the government route.
 - o Since April 2000, the total FDI in defence industries stands at Rs 5,516.16 crore.
- **Technology Development Fund (TDF):** Executed by DRDO, it aims to provide grant in aid to Indian industries, including MSMEs and Start-ups.
- **SRIJAN Portal:** A one-stop shop online portal that provides access to vendors to take up items that can be taken up for indigenization.

Challenges to India's Defence Exports

- **Import Reliance:** Indian industry is reliant on imports for critical components for defence equipment such as engines, avionics, and sensors.
- Lack of R&D: There is a considerable gap in R&D for advanced technologies, including AI-driven systems, hypersonic missiles, and stealth technologies.
- **Competition from global players:** India's defence exports encounter stiff competition from established global players like the United States, Russia, and France.
 - Challenges include overcoming quality perceptions and addressing technological gaps in advanced platforms such as stealth fighters and high-end UAVs.
- **Bureaucratic hurdles:** Regulatory hurdles, including bureaucratic gaps in procurement and project approvals, continue to impede progress.

Way Forward

- **Promoting export of complete defence systems/platforms**: Countries from the African continent, South-East Asia, and the Latin American region are some of the markets for the export of complete defence systems/platforms.
 - To promote exports to such nations, there may be a requirement to provide/ increase the line of credit a financing mechanism from the EXIM bank to promote exports to such countries.
- Forging long-term partnerships with upcoming defence hubs: These are countries that have shown a strong growth in their defence industry over the past few decades and now are focusing on developing indigenous capabilities, such as Australia, UAE, Saudi Arabia, South Korea, etc.

- o Ministry of Defence in conjunction with domestic defence industry should identify such opportunities in these countries and assist the **Indian companies to forge partnerships for joint manufacturing**.
- **Enlarge export horizon:** Indian defence manufacturers may be required to expand their presence through **foreign offices in key countries,** thereby increasing Indian footprint.
- **Focus on supplying components/sub-systems**: Advanced defence equipment manufacturing nations establish their supply chains in countries with lower costs of manufacturing.
 - Smaller manufacturers should thus aim to enhance their capabilities to become part of global supply chains and fulfil the offset obligations of major manufacturers.

4.3. BIOLOGICAL WEAPONS CONVENTION (BWC)

Why in the News?

United Nations Office for Disarmament Affairs (UNODA) celebrated 50th anniversary Biological Weapons Convention (BWC).

About Biological Weapons Convention (BWC)

- Formally known as "The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction".
- Genesis: Negotiated in Geneva, Switzerland within the Eighteen Nation Committee on Disarmament (ENDC) and Conference of the Committee on Disarmament (CCD) from 1969 until 1971.
 - Opened for signature in 1972 and entered into force in 1975.
- Membership: Almost universal membership with 188 States Parties (India signed and ratified in 1974) and 4
 Signatory States (Egypt, Haiti, Somalia, Syrian Arab Republic).
 - States Parties meet approximately every 5 years to review its operation.
 - States Parties to BWC have strived to ensure that Convention remains relevant and effective, despite the changes in science and technology, politics and security since it entered into force.

Key facts about the BWC

- 1st multilateral disarmament treaty banning an entire category of weapons of mass destruction (WMD).
- Effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons.
 - Supplements the 1925 Geneva Protocol, which had prohibited only the use of biological weapons.
- Implementation Support Unit (ISU) to provide administrative support to meetings agreed by Review Conference, comprehensive implementation, universalization of the Convention.

Know the term

- Biological Weapons: Weapons that disseminate disease-causing organisms (bacteria, viruses, fungi, prions or rickettsiae) or toxins (poisons derived from animals, plants or microorganisms) worldwide to harm or kill humans, animals or plants.
 - Historical biological weapons programmes have included efforts to produce: aflatoxin; anthrax; botulinum toxin; foot-and-mouth disease; glanders; plague; Q fever; rice blast; ricin; Rocky Mountain spotted fever; smallpox; and tularaemia, etc.
- o **5 States- Israel**, Chad, Djibouti, Eritrea and Kiribati have neither signed nor acceded to the Convention.



United Nations Office for Disarmament Affairs (UNODA)





Genesis: Established in 1998 as the Department for Disarmament Affairs.



About: It provides substantive and organizational support for **norm-setting in the area of disarmament** through General Assembly and its First Committee, Disarmament Commission,
Conference on Disarmament.



Functions:

- Fosters disarmament measures through dialogue, transparency and confidence-building on military matters, and encourages regional disarmament efforts.
- Provides objective, impartial and up-to-date information on multilateral disarmament issues and activities to Member States, States parties to multilateral agreements, etc.
- Supports the development and implementation of measures after a conflict, such as disarming and demobilizing former combatants and helping them to reintegrate in civil society.

Measures taken by India to implement Biological Weapons Convention (BWC)

- Manufacture, Use, Import, Export and Storage of Hazardous Micro organisms, Genetically/Engineered Organisms
 or Cells Rules, 1989: To protecting the environment, nature and health, in connection with the application of gene
 technology and micro-organisms.
- Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005: It Prohibits
 unlawful activities (such as manufacturing, transport, or transfer) related to weapons of mass destruction, and their
 means of delivery.
- Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET): SCOMET list is India's National Export Control List of dual use items, munitions and nuclear related items, including software and technology.
 - o Category 2 of the SCOMET list covers micro-organisms and toxins.
- India and France jointly proposed establishing a database to facilitate assistance under Article VII of BWC.
 - Article VII deals the undertaking to assist any State Party exposed to danger as a result of a violation of the BWC.

Challenges related to BWC

- Lack of a Verification Mechanism: Unlike other major disarmament treaties, Dual-use nature of bioscience makes it difficult to differentiate between peaceful and offensive applications from an accounting-driven framework.
 - o In case of **Chemical Weapons Convention**, verification is based on framework driven by accounting that involves documentation of facilities, tools, and raw materials of relevance etc.
- Lack of legally enforceable data collecting provision: It contributes to BWC reliance on politically binding confidence-building measure (CBM) submissions.
 - o CBM suffers from **low participation** (2022 was the first year that over 50% of states parties submitted a CBM).
- **Limited Institutional support:** Implementation Support Unit (ISU) is **understaffed,** it was only at Ninth Review Conference that ISU increased its staffing from 3 non-permanent staff to **4**, since its inception in **2006.**
- Insufficient National Implementation: For e.g., India has a National Authority for Chemical Weapons Convention (NACWC) but lacks a similarly centralized body for the Biological Weapons Convention (BWC).

Way forward

- Implement Modular-Incremental Approach for Verification: This approach focuses on integrating various policy proposals and scientific tools to create a more robust verification regime.
- **Expand Permanent Institutional Support:** Appoint a **rotating expert verification group** under the UN Secretary-General, comprising disarmament specialists and biotechnology industry experts to oversee BWC compliance.
- Universalize Confidence-Building Measure Submissions: Recent advances in artificial intelligence and natural language processing have the potential to make some CBM submissions easier, such as through the use of data harmonization and text mining.
- Address Non-State Actor Threats: Integrating BWC with UN Security Council Resolution 1540 to prevent non-state actors (terrorist groups) from acquiring, developing, or using biological weapons.

4.4. NEWS IN SHORTS

4.4.1. VIBRANT VILLAGES PROGRAMME-II (VVP-II)

Cabinet approves Vibrant Villages Programme-II (VVP-II).

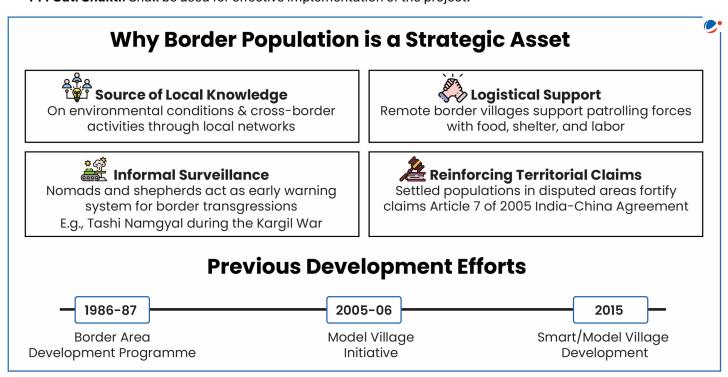
- **VVP-II** builds upon the foundation laid by the **first phase**, **VVP-I**, which targeted **border villages** along the **northern frontier**.
- This initiative highlights India's commitment to Viksit Bharat@2047, ensuring safe, secure, and self-sufficient land borders.

About Vibrant Villages Programme-II (VVP-II)

- Type: Central Sector Scheme with 100% Centre funding (unlike VVP-I, which was Centrally Sponsored).
- Coverage: Strategic villages along international land borders (ILBs) across 17 states/UTs (excluding northern border blocks covered under VVP-I (2023-24)).
- **Objective:** Improve living conditions, provide livelihood opportunities, control trans-border crime, and integrate populations as **'eyes and ears' for internal security**.
- Tenure: Financial Years 2024-25 to 2028-29

Key Features of VVP-II

- Infrastructure Development: Investments in roads, housing, sanitation, drinking water, and SMART classrooms, with all-weather road connectivity under the Pradhan Mantri Gram Sadak Yojana (MGSY-IV).
- Value Chain & Livelihood Development: Support for cooperatives, SHGs, and border-specific outreach activities to create sustainable livelihoods.
- Welfare Scheme Convergence: Implement existing welfare schemes in the identified villages, ensuring full coverage under the convergence model.
- **Cultural & Tourism Promotion**: Organizing fairs, festivals, awareness camps, and national day celebrations to boost tourism and promote local heritage.
- PM Gati Shakti: Shall be used for effective implementation of the project.



4.4.2. I4C

Recently, **Department of Revenue under the Union Ministry of Finance** issued notification to include **Indian Cyber Crime Coordination Centre** (I4C) under the **Section 66 of the Prevention of Money Laundering Act (PMLA), 2002**.

• This would help I4C to share and receive information from the **Enforcement Directorate and other law** enforcement agencies, so as to strengthen the country's fight against cyber-enabled financial crimes.

Section 66(Disclosure of information) of PMLA Act, 2002

- Enables the Director (Directorate of Enforcement) or any other authority specified by him to share the information with the concerned agency for necessary action.
- Sharing of information shall be on the basis of **information or material in his possession**, that the **provisions of any other law for the time being in force are contravened**.

About Indian Cyber Crime Coordination Centre (I4C)

- Officially inaugurated in 2020, it is an initiative of the Union Ministry of Home Affairs, envisaged to act as the nodal point to curb Cybercrime in the country.
 - o In July 2024, it was made an attached office on the Union Ministry of Home Affairs.
- Objective: To provide a framework and eco-system for Law Enforcement Agencies for dealing with Cybercrime
 in a coordinated and comprehensive manner.

Verticals of I4C: National Cybercrime Reporting Portal (NCRP), National Cybercrime Threat Analytics Unit (NCTAU), National Cybercrime Ecosystem Management Unit (NCEMU), Joint Cyber Crime Coordination Team (JCCT), etc.

4.4.3. RAFALE MARINE (M) FIGHTER JETS

Centre approved 26 Rafale Marine (M) Fighter Jets From France.

- These fighter jets will be for the Indian Navy and will be deployed on the country's first indigenous aircraft carrier INS Vikrant.
- The Indian Air Force operates 36 Rafale jets, acquired earlier.

About Rafael aircraft

- Manufacturer: Dassault Aviation, a French aerospace company.
- "Omnirole" capabilities: Which means able to carry out all combat aviation missions such as air defense, strikes, reconnaissance, nuclear deterrence, etc.
- Generation: 4.5 generation with maximum speed 1.8 Mach (1 Mach=1235km/hr).

Various Latest Generation Aircrafts	Specifications	Examples
Fourth generation jet fighters (1970- 1980s)	Ability to both switch and swing roles between air-to-air and air-to-ground.	MiG-29, F-16, Mirage-2000 etc.
Four and half generation jet fighters	Added 'stealth', radar absorbent materials, thrust vector controlled engines, to extend the range of fourth generation fighters.	Eurofighter Typhoon, Rafale etc.
Fifth generation jet fighters	Advanced stealth technologies and advanced weapons,	F-22 Raptor,Chengdu J-20 etc.

U.S.-China 6th-Gen Aircraft Battle

- USA: The US President announced plans to move forward with a next-generation fighter jet dubbed F-47.
- China: In December 2024, China flew two sixth-generation fighter prototypes, the J-36 and J-50.
- Sixth-generation fighter jets are characterized by attributes such as Artificial Intelligence (AI) integration,
 Hypersonic capabilities, Unmanned capabilities, etc.

4.4.4. LONG-RANGE GLIDE BOMB 'GAURAV'

DRDO successfully conducts release trials of Long-Range Glide Bomb 'Gaurav'.

Weapon Specifications

- **Type**: Long-Range Glide Bomb (LRGB).
- Weight: 1,000 kg class
- Range: 'Gaurav' achieved 100 km range with pinpoint accuracy.
- **Development**: Designed and developed indigenously

4.4.5. MK-II(A) DEW SYSTEM

DRDO successfully conducted a **trial of a Mk-II(A) LASER- Directed Energy Weapon (DEW) system** at the National Open Air Range (NOAR) in Kurnool (Andhra Pradesh).

• India became the **fourth country** in the world, after the **US, China, and Russia** who possess advanced LASER weapon capabilities.

About Mk-II(A) DEW system

- Developed by: Indigenously by DRDO's Centre for High Energy Systems and Sciences (CHESS), Hyderabad.
- Potential targets: It can disable drones, missiles, and aircrafts.
- **Mechanism:** Once detected by a radar or inbuilt Electro Optic (EO) system, it engages targets and uses an intense **high-energy 30 kilowatt LASER Beam** to cut through the target, leading to structural failure.
- Characteristics: Lightning speed of engagement, precision, and can have lethality delivered to the target within a few seconds.

Significance of DEW System

- **Potential to revolutionize the battle space economics:** It can reduce the reliance on expensive ammunition while also **lowering the risk of collateral damage**.
- Counter-electronic capabilities: High-power microwave (HPM) weapons can disable electronic systems, radars, and communications without physical destruction.
- For offensive and defensive warfare: Such as for tactical air defence, anti-ballistic missile defence, and anti-satellite (A-SAT) applications, Low-power lasers for crowd control and deterring pirates.

About Directed Energy Weapons





Use concentrated energy from electromagnetic or particle technology, rather than kinetic energy, to degrade or destroy targets



Types: High Energy LASER (HELS), High power microwave weapons (HPMs), millimeter waves, Particle beams weapons.

4.4.6. PROJECT VARSHA

INS Varsha, under Project Varsha to be operational by 2026.

About Project Varsha

- It is a classified naval project aimed at strengthening India's underwater nuclear capabilities.
- Objective: To develop a secure underground base to house a fleet of over 12 nuclear-powered ballistic missile submarines (SSBNs).
- Location: Coastal village Rambilli in Andhra Pradesh.
- Similar to Project Varsha from the east, Karwar base in Karnataka under Project Seabird safeguards the west coast.

