

*Current Affairs*

# Workbook

September 2025



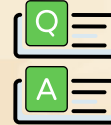
**Mains Questions**



**Ethics Case Studies**



**Progress Tracking Table**



**MCQs**



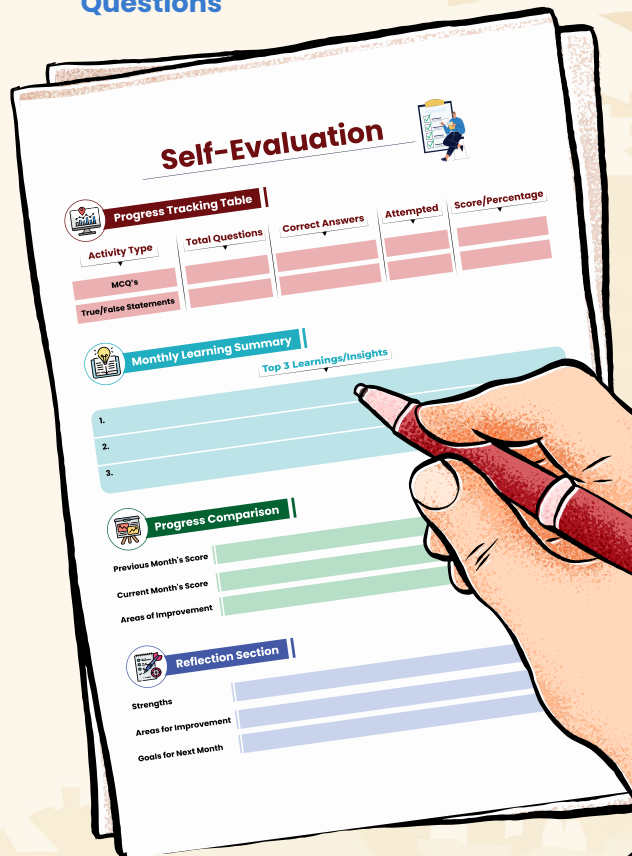
**Quick facts**



**Comprehensive Summary**



**True/ False**



## Self-Evaluation

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

**Monthly Learning Summary**  
Top 3 Learnings/Insights

- 
- 
- 

**Progress Comparison**

Previous Month's Score \_\_\_\_\_

Current Month's Score \_\_\_\_\_

Areas for Improvement \_\_\_\_\_

**Reflection Section**

Strengths \_\_\_\_\_

Areas for Improvement \_\_\_\_\_

Goals for Next Month \_\_\_\_\_



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\*: Pre-foundation classes are designed to provide a strong foundation in core UPSC CSE subjects, utilizing NCERTs and basic textbooks. They serve as the initial step in the comprehensive preparation journey for the UPSC Civil Services Examination by providing conceptual clarity in core GS subjects such as History, Polity, Geography, Economy, and Environment. Further, Pre-Foundation Classes act as a transition platform toward the VisionIAS Regular Foundation Course Program, 2027.

# From the Editor's Desk

Dear Readers,

The September edition of the Workbook continues our effort to make your current affairs preparation structured, practice-oriented, and analytically enriching.

This edition compiles crucial developments across governance, economy, and global affairs shaping India's policy landscape.

In **Polity and Governance**, the edition delves into the continuing debates around **judicial pendency**, the evolving role of the **National Medical Commission (NMC)**, and fresh insights on **criminalization of politics**—reflecting the state of institutional accountability and reform.

Under **International Relations**, we analyse India's engagements in key multilateral forums like the **Shanghai Cooperation Organization (SCO)**, alongside bilateral dynamics with **China** and **Japan**, situating them within India's broader Indo-Pacific outlook.

The **Economics** section highlights major policy thrusts such as **GST reforms**, the expanding **semiconductor ecosystem**, and initiatives like **PM MITRA** and the **National Logistics Policy**, underscoring India's drive toward manufacturing competitiveness and export-led growth.

In the domain of **Security and Science and Technology**, issues like **cybercrime trends**, the functioning of the **Enforcement Directorate** and, the transformative role of **Artificial Intelligence in Healthcare**. The **Environment** section covers developments from the **UN High Seas Treaty** to India's **Green Credit Programme**.

Among others it covers **Social Issues, Culture, Ethics** and **Government Schemes** in detail.

## How the Workbook is Organized?

1. **Summary of the Monthly Magazine** – Quick recall of essentials.

2. **Quick Facts Block** – Key data points consolidated.

3. **Activities Block:**



**MCQs** – To sharpen recall.



**True/False Statements** – For conceptual clarity.



**Mains Practice Questions** – To develop structured writing.



**Ethics Case Studies** – To test application in dilemmas.

4. **Answers and Explanations** – For self-evaluation.

5. **Progress Tracking Table** – To monitor consistency.

*We encourage you to use this Workbook as an interactive tool, revising regularly and writing answers with discipline. Consistency, clarity of thought, and analytical depth are the keys to mastering current affairs for the Civil Services Examination.*

Warm regards,  
 Team Current Affairs,  
 VisionIAS



“The future belongs to those who prepare for it today.”

– Malcolm X

# POLITY AND GOVERNANCE



## 1.1. Criminalisation of Politics

### Why in the News?

ADR report reveals that **47% of Ministers in India**, including Union and State Cabinets, face criminal cases, with **27% involving serious charges**.





### Causes of Criminalisation of politics

- ➔ **Politico-Criminal Nexus:** Criminals seek legitimacy; politicians gain money and muscle (**Vohra Committee, 1993**).
- ➔ **Winnable Candidates:** 15.3% of charged candidates win vs 4.4% clean (**ADR 2024**).
- ➔ **High Costs & Funding:** Reliance on **black money and mafia**.
- ➔ **Slow Justice:** Low convictions, delayed trials; **55% rise in MPs** with criminal records since 2009.
- ➔ **Identity Politics:** Caste and religion **often outweigh criminal records**.




### Constitutional and legal provisions to reduce Criminalisation of politics

- ➔ **Representation of People Act, 1951:**
  - ➔ **Section 8:** Disqualifies convicted individuals with sentences of **two years or more**.
  - ➔ **Section 11:** EC can reduce disqualification, used in **Prem Singh Tamang's case (2019)**.
- ➔ **Recent Initiatives:** 130th Constitutional Amendment Bill **proposes removal of Ministers detained over 30 days for crimes punishable by five years or more**.

### Impact of criminalisation of politics

- 
**Loss of Credibility**  
 Erodes public faith in democracy
- 
**Law-Breakers as Law-Makers**  
 Criminals in power manipulate laws for self-interest.
- 
**Unfair Electoral Process**  
 Criminal candidates distort the electoral competition, limiting the choice available to voters
- 
**Institutionalised Corruption**  
 Encourages systemic and institutionalised corruption.

## Judicial pronouncements related to Criminalisation of politics

- 
**Union of India v ADR (2002):** Candidates must disclose all criminal charges and convictions.
- 
**Lily Thomas v Union of India (2013):** Legislators convicted with  $\geq 2$ -year sentence is immediately disqualified.
- 
**Public Interest Foundation v Union of India (2019):** Parties must publish candidates' criminal records online and in media.

### Way Forward

- ➔ **Stronger Penalties for False Affidavits:** Enforce **244th Law Commission's recommendation**.
- ➔ **Dedicated Election Benches:** High Courts should hold day-to-day hearings to **ensure timely convictions**.
- ➔ **Review Section 11 of RPA:** Exclude serious crimes **from EC's power to reduce disqualification**.
- ➔ **Financial Transparency:** Bring political parties **under the RTI Act, 2005**.

## 1.2. Judicial Pendency

### Why in the News?

Case backlog in Supreme Court hits **all-time high of 88,417**.

### More on the News

↻ High Courts have about **63 lakh pending cases**, while **District Courts face nearly 4.6 crore** pending cases (National Judicial Data Grid).

### Reasons for pendency of cases

- ↻ **Low Judge/Population Ratio:** 21 judges per million vs recommended 50 (**120th Law Commission**).
- ↻ **Underused Alternate Dispute Resolution:** Mechanisms like **Gram Nyayalayas remain ineffective**.
- ↻ **Procedural Delays:** Appeals, adjournments, **frivolous cases and weak case management**.
- ↻ **Infrastructure Gaps:** Limited staff, **amenities, technology**, and digital adoption.
- ↻ **Financial Constraints:** Judiciary gets only 0.1% of GDP, **much lower than defence**.
- ↻ **Government Litigation:** ~50% of cases involve **government agencies**.

### Impact of Judicial pendency

- ↻ **Fundamental Rights Violation:** Delayed trials violate **Article 21, as held in Hussainara Khatoon vs State of Bihar (1979)**, by denying the right to a speedy trial.
- ↻ **Social Impact: undertrials (76% of prisoners)** suffer long incarceration without conviction.
- ↻ **Economic Impact:** Escalates **litigation costs** for parties and **stalls development projects**.
- ↻ **Loss of Trust:** Citizens sometimes opting for **extra-legal solutions (Black coat syndrome)**; **systemic delays** turn justice into a “defense” tactic.

### Schemes/Initiatives by Government to reduce case pendency

- ↻ **National Mission for Justice Delivery and Legal Reforms (NMJDLR- 2011):** Reduction of arrears & delays, infrastructure, procedural reforms.
- ↻ **Centrally Sponsored Scheme (CSS) for Development of Infrastructure for Judiciary**
- ↻ **e-Courts Mission Mode Project (Phase I, II, III):** Computerisation of courts, e-filing, videoconferencing etc.
- ↻ **Commercial Courts (under Commercial Courts Act, 2015):** Faster disposal of **commercial disputes etc.**
- ↻ **Fast Track Courts (FTCs):** E.g. NIA courts, POCSO courts etc.
- ↻ **Alternate Dispute Resolution (ADR) Mechanisms:** Such as Lok Adalats, Mediation, Arbitration etc.

### Way Forward

- ↻ **NJIA: Establish National Judicial Infrastructure Authority (NJIA)** to manage court infrastructure and AI.
- ↻ **Ad-hoc Judges:** Appoint experienced retired judges under **Articles 128 & 224A**.
- ↻ **Targets & Reviews:** Set case disposal targets; **conduct performance reviews**.
- ↻ **Control Adjournments:** Regulate frivolous or **technical delays**.
- ↻ **Reform Litigation:** Reduce government **cases, clarify laws, ensure compliance**, discourage frivolous suits.
- ↻ **Promote ADR:** Expand **alternate dispute resolution** and pre-litigation mediation.

