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Current Affairs
Workbook

April 2025

Progress Tracking Table

Mains Questions

Ethics Case Studies

MCQs

Quick facts

Self-Evaluation

	Progress Tracking Table			
Activity Type	Total Questions	Correct Answers	Attempted	Score/Percentage
MCQ's				
True/False Statements				

Monthly Learning Summary

Top 3 Learnings/Insights

1.
2.
3.

Progress Comparison

Previous Month's Score
Current Month's Score
Areas of Improvement

Reflection Section

Strengths
Areas for Improvement
Goals for Next Month

Comprehensive Summary

True/ False

CONTENTS

10. GOVERNMENT SCHEMES

11. QUICK FACTS

12. ACTIVITIES

13. ANSWER & EXPLANATION

14. SELF- EVALUATION

AHMEDABAD | BENGALURU | BHOPAL | CHANDIGARH | DELHI | GUWAHATI | HYDERABAD | JAIPUR | JODHPUR | LUCKNOW | PRAYAGRAJ | PUNE | RANCHI

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From the Editor's Desk

Dear Readers,

Welcome to the April edition of the Workbook. As part of endeavour, this month's compilation continues to guide your preparation with clarity, structure, and analytical depth. Each section has been curated to strengthen your conceptual understanding while staying attuned to recent developments.

In **Polity and Governance,** we explore the evolving dynamics of the **Separation of Powers,** the constitutional and political implications of **Assent to State Bills,** and a reflective analysis of **five years of the SVAMITVA scheme**—a landmark initiative reshaping property rights in rural India.

In **International Relations,** we revisit the historic **Simla Agreement,** unpack the complexities of the **Indus Water Treaty,** and assess India's place in the **emerging world order,** marked by shifting power centres and new geopolitical alignments.

The **Economy** section focuses on the policy push toward innovation and inclusion—covering the rise of India's **Deeptech ecosystem,** performance and outreach of the **PM Mudra Yojana,** and structural reforms like **One State One RRB** aimed at strengthening rural credit delivery.

In the **Environment** section, we examine the growing relevance of an **eco-centric approach** to development, the role of **Bio-Input Resource Centres** in sustainable agriculture, and the ethical and scientific contours of **functional de-extinction**—a frontier topic in biodiversity conservation.

Let this edition serve as both a revision tool and a source of perspective—bridging static knowledge with dynamic developments.

How the Workbook is Organized?

1. **Monthly Summary** – A compact recap of key developments.

2. **Quick Facts Block:** Essential facts, figures, and statistics for rapid revision.

3. **Activities Block:**

MCQ's : Test your understanding of key topics.	**True/False Statements :** Verify critical facts.	**Mains practice Questions :** Develop structured and analytical responses.	**Ethics Case Studies :** Apply current affairs to ethical dilemmas for better decision-making.	**Answers and Explanation :** Immediate feedback for self-assessment.

4. **Progress tracking table :** Monitor your learning and identify areas for improvement.

We encourage you to practice consistently, engage with the material actively, and make this Workbook your trusted companion in UPSC preparation. With the right approach and determination, success is within your reach.

Warm regards,
Team Current Affairs,
VisionIAS

> *"Success is not final, failure is not fatal: it is the courage to continue that counts."*
> *– Winston S. Churchill*

POLITY AND GOVERNANCE

1.1. Separation of Powers

Why in the News?

The Vice President of India stressed the need for a clear separation of powers, warning that any overlap among the Legislature, Executive, or Judiciary risks institutional overreach.

Separation of Powers

It means demarcation of authorities and duties into three branches of government – Executive, Legislature and Judiciary.

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.

Principles of Separation of Powers

Exclusivity Principle: Dividing the government into three structural organs.

Functional Principle: Delineating the boundaries of the organs, and that one organ shall not perform the functions 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.

➲ **Functional Overlap:**
➡ The President (executive head), exercises 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** as held by the SC.

➲ **Conflicts among Organs:**
➡ **Judicial Interventions**: Ruling that the President must decide on State Bills, reserved by the Governor for Presidential assent, within three months.
➡ **Legislative encroachment**: National Judicial Appointments Commission (NJAC) Act, which included the Union Law Minister and two eminent persons in committee recommending judges.
➡ **Executive overreach**: Executive majority in tribunals, frequent promulgation of ordinances

Conclusion

Organs of government cannot function in watertight compartments, so, a broad separation of power with some functional overlap and adequate checks and balances furthers the goal of democracy.

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 in the News

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.

Constitutional Provisions regarding assents to the state bill	
Governor can (Article 200)	**For bills reserved by Governor, the President (Article 201) can**
⊃ Grant Assent. ⊃ Withhold Assent. ⊃ **Return for Reconsideration** (except Money Bills) – If the legislature passes it again, the **Governor must give assent.** ⊃ **Reserve for President's Consideration.**	⊃ **Grant Assent.** ⊃ **Withhold Assent.** ⊃ **Return for Reconsideration** – Legislature must act within 6 months; after reconsideration, **President can still accept or reject.**
Unlike the Governor, the **President is not obligated** to give assent to a reconsidered bill.	

Key Highlights of the Judgement

⊃ **Inaction is unconstitutional**: There is no Pocket or Absolute Veto available to the governor or President.

➡ In case the Governor/President exhibits inaction, the State Government could seek a writ of mandamus from a competent court.

⊃ **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.

➡ **Exception** is when the **bill presented in the second round** is **materially different** from that in the **first instance.**

⊃ **Prescribed timeline for assent of Bills**

⊃ **Governor Lacks Absolute Discretion Under Article 200** and has to mandatorily abide by the advice tendered by the Council of Ministers except in following situations:

Timelines set by Supreme Court for State Bill

➡ **State Bills that** would derogate the powers of the High Court, will not become effective without assent of President, relating to a subject enumerated in the Concurrent List etc.

⊃ **Discretionary power under Article 200 is subject to judicial review**: Withholding assent or reserving a Bill using the Governor's discretion or the President withholding assent, can be challenged in the Supreme Court.

⊃ **President should consult the Supreme Court on Bills reserved for unconstitutionality** (Article 143).
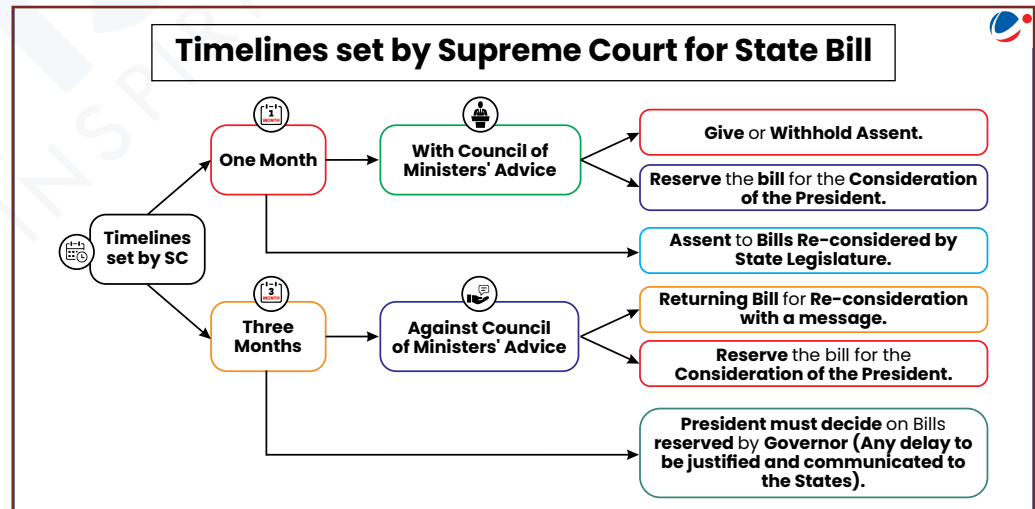
1.3. States' Demand for Autonomy

Why in the News?

The Tamil Nadu government has formed a high-level committee headed by former Supreme Court judge Justice Kurian Joseph to suggest ways to strengthen State autonomy and federalism.

Mandate of the Committee

- Review constitutional, legal, and policy aspects of Centre-State relations, Suggest ways to restore powers shifted from the State List to the Concurrent List etc.

Federal Scheme of the Indian Constitution

- Union of states with no right to secede for the states from the Union.
- Single constitution, single citizenship, common all-India services, common election commission and a single unified judiciary.
- **Division of Legislative Powers under** article 246 enumerated in the Seventh Schedule.
- **Indian federalism has often been characterised as quasi-federal**: stronger Centre having more power than States.

Why India Adopted Centralised Federalism?

- **Safeguard Unity and Integrity of India** as legacy of partition created a general fear of fissiparous tendencies.
- **Ensuring equitable distribution of Wealth and Development between** rich and poor states.
- **Promoting core Constitutional values** of justice, parliamentary democracy, liberty, etc., that can be extended through strong centre.
- **Promoting uniformity of Laws**

Key Issues Highlighting the Erosion of States' Autonomy

- **Central interference in subjects under the State List:** UGC draft regulations on the appointment and promotion of university teachers and Vice-Chancellors.
  - ➜ Tamil Nadu opposed NEET for entry to medical colleges.
- **Centralization of Fiscal Powers:** Limited taxation powers under GST, Delays in tax devolution and cuts in grants-in-aid.
- **Uniform Policies Ignoring State Diversity:** Tamil Nadu's opposition to the three-language policy demands.
- **Weak Institutional Checks:** Planning Commission was created by executive order, lacked constitutional accountability, Governor's delays in assenting to State bills.
- **Increasing instances of Centralisation:** For example the improper use of assenting powers of the Governor in Tamil Nadu under Article 200, West Bengal opposed Central Bureau of Investigation (CBI) investigations without state consent.

Key Initiatives to Improve Centre-State Relations

- **Inter-State Council** (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):** Reduced from 130 to 75, aiming for 50.
- **Decentralisation**: 73rd & 74th Amendments gave powers to Panchayats and Municipalities.

Ways for Effectively Addressing the Demand for State Autonomy

- Implementing Sarkaria Commission's (1983) Key Recommendations
  - ➜ **Shift all residuary powers** (except taxation) to the Concurrent List, **Union must consult States before legislating** on Concurrent List subjects.
- **Promoting Equitable Development**: As recommended by the Punchhi Commission (2007), Increase financial transfers to underdeveloped States, focus on boosting physical and human infrastructure.
- **Use Inter-State Council: For both collective and individual State consultations** (Venkatachaliah Commission).
- **Promote coordination and policy consensus:** Through, Zonal Councils, GST Council, NITI Aayog, and Other cooperative platforms

Conclusion

As Annadurai said in 1967, "Through mutual goodwill and understanding we should forge a fraternal and beneficial nexus."
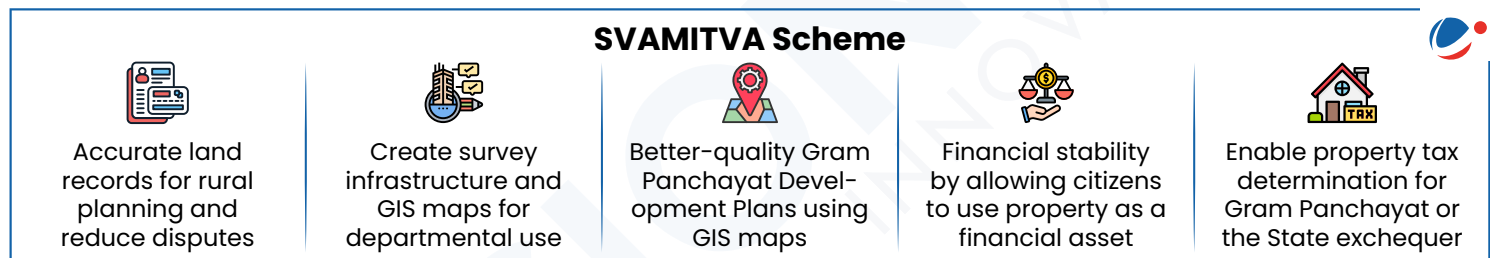
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1.4. 5 Years of SVAMITVA scheme

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:** 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**: For accurate geo-referencing and land demarcation.
 → **Drone Mapping: To create accurate property maps** for issuing ownership rights**.**
 → **Information, Education, and Communication (IEC) Initiatives: To 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.

SVAMITVA Scheme

Accurate land records for rural planning and reduce disputes	Create survey infrastructure and GIS maps for departmental use	Better-quality Gram Panchayat Development Plans using GIS maps	Financial stability by allowing citizens to use property as a financial asset	Enable property tax determination for Gram Panchayat or the State exchequer

Significance of the scheme

⮑ **Legal Empowerment and Dispute Resolution:** Through issuance of property cards, 1.3 lakh+ property cards issued.
⮑ **Economic Transformation through Financial Inclusion:** Property cards **serve as valuable collateral to get finance.**
⮑ **Governance Revolution and Resource Optimization:** Ekhatpur-Munjvadi village (Maharashtra) have experienced increased Own Source Revenue (OSR) through updated property records.
⮑ **Technological Innovation in Rural Development:** Use of **survey-grade drones coupled with CORS networks.**
⮑ **Holistic Rural Transformation and Planning**: In **Haryana and Uttarakhand (100% completion in both drone surveys and property card preparation)**, the scheme creates a **blueprint for planned, sustainable rural development.**

Challenges for the implementation of the scheme

⮑ **Unclear Legal Validity of Property Cards:** May not **be recognized as conclusive proof of ownership by financial institutions.**
⮑ **Variations in State Land Laws and Record-Keeping Practices:** Andhra Pradesh maintains records **of both registered and unregistered liabilities, while most other states only record registered mortgages.**
⮑ **Limited Property Tax Collection Authority:**
 → Odisha **has not empowered Gram Panchayats to collect property tax.**
 → **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.
⮑ **Data Management: Lack of clear framework and** 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:** Developing uniform **procedures to record all liabilities on property cards**.
⮑ **Empower all Gram Panchayats:** To collect property tax through legal amendments and implement comprehensive property classification systems.

- **Protect Marginalized Communities**: Train surveyors to **recognize rights of SC/ST groups, women, and sharecroppers,** ensure active community **participation.**
- **Enhance Data Management:** Make non-personal land **data publicly accessible to improve transparency**, Implement uniform geospatial **data standards.**

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 Deputy Speaker of the Lok Sabha

- The office emerged in **1921** under **Government of India Act, 1919.**
  - **Sachidananda Sinha** first held this office in the **Central Legislative Assembly.**
  - **M. A. Ayyanga**r, became the **first elected DS** post-independence.
- **Election (Article 93):** Lok Sabha, **as soon as may be**, choose two members of the House to be **Speaker** and **DS.**
  - **Long-standing convention-** the post of DS has been offered to the **Opposition.**
- **Speaker may resign** by submitting a resignation to the DS and vice-versa (Article 94).
- **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: Places DS** on an **equal footing** with the Speaker.
- **Essential for continuity, stability, and institutional balance:** 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 Responsibilitie**s: DS chairs key sessions, leads committees, and manages sensitive debates requiring neutrality and authority.

Issues with the Vacancy

- **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.**

- **Question of Law:** Can constitutional courts direct Speakers, acting as quasi-judicial tribunals, to decide anti-defection disqualification petitions within a specific timeframe?

Supreme Courts Observations

- **The SC stated that it is not "powerless"** if Speaker remains "indecisive" on disqualification petitions.
- **Court's Right to Set a Reasonable Timeframe**
  - **E**.g., as done in **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:

- **Kihoto Hollohan v. Zachillhu (1992):** Courts have the authority to intervene if the Speaker delays action
- **Ravi S. Naik v. Union of India (1994):** The Speaker should act as a neutral adjudicator rather than a political figure.
- **Karnataka MLAs' disqualification case (2020): Consider transferring disqualification powers** from the Speaker to **an independent tribunal**

Anti-Defection Law: Introduced through 52nd Amendment Act, 1985 adding Tenth Schdule.

1.5.3. Immigration and Foreigners Bill, 2025

Key Highlights of the Bill

- **Objective:** To modernize immigration laws, enhance national security, and improve coordination among immigration authorities.
- **Bills repealed:**
  - Passport Act, 1920
  - Registration of Foreigners Act, 1939
  - Foreigners Act, 1946
  - Immigration (Carriers' Liability) Act, 2000
- **Immigration Regulation by** a **Bureau of Immigration.**
- **Penalties for illegal entry** with imprisonment of up to five years, fine up to five lakh rupees, or both.
- **Police officers** not below the rank of a Head Constable can **arrest without a warrant.**

1.5.4. Panchayat Advancement Index (PAI)

Introduced by Ministry of Panchayati Raj

About Panchayat Advancement Index (PAI)

➲ **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.
  ➡ **Nine Themes** related to Poverty, Healthcare, Sanitation, Governance, Women and Children.
➲ **Aims**: Measure how well these grassroots institutions are achieving localized SDGs.
  ➡ **Nine key themes**
➲ **Categories in the PAI**
  ➡ **Achiever (0% Panchayats)**
  ➡ **Aspirant (61.2%)**
  ➡ **Performer (36%)**
  ➡ **Front-Runner:** Gujarat topped the rankings
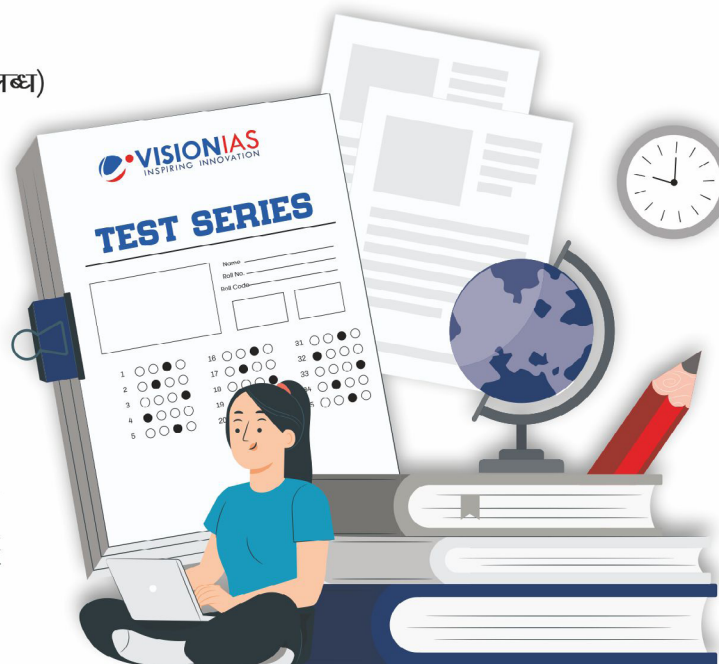
INTERNATIONAL RELATIONS

2.1. Emerging World Order

Why in the News?

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

About World Order

➲ Definition: Arrangement of power and authority that provides the framework for the conduct of diplomacy and world politics on a global scale.

Factors behind New World Order

➲ **Decline of Post-War Multilateralism**: E.g., **UN's failure** in **Ukraine** and **Gaza**.

➲ **Rise of Polycrisis**: E.g., **War**, **climate**, **pandemic**, **cyber threats**.

➲ **Regional & Agenda-Based Geopolitics**: E.g., BRICS aims to reduce over-reliance on traditional powers and enhance **South-South cooperation**.

➲ **Multipolarity**: World order is no longer dominated by one (unipolar) or two (bipolar).

Opportunities for India in an Emerging World Order

➲ **Voice of the Global South**: Promotes **non-Western democracy**. E.g., **G20 (Vasudhaiva Kutumbakam)**, **Voice of Global South**, **Vishvamitra** vision.

➲ **Balanced Multipolarity**: Engages with **BRICS**, **SCO**, **QUAD**, **G20**, etc.

➲ **Issue-based Cooperation**: E.g., **BIMSTEC** (connectivity, disaster management), **IPEF** (Indo-Pacific Economic Framework**)**.

➲ **Digital & Tech Leadership**: Through **CoWIN**, **UPI**, Open Network for Digital Commerce (ONDC), etc.

➲ **Climate Diplomacy**: Backs **green growth**, **finance reform**. E.g., **International Solar Alliance (ISA)** and **Coalition for Disaster Resilient Infrastructure (CDRI)**

➲ **Cultural Soft Power**: E.g., **Yoga Day**, **diaspora**, **Buddhism diplomacy**.

Conclusion

India must use the evolving world order to advance its **multipolar vision** and shape **inclusive, future-ready global norms**.

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 — 🕊️ **Post-WWII 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

2.2. Inward-Looking Development Strategies

Why in the News?

U.S. launched **Reciprocal Tariff Plan** with **10% base import tax**, targeting **trade surplus nations.**

More on the News

➲ This move signals a shift to **inward-looking strategies**, away from **outward-oriented policies**.

➲ Other Key Examples of Inward-Looking Development Strategies
  ➜ **China**: Export controls on **rare earths** like **Germanium**
  ➜ **India**: **Make in India**, **PLI scheme**, and **Atmanirbhar Bharat**

Inward-Looking Development Strategies

➲ **Definition**: Focuses on **indigenous raw materials** and **domestic production**, aiming to protect **local industries** and reduce **external dependence**.

➲ **Genesis**:
  ➜ **Latin America**: Adopted post **WWI & Great Depression** to counter **19th-century free trade crises**.
  ➜ **India**: Post-**independence**, driven by **colonial exploitation** and goal of **economic autonomy**, promoted **protectionism**.

Development Strategies: Inward vs Outward Looking

Inward-Looking Strategy	Outward-Looking Strategy
1. **Part of the broader trend of** deglobalization	1. Integral to **globalization**
2. **Supports local industries** through protective measures	2. Encourages **free trade** and removal of trade barriers
3. **Protects domestic jobs** from foreign competition	3. Welcomes **foreign investment** as catalyst for growth
4. Employs **tariffs and subsidies** to shield domestic producers	4. Promotes **global integration** of domestic economy
5. **Limits foreign competition** to nurture local businesses	5. Prioritizes **economic efficiency** through competition
6. Emphasizes **self-sufficiency** and reduced import dependence	6. Facilitates **technological innovation** through knowledge transfer
7. Focuses on **import substitution** industrialization (ISI)	7. Embraces **export-oriented** industrialization
8. Aims to **reduce trade deficits** and foreign exchange outflows	8. Seeks **comparative advantage** in global markets

VS

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

Objectives	Approaches
National Security and Strategic Autonomy	➲ Develop **domestic supply chains** (e.g., semiconductors, pharma) to reduce dependency during crises. ➲ E.g., **U.S. CHIPS Act** (semiconductor subsidies)
Reclaiming Economic Sovereignty	➲ Global institutions like **WTO** and **IMF** favor rich nations; inward strategies offer more control. ➲ E.g., **India's Atmanirbhar Bharat** (₹20 lakh crore package), **China's dual circulation policy.**
Reviving Domestic Manufacturing Employment and Strengthening Economic Competitiveness	➲ Inward policies promote **import substitution** and **job creation.** ➲ E.g., **India's 5 Positive Indigenisation Lists**
Addressing Trade Imbalances	➲ Use of **tariff** and **non-tariff barriers** for fair competition. ➜ E.g., **India reserves 75% of defence budget** for domestic procurement.

Potential negative impacts of Inward-Looking Development Strategies

- ➲ Higher Consumer Prices: Tariffs/import bans raise costs, reduce competition, and limit choices.
- ➲ **Efficiency Loss**: **Reshoring/friendshoring** can be costly and less resilient.
- ➲ Supply Chain Disruption: Electronics/auto sectors face delays, cost hikes, and slower innovation.
- ➲ Trade Tensions and Wars: Protectionism triggers retaliatory measures.
- ➲ Bloc Formation: Promotes bilateralism, weakens multilateralism, excludes smaller nations.

Conclusion

Ensures **economic sovereignty**, but may hurt **efficiency** and **consumers**. Success needs **capacity-building**, **tech**, and **skill development**; a **selective approach** is preferable to isolation.
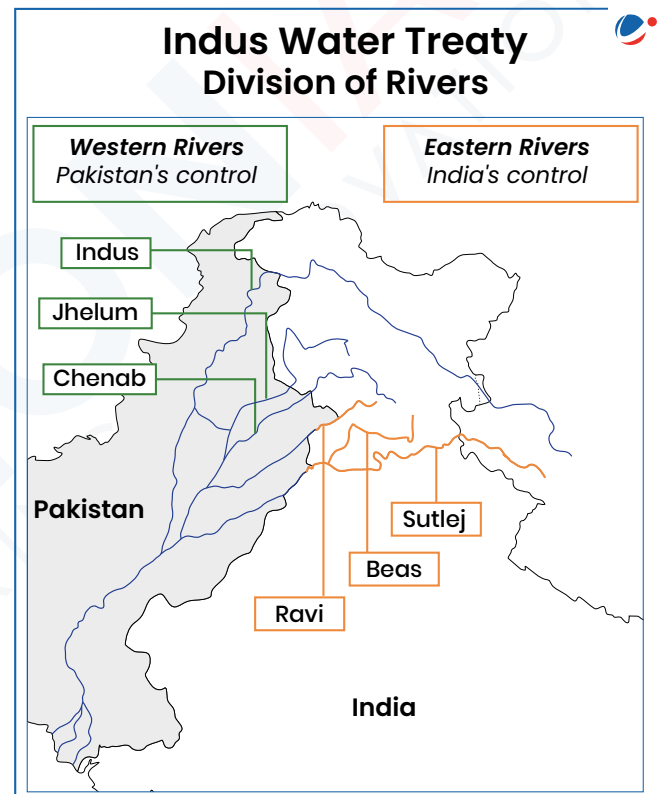
2.3. Indus Waters Treaty

Why in the News?

India placed **IWT in abeyance**, citing **Pakistan's support for cross-border terrorism.**

More on the News

- ➲ 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 Vienna Convention on the Law of Treaties (VCLT) (1969) allows suspension via abeyance.
- ➲ **IWT** lacks provision for **unilateral suspension**.

Indus Water Treaty
Division of Rivers

Western Rivers — *Pakistan's control*
Eastern Rivers — *India's control*

Indus, Jhelum, Chenab — Pakistan
Sutlej, Beas, Ravi — India

About the Indus Waters Treaty

- ➲ **Signed**: 1960 by **India & Pakistan**, with **World Bank** as signatory.
- ➲ **Objective**: Share **Indus river system** waters
- ➲ **Division of Water**:
  - ➜ **Eastern Rivers** (Ravi, Beas, Sutlej): Full use by **India**
  - ➜ **Western Rivers** (Indus, Jhelum, Chenab): Allocated to **Pakistan**; **India** allowed **non-consumptive use**
  - ➜ **Article III(1)**: India must **let flow** western rivers to Pakistan.
  - ➜ **Exchange of Data**: Regular sharing on **river flow and usage**.
- ➲ **Dispute Resolution (3-Step)**:
  - ➜ **Permanent Indus Commission (PIC)** – Two commissioners; meets **annually**.
  - ➜ **Neutral Expert** – Appointed by **World Bank**, **binding decision**.
  - ➜ **Court of Arbitration (CoA)** – **7-member tribunal**, decision by **majority vote**.