4.4.7. EXERCISES IN NEWS

Exercise	Details	
Exercise Desert	Indian Air Force is participating in Exercise Desert Flag-10.	
Flag-10	• It is a premier multinational air combat exercise being hosted by the United Arab	
	Emirates (UAE).	
Operation	European Union Naval Force (EUNAVFOR) Operation ATALANTA has proposed a joint	
ATALANTA	exercise with the Indian Navy.	
	About Operation Atalanta	
	Objective: It supports efforts for peace, stability and Maritime security such as piracy,	
	combating narcotics trafficking, illegal fishing etc.	
	It operates in the Western Indian Ocean and the Red Sea region.	
Exercise 'Dustlik'	6 th edition of Exercise Dustlik started in Pune, Maharashtra.	
	• It is a yearly Joint military Exercise event conducted alternatively in India and	
	Uzbekistan.	
Exercise Tiger	The Fourth edition of Exercise Tiger Triumph has commenced at Vishakhapatnam coast.	
Triumph	• It is the Bilateral Tri-Service India-US Humanitarian Assistance and Disaster Relief	
	(HADR) Exercise.	
	• It aims at developing interoperability for conducting HADR operations and for the	
	formulation of Standard Operating Procedures (SOPs) to establish a Combined	
	Coordination Center (CCC).	
INIOCHOS-25	Indian Air Force to Participate in Multinational Air Exercise in Greece.	
	About INIOCHOS-25	
	It is an annual multinational air exercise hosted by Greece's Hellenic Air Force.	
	It serves as a platform for air forces to hone their skills, exchange tactical knowledge, and	
	strengthen military ties.	



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5. ENVIRONMENT

5.1. ECO-CENTRIC APPROACH

Why in the News?

Recently, Supreme Court highlighted that in international jurisprudence, India was the first country to shift from an anthropocentric approach to an eco-centric one.

More on the News

- Supreme Court of India directed the **Telangana Wildlife Warden** to take immediate steps to **protect** the **wildlife** affected by the destruction of 100 acres of the Kancha Gachibowli "forest" area.
 - This came in the backdrop of the Telangana Government's plan to auction some 400 acres of forested land adjacent to the University of Hyderabad to build IT parks, which led to massive student protests.

About Eco-centric Approach

- It prioritizes the well-being of the **entire ecosystem** and its components, **viewing nature as valuable for its own sake**, not just for human use.
 - However, Anthropocentric approach, on the other hand, is based on the belief that human beings are the
 most important entity on earth, and other beings and things are valued primarily for their utility to humans.
 - > For example, in **M.C. Mehta vs. Union of India (1986)**, the SC held that the **right to live in a pollution-free environment** is a fundamental right to life under Article 21 of the Constitution.
- This approach also found recognition in the deep ecology movement (by Arne Naess, a Norwegian philosopher).
 - This movement fostered the idea that humans must radically change their relationship to nature from one that values nature solely for its usefulness to human beings to one that recognizes that nature has an inherent value.
- This approach is also backed by Interest theory which states that an individual can hold rights if his or her well-being is of intrinsic or ultimate value.

Difference between anthropocentric and an eco-centric Approach				
	Anthropocentric	Eco-centric		
Legal Rights	Legal rights are extended only to humans or	Nature (E.g. Rivers) can have legal rights.		
	human interests.			
Ethical Basis	Considered a human being as an End.	Egalitarian Approach		
	Philosopher Immanuel Kant argued that			
	human have a categorical duty to treat	l duty to treat		
	persons always as end and never merely as			
	a means.			
Policy	Environmental protection is reactive and	Pro-active ecological preservation.		
Approach	human-interest driven.			
Conservation	Utilitarian conservation (conserve what is	Holistic conservation (conserve all		
Strategy	useful).	biodiversity equally).		
Examples	Promoting Ecotourism (Linking conservation	ting Ecotourism (Linking conservation Granting legal personhood to rivers or forests.		
	with economic activity).	Uttarakhand HC declared Ganga and Yamuna		
		as legal persons with rights.		

Key Driver/Facilitator to the Eco-Centric Approach

- Constitutional Mandate:
 - Article 21 (Right to life and personal liberty)
 - Article 48A (Directs the State to protect and improve the environment and wildlife) and Article 51A(g)
 (Fundamental Duty of citizens to protect natural resources)
- Judicial Activism: Using this mechanism Judiciary gave voice to the voiceless, such as Animals, forests, etc.
 - o Public Interest Litigations (PILs) by activists, NGOs, and citizens played an instrumental role in it.

- Evolution of Environmental Jurisprudence: E.g. Public Trust Doctrine (nature belongs to all, held in trust by the state) and Precautionary Principle (act before harm occurs).
- Environmental Degradation and Ecological Crises: E.g. Deforestation, river pollution, etc.
- Cultural Ethos: Traditional Indian wisdom never believed humans to be superior to the environment and instead viewed ecology as a living being, of which humans were a
- **Legislative Measures:** E.g., Prevention of Cruelty to Animals Act (1960), Wildlife (Protection) Act (1972), etc.

Significance of **Eco-centric Approach** Recognition of Nature's Intrinsic Value Strengthening Wildlife and Biodiversity **Protection** by bridging **Governance** and Legislative Gaps **Expansion of Environmental** Jurisprudence

Aligns India with Global Environmental

its constitution.

E.g. Ecuador became the first country in the world to recognize Rights of Nature in



Important Judicial Pronouncements related to Eco-centric **Approach**

T.N. Godavarman Thirumulpad vs Union of India & Ors (1996): Expanded 'forest' meaning to preserve green expanses, irrespective of their nature, classification or ownership.



N.R. Nair v. Union of India (2000): SC upheld that animals are

conscious beings and have the right to live with dignity without any form of cruelty.

WWF-1 v. Union of India and others, Supreme Court (2013): Invoked the 'species best interest standard', focussing on the well-being of the flora and fauna

Animal Welfare Board of India v. A. Nagaraja (2014): SC prioritised the rights of animals over human traditions in practices like Jallikattu.

Conclusion

India Judiciary's shift to an eco-centric approach marks a transformative step in Indian environmental jurisprudence, recognizing the intrinsic value of nature. It reaffirms the constitutional vision of harmonious coexistence between humans and the environment, ensuring long-term ecological justice.

5.2. REVISED CLASSIFICATION OF INDUSTRIES

Why in the News?

Central Pollution Control Board (CPCB) has directed State Pollution Control Boards (SPCBs) to adopt a revised classification of industries.

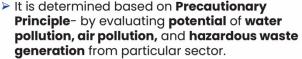
More on the News

Revised classification aims to create a clean & transparent working environment and promote the Ease of Doing Business.

Know the term







▶ It ranges from 0 to 100; the increasing value of PI denotes the increasing degree of pollution load.

- In the new revised classification, CPCB has classified a total of 419 sectors into Red (125), Orange (137), Green (94), White (54) and Blue (9) category.
 - o Blue category has been newly introduced.
- CPCB has followed a revised methodology based on Pollution Index (PI).
- Also, CPCB will **incentivize** industries which have demonstrated the successful **implementation** of **environmental management measures.**
 - E.g., Consent to Operate (CTO) for Red Category may be granted for the validity of max. 10 years.

Classification of Industries

- Background: It originated in 1989 with the Doon Valley (Uttarakhand) Notification issued by the Union Ministry of Environment, Forest and Climate Change (MoEFCC).
 - o Classification based on PI was introduced in 2016.
- **Purpose**: To ensure that the industry is established in a manner which is consistent with the environmental objectives.
 - The classification is for entire industrial sectors and not for individual units.
- Usage/Relevance of classification:
 - Siting criteria: Used as a tool for deciding the location/siting of an industry.
 - o **Development of cluster**: Used for planning of **sector specific cluster**.
 - Sector specific plans for pollution control: Plans for control of pollution may be prepared and implemented on priority for the sectors.
 - o **Inspection frequency**: SPCBs/PCCs may prioritize **environmental surveillance** programs based on the categories of sectors.
 - A tool for progressive environmental management: Industrial units may adopt cleaner technologies, cleaner fuels, etc., to reduce PI, thus, moving to lower pollution potential category.

Existing Categories of Sectors		
Category	PI Key detail /Examples	
Red	PI> 80	No Red category of industries shall normally be permitted in the ecologically
		fragile area / protected area.
		E.g. Cement, manufacturing of automobiles, distilleries, etc.
Orange	55 ≤ PI < 80	E.g. Brick manufacturing, dry cell battery, coal washeries, etc.
Green	25 ≤ PI < 55	E.g. Manufacturing of Compact disc Computer (CD/DVD), chilling plants, etc.
White	PI < 25	These are non-polluting; do not require Environmental Clearance (EC) and
		Consent.
		E.g. Assembly of air coolers, cardboard manufacturing, medical oxygen, etc.
Note: For ar	Note: For any new or left-out sector, the SPCB/ Pollution Control Committees (PCCs) are allowed to categorize the	

About Blue Category

sector at its own level.

- It includes Essential Environmental Services (ESSs) for management of waste generated from domestic/ household activities.
 - **ESSs** are those facilities which are essential to control, abate and mitigate pollution generated from **Domestic** and Industrial activities.
- **Examples:** Municipal Solid Waste Management Facility (Sanitary landfill/ Integrated Sanitary landfills, etc.) sewage treatment plants, etc.
 - Compressed Biogas Plants (CBP) based on various feedstock like municipal solid waste, agro-residue, etc. may be considered under blue category.
 - > CBG plants based on industrial or process waste will continue to be in red category.
- Need of introducing Blue Category: It will foster waste management practices.
 - o Consent to Operate (CTO) validity of this category sectors will be 2 years more than the other category.



Central Pollution Control Board (CPCB)





Genesis: Constituted as Statutory body in 1974 under the Water (Prevention and Control of Pollution) Act, 1974.

Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.



Ministry: Ministry of Environment, Forest & Climate Change



Key Functions:

- To promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution
- To improve the quality of air and to prevent, control or abate air pollution in the country. It also provides technical services to the Ministry of Environment and Forests of the provisions of the **Environment (Protection) Act, 1986.**



Key Programmes/Initiatives:

- National Air Quality Monitoring Programme (NAMP)
- Water Quality Assessment under National Water Quality Monitoring Programme (NWMP), etc.

Conclusion

The CPCB's revised classification of industries, including the introduction of the Blue category, reflects a progressive shift towards environmentally responsible industrial regulation.

5.3. BIO-INPUT RESOURCE CENTRES (BRCS)

Why in the News?

Union Ministry of Agriculture and Farmers' Welfare released the guidelines for setting up of Bio-Input Resource Centres (BRCs) under the National Mission on Natural Farming (NMNF).

About Bio-Input Resource Centres (BRCs)

- A BRC is cluster-level enterprise where time tested, locally prepared Inputs/formulations utilizing biological entities (useful for soil health, crop growth, pest or disease management) are made available for purchase by farmers in a defined geographical area.
- In the Budget Speech 2023-24, Government had announced setting up of 10,000 BRCs under National Mission on Natural Farming (NMNF).

Purposes served by BRCs



Maintaining and sale of **cultures** of **biofertilizers** and **bio-pesticides** for multiplication and use by farmers



Preparation and sale of **ready-to-use organic inputs**



Training farmers on the preparations of botanical extracts and animal based inputs



Sharing knowledge on natural farming practices



Sale of pheromone traps, lures, sticky traps and others

Key-features of the Guidelines

- Financial assistance: Rs 1 lakh for setting up a BRC (Assistance does not include sheds, renting of premises, etc.).
- Convergence with other Schemes/Programmes: Like Formation and Promotion of 10,000 Farmer Producer Organisation, National Mission on Edible Oilseeds, etc.

- **Preparation of Bio-Inputs:** As per the requirements of the local farmers, local land-use patterns, soil types and local crop systems.
- Who can operate BRCs: Practicing Natural Faming (NF) farmers, Farmer Producer Organization (FPOs), Self-Help Groups (SHG), Cooperatives, Krishi Vigyan Kendras (KVKs) etc. with Goshalas at Gram Panchayat.

About National Mission on Natural Farming (NMNF)

- Aim: Promoting NF practices for providing safe & nutritious food for all.
- Type: Centrally Sponsored Scheme
 - Centre: State share 90:10 for Hilly & North Eastern States and 60:40 for all other States
- Tenure: Till 2025-26
- Ministry: Ministry of Agriculture & Farmers' Welfare.
- **National Steering Committee (NSC):** At National level, under Chairpersonship of Minister of Agriculture & Farmers' Welfare to steer the mission.
- Key Targets:
 - 15,000 clusters in Gram Panchayats, which are willing.
 - o Reach 1 crore farmers and initiate Natural Farming (NF) in 7.5 lakh Ha area.
 - o **Around 2000 NF** Model Demonstration Farms shall be established at Krishi Vigyan Kendras (KVKs), Agricultural Universities (AUs) and farmers' fields.
 - o **30,000 Krishi Sakhis** (Community Resource Persons CRP) for easy scaling up of NF practices and knowledge.

To know more about Natural farming, refer to **Article 5.7. Natural farming** in **November 2024** Monthly Current Affairs Magazine.

5.4. FUNCTIONAL DE-EXTINCTION

Why in the News?

A US biotech company, **Colossal Biosciences**, claims to have genetically engineered three grey wolf pups to carry traits of the extinct dire wolf, calling it **world's first successful functional de-extinction**.

What is Functional De-extinction?

- Unlike true de-extinction, where a species is brought back exactly as it existed, **functional de-extinction** focuses on **reviving ecological roles and traits** of extinct species using gene editing and cloning techniques.
- These revived organisms are **not exact replicas**, but are genetically engineered to closely resemble extinct species in form or function.
- It typically involves advanced techniques like CRISPR gene editing, cloning, and genome mapping.

About Dire Wolf

- **Dire wolves (**Aenocyon dirus**):** They were large **canines** that dominated southern Canada and US before they went extinct about 13,000 years ago.
- Physical Characteristics: Up to 3.5 feet tall, over 6 feet in length, weighing ~68 kg.
- Comparison with Grey Wolf: Dire Wolves resembled the gray wolves (CANIS LUPUS) of today, but were larger, with white coats, wider head, larger teeth, more powerful shoulders & muscular legs etc.
- Causes of extinction: Possibly linked to the disappearance of large prey species and human activities.



How Colossal Biosciences brought Back the Dire Wolf?

They used both cloning and gene-editing based on 2 ancient samples of dire wolf DNA to birth three pups.

• **Ancient DNA Extraction**: Extracted DNA from two dire wolf fossils - a 13,000-year-old tooth from **Ohio** and a 72,000-year-old ear bone from **Idaho**.

- **Genome Mapping:** Sequenced the dire wolf genome and compared it with modern gray wolves to identify functional genes.
- **CRISPR Gene Editing**: The genes of the dire wolf's closest living relative, the gray wolf, were edited to include gene variants specific to the formerly extinct animal.
- Cloning & Birth: Edited DNA was implanted into enucleated ova, which were carried by domestic dog surrogates, leading to the birth of the three pups named Romulus, Remus, and Khaleesi.
 - o Instead of traditional cloning, scientists used a less invasive method involving **endothelial progenitor cells** (**EPCs**) from gray wolves, the dire wolf's closest living relatives.

Significance of Functional De-extinction



Ecosystem Restoration by introducing functional proxies to reinstate food webs, nutrient cycles, etc.

Biodiversity Enhancement by occupying a vacant niche.





Conservation tool to enhance disease resistance or genetic diversity.