## 1.3. National Medical Commission (NMC)

### Why in the News?

The National Medical Commission (NMC) recently **completed five years**.

### About the National Medical Commission

- ↻ **Statutory body** under the **National Medical Commission Act, 2019**, effective 25 Sept 2020, replacing the Medical Council of India.
- ↻ **Composition:** Appointed by the **Central Government**
  - Chairperson, Ten ex officio Members, Twenty-two part-time Members.
- ↻ **Four Autonomous Boards:**
  - **Under-Graduate** Medical Education Board
  - **Post-Graduate** Medical Education Board

- Medical Assessment & Rating Board
- **Ethics and Medical** Registration Board

## Functions of NMC

- ↻ Lay down **Policy & Standards**, map Healthcare **needs and resources**.
- ↻ Ensures smooth **functioning of boards and councils**, **monitors compliance** and handles appeals efficiently.
- ↻ Enforces **professional conduct standards**, **Controls fees for 50% seats** in private/ deemed colleges, Grants limited **licences** to **Community Health Providers**.

## Issues With NMC

- ↻ **Governance Gap**: Dominated by doctors, lacking public health or citizen representation.
  - **Appeals** allowed only **from registered practitioners**.
- ↻ **Fee Regulation**: Controls fees for **only 50% of private seats**, allowing high charges for others.
- ↻ **Ethics Oversight**: Misconduct cases lack **judicial input and timelines**, raising **impartiality concerns**.
- ↻ **National Medical Register (NMR)**: Slow verification process, **risking unqualified practice**.

## Conclusion

The NMC modernizes medical governance but must improve **inclusivity, ethical oversight, and accountability** for a transparent, equitable healthcare system.

## 1.4. News in Shorts

### 1.4.1. Indian and French Political Systems

The French Parliament recently voted to remove the **government along with the Prime Minister**, leading to **political instability in the country**.

#### Comparison between the Indian and the French Political Systems

- ↻ **Similarities**: Both are **republican democracies** with **elected heads of state** and **bicameral legislatures**. They uphold the **principles of liberty, equality, and fraternity**.
- ↻ **Differences**: (Refer Table)

Aspect	India	France
<b>Constitutional model</b>	<b>Parliamentary republic</b> ; single executive led by PM; President largely ceremonial.	<b>Semi-presidential</b> with dual executive (i.e. President + Prime Minister)
<b>Procedures to elect the President</b>	<b>Indirect election</b> by an electoral college using <b>single transferable vote</b> and <b>secret ballot</b> .	<b>Direct election</b> by universal adult suffrage.
<b>Choosing / Removing Prime Minister (PM)</b>	The <b>PM is elected by Lok Sabha</b> and must retain the <b>confidence of Lok Sabha</b> .	The <b>PM is appointed by the President</b> , but must keep <b>Assembly confidence</b> .
<b>Federal design</b>	<b>Quasi-federal</b> ; Blends federal and unitary features.	<b>Unitary</b> ; Centralized authority with local governments as central agents.

#### Approach to Secularism

**Positive approach**: State maintains **neutrality but can intervene** to reform (e.g., abolishing untouchability).

French **laïcité** enforces **strict separation** of religion and state (e.g., bans on conspicuous symbols).

### 1.4.2. Visakhapatnam Declaration

The 28th National Conference on e-Governance adopted the **Vishakapatnam Declaration**, urging a **whole-of-government approach to build digital, agile, and data-driven civil services**.

#### Key Proposals of the Vishakapatnam Declaration

- ↻ **National Vision**: Promote inclusive, transparent, and **citizen-centric governance**.
- ↻ **Technology-Driven Governance**: Use AI, ML, Blockchain etc. for multilingual, real-time, ethical citizen services.
  - **Examples**: BHASHINI, Digi Yatra, NADRES V2.
- ↻ **Replication of Successful Models**: Scale up **SAMPADA 2.0 (MP)**, **eKhata (Bengaluru)**, **Rohini Gram Panchayat (Maharashtra)**, and **DAMS by NHAI**.
- ↻ **Grassroots and Inclusive Development**: Expand digital outreach to the **North-East and Ladakh under NeSDA**; promote **Panchayat models and digital literacy for women and youth**.
- ↻ **Cybersecurity and Resilience**: Adopt **Zero-Trust architecture**, **post-quantum security**, and **AI monitoring** in key sectors.



- ➔ **Agriculture and Sustainability:** Implement **National Agri Stack** for **better credit, advisories, and markets.**
- ➔ **Other:** Promote government–industry collaboration and regional **innovation hubs like Visakhapatnam.**

### Related News

**World's first AI minister appointed in Albania:** Diella, an AI bot managing public tenders to ensure transparency and reduce corruption.

### 1.4.3. Immigration and Foreigners (Exemption) Order, 2025

Issued by the **Union Ministry of Home Affairs** under the **Immigration and Foreigners Act, 2025.**

### Key Highlights of the Order

- ➔ **Exemption of Passport/Visa for:**
  - ➔ Indian **armed forces personnel** on duty.

- ➔ Indian, Nepali, and Bhutanese citizens at **designated border points.**
- ➔ **Tibetans with valid registration** or special permits.
- ➔ **Specific religious minorities:** Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians from Afghanistan, Bangladesh, and Pakistan **who entered India by December 31, 2024, even with invalid documents.**
- ➔ Registered Sri Lankan Tamil nationals **who took shelter in India by January 9, 2015.**
- ➔ **Visa exemption also applied to:**
  - ➔ Foreigners with diplomatic or **official passports (where reciprocal agreements exist).**
  - ➔ Nationals eligible for **visa-on-arrival.**
  - ➔ **Certain foreign military** personnel visiting aboard naval warships.



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# INTERNATIONAL RELATIONS



## 2.1. Shanghai Cooperation Organisation (SCO)

### Why in the News?

The 25th SCO Summit 2025 was held in Tianjin, China.

### More on the News

- ➔ Summit ended with the **Tianjin Declaration and SCO Development Strategy until 2035**.
- ➔ SCO Chairmanship for 2025–2026 **passed to Kyrgyz Republic**.
- ➔ **Merged dialogue partners and observers into new category:** SCO partner countries.
- ➔ Laos admitted as **partner country; SCO now has 27 countries (10 members + 17 partners)**.
- ➔ SCO granted **Observer status** with the **Commonwealth of Independent States (CIS)**.
  - ➔ **CIS** was established in 1991 for **trade and military cooperation between the former USSR States** (except Baltic States).

### Key Outcomes of the SCO Summit

- ➔ **Security & Counterterrorism**
  - ➔ Condemned Pahalgam attack, **marking diplomatic success for India**.
  - ➔ Urged adoption of India's **Comprehensive Convention on International Terrorism (CCIT)** for a **global anti-terror framework**.
  - ➔ Agreed to set up **SCO Anti-Drug and Security Threat Centres**.
- ➔ **Global Governance & Trade**
  - ➔ Backed China's **Global Governance Initiative (GGI)** promoting sovereign equality and multilateralism.
  - ➔ Moved toward **SCO Development Bank and Credit Mechanism** as non-dollar alternatives.
- ➔ **Technological Cooperation:** Approved use of **China's BeiDou System** for SCO members **as a GPS alternative**.
- ➔ **Other Outcomes:** Supported India's "One Earth, One Family, One Future" and India proposed a **Civilisation Dialogue Forum (enhances soft power)**.

### Conclusion

Summit **boosted security, trade, and tech ties**, reinforcing SCO's unity and adaptability to global challenges.

## 2.2. India–China Relations

### Why in the News?

Indian PM and Chinese President met on the **sidelines of the SCO Summit 2025 in Tianjin, China**.

### More on the News

- ➔ First PM visit to **China since 2018** indicate **renewed India–China engagement**.
- ➔ 24th round of **Special Representatives' (SRs)** Dialogue recently held, co-chaired by Chinese FM and India's **National Security Advisor**.

## Challenges in India–China Relations

- ➔ **Unsettled Borders:** Lack of agreement along the 3,488 km LAC has caused clashes (**Doklam 2017, Galwan 2020**).
- ➔ **Trade imbalance:** India's trade deficit rose to **USD 99B (2024–25)** from **USD 85B (2023–24)**.
- ➔ **China-led Trilateral Nexus:** New trilateral initiatives with **Bangladesh–Pakistan** and **Pakistan–Afghanistan**;
  - ➔ **CPEC passes through PoK**, violating India's sovereignty.
- ➔ **China's Assertiveness:** Presence in **South Asia** (Maldives, Sri Lanka) raises concerns; **India counters via Quad (India, US, Japan, Australia)**.
- ➔ **Waterpower:** E.g. **Chinese Dam** on Brahmaputra (**Yarlung Zangbo**) gives leverage over India.

## Renewed Engagement between India and China through 24th round of SRs Dialogue:

- ➔ **Border Management:** Follow 2005 Agreement, form Expert & Working Groups, **use diplomatic/military channels to de-escalate**.
- ➔ **Dialogue Mechanisms:** Resume suspended talks and **People-to-People Exchanges in 2026**; focus on partnership.
- ➔ **Economic & Trade Ties:** Boost trade/investment; reopen passes at **Lipulekh, Shipki La, Nathu La**.
- ➔ **75 Years of Ties:** Commemorative events in 2025; **revive Dragon–Elephant ties**; maintain strategic autonomy.
- ➔ **Other Agreements:** Restart direct flights, expand **Kailash Mansarovar Yatra in 2026**; **share hydrological data during emergencies**.



## Significance for India from Renewed Engagement

- ➔ **Trade:** China supplies major **Active Pharmaceutical Ingredients (APIs)**.
- ➔ **Investment:** **Economic Survey 2023–24** proposed to **attract Chinese investment** for Indian manufacturing.
- ➔ **Access to Critical Resources:** China dominates global **rare earth extraction (70%) and processing (90%)**.
- ➔ **Global Influence:** Stable ties enhance roles in **global governance (BRICS, SCO)** and **counterbalance Western influence in WTO, IMF, UN**.
- ➔ **Countering Global Challenges:** E.g. climate change, public health, and energy security.
- ➔ **Regional Peace & Stability:** Reduces border **conflict risk and strengthens South Asia and Indo-Pacific stability**.
- ➔ **India–Russia–China Triangle:** Can expand investment **opportunities and navigate US sanctions**.