Implications of the suspension of the Indus Waters Treaty	
On India	**On Pakistan**
➲ **Credibility:** Unilateral action may hurt India's image as a **responsible treaty partner.** ➲ **Weaponising water resources:** Could prompt **China** to adopt similar tactics over **Brahmaputra.**	➲ **Food Security: 80%** of crops depend on **Indus irrigation** (World Bank). ➲ **Economic Impact:** Key exports **(wheat, rice, cotton)** earned **USD 4.8 billion** (2022)—depend on the Indus. ➲ **Energy & Water Stress: 1/3rd** of power from **hydropower**; country already **water-stressed.**

Other Issues with IWT

- ➲ **Dam Objections**: Pakistan opposes **Kishanganga (Jhelum)** and **Ratle (Chenab)** projects.
- ➲ **Bypassing Dispute Steps**: On Kishanganga, Pakistan skipped **Neutral Expert** and went directly to **Permanent Court of Arbitration (PCA)**, violating IWT procedure.
- ➲ **Biodiversity Threat**: **Shahpurkandi** and **Ujh (Ravi)** may impact **Indus dolphins**.

- ➲ **Terrorism Link**: Post-2016 attack, India asserted **"water and blood can't flow together"**
- ➲ **Lack of regular data sharing**: Flow data crucial to understanding **river basin dynamics**.

International principles on international water sharing

- ➲ **Helsinki Rules, 1966**: By **International Law Association**; governs use of **international drainage basins**.
- ➲ **Helsinki Convention, 1992**: Legal framework to **prevent and control cross-border water pollution**.
- ➲ **UN Watercourses Convention, 1997**: Codifies law on **non-navigational uses** of **transboundary watercourses**.
- ➲ **India, China,** and **Pakistan** are **not signatories**.

Conclusion

India's use of **'abeyance'** is a **strategic message**, not treaty rejection—treaties must reflect **real-world politics** and require **credibility** from all parties to protect **India's interests**.

2.3.1. Shimla Agreement

Why in the News?

Pakistan suspended participation in all bilateral agreements with India, including the Simla Agreement.

Shimla Agreement

- ➲ **Background** Signed in **1972** after **India–Pakistan 1971 War**, which led to the creation of **Bangladesh**.
- ➲ **Key Provisions**
  - ➜ **Normalization of Relations**: Based on **UN Charter**; resume ties, repatriate prisoners of war (**POWs**) and **civilians**.
  - ➜ **Bilateral Resolution**: Settle issues through **bilateral talks** or **mutual agreement**.
  - ➜ **Line of Control (LoC)**: Formalized **1971 ceasefire line** into **LoC** in **J&K**.
  - ➜ **Respect for Sovereignty**: Mutual **non-interference** and **territorial respect**.
  - ➜ **Future Meetings**: Provision for **summit-level peace talks**.

Importance of the Shimla Agreement

- ➲ **Bilateralism Framework**: Counters **Pakistan's attempts** to internationalize **Kashmir.**
- ➲ **Stabilising the LoC**: Gave **international legitimacy** to the **Line of Control.**
- ➲ **Cooperation Prospects**: Enabled initiatives like **Kartarpur Corridor, 2012 Visa Agreement.**
- ➲ **Trust Building**: Promotes dialogue through **non-interference** in internal affairs.

Implications of the suspension of the Shimla Agreement

- ➲ **Symbolic/Diplomatic Impact**: Mostly **symbolic**, as the pact lost relevance post repeated **violations** (e.g., **Pulwama 2019**).
- ➲ **LoC Implications**: **Non-recognition** may provoke attempts to alter **status quo** (e.g., **Kargil**).
- ➲ **Regional Stability**: Undermines peace between **nuclear-armed neighbours**.
- ➲ **International Views**: May attract **criticism** and boost **India's claim** of Pakistan's **unreliability**.
- ➲ **India's Strategic Advantage**: India can pursue hard action against cross-border terrorism, revisit claims over Pakistan-Occupied Kashmir (PoK), etc.

Other important agreements between India and Pakistan

- ➲ **Nehru-Liaquat Pact (1950)**: Protection of **minorities** in both countries.
- ➲ **Bilateral Protocol on Religious Pilgrimages (1974)**: Facilitates **cross-border religious visits**.
- ➲ **Nuclear Non-Aggression Agreement (1988)**: **Annual exchange** of nuclear facility lists (Jan 1).
- ➲ **Missile Test Pre-Notification (2005)**: Advance notice for **ballistic missile tests**.
- ➲ **Kartarpur Corridor Agreement (2019)**: **Visa-free access** to **Gurdwara Darbar Sahib** in Pakistan.
- ➲ **Other**: Agreement on prevention of air space violations and for permitting over flights and landings by military aircraft (1991), etc.

Conclusion

The **Shimla Agreement** offers a framework for **bilateralism** and **peaceful coexistence**. Its spirit can help **reset relations**, address **historical grievances**, and build **mutual trust**.

2.4. 75 Years of India-China Relations

Why in the News?

China's President proposed "Dragon–Elephant tango" to mark 75 years of ties.

More on the News

⮑ Dragon-Elephant Tango" is used to describe a vision of peaceful and cooperative relations between China and India.

⮑ Dragon represents China and Elephant represents India.

Significance of Stable Relations

⮑ **Regional Peace**: Reduces **border tensions**, enables **development focus.**

⮑ **Indo-Pacific Prosperity**: Lowers **strategic friction**, supports **regional cooperation.**

⮑ **Trade & Investment**: E.g., China supplies Active Pharmaceutical Ingredients (APIs), invests in **Indian startups**
  ➡ China is largest trade partner ($118.4 bn).

⮑ **Access to Resources**: China dominates **rare-earths**, key for **tech & solar goals.**

⮑ **Global Influence**: Collaboration in **BRICS**, **SCO**, and calls for reforms in **WTO**, **IMF**, and **UN**.

⮑ **Countering Global Challenges**: Joint action on **climate**, **health**, and **energy issues.**

India-China Border

Key concerns in India-China Relations

⮑ Unsettled Borders: Disputes along 3,488 km LAC led to clashes. E.g., Doklam (2017), Galwan (2020)

⮑ Trade Imbalance: Trade deficit Rose to $85 bn (2023-24)
  ➡ Dependent on China for Semiconductors, Pharma APIs etc.

⮑ China–Pakistan Nexus: China-Pakistan Economic Corridor (CPEC) through PoK, violates sovereignty

⮑ Assertiveness: String of Pearls- presence in Maldives, Sri Lanka, South China Sea

⮑ Water Power: China controls rivers to northeast; built dams like Zangmu, Jiacha, etc.

Way Forward

⮑ **Diplomatic Engagements**: Use **BRICS, SCO, G20, AIIB** for dialogue.

⮑ **Mutual Respect**: Base ties on **respect, sensitivity, and interest.**

⮑ **Strategic Balancing**: Defend **sovereignty** while engaging diplomatically.

⮑ Water resource management: Enhancing cooperation on sharing hydrological data for Transboundary Rivers.

⮑ **Confidence Building Measures (CBMs)**: Expand to **economic and cultural ties** in border areas.

The String of Pearls

⮑ **China's Strategy**: Building **commercial and military assets** in **IOR** to secure **energy routes** and **expand influence**.

⮑ **Key Locations**: **Gwadar (Pakistan)**, **Hambantota (Sri Lanka)**, **Chittagong (Bangladesh)**, **Sittwe & Coco Islands (Myanmar)**, and a **military base in Djibouti**.

India's Response – "Necklace of Diamonds" Strategy

⮑ A **multi-pronged counter-strategy** that includes:
  ➡ **Developing Naval Bases and Access**: E.g., **Chabahar (Iran)**, **Oman**, **Changi Naval Base (Singapore)**.
  ➡ **Regional Partnerships**: Strengthen ties via **Act East**, **ASEAN**, **Quad**, etc.
  ➡ **Maritime Vision**: **SAGAR** & **MAHASAGAR** for regional **security and growth**

2.5. China's Rare Earth Elements Export Control

Why in the News?

China imposed export restrictions on **7 REEs & magnets**, citing **U.S. tariff hikes**

What are Rare Earth Elements (REE)?

➲ **Misnomer**: **Abundant** in Earth's crust, but rarely in **economically viable concentrations** (United States Geological Survey-USGS).

➲ Named "rare" in **18th–19th centuries** due to rarity vs. other **earth's elements** like **lime** or **magnesia**

➲ **IUPAC Definition (2005)**: **17 elements** with high **density** & **conductivity**
   ➔ **Includes:** cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), etc.

➲ **Sources**: Found in **bastnasite**, **loparite**, and **monazite**
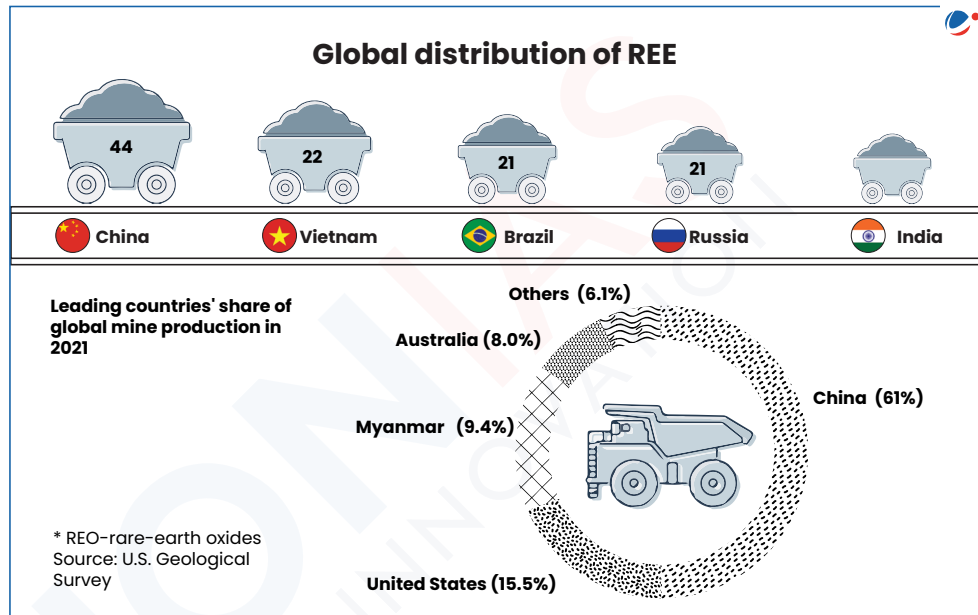
Geostrategic significance of recent export control of REE

➲ **Tariff War Leverage**: Counters **U.S. tariffs**; seeks strategic edge despite risks.

Global distribution of REE

44	22	21	21	
🇨🇳 China	⭐ Vietnam	🇧🇷 Brazil	🇷🇺 Russia	🇮🇳 India

Leading countries' share of global mine production in 2021

- Others (6.1%)
- Australia (8.0%)
- Myanmar (9.4%)
- United States (15.5%)
- China (61%)

* REO-rare-earth oxides
Source: U.S. Geological Survey

➲ **Impact on Critical Tech**: E.g., **Yttrium, Dysprosium** vital for **defence, electronics, jet engines** → leads to **cost hikes & innovation delays.**

➲ **Supply Chain Disruption**: Affects major importers – **US, Japan, Vietnam,** and **Germany.**

➲ **Weaponisation of REEs**: E.g. In **2010** banned exports to Japan and in **2023–25** imposed export restrictions on **gallium** and **germanium.**

➲ **Diversification Moves**: Countries are opting for **reshoring** (bringing back the production to the home country) and **friend-shoring** (businesses source or produce goods in countries with shared values).
   ➔ Alternatives to China for REE can be **Africa (**Democratic Republic of Congo**, Malawi)**, **South America, Australia**

Global efforts to reduce dependence on China for REE

➲ **Critical Minerals Mapping Initiative (CMMI, 2019)**: **US–Australia–Canada** initiative for **mineral mapping** incl. REEs

➲ **UN Panel on Critical Energy Transition Minerals**: Roadmap for managing **energy transition minerals**

➲ **Mineral Security Partnership (MSP)**: Includes **India**; ensures supply of **key minerals** for **tech**, **defence**, **energy**, **industry**

Indian Initiatives for REE production

National Critical Mineral Mission (NCMM) (**Budget 2024–25**): To secure **critical mineral supply chains**.

Mines & Minerals (Amendment) Act, 2023: Allows **private companies** to bid for **critical mineral exploration**, incl. **REEs**.

Bilateral/Multilateral Cooperation: E.g., **India–Australia Critical Minerals Investment Partnership** for **REE projects**.

Exploration Efforts: **Department of Atomic Energy** found large **REE oxide deposits** in **Balota, Rajasthan**.

Conclusion

Reducing REE dependence on China needs **strategic reserves**, **domestic output**, and **refining tech**, supported by **deep-sea mining**, **recycling**, **regulatory reforms**, and **private sector incentives**.

2.6. India – Sri Lanka Relations

Why in the News?

PM of India received Sri Lanka's highest civilian award, Mithra Vibhushana, during a state visit.

Key Outcomes of the Visit

➲ **Defence Cooperation**: MoU signed; Sri Lanka assured **no anti-India use** of territory
➲ **Energy Collaboration**: **India–Sri Lanka–UAE** to co-develop **Trincomalee energy hub**
➲ **Grant Assistance**: Aid for **Thirukoneswaram temple** in Trincomalee, **Sita Eliya temple** in Nuwara Eliya, and **Sacred City Complex project** in Anuradhapura.

Significance of India- Sri Lanka Relations

For Both Nations

➲ **Global Support**: India backs **Sri Lanka's BRICS bid**; Sri Lanka supports **India's UNSC seat (2028–29).**
➲ **Maritime Security**: Joint focus in **Indian Ocean Region (IOR)** on traditional & non-traditional threats.
➲ **Energy Cooperation**: Talks on **inter-grid link**, **LNG**, **pipeline**, **Sampur project.**
➲ **Multilateral Engagement**: Active in **Commonwealth**, **IORA**, and **BIMSTEC.**
➲ **Military Collaboration**: Joint exercises – **SLINEX (Navy)**, **MITRA SHAKTI (Army)**; joins **MILAN**

For Sri –Lanka	For India
➲ **Financial Aid:** India extended **$4 bn aid (2022–23)**; supported **Kankesanthurai Port**	➲ **Indian Ocean Security:** Sri Lanka is vital for **regional maritime stability**
➲ **IMF Bailout:** India's **early assurance** enabled **$2.9 bn IMF package (2023)**	➲ **Policy Alignment:** Central to **Neighbourhood First** and **MAHASAGAR** vision
➲ **Economic Importance:** India is largest trade partner, top FDI contributor, & largest source of tourists.	➲ **Indian Origin Tamils (IOTs):** ~1.6 million IOTs in **plantations** and **Colombo's business sector**
➲ **Other:** Humanitarian Assistance	

Irritants in India-Sri Lanka Relations

➲ **Chinese Influence**: Strategic concerns over **Chinese projects** like **Hambantota.**
➲ **Fishermen Disputes**: Sri Lanka opposes **bottom trawling**. Also, there is territorial dispute over Kachchatheevu Island.
➲ **Tamil Ethnic Issue**: Delay in **13th Amendment** (linked to **1987 Indo-Lanka Accord**) sparks political friction; opposed by **Sinhala nationalists**, supported by **Tamil groups.**

Way Forward

➲ **Five "S" Approach**: Samman (Respect), Samvad (Dialogue), Sahyog (Cooperation), and Shanti (Peace); to create conditions for universal Samriddhi (Prosperity).
➲ **Constructive Engagement**: Bilateral mechanism for **fishermen**; Implement **13th Amendment** through dialogue.
➲ **Soft Power & Culture**: Jointly develop **Buddhist Circuit**, **Ramayana Trail** using tech & diaspora.
➲ **Multilateral Cooperation**: Use **BIMSTEC** & **IORA** for **security**, **climate**, and **integration.**

2.7. India-Saudi Arabia Relations

Why in the News?

Indian Prime Minister visited Saudi Arabia.

Major Outcomes

➲ **Strategic Partnership Council (SPC)**: **2nd SPC** meeting created **Defence Cooperation** and **Tourism & Cultural Cooperation** committees.
  ➜ India is the **4th country** after **UK, France, and China** to have such a council with Saudi Arabia.
➲ **High Level Task Force on Investment (HLTF)**: Fast-track **$100 bn Saudi investment** in **energy, tech,** infrastructure, etc. Agreed to establish **two refineries** in India.

Significance of Bilateral Relations

For Both Countries

- **India-Saudi ties reflect India's Middle East policy shift**: From **remittances/religious diplomacy** to **investment**, **strategic dialogue**, and **defence cooperation**.
  - ➜ E.g., **Hydrocarbon partnership** upgraded to **comprehensive energy partnership**
- **Strengthening Bilateral Relations**: Ties established in **1947**; elevated to **Strategic Partnership** via **Riyadh Declaration (2010)**.
  - ➜ Bilateral Defence Engagements: Al Mohed Al Hindi (Naval), SADA TANSEEQ (Army)
- **Partners in Regional Maritime Security and Trade Corridors**: E.g., Indian Ocean Naval Symposium **(IONS)**, and Combined Maritime Forces **(CMF)**

Saudi Arabia

For India

- **Energy Security**: 3rd largest source of **crude oil, petroleum, LPG (2023–24).**
- **Trade**: ~$43 bn trade (2023–24); **5th largest trading partner.**
- **Investment**: Invested around USD 10 billion. In 2019, it announced plans to invest USD 100 billion more.
- **People & Culture**: **6.7%** of total **remittances (2024); Hajj quota** increased (2025).
- **Security Cooperation**: Helped in arrest of **Zabiuddin Ansari** (2008 Mumbai attack), deportation of **Abdul Salam** (fake currency racket), and **Operation Kaveri evacuation** (evacuation of Indians from conflict-hit Sudan).
- **Support for Moderate Islam**: **Crown Prince's reforms** help curb **radical ideologies** affecting **South Asia**, home to **400 million Indian Muslims**.

Challenges in India–Saudi Arabia Relations					
Labour Policies: Saudization limits Indian job access	**Trade Deficit:** India's deficit is about $31.3 bn (FY 2022–23)	**Project Delays:** $50 bn West Coast refinery project stalled	**FTA Talks:** India–GCC FTA stalled since 2004	**Geopolitical Divergences:** Saudi–Pakistan ties concern India	**Strategic Misalignments:** India's Iran ties vs Saudi's China tilt

Conclusion

India–Saudi ties are deepening in **defence, energy, economy, and culture**, while sustaining their **strategic partnership** amid complex challenges.

2.8. India-UAE Relations

Why in the News?

Crown Prince of Dubai made his first official visit to India.

Key Announcements during the Visit

- **Bharat Mart & Virtual Trade Corridor (VTC)**: Boosts **bilateral trade** and strengthens **India-Middle East-Europe Economic Corridor (IMEEC)**.
  - ➜ The Bharat Mart is India's warehousing facility.
- **Ship Repair Clusters (Kochi & Vadinar)**: Expected to enhance India's maritime sector.

United Arab Emirates

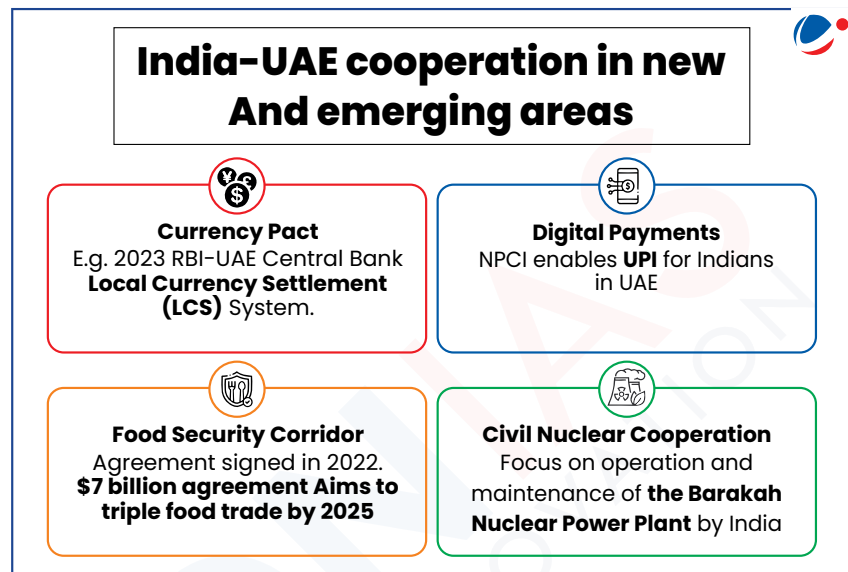## Significance of Bilateral Relations

For Both Countries

- **Growing Political Relationship**: Upgraded to **Comprehensive Strategic Partnership (2017)** after PM's 2015 visit.

- **Strategic Global Partnership**: Active in **BRICS, I2U2 (India-Israel-UAE-USA)**, and **UFI Trilateral** (UAE–France–India).
- Expanding Role in Regional Cooperation: Linked via **IMEEC** and **Indian Ocean Naval Symposium (IONS)**
  - ➜ Strengthening maritime cooperation through Naval Engagements & Joint Exercises (Desert Cyclone (India-UAE) and trilateral Desert Knight (India-France-UAE))

For India

- **Key Energy Partner**: **4th largest crude, 2nd largest LNG & LPG** supplier, offers **strategic oil storage.**
- **Robust Trade Relations**: Bilateral trade is about **$85 bn (2022–23)**; UAE is the **3rd largest trading partner, 2nd export destination.**
- **Economic Integration & Investment**: Only country with both **Comprehensive Economic Partnership Agreement (CEPA) (2022)** and **Bilateral Investment Treaty (BIT) (2023)**.
  - ➜ UAE is **7th largest FDI** source (2000–2024).
- **People & Culture Ties**: **3.5 million Indians** in UAE; **Remittances (FY24)** accounts 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.

India-UAE cooperation in new And emerging areas

Currency Pact
E.g. 2023 RBI-UAE Central Bank **Local Currency Settlement (LCS)** System.

Digital Payments
NPCI enables **UPI** for Indians in UAE

Food Security Corridor
Agreement signed in 2022. **$7 billion agreement Aims to triple food trade by 2025**

Civil Nuclear Cooperation
Focus on operation and maintenance of **the Barakah Nuclear Power Plant** by India

Challenges in India-UAE relationship

- **Migration and Labor Issues**: **Kafala system** (sponsorship-based labor system) enables **labor exploitation.**
- **Trade Imbalances**: **India's deficit** with UAE is about **US$16.78 bn (FY 2022).**
- **Energy Pricing Conflicts**: UAE's **OPEC stance** may clash with India's pricing needs.
- **Air Services Agreement Disputes**: India limits **UAE flight expansion** to protect local airlines.
- **Regional Crises: Gaza war and Red Sea attacks** disrupt regional initiatives like **IMEEC.**
- **Geopolitical Friction**: India–Iran ties vs UAE–China partnership.

Conclusion

India–UAE ties are a strong **strategic partnership**, but require **careful management** of **geopolitics, energy**, and **labor issues** for sustained growth.

2.9. 6th BIMSTEC Summit

Why in the News?

Summit was held in **Bangkok** under **Thailand's chairmanship**.

Major India-Led Initiatives launched at 6th BIMSTEC Summit

- **BODHI (BIMSTEC for Organized Development of Human Resource Infrastructure) Initiative**: **Skilling youth** via **training** and **scholarships** for professionals, students, researchers.
- **Digital Public Infrastructure**: India to conduct a **pilot study** on its regional feasibility.

Other Key Outcomes

BIMSTEC Bangkok Vision 2030: First strategic vision to build **"PRO BIMSTEC"**—**Prosperous, Resilient, Open**—focusing on **economic integration**, **connectivity**, and **human security**.

Maritime Transport Cooperation Agreement: Signed to enhance **regional maritime connectivity**.

About BIMSTEC

- **Genesis**: Formed in **1997** via the **Bangkok Declaration** with original **4 Members** as **BIST-EC** (Bangladesh, India, Sri Lanka, and Thailand).

- **Secretariat**: Dhaka, Bangladesh
- **Objective**: Promote **economic development**, **social progress**, and **regional peace** in **Bay of Bengal** region.
- **7 Priority Areas/Pillars** (led by each Member): E.g. Security pillar is led by India

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

- **SAARC's Alternative**: Excludes **Pakistan**, functional amid **South Asian Association for Regional Cooperation**'s deadlock.
- **Aligned with India's Foreign Policy**: Aids initiatives like **Act East**, **Neighbourhood First**, **Indo-Pacific**, and **QUAD** goals.
- **Strategic Bridge**: Connects **South** & **Southeast Asia** via **Thailand & Myanmar.**
- **Blue Economy & Maritime Security**: Supports **Bay of Bengal**, **anti-piracy**, **disaster relief**, aligned with **SAGAR/MAHASAGAR.**
- **South Asian Integration**: Promotes **connectivity** via **BIMSTEC Master Plan.**
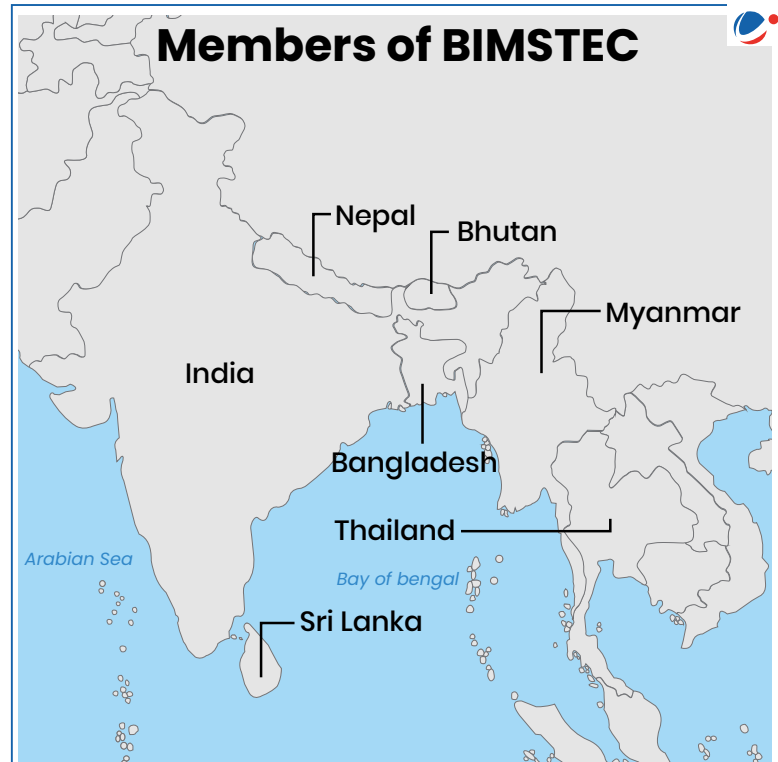
Issues with BIMSTEC

- **Slow Progress**: Charter adopted after **27 years**; Just 6 summits, including the current one, have been held in the last 27 years.
- **Geopolitical Challenges**: All BIMSTEC member countries except India and Bhutan are part of BRI projects.
- **Low Intra-Regional Trade**: **6–7% trade share** within BIMSTEC.
  - **BIMSTEC FTA,** initiated in 2004, remains unimplemented.
- **Infrastructural and Connectivity Gaps**: Delays in India-Myanmar-Thailand (IMT) Trilateral Highway, and Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement.
- **Political Instability**: E.g. Crises in **Myanmar, Nepal, Sri Lanka**.
- **Strained Member Relations**: Tensions like **Bangladesh–Myanmar (Rohingya)** and **India–Nepal border** affect **trust.**

Conclusion

BIMSTEC serves as a **practical platform** for advancing **India's regional goals** beyond **SAARC's constraints**.

2.10. Indian Diaspora

Why in the News?

Standing Committee on External Affairs (2024–25) released a report on **Indian Diaspora Overseas**.