Concerns about Functional De-extinction

- **Ecological Disruption**: The "de-extinct" species might not perfectly replicate the extinct species' role, potentially becoming invasive, disrupting existing ecological balances.
 - o These are **genetic approximations**, not actual revivals of extinct species.
- **Ethical Considerations:** Concerns exist about the welfare of the animals created through de-extinction, especially if the process involves significant genetic manipulation or if the animal is ill-suited to the current environment.
- **Resource Diversion:** Critics argue that the significant resources required for de-extinction projects could be better spent on conserving existing endangered species and their habitats, which are facing immediate threats.
- Lack of Regulation: No clear global ethical or legal frameworks for de-extinction.

Conclusion

The revival of dire wolf-like creatures by Colossal Biosciences represents a groundbreaking step in **de-extinction science**. While it opens new avenues for conservation and understanding extinct species, it also necessitates careful consideration of ethical, ecological, and scientific implications. As technology advances, the **balance between innovation and responsibility** becomes ever more crucial.

5.5. NEWS IN SHORTS

5.5.1. COMMAND AREA DEVELOPMENT AND WATER MANAGEMENT (M-CADWM)

Union Cabinet approved modernization of Command Area Development And Water Management (M-CADWM).

- M-CADWM as a sub-scheme of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is set to run for the period 2025-2026.
- PMKSY was launched in 2015-16 to enhance physical access of water on farm and expand cultivable area under assured irrigation, improve on-farm water use efficiency, etc.

Key Features of M-CADWM

- Objective: Modernization of the irrigation water supply network to supply of irrigation water from existing canals or other sources in a designated cluster.
- It will make robust backend infrastructure for micro-irrigation by farmers from established source to the Farm gate up to 1 hectare with underground pressurized piped irrigation.
- Technology: Use of Supervisory Control and Data Acquisition (SCADA), Internet of things technology will be used for water accounting and water management.
- Potential benefits:
 - Increase the Water Use Efficiency (WUE) at the farm level, increase agriculture production & productivity.
 - Sustainable farming by Irrigation Management Transfer (IMT) to Water User Society (WUS) for management of irrigation assets.
 - > WUS will receive handholding support for the next five years, helping them connect with economic entities like Farmer Producer Organizations (FPOs).
 - Attracting youth into farming by adopting the modern method of irrigation.

About Command Area Development and Water Management (CAD&WM) Programme

Meeting: Launched in 1974-75 and was renamed as Command Area Development and Water Management (CADWM) Programme in 2004.



Objective: Enhance utilisation of irrigation potential created and improve agriculture productivity and production.



Implementation: Under PMKSY - Har Khet Ko Pani from 2015-16.



Components: Structural intervention (On-Farm Development (OFD) works, link drains etc.) & Non-Structural intervention (One time Grant to Water Users' Associations (WUAs); Trainings and demonstration on water use efficiency, etc.)



5.5.2. GREEN MUNICIPAL BONDS

Ghaziabad Nagar Nigam pioneered India's first certified Green Municipal Bonds.

- It was issued under the Swachh Bharat Mission-Urban, raising ₹150 crore for the development of a cutting-edge
 Tertiary Sewage Treatment Plant (TSTP).
- TSTP ensures that **treated water meets the highest standards**, making it suitable for reuse in industrial processes.
- The TSTP was developed under the Public-Private Hybrid Annuity Model (PPP-HAM), with 40% municipal funding.

Green Municipal Bond (GMB)

- **Municipal bonds** refer to **non-convertible debt securities** issued by a municipal body or another entity that is established for such purposes and entrusted with functions under **Article 243W** of the Indian Constitution.
 - Green bonds are used to raise funds specifically for the climate mitigation, adaptation and other environment friendly and low carbon projects (World Bank).

Significance of GMB

- Sustainable development: Investors are increasingly focused on integrating Environment, Social and Governance (ESG) factors into their investment processes.
- Low cost, long term capital: They are cost-competitive with other bonds and can provide capital at a lower cost than commercial bank loans.
- **Broaden investor base:** As existing traditional financing sources such as domestic bank loans are not sufficient to support capacity addition.

Challenges of raising GMB



Poor fiscal health: Fiscal health lies at the centre of the credit-worthiness of a municipality.



Lack of internal capacity:
Internal capacity refers to the in-house expertise of a ULB, lack of relevant experts, and the expertise or skill sets in the workforce



Others: Absence of organic demand/constrained investor base, Inadequate financial discipline and disclosures, Lack of familiarity with bonds etc.

5.5.3. SIMILIPAL TIGER RESERVE

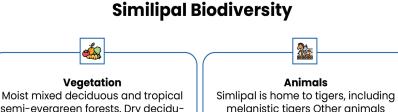
Odisha notified Similipal tiger reserve as national park.

- Out of the 2,750 sq km of the Reserve, 845.70 sq km has been notified as National Park, making it largest in Odisha, leaving behind Bhitarkanika.
- It is the 107th National Park and the second in the eastern state, after the Bhitarkanika.

About Simlipal Forest

- Location: Mayurbhanj District of Odisha in Chottanagpur region.
- **Major Rivers:** Burhabalanga, Palpala Bandan, Salandi, Kahairi, and Deo.
- Simlipal is also protected as a Wildlife Sanctuary, a Tiger Reserve (under Project Tiger), a Biosphere Reserve (under UNESCO's Man and the Biosphere Programme, since 2009), and forms part of Mayurbhanj Elephant Reserve.

semi-evergreen forests. Dry deciduous forests (e.g. Sal Tree), and grasslands are also present



Simlipal is home to tigers, including melanistic tigers Other animals include fishing cat, barking deer and mouse deer.

What is a National Park?

- **About:** It is an area, whether within a sanctuary or not, **given the highest protection** to conserve its wildlife and environment by reason of its **ecological, faunal, floral, geomorphological, or zoological importance**.
 - No human activity is permitted inside the national park, except for the ones permitted by the Chief Wildlife Warden of the state.
 - o Also, under the Forest Right Act of 2006, certain tribal groups are permitted to live inside the National Parks.
- Notification: By the State Governments under the Wildlife Protection Act, 1972.
 - However, once notified, no alteration of the boundaries can be done by the State Government, except on a recommendation of the National Board for Wildlife.

5.5.4. GANDHI SAGAR WILDLIFE SANCTUARY

Cheetah Project Steering Committee cleared the relocation of some of the cheetahs from Kuno National Park to Gandhi Sagar Wildlife Sanctuary

About Gandhi Sagar Wildlife Sanctuary

- Geographical: Gandhi Sagar is a wildlife sanctuary located at eastern Madhya Pradesh. It is spread over two districts of Madhya Pradesh i.e. Mandsaur and Nimach.
 - o This region is known as Nimar region.
- Type: The forest of this sanctuary is part of Khathiar-Gir dry deciduous forest.

- River: River Chambal Passes through it.
- Dam: This sanctuary is spread over the area surrounding to Gandhi Sagar dam backwater.
- Trees: Salai, Kardhai, Dhawda, Tendu, Palash etc.
- Wildlife: Wild Dogs (Dholes), Chinkara, Leopard, Otter, Mugger crocodile.
- Historical: It is part of the world famous Chaturbhuj Nala rock shelters.

5.5.5. INTERNATIONAL BIG CAT ALLIANCE

India And IBCA Signed the Headquarters Agreement.

• The Agreement provides **India** to host the International Big Cat Alliance (IBCA) **Headquarters** and **Secretariat** helping IBCA efficiently discharge its official functions.

More on the Agreement

- It pertains to visas, privileges and immunities being extended to the IBCA Secretariat and personnel, premises, etc.
- Further, India to provide a **budgetary support** of **150 crore rupees to IBCA** for creating a corpus, building infrastructure, meeting recurring expenditure for **5 years from 2023-24 to 2028-29.**



International Big Cat Alliance





Genesis: Launched by India in 2023 to commemorate 50 years of Project Tiger



Entity Type: Full-fledged treaty based inter-governmental international organization and international legal entity.



Members: 7 countries (Nicaragua, Eswatini, India, Somalia, Liberia, Guinea, Cambodia) have formally signed its Framework Agreement.



Aim: Conservation of 7 big cats namely Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar and Puma. Out of these, 5 big cats viz., Tiger, Lion, Leopard, Snow Leopard and Cheetah are found in India.

Other Efforts for Conservation of Big Cats

- St. Petersburg Declaration on Tiger Conservation (2010): Members of 13 tiger range countries agreed to the Tx2 goal (double the world's wild tigers by 2022).
- India: Project Tiger (1973); Project Lion (2020) for conserving Asiatic Lions, etc.

To know more about IBCA, refer to **Article 5.5. International Big Cat Alliance (IBCA)** in **March 2024** Monthly Current Affairs Magazine.

5.5.6. GLOBAL GEOPARKS NETWORK (GGN)

During the 10th Anniversary of **UNESCO Global Geoparks (UGGPs),** 16 new sites across 11 countries were added to the GGN.

- GGN is a non-profit International Association founded under UNESCO.
- It establishes ethical standards that must be adopted by Global Geoparks.

Major Geoparks added to GGN

- Kanbula (China): Located on the edge of the Qinghai-Tibet Plateau, it features the ancient Maixiu volcanoes, which are exceptionally well-preserved, and the Yellow River.
- Mt Paektu (North Korea): It was the location of one of the largest eruptions in recorded history (Millennium Eruption around 1000 CE).

- **North Riyadh (Saudi Arabia):** Obaitharan Valley (Wadi Obaitharan), located at the base of Tuwaiq Mountain, is a lush reserve that supports the region's water supply.
 - Valley is also home to ancient coral reef systems.

UNESCO Global Geoparks (UGGP)

- Genesis: Introduced in 2015 as a key component of the International Geosciences and Geoparks Programme (IGGP).
- Geoparks: UGGPS are single, unified geographical areas where landscapes of international geological significance are managed with a holistic concept of
 - o protection,
 - o education and
 - sustainable development.
- Management: Managed by a body having a legal existence recognised under national legislation.
- Reassessment Period: UGGP status is not permanent; it is reassessed every four years.
- Mandatory Networking: Membership of the GGN is obligatory for UGGPs.
- Current Status: There are 229 UNESCO Global Geoparks in 50 countries (none in India).

5.5.7. PARTICULATE EMISSION TRADING MARKET IN GUJARAT

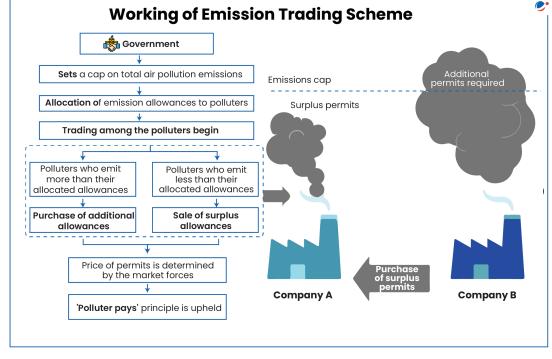
A new study has revealed that the Surat Emission Trading Scheme (ETS) launched in 2019 has been successful in

controlling particulate matter emissions cutting Pollutants By 20-30%.

 Pollution abatement costs also dropped by over 10 %, and compliance with environmental laws rose among participating plants.

About Surat ETS

- Overview: It is the world's first-ever market for trading in particulate matter emissions.
 - It is also India's first pollution trading scheme of any kind.



- o The concept of ETS first originated in US, targeting sulfur dioxide (SO2) pollution.
- Objective: To curb air pollution in accordance with the polluters pay principle.
- Working Mechanism: It is based on market-linked 'cap and trade' mechanism (Refer Image).
 - o This approach has been used in Europe for greenhouse gases and in China for carbon emissions.
 - ETS uses Continuous Emissions Monitoring Systems (CEMS) devices for monitoring.
- Trading: Industries trade permits on a platform developed by NeML (National Commodities and Derivatives Exchange e-Markets).
- Participating units are also required to submit an **'Environmental Damage Compensation**' amount (rate varies according to size of industry).

5.5.8. NET ZERO FRAMEWORK FOR GLOBAL SHIPPING

International Maritime Organization (IMO) approved Net-Zero Framework for Global Shipping.

- The **IMO Net-zero Framework is the first in the world** to combine **mandatory emissions limits** and GHG pricing across an entire industry sector.
- Shipping accounts for almost 3% of global greenhouse gas emissions.

Key Features

- It will be included in Annex VI (Prevention of air pollution from ships) to the **International Convention for the Prevention of Pollution from Ships** (MARPOL).
- Aim: Net-zero emissions by or around, i.e. close to 2050.
- Implementation: Set to be formally adopted in October 2025 before entry into force in 2027.
 - o Once into force, it will become **mandatory for large ocean-going ships over 5,000 gross tonnage**, which emit 85% of the total CO2 emissions from international shipping.
- Ships will be required to comply with:
 - o **Global Fuel Standard:** Ships must reduce, over time, their annual greenhouse gas fuel intensity (GFI) that is, how much GHG is emitted for each unit of energy used.
 - Global Economic Measure: Ships emitting above GFI thresholds will have to acquire remedial units to balance its deficit emissions, while those using zero or near-zero GHG technologies will be eligible for financial rewards.
- IMO Net-Zero Fund: It will be established to collect pricing contributions from emissions.

About MARPOL



Main international convention aimed at the **prevention of pollution** from ships caused by operational or accidental causes



Adopted at the **International Maritime Organization (specialized agency of the United Nations)** in 1973.



MARPOL is structured into **six annexes**, each dealing with a different type of pollution.

5.5.9. WHO GLOBAL CONFERENCE ON AIR POLLUTION AND HEALTH

Second WHO Global Conference on Air Pollution and Health was held in Catragen, Columbia.

About the Conference

- It was co-organized by WHO and Columbia and other UN Agencies like UNEP, WMO etc.
- Objectives: Accelerating action for clean air, clean energy access and climate change mitigation.

Key Highlights

- Over **50 countries**, have committed to the **shared goal** of **reducing the health impacts of air pollution by 50% by 2040.**
- India reaffirmed its commitment to reducing air pollution's health impacts by 2040 through actions aligned with the **National Clean Air Programme**.

5.5.10. BAKU TO BELEM ROADMAP

India urges **BRICS** nations to unite on 'Baku to Belem Roadmap' to mobilise **USD 1.3 trillion in climate finance annually by 2035** to support Nationally Determined Contributions (NDCs).

Baku to Belem Roadmap

- **UNFCCC COP29**, **held in Baku (Azerbaijan)**, agreed on a new global finance goal and a framework for raising ambition for climate finance in run-up to COP30 in Belém (Brazil).
- It aims at **scaling up climate finance to developing country parties** to support low greenhouse gas emissions and climate-resilient development pathways and implement NDCs.

To know more about Climate Finance, refer to **Article 5.3. Climate Finance** in **November 2024** Monthly Current Affairs Magazine.

5.5.11. AIM4NATURE INITIATIVE

The Food and Agriculture Organization (FAO) on Earth Day (22nd April) launched Accelerating Innovative Monitoring for Nature Restoration (AIM4NatuRe).

About AIM4NatuRe Initiative

- AIM4NatuRe is an acronym of Accelerating Innovative Monitoring for Nature Restoration.
- Aim: To improve monitoring and reporting of global ecosystem restoration efforts.
 - Initiative leverage cutting-edge technology, standardized data frameworks, and capacity development to restore at least 30% of degraded ecosystems by 2030, as outlined in Target 2 of the Global Biodiversity Framework (GBF).
- It is part of FAO's AIM4Forests Programme, expanding the scope beyond forests to provide a holistic approach to nature restoration monitoring.