## Conclusion

Enhanced dialogue via **BRICS, SCO, trade, water management, and cultural exchanges** can rebuild trust, guided by mutual respect, sensitivity, and interest.

## 2.3. India–Japan Partnership

### Why in the News?

Indian PM visited Japan and **signed key agreements to strengthen India–Japan partnership**.

### Key Outcomes of the Prime Minister's Visit

- ➔ **India–Japan Joint Vision for the Next Decade:** 10-year strategy for cooperation in **8 areas including Economic Partnership, Economic Security, Mobility, Ecological Sustainability, and State–Prefecture Engagements**.
  - ➔ **State–Prefecture partnerships:** Andhra Pradesh–Toyama, Tamil Nadu–Ehime, Uttar Pradesh–Yamanashi, Gujarat–Shizuoka.
- ➔ **Economic Security Initiative:** Strengthen **supply chains in semiconductors, clean energy, telecom, and emerging technologies**.
- ➔ **Space Cooperation:** Joint Lunar Polar **Exploration Mission (Chandrayaan 5)**.



- ➔ **Other Outcomes:** Joint Declaration on **Security Cooperation**; India-Japan **AI Initiative**; **Sustainable Fuel** Initiative.

## Pillars of India-Japan Relations

- ➔ **Status:** Special Strategic & Global Partnership since 2014.
- ➔ **Economic Cooperation:** India-Japan Comprehensive Economic Partnership Agreement 2011 covers trade, investment, IPR, and mobility; bilateral **trade FY 2023-24 US\$ 22.85B etc.**
- ➔ **Security Cooperation:** Agreements include 2025 Joint Declaration, 2015 defense pacts; **2+2 Ministerial Dialogues**; **bilateral exercises JIMEX, Dharma Guardian**; **multilateral MILAN, MALABAR.**
- ➔ **Development Cooperation:** Mumbai-Ahmedabad High Speed Rail; **India-Japan Act East Forum supports Northeast development under Act East Policy and Japan's Free & Open Indo-Pacific vision.**

## Role of India-Japan in Global and Regional Order

- ➔ **Rules-Based Global Order:** Commitment to **free and open Indo-Pacific**; **coordinate via QUAD** on maritime security, critical tech, and resilient supply chains.
- ➔ **Strengthening Multilateralism:** Cooperate in **G4 for UNSC reforms** and support **permanent seat candidacies.**
- ➔ **African Development:** Trilateral cooperation in Africa via **Asia-Africa Growth Corridor (AAGC, 2017)** and Japan-India Initiative for Sustainable Economic Development.
- ➔ **Supply Chain Resilience:** Collaboration with Australia in the **Supply Chain Resilience Initiative** to reduce **over-reliance on single sources.**

## Conclusion

Despite nuclear tech restrictions, **India-Japan partnership is a key Indo-Pacific pillar. Japan counters China via US alliances; India maintains strategic autonomy.** Shared democratic values **drive multilateralism, economic resilience, and inclusive growth.**

## 2.4. News in Shorts

### 2.4.1. New Strategic EU-India Agenda

The European Commission and High Representative adopted a **Joint Communication outlining a 'New EU-India agenda'**.

### Key highlights of New Strategic EU-India Agenda

- ➔ **Aim:** Enhance prosperity, security, and address global challenges together.
- ➔ **5 Core Pillars:**
  - ➔ **Prosperity and Sustainability:**
    - ◆ Promote **growth, jobs, industry, and decarbonization.**
    - ◆ Finalize FTA (2025), conclude Investment **Protection Agreement.**
    - ◆ Strengthen **Trade and Technology Council (TTC)**, create Blue Valleys.
    - ◆ EU-India **Task Force on Green Hydrogen**; align **net-zero targets.**
  - ➔ **Technology and Innovation:**
    - ◆ Support emerging **technologies via Innovation Hubs.**
    - ◆ Develop digital environment, including **Digital Public Infrastructure.**
  - ➔ **Security and Defence:**
    - ◆ Address **threats, terrorism, transnational crime.**
    - ◆ Coordinate in **Indo-Pacific**; **promote rules-based maritime order.**

- ➔ **Connectivity and Global Issues:** E.g. Collaborate via **EU's Global Gateway and MAHASAGAR.**
- ➔ **Enablers:** Boost **skills mobility, knowledge exchange, business, and institutional cooperation.**

Closer EU-India cooperation is **crucial amid weaponized dependencies, unilateral trade practices, and rising global economic asymmetries.**


### 2.4.2. India-Israel


**Israel became the first OECD country to sign a BIT with India; the earlier 1996 BIT was terminated in 2017.**

### Key Features of India-Israel BIT

- ➔ **Boost to Investment:** Bilateral investments currently **USD 800 million.**
- ➔ **Investor Protection:** Ensures minimum standard of treatment **while preserving State regulatory rights.**
- ➔ **Dispute Resolution:** **Arbitration mechanism** to facilitate trade and investment growth.

### Bilateral Investment Treaty (BIT)

 **Definition:** Reciprocal agreement between two States to promote and protect investments.

 **Legal Basis:** Covered under **Art. 38(1)(a), ICJ Statute**, as part of international law.

 **India's Model BIT:** New text adopted in 2015, replacing 1993 version.

 **Recent BITs:** Uzbekistan (2024), UAE (2024), Kyrgyzstan (2025).

## Evolving co-operation between India-Israel

- ➔ **Economic:** Bilateral trade **USD 6.53B (FY 2023-24, excluding defense)** with India's export surplus.
- ➔ **Regional Cooperation:** I2U2 Partnership summit (2022) with India, Israel, UAE, US.
- ➔ **Innovation & Science:** India-Israel Industrial R&D and Innovation Fund (I4F) 2023-27.
- ➔ **Defence:** Co-developed **Barak-8 missile, regular port calls in Haifa.**
- ➔ **Other:** Cultural exchange, **health & medicine cooperation, etc.**

### 2.4.3. India-Singapore

Prime Minister of Singapore **paid an official visit** to India which marked **60 years of India-Singapore diplomatic relations**

#### Key Outcomes

- ➔ **Economic:** Review trade agreement (CEPA), support semiconductors, boost capital markets, **space collaboration (IN-SPACe & Singapore).**
- ➔ **Defence & Security:** Cooperate in quantum computing, AI, automation, unmanned vessels.
- ➔ **Digitalisation:** Strengthen fintech, cybersecurity, capital markets; **expand UPI-PayNow.**
- ➔ **Skills:** National Centre of Excellence in **Advanced Manufacturing, Chennai.**
- ➔ **Sustainability:** Green initiatives, **green hydrogen, ammonia, urban water, civil nuclear.**
- ➔ **Connectivity:** Green and **Digital Shipping Corridor.**
- ➔ **Healthcare:** Digital health, **disease surveillance.**
- ➔ **People-to-People:** Social, **cultural, and community exchanges.**

### 2.4.4. Pakistan and Saudi Arabia Strategic Mutual Defence Agreement

The agreement develops **defence cooperation and establishes that aggression against one is aggression against both.**

#### Impacts of the Agreement

- ➔ **Nuclear Risk:** Extends Pakistan's umbrella to Saudi Arabia in **tense West Asia.**
- ➔ **Power Shift:** Boosts Saudi defence vs Iran, Houthis, Israel; **signals reduced US role;** opens space for China.
- ➔ **India Impact:** Pakistan may use pact as deterrence against **India and cross-border terrorism.**

#### India-Saudi Arabia Relations

- ➔ **Strategic:** Partnership formalized in **2010 (Riyadh Declaration).**
- ➔ **Economic:** India is **Saudi Arabia's 2nd largest trade partner;** Saudi Arabia is India's 5th.
  - ➔ **Bilateral trade (2023):** USD 42.98B; India net importer.

➔ In **2024** Saudi Arabia **contributed 6.7% of India's inward remittances.**

➔ **Energy:** Saudi Arabia is India's **3rd largest** crude oil supplier.

### 2.4.5. Palestinian State Recognised by Multiple Nations

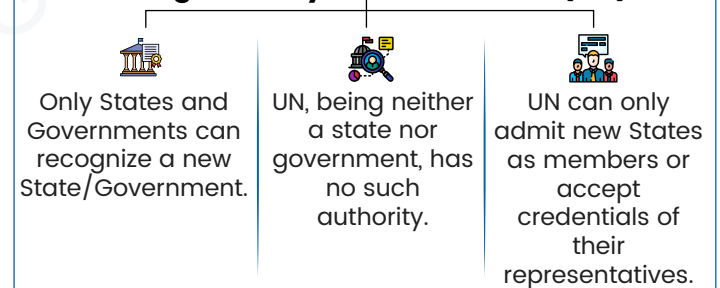
Four Western nations—**UK, Canada, Portugal, and Australia**—joined over **140 UN members in recognizing Palestine.**

➔ **India:** Recognized Palestine in 1988; **recently voted in favor of the UNGA resolution endorsing the 'New York Declaration' for a peaceful Two-State Solution.**

#### Recognition of States

- ➔ Process by which a **state acknowledges another entity as a state.**
- ➔ **Montevideo Convention (1933) Criteria:** Permanent population, defined territory, government, and capacity for international relations.
  - ➔ **Effects of State Recognition**
    - ➔ Can establish **diplomatic relations and treaties** with other states.
    - ➔ **Gains rights and privileges** of international statehood.
    - ➔ Eligible for UN membership.
      - ◆ Palestine is currently a UN **"Permanent Observer State,"** not a full member.

#### Recognition by United Nations (UN)



### 2.4.6. New initiatives for Global AI Governance

Recently, the UNGA announced **two mechanisms to promote international AI governance**, building on the **"Pact for the Future" and the "Global Digital Compact."**

#### About the new mechanisms

- ➔ **Independent International Scientific Panel on AI:** Promotes scientific understanding of **AI opportunities, risks, and impacts.**
- ➔ **Global Dialogue on AI Governance:** Platform for **international cooperation, sharing best practices, and inclusive discussions on AI governance.**

#### Other UN Mechanisms for Global AI Governance

- ➔ **Pact for the Future:** Adopted in September 2024, **guiding SDGs and emerging challenges.**

- ➔ **Global Digital Compact:** Annexed to the **Pact, a framework for digital cooperation** and AI governance.
- ➔ **AI for Good Global Summit:** Identifies and **scales AI applications** for SDGs.