About Indian Diaspora

- **Definition**: People of **Indian origin** settled abroad on **long-term visas** or over **generations**.
- **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)**: Registered under **Section 7A, Citizenship Act, 1955.** (**PIO and OCI merged** in 2015 as **OCI**.)
  - **Non-Resident Indians (NRIs)**: **Indian citizens** living abroad with **Indian passports**.
- **Current Status**: **35.42 million** (15.85 million NRIs and 19.57 million PIOs and OCIs) (Jan 2024)
- **Geographical Distribution**: Major presence in **USA, UK, Canada, Gulf, Australia, Southeast Asia**, and **Caribbean**.

Members of BIMSTEC

Significance and Contribution of Indian diaspora				
Remittances: Top global recipient; USD 118.7 bn (2023–24)	**Trade and Investments:** Major FDI contributor, supports entrepreneurship	**Tech, Knowledge & Skills:** Skilled in IT, medicine, finance, academia	**Soft Diplomacy:** Promotes Indian culture—yoga, films, festivals, cuisine	**Significance for Host Countries:** E.g., **UK's National Health Services** has majority **Indian-origin doctors**

Key-Concerns related to Indian Diaspora highlighted by the Committee

- **Limited Voting Rights**: NRIs must be **physically present**; turnout is low.
- **Prisoner Transfers**: Only **8 prisoners** repatriated in last 3 years despite agreements.
- **Job Rackets**: Indians lured to **SE Asia** (e.g., **Cambodia, Myanmar**) for cybercrime.
- **Re-integration of Migrants**: **5.95 lakh** returned (2019–24) due to economic disruptions, etc.; no **national reintegration policy.**
- **Safety of Indian Students**: **403 deaths** abroad (2018–24); due to **accidents, illness, etc.**

Initiatives taken by India for Indian diaspora

- **Know India Programme (KIP), 2003**: For **PIO youth (21–35 yrs)** to connect with modern India.
- **Knowledge Sharing Programmes**: E.g. Visiting Advanced Joint Research (VAJRA) Faculty Scheme, Pravasi Bharatiya Academic and Scientific Sampark (PRABHASS), and Vaishvik Bharatiya Vaigyanik (VAIBHAV) fellowship programme
- **Pravasi Bharatiya Divas (PBD), since 2003:** Observed on Jan 9 to **honour diaspora;** marks **Gandhiji's return (1915).**
- **Indian Community Welfare Fund (ICWF), 2009:** Established in 17 Emigration Clearance Required (ECR) Countries and Maldives
- **Other:** Pravasi Bharatiya Bima Yojana (PBBY), etc.

Way Forward: Recommendation of the Committee

- **Voting Rights to NRIs**: Enable via **Electronically Transmitted Postal Ballot System (ETPBS)** (remote voting).
- **Prisoner Transfers**: Amend existing agreements or create new ones to facilitate smoother repatriation of prisoners
- **Protecting Professionals**: Mandate **HRD/MEA-attested certificates**; use verified platforms (e.g., **Glassdoor, LinkedIn**).
- **Returnee Integration**: Adopt **Kerala model** for reintegration schemes.
- **Safety of Students Abroad**: Create **policy** to protect Indian students, especially in conflict-prone areas
- **Emigration Bill 2024**: Replace outdated **Emigration Act 1983**.
  - Also, need to address Student Migration in the Emigration Bill.

2.11. News in Shorts

2.11.1. SAARC Visa Exemption Scheme

India announced **Pakistan nationals** will **no longer be allowed** to travel under **SVES**.

About SVES

- **Launched** in **1992**, based on a **1988 SAARC Summit** decision (Islamabad).
- **Aim**: Enhance **people-to-people contact** and **regional cooperation** among **SAARC members**.

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".

Key Highlights of the Declaration

- **Supported by ILO** for advancing labour rights.
- **Key Commitments**:
  Promote **inclusive AI** with **worker protection**
  Ensure **fair climate transitions** via **social dialogue**
  Strengthen **South-South cooperation** on **labour rights**, **digital inclusion**, and **green jobs**

Significance of declaration for workers

- ➲ **Harnessing AI for Decent Work**: Ensures **worker voice** through **social dialogue**; Promotes **rights-based AI use** via **South-South cooperation** (ILO).
- ➲ **Just Transition**: Focus on **green jobs** amid threats to **1.2 billion livelihoods** and **2.4 billion heat-exposed workers.**
- ➲ **Universal Social Protection**: Tackle **protection gaps**, especially for **platform workers**, and **83%** lack basic protection.
- ➲ **Impetus to Social Justice**: Backed by **ILO's Global Coalition for Social Justice** through **guidance**, **research**, and **technical support**.

2.11.3. ASEAN-India Trade In Goods Agreement (AITIGA)

India hosts 8th Joint Committee Meeting on AITIGA.

About AITIGA

- ➲ **Genesis: Signed in 2009** and **entered into force in 2010.**
- ➲ **Mandates:** National Treatment to goods **as per GATT, 1994.**
- ➲ **Trade**: India-ASEAN trade reached **USD 121 billion** (2023–24); ASEAN forms **11%** of India's global trade.

2.11.4. Extradition

26/11 Mumbai Terror Attack accused extradited to India from the US.

Extradition

- ➲ Extradition means the **surrender of any person** who is **sought by the requesting State for criminal prosecution** for an extraditable offence. (UN Office on Drugs and Crime (UNODC))
- ➲ **Extraditable Offence** includes

  Offence listed in an **extradition treaty**, or

  Punishable with ≥ 1 year imprisonment in **either country** (in absence of treaty)

What is the framework for Extradition?

- ➲ **In India**

  Extradition Act, 1962 (amended in **1993**)
  - ◇ **Ministry of External Affairs** is **nodal authority.**
  - ◇ India has **extradition treaties with 48 countries**, including the **USA** and **Bangladesh.**

  Final decision made by the **Government of India**; appeal possible in **higher courts**
- ➲ **Globally:** United Nations Model Treaty on Extradition (1990), UN Model Law on Extradition (2004), United Nations Convention against Transnational Organized Crime (2000), etc.

Extradition Principles

Reciprocity
Encourages mutual cooperation between states for extradition

Double Criminality
Requires the act to be a crime in both jurisdictions.

Double Jeopardy
Prevents extradition for already punished crimes.

Speciality
Limits prosecution to specified offenses in extradition.

Fair Trial
Ensures just and impartial legal proceedings.

Challenges in Extradition Law

- ➲ **Double Criminality Loophole**: Offenders flee to nations where the act isn't a crime.
- ➲ **Lengthy Process**: Delays due to heavy paperwork and red tape.
- ➲ **Limited Treaties**: Only **48 countries** have extradition pacts with India.

2.11.5. India-Thailand Strategic Partnership

Both signed a **joint declaration** to establish a **Strategic Partnership**.

Significance of India-Thailand Strategic Partnership

- ➲ **Mutually-Beneficial Goals**: Shared interest in **Indo-Pacific** and **ASEAN Centrality**.
- ➲ **Strategic Location**: Thailand is India's **maritime neighbour** in ensuring **regional peace**.
- ➲ **Complementing Policies**: India's **Act East** aligns with Thailand's **Act West**.
- ➲ **Regional Groupings**: Thailand is a partner in **ASEAN**, **BIMSTEC**, etc.

Other Key Agreements Inked

- **MoUs on Sectoral Cooperation**: Collaboration on **National Maritime Heritage Complex** (NMHC) **at Lothal** and **North Eastern Region development** (MDoNER).
- **Trade Facilitation**: Exploring **local currency-based settlement mechanism**.

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.**

2.11.6. India's Extended Continental Shelf Claim

Recently, India expanded its claim in the **Central Arabian Sea** by **~10,000 sq. km** as part of its **extended continental shelf**, and modified an earlier claim to avoid a **dispute with Pakistan**.

Commission on the Limits of the Continental Shelf (CLCS)

🏛️ **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.**

🎯 **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.

Dispute over the maritime boundary

- **Exclusive Economic Zone** (EEZ): Grants **exclusive mining and fishing rights** up to **200 nautical miles** from the coast. This entire zone forms part of the **extended continental shelf**.
- **India's Claim:**

Filed first claim in **2009** to **UN's Commission on the Limits of the Continental Shelf** (CLCS).

In **2021**, **Pakistan objected**, citing the **Sir Creek** dispute.

In **March 2023**, **CLCS rejected** India's claim but permitted **modified resubmissions**.

About Sir Creek

- **Disputed Area**: A **96-km-long tidal estuary** in the **Arabian Sea**, dividing **Sindh (Pakistan)** and **Kutch (Gujarat, India)**.
- **India's Stand (1947)**: Apply **Thalweg Principle**—boundary lies **mid-channel** of a **navigable waterway**.
- **Pakistan's Stand**: Claims **Sir Creek is not navigable**, so **Thalweg cannot apply**.

2.11.7. Transshipment Facility For Bangladesh

India revoked the **2020 agreement** allowing **Bangladeshi exports** via Indian **Land Customs Stations** for third-country trade.

- **Reason for revoking agreement** is **Port/airport congestion** impacting **India's own exports**.
- This comes amid **strained ties** and **Bangladesh's remarks**, questioning India's role as **Net Security Provider** in the IOR.

India's role as Net Security Provider in IOR

- **Geo-Strategic**: India's **central IOR location**, with a 7,500-km coastline and proximity to key chokepoints (e.g., Strait of Malacca, Bab al-Mandab).
- **Maritime Security**: Leads **anti-piracy**, **counter-trafficking**, ensures **Sea Line protection**.
- **Development & HADR**: **First responder**—Tsunami (2004), **Maldives water crisis**, **Sri Lanka economic aid (2022)**.

Challenges to India's Position in the IOR

- **China's Expanding Influence**: E.g., **String of Pearls strategy**
- **Regional Instability**: E.g., **Political unrest in Bangladesh**
- **Non-Traditional Threats**: Proximity to **Golden Crescent** and **Golden Triangle**.

2.11.8. Heard And McDonald Island

US President announced **10% tariffs** on several US trade partners, including **Heard and McDonald Islands**.
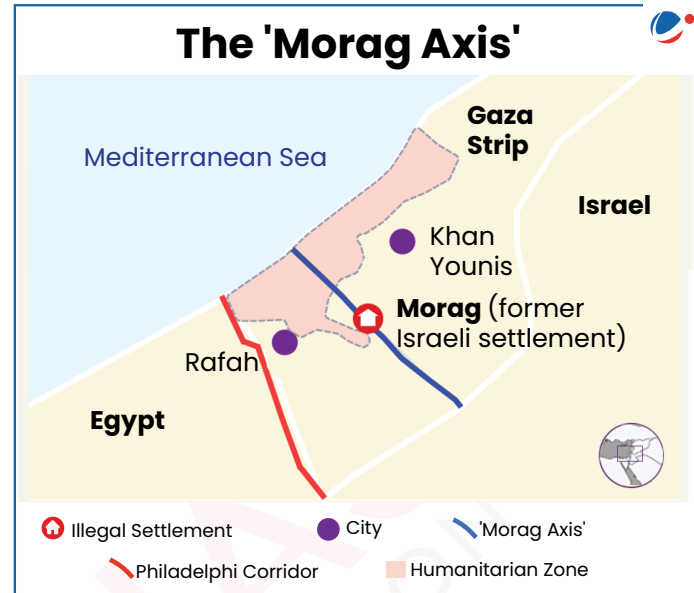
About the Islands

- **Uninhabited subantarctic islands** in the **Southern Ocean**
- **Administered** by **Australia**
- Only **volcanically active subantarctic islands**—vital for studying **geomorphic and glacial processes**
- Listed as **UNESCO World Heritage Sites**

2.11.9. Morag Axis

Israel has completed the takeover of a new **security corridor** called the **Morag Axis**.

About Morag Axis

➲ **Agricultural land** between **Khan Younis** and **Rafah**, running **east–west** across the **Gaza Strip**.

➲ Named after **"Morag"**, an **illegal Israeli settlement** (1972–2005) once located in the region.

The 'Morag Axis'

Legend: Illegal Settlement · City · 'Morag Axis' · Philadelphi Corridor · Humanitarian Zone

ECONOMICS

3.1. Innovation Ecosystem for Deep Tech

Why in the News?

Minister urged startups to focus on Deep tech innovation.

About Deep Tech

Advanced science/tech innovations solving complex problems via novel solutions or more advanced core science/engineering technologies in startups.

Deep Tech Startup Ecosystem in India

- **Extent:** Currently 4,000 start-ups, expected 10,000 by 2030 (approx), Department for Promotion of Industry and Internal Trade.
- **Global Standing:** Despite 3rd largest pool India **ranked 6th** globally
- **Funding:** Attracted $1.6 billion in 2024, 78 % increase year-on-year.
- **Examples:** Agnikul's 3d-printed rocket engine, ImmunoAct cancer therapy, and ideaForge's advanced UAVs.

DEEP TECH: AR/VR, Big data, Artificial intelligence & Machine learning, Nano-technologies, Language processing, Blockchain, Vision & Speech algorithms, Quantum computing, Biotech, Robotics, Advanced material science, Photonics and electronics
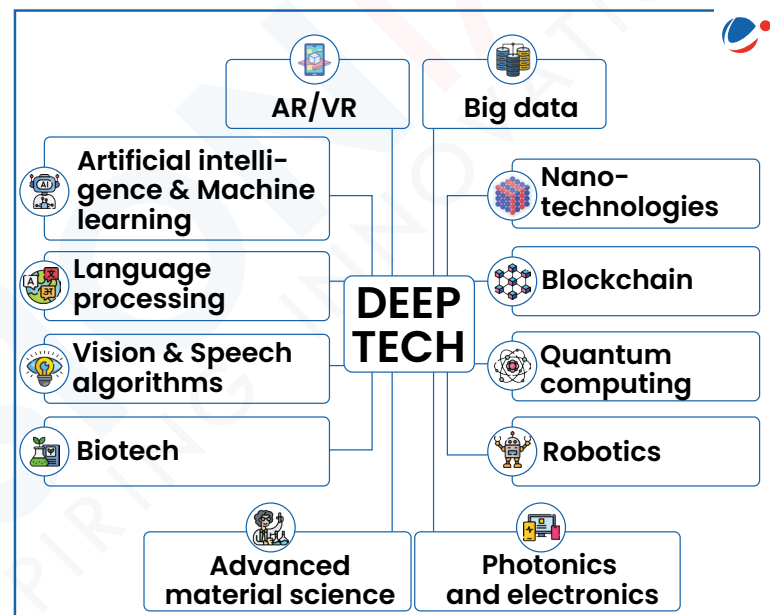
Why are Deep Tech Startups lagging in India?

- **Lagging Institutional Support:** only 1/6 public R&D support it
- **Inconsistent Funding** and favors quick returns
- **Long Gestation Period** with high risk
- **Focus on Consumer Startups**
- **Regulatory Hurdles** due to lack of universal consensus
- **Education and Research Infrastructure:** weak
- **Limited Academia-Industry Collaboration:** impede progress

Initiativeas for India's Deep Tech Ecosystem

- Deep Tech Fund of Funds (Budget 2025-26)
- Draft National Deep Tech Startup Policy
- ADITI Scheme: Grants for developing critical and strategic defense technologies.
- Anusandhan National Research Foundation: access scientific equipment & facilities.
- Thematic Missions in AI, Blockchain and quantum
- International Collaborations: ICET with USA, Semiconductor with Japan, QUIN by Quad Members.

Way Forward

- ➲ **Facilitate Spinouts:** companies based on academic research owned by University
- ➲ Strengthen **innovation clusters** in key sectors and establish dedicated R&D facilities
- ➲ **Foster Investment** via co-investment programs, government instruments and simplified VC regulations and bridge investor knowledge gaps.
- ➲ Offer R&D incentives like grants and sandboxes
- ➲ **Implementation of National DeepTech Startup Policy** with monitoring

3.2. Electronics Component Manufacturing Scheme

Why in the News?

MeiTY notified the Electronics component manufacturing scheme.

About Electronics Component Manufacturing Scheme (ECMS)

- ➲ **Ministry:** Ministry of Electronics and Information Technology (MeiTY)
- ➲ **Objective:** Attract investments to build strong component manufacturing, integrating with global value chains.
- ➲ **Targeted Segments:** Targeting subassemblies (display, camera), bare components (PCBs), supply chain, and capital goods.
- ➲ **Types of Fiscal incentives offered for different segments:** Turnover-linked for sub-assemblies, capex-linked, and hybrid for select components.
- ➲ **Tenure:** Turnover linked incentive 6 years; Capex incentives 5 years
- ➲ **Eligibility:** Both **Greenfield** and **brownfield investment**
- ➲ **Implementation agency:** MeiTY through **Project Management Agency (PMA).**

Significance of Electronic Components Sector India

- ➲ **Economic Potential:** Fastest-growing sectors with **5 times** domestic growth (FY 15 to 24).
- ➲ **Export Growth:** Contributed **$29.12 billion** in **FY24** with **>20%** CAGR
- ➲ **National Security:** 1st defence semiconductor plant (India-US), will reduce foreign reliance
- ➲ **Drives Technological Innovation:** 5G enabling Remote Surgery and Autonomous Vehicles.

Challenges faced by electronic component sector in India

- ➲ **High cost of manufacturing:** Multiple tariff slabs & surcharges, high material & logistics costs etc. make India's products globally uncompetitive (eg 4%-5% disadvantage for Indian components versus China) and Scale up challenge
- ➲ **Lack of R&D and design ecosystem:** India spends less than 1% of GDP, hinders innovation
- ➲ **Lack of access** to global demand
- ➲ **Heavy imports dependence** on critical minerals causes supply chain disruptions and price volatility.
- ➲ A weak component ecosystem faces high capex, low turnover, and long gestation.
- ➲ Technological and skills gaps necessitate technology transfer.

Government Schemes for Electronics Boom in India

- ➲ Make in India (2014)
- ➲ PMP (2017): production of mobile devices
- ➲ PLI Scheme (2020): incentives on incremental sales
- ➲ SPECS: incentive on capex
- ➲ Semicon India (2021): Develop semiconductor and display ecosystem
- ➲ India Semiconductor Mission

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 basic, Capex support for complex and Hybrid support for high-complexity ones
  - ➡ **Innovation scheme** to promote SMEs/R&D centers to invest in product design and R&D.

➡ Large clusters with worker housing and localized regulations will be developed.
- ➲ **Non-Fiscal Interventions**
  - ➡ **Rationalize tariffs** to improve competitiveness
  - ➡ Attract **foreign talent**
  - ➡ Fostering **academia- industry** collaboration.
  - ➡ **Simplify the process** of Tech transfer

3.3. Pradhan Mantri Mudra Yojana (PMMY)

Why in the News?

10 years of PMMY have been completed.

About PMMY

- ➲ **Ministry: Ministry of finance**
- ➲ **Launch year:** 2015
- ➲ **How to avail**: From intermediaries (Bank, Micro Finance Institutions and NBFCs), RRB etc. Borrowers can file online application on Udyamimitra portal
- ➲ **MUDRA (Micro Units Development and Refinance Agency Ltd)** provides refinance support to its intermediaries. And monitors PMMY.
- ➲ **Mudra Card:** overdraft facility to borrowers
- ➲ **Mudra Mitra:** Mobile phone application guiding for MUDRA loan
- ➲ **Categories of the loan**: Shishu (upto 50k), Kishor (50k-5 lakh), Tarun (5-10 lakh) and Tarun Plus (10-20 lakh).
- ➲ **Nature of Assistance:** Term Loan, Overdraft Limit, Working Capital and Composite Loan for Acquiring Capital.
- ➲ **Objective of PMMY**
  - ➡ Collateral free access to credit
  - ➡ To fund the unfunded by bringing MSMEs to the formal financial system
  - ➡ Financial inclusiveness & support to the marginalized & socio-economically neglected classes

Key features PMMY

- ➲ **Collateral free loan** guaranteed by **CGFMU**.
- ➲ **Interest rate:** Deregulated, 2% subvention on Shishu loans repayment, reduction to MFIs / NBFCs, lending to women
- ➲ **Progressive Lending** shows shift towards larger loans (Kishor, Tarun), indicating business scaling**.**
- ➲ It reduces **regional disparity** by focusing on underdeveloped regions
- ➲ **Promote first time entrepreneur**
- ➲ **Financial Inclusion:**
- ➲ MUDRA aligns with initiatives like Make in India, NRLM, NULM, etc for financial inclusion and micro-enterprise support.
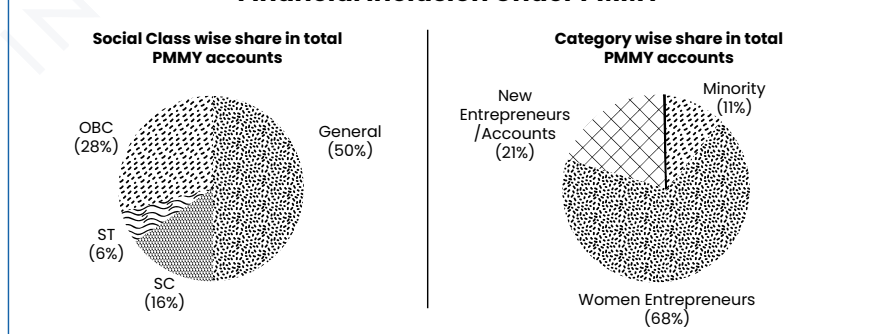

Financial Inclusion Under PMMY

Social Class wise share in total PMMY accounts: OBC (28%), General (50%), ST (6%), SC (16%)

Category wise share in total PMMY accounts: New Entrepreneurs/Accounts (21%), Minority (11%), Women Entrepreneurs (68%)

Issues associated with PMMY

- ➲ **High NPAs in MUDRA Loans:** 2.21% overall. But it is improving.
- ➲ **Scheme design issues** include a 15% CGFMU payout ceiling, high fees/rates, and no collateral risk.
- ➲ **Implementation is challenged** by borrowers' lack of documentation knowledge.
- ➲ **Lack credit discipline**: Loan diverted for personal use
- ➲ **Poor monitoring** of borrowers

Measures to be taken to improve Mudra loan

- ➲ **Increase financial awareness**
- ➲ **Enhanced Credit Guarantee Scheme (ECGS):** banks to lend more
- ➲ Raising loan limits, interest subvention, or targeted schemes **for women-led** enterprises
- ➲ Implementing a robust tech-driven monitoring framework to improve efficiency, reduce misuse, and build trust.

3.4. One State, One RRB

Why in the News?

Department of Financial Services notified **amalgamation of 26 Regional Rural Banks (RRBs)**.

More on the news

- Done by Central Government under **Regional Rural Banks Act, 1976**.
- 1st **phase** (FY 2006 to 2010) based on recommendations of **Dr. Vyas Committee,** focus on merging RRBs under same sponsor bank within a state. Now 4th phase: 28 RRBs from 43.
- E.g., Baroda U.P. Bank, Aryavart Bank and Prathama U.P. Gramin Bank in UP amalgamated into single RRB – **Uttar Pradesh Gramin Bank**.

About RRB

- **Genesis:** First 5 RRBs established in **1975** on recommendations of **Narasimham Working Group.**
- **Ownership: Government of India (50%),** concerned **State Government (15%),** and the **sponsoring commercial bank (35%).**
- RRBs **regulated** by RBI under the Banking Regulation Act, 1949 and **supervised** by NABARD.
  - ➡ For tax purposes, treated as cooperative societies under Income Tax Act, 1961.
- **Requirements:**
  - ➡ Must allocate 75% 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 to reach ~5.2% by FY30 of India's GDP.
- RRB will have **financial benefits** like greater capital base and improved liquidity.
- Unified RRB can **centralize** compliance functions.
- **Strengthened lending capacity** to rural sectors (MSMEs and agriculture)
- **Promoting financial inclusion**
- **Enhanced competitiveness** via Pooled resources, expertise and tailored products.
- **Consolidated IT** improves capabilities like cyber security, fraud prevention, big data analytics etc.
- **Other benefits** include operational efficiency, a large talent pool, and better oversight from sponsor banks.

Challenges in Amalgamation of RRBs	
Operational	**Governance and stakeholder management**
- **Different operational & organizational structure** of amalgamated banks - **Unexpected delay** will impact customers - **Operational difficulty** like maintenance of documents	- **Workforce realignment and employee movement** issues - **Difficulties in tracking updates** across departments
Financial	**Technological**
- **Inconsistencies in accounts &** branch and corporate ledgers - **Possibility of adverse impact** on CRAR ratio - **Complications in movement** of securities, funds & investments	- Issues related to **ensuring secure migration of CBS data** - **High volume of data** related to transaction histories and migrated data backups

3.5. News in Shorts

3.5.1. India's External Debt

Finance Ministry's **Quarterly External Debt Report (Dec 2024)**, risen **by 10.7%** (from Dec 2023) mainly due to **Valuation Effect** (occurs due to **appreciation of US dollar** vis-à-vis Indian Rupee).

Other Key Highlights of the Report

- **External Debt to GDP ratio: 19.1%** (Dec, 2024)
- **US dollar Denominated Debt** and **Loans** constituted largest component.
- **Debt service (Principal repayments plus interest payments)**: Declined by 0.1% (September – December, 2024).
- **Long Term** (marginal increase) **v Short Term** (marginal decline) debt.

About External Debt

- Money borrowed from **outside the country**, by both Central Government & Corporations (External Commercial Borrowings) in **other currencies** viz., US Dollar, SDR, etc.,
- **Sources:** Foreign commercial banks, international financial institutions like IMF, World Bank, etc., or foreign governments.

Recommendations to manage External Debt

- **Diversifying currency transactions**: Reducing U.S. dollar reliance etc.
- **Sustainable Debt Practices**: Borrowing directed towards investment, not consumption.
- **Balancing** borrowing with economic growth: Focus on robust fiscal policies, export-led growth, etc.

Challenges with rising External Debt

- Changes in exchange rate affect its repayment burden.
- Rising Inflation increases interest rates, slowing down growth, resulting in higher external debt to GDP ratio.
- Global threat of stagflation may lower demand for India's exports affecting **debt service ratio.**

3.5.2. MOSPI Releases CAPEX (Capital Expenditure) Survey

Capex Survey by **National Statistics Office (NSO) (under MOSPI),** was conducted under **the Collection of Statistics Act, 2008.**

Key Findings

- Private sector CAPEX grew 66% in FY22 -25, reaching ~Rs 6.5 lakh crore.

- Manufacturing enterprises accounted for 48% of total private sector CAPEX
- Focus on core assets, with others investing in value addition, opportunistic assets, & diverse strategies.

Significance of CAPEX

- **Competitive Advantage:** Companies can enhance their **operational efficiency, innovate products or services**
- **For Asset Maintenance and Upgrades**
- **Investor Confidence:** Capex signals long-term growth and value creation.
- **Strategic Decision-Making:** Capex decisions reflect strategic priorities, indicating future growth.

Challenges hindering private sector Capital Expenditure

- Difficulty in mobilizing equity & affordable debt.
- Risk estimation and mitigation issues.
- Delays in clearances and land acquisition.

About Capital Expenditure		
➲ It is money spent by government on development of machinery, building, health facilities, education, etc.		
➲ **Capital expenditure includes** acquiring fixed and intangible assets; Upgrading an existing asset; & Repayment of loan		
Aspect	**Capital Expenditure**	**Revenue Expenditure**
Nature	Creates assets for 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

Aim

- Consolidating laws related to regulation of **coastal shipping** (**all types of vessels:** ships, boats, sailing vessels, and mobile offshore drilling units).
- R**epeal Part XIV of the Merchant Shipping Act, 1958,** which regulates ships other than sailing vessels engaged in trade within coastal waters.