5.5.12. VULTURE CONSERVATION AND BREEDING CENTRE (VCBC)

34 critically endangered vultures were transferred from the Vulture Conservation Breeding Centre (VCBC) in Pinjore (Haryana), to Maharashtra.

About VCBC, Pinjore

- Genesis: Established in 2001 with the UK Government's 'Darwin Initiative for the Survival of Species' fund.
- Partners: Harvana Forest Department and the Bombay Natural History Society (BNHS).
- Aim: To save three species of vultures, the White-backed, Long-billed and Slender-billed.
- Location: Edge of the Bir Shikargaha Wildlife Sanctuary, Haryana.
- Achievement: Confirmed that diclofenac, a non-steroidal anti-inflammatory drug, was the main cause of vulture mortality.

5.5.13. SMALL HIVE BEETLE (SHB)

Alien or non-native beetle, **Small Hive Beetle** (*Aethinatumida*), was recorded for the first time in India in West Bengal.

About SHB

- Native: Sub-Saharan Africa.
 - o It seldom causes harm to Africa but creates havoc across other regions.
- Characteristics: Oval-shaped, reddish-brown, and 5-7 mm long, its life cycle goes through different stages: eggs, larva, pupa and adult.
- Damage: Females of SHB enter the beehives through cracks and crevices to lay eggs, which on hatching feed voraciously on the stored pollen, honey, and honeybee eggs and defecate in the honeycombs making it unfit for human consumption.



5.5.14. ARAL SEA

Research indicates signs of **geological changes** (elevation of the dried land of the basin) since the water disappeared on Aral Sea.

About Aral Sea

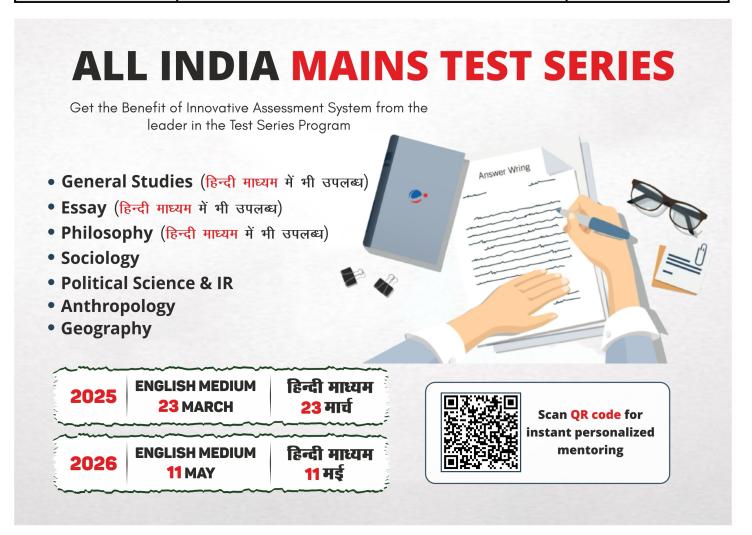
- About: Was once a large saltwater lake of Central Asia.
- Location: Boundary between Kazakhstan (North) and Uzbekistan (South).
 - o It was fed by Amu Darya and Syr Darya rivers.
- Cause of Disappearance: Diversion of the Amu Darya and Syr Darya rivers during the Soviet era.
 - The dried-up Aral Sea became the hazardous Aralkum Desert, which ranks as a major global dust source.





You can scan this QR code to practice the Smart Quiz of Environment at our open test online platform for testing your understanding and recalling of the concepts.





6. SOCIAL ISSUES

6.1. WORKPLACE AUTOMATION

Why in the News?

Major tech firms are rapidly adopting AI including generative AI, enhancing customer interactions and workplace efficiency, but concerns about its impact on workers persist.

About Workplace Automation

- **Meaning:** It is the **use of technology** such as AI, Machine Learning, Augmented Reality, etc., to **perform tasks** and **processes** with minimal **human intervention.**
- India and Automation: India's Industrial Automation Market Growth is expected to reach \$29.43 bn by FY2029.
 - Key drivers for Workplace Automation in India: Accelerating digitalisation and technological Innovation, changing customer expectation, enhanced competition, rising labour costs, Ageing population, etc.

What are the social benefits associated with the Workplace Automation?

- **Bridging skill-job gap and workforce productivity:** Al-driven systems and algorithmic management assign tasks based on skills and availability, improving productivity. Identifies gaps and helps target upskilling efforts.
- **Promoting Gender Equity and diversity at workplace:** Automation can reduce biases in hiring and performance evaluation, supporting diversity efforts and promoting **social mobility**.
- Safer Workplaces: Machines take over hazardous and physically demanding tasks.
- **Enhanced work-life Balance**: Automation of routine work allows employees more personal time. Less repetitive work decreases mental fatigue and burnout. Thus, employees can do strategic, creative, and decision-making roles.
- Improved Customer Service: Greater consistency, faster responses, and improved access and affordability of customer experience.

What Are the Social Challenges Associated with Workplace Automation?

Rising Income Inequality

- Wage Polarization and job losses: High-skilled workers benefit more from automation, while low-skilled workers face job losses or stagnant wages.
 - > Automation is expected to create 69 million new jobs, whereas 83 million jobs will become obsolete by 2027 (WEF).
- Barriers to Reskilling: Unequal access to digital literacy and training programs may deepen existing socioeconomic divides.
- Gender Disparities in Employment: Automation tends to replace low skilled jobs like clerical and secretarial
 roles where female works have higher representation.
 - > Thus, without targeted reskilling and support, automation could further reduce job opportunities for women.
- o **Gig Workers and Job Insecurity:** Automation may encourage short-term contracts and reduce job stability, especially in platform-based gig economies.
 - > Gig workers often lack organizational support and protection when working with automated systems.
- **Mental Health and Well-being:** Continuous monitoring and algorithmic control (e.g., keystroke tracking, real-time surveillance) can increase stress and reduce autonomy, leading to digital fatigue and burnout.
 - The pressure to stay constantly connected negatively impacts work-life balance and overall mental health.
- **Decline in Human Oversight and Judgment:** Excessive dependence on automated systems may erode human intervention, create misjudgements, or safety failures when systems malfunction.
 - There is also anticipation that automation may also **gradually reduce human decision-making in critical areas** such as **healthcare**.

Way Ahead to Ensure Inclusive, Safe, and Equitable Workplace Automation

- Ensuring Income Equity
 - Universal Social Security: Recognize job loss due to automation under labour laws. Extend social security to informal, gig, and contract workers most vulnerable to automation.

- > Code on Social Security, 2020 aims to extend social security benefits to all workers both in the organised and unorganised sectors.
- > **Industrial Relations Code, 2020** has a provision for **worker reskilling fund** for re-skilling the retrenched workers by crediting fifteen days' wages last drawn by the worker.
- Foster Equitable Automation: Bridge the Gender Automation Gap through inclusive policies and targeted upskilling.
- Strengthen Legal and Policy Frameworks to facilitate safe and healthy workplace
 - Update Occupational Safety and Health (OSH) Laws: Include gig workers, teleworkers, and platform workers under workplace safety laws.
 - > Align the law with the **1981 ILO Convention No. 155** (OSH CONVENTION) and the **2006 Convention No. 187** (Promotional Framework for OSH) to ensure the **right to a safe and healthy workplace in the digital era**.
 - Revise Regulations on Robotics & Human-Robot Interaction: Introduce clear safety norms and protocols for collaborative environments.
 - o **Enshrine the Right to Disconnect:** Prevent overwork and digital burnout by regulating after-hours work expectations.
- **Promote Human-Centric Algorithmic Management:** Ensure algorithmic management tools are transparent, ethical, and subject to human oversight.
 - o Establish clear grievance redress systems for workers affected by automated decision-making.
 - o **Incorporate worker feedback in** system design to maintain trust and reduce psychological stress.
- Prioritize Awareness: Conduct awareness campaigns about digital rights, mental health, and emerging risks.
- **Ensure Environmental Sustainability:** Promote green automation that contributes to **environmental sustainability** and long-term resilience.

Conclusion

A collaborative, worker-centric, and forward-looking approach is essential to ensure that workplace automation enhances rather than undermines safety, equity, and well-being. With the right balance of technology, policy, and participation, automation can lead to more sustainable, inclusive, and humane workplaces.

Scan the QR code to know more about the impact of emerging technologies

Weekly Focus #80: Ethics of emerging technology



6.2. NEWS IN SHORTS

6.2.1. MOSPI RELEASED "WOMEN AND MEN IN INDIA 2024: SELECTED INDICATORS AND DATA"

Report offers a comprehensive overview of the gender landscape in India across key areas like population, education, health, economic participation, and decision-making.

Key Highlights from Report

- Sex Ratio at Birth: Between 2014-16 and 2018-20, sex ratio in urban areas (910) has surpassed that of rural areas (907).
- Health: Maternal Mortality Rate (MMR) declined from 122 in 2015-17 to 97 in 2018-20.
- **Education:** Literacy rates in India reached 84.7% for males and 70.3% for females in 2017 with Kerala having the smallest gender literacy gap, while Rajasthan having the highest.
- **Economic Participation:** Female Labour Force Participation Rate (LPFR) increased significantly from 23.3% in 2017-18 to 41.7% in 2023-24.
 - o Financial Inclusion: Women own 39.2% of all bank accounts and contribute to 39.7% of total deposits.
 - o Leadership roles: Women held 28.7% share in board of directors in FY25, up from 26.7% in FY20.
- Political Participation: Female voter turnout varied over the years, reaching 67.2% in 2019 but slightly declining to 65.8% in 2024.

• **Violence against Women:** Nearly one-third (31.9%) of married women aged 18-49 in India experience spousal violence, with the highest rates in Karnataka (48.4%), Bihar (42.5%) and Manipur (41.6%).

6.2.2. AI KIRAN

Al Kiran, an initiative to empower women in Artificial Intelligence, has been launched.

About Al Kiran

- Objective: To foster a vibrant Al community where women can thrive as innovators, changemakers, and leaders.
- Led by: Office of the Principal Scientific Adviser (PSA) to the Government of India.
- **Focus Areas**: It highlights contributions of over 250 women driving advancements in AI across critical sectors such as education, healthcare,

About KIRAN Scheme

- The Knowledge Involvement in Research Advancement through Nurturing (KIRAN) Scheme was launched by the Department of Science and Technology (DST)
- Aim: Promote gender equality in science and technology by supporting and empowering women in the field.

6.2.3. IMF REPORT STRESSES ON SILVER ECONOMY

IMF released "World Economic Outlook (WEO): A Critical Juncture Among Policy Shift" Report.

- Apart from growth projection, the report also highlights demographic shifts and Silver Economy.
- Report also recommends policies favouring healthy ageing enabling participation of older individuals in labour force.

Key Observations

- Economies worldwide are aging rapidly: Due to declining fertility and rising life expectancy crossing their demographic turning point and shifting from demographic dividend to demographic drag.
 - The average age of the world's population is projected to increase by 11 years between 2020 and the end of the century.
- Healthy Ageing: Alongside increase in longevity, the functional capacity of older individuals has improved over time.
 - 70 year old in 2022 had the same cognitive ability as a 53 year old in 2000.

Benefits of Healthy Ageing

- **Impact on Global GDP Growth:** Healthy aging is projected to **add 0.4% point** to global average GDP growth over 2025–50.
 - The contribution from **Indi**a would be large as the share of workers aged 50 and older is to grow faster in that period.
- Impact on Labor Force Participation: Targeted health policies enable older workers to increase their labor force participation rates.

Policy Recommendations on Healthy Ageing

- **Comprehensive Approach:** Combining pension reforms, training, workplace adaptations, with health-oriented interventions to **increase effective retirement ages.**
- Reducing labor force participation gaps: Fostering higher female labor force participation through improved work-life balance, affordable childcare, etc., to counter demographic headwinds.



You can scan this QR code to practice the Smart Quiz of Social Issues & Social Schemes at our open test online platform for testing your understanding and recalling of the concepts.



7. SCIENCE AND TECHNOLOGY

7.1. GREEN HYDROGEN CERTIFICATION SCHEME OF INDIA

Why in the News?

Recently, Union Minister for New and Renewable Energy launched Green Hydrogen Certification Scheme of India (GHCI).

About GHCI

- It has been launched under the National Green Hydrogen Mission (NGHM).
- Objective: To create a robust framework for certifying Green Hydrogen production and ensuring transparency, traceability, and market credibility.
 - o It will help in developing detailed methodology for the **measurement, monitoring, reporting, onsite verification, and certification** of GH and its derivatives.
- Ministry: Ministry of New and Renewable Energy (MNRE).
- Eligible Hydrogen Production Pathways: Electrolysis and Conversion of Biomass.
- Verification: Green Hydrogen producers shall get conducted annual verification by an Accredited Carbon Verification (ACV) agency.
- Green Certification: On meeting the average emission intensity (non-biogenic) requirements of 2 kg CO₂ eq/kg H₂ or less.
 - o It is non-transferable or tradeable and cannot be claimed for any emission reduction credits.

What is Green Hydrogen (GH₂)?

- Refers to hydrogen produced through electrolysis, which splits water molecules (H₂O) into hydrogen (H₂) and oxygen (O₂) using electricity generated from renewable sources like solar, etc.
 - o It is also produced with the help of gasification of biomass.
- Key Applications: Fuel Cell Electric Vehicles (FCEVs), Industry (Fertilizer Refinery), Transport (Road, Rail), etc.

Other Types of Hydrogen							
Colour							
Туре	Black/Brown Hydrogen	Grey Hydrogen	Blue Hydrogen	Turquise Hydrogen	Pink Hydrogen	Yellow Hydrogen	White Hydrogen
Process	Coal Gasification	Methane Reformation	Coal Gasification & Methane Reformation with CCUS	Pyrolysis	Electrolysis	Electrolysis	Naturally occur
Source	Coal	Natural Gas	Fossil Fuel	Methane	Nuclear Energy	Solar Power	Found in underground deposits

About National Green Hydrogen Mission (NGHM), 2023

- Objective: To make India a Global Hub for production, usage and export of Green Hydrogen and its derivatives.
- Duration: Phase I (2022-23 to 2025-26) and Phase II (2026-27 to 2029-30).

Expected Outcomes Of The Mission By 2030

C

India's Green Hydrogen Production Capacity will Reach at Least





Renewable Energy Capacity Addition of ~125 GW



Over

₹ 8 lakh crore
in Total Investments



Create Over **6 lakh** Full Time Jobs



50 MMT per annum of CO2 Emissions are Expected to be Averted



Key components:

- o Facilitating demand creation through exports and domestic utilization.
- Strategic Interventions for Green Hydrogen Transition (SIGHT) programme, which includes incentives for manufacturing of electrolysers, etc.
- Pilot Projects for steel, mobility, shipping, decentralized energy applications, hydrogen production from biomass, hydrogen storage, etc.
- Development of Green Hydrogen Hubs
- Establishing a robust framework of regulations and standards.
- o Research & Development programme.

Conclusion

To unlock the full potential of green hydrogen in India, a multi-pronged approach is essential—reducing production costs, offering targeted incentives for manufacturing electrolyser, investing in R&D, promoting Public Private Partnerships (PPP), etc.

To know more about NGHM, refer to **Article 7.2. National Green Hydrogen Mission** in **July 2024** Monthly Current Affairs Magazine.