### 2.4.7. Convention on the Prevention and Punishment of the Crime of Genocide

The UN-mandated **Independent International Commission of Inquiry** analyzed **Israel's conduct** in Gaza under the **Genocide Convention**.

#### About Genocide Convention

- ➔ **Defines genocide** as acts intended to **destroy, in whole or in part, a national, ethnic, racial, or religious** group, in war or peace.
- ➔ **Membership:** 41 signatories, 153 parties; India signed in 1949 and ratified in 1959.
- ➔ **International Court of Justice:** Adjudicates cases on **interpretation and application** of the convention.

### 2.4.8. International Criminal Court (ICC)

**Burkina Faso, Mali, and Niger** recently withdrew from the ICC, accusing it of being **"a tool of neo-colonial repression controlled by imperialist powers."**

#### About ICC (HQ: Hague, Netherlands)

- ➔ World's **first permanent international criminal court**.
- ➔ **Origin:** Founded by Rome Statute (**adopted 1998, effective 2002**).
- ➔ **Jurisdiction:** Investigates, prosecutes, and tries individuals for **Genocide, Crimes against Humanity, War Crimes, and Crime of Aggression**.
- ➔ **Membership:** 125 countries; **India, Israel, US, Russia, and China are not parties**.
- ➔ **Funding:** Mainly by States Parties.
- ➔ **Enforcement:** ICC decisions are binding.

**Issues with International Criminal Court (ICC):** Perceived Bias, Limited Jurisdiction, Political Resistance, Weak Enforcement.

### 2.4.9. Scarborough Shoal

Philippines strongly **condemned China's establishment** of a nature reserve at **Scarborough Shoal**.

#### About

- ➔ Scarborough Shoal (**Huangyan Island in China, Panatag Shoal in the Philippines**) is a small atoll in the South China Sea.
- ➔ **Both China and the Philippines** claim it as part of their territory.



### 2.4.10. Bagram Air Base

The United States is in talks with Afghanistan **to regain control of Bagram Air Base**.

#### About Bagram Air Base

- ➔ **Largest air base** in Afghanistan, north of Kabul.
- ➔ Built by **Soviets in the 1950s**; became a **frontline between Taliban and Northern Alliance** after Soviet withdrawal.
- ➔ Post-2001, served as **US centre for war on terror** in Afghanistan.
- ➔ US and NATO troops **withdrew in 2021**.



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## 3.1. Goods and Services Tax (GST) Reform

### Why in the News?

The **56th GST Council meeting** approved **Next-Gen GST Reform (GST 2.0)** with a **simplified two-slab rate structure for rationalization**.

### Evaluation of GST 1.0

- ➔ **About GST:** A unified indirect tax on **goods and services introduced by the 101st Constitutional Amendment Act, 2017**.
- ➔ **Components:** Central GST (CGST), State GST (SGST) / Union Territory GST (UTGST) for intra-state; Integrated GST (IGST) inter-state, **collected by Centre and shared with states**.
- ➔ **Destination-Based Tax:** Revenue accrues to the **state/UT of consumption**.
- ➔ **Significance:** GST has unified 17 taxes and 13 cesses, ended tax-on-tax, has doubled collections, **and expanded the taxpayer base by over two times since 2017**.

### GST 2.0: Key Reforms and Recommendations

- ➔ **New Rate Structure:** Two slabs—**5% and 18% replacing 12% and 28%**; **40% Special De-Merit Rate on sin/luxury goods replacing compensation cess**, median tax rate moves from 12% to 5%.
- ➔ **Dispute Resolution:** GSTAT to handle appeals by **Sept 2025**.
- ➔ **Registration Ease:** **Optional simplified GST registration** for small/low-risk firms from Nov 1, 2025; **simplified system for small e-commerce sellers**.
- ➔ **Export Benefits:** Place of supply for **intermediary services** based on recipient's location, aiding export benefit claims.

### Sectoral Relief

- ➔ **FMCG/Essentials (18% → 5%):** Hair oil, soaps, shampoos, toothpaste.
- ➔ **Health (18% → exempt/5%):** No GST on **life and health insurance**; 36 lifesaving drugs at Nil rate, others at 5%.
- ➔ **Key Goods (28% → 18%):** Air conditioners, dishwashers, TVs (uniform 18%), and cement.
- ➔ **Transport (28% → 18%):** Small cars (Petrol/LPG/CNG ≤1200cc; Diesel ≤1500cc, under 4000mm) and bikes ≤350cc.

### Benefits of the Recent Changes

- ➔ **Social Protection:** Enhances **healthcare access and financial security**.
- ➔ **Lower Prices, Higher Demand:** Reduced **costs boost** consumption and savings.
- ➔ **MSME Support:** Lower input rates **reduce production costs and improve competitiveness**.
- ➔ **Ease of Living:** Simplifies **compliance and dispute resolution**.
- ➔ **Wider Tax Net:** Encourage **compliance and expand revenue base**.

### Key Challenges in recent changes

- ➔ **Revenue Loss:** Estimated **₹48,000 crore shortfall** (FY23–24 base).
- ➔ **Loss of Input Tax Credit:** **No input tax credit** on healthcare and insurance; **insurers lose GST set-off, raising operational costs**.
- ➔ **Compliance & Tech Issues:** Businesses face transition **hurdles price revision and billing upgrades**.
- ➔ **Inverted Duty Structure:** Inputs taxed **higher than outputs** (e.g., bicycles 5% vs. inputs 18%).
- ➔ **Anti-Profiteering Gap:** With National Anti-Profiteering Authority merged into CCI (2022), **no dedicated mechanism to ensure rate cuts benefit to consumers under GST 2.0**.

### 3.1.1. GSTAT and GSTAT e-Courts Portal launched

#### About Goods and Services Tax Appellate Tribunal (GSTAT)

- ➔ Established under **Section 109 of the CGST Act, 2017** as the **second appellate authority**; first appeal lies within the **tax administration**.
- ➔ **Purpose:** Provides an **independent forum to hear appeals** against **GST Appellate Authority** orders.
- ➔ **Benches:** One Principal Bench in New Delhi and 31 State Benches across 45 locations for nationwide access.
- ➔ **Structure:** Each Bench includes **2 Judicial Members, 1 Technical Member (Centre), and 1 Technical Member (State)**.
- ➔ **Significance:** Embodies **cooperative federalism** and ensures **impartial, uniform adjudication**.

#### About GSTAT e-Courts Portal

- ➔ Created by **Goods and Services Tax Network (GSTN)** with **National Informatics Centre (NIC)** that lets taxpayers file appeals, track cases, and join hearings online for efficient **GST dispute resolution**.

## 3.2. India's Semiconductor Ecosystem

#### Why in the News?

A **2 nm chip is being designed in India for the first time** after inauguration of ARM's new semiconductor design office in Bengaluru.

#### Why is 2nm chip significant?

- ➔ It uses **ultra-small transistors that increase processing power**, reduce size, and **lower energy use**.
- ➔ This makes **devices lighter and more efficient**, while also holding strategic value for **national security, space, and defence applications**.
- ➔ The industry may hit **USD 1 trillion by 2030, dominated by Taiwan, South Korea, Japan, China, and the U.S.** Taiwan alone produces **60% of semiconductors and 90% of advanced chips**.
  - ➔ India aims to **become a reliable partner in diversifying global supply chains**.

#### Major ongoing Initiatives for Semiconductor Industry in India

- ➔ **India Semiconductor Mission (ISM, 2021):** Offers up to 50% fiscal support for fabs and display units; promotes compound semiconductors, ATMP/OSAT, and **DLI incentives for startups (₹15 crore)**.
- ➔ **Semicon India 2025:** Global expo themed "**Building the Next Semiconductor Powerhouse**", co-hosted by ISM.
- ➔ **Skilling & Talent:** AICTE VLSI curriculum upgrade, **NIELIT's SMART Lab (1 lakh engineers)**, **C2S and Future Skills programs for VLSI, embedded, and chip design training**.
- ➔ **Global Partnerships:** India-U.S. iCET deepens cooperation **on critical tech and semiconductors**.
- ➔ **Design & R&D:** New 3 nm design centres (Noida, Bengaluru); **focus on SiC & 3D Glass packaging; Vikram 32-bit processor marks India's first space-grade microprocessor**.

#### Challenges in Semiconductor ecosystem

- ➔ **Limited Core IP & Indigenous Development:** Few patents in advanced **chips, AI, or quantum computing**.
- ➔ **Geopolitical Risks:** Export controls (US) **may restrict access to critical tech and equipment**.
- ➔ **Focus on Mature Fabs:** Most Indian fabs **target >28nm nodes, while global demand shifts to 3nm, 5nm**.
- ➔ **Weak Supply Chain:** Lack of domestic sources for **silicon wafers, specialty chemicals, and ultrapure gases**.
- ➔ **High Costs:** **Design costs are prohibitive** for many startups.
- ➔ **Other Issues:** Fragmented ecosystem, talent shortage, **slow execution etc.**

#### Way Ahead

- ➔ **Boost Indigenous R&D & IP:** Increase funding and **strengthen IP creation and enforcement**.
- ➔ **Leverage Geopolitics:** Position India as a secure **investment hub; join alliances like U.S.-led "Chip 4."**
- ➔ **Support Advanced Nodes:** Incentivize joint **ventures and tech transfers**.
- ➔ **Enhance Manufacturing Infrastructure:** Set up refurbished **fabs for training and production**.
- ➔ **Increase Raw Material Production:** Build local plants for **specialty chemicals; fast-track approvals**.
- ➔ **Promote Collaboration:** Connect design houses, fabs, and **testing units to complete the value chain**.
- ➔ **Develop Skilled Workforce:** Update curricula and **establish training centers** with hands-on fab experience.