Key Provisions of Bill

- ⤷ **License for Coasting Trade** issued by the Director General of Shipping (DGS) mandatory for foreign vessels while Indian vessels are exempted.
  - ➜ **Coasting trade:** carriage of goods by sea but doesn't include fishing.
- ⤷ Mandates **National Coastal & Inland Shipping Strategic Plan** & **National Database for Coastal Shipping**.
- ⤷ **Authority to DGS** to seek information, issue directions, & enforce compliance.
- ⤷ **Central Government:** Provide exemptions & regulatory oversight

3.5.4. New Steel Policy

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

What is DMI&SP Policy: Gives preference to **domestically produced steel** in **government procurement**.

Key Highlights of the Revised Policy

- ⤷ **Nodal Ministry**: Ministry of Steel
- ⤷ **Applicability**: All government ministries, departments, PSUs, societies, trusts, & statutory bodies. Covers **procurement above ₹5 lakh.**
- ⤷ **Materials covered**: Steel in **"Melt & Pour" condition (produced in steel-making furnace** & **poured** into its **first solid shape).** E.g. flat-rolled steel, bars, etc.
- ⤷ No **Global Tender** Enquiries (GTE) for most iron and steel products **barring some exception.**
- ⤷ **Capital goods** used in production of alloy must achieve **at least 50% DVA (Domestic value addition)**.
- ⤷ Bans suppliers from countries that bar Indian firms in their government steel procurement **unless Ministry allows it.**

Why Was the Policy Revised?

- ⤷ **Rising Threat**: India is **net importer of finished steel**. There was surge in cheap steel imports from China, Japan, & South Korea while exports fell.
- ⤷ **Stagnation in global markets**: Issue of over production, slump in global demand
- ⤷ **Strategic Role of Government Procurement** i.e. 25-30% of India's finished steel for infrastructure, railways, defense.

3.5.5. Tax Collected at Source

IT department notified luxury items list on which taxpayers to pay 1% TCS

About Tax Collected at Source (TCS)

- ⤷ Tax payable by seller which he collects from buyer at time of sale of goods.
- ⤷ **Section 206, Income Tax Act**: list of goods on which

seller should collect tax from buyers.
- ⤷ **Section 52, CGST Act, 2017**: Tax Collection at Source, by e-Commerce Operator in respect of taxable supplies.

3.5.6. Safe Harbour

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

- ⤷ **Increasing threshold** for availing safe harbour from 200 to 300 Crore.
- ⤷ **Including Lithium-Ion Batteries** in electric or hybrid vehicles in **definition of core auto components**.

Safe Harbour: Tax authority shall **accept transfer price declared by 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)

- ⤷ RBI: Banks need to assign a lower run-off factor on retail deposits.
  - ➜ **Run-off factor:** percentage of deposits that could be withdrawn by depositors in a stress scenario.

About LCR

- ⤷ It is **amount of High-Quality Liquid Assets (HQLAs) that financial institutions must have on hand to ensure they can meet their short-term obligations** in event of market turmoil.
- ⤷ LCR part of **Basel Accords**, created **by 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 semi-annual report assessed impact of geopolitical risks on global financial stability.

Geopolitical Risks

- ⤷ **Multiple threats to supply chains**
- ⤷ New trade alliances and investment hubs are **redefining global power dynamics.**
- ⤷ **A fragmented tax environment. E.g.,** Minimum global tax, while others are withdrawing from multilateral tax policy.
- ⤷ **Demographic, technological and cultural pressures on workforces: E.g.,** Aging populations, mass retirement, falling birth rates, culture wars, AI integration, etc.

Implications of geopolitical risks

- Increased military spending & economic downturns raise public-debt-to-GDP ratios, escalating **fiscal sustainability** concerns and **sovereign risk.**
- **Financial Contagion:** Geopolitical risks spill over to other economies through trade & financial linkages.
- It can lead to **economic disruptions**, such as **supply chain disruptions** and **capital flow reversals**.
- **Investor Confidence:** It generally **lowers investor confidence,** leading to **market uncertainty** & **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
- Strengthen Capital Buffers
- Deepen Financial Markets with robust regulations
- Maintain Macroeconomic Buffers
- Improve Crisis Preparedness

3.5.9. Global Trade Outlook and Statistics 2025

By **World Trade Organisation (WTO).**

- Volume of world merchandise trade likely to fall by 0.2% in 2025**,** particularly in **North America**
- Severe downside risks exist, like **"reciprocal" tariffs and broader spillover of policy uncertainty.**
- The report contains for **1st time a forecast for services trade (Volume** to grow by 4.0% in 2025).

3.5.10. UNCTAD Releases Technology and Innovation Report 2025

Key Findings of the Report

- Ensuring AI drives **inclusive growth** rather than **deepening divides**
- **Global potential of AI** to reach **$4.8 trillion** by 2033
- Globally AI could impact **40% jobs,** offering productivity gains along with concerns regarding automation & job displacement
- **Market dominance at National and Corporate Levels:** US accounts for **70% of global AI private investment**
- India ranks 36th in 2024

Way Forward on Inclusive AI

- Redesigning AI solutions in **locally available digital infrastructure, lowering the skill barriers; etc.**
- **Adopting Worker Centric Approach**
- **Government** to assess **national AI capacities** across **infrastructure, data** and **skills.**

3.5.11. International Standards of Accounting And Reporting (ISAR)

About ISAR

- It is a **UN global forum of policy-makers, regulators, standard-setters & lead experts** in area of enterprise accounting & reporting.
- **Mandate:** Assist in improving quality & 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:** In **Geneva to address emerging issues in enterprise accounting and reporting.**
- **Membership**: ISAR allows 34 formal members to serve 3 year terms. Include 9 African, 7 Asian, 6 Latin American, 3 Eastern European, and 9 Western European and Other States.

3.5.12. 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**: Provides market for trading in **equity, currencies, debt instruments, derivatives, mutual funds.**
- **Regulated by:** Securities Exchange Board of India (SEBI), statutory body under SEBI Act, 1992.

3.5.13. Cape Town Convention and Protocol

The Protection of Interests in Aircraft Objects Bill, 2025 aims to align with **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.
- 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 developed nano sulphur which increased mustard (DMH-11, genetically modified) yield by 30-40%.

About TERI's Nano-sulphur

- It is Green product that uses biological agents
- It has **antibacterial and insecticidal** properties.
- **Benefits:** Acts as plant growth promoter, enhancing plant stress resistance, improving nutritional quality of plants, etc.

3.5.15. Saline Aquaculture Hubs

About Saline Aquaculture

- **Meaning: Use of saline-affected lands** (unsuitable for agriculture) for inland saline aquaculture.
    - Aquaculture is farming of **aquatic organisms**
- **Significance:** Generate employment & livelihood opportunities
- **Potential in India:**
    - Only 2, 608 hectares of 58,000 hectares identified saline area is being currently utilized

→ India stands as 2nd **largest producer of cultured shrimp globally**, earning **65% of its seafood export value** from shrimp alone, which can be **better realized** through Saline Aquaculture.

Key Challenges Faced by Farmers for Saline Aquaculture

- China's Expanding Influence
- Regional Instability E.g. Political turmoil in Bangladesh
- Non-Traditional Threats: Proximity to drug smuggling zones

Measures to tap the potential of Saline Aquaculture

- **Policy Reforms:** Increasing **area limit** from 2 to 5 hectares, a **National Level Committee** to prepare a roadmap for the sustainable development of saline aquaculture in North Indian states.
- Recommendations for establishment of **Integrated Aqua Park** in Sirsa to improve **marketing channels**
- States to leverage **Krishi Vigyan Kendras** to identify new areas for saline aquaculture, & conduct outreach-based research.

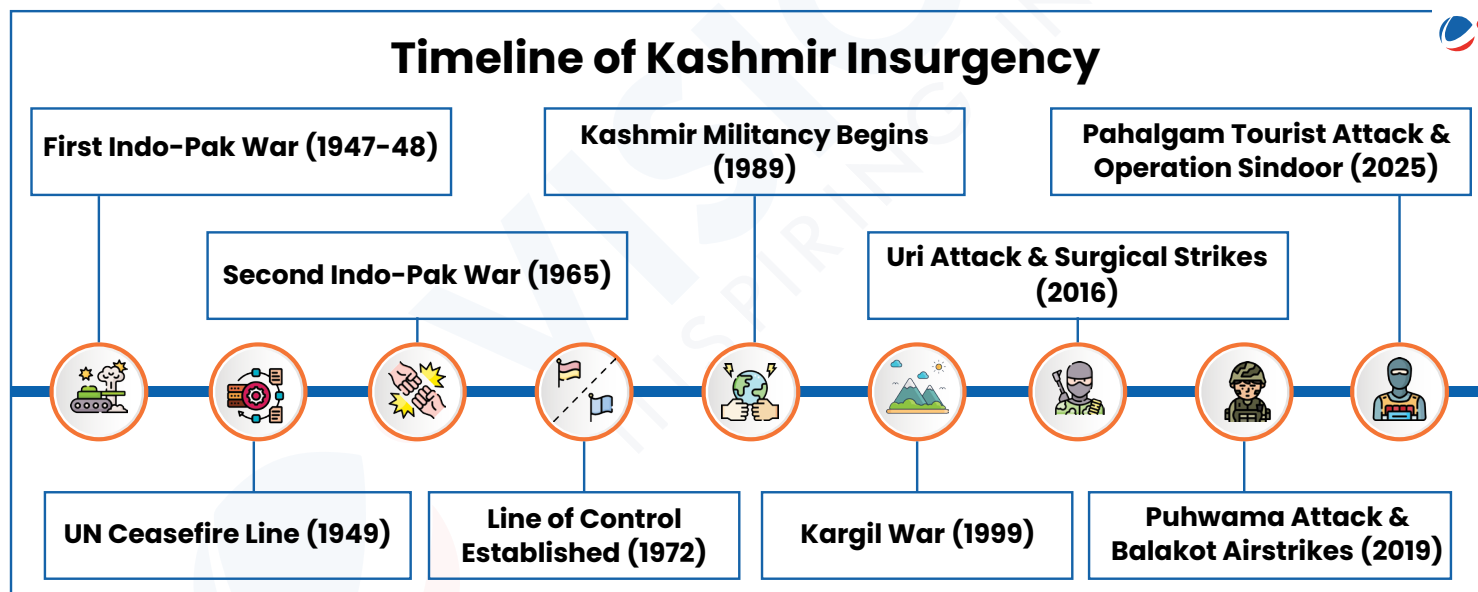# 4.1. Role of Quantum Computing In National Security

Why in the News?

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

More on the News

➲ **India:** Suspended the **Indus Waters Treaty**, closed the **Attari Integrated Check Post,** scrapped the **SAARC Visa Exemption Scheme** for Pakistanis, and halted **visa services for Pakistani nationals.**

➲ **Military Action:** Conducted precision airstrikes under **'Operation Sindoor'** at **9 locations** in **Pakistan** & **POJK**, targeting terror hubs of **LeT, JeM**, and other Pakistan-backed proxies involved in attacks in **J&K and other parts of India**.

Timeline of Kashmir Insurgency

First Indo-Pak War (1947-48)

Kashmir Militancy Begins (1989)

Pahalgam Tourist Attack & Operation Sindoor (2025)

Second Indo-Pak War (1965)

Uri Attack & Surgical Strikes (2016)

UN Ceasefire Line (1949)

Line of Control Established (1972)

Kargil War (1999)

Puhwama Attack & Balakot Airstrikes (2019)

Recent Trends in Kashmir Terrorism:

➲ **Decline in Terrorism:** As per **MHA's 2023-24 report,** terrorist attacks in J&K have steadily decreased since 2019, alongside growth in tourism and infrastructure, boosting stability and prosperity.

➲ **Expert Analysis:** Recent attacks aim to disrupt J&K's **development and incite communal tensions** across India.

Factors behind terrorism in Jammu and Kashmir

➲ **External Factors**
  ➡ **Pakistan's Proxy War:** State-backed support (training, arms, safe havens) to groups like LeT, JeM, HM, and TRF.
  ➡ **International Non-Consensus:** Inconsistent global pressure; China's UNSC vetoes protect Pakistan.
  ➡ **Global Ideological Influence**: Transnational jihadist networks (ISIS, Hamas ties) fuel radicalization.

→ **Porous Borders**: LoC's rugged terrain enables **infiltration of militants and weapons.**
- **Internal Factors**
  → **Radicalization:** Youth are radicalized via online **platforms (Telegram, YouTube) and local networks.**
→ **Political Alienation**: Grievances over AFSPA and perceived lack of representation fuel separatist sentiments.
  → **Economic Challenges:** High unemployment makes **youth high target.**
  → **OGWs' Role:** They sustain militancy via **funding, recruitment, and propaganda.**
  → **Terror Finance**: Separatist groups (Hurriyat, JKLF) **funnel Pakistani Hawala money** to fuel local militancy.

Challenges in tackling terrorism in Jammu and Kashmir

- **Hybrid & Virtual Terrorist Outfits**
  → **Hybrid Terrorists:** Unlisted, self-radicalized individuals conducting attacks while blending into society.
  → **Virtual Terror Groups**: Fronts like **Jammu Kashmir Ghaznavi Force** and **TRF** serve as proxies for LeT.
- **Porous Borders:** Difficult terrain enables **infiltration and smuggling.**
- **Pakistan's information warfare: E.g.,** social media used for **anti-India propaganda.**
- **Intelligence Gaps:** Weak inter-agency coordination (central/state/local) **delays counter-terror responses.**
- **Evolving Technology:** Terrorists **use drones, encrypted apps, and advanced weaponry.**
- **Changing Tactics:** Shift from **large-scale attacks** to **targeted killings** of soft targets like tourists.

Initiatives Taken to tackle terrorism in Jammu and Kashmir

- **Crackdown on Terrorist Groups and their Ecosystem: E.g.,** surgical strikes (2019 Pulwama, Op Sindoor 2025); Operation All-Out (2017); Banning Jamaat-e-Islami (OGW); Rehabilitation through Operation Sadbhavana, etc.
- **Developmental Steps: HIMAYAT (skills)** and UMEED (women's empowerment); Infrastructure projects, e.g., **Chenab Bridge** & **Vande Bharat trains**
- **Diplomatic: Requesting IMF to review Pakistan** aid and FATF to place Pakistan on Grey List; **Using UNSC 1267** Committee to address Pakistan's role in terrorism.
- **Political:** Abrogation of Article 370, delimitation exercise, and local **elections for better representation.**
- **Tackling Cross-Border Militant Infiltration:** Smart border technologies, **e.g.,** laser fencing, drones, etc.

Way Forward

- **Strengthen Intelligence: Boost inter-agency coordination** and deploy **AI-driven analytics**; Augment **HUMINT** (Human Intelligence) to support **TECHINT** (Technological Intelligence).
- **Border Security:** Accelerate smart fencing, etc., along **LoC (per Madhukar Gupta Committee)**; Enhance **inter-agency coordination** for seamless operations.
- **De-radicalization Programs:** Scale up local initiatives **to counter extremist narratives e.g., Education.**
- **Economic Development:** Prioritize job creation and **tourism promotion.**
- **Political Process:** Ensure inclusive governance **through free and fair elections.**
- **International Pressure:** Utilize platforms like **UNSC and FATF to pressure Pakistan.**

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.**

India's Defense Export Equipment

- **Philippines:** Brahmos Supersonic Cruise Missile.
- **Mauritius:** Advanced Light Helicopter (ALH), Dornier Do-228 Aircraft.
- **France:** Software and Electronic Equipment in Defence Sector.
- **Armenia:** Akash Air Defence Missile, Pinaka Multi-Launch Rocket System, Artillery Guns, Swathi Weapon Locating Radars.
- **USA:** Parts of Aircraft and Helicopter.

Initiatives for Improving Defence Exports

- **Innovations for Defence Excellence (iDEX):** Launched in 2018, engages MSMEs, **startups, and academia.**
- **Defence Industrial Corridors (DICs):** Established in Uttar Pradesh and Tamil Nadu.

- **Ease of Doing Business in the Defence Sector:** Simplification of industrial licensing procedure, Simplification of SOP for Export Authorisation.
- **Liberalised FDI Policy:** Liberalized in 2020, **allowing 74% through automatic route** & **higher through government route; Total FDI**: Rs 5,516.16 crore (since 2000).
- **Technology Development Fund (TDF):** DRDO-executed grants for Indian **industries including MSMEs and startups.**
- **SRIJAN Portal**: One-stop online portal for vendors to **access indigenization opportunities.**

Challenges to India's Defence Exports

- **Import reliance for critical components** for defence equipments.
- **Lack of R&D** for advanced technologies, including AI driven systems.
- Competition from established global **players, e.g., US, Russia and France.**
- Bureaucratic hurdles in **procurement and approvals.**

Way Forward

- **Promote export of complete defence systems to markets in** Africa, South-East Asia, and Latin America.
- **Forge partnerships with emerging defence hubs** like Australia, UAE, Saudi Arabia, and South Korea.
- **Expand presence through foreign offices** in key countries.
- Smaller manufacturers should **enhance capabilities to join global supply chains and fulfill offset obligations.**
- Focus on becoming part of global supply chains **for components and sub-systems.**

INDIA'S DEFENCE EXPORTS

₹23,622 Cr Total Exports (2024-25)	64.5% Private Sector Share
₹1,09,997 Cr Cumulative (2015-25)	42.85% DPSU Growth

2029 TARGET
₹50,000 Crore

TOP BUYERS (100+ COUNTRIES)	KEY EXPORTS
US USA	Missiles
FR France	Artillery
AM Armenia	Naval Platforms
	TEJAS Aircraft

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 from **1969–1971**, opened for signature in **1972 and entered into force in 1975.**
- **Membership**: 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.

Key facts about the BWC

- **1st multilateral disarmament treaty** banning an entire category of weapons of mass destruction (WMD).
- **Prohibits development, production, acquisition, transfer, stockpiling and use** of biological weapons; Supplements the **1925 Geneva Protocol (deals with use of biological weapons)**.
- **Has an Implementation Support Unit (ISU)** for the administrative support.
- **5 States Israel**, Chad, Djibouti, Eritrea and Kiribati **have neither signed nor acceded.**

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

- Manufacture, **Use, Import, Export and Storage of Hazardous Microorganisms,** Genetically/Engineered Organisms or Cells Rules, 1989.
- **Weapons of Mass Destruction** and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.
- Special **Chemicals, Organisms, Materials, Equipment** and Technologies (SCOMET).
- **India and France jointly proposed** establishing a database to facilitate assistance under Article VII of BWC.

Challenges related to BWC

➭ **Lack of a Verification Mechanism**: The **dual-use nature of bioscience** makes it difficult to differentiate between peaceful and offensive applications.

➭ **Lack of legally enforceable data collecting provision:** Relies on **politically binding CBMs,** which suffer from low compliance (only >50% submission rate in 2022).

➭ **Limited Institutional support:** Implementation Support Unit (ISU) **is understaffed (just 4 personnel since 2006).**

➭ **Insufficient National Implementation:** India has a NACWC for chemical weapons **but no equivalent centralized body** for the BWC.

Way forward

➭ **Implement Modular-Incremental** Approach for Verification.

➭ **Expand Permanent Institutional Support** in appointment of rotating expert verification group.

➭ Universalize Confidence-Building Measure **Submissions by use AI advances to simplify**.

➭ Address Non-State Actor Threats by Integrating **UN Security Council Resolution 1540.**

4.4. News in Shorts

4.4.1. Vibrant Villages Programme-II (VVP-II)

Cabinet Approval & Overview

➭ **Continuation of VVP-I**, now as a **100% centrally funded** scheme (vs. earlier Centrally Sponsored model).

➭ **Coverage**: Expands to **strategic villages across 17 states/UTs** (excluding northern borders covered under VVP-I).

➭ **Goal**: Boost **livelihoods, infrastructure, and security integration** (2024–2029).

Key Features

➭ **Infrastructure**: Roads, housing, SMART classrooms, all-weather connectivity.

➭ **Livelihoods**: Cooperatives, SHGs, and border-specific income generation.

➭ **Convergence**: Leverages existing welfare schemes.

➭ **Soft Power**: Cultural festivals, tourism promotion, heritage awareness.

➭ **Implementation**: Uses **PM Gati Shakti** for efficiency.

Strategic Importance of Border Populations

➭ **Security**: Locals act as **"eyes and ears"** (e.g., Kargil War hero Tashi Namgyal).

➭ **Territorial Claims**: Settlements reinforce sovereignty (e.g., **India-China 2005 Agreement**).

➭ **Logistics**: Villages aid forces with shelter, labor, and intelligence.

➭ **Precedents**: Builds on past efforts like **Border Area Development Programme (1986)**, Model Villages (2005), and Smart Villages (2015).

4.4.2. I4C

Indian Cyber Crime Coordination Centre (I4C) Notified Under PMLA

Key Update

➭ **Department of Revenue** (Finance Ministry) included **I4C** under **PMLA Section 66**, enabling **information exchange** with **Enforcement Directorate (ED)** and other agencies to combat **cyber-enabled financial crimes**.

About PMLA Section 66

➭ **Allows ED Director** to **share information** with relevant agencies if evidence suggests violations of other laws.

➭ **Information shared** if evidence suggests other laws are violated

I4C Overview

➭ **Launched**: 2020 by **MHA**; became its **attached office** (July 2024).

➭ **Role**: Nodal agency for **cybercrime coordination** among law enforcement.

➭ **Key Units**:
   → **National Cybercrime Reporting Portal (NCRP)**
   → **National Cybercrime Threat Analytics Unit (NCTAU)**
   → **Joint Cyber Crime Coordination Team (JCCT)**

4.4.3. Rafale Marine (M) Fighter Jets

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

➭ For the Indian Navy and deployment on INS Vikrant, **India's first indigenous aircraft carrier**.

➭ Indian Air Force operates **36 Rafale jets acquired earlier.**

4.4.7. Exercises In News

Exercise	Details
Exercise Desert Flag-10	➲ **Indian Air Force participates in this premier multinational air combat exercise hosted by the UAE.**
Operation ATALANTA	➲ **European Union Naval Force (EUNAVFOR)** proposes a joint exercise with the Indian Navy. ➲ **Focus: Maritime security, counter-piracy, anti-narcotics,** and illegal fishing in the Western Indian Ocean and Red Sea regions.
Exercise 'Dustlik'	➲ Annual joint military exercise is conducted alternately between **India and Uzbekistan.**
Exercise Tiger Triumph	➲ **4th edition** of this India-US tri-service exercise **commenced off the Vishakhapatnam coast.** ➲ **Aim:** To enhance interoperability and develop **Standard Operating Procedures** (SOPs) for humanitarian assistance and disaster relief (HADR) operations.
INIOCHOS-25	➲ **Indian Air Force** participates in this annual multinational air exercise hosted by **Greece's Hellenic Air Force.** ➲ **Aim:** It serves as a platform for improving **air combat skills, sharing tactical knowledge,** and strengthening military relations.

ENVIRONMENT
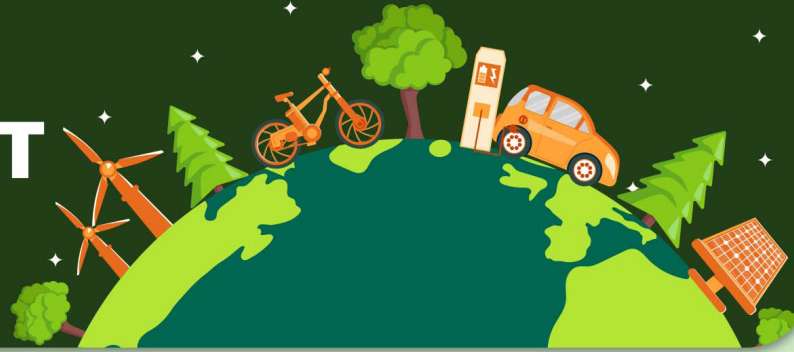
5.1. Eco-centric Approach

Why in the News?

The Supreme Court (SC) recently noted that India pioneered the shift from an **anthropocentric** to **an eco-centric approach** in international jurisprudence.

More on the News

- ⮑ The SC directed Telangana's Wildlife Warden to protect wildlife impacted by the **destruction of 100 acres of Kancha Gachibowli's "forest" area.**
  - ➜ This followed the **Telangana Government's proposal** to auction **400 acres of forest** land near **Hyderabad University for IT parks, sparking student protests.**

About Eco-centric Approach

- ⮑ It prioritizes the **well-being of the entire ecosystem,** valuing nature for its own sake, not just human utility. E.g., **M.C. Mehta vs. Union of India (1986)**
  - ➜ **In contrast,** the anthropocentric approach treats humans as central.
- ⮑ **Aligns with the deep ecology movement** (by Arne Naess), advocating a shift from viewing **nature as merely useful to humans** to recognizing its inherent worth.
- ⮑ **Supported by Interest Theory,** which grants rights to beings **whose well-being holds intrinsic value.**

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 Ethics: **E.g., Ecuador became the first country in the world to recognize Rights of Nature in its Constitution**

Environmental Approaches Comparison

Understanding the fundamental differences between human-centered and nature-centered perspectives

Anthropocentric	Eco-centric
Legal Rights Legal rights are extended **only to humans** or human interests	**Legal Rights** **Nature itself** (eg, Rivers, Forests) can have legal rights.
Ethical Basis Considers human beings at an **End** Kant held that humans have an absolute moral obligation to **treat people as inherently valuable ends in themselves, never as mere means.**	**Ethical Basis** **Egalitarian Approach** all life forms and natural systems have intrinsic value
Policy Approach Environmental protection is **reactive** and human-interest driven.	**Policy Approach** **Pro-active** ecological preservation for its own sake.
Conservation Strategy **Utilitarian conservation** conserve what is useful to humans.	**Conservation Strategy** **Holistic conservation** conserve all biodiversity equally regardless of human utility.
Example Promoting **Ecotourism**-linking conservation with economic activity and human benefit	**Example** **Granting legal personhood** to rivers or forests. Uttarakhand High Court declared Ganga and Yamuna as legal persons with rights

Key Driver/Facilitator to the Eco-Centric Approach

- ⮑ **Constitutional Mandate**: Article 21, Article 48A, Article 51A(g)
- ⮑ **Judicial Activism:** Gave voice to the voiceless (**e.g.,** animals, forests.) **Also,** PILs **by** activists, etc, were instrumental.

- **Evolution of Environmental Jurisprudence:** E.g. Public **Trust Doctrine & Precautionary Principle.**
- **Environmental Degradation and Ecological Crises**: Such as **deforestation and river pollution.**
- **Cultural Ethos:** Traditional **Indian wisdom viewed ecology** as a living being with humans as part of it, not superior.
- **Legislative Measures:** Including **Prevention of Cruelty to Animals Act (1960), Wildlife (Protection) Act (1972).**

Important Judicial Pronouncements related to Eco-centric Approach

- **T.N. Godavarman Thirumulpad vs Union of India & Ors (1996):** Expanded the meaning of 'forest'.
- **WWF-1v. Union of India and others, Supreme Court (2013):** Invoked the 'species best interest standard'.
- **Animal Welfare Board of India v. A. Nagaraja (2014):** SC prioritised the rights of animals over human traditions (**e.g.,** Jallikattu).
- **N.R. Nair v. Union of India (2000):** SC upheld that animals are conscious beings and have the right to live with dignity.