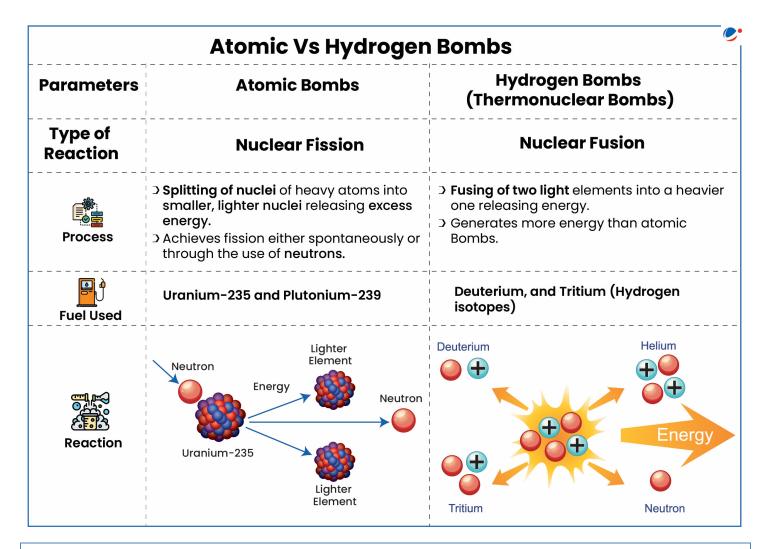
7.2. NEWS IN SHORTS

7.2.1. NON-NUCLEAR HYDROGEN BOMB

Recently a non-nuclear hydrogen bomb has been detonated by china.

Key Features of the Non-Nuclear Hydrogen Bomb

- Chemical Reaction: It deploys chemical reaction with Magnesium Hydride to create a powerful explosion without nuclear materials.
 - o **Hydrogen bomb**, on the other hand, is primarily based on the **nuclear fusion process.**
- **Uses Magnesium Hydride:** Unlike Hydrogen bombs that uses **radioactive hydrogen isotopes** like deuterium or tritium as fuel.
 - Magnesium Hydride is a silvery powder that acts as a solid-state hydrogen storage material.
 - When ignited it releases hydrogen that rapidly mixes with air and on reaching explosive limits, the gas ignites creating a **self-sustaining combustion cycle**.
- Scale of Damage: Generates only about 40% of Trinitrotoluene's blast force, but demonstrates greater thermal damage radius with heat output enough to melt materials such as aluminium alloys.
 - It requires minimal ignition energy and has the ability to generate intense, sustained heat without producing radiations.



7.2.2. JEVONS PARADOX

Recently, Microsoft CEO highlighted Jevons Paradox in the backdrop of increased adoption of the AI systems globally.

About Jevons Paradox

- It is the **idea** that technological progress that makes a resource cheaper or more efficient to use often leads to an **increase in demand for that resource.**
- Background: William Stanley Jevons first described a paradox in 1865 where he maintained that more efficient steam engines would not decrease the use of coal in British factories but would actually increase it.
- In the case of AI, as systems become more powerful and accessible, it is likely that their use will grow significantly.

7.2.3. TENSOR PROCESSING UNIT

Google recently launched its 7th-generation TPU, called Ironwood, designed to enhance performance of AI models.

About TPU

- Specialised processor or Application-Specific Integrated Circuit (ASIC) developed by Google in 2015, specifically optimized for machine learning and AI tasks.
- TPUs are designed to handle tensor operations (Core data structures used in ML models).
 - Tensors are multidimensional arrays that store a specific type of value.

- Advantages of TPUs:
 - Optimized for Al Workloads: Built specifically for machine learning, TPUs outperform CPUs and GPUs in Al
 - Faster Training: TPUs can train complex neural networks in hours.

About Central Processing Unit (CPU) and Graphics Processing Unit (GPU):

- CPU: General-purpose processor to handle various tasks.
 - o CPUs can contain two to 16 cores. Ability to multitask is determined by number of cores in hardware.
- GPU: Specialized processor designed to perform multiple tasks concurrently/parallelly rather than sequentially (like in a CPU).

7.2.4. MISSION "FRAM2"

Mission titled "Fram2" has been launched using Dragon spacecraft of SpaceX.

- It will carry out a series of experiments, including the first X-ray in space and the cultivation of mushrooms in microgravity.
- It will be the first human spaceflight to cruise directly over Earth's Polar Regions.

About Earth's polar orbit:

- A polar orbit is when a satellite orbits Earth by passing over the North and South Poles.
 - A deviation of 10 degrees over north and south poles is still classified as a polar orbit.
- Height: Polar orbits are a type of low Earth orbit, typically between 200 to 1000 km in altitude.
- Significance: A spacecraft orbiting over the poles can observe the entire planet as it spins underneath.
 - o The path is particularly useful for weather, mapping and spy satellites.
- Issue: Launching rocket into polar orbits requires greater fuel since rockets cannot harness Earth's rotational speed.

Satellite Orbit	Height	Application	Details	Examples
Low Earth orbit (LEO)	Under altitudes of 2000 km	Satellite imaging, communication, Earth observation, navigation and scientific research	International Space Station (ISS) also orbits here as shorter distance makes it easier for astronauts to reach.	RISAT-2B
Sun- synchronous orbit (SSO)	Between 600 to 800 km	Ideal for studying land-use changes, ice melting, and weather.	Particular kind of polar orbit in which satellites are in sync with Sun.	HysIS for earth observation
Medium Earth orbit (MEO)	From 2,000 to 36,000 kilometers	Ideal for navigation satellites and telephone communications	Satellites in MEO do not need to follow specific paths around Earth	European Galileo system
Geostationary orbit (GEO)	35,786 km	Telecommunication, weather satellites, GPS etc.	Fly above Earth's equator, moving from west to east, exactly matching Earth's rotation.	Indian National Satellite System (INSAT)

7.2.5. ARYABHATA SATELLITE

India's first satellite, Aryabhata, completed 50 years.

About Aryabhata Satellite

- Orbit: Low Earth Orbit
- Built by ISRO to conduct experiments in X-ray astronomy, aeronomics, and solar physics.
- Named after the ancient Indian mathematician and astronomer.
- Launched in 1975, by Soviet Kosmos-3M rocket from Volgograd Launch Station (present Russia)
- Made India the 11th country in the world to send a satellite into orbit.

7.2.6. DESALINATION TECHNOLOGIES

IIT Bombay Scientists Developed a lotus leaf-like solar evaporators for salt-water treatment.

 Developed a new hydrophobic Graphene-based material that can facilitate water desalination, this could be a significant breakthrough to address the fresh water crisis in the world.

Fresh water crisis

- While 71% of its surface is covered by water, the world population depends on only the 3% available fresh water.
 - Out of which only 0.06% can be easily accessed as the rest comprises the frozen polar ice cap or glaciers, groundwater, and swam.

Desalination Technologies and Processes

Desalination Technologies	Thermal Technology	Membrane Technology	
Concept	 Heating of saline water and collecting the condensed vapor (distillate) to produce pure water. Usage: Mainly for seawater desalination. 	 Feedwater is pumped through semi- permeable membranes to filter out the dissolved solids. Usage: Mainly for brackish water desalination. 	
Sub-categories (Processes)	Three groups: Multi-Stage Flash Distillation Multi-Effect Distillation Vapor Compression Distillation	Two groups: • Electrodialysis/Electrodialysis Reversal (ED/EDR) • Reverse Osmosis (RO)	
Merit	 Ability to reduce the maximum salinity concentration. Demands less input electrical energy compared to membrane techniques. 	 Environmental Friendly: E.g., ED eliminates the need for chemicals. Smaller footprint: Typically require less space than conventional technologies. 	
Demerits	 Using conventional energy sources like coal etc. High costs involved: So, rarely been used for brackish water desalination. Subject to corrosion: E.g., MSF plants. 	 Susceptible to Fouling. Require Regular Maintenance Face challenges in Membrane Waste Disposal. May not fully remove Total dissolved solids (TDS) or pathogens. 	
Example	Low Temperature Thermal Desalination (LTTD) plants were established in the Kavaratti, Minicoy and Agatti Islands in the UT of Lakshadweep.	Nemmeli Seawater Desalination Plant, Tamil Nadu, on Reverse Osmosis. (Largest desalination plant in the South Asia)	

7.2.7. BATECHOMON

BatEchoMon, short for **Bat Echolocation Monitoring**, is **India's first automated bat monitoring system** developed at the Indian Institute for Human Settlements (IIHS), Bengaluru.

About BatEchoMon

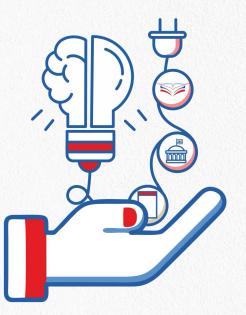
- It is an autonomous system capable of detecting and analysing bat calls in real-time.
- It acts as a **Bat Detector**, a specialised recording device that can convert the ultrasonic echolocation calls of insectivorous bats into audible sounds for humans.
 - It uses raspberry pi microprocessor and convolutional neural network algorithms to detect and identify bat species via echolocation calls.



You can scan this QR code to practice the Smart Quiz of Science & Technology at our open test online platform for testing your understanding and recalling of the concepts.



OPTIONAL SUBJECT CLASSES 2026



- > Geography > Sociology
- Political Science and International Relations

20 JUNE, **2** PM

> Physics

15 JULY

- » Public Administration
- Anthropology >> Hindi Literature

STARTING SOON

8. CULTURE

8.1. MANUSCRIPTS OF BHAGAVAD GITA AND NATYASHASTRA

Why in the News?

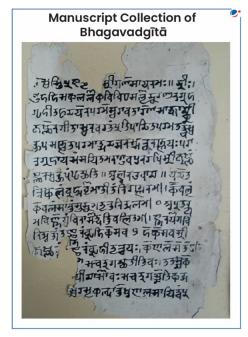
United Nations Educational, Scientific and Cultural Organization (UNESCO) added the Manuscript Collection of **Bhagavad-Gita and Natyashastra** in its Memory of the World Register.

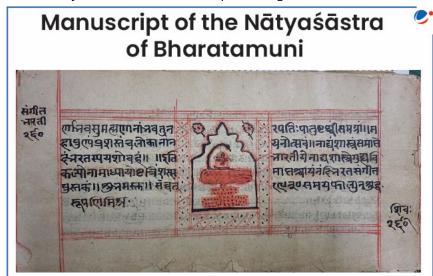
About UNESCO Memory of the World (MoW) Programme

- Genesis: Launched in 1992.
- Objectives: Facilitate preservation (particularly in areas affected by conflict and/or natural disaster), catalyse universal access, enhance public awareness worldwide of the significance of documentary heritage.
 - Documentary heritage is a legacy of humankind, through which we can look back into past, enrich our present lives, and look into future with boldness forged by enduring memories.
- International Advisory Committee (IAC) is the main body responsible for advising UNESCO on the planning and implementation of Programme as a whole.
 - IAC comprises 14 members serving in a personal capacity, appointed by the Director-General of UNESCO.
- Current Status: 570 Memory of the World inscriptions on the International Register since 1995.
 - Recently, MoW listed 74 new items of documentary heritage inscribed on the Memory of the World International Register in 2025.
- In addition to International Register, UNESCO has supported creation of **4 regional registers** and **National "Memory of the World" Committees** in more than 100 countries.

About Bhagavad-Gita

- **About:** Attributed to **Sage Vyas**, it contains **700 verses in 18 chapters**, is embedded within the **Bhīṣmaparva** (adhyāya 23-40) of the epic **Mahabharata**.
- It is a **central text** in continuous, cumulative ancient intellectual Indian tradition, synthesizing various thought movements such as **Vedic**, **Buddhist**, **Jain and Cārvāka**.
- It takes the form of a dialogue between **Krisna and Arjuna** with armies lined up for the great war intended to free Arjuna of dejection (visāda).
 - In the battle of kurusetra Lord Krishna urges Arjuna to do his duty, good or evil without any attachment for the fruit of actions (niskama karma).
- Three margas (paths) in Gita: Karma (Action), jnana (Knowledge), bhakti (Devotion) are three paths proposed as spiritual disciplines by Gita for the betterment of one's wealth.
- Other key facts about Bhagavad-Gita:
 - Contains the idea of Bhakti.
 - Teachings of Shankaradeva, founder of the Vaishnavite sect in Assam, was inspired by Bhagavad Gita.





About Natyashastra (Science of Dramaturgy)

- It was written by Bharatamuni and was codified around the 2nd century B.C.
- It is an **epitome of Nāṭyaveda** (an oral body of knowledge of performing art containing 36,000 verses known as the Gāndharvaveda).
- Natyotpatti, meaning "birth of performing art," refers to the origin story of the Natyashastra.
 - o It gives the mythical account of the origin of the art and its descent on the earth.
 - o In the story Natyashastra was formed by extracting knowledge from all 4 Vedas- Paathya or recitative
 - text (from Rig veda), Sangeeta or music (from Saama veda), Abhinaya or performance (from Yajur veda) and Rasa or emotions (from Atharva veda).
 - o Hence, Natyashastra is often referred to as the 'Fifth Veda'.
- It comprises comprehensive set of rules that define nāṭya (drama), abhinaya (performance), rasa (aesthetic experience), bhāva (emotion), saṅgīta (music), etc.
 - Aim: To create **Rasa** and this is achieved by giving **detailed instructions** to various categories of personnel concerned and connected with the stage and the stage production.
- It is the first text available on the classification of India instruments.

Other Important entries from India in UNESCO Memory of the World Register			
First Summit Meeting of the Non-Aligned Movement Archives	2023		
Abhinavagupta (940-1015 CE): Collection of Manuscripts of his works			
Maitreyayvarakarana & Gilgit Manuscript	2017		
Shāntinātha Charitra	2013		
Laghukālacakratantrarājatikā (Vimalaprabhā)	2011		
Tarikh-E-Khandan-E-Timuriyah			
Rigveda	2007		
Saiva Manuscript in Pondicherry	2005		
Archives of the Dutch East India Company	2003		
The I.A.S. Tamil Medical Manuscript Collection	1997		

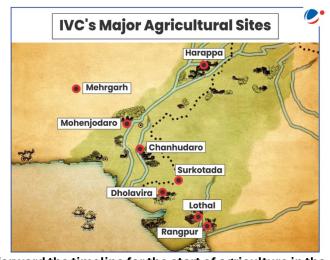
8.2. AGRICULTURE IN INDUS VALLEY CIVILIZATION

Why in the News?

New radiocarbon dating study has revised the age of Mehrgarh, South Asia's oldest known Neolithic farming settlement in Pakistan, from 8000 BCE to 5200 BCE.

More on the News

- Earlier versions of the farming timeline relied on radiocarbon dates from burnt wood, a material that can be centuries older than the event dated.
 - The new team instead dated carbon locked in tooth enamel, which records the actual year a person died and is far less prone to contamination.
- Since the rise of civilization in the Indus Valley is best regarded as the culmination of a long period of Neolithic experimentation and development, this study also pushes forward the timeline for the start of agriculture in the Indus Valley Civilization (IVC).



Agriculture in IVC

The seasonal mobility of early hunter-gatherer communities—who relied on wild plants and animals for sustenance—gradually gave way to a more settled agrarian lifestyle. These communities began cultivating crops and domesticating animals, marking a significant shift in human civilisation.