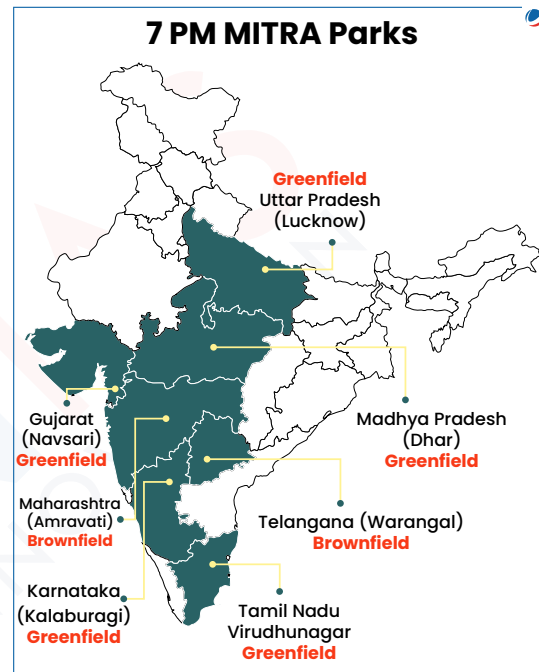
### 3.3. Prime Minister Mega Integrated Textile Region and Apparel (PM MITRA) Scheme

#### Why in the News?

The Prime Minister laid the **foundation stone of PM MITRA Park in Dhar, Madhya Pradesh.**

#### About PM MITRA Scheme

- ➔ **Launched:** By Ministry of Textiles with **₹4,445 crore allocation (2021–22 to 2027–28).**
- ➔ **Objective:** Establish **large-scale textile hubs with complete value-chain in one location.**
- ➔ **Vision:** “5F” (Farm → Fibre → Factory → Fashion → Foreign), to scale and integrate the textile ecosystem.
- ➔ **Goals:** Attract ₹70,000 crore investment; **create ~20 lakh jobs.**
- ➔ **Eligibility & Selection for States:** Contiguous, encumbrance-free land ≥1000 acres, strong textile policy, traditional textile strengths.
- ➔ **Structure & Implementation:**
  - ➔ **Developed under Special Purpose Vehicle:** Centre (49%) + State (51%).
  - ➔ **Operates largely as PPP with a master developer for infrastructure**
- ➔ **Financial Support & Incentives:**
  - ➔ **Development Capital Support (DCS):** Up to 30% of project cost
  - ➔ **Greenfield:** max ₹500 crore, Brownfield: up to ₹200 crore
  - ➔ **Competitiveness Incentive Support (CIS):** Up to ₹300 crore per park for early setup, turnover, etc.
  - ➔ **Convergence with other schemes** for power, skill, logistics.
  - ➔ **Commercial development:** Up to **10% of park area** allowed to generate revenue for sustainability.



#### Why was PM MITRA Scheme launched?

- ➔ **Fragmented Value Chains:** Most units handle **only one or two stages, increasing costs.**
- ➔ **Infrastructure Gaps:** Lack of modern processing, effluent treatment, **labs affect export competitiveness.**
- ➔ **Obsolete Technology & Low Productivity:** Older machinery **raise costs; plug-and-play factories attract investors.**
- ➔ **Underinvestment & Poor Scale:** Existing schemes have not achieved **global competitiveness.**
- ➔ **Multiplier Effect:** Integrated parks boost jobs and **raw material linkages create broad economic impact.**

#### Overview of India's Textile and Apparel Sector

- ➔ **Global Standing:** **2nd largest** manufacturer, **6th largest** exporter (3.91% share).
- ➔ **Economic Contribution:** **~2.3% of GDP, 13%** of industrial output, **12%** of exports (US\$34.4B, 2023–24).
- ➔ **Employment:** Over **45 million** directly employed, mostly women and rural population; **2nd largest employment** sector after agriculture.
- ➔ **Inclusive:** **~80% of capacity** in MSME clusters.

**Other Key Government Initiatives & Supports:** Production Linked Incentive Scheme, Samarth Scheme, Amended Technology Upgradation Fund Scheme, Kasturi Cotton, National Technical Textiles Mission, FDI (100% allowed via automatic route)

### 3.4. National Logistics Policy, 2022

#### Why in the News?

The Union Ministry of Commerce and Industry marked the **third anniversary of the National Logistics Policy (NLP), 2022.**

#### About National Logistics Policy (NLP), 2022

- ➔ **Genesis:** Launched to complement **PM Gati Shakti National Master Plan (PMGS-NMP).**

- ➔ **Vision:** Build a **tech-enabled, integrated, cost-efficient, resilient, and sustainable logistics ecosystem** for inclusive growth.
- ➔ **Focus:** **Soft infrastructure and process improvements**, service efficiency etc. (While **PMGS-NMP focuses fixed infrastructure**).
- ➔ **Targets:**
  - ➔ **Cut logistics costs** to global benchmarks by 2030.
  - ➔ **Enter top 25 in Logistics Performance Index** by 2030.
  - ➔ Establish **data-driven decision support**.
- ➔ **Implementation:** Via **Comprehensive Logistics Action Plan (CLAP)** across 8 key action areas (infographic).

## Key achievements under the National Logistics Policy (2022–2025)

- ➔ **Logistics Ease Across Different States (LEADS) Index:** Promotes competitive federalism; supports India's rise in **World Bank Logistics Performance Index 2023**.
  - ➔ LEADS 2025 adds **corridor performance** assessment (**journey time, truck speed, waiting periods**) and **API-based speed evaluation**.
- ➔ **Unified Logistics Interface Platform (ULIP):** Integrates 30+ digital systems; **enabled 160+ crore digital transactions**.
- ➔ **Digital Integration:** E-Logs portal onboarded **resolved 100 of 140 stakeholder issues**.
- ➔ **Regional Logistics:** E.g. 27 States/UTs formulated State Logistics Policies.

## Other initiatives to Improve Logistics Sector in India

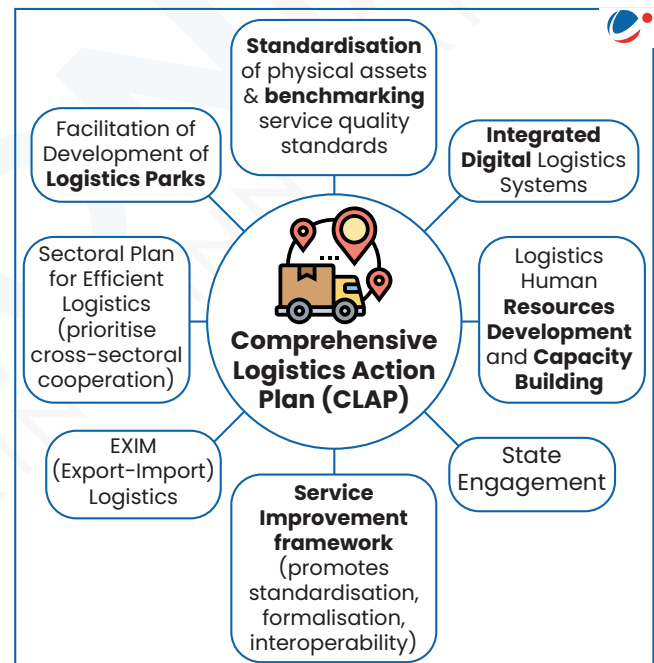
- ➔ **Infrastructure Status:** Grants cheaper, **long-term funding like roads and railways**.
- ➔ **SMILE Programme (with ADB):** Supports **Integrated State & City Logistics Plans, enhancing multimodal infrastructure**.
- ➔ **Logistics Data Bank (LDB) 2.0:** Real-time container tracking, **including export container tracking on high seas**.
- ➔ **Other Initiatives:** Multi-modal Logistics Parks (Bharatmala), **ULIP, Dedicated Freight Corridors, etc.**

## Challenges still persist related to Logistics sector

- ➔ **Modal Imbalance:** Rail 18%, road 71% (freight traffic).
- ➔ **Unorganized Sector:** ~90% fragmented small players dominate.
- ➔ **Digital Literacy:** Uneven adoption among small firms and operators, especially outside cities.
- ➔ **Regulatory Complexity:** Overlapping state/Centre rules, inconsistent GST application, varied licensing norms.

## Way Forward

- ➔ **Efficient Modal Mix:** Expedite **Dedicated Freight Corridors** to lower costs and enhance efficiency.
- ➔ **Evolving Formats:** Align **logistics and warehousing** with **omnichannel retail**.
- ➔ **Public-Private Partnerships:** Partner with **startups and fleet operators** to develop affordable digital tools.
- ➔ **Technological Integration:** Adopt automation to **improve operations and data accuracy**.



## 3.5. SARFAESI Act, 2002

### Why in the News?

The Supreme Court highlighted **anomalies in the SARFAESI Act, 2002 and SARFAESI Rules, 2002**.

### Key Observation of Supreme Court

- ➔ **Contradiction:**
  - ➔ **Section 13(8) (post-2016):** Borrower **loses the right to repay and recover** the asset once the auction notice is published.
  - ➔ **Rules 8 & 9:** Borrowers can redeem the **asset until the auction date**.

- ➔ **Court's Interpretation:** "Publication of notice" under Section 13(8) aligns with procedural steps in the Rules; borrower's redemption right ends only after proper notice (newspaper, personal service, email, etc.).

## Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002

- ➔ **Objectives:**
  - ➔ **Recover banks' and financial institutions' NPAs** efficiently; cooperative banks included.
  - ➔ **Allows sale of residential/commercial assets** at auction if borrower defaults.