Conclusion

India's judiciary has pioneered an **eco-centric approach that recognizes nature's inherent value, aligning with constitutional principles** of human-environment harmony.

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.**
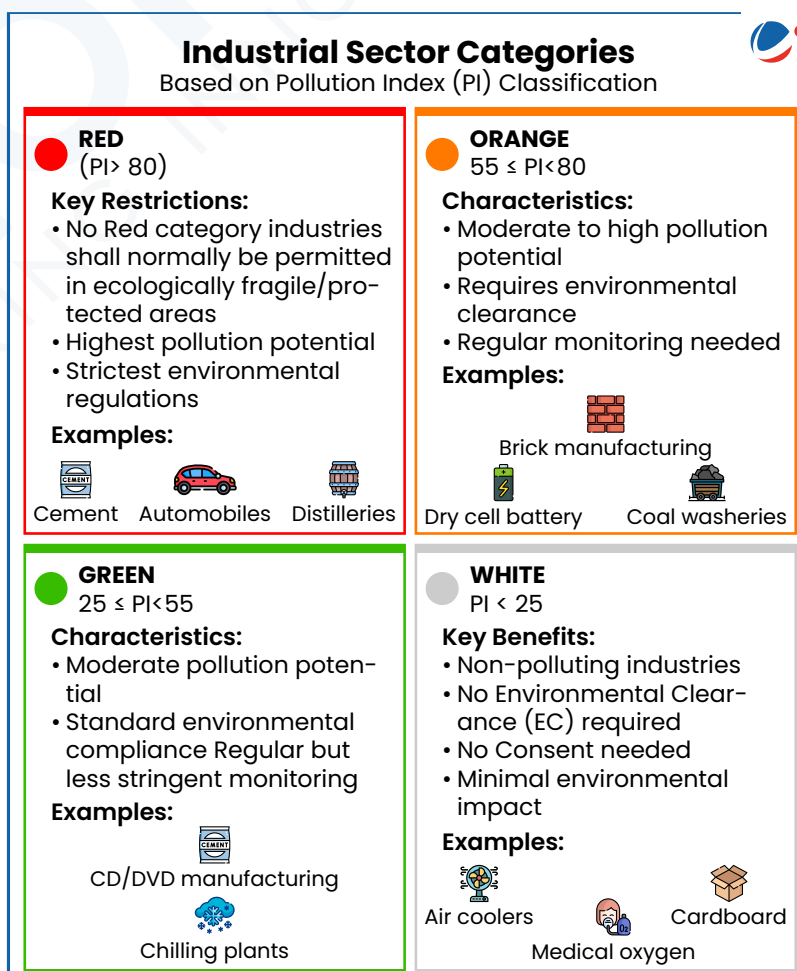
More on the News

- **Revised classification** enhances transparency and Ease of Doing Business.
- **CPCB categorizes 419 sectors**: Red (125), Orange (137), Green (94), White (54), and Blue (9, this category is newly inducted).
- **Methodology** now uses **Pollution Index (PI).**
- **Incentives** for industries excelling in environmental management. **E.g., Consent to Operate (CTO)** for Red Category may be granted for the validity of max. 10 years.

Classification of Industries

- **Background:** Originated in 1989 with **the Doon Valley Notification issued by MoEFCC.** PI-based classification introduced in 2016.
- **Purpose:** Ensure industries establish **consistent with environmental objectives.** The classification is for entire industrial sectors and not for individual units.
- **Usage/Relevance**: Used for location/siting decisions, sector-specific **cluster planning, pollution control, inspection frequency, and promoting cleaner technologies.**
- **Relevance of classification:** Guides industrial location decisions; Aids sector-specific cluster planning; etc.

About Blue Category

- **Covers Essential Environmental Services (ESSs)** managing domestic/industrial waste pollution. E.g., Sewage treatment plants, Municipal waste facilities (landfills).
  - Compressed Biogas Plants (using municipal/agro waste) in **'Blue category'**. Industrial-waste CBGs remain in **'Red category'.**
- **Purpose:** Promote scientific waste management.
- **Key benefit:** CTO validity: 2 years longer than other categories.

Industrial Sector Categories
Based on Pollution Index (PI) Classification

RED (PI> 80)
Key Restrictions:
- No Red category industries shall normally be permitted in ecologically fragile/protected areas
- Highest pollution potential
- Strictest environmental regulations
Examples: Cement, Automobiles, Distilleries

ORANGE 55 ≤ PI<80
Characteristics:
- Moderate to high pollution potential
- Requires environmental clearance
- Regular monitoring needed
Examples: Brick manufacturing, Dry cell battery, Coal washeries

GREEN 25 ≤ PI<55
Characteristics:
- Moderate pollution potential
- Standard environmental compliance Regular but less stringent monitoring
Examples: CD/DVD manufacturing, Chilling plants

WHITE PI < 25
Key Benefits:
- Non-polluting industries
- No Environmental Clearance (EC) required
- No Consent needed
- Minimal environmental impact
Examples: Air coolers, Cardboard, Medical oxygen

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)

- ⮑ Cluster-level enterprises providing locally prepared biological inputs **for soil health, crop growth, and pest management to farmers in defined areas.**
- ⮑ Budget 2023-24 announced setting up **of 10,000 BRCs under NMNF.**

Purposes served by BRCs

- ⮑ **Maintaining and sale of cultures of bio-fertilizers** 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 per BRC (excluding infrastructure costs)
- ⮑ Convergence with other schemes like **Farmer Producer Organisation promotion, National Mission on Edible Oilseeds.**
- ⮑ Bio-Inputs prepared according to **local requirements, land patterns, soil types and crop systems.**
- ⮑ **Operators:** Natural Farming practitioners, FPOs, SHGs, Cooperatives, Krishi Vigyan Kendras (KVKs).

About National Mission on Natural Farming (NMNF)

- ⮑ **Aim:** Promote Natural Farming for safe, nutritious food.
- ⮑ **Type:** Centrally Sponsored Scheme (90:10 for Hilly/NE States, 60:40 for others).
- ⮑ **Tenure**: Till 2025-26
- ⮑ **Administration**: Under Agriculture Ministry with National Steering Committee led by Agriculture Minister.
- ⮑ **Key Targets:** 15,000 clusters in willing Gram Panchayats; reaching 1 crore farmers across 7.5 lakh hectares; 2,000 Model Demonstration Farms; training 30,000 Krishi Sakhis as Community Resource Persons.

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 FunctFional De-extinction?

- ⮑ Unlike true de-extinction, **functional de-extinction focuses on reviving ecological roles and traits of extinct species using gene editing and cloning techniques.**
- ⮑ These organisms are not exact replicas, but are **genetically engineered to resemble extinct species.**
- ⮑ Involves advanced techniques **like CRISPR gene editing, cloning, and genome mapping**.

About Dire Wolf

- ⮑ **Dire wolves (Aenocyon dirus):** Large canines that dominated southern **Canada and US before extinction ~13,000 years ago.**
- ⮑ **Physical Characteristics:** Up to 3.5 feet tall, over **6 feet long, weighing ~68 kg.**
- ⮑ **Comparison with Grey Wolf:** Resembled modern gray wolves but were larger, **with white coats, wider heads, larger teeth, and more powerful builds.**
- ⮑ **Causes of extinction:** Linked to **disappearance of large prey species and human activities**.

How Colossal Biosciences brought Back the Dire Wolf?

Used cloning and gene-editing based on ancient DNA samples:

- **Ancient DNA Extraction**: From 13,000-year-old tooth (Ohio) and 72,000-year-old ear bone (Idaho).
- **Genome Mapping:** Sequenced dire wolf genome and compared with modern gray wolves.
- **CRISPR Gene Editing:** Edited gray wolf genes to include dire wolf gene variants.
- **Cloning & Birth:** Edited DNA implanted into enucleated ova, carried by dog surrogates, producing three pups.
    - Used **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**: **"De-extinct" species may not perfectly replicate extinct species'** roles, potentially disrupting ecological balances.
- **Ethical Considerations:** Concerns about **animal welfare, especially** with significant genetic manipulation.
- **Resource Diversion**: Resources could be better spent on **conserving endangered species.**
- **Lack of Regulation: No clear global ethical or legal** frameworks exist.
- **Significance of Functional De-Extinction:** Ecosystem Restoration, Biodiversity Enhancement, used as conservation tool.

Conclusion

De-extinction breakthroughs **demand balancing scientific innovation with ecological ethics** and responsibility for sustainable conservation.

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 is a sub-scheme of **PMKSY for 2025-2026.**
- PMKSY was launched in 2015-16 to enhance **water access on farms and expand irrigated areas.**

Key Features of M-CADWM

- **Objective**: Modernize irrigation networks to deliver canal/source water to **clustered farm areas.**
- **Infra:** Underground pressurized pipes for micro-**irrigation (up to 1 hectare).**
- **Tech:** SCADA & IoT for precise **water accounting/management.**
- **Potential benefits:**
    - **Boosts Water Use Efficiency (WUE**), crop yield, and farm productivity.
    - **Sustainable farming**: Transfers irrigation management to Water User Societies (WUS) with 5-year support. Links WUS to FPOs for economic viability.
    - **Encourages youth** through modern irrigation adoption.

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), etc.**

5.5.2. Green Municipal Bonds

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

- Issued under Swachh Bharat Mission-Urban, raising ₹150 crore for a **Tertiary Sewage Treatment Plant (TSTP).**
- TSTP ensures **treated water meets highest standards** for industrial reuse.
- Developed **under Public-Private Hybrid Annuity Model (PPP-HAM)** with 40% municipal funding.

Green Municipal Bond (GMB)

- Municipal bonds **are non-convertible debt securities issued by municipal bodies under Article 243W** of Indian Constitution
- Green bonds **specifically raise funds for climate mitigation, adaptation** and environment-friendly projects.

Significance of GMB

- **Sustainable development:** Investors increasingly focus on **Environment, Social and Governance (ESG) factors.**
- **Low cost, long term capital**: Cost-competitive with other **bonds and cheaper than commercial bank loans.**
- **Broaden investor base:** Supplements traditional financing **sources like domestic bank loans.**

Challenges of raising GMB: Poor fiscal health, Lack of internal capacity, inadequate financial discipline etc.

5.5.3. Similipal Tiger Reserve

Odisha notified **Similipal tiger reserve as national park**.

- **845.70 sq km of the 2,750 sq km Reserve** has been notified as National Park which **is Largest National Park in Odisha, surpassing Bhitarkanika.**
- **107th National Park** in India and **second in eastern state.**

About Simlipal Forest

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

What is a National Park?

- Area given **highest protection to conserve wildlife and environment due to ecological**, faunal, floral, geomorphological, or zoological importance.
- Human activity prohibited **except those permitted by Chief Wildlife Warden.**
- Under **Forest Right Act 2006,** certain tribal groups permitted to live inside.
- **Notified by State Governments** under Wildlife Protection Act, 1972
- Boundary alterations require **recommendation from National Board for Wildlife.**

Simplipal Biodiversity

- **Vegetation:** Moist mixed deciduous and tropical semi evergreen forests, Dry deciduous forest, grass etc.
- **Animals:** Tigers, fishing cats, barking and mouse deer.

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:** Located in eastern Madhya Pradesh, spanning **Mandsaur and Nimach districts** in the Nimar region.
- **Type:** Part of Khathiar-**Gir dry deciduous forest.**
- **River**: **Chambal** passes through it.
- **Dam:** Surrounds **Gandhi Sagar dam** backwater.
- **Trees:** Salai, Kardhai, Dhawda, Tendu, Palash etc.
- **Wildlife**: Wild Dogs (Dholes), Chinkara, Leopard, Otter, Mugger crocodile.
- **Historical:** Contains part of the **world famous Chaturbhuj Nala rock** shelters.

5.5.5. International Big Cat Alliance

India And IBCA Signed the Headquarters Agreement

- Agreement allows India to host **the International Big Cat Alliance (IBCA) Headquarters and Secretariat**.
- Helps IBCA **efficiently discharge** its official functions.

More on the Agreement

- Covers **visas, privileges and immunities for IBCA** Secretariat, personnel, and premises.
- India to provide budgetary support of 150 crore rupees to IBCA for corpus creation, infrastructure, **and recurring expenses for 5 years (2023–24 to 2028–29).**

International Big Cat Alliance

- **HQ:** India
- **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.

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5.5.6. Global Geoparks Network (GGN)

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

About GGN:

➲ Non-profit under UNESCO, setting **ethical standards for geoparks.**

Notable New Geoparks added to GGN

➲ **Kanbula (China):** Qinghai-Tibet Plateau site with **ancient volcanoes & Yellow River** landscapes.

➲ **Mt Paektu (NK):** Location of the massive **1000 CE "Millennium Eruption".**

➲ **North Riyadh (Saudi):** Obaitharan Valley with ancient **coral reefs & critical water reserves.**

UGGP Key Facts:

➲ Created in **2015** under UNESCO's Geosciences Programme.

➲ Defined as unified areas with **international geological significance**, managed for conservation, education & sustainability.

➲ Require **4-year reassessments** and mandatory GGN membership.

5.5.7. Net Zero Framework for Global Shipping

The International Maritime Organization (IMO) **approved the world's first net zero framework combining mandatory emissions limits** and GHG pricing across an entire industry sector.

➲ Shipping accounts for almost **3% of global greenhouse gas emissions.**

Key Features:

➲ Added to **MARPOL Annex** VI (ship air pollution rules).

➲ **Target:** Net-zero by ~2050; enforced from 2027 (adopted Oct 2025).

➲ Applies to **ships >5,000 GT** (covers 85% of shipping emissions**).**

➲ **Requires compliance with Global Fuel Standard + Global Economic Measure.**

➲ **Net-Zero Fund:** Collects emissions pricing contributions.

About MARPOL:

➲ 1973 treaty under IMO (UN agency) **to prevent ship pollution.**

➲ Six annexes addressing **different pollution types** (e.g., oil, chemicals).

5.5.8. 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

➲ 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 **reducing air pollution health impacts by 50% by 2040.**

➲ India reaffirmed its commitment to this goal through **actions aligned with the National Clean Air Programme.**

5.5.9. Baku to Belem Roadmap

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

Baku to Belem Roadmap

➲ **UNFCCC COP29 in Baku (Azerbaijan)** established a new global finance goal framework advancing toward **COP30 in Belém (Brazil).**

➲ It aims to scale up climate finance to developing **countries for low-emission, climate-resilient development and NDC implementation.**

5.5.10. Aim4nature Initiative

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

About AIM4NatuRe Initiative

➲ AIM4NatuRe stands for **Accelerating Innovative Monitoring for Nature Restoration.**

➲ **Aims to improve monitoring and reporting of global ecosystem** restoration efforts using **advanced technology, standardized data frameworks, and capacity development** to restore 30% of degraded ecosystems by 2030 (Target 2 of GBF).

➲ Part of FAO's AIM4Forests Programme, **expanding beyond forests for holistic nature restoration monitoring.**

5.5.11. 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 UK Government's 'Darwin Initiative for the Survival of Species' fund.**
- **Partners:** Haryana Forest Department and **Bombay Natural History Society (BNHS).**
- **Aim:** To save **White-backed, Long-billed and Slender-billed vulture species.**
- **Location:** Edge of **Bir Shikargaha Wildlife Sanctuary, Haryana.**
- **Achievement:** Confirmed diclofenac **(non-steroidal anti-inflammatory drug) as main cause of vulture mortality.**

5.5.12. Small Hive Beetle (SHB)

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

About SHB

- **Native:** Sub-Saharan Africa, where it rarely **causes harm, though it creates havoc in other regions.**
- **Characteristics:** Oval-shaped, reddish-brown, 5-7 mm long, **with life cycle progressing through eggs, larva, pupa and adult.**
- **Damage:** Female SHBs enter beehives **through cracks to lay eggs.**
- Hatched larvae feed voraciously on stored pollen, honey, and bee eggs, **while defecating in honeycombs, rendering them unfit for human consumption.**

5.5.13. Aral Sea

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

About Aral Sea

- Once a large saltwater lake in Central Asia.
- Location: Boundary between **Kazakhstan (North) and Uzbekistan (South), fed by Amu Darya and Syr Darya rivers.**
- Cause of Disappearance: Diversion of **Amu Darya and Syr Darya rivers during Soviet era.**
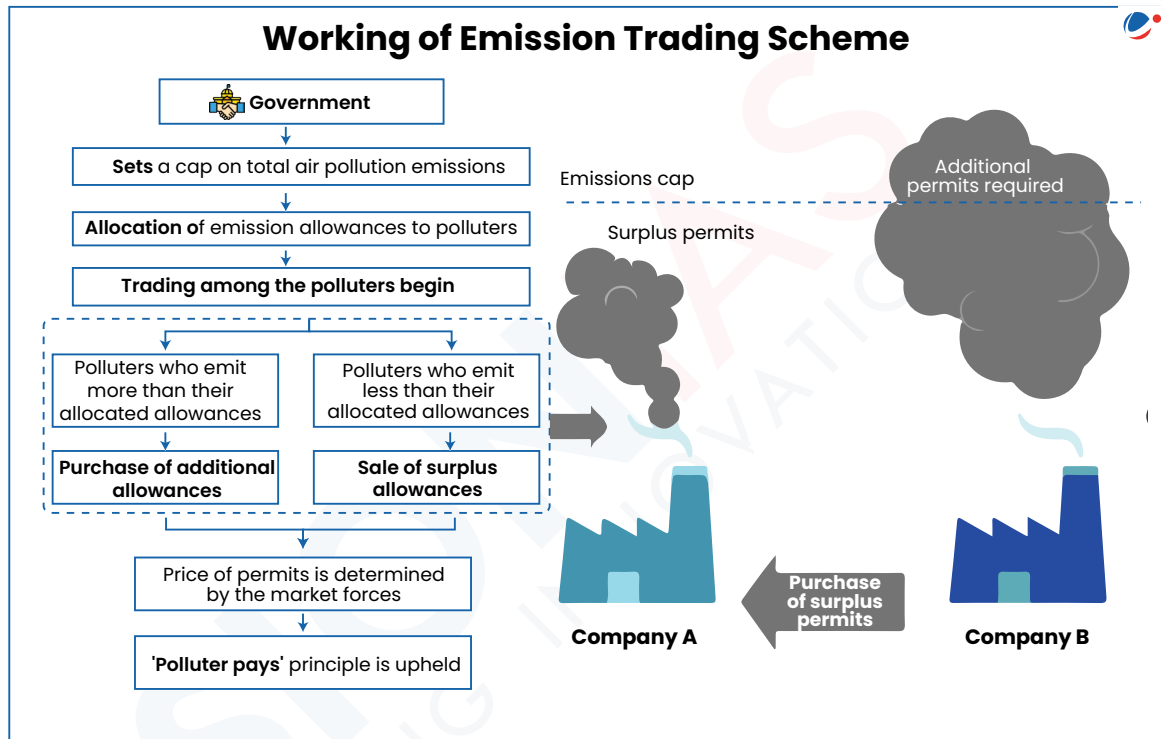 - The dried-up sea became **the hazardous Aralkum Desert, a major global dust source.**
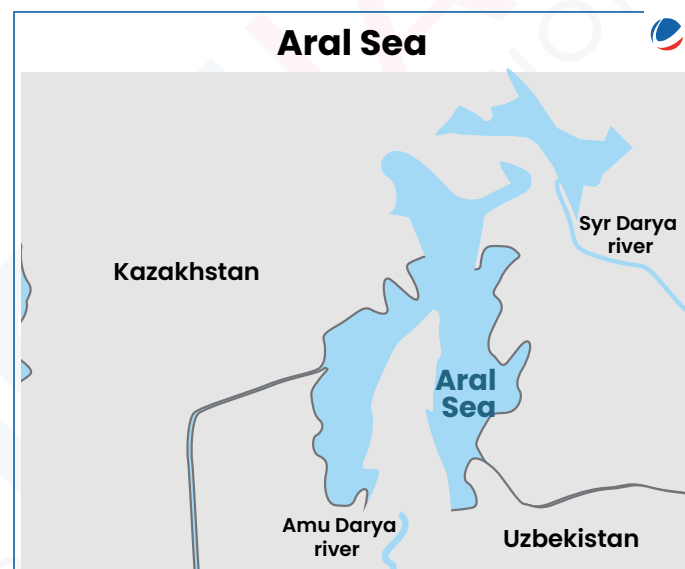
Aral Sea

5.5.14. 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 Emissions Trading Scheme (ETS)

➲ **First-of-its-kind:** World's 1st particulate matter trading market & **India's 1st pollution trading scheme** (inspired by US's sulfur dioxide ETS).

➲ **Goal:** Reduce air pollution via **'polluter pays'** principle.

➲ **Mechanism:** Cap-and-trade system **(used in EU/China),** with permits traded on NeML's platform.

➲ **Compliance:** Industries deposit **'Environmental Damage Compensation',** scaled by size.

Working of Emission Trading Scheme

- Government
  - **Sets** a cap on total air pollution emissions
  - **Allocation of** emission allowances to polluters
  - **Trading among the polluters begin**
    - Polluters who emit more than their allocated allowances → **Purchase of additional allowances**
    - Polluters who emit less than their allocated allowances → **Sale of surplus allowances**
  - Price of permits is determined by the market forces
  - **'Polluter pays'** principle is upheld

Emissions cap — Surplus permits — Additional permits required

Company A ← Purchase of surplus permits ← Company B

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:** 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 Gaps & Boosting Productivity**: AI assigns tasks based on skills, identifies upskilling needs, and enhances overall efficiency.
- **Promoting Equity & Diversity**: Automation reduces bias in hiring and evaluations.
- **Safer Work Environments**: Machines handle hazardous and strenuous tasks.
- **Better Work-Life Balance**: Reduces routine work, easing fatigue and enabling more meaningful roles.
- **Enhanced Customer Service**: Ensures faster, consistent, and more accessible support.

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.
  - **Barriers to Reskilling**: Due to unequal access to digital literacy and training.
  - **Gender Disparities in Employment:** Automation tends to replace low skilled jobs like clerical and secretarial roles where female works have higher representation.
  - **Gig Workers and Job Insecurity:** Automation may encourage short-term contracts and reduce job stability, especially in platform-based gig economies.
- **Mental Health and Well-being**: Algorithmic monitoring and constant connectivity increase stress, reduce autonomy, and harm work-life balance, contributing to digital fatigue.
- **Reduced Human Oversight**: Overreliance on automation may lead to errors and safety risks, especially in critical fields like healthcare, where human judgment remains vital.

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.
    - **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.**

➔ **Foster Equitable Automation:** Bridge the **Gender Automation Gap** through inclusive policies and targeted up-skilling.

⟳ **Strengthen Legal and Policy Frameworks: Update Occupational Safety and Health (OSH) Laws. Also a**lign the law with the **ILO Convention No. 155** (OSH Convention) and **No. 187** (Promotional Framework for OSH)..

⟳ **Promote Regulate Robotics**: Define safety norms for human-robot collaboration.

⟳ **Right to Disconnect**: Safeguard workers from overwork and digital fatigue.

⟳ **Human-Centric Algorithmic Management**

➔ Ensure transparency, human oversight, and worker grievance mechanisms.

➔ Integrate worker feedback to reduce stress and build trust.

⟳ **Raise Awareness**: Promote digital rights and mental health literacy through campaigns.

⟳ **Green Automation**: Encourage environmentally sustainable automation practices.

Conclusion

A collaborative, worker-focused approach can ensure automation enhances safety, equity, and well-being, creating more inclusive and sustainable workplaces.

6.2. News in Shorts

6.2.1. MoSPI Released "Women and Men in India 2024: Selected Indicators And Data"

Key Highlights from Report

⟳ **Sex Ratio at Birth:** Urban areas (910) surpassed rural (907) between 2014–16 and 2018–20.

⟳ **Health:** MMR declined from 122 (2015–17) to 97 (2018–20).

⟳ **Education:** 2017 literacy rates – males: 84.7%, females: 70.3%.

➔ Kerala had the smallest, Rajasthan the largest gender literacy gap.

⟳ **Economic Participation:**

➔ FLPR rose from 23.3% (2017–18) to 41.7% (2023–24).

➔ Women own 39.2% of bank accounts, hold 39.7% of deposits.

➔ Women on boards increased from 26.7% (FY20) to 28.7% (FY25).

⟳ **Political Participation:** Female voter turnout was 67.2% (2019), dipped to 65.8% (2024).

⟳ **Violence Against Women:** 31.9% of married women (18–49) face spousal violence; highest in Karnataka (48.4%), Bihar (42.5%), Manipur (41.6%).

6.2.2. AI Kiran

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

About AI Kiran

⟳ **Objective**: To foster a vibrant **AI community** where **women** can thrive as innovators, changemakers, and leaders.

⟳ **Led by:** Office of the **Principal Scientific Adviser** (PSA) to the GoI.

⟳ **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 th**e 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.

Key Observations

⟳ **Rapid Ageing:** Global population ageing due to lower fertility and longer life expectancy.

➔ **Average age** projected to rise by **11 years (2020–2100)**.

⟳ **Improved Functionality:** Older adults are healthier.

➔ A **70-year-old in 2022** matched the **cognitive ability of a 53-year-old in 2000**.

Economic Implications

⟳ **GDP Growth:** Healthy ageing could add **0.4%** to global GDP growth (2025–2050).

⟳ **Labor Participation:** Health policies boost older workers' ability to stay employed.

Policy Recommendations

⟳ **Integrated Approach:** Pension reforms, retraining, workplace and healthcare adaptations to raise retirement age.

⟳ **Narrow Gaps:** Encourage **female workforce participation** through childcare support and better work-life balance.

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

- **Launched** under the **National Green Hydrogen Mission (NGHM)**
- **Objective**: Certify **Green Hydrogen (GH)** with **transparency**, **traceability**, and **credibility**
- **Ministry**: **Ministry of New and Renewable Energy (MNRE)**
- **Eligible Pathways**: Electrolysis and biomass conversion
- **Verification**: Annual audit by **Accredited Carbon Verification (ACV)** agency
- **Green Certification Criteria**: Emission ≤ **2 kg CO_2 eq/kg H_2** (non-biogenic)
    - Certificates are **non-transferable**, not valid for **carbon credits.**

Other Types of Hydrogen

Colour							
Type	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

What is Green Hydrogen (GH2)?

- Produced via **electrolysis** using **renewable energy** (e.g., solar) or **biomass gasification**
    - **Process**: Splits $H_2O \rightarrow H_2 + O_2$ using green electricity
- **Applications**: **FCEVs** (Fuel Cell Electric Vehicles); **Industry** (Fertilizer, Refinery); **Transport** (Road, Rail), etc.

About National Green Hydrogen Mission (NGHM), 2023

- **Objective**: Make India a **global hub** for **Green Hydrogen** production, use, and export
- **Duration**: **Phase I**: 2022–23 to 2025–26; **Phase II**: 2026–27 to 2029–30.
- **Key components:**
  - **Demand Creation**: For **exports** and **domestic use**
  - **Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme**: Incentives for **electrolyser manufacturing** and GH production.
  - **Pilot Projects**: In **steel**, **mobility**, **shipping**, **biomass**, **hydrogen storage**, etc.
  - **GH Hubs**: Develop regional **Green Hydrogen Hubs**
  - **Regulations & Standards**: Establish a **robust framework**
  - **R&D Programme**.
- **Expected Outcome**: GH production capacity will reach at least 5MMT per annum, Averting 50 MMT per annum of CO_2 emissions, etc.