Archaeological excavations in the Indus Valley and surrounding regions provide concrete evidence of early agricultural practices, as seen in the discovery of granaries, pottery, terracotta figurines, and ornamental artifacts.

Crops Cultivated:

- Wheat and barley were the primary rabi crops, whereas mustard, sesamum, cotton, dates, and leguminous plants were sown as kharif crops.
 - > Evidence of wheat was found at **Harappa and Mohenjo-Daro** whereas evidence of **barley was found at Shortugai.**
- o Evidence of rice cultivation is limited to Lothal and Rangpur in Gujarat, with rice husk found at Rangpur.
- Pulses: Green gram, black gram, and horse gram grown at various sites and Balathal, whereas evidence of peas found at Harappa.
- o **Brassicas:** Brassica campestris **(brown sarson, yellow sarson, toria)** and Brassica juncea (mustard) found at **Chanhu-daro and Surkotada**, were supposedly **used for oil, medicine, or bird feed.**
- Cotton: IVC was the world's first cotton producer. The Babylonian and Greek names for cotton, Sindhu and Sindon, respectively, point to the Indus Valley as the home of cotton.
 - > Cloth fragment and 24-fold yarn is found at Mohenjo-Daro.
- Fruits: Jujube (Ber) found at Mehrgarh, Date Palms: date stones recovered at Nausharo and Mohenjo-Daro, Grapes: grape pips found at Mehrgarh, Nausharo, and Shortugai, Walnuts and Peepal Fruit: Recovered at Hulas.

Agricultural Techniques and Tools:

- Plough: The Harappans probably learned plough technology from the Sumerians. They used wooden ploughs, which did not survive over time as wood decays.
 - > A terracotta plough model from Mohenjo-Daro indicates their design, though it lacks a handle.
- Wheeled Carts: Bullock carts with solid wheels were used to transport goods like farmyard manure. It highlights animal power and wheel technology.
 - > Several bronze models of bullock carts are found at **Harappa and**Chanhu-daro as well as Cart-ruts have been found at Harappa.
- Cropping Patterns: Excavations at Kalibangan revealed a furrowed field with a grid pattern, suggesting mixed cropping (e.g., mustard and grams), possibly the earliest evidence of a ploughed field globally.
- Wheeled Carts

Plough

- Saddle-Quern: Which is considered as modern equivalents sil and vatta was used for grinding grains like roasted barley, as depicted in a Mohenjo-Daro terracotta of a woman kneading flour persist in Indian homes.
- o Crop Protection: Wild animals like deer, wild boars, parakeets threatened the crops.
 - > Terracotta sling balls found at Harappan sites indicate **farmers used** slings to scare pests, a practice still seen in northern India.

Land and Irrigation Practices:

- Fields were primarily located along river banks, leveraging seasonal inundation for irrigation.
- Rabi crops were sown post-inundation, while kharif crops were sown at the start of inundation and harvested at its end.
- Advanced irrigation (gabarbands, canals, wells) supported year-round cultivation, especially during dry seasons.



Conclusion

The Indus Valley Civilization thrived for centuries because of its strong agricultural foundation. Their farming skills supported advanced cities, beautiful art, and wide-reaching trade networks. This agricultural success was key to their lasting impact on human history.

To know more about the Harappan Civilisation, refer to **Article 8.1. 100 years of Discovery of Harappan Civilisation** in **September 2024** Monthly Current Affairs Magazine.

8.3. VAIKOM SATYAGRAHA

Why in the News?

This year marks the centenary of the official withdrawal of Vaikom satyagraha on November 30, 1925.

More on the News

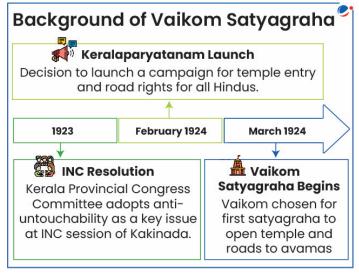
- The Vaikom satyagraha was a significant event in India's history, as it marked the milestone in the fight against untouchability.
- The satyagraha was withdrawn after consultations between Gandhi and W.H. Pitt, the then police commissioner of Travancore.

About Vaikom Satyagrah

- The Vaikom Satyagraha was a non-violent civil rights movement in Travancore, Kerala against Hindu caste discrimination.
- It specifically protested the prohibition that prevented lower castes (avarnas) from using public roads surrounding the Shiva temple at Vaikom.
- The Satyagraha began by sending three volunteers daily on the road instead of a procession due to prohibitory orders.
 - Dressed in khadi, three young men namely Govinda Panikkar, a Nair, Bahuleyan, an Ezhava and Kunjappu, a Pulaya, marched ahead to the temple.
- They were promptly **stopped and arrested**. So, the next morning, **another three men entered the forbidden roads** and courted arrest.
 - o This went on every day until the police stopped making arrests and barricaded the whole area instead.
- From then, the Satyagrahis used peaceful protest methods like blocking roads, organizing quiet demonstrations, and holding gatherings.
- Satyagraha Ashram were stablished near the temple to house volunteers from various castes, fostering unity.
 The satyagraha gained popular support from the Akalis of Punjab as well as Christian and Muslim leaders of different parts of the country.

Key Leadership

- The issue of temple entry was first raised by Ezhava leader T K Madhavan in a 1917 editorial in his paper Deshabhimani.
 - His efforts led to the formation of the Anti-Untouchability Committee (AUC) in January of 1924, with other anti-caste radicals such as KP Kesava Menon and K Kelappan (Kerala Gandhi).
 - These three are also considered as pioneers of the Vaikom Satyagraha movement.
- The Kerala Provincial Congress Committee which passed the anti-untouchability resolution was chaired by K
 Kelappan, comprised of T K Madhavan, Velayudha Menon, K Neelakantan Namboothiri and TR Krishnaswami
 Iyer.
- George Joseph, briefly led the agitation when the pioneers were behind bars and requested Periyar to lead the satyagraha.
- E. V. Ramasamy Naicker (Periyar) also called as Vaikom Veerar, defied bans, addressed public meetings, and was imprisoned twice, significantly contributing to the movement.
- Gandhi visited Vaikom (March 1925) held public meetings, met the Maharani, and debated the Nambudiri priest, emphasizing the fight against untouchability as critical as Swaraj.
- Women show massive participation with key personalities like Nagammai (wife of Periyar), S.R. Kannamma and Bhagyam Stanumalaya Perumal, tried to remove the barricade to enter the 'banned road' around the temple, Kayyalakkal Narayani (wife of T.K.Madhavan) wrote articles in Deshabhimani.
- Others key personalities who supported the satyagraha: C. Rajagopalchari, Sree Narayana Guru, Chatampi Swamikal etc.



Challenges faced by Satyagrahis

- Orthodox Resistance: Upper-caste Hindus and temple authorities resisted, with violent attacks on satyagrahis, including beatings and irritants poured into their eyes.
- Funding and Morale: Frequent arrests and fund shortages tested the movement's resilience,
- Internal Tensions: A minor misunderstanding between Gandhi and Sree Narayana Guru arose over Satyagraha's methods, which caused temporary rift.
- **Flood**: Satyagrahis had to face the challenge of severe flood, where they had to stand in waist-**deep water while the police stood guard in boats.**

Significance of Vaikom satyagraha

- Partial Success (November 1925): Three of the four temple roads were opened to all, including Ezhavas and untouchables; the fourth was restricted to Brahmins only.
- Long-term Impact: Paved the way for the **1936 Temple Entry Act in Travancore, allowing all Hindus** access to temples and their roads.
- National Significance: Drew all-India attention, with Dr. B.R. Ambedkar calling it the "most important event" for untouchables, raising awareness about untouchability across India.
- Communal Harmony: Fostered unity among Savarnas, Avarnas, Christians, Muslims, and Sikhs, demonstrating people's solidarity.
- Gandhian Principles: Proved Satyagraha's effectiveness as a non-violent tool for social reform.

Conclusion

Vaikom Satyagraha was a landmark in **India's fight against untouchability, linking social justice with the freedom movement** and integrating princely states into the national struggle.

8.4. PERSONALITY IN FOCUS: SIR CHETTUR SANKARAN NAIR (1857-1934)

Introduction

Recently, Prime Minister hailed the distinguished Indian lawyer, judge, and statesman, Sir Chettur Sankaran Nair, who played a pivotal role in India's freedom struggle. He led a legal battle against the Britishers and particularly Michael O'Dwyer (lieutenant Governor of Punjab) for the Jallianwala Bagh massacre, 1919. Additionally, his courageous legal fight against Michael O'Dwyer is the focus of the recently released movie 'Keshari Chapter 2'.

Background and Early Life

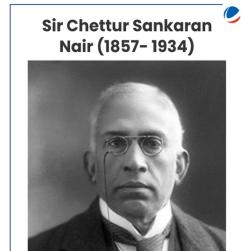
- **Birth: Born** in **1857**, in Palakkad, Kerala.
- Education: Studied Arts in Presidency College, Madras in 1877 and Law from the Madras Law College in 1879.

Career

- Youngest President of the Indian National Congress (Amraoti, 1897).
- o Member of the Madras Legislative Council (1900).
- Advocate-General to the Government (till 1908).
- o Permanent Judge at Madras High Court (1908 -1915).
- Viceroy's Executive Council member (1915), holding Education portfolio.
- o Councillor to the Secretary of State for India in London (1920–21).
- o Indian Council of State member (from 1925).
- o President of the Indian Central Committee for Simon Commission cooperation (1928).

Accolades:

- Awarded the title 'Commander of the Indian Empire' by the King Emperor in 1904.
- Received **knighthood** in **1912.**



- Literary Contributions:
 - Wrote two famous Minutes of Dissent in the Despatches on Indian Constitutional Reforms (1919);
 - o Gandhi and Anarchy (1922);
 - o Founded Madras Review and the Madras Law Journal.
- Death: 1934 in Madras.

Key Contributions

- Landmark Judgment: In Budasna V. Fatima (1914), he upheld conversion to Hinduism and ruled that such converts were not outcasts.
- Justice for Jallianwala Bagh: Took clear stand against Michael O'Dwyer for his role in 1919 massacre.
- Social Reforms: Advocated full equality, condemning inequality as racial inferiority and national abasement.
- **National Vision**: Supported **Dominion Status** for India in the first stage and regarded **complete independence** to be achieved in the second stage.
- **Liberal and Moderate Politics**: Criticized Gandhi's Civil Disobedience and Non-Cooperation Movements; supported peaceful constitutional reform and linguistic reorganization of states.
- **Stood for Women's Rights**: Participated in the 1920 Indian deputation to the **Southborough Committee** with Herabai Tata and Mithan Lam to put forward the case for **female suffrage** in India.

Key Values

- Courage: Quit the Viceroy's Executive Council in protest of the Jallianwala Bagh massacre.
- **Righteousness**: Refused to apologise after unfairly losing a defamation case in England to **Michael O'Dwyer** and stood by his principles.
- **Patriotism**: An **ardent nationalist**, who admired **British democratic institutions** yet exposed its harmful effects on the Indian economy.
- **Commitment**: Believed in **India's right to self-government** and resigned from active politics when the Viceroy Irwin announced **Dominion Status** as the ultimate goal for India
- Visionary: Supported inter-caste and inter-religious marriages long before they gained wider acceptance.

Conclusion

assassination as "an act of insanity".

Sir Nair's **legacy** remains significant in reviving the ideals of **justice**, **courage**, **dedication**, and a **firm resolve** to **favour the right** fostering the spirit of **sacrifice**.

About Jallianwala Bagh Massacre Jallianwala Bagh Massacre The Massacre April 13, 1919: In spite of Brigadier General (1) (2) (3) 4 prohibiting orders unlawful April 9, 1919 March 1919 April 10, 1919 April 13, 1919 assembly, People gathered at Jallianwala Bagh on Baisakhi Background March 1919 Here, two resolutions were to be Indians expected self-governance after WWI discussed, one condemning the firing ▶ British passed Rowlatt Act (Black Act) in March 1919 allowing on April 10 and the other requesting the imprisonment without trial authorities to release their leaders. Gandhi ji launched Satyagraha movement in protest General Dyer ordered troops to open firing Mediate events leading to the Massacre on the crowd without issuing any prior warning leading to death of many innocent April 9, 1919: Dr. Kitchlew and Dr. Satvapal 13 were arrested for leading peaceful protests people. against the Rowlatt Act in Amritsar. Aftermath of the Massacre Jallianwala General Dyer's actions approved by Bagh April 10, 1919: Protesters marched to demand Massacre Lieutenant-Governor Michael O'Dwyer. their release but were fired upon by British April 13, 1919 forces. Many were killed or injured. **Disorders Inquiry Committee or Hunter** Commission was formed in October, 1919. It censured General Dyer's actions leading to his resignation.

In March, 1940, Michael O'Dwyer assassinated in London by Udham Singh. Gandhi ji condemned the

8.5. NEWS IN SHORTS

8.5.1. BANARSI SHEHNAI AND TABLA

Geographical Indication (GI) certificates awarded to Banarasi Shehnai and Banarasi Tabla.

About Banarasi Shehnai

- It is an Indian wind instrument similar to the oboe in tone and has seven holes on its staff in place of keys.
- Its music is associated with the **temple music** of the country
- It is considered auspicious to play the Shehnai on occasion of most Indian weddings.
- It gained global recognition through the legendary Ustad Bismillah Khan.

About Banarasi Tabla

- Benares tabla gharana was developed a little over 200 years ago by the legendary Pandit Ram Sahai.
- Banaras Gharana is recognized as one of the six principal tabla gharanas in Indian classical music.
- Noted tabla player Padma Vibhushan Pandit Kishan Maharaj belonged to the Banaras gharana of Hindustani classical music.

8.5.2. KANNADIPPAYA TRIBAL CRAFT

Kannadippaya has become the first tribal handicraft from Kerala to receive the Geographical Indication (GI) tag.

About Kannadippaya

- It is a beautifully woven mat, also known as "mirror mat" due to its unique reflective pattern.
- Made from the soft inner layers of reed bamboo, the mat stands out for its unique properties providing warmth during winter and cooling effect in summer.

8.5.3. HARVEST FESTIVALS

Traditional harvest festivals are being celebrated in different parts of India.

 Marking the 1st day of the New Year, they are a way of thanksgiving for the abundant harvest at the coming of spring.

Traditional harvest festivals in India

- Baisakhi (Punjab): Marks the beginning of harvesting of Rabi crops. Bhangra and Gidda dances are performed.
- Vishu (Kerala and Tamil Nadu): Marks the traditional spring equinox when day and night are equal.
- Poila Boishakh (West Bengal): Traders begin the new financial year by opening fresh account books, known as Haal Khaata.
- Others: Bohag Bihu or Rongali Bihu (Assam), Puthandu (Tamil Nadu), Makar Sakranti (Maharashtra, Karnataka, Andhra Pradesh, Telangana), Lohri (Punjab, Haryana, Himachal Pradesh, J&K), Pongal (Tamil Nadu)

8.5.4. PADMA AWARDS

President of india presents padma awards 2025 at the civil investiture ceremony-I.