### Key Features of the Act

- ➔ **NPA Classification & Notice:** Loans classified as **NPAs per RBI; 60-day demand notice mandatory before recovery.**
- ➔ **Recovery Methods:**
  - ➔ **Securitisation:** Stressed assets repackaged into **tradable securities** for risk distribution.
  - ➔ **Asset Reconstruction:** To buy **NPAs from banks** to clean balance sheets.
  - ➔ **Court-Free Enforcement:** Secured creditors can **take possession/sell assets (except agricultural land)** under Section 13.
- ➔ **Central Database:** Registry for **securitisation/reconstruction transactions.**
- ➔ **Borrower Rights:** Can approach **Debt Recovery Tribunal (DRT)** for grievances.
- ➔ **Working:** Post-NPA declaration, **borrowers get 60 days to repay; failure triggers bank action.**

### Key Issues/challenges associated with the SARFAESI Act

- ➔ **Exclusion of Certain Borrowers:** Loans under ₹1 lakh or 80% repaid not covered.
- ➔ **Procedural/Judicial Delays:** Borrowers approach **DRTs to stay possession** proceedings.
- ➔ **Asset Recovery Complexities:** Difficulties in **identifying/liquidating collateral**, e.g., third-party transfers.
- ➔ **Sub-optimal ARC Performance:** Banks recovered **only ~14.3% of stressed assets** sold to ARCs (FY04–FY13).
- ➔ **Socio-Economic Impact:** Forced dispossessions affect **livelihoods, increase indebtedness, etc.**
- ➔ **Other Issues:** Borrowers' rights infringed, **asset valuation disputes, exclusion of unsecured creditors.**

**Other initiatives for Securitisation and Reconstruction of Financial Assets/Resolving NPAs:** Insolvency and Bankruptcy Code (IBC), 2016, RBI Prudential Framework, 2019, National Asset Reconstruction Company Limited (NARCL), 2021

### Way Forward

- ➔ **Harmonise Law and Rules:** Ministry of Finance to **address anomalies highlighted by SC.**
- ➔ **Align with IBC:** Create a cohesive framework **for stressed asset resolution.**
- ➔ **Technological Integration:** Use **AI and data analytics** for asset valuation and monitoring.
- ➔ **Specialized DRTs:** Strengthen tribunals **to expedite dispute resolution.**
- ➔ **International Best Practices:** Adopt models like the **UK Insolvency Act.**

## 3.6. Pradhan Mantri Matsya Sampada Yojana

### Why in the News?

**Pradhan Mantri Matsya Sampada Yojana (PMMSY)** completed 5 years of its launch.

### About PMMSY

- ➔ **Genesis:** Launched in 2010 by **Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying.**
- ➔ **Objective:** Address gaps in fish production, **productivity, quality, technology, infrastructure, and marketing.**
- ➔ **Duration:** FY 2020–21 to FY 2024–25, **extended to FY 2025–26.**
- ➔ **Nodal Agency:** NFDB implements **training, awareness, and capacity-building.**
- ➔ **Structure & Components:** Two separate components
  - ➔ **Central Sector (CS):** Fully funded & implemented by Centre.
  - ➔ **Centrally Sponsored Scheme (CSS):** Partially funded by Centre, implemented by States.
    - ◆ Focus on **production, infrastructure, and fisheries management.**

## Targets and Achievements:

Area	Targets	Achievements
<b>Fish Production and Fish Productivity</b>	Increase aquaculture from 3 → 5 tonne/ha and per capita consumption 5–6 kg → 12 kg	Aquaculture reached <b>4.7 tonne/ha</b> ; per capita consumption increased to <b>12–13 kg</b> ; India emerged as <b>2nd largest fish producer (~8% global share)</b> .
<b>Economic Value Addition</b>	Reduce post-harvest losses 20–25% → 10%	Post-Harvest losses reduced to <b>10–15%</b> .
<b>Enhancing Income and Employment Generation</b>	Generate <b>55 lakh jobs</b>	<b>58 lakh jobs</b> created in fishing & aquaculture (Dec 2024)

## Important Key Initiatives under PMMSY

- ➔ **Women Empowerment:** Financial support up to ₹1.5 crore/project for beneficiaries and entrepreneurs.
- ➔ **Climate Resilience:** 100 coastal villages designated as **Climate Resilient Coastal Fishermen Villages**.
- ➔ **Productivity Boost:** Through **Biofloc Technology** for sustainable aquaculture.
- ➔ **Post-Harvest & Marketing:** 2,195 Fish Farmers Producer Organizations supported with ₹544.85 crore.
- ➔ **Value Chain & Resilience:** PMMKSSY launched in 2024 for 4 years.

## Challenges persist in Fisheries Sector

- ➔ **Governance:** Inland fisheries face **inconsistent laws and neglect**.
- ➔ **Global:** Exporters pressured by **transport and shipping disruptions**.
- ➔ **Disease:** Shrimp farming threatened by **Enterocytozoon hepatopenaei (EHP), a microsporidian parasite**.
- ➔ **Environmental:** Disasters like **MSC Elsa-3 shipwreck off Kochi coast** damage marine life.

## Way Forward

- ➔ **Research-Farmer Partnership:** Training by **ICAR-CIBA** on shrimp disease management.
- ➔ **Sustainability & Global Market:** Eco-labelling for **Lakshadweep tuna** to boost artisanal fishers' income.
- ➔ **Parliamentary Recommendations:**
  - ➔ Set up **Indian Council for Fishery and Aquaculture Research (ICFAR)** for focused research and sectoral challenges.
  - ➔ Enforce **Minimum Legal Mesh Size (MLS)** and ban destructive fishing.

## Other Important initiatives taken for Fisheries Sector



**Blue Revolution Scheme** was launched in FY 2015-16 for increasing fisheries production and productivity.



Creation of **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** for fisheries sector in 2018.



**National Policy on Marine Fisheries (NPMF, 2017)** places a strong emphasis on sustainability.



**Geographic Information System (GIS) technology** for mapping marine fish landing centers and fishing grounds, aiding in effective resource management.

## 3.7. News in Shorts

### 3.7.1. State Finances 2022–23 Report

The Comptroller and Auditor General released a **first-of-its-kind report analyzing fiscal trends for all 28 states over 2013–14 to 2022–23**.

### Key Findings

- ➔ **State Debt:** 22.17% of GDP in 2022-23; **Fiscal Responsibility and Budget Management (FRBM)** target **20% by 2024-25**.
- ➔ **Debt-to-GSDP:** Highest in Punjab 40.35%, **Nagaland 37.15%, West Bengal 33.70%**.

- ➔ **Fiscal Deficit:** All states in deficit; **Gujarat 0.76%, Himachal Pradesh 6.46%; FRBM target 3.5%**.
- ➔ **Gaps in Revenue Capacity:** States' Own Tax Revenue (SOTR) ranges from **Haryana 70% to Arunachal Pradesh 9%**.

### Why is Public Debt High in Many Indian States?

- ➔ Rising Subsidies (e.g. Farm loan waiver), High Committed Expenditure (e.g. Interest, salaries constitute 42% of revenue), Weak Revenue Mobilization.

### 3.7.2. Annual Survey of Industries (ASI) Results for 2023-24 released

- **Released by:** Ministry of Statistics and Programme Implementation (MoSPI).
- **Purpose:** Provides insights on manufacturing industry growth, structure, output, value added, employment, and capital formation.
- **Coverage:** Factories under **Factories Act 1948, the Bidi and Cigar Workers (Conditions of Employment) Act, 1966, and electricity undertakings not registered with the Central Electricity Authority (CEA)**; excludes defence, oil depots, railway workshops, gas storage, etc.
- **Preparation:** Results compiled at state and major industry levels.

#### Key highlights of the survey

- **Top 5 Gross Value Added (GVA) Industries:** Basic metals, Motor vehicles, Chemicals & products, Food products, Pharmaceuticals.
- **Top 5 States by Employment:** Tamil Nadu, Gujarat, Maharashtra, Uttar Pradesh, Karnataka.
- **Growth Indicators:** GVA +11.89%, industrial output +5.8%, average emoluments per worker +5.6% (2022-23 vs 2023-24).

### 3.7.3. Industrial Park Rating System (IPRS) 3.0

- **Launch:** Union Ministry of Commerce and Industry; **pilot in 2018, IPRS 2.0 in 2021, IPRS 3.0 expands framework.**
- **New Parameters:** Sustainability, green infrastructure, logistics connectivity, digitalization, skill linkages, and tenant feedback.
- **Objective:** Strengthen **India's industrial ecosystem and enhance competitiveness.**
- **Developer:** Department for Promotion of Industry and Internal Trade (DPIIT) with support from the **Asian Development Bank (ADB).**
- **Categorisation:** Parks classified as **Leaders, Challengers, and Aspirers based on performance indicators.**
- **Integration:** Part of **India Industrial Land Bank, a GIS-based one-stop platform mapping all industrial infrastructure nationwide.**

#### About Industrial Parks

- **Definition:** Economic zones developed to host clusters of industrial activity (**e.g., Narela Industrial Area**).
- **Other Names:** Special Economic Zones (SEZs), enterprise zones, etc.
- **Scale in India:** Over **4,000 operational** industrial parks.
  - ➔ **Development Initiatives:** 20 plug-and-play industrial parks and smart cities are being developed under the **National Industrial Corridor Development Programme (NICDP).**

### 3.7.4. Ministry of Finance Gives infrastructure status to Large Ships

**Large Ships Included in Infrastructure Harmonized Master List (HML).** It is now part of **'Transport and Logistics' category** to boost shipbuilding and maritime industry.

#### ➤ Definition of Large Ship:

- ➔ Commercial vessels with gross tonnage (GT)  $\geq$  10,000 under Indian ownership and flag; or
- ➔ GT  $\geq$  1,500, built in India, under Indian ownership and flag.

- **Significance:** Access to easier infrastructure lending, larger ECB limits, viability gap funding, and tax incentives.

#### Status of India's Shipping Sector

- **Foreign Dependence:** 95% of trade on foreign ships; ~\$75 billion paid annually for services.
- **Shipbuilding Share:** Only **0.06%** of global total.
- **Target:** Among top five shipbuilders by 2047; **₹54 trillion investment planned** under Maritime Amrit Kaal Vision 2047.
- **Issues:** Capital constraints, high borrowing costs, ageing fleet, tax anomalies, and skill gaps.

### 3.7.5. Cabinet Approves Package to Boost Shipbuilding

#### Shipbuilding Package Highlights

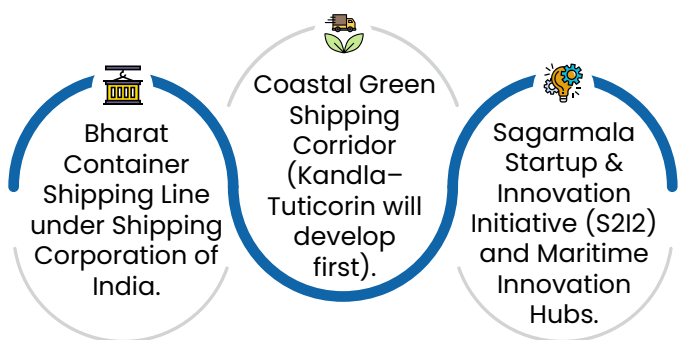
#### ➤ Four-Pillar Approach:

- ➔ Strengthen domestic capacity;
- ➔ Improve long-term financing;
- ➔ Promote greenfield & brownfield shipyard development;
- ➔ Enhance technical skills, and implement legal, tax, and policy reforms.