Conclusion

Unlocking Green Hydrogen's potential in India needs a **multi-pronged approach**—lowering **production costs**, incentivizing **electrolyser manufacturing**, boosting **R&D**, and promoting **PPP models**.
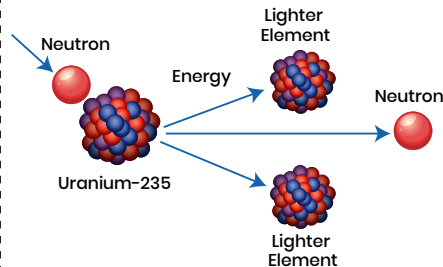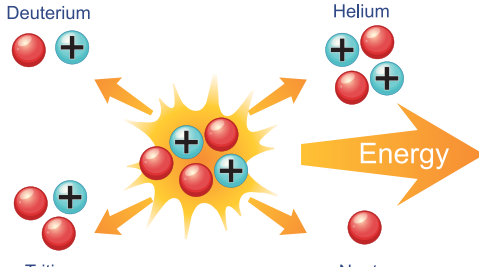
7.2. News in Shorts

7.2.1. Non-Nuclear Hydrogen Bomb

China recently detonated a **non-nuclear hydrogen bomb**

Key Features of the Non-Nuclear Hydrogen Bomb

- **Chemical Reaction**: Explosion via **Magnesium Hydride**, no nuclear materials
- **Mechanism**: Releases **hydrogen**, ignites with air to create **self-sustaining combustion**
- **Damage Scale**: Generates only about 40% of Trinitrotoluene's blast force, but causes **higher thermal damage**, melts **aluminium alloys**
- **Ignition & Radiation**: Needs **low ignition energy**, emits **no radiation**

Atomic Vs Hydrogen Bombs

Parameters	Atomic Bombs	Hydrogen Bombs (Thermonuclear Bombs)
Type of Reaction	**Nuclear Fission**	**Nuclear Fusion**
Process	○ **Splitting of nuclei** of heavy atoms into smaller, lighter nuclei releasing **excess energy.** ○ Achieves fission either spontaneously or through the use of **neutrons.**	○ **Fusing of two light** elements into a heavier one releasing energy. ○ Generates more energy than atomic Bombs.
Fuel Used	**Uranium-235 and Plutonium-239**	**Deuterium, and Tritium (Hydrogen isotopes)**
Reaction		

7.2.2. Jevons Paradox

Microsoft CEO referred to it amid rising **AI adoption**

About Jevons Paradox

- **Concept**: Greater efficiency in resource use often leads to **higher overall demand**
- **Origin**: Proposed by **William Stanley Jevons (1865)**—more efficient steam engines led to **more coal use**, not less
- **AI Context**: As **AI becomes cheaper and powerful**, its **usage will rise**, not fall

7.2.3. Tensor Processing Unit

Google launched its **7th-gen TPU – Ironwood**, optimized for **AI performance**

About TPU

- Developed by **Google (2015)**; a type of **Specialised processor or Application-Specific Integrated Circuit (ASIC)** for **machine learning.**
- Handles **tensor operations** (multi-dimensional arrays in ML models).
- **Advantages of TPUs:**
    - **AI-Optimized**: Outperforms **CPU/GPU** in AI tasks
    - **Faster Training**: Trains **complex neural nets** in **hours**

7.2.4. Mission Fram2

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

- The experiment to be carried by it includes **first X-ray in space** and **mushroom cultivation in microgravity**.
- It is first human spaceflight to **cruise over Earth's Polar Regions**

About Earth's polar orbit

- **Definition**: Satellite passes over **North & South Poles**; up to **10° deviation** allowed
- **Altitude**: Type of **Low Earth Orbit (200–1000 km)**
- **Significance**: Enables **global observation**; ideal for **weather, mapping, spy satellites**
- **Challenge**: Requires **more fuel** as rockets can't use **Earth's rotation** for lift-off

Satellite Orbit	Application	Key Details
Low Earth orbit (LEO)	➲ Satellite imaging, communication, Earth observation, navigation and scientific research ➲ **E.g.,** RISAT-2B	➲ **Height:** Under 2000 km ➲ International Space Station (ISS) is placed in this orbit only.
Sun-synchronous orbit (SSO)	➲ Studying land-use changes, ice melting, and weather ➲ **E.g.,** HysIS for earth observation	➲ **Height:** 600 to 800 km ➲ Particular kind of polar orbit in which satellites are in sync with Sun.
Medium Earth orbit (MEO)	➲ Navigation satellites and telephone communications ➲ **E.g.,** European Galileo system	➲ **Height:** 2,000 to 36,000 km ➲ Satellites in MEO do not need to follow specific paths around Earth
Geostationary orbit (GEO)	➲ Telecommunication, weather satellites, GPS etc. ➲ **E.g.,** Indian National Satellite System (INSAT)	➲ **Height:** 35,786 km ➲ Fly above Earth's equator, moving from west to east, exactly matching Earth's rotation.

7.2.5. Aryabhata Satellite

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

About Aryabhata Satellite

- **India's first satellite**, built by **ISRO**
- **Launched: 1975** by **Soviet Kosmos-3M** from **Volgograd (Russia)**
- **Orbit**: Low Earth Orbit
- **Purpose**: Experiments in **X-ray astronomy, aeronomics, solar physics**
- **Named after**: Ancient Indian **mathematician & astronomer Aryabhata**

7.2.6. Desalination Technologies

IIT Bombay scientists developed **lotus leaf-like solar evaporators** using new **hydrophobic Graphene-based material** for **saltwater treatment**.

- ⟳ It enables efficient **water desalination**; potential solution for **global freshwater crisis**
- ⟳ Desalination Technologies and Processes

Thermal Technology

- ⟳ **Concept**: Heats **saline water**, collects **condensed vapor** for pure water
- ⟳ **Usage**: Mainly for **seawater**
- ⟳ **E.g.,** Low Temperature Thermal Desalination (LTTD) plants in Lakshadweep (Kavaratti, Minicoy, Agatti)

Membrane Technology

- ⟳ **Concept**: Filters **brackish water** using **semi-permeable membranes**
- ⟳ **Usage**: Brackish water desalination

- ⟳ **Method used**: Electrodialysis/Electrodialysis Reversal (ED/EDR) and Reverse Osmosis (RO)
- ⟳ **E.g.,** Nemmeli Seawater Desalination Plant, Tamil Nadu – largest in South Asia.

7.2.7. Batechomon

India's first automated bat monitoring system, developed by **IIHS, Bengaluru**

About BatEchoMon - Bat Echolocation Monitoring

- ⟳ An **autonomous system** capable of **detecting and analysing bat calls** in real-time.
- ⟳ It uses technologies like convolutional neural network algorithms to detect and identify bat species via echolocation calls.
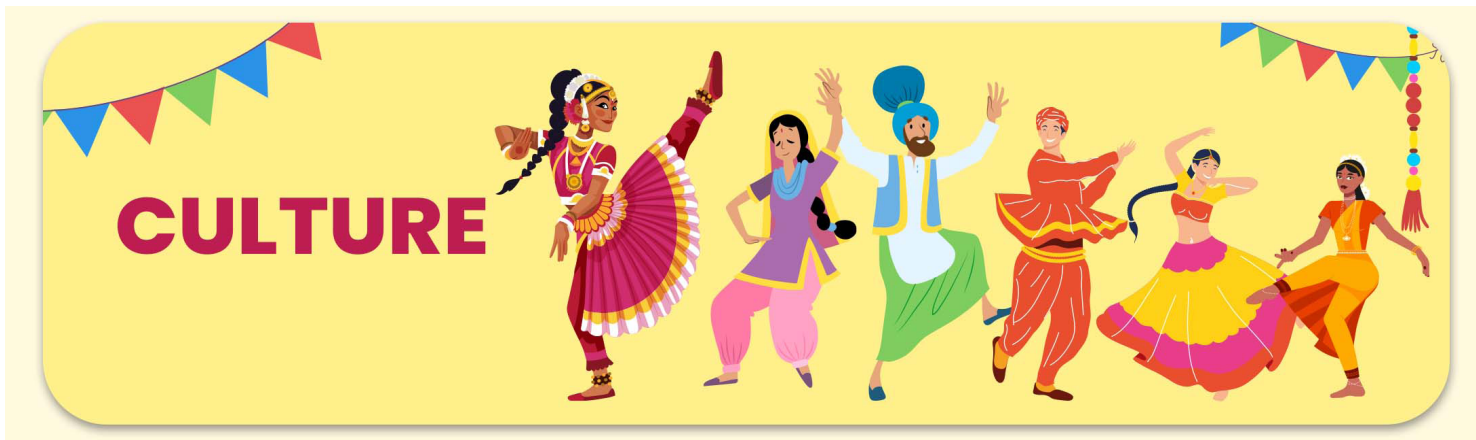
8.1. Manuscripts of Bhagavad Gita and Natyashastra

Why in the News?

UNESCO added the Bhagavad-Gita and Natyashastra Manuscript Collections to its Memory of the World Register.

About UNESCO Memory of the World (MoW) Programme, 1992.

- **Objectives:** Facilitating preservation (especially in disaster/conflict areas), universal access, and global awareness of documentary heritage's significance.
- **The International Advisory Committee (IAC):** UNESCO's main advisory body for the program comprises 14 members appointed by the Director-General.
- **Current Status:** Since 1995, the International Register has 570 inscriptions, with 74 new items.
- In addition, **4 regional registers** and **National "Memory of the World" Committees**.

About Bhagavad-Gita

- By **Sage Vyas, 700 verses in 18 chapters,** within **Bhīsmaparva** (adhyāya 23-40) of **Mahabharata**.
- It is a **central text** synthesizing **Vedic, Buddhist, Jain and Cārvāka** thought.
- It's a dialogue between **Krisna and Arjuna** before war, urging selfless action (niskama karma) and free Arjuna of dejection (visāda).
- The Gita proposes Karma, Jnana, and Bhakti as spiritual paths.
- Contains the idea of Bhakti, inspiring Shankaradeva's Vaishnavism in Assam.

About Natyashastra (Science of Dramaturgy)

- By **Bharatamuni** of **2nd century B.C.**
- **Epitome of Nātyaveda** (performing art in 36,000 verses, Gāndharvaveda).
- Natyotpatti, story describes its creation by extracting text (Rigveda), music (Samaveda), performance (Yajurveda), and emotions (Atharvaveda), making it "Fifth Veda.
- It **comprehensivively** defines **nātya, abhinaya, rasa, bhāva, sangīta,** etc.
- To create Rasa through detailed instructions for stage personnel.
- **First text** available on **classification of India instruments**.

Other Important Indian Entries in UNESCO Memory of the World Register:

- **2023:** 1st Meeting of Non-Aligned Movement Archives and Abhinavagupta's work (940-1015 CE)
- **2017:** Maitreyayvarakarana & Gilgit Manuscript.
- **2013:** Shāntinātha Charitra.
- **2011:** Laghukālacakratantrarājatikā (Vimalaprabhā); Tarikh-E-Khandan-E-Timuriyah.
- **2007:** Rigveda.
- **2005:** Saiva Manuscript in Pondicherry.
- **2003:** Archives of the Dutch East India Company.
- **1997:** The I.A.S. Tamil Medical Manuscript Collection.

8.2. Agriculture in Indus Valley Civilization

Why in the News?

Revised age of Mehrgarh, South Asia's oldest Neolithic farming settlement in Pakistan, from 8000 BCE to 5200 BCE.

More on the News

- Previously used burnt wood.
- Now carbon from enamel, more accurate.
- Start of agriculture timeline pushed forward in IVC.

Agriculture in IVC: Hunter-gatherer's seasonal movement transitioned to settled agriculture with animal domestication. Excavations reveal evidence of this through granaries, pottery, figurines, and artifacts.

- **Crops Cultivated:**
  - **Wheat (Harappa, Mohenjo-Daro) and barley (Shortugai)**: Rabi crops
  - **Mustard, sesamum, cotton, dates, and leguminous plants**: kharif crops
  - Rice evidence limited to Gujarat (Lothal, Rangpur)
  - **Pulses** like Green, black and horse gram and peas grown
  - Brassicas (Chanhu-daro, Surkotada) were used for oil, feed or medicine.
  - IVC world's first cotton (**Sindhu and Sindon**) producer (Mohenjo-Daro finds cloth).
  - **Fruits** like Jujube (Mehrgarh), dates, Walnuts and Peepal
- **Agricultural Techniques and Tools:**
  - **Plough:** Harappans learned plough technology from **Sumerians** (**Wooden plough,** terracotta model)
  - **Wheeled bullock carts** (bronze models at Harappa, Chanhu-daro; cart-ruts at Harappa) transported goods. Animal power and wheel technology.
  - Excavations at Kalibangan revealed **furrowed field with grid pattern, mixed cropping**
  - **Saddle-Quern:** For grinding grains
  - **Crop Protection** by Terracotta sling balls (Harappan)
  - **Land and Irrigation Practices:** Fields were near rivers, using seasonal flooding for irrigation. Rabi crops were post-flood, kharif with flood onset. Advanced irrigation (gabarbands, canals, wells) enabled year-round farming.

Conclusion: IVC thrived for centuries because of its strong agricultural foundation. Their farming skills supported advanced cities, beautiful art, and wide-reaching trade networks.


IVC's Major Agricultural Sites
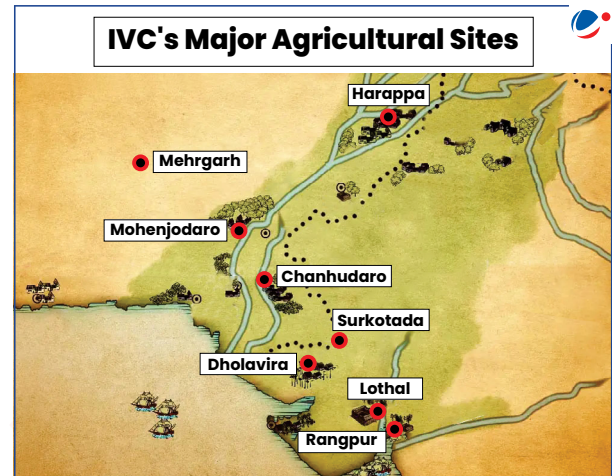
8.3. Vaikom Satyagraha

Why in the News?

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

About Vaikom Satyagrah

- It was **non-violent civil rights movement** in Travancore, Kerala **against Hindu caste discrimination,** especially untouchablility.
- Protested prohibition on **avarnas from using public roads** surrounding Shiva temple at Vaikom.
- **The Satyagraha**: Three volunteers daily on road, in khadi. **Govinda Panikkar, a Nair, Bahuleyan, an Ezhava and Kunjappu, a Pulaya.**
  - Used peaceful protest methods: blocking roads, quiet demonstrations, and holding gatherings.
  - Satyagraha Ashram housed volunteers of all castes, gaining national support.
- Withdrawn after talks between Gandhi and W.H. Pitt, then police commissioner of Travancore.

Background of Vaikom Satyagraha
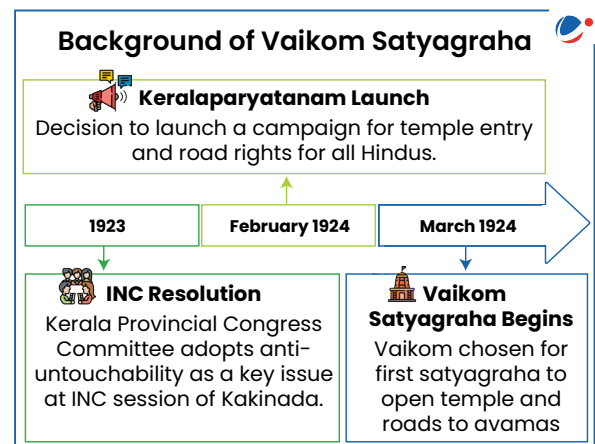
Key Leadership:

- ⮂ Issue 1st rose **by T K Madhavan (Ezhava leader)** in editorial in his paper, **Deshabhimani, 1917.**
  - ➡ This led to formation of **Anti-Untouchability Committee (AUC)** in 1924, along with **KP Kesava Menon and K Kelappan (Kerala Gandhi).**
  - ➡ These three, **pioneers** of this movement.
- ⮂ George Joseph and E. V. Ramasamy Naicker **(Periyar or Vaikom Veerar)** lead the satyagraha.
- ⮂ **Gandhi's** 1925 visit to Vaikom and debated Nambudiri priest, emphasizing the fight against untouchability as critical as Swaraj.
- ⮂ **Women participants**: Nagammai (wife of Periyar), S.R. Kannamma and Bhagyam Stanumalaya Perumal, Kayyalakkal Narayani (wife of T.K.Madhavan)
- ⮂ **Supporters:** C. Rajagopalchari, Sree Narayana Guru, Chatampi Swamikal etc

Challenges faced by Satyagrahis

- ⮂ **Orthodox Resistance**: Upper-caste Hindus and temple authorities resisted,
- ⮂ **Funding and Morale:** Frequent **arrests and fund shortages.**
- ⮂ **Temporary rift** between Gandhi and Narayana Guru over Satyagraha's methods
- ⮂ **Flood**: Satyagrahis protest in waist-deep water.

Significance of Vaikom satyagraha

- ⮂ **Partial Success:** Three roads **opened to all,** 4th only for Brahmins
- ⮂ **Enacted Temple Entry Act, 1936 allowing** access to all in temples
- ⮂ Nationally Significant, **Ambedkar** hailed it as crucial for untouchables, raising awareness.
- ⮂ It fostered **Communal Harmony** and demonstrated people's solidarity.
- ⮂ **Gandhian Principles:** Proved **Satyagraha's effectiveness as non-violent tool** for social reform.

8.4. Personality In Focus: Sir Chettur Sankaran Nair (1857-1934)

Why in the News?

PM hailed Sir Nair, lawyer/judge/statesman, for his role in India's freedom struggle. He fought legal battle against the British, especially Michael O'Dwyer, for 1919 Jallianwala Bagh massacre.

Background and Life

- ⮂ **Birth:** Palakkad, Kerala, 1857
- ⮂ **Education:** Studied Arts in Presidency College, Madras, 1877 and Law in Madras Law College, 1879.
- ⮂ **Career**
  - ➡ Youngest **President of the Indian National Congress** (Amraoti, 1897)
  - ➡ **Member of the Madras Legislative Council**
  - ➡ **Advocate-General** to the Government
  - ➡ **Permanent Judge** at Madras High Court
  - ➡ **Viceroy's Executive Council** member (1915), holding Education portfolio
  - ➡ **Councillor to the Secretary of State for India** in London (1920–21).
  - ➡ **Indian Council of State** member (from 1925).
  - ➡ **President of 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:**
  - ➡ **Minutes of Dissent** in the **Despatches on Indian Constitutional Reforms** (1919)
  - ➡ **Gandhi and Anarchy** (1922)
  - ➡ Founded **Madras Review** and the **Madras Law Journal**
- ⮂ **Death: 1934** in **Madras.**

Key Contributions

- ➲ **Landmark Judgment**: Budasna V. Fatima (1914), he upheld **conversion to Hinduism** and ruled such converts not outcasts.
- ➲ **Justice for Jallianwala Bagh**: Clear stand against Michael O'Dwyer's role in 1919 massacre.
- ➲ **Social Reforms**: Condemned inequality as racial inferiority and **national abasement.**
- ➲ **National Vision**: Earlier support for **Dominion Status** but later **complete independence**
- ➲ **Liberal and Moderate Politics**: Criticized Gandhi Movements; supported peaceful constitutional reform and States linguistic reorganization
- ➲ **Stood for Women's Rights**: Participated in 1920 Indian deputation to **Southborough Committee** with Herabai Tata and Mithan Lam for **female suffrage** in India.

Key Values

- ➲ **Courage**: Resigned from Viceroy's Council over Jallianwala Bagh.
- ➲ **Righteousness**: Refused apology in defamation case.
- ➲ **Patriotism**: Nationalist who admired British democratic institutions yet exposed its harmful economic effects.
- ➲ **Commitment**: Resigned politics after Dominion Status announcement by Irwin.
- ➲ **Visionary**: Supported inter-caste/religious marriages early.

8.5. News in Shorts

8.5.1. Banarsi Shehnai And Tabla

Geographical Indication (GI) certificates awarded

Banarasi Shehnai

- ➲ Indian **wind instrument**
- ➲ Associated with **temple music**
- ➲ Considered auspicious to play Shehnai in **weddings.**
- ➲ **Global recognition** through **Ustad Bismillah Khan.**

Banarasi Tabla

- ➲ Benares tabla gharana eveloped by **Pandit Ram Sahai .**
- ➲ One of the six principal **tabla gharanas in Indian classical music.**
- ➲ Personality associated: **Padma Vibhushan Pandit Kishan Maharaj**

8.5.2. Kannadippaya Tribal Craft

First tribal handicraft from Kerala to receive GI tag

- ➲ Also called **"mirror mat"** due to its unique reflective pattern.
- ➲ Made from soft inner layers of **reed bamboo**
- ➲ **Uniqueness**: providing warmth during winter and cooling effect in summer.
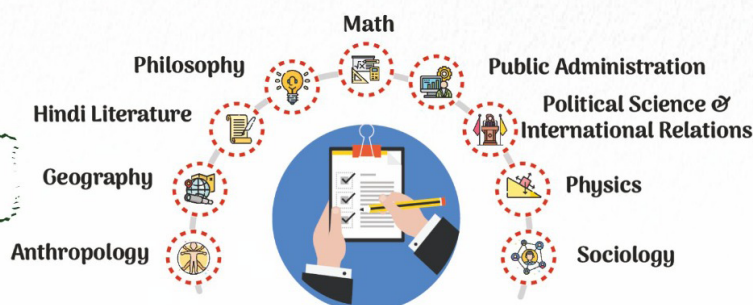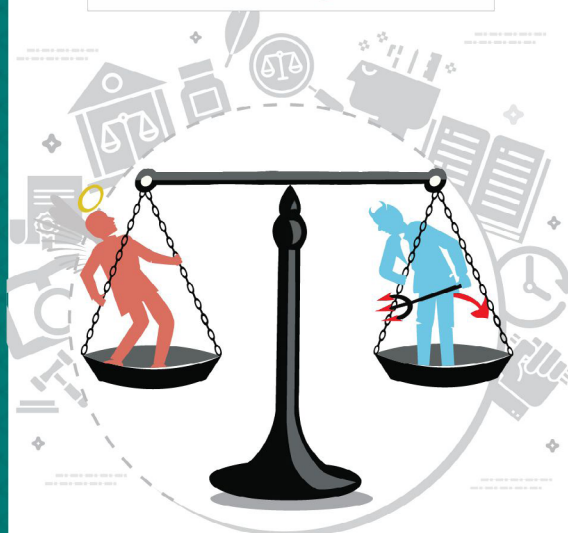
8.5.3. Harvest Festivals

- ➲ They mark **1st day of New Year** and **thanksgiving for abundant harvest** at the coming of **spring.**

Traditional harvest festivals in India

- ➲ **Baisakhi (Punjab)**: Marks beginning of harvesting of Rabi crops. **Bhangra and Gidda** dances performed.
- ➲ **Vishu (Kerala and Tamil Nadu)**: Marks traditional **spring equinox** when day and night are equal.
- ➲ **Poila Boishakh (West Bengal)**: **Traders** begin **new financial year** by opening fresh account books, called **Haal Khaata.**
- ➲ **Others**: Bohag 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

- ➲ Presented by President of India
- ➲ Among the **highest civilian honours**
- ➲ **Announced annually** on the eve of **Republic Day**.
- ➲ **Three categories:**
  - ➡ **Padma Vibhushan:** Exceptional and distinguished service
  - ➡ **Padma Bhushan:** Distinguished service of a higher order
  - ➡ **Padma Shri:** Distinguished service
- ➲ Recognizes achievements in all fields where public services are involved.
- ➲ **History and Suspension:** Instituted in 1954; not awarded during **1978–79** and **1993–97.**
- ➲ **Selection Process:**
  - ➡ **Padma Awards Committee**, constituted by PM every year gives recommendations.
  - ➡ Public nominations allowed, including self-nominations.
- ➲ **Not a title:** Cannot be used as a **prefix or suffix** to the awardee's name.

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ETHICS

9.1. Social Media Influencer and Consumer Behaviour

Introduction

The **digital age** has reshaped how people form **identities** and make **choices**, with platforms like **Instagram** and **Facebook** turning casual content into tools of **aspiration** and **consumerism**. India's **influencer marketing industry**, set to reach ₹3,375 **crore by 2026** (E&Y), shows the rising power of **digital creators**.

Positive Role Played by Social Media Influencer to influence consumer behavior

- **Promoting Social Change**: Raised awareness on **mental health**, **body positivity**, and **women's rights**. E.g., **#MeToo India** exposed workplace harassment
- **Conscious Consumerism**: Rise of **"de-influencing"** promotes **mindful spending.**
- **Inclusivity & Diversity**: Challenges **gender norms**, gives voice to **marginalized groups.**
- **Access to Information**: Used to spread **government updates**, **career tips**, and **public schemes.**

Ethical Issues in Influencer Culture

- **Mindless Consumption**: Promotes **materialism**, contradicts **Gandhian ethics.**
- **Psychological Manipulation**: Triggers **FOMO** (fear of missing out), **social comparison**, encourages **impulse buying**
- **Lack of Accountability**: No regulatory checks, **leading to consumer misinformation and fraud.**
- **Dishonesty**: E.g. Plagiarizing content or failing to credit creators disrespects intellectual

Psychology behind Influencer-Driven Consumption

Turn Desire Into Need | **Trust over Traditional Ads** | **Identity through Products**

- **Privacy Violations**: Mishandling **user data** without safeguards.
- **Mental Health Harm**: Idealized lives promote **anxiety**, **low self-worth**, affecting **collective well-being.**

India's Regulatory Framework for Influencer Accountability

- **Central Consumer Protection Authority (CCPA)**: Regulates **consumer rights**, **misleading ads**, and **unfair trade practices**
- **Securities and Exchange Board of India (SEBI)**: Banned partnerships between **regulated financial firms** and

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.

unregistered influencers
- ➲ **Advertising Standards Council of India (ASCI)**: Issued guidelines mandating **clear labeling** of **paid promotions**
- ➲ **Department of Consumer Affairs**: Released **'Endorsement Know-hows'** for ethical promotions
- ➲ **India Influencer Governing Council (IIGC):** A **Self-regulatory body**. It introduced **Code of Standards** and **weekly influencer ratings**

Conclusion

To build a transparent and trustworthy digital ecosystem, it is essential to enforce clear endorsement rules, integrate media literacy in education, and encourage brands to prioritize credibility over popularity.

9.2. Ethical Dimensions of Body Shaming

Introduction

Body shaming involves **criticizing individuals based on their physical appearance** and can affect anyone. In a commercialized beauty culture, body image is often misused—e.g., a **Thai café offering discounts to thin customers.**

Socio-Cultural Factors Driving Body Image Shaming

- ➲ **Unrealistic Beauty Standards**: Media and ads promote **fair skin** and **slim bodies**, leading to **disordered eating.**
- ➲ **Social Media Pressure**: Filters and edits create **perfect body illusions.**
  - ➡ E.g., **Kerala teen's death** after extreme fasting influenced by online trends
- ➲ **Cultural & Family Bias**: Women judged by looks; men by **height/muscles.**
  - ➡ E.g., pressure to **lose weight/fairness** for **marriage prospects**
- ➲ **Peer Conditioning**: Early **teasing and bullying** normalize appearance-based judgment.