About Padma Awards

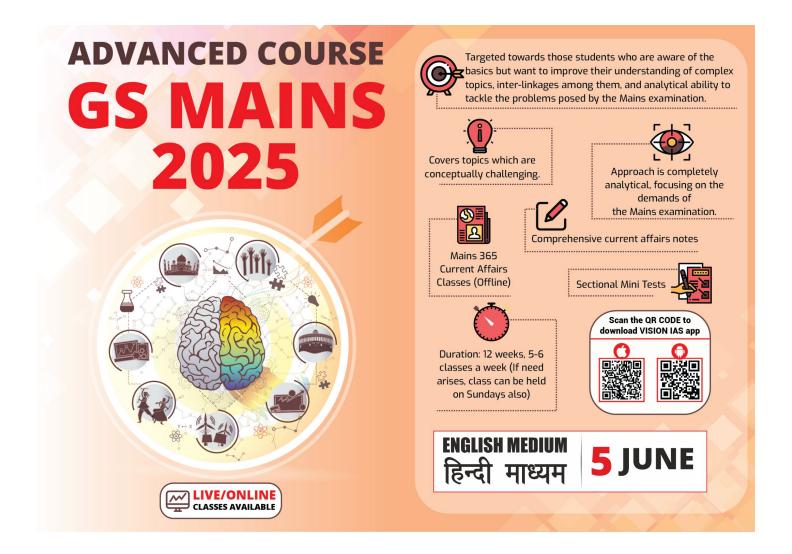
- · Among the highest civilian honours in India.
- Announced annually on the eve of Republic Day.

- Three categories:
 - o Padma Vibhushan: For exceptional and distinguished service
 - o Padma Bhushan: For distinguished service of a higher order
 - Padma Shri: For distinguished service
- Recognizes achievements in all fields where an element of public service is involved.
- History and Suspension: Instituted in 1954; not awarded during 1978–79 and 1993–97.
- Selection Process:
 - o Recommendations made by the Padma Awards Committee, constituted by the Prime Minister every year.
 - Public nominations allowed, including self-nominations.
- Not a title: Cannot be used as a prefix or suffix to the awardee's name.



You can scan this QR code to practice the Smart Quiz of Culture at our open test online platform for testing your understanding and recalling of the concepts.





9. ETHICS

9.1. SOCIAL MEDIA INFLUENCER AND CONSUMER BEHAVIOR

Introduction

The digital age has reshaped not only commerce but also how people form identities and values. Platforms like Instagram and Facebook are now powerful tools for shaping desires and behaviors. What starts as casual content — fitness tips, lifestyle vlogs — often becomes a mix of aspiration, subtle manipulation, and consumerism. The line between genuine opinion and paid promotion is increasingly blurred.

India's influencer marketing industry is expected to grow rapidly, reaching ₹3,375 crore by 2026, highlighting the rising influence of digital creators (E & Y report).

Positive Role Played by Social Media Influencer to influence consumer behavior

- Promoting Social Change: Influencers raise awareness on mental health, body positivity, and women's rights.
 - o The Indian #MeToo movement, exposed workplace harassment and sparked reform.
- Conscious Consumerism: Some consumers are now resisting influencer marketing through a trend called "de-influencing," where influencers promote mindful spending and discourage unnecessary purchases.
- **Inclusivity and Diversity**: Several influencers challenge the gender stereotypes and represent marginalized voices, fostering acceptance and awareness.
- Access to Information: Officers use social media influencers to share updates, career tips, and public schemes, bridging the gap between governance and citizens.
 Psychology behind

Ethical Issues in Influencer Culture

- Mindless Consumption: Influencers often promote products as status symbols, not for need. This fuels materialism and undermines simplicity and sustainability—contradicting Gandhian ethics of self-restraint.
- Psychological Manipulation: By triggering
 fear of missing out (FOMO) and social comparison, influencers push impulsive consumption, especially among youth, eroding autonomy and informed choice.
- Lack of Accountability: Many influencers act as informal opinion leaders but face no checks, leading to consumer misinformation and fraud.
- **Dishonesty**: Plagiarizing content or failing to credit creators disrespects intellectual property and deceives followers, breaching ethical and legal norms.
- **Privacy Violations**: Large influencers collect and handle user data, often without proper safeguards—raising serious ethical and legal concerns.
- **Harm to Mental Health**: Idealized lifestyles online promote anxiety, low self-esteem, and dissatisfaction. From a **utilitarian view,** this diminishes collective well-being.

India's Regulatory Framework for Influencer Accountability

- Central Consumer Protection Authority (CCPA): It regulates matters relating to violation of rights of consumers, unfair trade practices and false or misleading advertisements.
- Securities and Exchange Board of India (SEBI): Banned partnerships between regulated financial entities and unregistered finfluencers to protect investors.
- Advertising Standards Council of India (ASCI): Released guidelines requiring influencers to clearly label paid promotions on digital platforms.
- **Department of Consumer Affairs**: Published 'Endorsement Know-hows' to help influencers and celebrities follow ethical and transparent promotion practices.



- India Influencer Governing Council (IIGC): Launched by Industry leaders, it is a self-regulatory body for Influencer marketing with members from major firms like Meta and Google.
 - o It recently introduced a **Code of Standards and weekly influencer ratings** (see infographic) to ensure transparency, accountability, and ethical content creation in **India's digital ecosystem.**

Code of Standards for Influencers





Paid Partnerships: Influencers must disclose any material partnership with brands.



AI Influencers: Must follow the same rules as human influencers, with a disclaimer about their non-human nature.



Brand Relations: Influencers can't endorse products they don't genuinely support or work with competing brands simultaneously.



Defluence: Honest criticism of brands is allowed but must be truthful and responsible



Child-Safe Content: Content must be safe, positive, and appropriate for children.



Complaint Forum: A consumer complaint forum is established under the IIGC.

Way Forward:

- Clear Endorsement Rules: Influencers must follow guidelines like "Endorsement Know-Hows" that require clear labels such as "ad," "sponsored," or "paid promotion" to ensure transparency.
- **Media Literacy**: Integrate media literacy into school and college curricula to help young people critically assess online content and resist manipulation.
- **Prioritize Credibility Over Popularity**:Brands must move beyond follower count and assess an influencer's educational background, domain expertise, and audience relevance.
- Responsible Content Creation: Influencers should aim for value-driven storytelling that informs, educates, and respects audience intelligence.

Check your Ethical Aptitude

In recent years, the rapid growth of social media platforms has led to the rise of a new category of public figures—social media influencers. With this massive following, influencers have the power to shape public opinions, influence consumer behavior, and impact purchasing decisions in areas such as fashion, health, and lifestyle.

On the basis of above case study

- 1. Analyze the positive and negative impacts of social media influencers on society. (150 words)
- 2. Discuss the ethical considerations that should guide the regulation of social media influencers. (150 words).

To know more about the impact of **social media influencers**, refer to **Article 9.2. Social Influence and Persuasion in times of Social Media and Influencer** in **August 2024** Monthly Current Affairs Magazine.

9.2. ETHICAL DIMENSIONS OF BODY SHAMING

Introduction

Body shaming is the act of criticising someone based on the shape, size, or appearance of their body. Anyone can be the target of body shaming.

As wellness and beauty are increasingly commercialized, body image is often misused in marketing. For example, a Thai café gave discounts to thin customers, exposing the ethical issues in rewarding body size. Such tactics may seem harmless but raise serious concerns about dignity, fairness, and mental health—especially in a diverse society like India.

Socio-Cultural Factors Driving Body Image Shaming

- **Unrealistic Beauty Standards**: Popular culture, including Bollywood films and fairness cream ads, promotes narrow beauty ideals like fair skin and slim bodies.
 - It is well-documented that idealized body norms can lead to body image disturbance and unhealthy behaviors, including dieting and clinically disordered eating.
- Media & Social Media Pressure: Platforms like Instagram and YouTube often promote unrealistic beauty through filters and edited images, making people feel they need to look perfect.
 - For example, an 18-year-old girl from Kerala, tragically died after extreme water fasting influenced by online weight loss advice.
- Cultural and Family Bias: Women are often valued for their appearance, while men face pressure to be muscular or tall.
 - o In many Indian households, girls are pressured to lose weight or become fairer for better marriage prospects. Dark skin or being overweight is wrongly associated with laziness.
- **Peer and Social Conditioning:** From school bullying to college jokes, appearance-based teasing starts early and normalizes judgment based on looks.
 - There's a lack of body-positive education.

Ethical Frameworks and Violations

- **Kantian Ethics**: Judging people by appearance for profit or ideals violates human dignity, treating them as tools rather than individuals with intrinsic worth.
- **Utilitarianism:** Though such practices may offer short-term gains, they cause long-term harm through mental health issues, stereotypes, and discrimination—making them ethically unjustifiable.
- **Virtue Ethics**: A good society should promote compassion and inclusivity. Rewarding appearance encourages vanity and exclusion, which are moral flaws.
- **Justice as Fairness (Rawls):** These practices fail the fairness test, as no one would accept a system that discriminates by body type if unaware of their own. It undermines equality and justice.

Key stakeholders involved

Stakeholders	Role/Interest
Society at Large	Foster empathy, inclusivity, and respect for diversity in appearance
Media & Influencers	Ethical responsibility, avoid promoting toxic beauty standards, embrace inclusive
	messaging
Businesses/Marketers	Ethical advertising, customer trust, long-term brand reputation over harmful short-term
	gains
Health Professionals	Provide support for body image issues, eating disorders, and psychological impacts
Government	Regulate harmful content, promote mental health, ensure ethical advertising standards

Way Ahead

- **Stronger Regulations**: Enforce laws to ban ads that promote body-based discrimination. Include body diversity education in schools and public health campaigns.
- **Media Awareness**: Help people recognize and question unrealistic beauty standards. Support campaigns that celebrate real, diverse bodies
 - Example: Dove's "Campaign for Real Beauty" broke stereotypes by featuring women of all ages, shapes, and sizes, redefining what beauty means.
- **Ethical Marketing**: Businesses should focus on inclusivity and avoid content that shames bodies. Hold influencers and brands accountable for harmful messaging.
- Mental Health & Dialogue: Offer psychological support for those affected by body shaming.
- **Role of Parents**: They should promote body positivity, avoid judging appearances, praise inner qualities, teach respect for all bodies, support emotional expression, and not set unrealistic beauty standards.

 Role of Schools: They can offer body image education and promote well-being over weight loss to build lasting confidence.

Conclusion

Ending body shaming requires collective effort—from media, institutions, and individuals—to shift focus from **appearance** to **acceptance**. True progress lies in valuing people for their character, not their looks, and creating a culture where everybody is treated with respect and dignity.

Check your Ethical Aptitude

A café in Thailand gave discounts to thin customers who could fit through narrow bars, drawing criticism for promoting body shaming. In India, where beauty standards already favor fair, slim, or muscular bodies, such practices can harm vulnerable groups. With media and social platforms pushing idealized looks, body image is now a commercial tool—raising serious ethical concerns for youth, women, and marginalized communities.

You are a senior officer in a national regulatory body tasked with reviewing a proposal from an Indian café chain seeking to run a similar "fit-to-save" promotional campaign. You are concerned that such practices could normalize body-based discrimination and set a harmful precedent.

Based on the case study:

- 1. Identify the ethical issues involved in the case.
- 2. Suggest a course of action you would recommend as a regulatory authority.

9.3. ETHICS OF CAPITAL PUNISHMENT

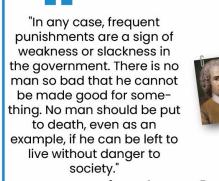
Introduction

Historically, all societies have used the death penalty/capital punishment to deter heinous crimes. Since the mid-20th century, human rights campaigns have led to its abolition or moratorium in about 170 countries. Yet, Amnesty International's 2024 report notes a 32% global surge in executions from countries like China, Iran, Saudi Arabia, Singapore, etc., making capital punishment a highly contentious issue in modern criminal justice and ethics.

Capital Punishment and the Philosophy behind it?

Stakeholders and their Concerns			
Stakeholders	Interests and Concerns		
Condemned	Right to Life, Fair Trial and Due Process, Discrimination,		
Individuals	Irreversible punishment, Psychological toll etc.		
Victims' Families	Justice and Closure, Retribution (Punishment) and		
	Restorative (Reconciliation) justice, Prolonged Legal		
	Process etc.		
Society at Large	Public safety, Justice, Collective conscience and Moral		
	standards		
Legal and Judicial	Ensuring fair trials , Upholding constitutional values,		
Systems	Balancing deterrence with human rights, Irreversibility		
	of Error		
Human Rights	Reform over Retribution, Human Dignity, right to life		
Organizations	and the potential for judicial errors.		
Governments and	Navigating public opinion, International obligations,		
Policymakers	Effectiveness of capital punishment as a deterrent.		

- Capital punishment or death penalty is the execution of an offender sentenced to death after conviction by a court of law for a criminal offense.
- It is based on the principle of retributive justice.
 - Retribution says that aim of punishment is to right the wrong rather than to control or prevent crime and nature of punishment is based on the severity of the offence.
- In the Bharatiya Nyaya Sanhita (BNS), capital punishment, or the death penalty, is primarily outlined in sections 103 and 104 for murder-related offenses.



— Jean-Jacques Rousseau

Evolution of death penalty in India

- Ancient India: Death penalty existed in various forms under Hindu Laws, guided by texts like Manusmriti and Arthashastra.
 - o Punishments were often severe for crimes like **murder, treason, or violating social norms,** with methods like beheading, impalement, or drowning.
 - However, the approach varied by region, ruler, and caste, with some texts advocating restraint or alternative punishments like exile or fines for lesser crimes.

Medieval India:

- Under Mughal and regional kingdoms, the death penalty was common for serious offenses like rebellion, murder, or theft under the Islamic law (Sharia).
- Hindu kingdoms continued to follow customary laws under Manusmriti, with punishments varying by local traditions.

Modern India:

- Colonial Period: The British formalized the death penalty under the Indian Penal Code (IPC) of 1860, prescribing it for crimes like murder, treason, and dacoity with murder.
 - > Hangings became the standard method, conducted in jails rather than public spaces.
- o **Post-Independence**: The death penalty **continued under the IPC**, primarily for violent crimes, however, the Constitution under **Article 21 ensures due process**.

Arguments for the death penalty

- Deterrence: Based on the principle of utilitarianism (Consequentialist Ethics), some argue that death penalty deters serious crimes, thus protecting society and reducing future harm.
- Retributive Justice: Justice requires that wrongdoers receive punishment proportionate to their crimes. The principle of "an eye for an eye" is often invoked.
- Prevention of re-offending: Some supporters of death penalty argue that those who are executed cannot commit further crimes, thus, reducing crime rates in future.
- Closure and vindication: It is often argued that the death penalty provides closure for victims' families.
- **Drain on public finances**: Maintaining a secure prison system for high-risk, violent offenders act as a drain on government resources.

Arguments against the death penalty

- Violation of Human Rights: Based on the principle of Deontological Ethics (Kantian Perspective), which states that certain actions (e.g., taking human life) are morally wrong regardless of their consequences.
- Risk of Irreversible Error and Discrimination: The justice system is not perfect, and there is always a possibility of
 errors leading to wrongful convictions. Once a person is executed, the error cannot be reversed, making it a final and
 irreversible punishment.
- Lack of Deterrence and Alternatives: There is little evidence that the death penalty is more effective than life imprisonment in deterring crime.
 - Some studies have even suggested that the death penalty may have the opposite effect, as criminals in some cases have tried to kill their victims to prevent them from testifying and risk getting a death sentence.