#### ➤ Key Components:

- ➔ **Shipbuilding Financial Assistance Scheme** extended to incentivize shipbuilding
- ➔ **Maritime Development Fund (MDF):** Long-term financing for shipbuilding, clusters, repairs etc.
- ➔ **Shipbuilding Development Scheme (SbDS):** Expand domestic capacity to 4.5 million Gross Tonnage annually

### Planned Initiatives for Strengthening Shipping Sector



### 3.7.6. Advance Authorisation Scheme

Union Government has **extended the Export Obligation Period** for products under this scheme to provide relief to **textile exporters**.

#### About Advance Authorisation Scheme

- **Meaning:** Export incentive allowing duty-free import of inputs used in **export products, exempt from QCO compliance.**
- **Coverage:** For manufacturer exporters or merchant exporters with supporting manufacturers.
- **Input Norms:** Based on predefined quantity norms for each export product.

### 3.7.7. BHARATI Initiative

APEDA has launched **BHARATI** to support **Agri Food Startups** and boost India's agri Food Export.

#### About BHARATI (Bharat's Hub for Agritech, Resilience, Advancement and Incubation for Export Enablement)

- **Objectives:** Support 100 agri-food startups and target \$50 billion exports by 2030 through a **3-month acceleration programme.**
- **Attract tech-driven startups** using AI, blockchain, IoT, and agri-fintech.
- Promote innovation in **GI-tagged, organic, superfood,** processed, livestock, and AYUSH products.
- **Address export issues** like product development, quality, perishability, and logistics.

#### Role of Agri-Startups in Enhancing Agri-Exports

- **Streamlined Supply Chains:** Reduce **post-harvest losses** via cold chains etc.
- **Technology Use:** Leverage **Big Data, IoT** for **precision farming** and pest/weather management.
- **Quality & Processing:** Provide inputs for export-ready produce.
- **Market Linkages:** Align production **with demand for timely export** fulfillment.

### 3.7.8. Global Innovation Index (GII) 2025

- **About:** Released by World Intellectual Property Organisation, **assessing 139 economies on investment, technology, adoption, and socio-economic impact.**
- **Launched:** 2007; recognized by UN General Assembly as **key Science, Technology and Innovation (STI) policies.**

#### Key Highlights

- **India's Rise:** Ranked 38th, up from 81st (2015); along with Vietnam a 15-year overperformer.

- **Top Economies:** Switzerland, Sweden, USA, South Korea, Singapore.
- **Innovation Clusters:** Top – Shenzhen–Hong Kong–Guangzhou; India's clusters in top 100 – Bengaluru (21st), Delhi (26th), Mumbai (46th), Chennai (84th).
- **India's Innovation Initiatives:** Startup India, Atal Innovation Mission, NIDHI etc.

### India's Innovation Landscape



#### Knowledge and Technology Outputs

- ▶ International patent filings: 22.2% (2023–2024)
- ▶ Scientific publications: 7.7% short-term, 7.3% long-term



#### Creative Outputs

- ▶ Improved from 49th (2023) 43rd (2024) → 42nd (2025)
- ▶ Strong cultural & creative services exports (13th globally)



#### India's Innovation Edge

- ▶ ICT Services Exports: 1st globally
- ▶ Domestic Market Scale: 3rd globally
- ▶ Venture Capital Ecosystem: 4th in late-stage VC deals
- ▶ Unicorn Valuation: 11th globally
- ▶ Intangible Asset Intensity: 8th globally
- ▶ Innovation Efficiency: High output-to-input ratio

### 3.7.9. World Trade Report 2025

The report released by the **WTO** recognizes AI as a **transformative technology reshaping global wealth and income.**

#### How AI can act as catalysts for Trade and Inclusive Growth?

- **Lower Costs & Higher Productivity:** Optimized logistics and compliance **may raise trade.**
- **Reduced Skill Premium:** Automation **lowers wage gap** between skill levels by 3–4%.
- **Knowledge Diffusion:** 10% rise in digital trade **links to 2.6% more AI patent** citations.
- **New Pathways:** Resource-rich nations can become **hubs for AI hardware** and data services.

**Policy Concerns:** Few firms dominate access, Labor Disruption due to automation.

### 3.7.10. OECD Economic Outlook Report

- ➔ **Released by:** Organisation for Economic Co-operation and Development (OECD)
- ➔ **India's Forecast:** GDP 6.7%, inflation 2.9%.
- ➔ **About Report:** Biannual analysis of global and national trends.
- ➔ **Coverage:** GDP, inflation, employment, trade, investment.
- ➔ **Risks:** Inflation, financial instability, geopolitical tensions.

### 3.7.11. Polymetallic Sulphides

India has signed 15-year deal with **ISA at Carlsberg Ridge**, Indian Ocean.

- ➔ **Significance:** India's third ISA contract, second for PMS; first global licence for **Polymetallic sulphides (PMS)** at Carlsberg Ridge.
- ➔ **Previous Contracts:** Polymetallic Nodules (Central Indian Ocean Basin) and PMS (Indian Ocean Ridge).
  - ➔ **Polymetallic Nodules:** Iron-manganese concretions around a core (e.g., shark tooth).
- ➔ **Carlsberg Ridge:** 3,00,000 sq km in Arabian Sea, NW Indian Ocean; boundary of Indian & Arabian plates.
- ➔ **Other Areas:** India applied for **Afanasy-Nikitin Sea (ANS)** mount; also **claimed by Sri Lanka**.

#### About PMS

- ➔ Deposits rich in copper, zinc, gold, silver on ocean floor, formed where **hot mantle fluids mix with cold seawater**.

### International Seabed Authority (ISA)

- ➔ **Members:** 170 (including India).
- ➔ **Genesis:** 1994, with **United Nations Convention on the Law of the Sea (UNCLOS)** entry into force.
- ➔ **About:** Autonomous international organization under **1982 UNCLOS and 1994 Agreement**.
- ➔ **Mandate:** To ensure the effective protection **from deep-seabed-related activities**.

### 3.7.12. Universal Postal Union (UPU)

Union Minister for Communication unveiled the **UPU Integration** for transforming **cross-border remittances**.

#### About UPU

- ➔ **Established:** 1874; UN specialized agency since 1948.
- ➔ **Headquarters:** Berne.
- ➔ **Oldest Organizations:** Second oldest after International Telecommunication Union (ITU) (1865).
- ➔ **Members:** 192 countries, **including India**.
- ➔ **Function:** Facilitates cooperation in **postal sector, ensuring a universal network** of modern products and services.

### 3.7.13. Hallmarking

The Indian government has introduced **Voluntary Hallmarking Unique Identification (HUID)**-based hallmarking for silver jewellery, aligned with gold system, **enhancing traceability**.

#### Hallmarking

- ➔ Records precise **precious metal content, ensuring authenticity, quality, consumer protection, and traceability**.
- ➔ **Regulated by:** BIS, India.

### Bureau of Indian Standards (BIS) [HQ: New Delhi]

- ➔ **Established:** 1986; now operates under BIS Act 2016.
- ➔ **Functions:** Sets standards, certifies products (**ISI, Hallmarking**), runs **testing labs**.

### 3.7.14. Opium Cultivation

Union Government has announced **Annual Licensing Policy for Opium Cultivation for 2025-26** under Narcotic Drugs and Psychotropic Substances (NDPS) Rules, 1985, framed under the **NDPS Act, 1985**.

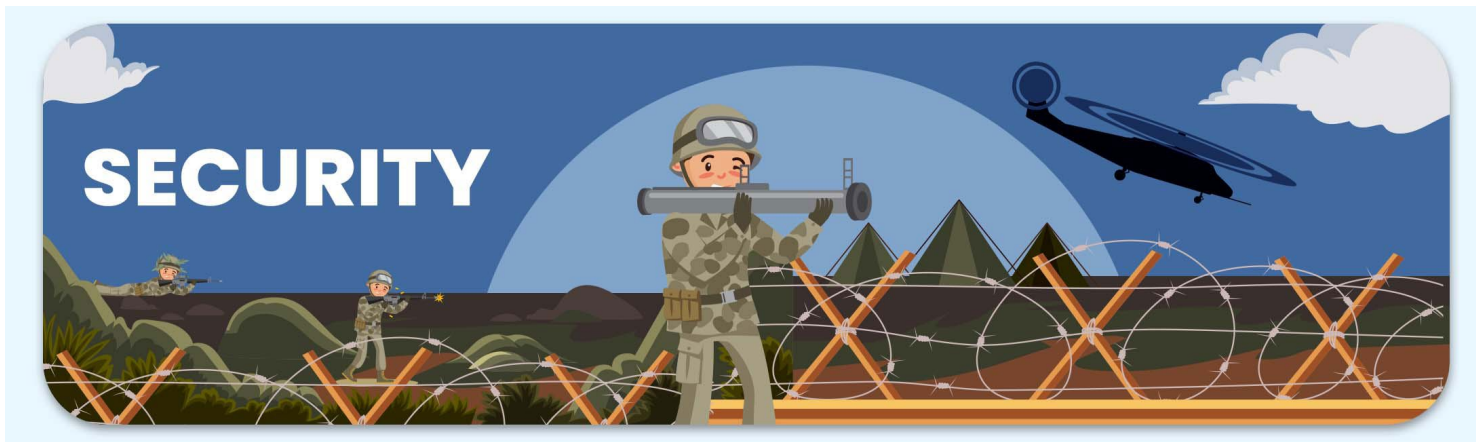
#### About Opium

- ➔ **Source:** Opium poppy; provides **alkaloids like morphine (pain relief) and codeine (cough syrups)**.
- ➔ **Other Uses:** Edible seeds and seed oil.
- ➔ **India's Status:** Only country allowed by **UN Single Convention (1961) to produce gum opium**; 11 others grow poppy but not gum.

#### Opium Cultivation in India

- ➔ **Regulation:** NDPS Act permits Central Government control for **medical and scientific purposes**.
- ➔ **Cultivation Areas:** Licensed annually in **Madhya Pradesh, Rajasthan, and Uttar Pradesh**.
- ➔ **Licensing:** **Central Bureau of Narcotics (CBN)** issues licenses; **farmers must sell opium to CBN at fixed government rates**.