Ethical Frameworks and Violations

- ➲ **Kantian Ethics**: Body shaming **violates human dignity**, treats people as tool.
- ➲ **Utilitarianism**: Causes **long-term harm**, outweighs any short-term benefits.
- ➲ **Virtue Ethics**: Encourages **vanity and exclusion**, not **compassion or inclusivity.**
- ➲ **Justice as Fairness (Rawls)**: Discrimination by body type **undermines fairness and equality**.

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, etc.
Businesses/Marketers	Ethical advertising, long-term brand reputation over harmful short-term gains, etc.
Health Professionals	Provide support for body image issues, eating disorders, and psychological impacts
Government	Regulate harmful content, promote mental health, ensure ethical advertising standards

Conclusion

Ending body shaming needs **collective action** to shift focus from **appearance to acceptance,** fostering a culture of **respect, dignity, and inclusivity.**

9.3. Ethics of Capital Punishment

Introduction

Historically penalty/capital punishment has been used to deter heinous crimes. Since the mid-20th century ~170 countries have abolished or stopped it. **Amnesty International's 2024 report** notes a **32% rise in executions**, especially in **China, Iran, Saudi Arabia, and Singapore etc.**, making capital punishment a highly contentious issue in modern criminal justice and ethics.

Capital Punishment and the Philosophy behind it?

- **Definition**: Legal **execution of an offender** after conviction
- **Philosophy**: Based on **retributive justice**—punishment must match the **severity of the crime.**

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

Evolution of death penalty in India

- **Ancient India**
  - Death penalty existed in various forms under Hindu Laws, guided by texts like **Manusmriti** and **Arthashastra**.
- **Medieval India**
  - **Mughal rule**: Death penalty under **Sharia** for **rebellion, murder,** and **theft.**
  - **Hindu kingdoms**: Continued **customary laws** with regional variation
- **Modern India**
  - **Colonial Period**: IPC (1860) formalized **death penalty** for **murder, treason, dacoity with murder**.
  - **Post-Independence**: Continued under **IPC** for violent crimes; protected by **Article 21** ensuring **due process.**

Arguments for the death penalty

- **Deterrence**: Based on **utilitarian ethics (Consequentialist Ethics)**—prevents future crimes and protects society.
- **Retributive Justice**: Punishment should match the **severity of the crime** ("eye for an eye").
- **Prevention of Re-offending**: Executed offenders cannot commit further crimes.
- **Closure for Victims**: Offers **emotional relief** and **vindication** to victims' families.
- **Financial Burden**: Avoids long-term cost of maintaining **high-risk prisoners.**

Arguments against the death penalty

- **Human Rights Violation**: **Deontological Ethics (Kantian Perspective)** opposes taking life, regardless of outcome.
- **Irreversible Errors**: Risk of **wrongful conviction** with no remedy after execution.
- **Lack of Deterrence**: Studies show **no proven advantage** over life imprisonment.
- **Counterproductive Outcomes**: In some cases, criminals kill victims to avoid testimony and **evade death sentence.**

Conclusion

Since **Universal Declaration of Human Rights (UNDHR) (1948)**, global momentum has favored **abolition**, yet death penalty persists amid **unfair trials** and use for **non-violent crimes**. A shift to **humane, evidence-based alternatives** is vital to uphold **justice and respect for life**.

GOVERNMENT SCHEMES

10.1. PM SHRI Schools (PM ScHools for Rising India)

Why in the News?

Some states have opposed the implementation of PM SHRI School Scheme.

Features

- ➲ **Ministry:** Ministry of Education
- ➲ **Type:** Centrally Sponsored Scheme
- ➲ **Beneficiaries:** Direct benefit to over 20 Lakh students
- ➲ **Tenure:** 5 years (2022-23 to 2026-27).
- ➲ **Objectives:** Establish over 14,500 national model schools.
  - ➡ Equitable, inclusive, and joyful learning, developing well-rounded individuals.
- ➲ **Selection Method of Schools:** Transparent challenge mode. 3 stages:
  - ➡ **MoU Signing:** State/UTs with Centre
  - ➡ **Eligibility Pool:** Eligible schools identified based on minimum benchmark
  - ➡ **Challenge method:** for fulfilling certain criteria
- ➲ **Implementation Strategy:** Implemented via existing Samagra Shiksha, KVS, and NVS structures.
- ➲ **Green Schools:** Solar panels, water conservation, waste management, and being plastic-free.
- ➲ **Enhanced Infrastructure:** Smart classrooms, digital libraries, vocational and science labs, playgrounds, and grade-specific furniture/learning tools like Jadui Pitara.
- ➲ **Skill Development:** Integrates vocational training, internships, and entrepreneurship, with local industries and Sector Skill Councils.
- ➲ **Mentoring and Leadership:** Mentor nearby schools to spread quality education, creating ripple effect.
- ➲ **Inclusive Education:** Safe infrastructure for girls and Children with special needs, and promotes mother tongue as the medium of instruction.
- ➲ **Monitoring and Quality Assurance:** Regular evaluations using School Quality Assessment Framework and schools are geo-tagged for monitoring.
- ➲ **Convergence and Community Participation:** Supports infrastructure and resource pooling.
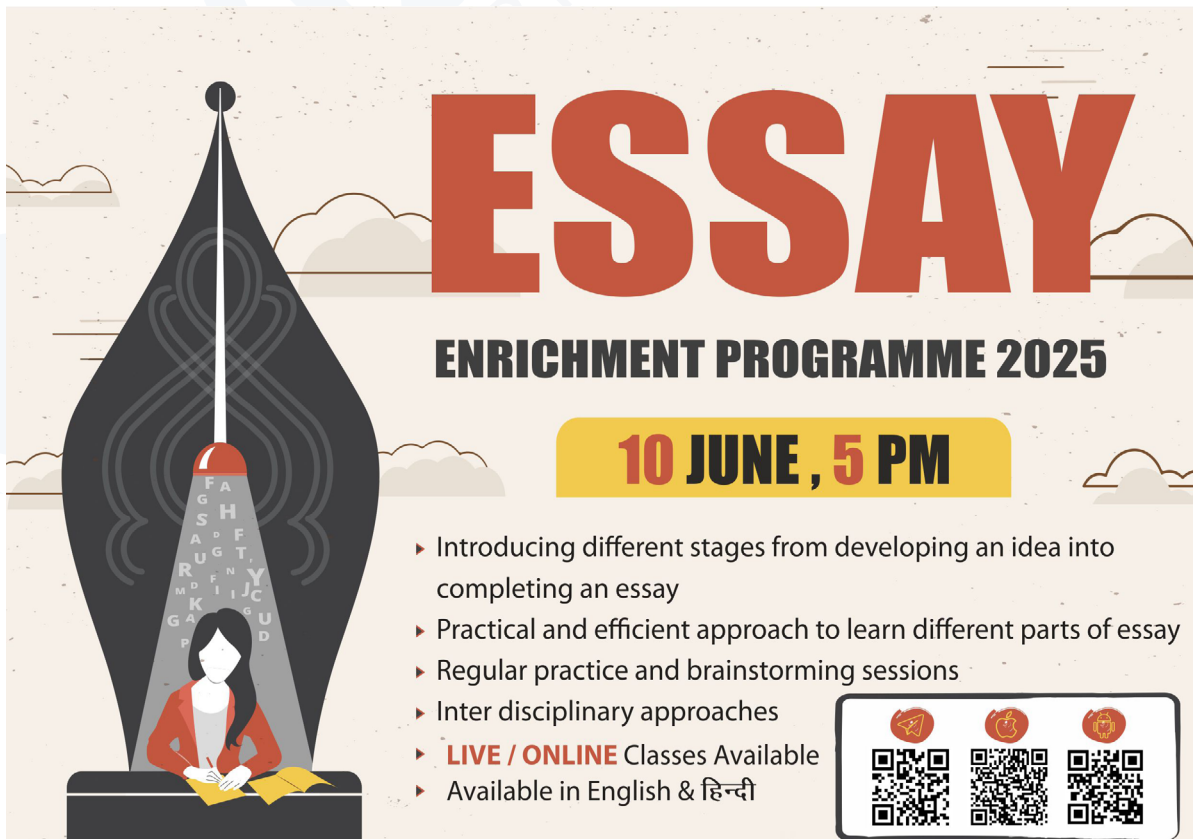
QUICK FACTS

Separation of Powers	➲ Separation of Powers means **demarcation of authorities and duties** into three branches of government – Executive, Legislature and Judiciary. ➲ **Origin: Aristotle** for the first time **classified the functions of the Government** (deliberative, magisterial and judicial). ➲ **Modern Theory: The Spirit of the Laws (1748), Montesquieu**
Assent to State Bills	**Constitutional Provisions regarding assents to the state bill** ➲ **Under Article 200, Governor can Grant Assent., Withhold Assent, Return for Reconsideration** (except Money Bills) – If the legislature passes it again, the **Governor must give assent or Reserve for President's Consideration.** ➲ Under Article 201, for bills **reserved by Governor**, the **President** can **Grant Assent, Withhold Assent** or **Return for Reconsideration.** ➲ Unlike the Governor, the President is not obligated to give assent to a reconsidered bill.
States' Demand for Autonomy	**Key Initiatives to Improve Centre-State Relations** ➲ **Inter-State Council** (Article 263) ➲ **Tax Devolution Increased** (from 32% to 42%) ➲ **GST Council** ➲ **Fewer Centrally Sponsored Schemes** (Reduced from 130 to 75, aiming for 50) ➲ **Decentralisation** (73rd & 74th Amendments gave powers to Panchayats and Municipalities)

5 Years of SVAMITVA Scheme	➲ **Implemented by:** Ministry of Panchayati Raj, State Revenue Department, State Panchayati Raj Department and Survey of India.
	➲ **Major Components**
	  ➜ **Establishment CORS network, Drone Mapping.**
	  ➜ **IEC for awareness**
	➲ **Gram Manchitra Enhancement.**

Deputy Speaker of the Lok Sabha	➲ 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.

Inaction by Speakers on Defection Petitions	➲ **Anti-Defection Law: Introduced through 52nd Amendment Act, 1985 adding Tenth Schedule.**
	➲ **Important Supreme Court pronouncement**
	  ➜ **Kihoto Hollohan v. Zachillhu (1992):** Courts have the authority to intervene if the Speaker delays action
	  ➜ **Ravi S. Naik v. Union of India (1994):** The Speaker should act as a neutral adjudicator rather than a political figure.
	  ➜ **Karnataka MLAs' disqualification case (2020): Consider transferring disqualification powers** from the Speaker to **an independent tribunal**

Indus Waters Treaty	➲ Signed in **1960 between India and Pakistan** with the help of the **World Bank,** which is also a **signatory.**
	➲ **River Allocation: India** – full rights over **Ravi, Beas, Sutlej; Pakistan** – **Indus, Jhelum, Chenab** (India allowed **non-consumptive use**).
	➲ **Dispute Resolution: 3-tier** mechanism – **Permanent Indus Commission, Neutral Expert, Court of Arbitration**
Shimla Agreement	➲ **Signed: 1972,** after the **India–Pakistan 1971 War** and creation of **Bangladesh.**
	➲ **Key Provisions: Bilateral resolution, normalization of ties,** formalization of **LoC,** respect for **sovereignty,** and **future peace talks.**
	➲ **Importance:** Reinforced **bilateralism,** stabilized **LoC,** enabled **cooperation** (e.g., **Kartarpur, Visa Pact**), and promoted **trust-building.**
String of Pearls	➲ **China's Strategy:** Establishing **commercial and military assets** in the **IOR.**
	➲ **Key Locations: Gwadar** (Pakistan), **Hambantota** (Sri Lanka), **Chittagong** (Bangladesh), **Sittwe & Coco Islands**(Myanmar), **Djibouti** (military base).
	➲ **India's Counter – Necklace of Diamonds:**
	➡ **Naval Access:** Bases in **Chabahar, Oman, Changi (Singapore).**
	➡ **Regional Ties:** Act East, **ASEAN, Quad, Japan, Australia.**
	➲ **Maritime Vision:** Initiatives like **SAGAR** and **MAHASAGAR.**
Rare Earth Elements (REE)	➲ **Misnomer: Abundant** in Earth's crust, but rarely in **economically viable concentrations (United States Geological Survey**-USGS).
	➲ Named "rare" in **18th–19th centuries** due to rarity vs. other **earth's elements** like **lime** or **magnesia**
	➲ **IUPAC Definition (2005): 17 elements** with high **density** & **conductivity**
	➡ **Includes:** cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), etc.
	➲ **Sources:** Found in **bastnasite, loparite, and monazite**
India–UAE Relations	➲ UAE is India's **4th largest source** of crude oil and the **2nd largest** source of LNG & LPG.
	➲ UAE is India's **3rd largest trading partner** and **2nd largest export destination.**
	➲ BAPS Mandir', first Hindu temple in UAE, is the largest of its kind in the Gulf region.
	➲ UAE is the only nation in the region to offer to store strategic oil reserves in India.
BIMSTEC	➲ **Formed: 1997,** as **BIST-EC** (Bangladesh, India, Sri Lanka, Thailand); later became **BIMSTEC** with 7 members.
	➲ **Members: Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, Thailand.**
	➲ **Secretariat: Dhaka,** Bangladesh.
Indian Diaspora	➲ **Definition:** People of **Indian origin** settled abroad on **long-term visas** or over **generations.**
	➲ **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):** Registered under **Section 7A, Citizenship Act, 1955. (PIO and OCI merged in 2015 as OCI.)**
	➲ **Non-Resident Indians (NRIs): Indian citizens** living abroad with **Indian passports.**
Sir Creek	➲ **Disputed Area: 96-km tidal estuary** in the **Arabian Sea,** between **Sindh (Pakistan)** and **Kutch (Gujarat, India).**
	➲ **India's Stand:** Apply **Thalweg Principle**—boundary lies **mid-channel** of navigable waters.
Pradhan Mantri MUDRA Yojana (PMMY)	**Launched**: 2015; **Ministry**: Ministry of Finance
	Objective: To provide **collateral-free loans** to MSE through banks, MFIs, NBFCs, RRBs.
	Loan Categories:
	➲ **Shishu**: Up to ₹50,000
	➲ **Kishor**: ₹50,001 – ₹5 lakh
	➲ **Tarun**: ₹5 lakh – ₹10 lakh
	➲ **Tarun Plus**: ₹10 lakh – ₹20 lakh

One State, One RRB	**Purpose**: to improve efficiency, credit delivery, and financial inclusion. **Benefits**: ⮕ Larger **capital base**, better **CRAR compliance**, and **improved liquidity**. ⮕ Enhanced **tech infrastructure** (e.g., Micro-ATMs, Video KYC, IMPS). ⮕ Strengthened **rural lending**, especially to **MSMEs and agriculture** (RRBs accounted for **11.2%** of agricultural credit in FY23). ⮕ Enables **digital inclusion**, **cost reduction**, and **product diversification**.
India's External Debt	**Rise in External Debt: Increased by 10.7% over December 2023, mainly due to valuation effect from the appreciation of the US dollar against the Indian Rupee.** **Debt-to-GDP Ratio: Marginally up to 19.1% (Dec 2024) from 19.0% (Sep 2024).** **Debt Service Ratio: Declined slightly by 0.1%, indicating stable repayment dynamics.** **Debt Composition**: ⮕ **Long-term debt** saw a marginal increase. ⮕ **Short-term debt** declined marginally.
MOSPI Releases CAPEX (Capital Expenditure) Survey	⮕ **Conducted By:** NSO under MoSPI, under the Collection of Statistics Act, 2008. ⮕ **Key Highlight:** Private sector Capex rose by 66% from FY22 to FY25. ⮕ **Sectoral Insight:** Manufacturing enterprises accounted for 48% of total private Capex in FY24-25. ⮕ **Purpose:** Assesses investment intentions, reflecting future economic capacity and private sector confidence. ⮕ **Significance:** Capex boosts long-term productivity, competitiveness, and investor confidence. ⮕ **Challenges:** Include equity and debt mobilization, project structuring, and regulatory delays (e.g., land acquisition).
Coastal Shipping Bill, 2025	**Objective**: To consolidate and modernize laws governing **coastal shipping** by repealing **Part XIV of the Merchant Shipping Act, 1958**. **Key Provisions**: ⮕ Mandatory **coasting trade license** for foreign vessels (Indian vessels exempted). ⮕ Establishment of a **National Coastal and Inland Shipping Strategic Plan** (updated biennially). ⮕ Creation of a **National Database** for Coastal Shipping.
New Steel Policy	⮕ The **Domestically Manufactured Iron & Steel Products (DMI&SP) Policy**, revised in **2025**, mandates preference for **domestic steel** in all **government procurement above ₹5 lakh**. ⮕ **Key Features**: 　➜ Applies to **all government entities** 　➜ Covers **"Melt & Pour" steel products**; bans **Global Tender Enquiries (GTEs)** for most items. 　➜ Requires **50% Domestic Value Addition (DVA)** in production equipment. 　➜ Reciprocal clause excludes suppliers from countries that bar Indian firms in their procurement.
Liquidity Coverage Ratio (LCR)	**What:** RBI revised **LCR norms,** lowering the **run-off factor** on **retail deposits** to improve liquidity management. **Definition:** LCR requires banks to hold enough **High-Quality Liquid Assets (HQLAs)** to meet **30-day net outflows** during financial stress. **Origin:** Introduced under the **Basel III framework** by the **Basel Committee on Banking Supervision.**
Terrorism in Jammu and Kashmir	⮕ The Resistance Front (TRF), an offshoot of the Pakistan-based terrorist **organization Lashkar-e-Taiba (LeT).** ⮕ India suspended the Indus Waters Treaty, closed the Attari Integrated Check Post, and carried out airstrikes under 'Operation Sindoor.' ⮕ **Decline in terrorist attacks since 2019;** economic growth and stability in Jammu & Kashmir have been rising (MHA Annual Report 2023-24).

India's Defence Exports	➲ India's defence exports reached **₹23,622 crore** in **FY 2024-25.** ➲ **64.5%** of exports contributed by the private sector **(₹15,233 crore)** and **42.85% increase from DPSUs (₹8,389 crore).** ➲ **Top export destinations:** USA, France, and Armenia. ➲ **India's export portfolio** includes Akash SAM, Tejas aircraft, and Dhruv helicopters. ➲ **Target:** ₹50,000 crore in defence exports by 2029.
Biological Weapons Convention (BWC)	➲ India ratified the BWC in 1974; 188 States Parties. ➲ BWC prohibits the development, production, and use of biological weapons. ➲ India has domestic measures like the **Weapons of Mass Destruction (Prohibition) Act, 2005.**
Similipal tiger reserve	➲ 107th National Park in India and **second in eastern state.** ➲ Located in **Mayurbhanj District of Odisha** in Chottanagpur region. ➲ **Major Rivers:** Burhabalanga, Palpala Bandan, Salandi, Kahairi, and Deo
International Big Cat Alliance	➲ **HO:** India ➲ **Genesis:** Launched by India in 2023 to **commemorate 50 years of Project Tiger.** ➲ **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.**
AIM4NatuRe Initiative	➲ The Food and Agriculture Organization launched **Accelerating Innovative Monitoring for Nature Restoration (AIM4NatuRe) on Earth Day (April 22).** ➲ AIM4NatuRe stands for **Accelerating Innovative Monitoring for Nature Restoration.** ➲ **Aims to improve monitoring and reporting of global ecosystem** restoration efforts using **advanced technology, standardized data frameworks, and capacity development** to restore 30% of degraded ecosystems by 2030 (Target 2 of GBF).
Aral Sea	➲ Once a large saltwater lake in Central Asia. ➲ **Location:** Boundary between **Kazakhstan (North)** and **Uzbekistan (South)**, **fed by Amu Darya and Syr Darya rivers.** ➲ Cause of Disappearance: Diversion of **Amu Darya and Syr Darya rivers during Soviet era.**
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.**
Aryabhata Satellite	➲ **India's First Satellite:** Built by **ISRO**, launched in **1975** by **Soviet Kosmos-3M** from **Volgograd.** ➲ **Orbit:** Placed in **Low Earth Orbit (LEO).** ➲ **Purpose:** Conducted experiments in **X-ray astronomy**, **aeronomics**, and **solar physics.**
Satellite Orbits	➲ **Low Earth Orbit (LEO): Under 2000 km**; used for **imaging, communication, Earth observation.** ➲ **Sun-Synchronous Orbit (SSO): 600–800 km**; for **land-use, weather, ice monitoring**; stays in sync with the **Sun.** ➲ **Medium Earth Orbit (MEO): 2,000–36,000 km**; used for **navigation** and **telecom.** ➲ **Geostationary Orbit (GEO): 35,786 km**; used for **telecom, weather**, and **GPS**; matches **Earth's rotation** above the equator.
Manuscripts of Bhagavad Gita and Natyashastra	**UNESCO Memory of the World (MoW) Programme:** ➲ Launched in 1992 to preserve documentary heritage. ➲ Aims for preservation, universal access, and enhanced public awareness. ➲ The International Advisory Committee (IAC) advises UNESCO on the program.

Agriculture in Indus Valley Civilization	**Agriculture in IVC:** Evidence: Granaries, pottery, terracotta figurines. **Crops Cultivated:** ⮕ **Rabi:** Wheat (Harappa, Mohenjo-Daro), Barley (Shortugai). ⮕ **Kharif:** Mustard, Sesamum, Cotton (first producer globally), Dates, Legumes. ⮕ **Rice:** Limited to Lothal, Rangpur (husk found). ⮕ **Pulses:** Green gram, black gram, horse gram, peas (Harappa). ⮕ **Brassicas:** Used for oil, medicine, feed. ⮕ **Fruits:** Jujube (Mehrgarh), Dates, Grapes, Walnuts, Peepal.
Vaikom Satyagraha	**About Vaikom Satyagraha:** ⮕ Non-violent civil rights movement in Travancore, Kerala, against untouchability. ⮕ Used peaceful protests like road blockades and demonstrations. **Key Leadership:** T K Madhavan, KP Kesava Menon, K Kelappan (Kerala Gandhi). Women participation: Nagammai, S.R. Kannamma, Bhagyam Stanumalaya Perumal, Kayyalakkal Narayani.
Sir Chettur Sankaran Nair (1857-1934)	⮕ **Career Highlights:** Youngest INC President (1897), Madras High Court Judge, Viceroy's Executive Council member (resigned post-Jallianwala Bagh). ⮕ **Legal Stand:** Landmark judgment upholding conversion to Hinduism (Budasna V. Fatima, 1914); fought for justice for Jallianwala Bagh victims. ⮕ **Social Reforms:** Advocated for full equality and women's suffrage.
Banarsi Shehnai And Tabla	⮕ **About Banarasi Shehnai-** GI, Indian wind instrument, temple music, Ustad Bismillah Khan. ⮕ **About Banarasi Tabla –** GI, Pandit Ram Sahai, Banaras Gharana one of six principal tabla gharanas in Indian classical music.
Kannadippaya Tribal Craft	⮕ GI tag, beautifully woven mat, also known as "mirror mat", Properties: providing warmth during winter and cooling effect in summer.
Harvest Festivals	⮕ **Traditional harvest festivals in India:** Baisakhi (Punjab), Vishu (Kerala and Tamil Nadu), Poila Boishakh (West Bengal), Bohag Bihu or Rongali Bihu (Assam), Puthandu (Tamil Nadu), etc.
Pm Shri Schools (Pm Schools For Rising India)	⮕ Ministry of Education, Centrally Sponsored Scheme. ⮕ Transparent online challenge for school selection. ⮕ Implemented via Samagra Shiksha, KVS, NVS. ⮕ PM SHRI schools to mentor other schools.

ACTIVITIES

12.1. MCQs

1. **Which of the following statements is true about Separation of Powers in India?**
   (a) There is complete separation without any overlap.
   (b) Each organ operates in complete isolation.
   (c) India follows a rigid separation of powers.
   (d) India follows a broad separation with functional overlap and checks and balances.

2. **Under which Article does the Supreme Court derive its power to pass any order for doing complete justice?**
   (a) Article 32
   (b) Article 142
   (c) Article 136
   (d) Article 226

3. **What legal recourse is available if a Governor withholds assent without justification?**
   (a) Impeachment
   (b) Writ of Habeas Corpus
   (c) Writ of Certiorari
   (d) Writ of Mandamus

4. **The Indus Waters Treaty was signed in 1960 under the auspices of which international organization?**
   (a) United Nations
   (b) SAARC
   (c) World Bank
   (d) International Court of Justice

5. **The Katchatheevu Island dispute is primarily between which two countries?**
   (a) Sri Lanka and Maldives
   (b) India and Sri Lanka
   (c) Bangladesh and Myanmar
   (d) Thailand and Malaysia

6. **The recently reported "Morag Axis" lies in which of the following regions?**
   (a) West Bank
   (b) Sinai Peninsula
   (c) Gaza Strip
   (d) Golan Heights

7. **With reference to the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), consider the following statements:**
   1. It was established through the Bangkok Declaration in 1997.
   2. Its permanent Secretariat is located in Dhaka, Bangladesh.

   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

8. **Which of the following statements correctly describes the fiscal incentive structure under the Electronics Component Manufacturing Scheme (ECMS)?**
   1. Turnover-linked incentives apply to the supply chain ecosystem.
   2. Capex-linked incentives are provided for bare components.
   3. Hybrid incentives may be provided for selected bare components.
   4. Only greenfield investments are eligible for the scheme.

   Select the correct answer using the code below:
   (a) 1 and 2 only
   (b) 3 only
   (c) 2 and 4 only
   (d) 1, 2, and 3 only

9. **Which of the following statements about the Pradhan Mantri MUDRA Yojana (PMMY) is/are correct?**
   1. MUDRA provides direct loans to micro-entrepreneurs.
   2. Loans under the 'Shishu' category are eligible for 2% interest subvention on prompt repayment.
   3. MUDRA loans are collateral-free and guaranteed by the Credit Guarantee Fund for Micro Units (CGFMU).

   Select the correct answer using the code below:
   - (a) 1 and 2 only
   - (b) 2 and 3 only
   - (c) 1 and 3 only
   - (d) 1, 2 and 3

10. **Consider the following statements about the Vibrant Villages Programme–II (VVP–II):**
    1. VVP–II builds upon the foundation laid by VVP–I, focusing on border villages along the northern frontier.
    2. VVP–II is a Centrally Sponsored Scheme with partial funding from the central government.
    3. The objective of VVP–II is to improve living conditions, provide livelihood opportunities, and control trans-border crime.
    4. VVP–II includes investments in infrastructure like roads, housing, and SMART classrooms under the Pradhan Mantri Gram Sadak Yojana (MGSY–IV).

    Which of the above statements is/are true?
    - (a) Only statement 1 is true.
    - (b) Statements 2 and 3 are true.
    - (c) Statements 1, 3, and 4 are true.
    - (d) All statements are true.

11. **Exercise participation and military cooperation, in this regard which of the following statements is NOT true?**
    - (a) Indian Air Force is participating in Exercise Desert Flag-10 hosted by the United Arab Emirates (UAE).
    - (b) Operation ATALANTA focuses on peace and stability efforts in the Western Pacific region.
    - (c) Exercise Dustlik is conducted alternatively in India and Uzbekistan on a yearly basis.
    - (d) Exercise Tiger Triumph is a Bilateral Tri-Service India-US Humanitarian Assistance and Disaster Relief (HADR) exercise.