Death Penalty in India

- Legal Framework: The Bharatiya Nyaya Sanhita prescribes the death penalty for violent and heinous offenses such as terrorism, murder of public officials, certain cases of rape, etc.
- Judicial Doctrine: The Supreme Court, in in BACHAN SINGH V. STATE OF PUNJAB (1980) gave "rarest of rare"
 doctrine and stated that capital punishment should be reserved for crimes so heinous that they shock the
 collective conscience of society.
 - Machhi Singh vs State of Punjab: Certain criteria were laid down by the court to assess what could actually fall under the rarest of rare doctrine.



- Pardoning Power of President and Governor: Once the appeal process has been exhausted and the higher courts
 have confirmed the defendant's death sentence, the defendant can submit petitions for mercy to the state or
 national executive.
- Recent Trends: Despite more than 500 people being on death row, executions have become rare with courts increasingly commuting death sentences to life imprisonment, reflecting a cautious approach. The last execution being carried out was in 2020 (Nirbhaya case).

Way Forward

- Need for Balance: Death penalty debate must balance the accused's rights, victims' interests, and society's need for justice and deterrence.
 - Prioritizing retribution may neglect restorative and rehabilitative aspect of justice, crucial for a fair and humane legal system.
- Law Commission Recommendation: The 262nd Law Commission Report (2015) recommended abolishing the death penalty for all crimes except terrorism and related offences, citing its limited deterrent effect and the risk of judicial error.
- International Perspective: Article 6 of the International
 Covenant on Civil and Political Rights (ICCPR) permits the death penalty only for the "most serious crimes" and encourages its abolition.
- Human Rights Organizations: These organisations recommend a shift toward victim-centric justice and restorative practices, emphasizing rehabilitation and community healing over retributive punishment.

Conclusion

Since the adoption of the **Universal Declaration of Human Rights (UNDHR)** in 1948, there has been a marked global shift towards abolition. Despite this progress, the death penalty persists in several countries, often amid allegations of unfair trials, political repression, or use for non-violent offenses. Thus, **humane and evidence-based alternatives** are needed to ensure justice and respect for life.

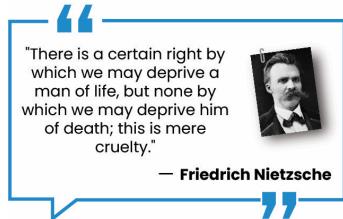
Check Your Ethical Aptitude

Ravi, a 28-year-old man, has been convicted of the premeditated and brutal murder of a police officer in a high-profile case that received wide media coverage. The trial court has sentenced him to death under the relevant provisions of the Bharatiya Nyaya Sanhita. The family of the slain officer is demanding justice and closure through execution, while multiple human rights organizations are petitioning for the sentence to be commuted to life imprisonment, citing the irreversible nature of the punishment and the global trend toward abolition. Ravi has already spent 3 years on death row during the trial and appeals process, and his mental health has visibly deteriorated. His lawyer argues that the punishment violates his fundamental right to life and dignity.

You are a senior officer in the Ministry of Law and Justice, tasked with advising the government on whether to uphold the sentence or recommend clemency.

Based on the above case study, answer the following questions as a senior officer:

- 1. Identify the ethical dilemmas involved in this case.
- 2. Discuss the competing values and moral philosophies (e.g., utilitarianism vs deontology) relevant to capital punishment in this scenario.
- 3. Who are the stakeholders in this case? Briefly outline their perspectives and ethical concerns.
- 4. If you were in the position to make the final decision, what would your recommendation be and why? Justify your answer using ethical principles, constitutional values, and relevant legal doctrines.
- 5. Suggest alternative mechanisms for ensuring justice and public confidence without resorting to the death penalty.



10. SCHEMES IN NEWS

10.1. PM SHRI SCHOOLS (PM SCHOOLS FOR RISING INDIA)

Why in the News?

Recently some states have opposed the implementation of PM SHRI School Scheme.

Objectives

Development of more than 14500 schools across country as PM SHRI Schools to showcase all components of National Education

Policy

2020.

(NEP)

Provide
 equitable,
 inclusive, and
 joyful
 education
 while nurturing
 holistic, well rounded
 individuals
 with 21st century skills.

Features

- Ministry: Ministry of Education
- Type: Centrally Sponsored Scheme
- Beneficiaries: More than 20 lakh students are expected to be direct beneficiaries of scheme
- Tenure: 5 years (2022-23 to 2026-27).
- **Selection Method of Schools:** Transparent challenge mode with schools self-applying through an online portal. (**Refer to Infographic**)
- Implementation Strategy: Implemented through existing administrative structures of Samagra Shiksha, Kendriya Vidyalaya Sangathan (KVS), and Navodaya Vidyalaya Samiti (NVS).

PM Shri Schools Selection Methodology Three-Stage Process with Definite Timelines



Stage 1: Mou Signing

States/UTs sign MoU with Centre laying down commitments for supporting quality assurance as PM SHRI schools

Stage 2: Eligibility Pool

Pool of eligible schools identified based on prescribed minimum benchmark through UDISE+ data





Stage 3: Challenge Method

Based on the challenge method for fulfilling certain criteria

• High-Quality Education:

- Experiential and holistic pedagogy aligned with NEP 2020.
- Competency-based assessments focusing on conceptual understanding and real-life applications.

Green Schools:

 Incorporation of eco-friendly practices like solar panels, water conservation, waste management, and plastic-free initiatives.

Enhanced Infrastructure:

- Smart classrooms, digital libraries, vocational labs, playgrounds, and state-of-the-art science labs
- \circ $\,$ Furniture and learning tools tailored for various grades, including Jadui Pitara and outdoor play materials.

Skill Development:

- o Integration of vocational training, internships, and entrepreneurship opportunities.
- Collaboration with local industries and Sector Skill Councils.

Mentoring and Leadership:

PM SHRI schools to mentor and lead nearby schools, creating a ripple effect for quality education.

Inclusive Education:

- Focus on equity and inclusion with safe infrastructure for girls and children with special needs (CWSN).
- Promotion of mother tongue/local languages as a medium of instruction.

Monitoring and Quality Assurance:

- Regular evaluations using a School Quality Assessment Framework (SQAF).
- Geo-tagging of schools for selection and monitoring.

• Convergence and Community Participation:

- Collaboration with Panchayati Raj Institutions, Urban Local Bodies, and community groups for infrastructure development and resource pooling.
- Monitored rigorously to ensure adherence to NEP 2020 goals.



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14 APRIL 2025



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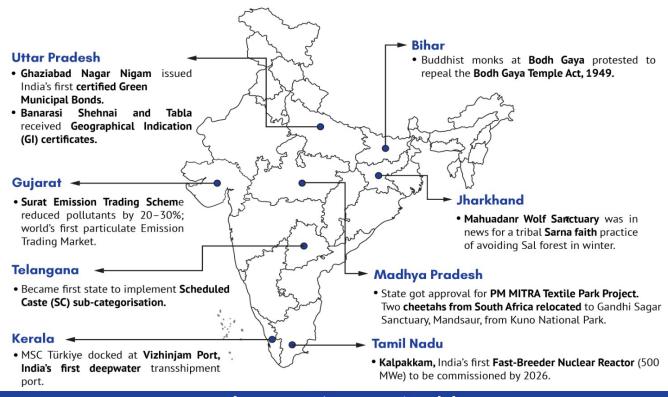
2025	5 MONTHS	31 MARCH
2026	15.5 MONTHS	19 MAY

(Highlights of the Program)

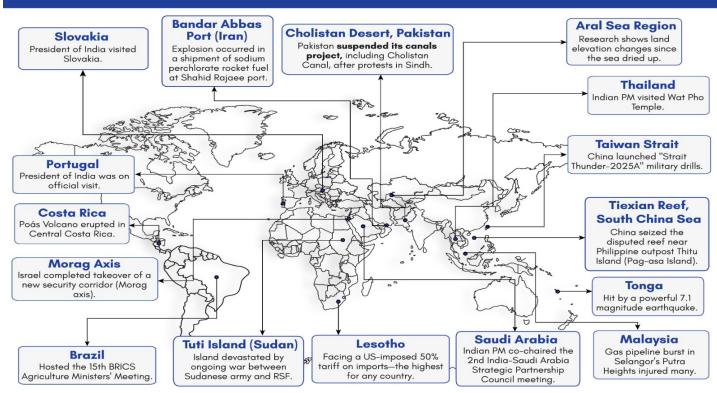
- Coverage of the entire UPSC Prelims and Mains Syllabus
- Highly experienced and qualified team of senior mentors
- Development of Advanced answer writing skills
- Special emphasis to Essay & Ethics

11. PLACES IN NEWS

India



Places in News: World



12. PERSONALITIES IN NEWS

Personality	About	Ethical Values Exhibited by the Personality
Jagadguru Basaveshwara	 The Prime Minister paid homage to Jagadguru Basaveshwara on the occasion of Basava Jayanti. About Jagadguru Basaveshwara A 12th-century philosopher, poet, statesman, Born in 1131 AD in Bagevadi, Karnataka, into a Brahmin family. Founder of the Lingayat tradition. He spread social awareness through his poetry, popularly known as Vachanaas. Social contribution Advocated social equality and eradication of caste discrimination. Supported women's participation in spiritual life Key Beliefs: Kayak (work as worship), Dasoha (equal distribution of wealth). 	Egalitarianism and codignity of labour He penned down poems to question the social and political order of his time based on hierarchy of status and wealth. In his teachings, he advocated for the dignity of manual labour and its right to be recognized.
Chhatrapati Shivaji Maharaj (1630-1680)	 April 3, marks the 345th death anniversary of Chhatrapati Shivaji Maharaj. Shivaji Maharaj passed away on April 3, 1680, at Raigad Fort. About Shivaji Maharaj. Shivaji was born at Shivneri Fort, Poona in 1630. He was the founder of the Maratha Empire in western India. In 1674, he crowned himself at Raigad and a new era called the 'Rajyabhisheka Era'. Formed a council of eight ministers popularly known as Ashtapradhan. He laid the foundation of the Maratha naval force in 1654 near Kalyan and went on to build multiple fortified naval bases along the western coastline. He developed guerrilla warfare tactics, and defeated Afzal Khan in 1659. 	Valour and Integrity He upheld the principles of just rule, emphasizing administrative efficiency and military strategy. His commitment to religious tolerance and governance reforms showcased his integrity as a leader.



Mahatma Jyotirao Phule (1827 - 1890)

- Ilth April marks the birth anniversary of Mahatma Jyotiba Phule.
- About Jyotirao Phule
 - Born: Satara district (Maharashtra) in 1827.
 - He was a social reformer who worked against social evils like untouchability and caste system.
 - He was given the title of Mahatma on May 11, 1888, by Vithalrao Krishnaji Vandekar, a Maharashtrian social activist.
- Social Contributions
 - He advocated for several important causes with his wife, including widow remarriage, the prevention of child marriage, and the promotion of girls' education.
 - With help of his wife, he started the first school for girls in 1848 in Pune at Tatyasaheb Bhide's residence.
 - In 1873, Jyotiba Phule formed the Satya Shodhak Samaj (Society of Seekers of Truth).

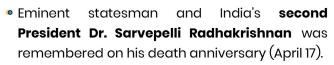
Books: Gulamgiri, Sarvajaneek Satyadharma, etc.

Rationalism and social justice



- Phule through his writing (e.g.
 Gulamgiri)
 reinterpreted the Indian past and provided scientific understanding of Indian history
 particularly the origin of its caste
 based social order.
- He pioneered women education in India and started several schools for girls and for children from depressed classes.







- He was a renowned Indian philosopher born in a small town of Andhra Pradesh.
- Firm believer in the principles of education as a transformative tool for society.
- His birthday, September 5, is celebrated as "Teacher's Day" in India
- Key Contributions
 - Worked as Professors of Eastern Religions and Ethics at the University of Oxford.
 - ▶ Served as India's Ambassador to the Soviet Union from 1949 to 1952.
 - ▶ He served as the Vice President (1952-1962) and President of India (1962-1967).
 - Literary works: The Principal Upanishads, The Hindu view of Life, Dhammapada, etc.
 - Rewards and Recognition: Knighthood (1931) and Bharat Ratna (1954).

Leadership and Scholar



- He introduced the thinking of western idealist philosophers into Indian thought. He placed Indian philosophy on the world map.
- He was an educator who made significant contributions to the realm of education. The report of the University Education Commission 1940-49 is the greatest contribution to educational thinking and practice.



Dr. Sarvepalli Radhakrishnan (1888 - 1975)





Daripalli Ramaiah

- Recently the famous environmentalist of Telangana Daripalli Ramaiah died.
- About Daripalli Ramaiah (1937- 2025)
 - A native of Reddipalli village, Telangana.
 - Locally known as 'Chetla Ramaiah' or Vanajeevi (forest dweller).
- Recipient of Padma Shri award in 2017.
- Contributions
 - A crusader for social forestry: Estimated to have planted over 1 crore saplings during his life.
 - Known as "tree-man" used to wear a green board around his neck to spread awareness of conservation of trees.
 - Awards: Seva Award in 1995, the Vanamitra Award in 2005, and the National Innovations and Outstanding Traditional Knowledge Award in 2015.

Environmental Stewardship and Selfless Service



- He dedicated his life to tree plantation and ecological preservation, inspiring generations through grassroots environmental action.
- His commitment reflected a deep sense of duty towards nature and society.





Dr. Krishnaswamy Kasturirangan (1940-2025)

- Distinguished space scientist Dr. K. 6
 Kasturirangan passed away.
- Key Contributions
 - ▶ Space: Served as Chairman of ISRO (1994–2003), under his leadership key space missions were materialised including:
 - * Operationalization of Polar Satellite Launch Vehicle (PSLV) and the first successful Geosynchronous Satellite Launch Vehicle (GSLV) flight.
 - * Earth observation satellites like BHASKARA-I & II etc.
 - * Conceptualising India's first space-based high-energy astronomy observatory "AstroSat'.
 - Education: He chaired the Committee on Draft National Education Policy (2019).
 - Environment: He led a 10-member High-Level Working Group for preparing a report on the ecologically sensitive Western Ghats.
 - The report proposed to identify 37 per cent of the Western Ghats as environmentally sensitive.

Scientific Vision and O Commitment to National Development

- He led India's space and education reforms with foresight and integrity.
- His work in satellite technology, astronomy, education policy, and ecological protection demonstrated a lifelong commitment to nation-building through science and knowledge.



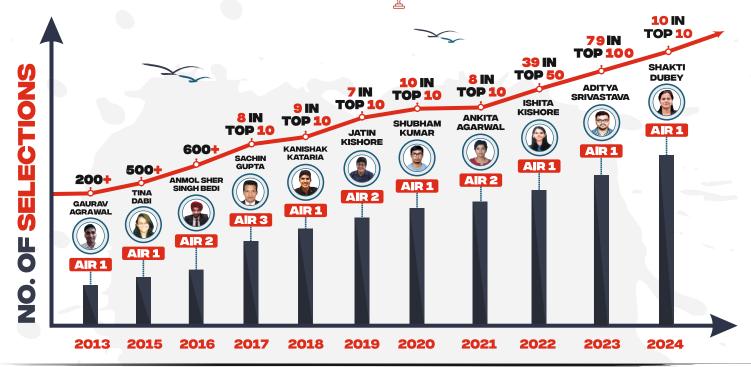
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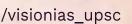
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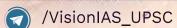
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