12. **With reference to the Central Pollution Control Board's (CPCB) revised classification of industries, consider the following statements:**
    1. The classification system was originally introduced through the Doon Valley Notification in 1989 by the Ministry of Environment, Forest and Climate Change.
    2. The Blue category has been newly introduced specifically for Essential Environmental Services that manage waste from domestic and household activities.
    3. Industries in the Red category have a Pollution Index (PI) greater than 80 and include sectors like cement and automobiles.
    4. The CPCB was established in 1974 under the Air (Prevention and Control of Pollution) Act, 1981.

Which of the statements given above are correct?
Options:
- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

13. **With reference to the recently notified Similipal National Park, consider the following statements:**
    1. Similipal has become the 107th National Park in India and the largest National Park in Odisha.
    2. It is located in the Mayurbhanj District of Odisha in the Chottanagpur region.
    3. Similipal is recognized as a UNESCO Biosphere Reserve under the Man and the Biosphere Programme since 2009.

Which of the statements given above are correct?
Options:
- (a) 1, 2 and 3 only
- (b) 2 & 3 only
- (c) 1 & 3 only
- (d) None of the above

14. **The term "Silver Economy", as highlighted in the recent IMF report, refers to:**
    - (a) Economies heavily dependent on silver mining
    - (b) Economic opportunities related to the aging population
    - (c) Economies with high digital penetration among youth
    - (d) Industrial sectors using AI and robotics

15. **With reference to AI KIRAN, recently seen in news, consider the following statements:**
    1. It is an initiative launched by the Ministry of Education.
    2. The programme aims to create awareness and trust in AI among the women

Which of the statements given above is/are correct?
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

16. **Consider the following statements regarding the Hydrogen Bomb:**
    1. It works on the principle of nuclear fission only.
    2. The explosion of a hydrogen bomb releases more energy than an atomic bomb.

Which of the statements given above is/are correct?
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

17. **What does the Jevons Paradox illustrate?**
    - (a) Technological advancements always reduce resource consumption
    - (b) Increased efficiency in resource use leads to reduced environmental impact
    - (c) Greater efficiency can lead to increased overall resource consumption
    - (d) Energy efficiency and energy demand are always inversely related

18. **Which of the following texts is referred to as the 'Fifth Veda' due to its extraction from all four Vedas?**
    - (a) Bhagavad Gita
    - (b) Rigveda
    - (c) Natyashastra
    - (d) Abhinavagupta's Tantraloka

19. **Which of the following crops is exclusively associated with sites like Lothal and Rangpur in the Indus Valley Civilization?**
    - (a) Barley
    - (b) Wheat
    - (c) Rice
    - (d) Mustard

20. **Who among the following was invited to lead the Vaikom Satyagraha after the initial leaders were imprisoned?**
    - (a) T. K. Madhavan
    - (b) E. V. Ramasamy Naicker (Periyar)
    - (c) C. Rajagopalachari
    - (d) Sree Narayana Guru

12.2. True/False Statements

1. The judiciary in India does not interfere in legislative or executive functions under any circumstance.(T/F)
2. The office of Deputy Speaker of the Lok Sabha was first introduced under the Government of India Act, 1935.(T/F)
3. The Inter-State Council is a constitutional body established under Article 263 to promote coordination between the Union and the States.(T/F)
4. The BODHI Initiative by India under BIMSTEC focuses on developing maritime infrastructure. (T/F)
5. The Kishanganga hydropower project is located on a tributary of the Jhelum River. (T/F)
6. Sir Creek is a 96-km-long tidal estuary located between the Indian state of Gujarat and Pakistan's Sindh province. (T/F)
7. "The primary challenge for Deep Tech startups in India is excessive government regulation in the consumer-tech sector." (T/F)
8. India's electronic component sector currently enjoys a strong R&D ecosystem comparable to countries like the USA and China. (T/F)
9. Project Varsha is aimed at developing a secure underground base to house nuclear-powered ballistic missile submarines (SSBNs) in the coastal village of Rambilli, Andhra Pradesh. (T/F)
10. The Long-Range Glide Bomb 'Gaurav' has a range of 50 km and was developed by the US. (T/F)
11. Gandhi Sagar Wildlife Sanctuary is Located in eastern Madhya Pradesh, spanning Mandsaur and Nimach districts in the Nimar region. (T/F)
12. St. Petersburg Declaration on Tiger Conservation has Members of 13 tiger range countries agreed to the Tx2 goal (double the world's wild tigers by 2022). (T/F)
13. There are 3 UNESCO Global Geoparks (UGGP) in India. (T/F)
14. Kerala had the smallest, Bihar had the largest gender literacy gap. (T/F)
15. Code on Social Security, 2020 aims to extend social security benefits to all workers in the unorganized sector only. (T/F)
16. Green hydrogen is produced by splitting water using electricity generated from renewable sources like solar or wind. (T/F)
17. In Geostationary orbit (GEO), satellites fly above Earth's equator, moving from west to east, exactly matching Earth's rotation. (T/F)
18. CPUs are more efficient than GPUs for running parallel algorithms used in deep learning. (T/F)
19. The Bhagavad Gita is composed of 18 chapters and is embedded in the Ramayana. (T/F)
20. The Vaikom Satyagraha successfully opened all four roads around the Vaikom temple to all castes by November 1925. (T/F)

12.3. Mains Practice Questions:

1. "The demand for greater State autonomy reflects the growing tensions in India's quasi-federal structure." Examine the statement in the light of recent developments. (10 marks, 150 words)
2. Discuss the significance of the SVAMITVA Scheme in empowering rural communities and transforming rural governance in India. Also highlight the key challenges in its implementation and suggest reforms to make it more inclusive and effective. (10 marks, 150 words)
3. Critically analyse India's diplomatic strategies in navigating the emerging multipolar world order. (10 marks, 150 words)
4. Examine the legal and geopolitical implications of India placing the Indus Waters Treaty in abeyance. (10 marks, 150 words)

5. Discuss the significance of Deep Tech startups in India's innovation ecosystem. What are the key challenges they face and what policy interventions are needed to address these issues? (10 Marks, 150 Words)

6. What are the key initiatives driving India's growth in defence exports? Discuss the challenges India faces and the way forward to strengthen its position in the global defence market. (10 marks, 150 words)

7. Discuss the key provisions of the Biological Weapons Convention (BWC) and India's efforts to implement its provisions. What are the challenges related to the BWC, and what measures can be taken to strengthen its effectiveness? (10 marks, 150 words)

8. Critically analyze India's transition from an anthropocentric to an eco-centric approach in environmental jurisprudence. Discuss the philosophical, legal foundations, and the role of judicial activism in promoting environmental rights, with examples from recent judicial interventions. (10 Marks, 150 words)

9. Critically analyze the potential of functional de-extinction as a conservation tool, focusing on its benefits and the risks associated with such biotechnological interventions. (10 Marks, 150 words)

10. Discuss the role of Bio-Input Resource Centres (BRCs) in promoting sustainable agriculture under the National Mission on Natural Farming (NMNF). Highlight the key guidelines for setting up BRCs and their potential impact on farmers. (10 Marks, 150 words)

11. Green Hydrogen is seen as a key pillar in India's decarbonisation strategy. Examine how the National Green Hydrogen Mission and its certification framework aim to realise this potential. (15 marks, 250 Words)

12. Discuss the significance and challenges of deploying satellites in polar orbits, especially in the context of recent human spaceflight missions like "Fram2". How do various satellite orbits cater to different applications in Earth observation and communication? (15 marks, 250 Words)

13. Discuss the significance of agriculture in the Indus Valley Civilization. Highlight the crops grown, techniques used, and how they supported the urban civilization. (15 marks, 250 Words)

14. Evaluate the significance of the Vaikom Satyagraha in India's socio-political history. Discuss the challenges faced and the long-term impact of the movement. (15 marks, 250 Words)

15. Discuss the doctrine of separation of powers in the Indian context. Highlight the constitutional provisions, judicial pronouncements, and practical challenges in maintaining the balance among the three organs of government. (15 marks, 250 Words)

16. The metaphor of a "Dragon–Elephant tango" marks 75 years of India–China ties. Examine its viability in the context of current geopolitical realities. (15 marks, 250 Words)

17. Discuss the significance of the Electronics Component Manufacturing Scheme (ECMS) in transforming India into a global electronics manufacturing hub. Also, analyze the major challenges that the scheme seeks to address. (15 marks, 250 Words)

18. Evaluate the impact of the Pradhan Mantri MUDRA Yojana (PMMY) in fostering financial inclusion and grassroots entrepreneurship in India. What challenges hinder its effectiveness, and what reforms are necessary to enhance its outcomes? (15 marks, 250 Words)

19. Discuss the external and internal factors contributing to terrorism in Jammu and Kashmir, and evaluate the challenges India faces in tackling this issue. (15 marks, 250 Words)

20. Critically analyse the ethical challenges posed by influencer marketing. How effective is India's regulatory framework in addressing them? (15 marks, 250 Words)

12.4. Ethics Case Studies

CASE STUDIES-1

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.

Based on the above case study, answer the following questions

    (a) Analyze the positive and negative impacts of social media influencers on society.

    (b) Discuss the ethical considerations that should guide the regulation of social media influencers.

CASE STUDIES-2

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

(a) Who are the stakeholders in this case? Briefly outline their perspectives and ethical concerns.

(b) 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.

(c) Suggest alternative mechanisms for ensuring justice and public confidence without resorting to the death penalty.

ANSWERS AND EXPLANATION

13.1. MCQs Answer and Explanation

1. **Answer: D**

   Explanation:
   - ➲ **India follows a broad separation with functional overlap and checks and balances.**

2. **Answer: B**

3. **Answer: D**

   Explanation: Mandamus means "we command." It is a directive issued by a court to a public official, compelling them to perform a duty that they are legally obligated to fulfill but have either failed or refused to do.

4. **Answer: C**

   Explanation: **About the Indus Waters Treaty**
   - ➲ **Signed**: Signed in 1960 between India and Pakistan with the help of the World Bank, which is also a signatory.
   - ➲ **Objective**: Share **Indus river system** waters
   - ➲ **Division of Water**:
     - ➡ **Eastern Rivers** (Ravi, Beas, Sutlej): Full use by **India**
     - ➡ **Western Rivers** (Indus, Jhelum, Chenab): Allocated to **Pakistan**; **India** allowed **non-consumptive use**

5. **Answer: B**

   Explanation: The Katchatheevu Island dispute is between **India and Sri Lanka**, mainly over fishing rights and ownership, contributing to broader bilateral tensions like **fishermen arrests**, **Tamil ethnic issues**, and **Chinese strategic presence** in Sri Lanka.

6. **Answer: C**

   Explanation: **About Morag Axis**
   - ➲ **Agricultural land** between **Khan Younis** and **Rafah**, running **east–west** across the **Gaza Strip**.
   - ➲ Named after **"Morag"**, an **illegal Israeli settlement** (1972–2005) once located in the region

7. **Answer: C**

   Explanation: **About BIMSTEC**
   - ➲ **Genesis**: Formed in **1997** via the **Bangkok Declaration** with original **4 Members** as **BIST-EC** (Bangladesh, India, Sri Lanka, and Thailand).
   - ➲ **Secretariat**: Dhaka, Bangladesh

   - ➲ **Objective**: Promote **economic development**, **social progress**, and **regional peace** in **Bay of Bengal** region.

8. **Answer: B**

   Explanation: Turnover-linked incentives are for sub-assemblies and bare components, not the supply chain. Capex-linked incentives are for the supply chain ecosystem and capital equipment, not bare components. Hybrid incentives are applicable to selected bare components. Both greenfield and brownfield investments are eligible.

9. **Answer: B**

   Explanation:
   - ➲ Statement 1 is incorrect: MUDRA is a refinance agency, not a direct lending institution.
   - ➲ Statement 2 is correct: A 2% interest subvention is available for prompt repayment of Shishu loans. Statement 3 is correct: Loans are collateral-free and guaranteed by CGFMU.

10. **Answer: C**

    Explanation:
    - ➲ **Statement 1 is correct**: VVP-II indeed builds upon the foundation laid by VVP-I, which focused on border villages along the northern frontier.
    - ➲ **Statement 2 is incorrect**: VVP-II is a **Central Sector Scheme** with 100% funding from the central government, unlike VVP-I, which was a Centrally Sponsored Scheme.
    - ➲ **Statement 3 is correct**: The objective of VVP-II is to improve living conditions, provide livelihood opportunities, and control trans-border crime.
    - ➲ **Statement 4 is correct**: VVP-II includes investments in infrastructure such as roads, housing, and SMART classrooms under the Pradhan Mantri Gram Sadak Yojana (MGSY-IV).

11. **Answer: B**

    Explanation:
    - **(a) Correct:** Indian Air Force is participating in Exercise Desert Flag-10 in the UAE.
    - **(b) Incorrect**: **Operation ATALANTA** operates in the **Western Indian Ocean** and **Red Sea**, not the Western Pacific.

(c) Correct: Exercise Dustlik is held alternately in India and Uzbekistan.

(d) Correct: Exercise Tiger Triumph is a **Bilateral Tri-Service** India-US **HADR** exercise.

12. **Answer: A**

    Explanation:

    ➲ **Statement 1 is correct:** The industrial classification system originated in 1989 with the Doon Valley Notification issued by the Ministry of Environment, Forest and Climate Change (MoEFCC).

    ➲ **Statement 2 is correct:** The Blue category is newly introduced for Essential Environmental Services (ESSs) that manage waste from domestic/ household activities, including municipal solid waste management facilities and sewage treatment plants.

    ➲ **Statement 3 is correct**: Red category industries have a Pollution Index (PI) greater than 80 and include highly polluting sectors like cement, automobiles, and distilleries.

    ➲ **Statement 4 is incorrect:** The CPCB was established in 1974 under the Water (Prevention and Control of Pollution) Act, 1974, not the Air Act. It was later entrusted with powers under the Air (Prevention and Control of Pollution) Act, 1981.

13. **Answer: A**

    Explanation:

    ➲ **Statement 1 is correct:** Similipal has become the 107th National Park in India and is now the largest National Park in Odisha, surpassing Bhitarkanika National Park in area.

    ➲ **Statement 2 is correct:** Similipal is located in Mayurbhanj District of Odisha in the Chottanagpur region, with major rivers including Burhabalanga, Palpala Bandan, Salandi, Kahairi, and Deo.

    ➲ **Statement 3 is correct:** Similipal has been recognized as a UNESCO Biosphere Reserve under the Man and the Biosphere Programme since 2009.

14. **Answer: B**

    Explanation: The **Silver Economy** refers to the economic ecosystem catering to the needs and opportunities of the **elderly population**, including health care, housing, insurance, and assistive technologies.

15. **Answer: B**

    Explanation: AI Kiran, an initiative to empower women in Artificial Intelligence, has been launched.

    ➲ It is led by Office of the Principal Scientific Adviser (PSA) to the GoI.

16. **Answer: B**

    Explanation: Hydrogen bombs operate through **nuclear fusion**, where light nuclei such as deuterium and tritium combine to form a heavier nucleus, releasing a massive amount of energy.

17. **Answer: C**

    Explanation: The **Jevons Paradox**, proposed by **William Stanley Jevons** in 1865, shows that improving efficiency in using a resource (like coal or AI computation) can paradoxically **increase** overall consumption due to greater affordability and expanded use.

18. **Answer: C:**

19. **Answer C:**

    Explanation: Evidence of rice cultivation in the Indus Valley Civilization is limited and has only been found at Lothal and Rangpur in Gujarat.

20. **Answer: B**

    Explanation: George Joseph invited Periyar to lead the Vaikom Satyagraha after the pioneers were jailed. Periyar played a significant role and earned the title "Vaikom Veerar".

13.2. True/False Answers

Answers

1. F	2. F	3. T	4. F	5. T	6. T
7. F	8. F	9. T	10. F	11. T	12. T
13. F	14. F	15. F	16. T	17. T	18. F
19. F	20. F				

13.3. Approach to the Mains Practice Questions

1. **Approach**

   Introduction: Meaning of Quasi Federal Structure.

   Main Body: Issues in federal structure leading to demand for greater State autonomy

   Conclusion: Conclude with need for a balance between states aspirations and national interests.

2. **Approach**

   Introduction: Mention the objective of SVMITVA scheme

   Body: Briefly discuss about the significance and key challenges

   Conclusion: Suggests measure to make SVMITVA scheme more inclusive

3. **Approach**

   Introduction: Define multipolar world order as a system with multiple power centers; India adopts multi-alignment to navigate this complexity.

   Body:

   ➲ **Opportunities:** Highlight India's role in BRICS, QUAD, G20, Voice of Global South, digital and cultural diplomacy.

   ➲ **Challenges:** Emphasize geopolitical balancing, weak global institutions, low trade share, climate finance divide, and border tensions.

Way Forward: Suggest deeper institutional engagement, regional trust-building, and diversified issue-based cooperation.

Conclusion: Emphasize that adaptive, value-driven diplomacy can help India shape a balanced, inclusive world order.

4. Approach

Introduction: Define abeyance as a temporary suspension; note it is not supported under IWT or international treaty law.

Body:

➲ **Legal aspect:** Explain that unilateral suspension contradicts Article XII(4) of IWT and norms under the Vienna Convention. Raises concerns over India's treaty obligations.

➲ **Geopolitical aspect**: Discuss use of treaty as strategic leverage against Pakistan; risk of setting precedent for others like China. Adds to regional tension and ecological risks.

Conclusion: Suggest that India needs to balance strategic interests with legal credibility through diplomatic channels and treaty modernisation.

5. Approach

Introduction: Define Deep Tech and its relevance

Body: List significance, challenges, policy interventions

Conclusion: Comprehensive, multi-stakeholder approach, Ensure long-term technological sovereignty & economic resilience.

6. Approach

Introduction: Briefly introduce the surge in India's defence exports and its target for 2029.

Main Body:

➲ **Key Initiatives**: Discuss initiatives like iDEX, Defence Industrial Corridors, liberalized FDI policy, and promotion of complete defence systems.

➲ **Challenges**: Highlight issues like reliance on imports for critical components, competition from global players, and bureaucratic hurdles.

Conclusion: Suggest measures such as promoting export of complete systems, forging partnerships with emerging defence hubs, and expanding India's presence in global supply chains.

7. Approach

Introduction: Define BWC and Discuss the main provisions, such as the prohibition of development, stockpiling, and use of biological weapons.

Main Body:

➲ **India's Efforts**: Highlight India's steps, such as the 1989 rules on hazardous microorganisms, the 2005 Weapons of Mass Destruction Act, and the SCOMET list.

➲ **Challenges:** Address issues like the lack of a verification mechanism, limited institutional support, and low participation in confidence-building measures (CBMs).

Conclusion: Suggest solutions like a modular-incremental approach for verification, strengthening institutional support, and addressing non-state actor threats.

8. Approach

Intro: Introduce the shift from anthropocentric to eco-centric jurisprudence and explain the concepts of utilitarian and holistic conservation.

Body: Discuss philosophical (deep ecology) and legal (Constitutional provisions, Public Trust Doctrine) foundations, and key judicial activism (e.g., M.C. Mehta case, Ganga personhood).

Conclusion: Emphasize the relevance of this shift for ecological justice and sustainable coexistence in the modern world.

9. Approach

Intro: Define BRCs and mention their role in natural farming.

Body: Explain how BRCs promote sustainable agriculture, discuss the guidelines for setting them up.

Conclusion: Assess their potential impact on farmers and rural ecosystems.

10. Approach

Introduction: Define workplace automation (use of AI, robotics, and digital technologies to perform tasks with minimal human intervention).

Body: Mention social benefits and challenges associated with the Workplace Automation

Conclusion: suggests measure to Ensure Inclusive, Safe, and Equitable Workplace Automation

11. Approach

Introduction: Green Hydrogen, produced using renewables, is central to India's decarbonisation and energy independence goals.

Body:

➲ **Mission Objectives:** Define NGHM as a plan to position India as a global Green Hydrogen hub.

➲ **Key Components:** Outline demand creation, SIGHT incentives, pilot projects, GH Hubs, and R&D support.

➲ **Certification Role:** Explain GHCS ensures credible verification with an emission cap of 2 kg CO_2/kg H_2 and annual audits.

➲ **Impact:** Emphasize how it enables industry adoption, builds export credibility, and attracts investment.

Conclusion: NGHM and GHCS together establish a credible, scalable foundation for India's clean energy transition.

12. Approach

Introduction: Mention "Fram2" as a recent mission using a polar orbit.

Body:

➲ Briefly define polar orbit and its significance.

➲ Comparison with Other Orbits

Conclusion: Note increasing relevance of polar orbits in advanced space missions.

13. Approach

Introduction: Backbone of IVC, enabling rise of urban centres

Body: Crops Cultivated, Agricultural Techniques and Tools, Significance in Urbanization

14. Approach

Introduction: Non-violent movement against untouchability

Body: List Significances, Challenges Faced and Role of Leadership

Conclusion: Landmark in India's struggle for social justice.

15. Approach

Introduction: Define in brief about separation of powers.

Main Body: Mention constitutional provisions, judicial pronouncements, and practical challenges

Conclusion: Mention way forward in brief.

16. Approach

Introduction: Explain the "Dragon–Elephant tango" as a metaphor for peaceful India–China cooperation; mark 75 years of diplomatic ties amid mixed signals.

Body:

➲ **Opportunities:** Mention shared platforms (BRICS, SCO), trade ties ($118.4 bn), climate cooperation, and regional influence as enablers of cooperation.

➲ **Challenges:** Point to border tensions (Galwan, Doklam), trade imbalance, China–Pakistan nexus, assertiveness in Indo-Pacific, and water disputes.

➲ **Strategic Responses:** Note India's counter-strategies like QUAD, "Necklace of Diamonds", SAGAR, and focus on realistic diplomacy as advised in "The India Way".

Conclusion: Suggest that while the tango is idealistic, its success depends on mutual respect, strategic clarity, and managing both rivalry and cooperation pragmatically.

17. Approach

Introduction: Start with Aim of ECMS

Body: Significance, Key Challenges Addressed by ECMS

Conclusion: Conclude with Government Measures

18. Approach

Introduction: Highlight alignment with inclusive growth & self-employment goals.

Body: Impact of PMMY, Challenges

Conclusion: Conclude with reforms

19. Approach

Introduction: Briefly mention the Timeline of Kashmir Insurgency, highlighting external and internal factors. (Can be given in form of infographics)
Main Body: Discuss Pakistan's proxy war, radicalization, economic challenges, and porous borders. Address challenges like hybrid terrorist outfits and evolving technologies.
Conclusion: Emphasize the need for a comprehensive approach involving intelligence, border security, and counter-radicalization to ensure peace and stability.

20. Approach

Introduction: Define influencer marketing as the use of social media personalities to promote products; raise concerns over ethics in the absence of clear boundaries.

Body:

➲ **Challenges:** Highlight materialism, FOMO, misinformation, IP violations, and mental health impact.

➲ **Regulation:** Emphasize CCPA, SEBI, ASCI guidelines, and IIGC's self-regulatory measures to ensure transparency and accountability.

➲ **Effectiveness:** Note limited enforcement, growing compliance, and need for stronger oversight.

Conclusion: Suggest a balanced approach combining stricter norms, platform responsibility, and digital literacy to safeguard ethical consumer engagement.

13.4. Approach to Case Studies

1. Approach

(A)

➲ **Introduction:** Social media influencers have emerged as powerful figures shaping public opinions and consumer behavior across sectors like fashion, health, and lifestyle.

➲ **Body:**
  → **Positive Impacts:** Promote social causes, raise awareness, encourage conscious consumption, and amplify marginalized voices.
  → **Negative Impacts:** Fuel materialism, trigger psychological issues like FOMO, spread misinformation, and risk privacy breaches and mental health problems.

➲ **Conclusion:** Influencers wield significant influence with both beneficial and harmful effects, calling for responsible engagement and awareness.
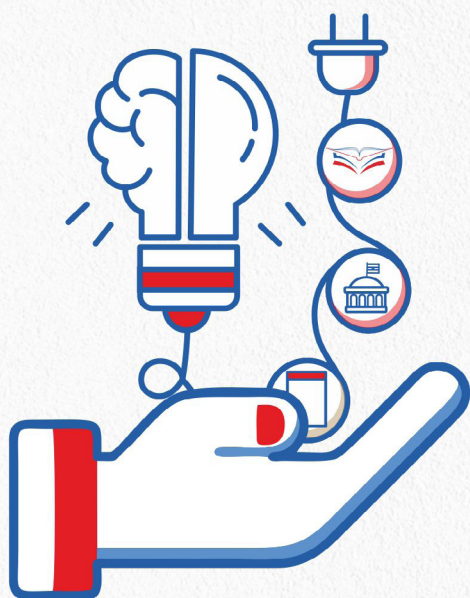
(B)

➲ **Introduction:** Briefly highlight the influence of social media influencers and the need for ethical regulation.

➲ **Body :** Ethical guidelines must ensure transparency, honesty, and responsibility, protect vulnerable groups, respect privacy and culture, and enforce accountability while upholding freedom of expression.

- **Conclusion:** Emphasize that ethical regulation fosters trust, protects consumers, and supports a healthy digital ecosystem.

2. **Approach**

- **Introduction:** A complex ethical and legal dilemma involving capital punishment, justice, and human rights.
- **Body:**
  - ➡ **Stakeholders:** Victim's family demands closure; convict's rights and mental health concerns; human rights groups oppose death penalty; government balances law and order.
  - ➡ **Recommendation:** Commute to life imprisonment due to constitutional rights, mental health, and global abolition trends.
  - ➡ **Alternatives:** Life imprisonment with strict conditions, victim compensation, etc.
- **Conclusion:** A humane, constitutionally grounded approach balances justice with dignity and human rights.

14. Self-Evaluation

Progress Tracking Table

Activity Type	Total Questions	Correct Answers	Attempted	Score/Percentage
MCQ's				
True/False Statements				

Monthly Learning Summary

Top 3 Learnings/Insights

1.

2.

3.

Progress Comparison

Previous Month's Score

Current Month's Score

Areas of Improvement

Reflection Section

Strengths

Areas for Improvement

Goals for Next Month

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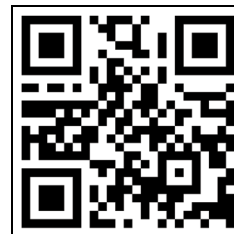
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10 in **TOP 10** Selections in **CSE 2024**
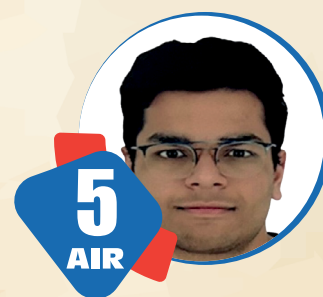from various programs of **Vision IAS**

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Shakti Dubey

AIR 2 — Harshita Goyal
AIR 3 — Dongre Archit Parag
AIR 4 — Shah Margi Chirag
AIR 5 — Aakash Garg

AIR 6 — Komal Punia
AIR 7 — Aayushi Bansal
AIR 8 — Raj Krishna Jha
AIR 9 — Aditya Vikram Agarwal
AIR 10 — Mayank Tripathi

79 Selections in **TOP 100** in **CSE 2023**

AIR 1 — Aditya Srivastava
AIR 2 — Animesh Pradhan
AIR 5 — Ruhani

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