## 4.1. Cybercrime in India

### Why in the News?

A Parliamentary panel on home affairs presented a report, titled '**Cyber Crime – Ramifications, Protection and Prevention**'.

### About Cybercrime

- The **National Cybercrime Reporting Portal (NCRP)** defines Cybercrime as any **unlawful act where a computer, computer network, or electronic device** is used as a tool or target to commit or facilitate a **crime**.
- **Types of Cyber Crime:** Malware, Ransomware, phishing, vishing (voice phishing), etc.
  - ➔ **New threats:** digital arrests, cryptojacking, etc.

### Reasons for rise in Cybercrime

- **Rapid Digital Transformation:** Aadhaar, UPI, and DigiLocker.
- **Transnational Nature of Cybercrime:** Citizens been trafficked abroad and coerced into committing cybercrimes.
- **Organised Nature of Cybercrime:** Cybercrime-as-a-Service (CaaS) lowers the technical barrier for entry, allowing less-skilled individuals to launch powerful cyberattacks.
- **Jurisdictional Challenge:** Across countries, allowing criminals to operate from **"safe havens"**.
- **Evolution of Criminal Methods:** Criminals hide identity via **VPNs, bulletproof hosting, encryption** etc.
- **Gaps in laws:** Gaps in the IT Act, lack of accountability for IT intermediaries etc.

### Impact of rise in cybercrime

- **Financial Losses:** India lost over **₹31,500 crore (2019–24)** due to cybercrime.
- **Threats to Critical Infrastructure and Erosion of Trust**
- **Social & Psychological Impact:** Victims **face trauma, social withdrawal**.

### Government Initiative to Tackle Cybercrime

- **Legal:** IT Act, 2000, Bharatiya Nyaya Sanhita (BNS) crimes, and Special and Local Laws (SLL).
- **Agencies and Institutional mechanisms:** Indian Cybercrime Coordination Centre, I4C (2020), CERT-In, National Critical Information Infrastructure Protection Centre (NCIIPC).
- **Advanced Technology Tool: AI/ML for fraud detection:** (Eg, NPCI's FRM system, RBI's MuleHunter.ai.) etc.
- **SAHYOG Portal (I4C)** Connects government, intermediaries, and platforms **for content takedown**.
- **Public Awareness: Campaigns like** Cyber Dost, **RBI Kehta Hai, etc.**

### Way forward

- **Empowering CBI:** To investigate cybercrime cases nationwide without needing general consent from state governments (Recommended by Parliamentary panel on Home Affairs).
- **Legal reforms:** Update the **IT Act** with stricter penalties, a **unified cybercrime law**, and **victim compensation**.
- **Intermediary Accountability:** Mandate registration of platforms in India, appoint local grievance officers etc.
- **Cooperation:** Strengthen State Cybercrime Coordination Centres, create an **international liaison unit**, etc.
- **Tech Upgrade:** Invest in **AI/ML**-driven threat intelligence, **blockchain** verification etc.
- **Data Protection:** Align with **DPDP Act 2023 for storage, KYC**, and privacy safeguards.
- **Capacity Building: Train police**, prosecutors, judiciary, and students and **Public Awareness**.



## 4.2. Enforcement Directorate

### Why in the News?

The Enforcement Directorate has reported **conviction rate of 94%** under **Prevention of Money Laundering Act** cases.

#### About Enforcement Directorate: (Headquarter: New Delhi)

- ➔ **Genesis:** 1956;
- ➔ **Administrative Control:** Department of Revenue, Ministry of Finance.
- ➔ ED is headed by a Director (rank not below Additional Secretary, GoI).
- ➔ A multi-disciplinary body investigating money laundering and foreign exchange violations.
- ➔ **Statutory function:** Enforcement of **Prevention of Money Laundering Act (2002)**, **Foreign Exchange Management Act (1999)**, **Fugitive Economic Offenders Act (2018)**.

### What is meant by Money Laundering?

- ➔ It is the processing of criminal proceeds to disguise their illegal origin.
- ➔ **3 Stages:**
  - ➔ **Placement** (moving the funds from direct association with the crime)
  - ➔ **Layering** (disguising the trail to foil pursuit)
  - ➔ **Integration** (making the money available to the criminal from what seem to be legitimate sources).
- ➔ **Challenges faced 'by the Enforcement Directorate (ED):**
  - ➔ **Operational Challenges:** Overreaching Jurisdiction and violating the federal structure, Political Targeting and Loss of Independence, Resource and Manpower Constraints.
  - ➔ **Structural and Legal Challenges:** **Broad Discretionary Powers** to arrest, provisionally attach assets, and reversed burden of proof, etc. **Judicial Backlogs and Constitutional Hurdles; Inter-Agency Litigation and Resource Drain.**
  - ➔ **Emerging Technological Challenges:** **Surge in Digital and Crypto Fraud** (Pig Butchering and Phantom Hacking) and **Implementation Gaps** (FATF evaluation flagged gaps in AML/CFT implementation).

## Judicial pronouncements related to ED



**Abhishek Banerjee vs. ED (2022):** Delhi HC upheld ED's nationwide jurisdiction in money laundering cases.



**Pankaj Bansal vs. Union of India (2023):** SC mandated ED to provide written grounds of arrest to the accused.



**Manish Sisodia vs. ED (2024):** Accused have the right to inspect all documents, including 'unrelied upon', for a fair trial.

### Way Ahead

Strict adherence to Due Process, Evidence-Based Investigations, Enhance Human Resources and Expertise, Deployment of latest technology (e.g. AI/ML tools), Harmonization among different agencies.

## 4.3. News in Shorts

### 4.3.1. Indian Ocean Naval Symposium (IONS)

An Emerging Leaders Panel Discussion was held under the Indian Ocean Naval Symposium (IONS).

#### About IONS

- ➔ **Launched:** 2008 by the Indian Navy to **enhance maritime cooperation** among Indian Ocean littoral states.

- ➔ **Membership:** 25 members and 9 observers
  - ➔ Open to states bordering the Indian Ocean with naval or maritime forces.
- ➔ **Chairmanship:** Rotates every 2 years; India to chair during 2025–27.

### 4.3.2. First Overseas Defence Manufacturing Plant

Defence Minister inaugurated **India's first overseas defence manufacturing plant** in **Morocco** which will produce **WhAP**.

#### About Wheeled Armoured Platform (WhAP)

- India's **First Wheeled Amphibious Infantry Combat Vehicle**.
- **Technologies Used: Integrated power pack** with automatic transmission, floatation and propulsion.

### 4.3.3. Androth

Indian Navy has received an indigenously built anti-submarine warfare ship **Androth**.

#### About Androth

- Second after **Arnala** of the eight **ASW SWCs (Anti-Submarine Warfare Shallow Water Craft)**, being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata.
- Propelled by a diesel **engine-waterjet combination** equipped with state-of-the-art **lightweight torpedoes and indigenous anti-submarine warfare rockets**.

### 4.3.4. Extended Range Attack Munitions

The US has approved the delivery of **Extended Range Attack Munitions (ERAMs)** to Ukraine.

#### About ERAMs

- It is a **next-generation air-launched, precision-guided missile**.
- **Range:** 240 to 450 kilometers which carries a 500-pound high-explosive warhead.

### 4.3.5. Peace Pact with Kuki-Zo Groups

A **tripartite Suspension of Operation (SoO) Agreement was renewed** between the Centre, the Manipur government, and insurgent groups comprising Kuki-Zo, Zomi and Hmars.

#### About the Agreement

- **Came into force:** from August 22, 2008

- **Objective:** to end hostilities by initiating political dialogue and finding a **political settlement within the Constitution** of India.

#### Other Peace Pacts in North East India:

- **NLFT (SD) Agreement (2019), Bodo Accord (2020), Karbi Accord (2021), etc.**

### 4.3.6. Exercises in News

<b>Exercise Bright Star</b>	Conceived as a <b>bilateral US-Egypt exercise, expanded</b> since 1995 among multiple nations.
<b>Exercise Maitree</b>	Joint training exercises between <b>India and Thailand</b> .
<b>Exercise Zapad</b>	<b>Russia and Belarus</b> launched joint <b>military exercise Zapad-2025</b> , held in Russia. It is a large-scale <b>multilateral military event</b> conducted <b>every four years</b> .
<b>Yudh Abhyas</b>	<b>21<sup>st</sup> edition of military exercise India-US Joint Military Exercise</b> .
<b>Pacific Reach 2025</b>	It is a <b>biennial, multilateral submarine rescue exercise</b>
<b>Exercise Siyom Prahar</b>	Conducted by Indian Army to validate <b>drone integration</b> in tactical operations under battlefield-like conditions.
<b>Exercise Yudh Kaushal</b>	Indian Army conducted Exercise.

### 4.4.7. Operation Black Forest

'Operation Black Forest' is the **biggest anti-Naxal operation** ever conducted on Karregutta hill situated along the **Chhattisgarh-Telangana border**.

#### Other anti-Naxal mission

- **Mission Sankalp'**: launched on sprawling hills of Karregutta and adjoining hills.
- **Operation Green Hunt (2009)**: It takes place across five states - West Bengal, Jharkhand, Bihar, Orissa and Chhattisgarh.



# ENVIRONMENT



## 5.1. UN High Seas treaty

### Why in the News?

Treaty for the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ agreement), known as High Seas Treaty is set to enter into force after ratification by 60<sup>th</sup> country.

### About BBNJ Agreement

- Aimed at conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (beyond EEZ).
- Implemented under **UNCLOS** – third implementing agreement after:
  - ➔ 1994 Part XI Implementation Agreement (deep seabed mining).
  - ➔ 1995 UN Fish Stocks Agreement.
- Establishes a **Conference of Parties, subsidiary bodies, a secretariat, and a funding mechanism.**
- Treaty enters into force 120 days after 60 ratifications.
- Non-UNCLOS members can also join.
- India signed the treaty but not ratified yet.

### Key Pillars of the Treaty

- **Marine Protected Areas (MPAs):** Mechanism for biodiversity-rich high-sea zones.
- **Marine Genetic Resources (MGRs):** Sharing benefits from high-sea genetic materials used in biotech etc.
- **Capacity Building & Technology Transfer:** Support for developing nations.
- **Environmental Impact Assessments (EIAs):** Required for high-sea activities like deep-sea mining.

### Exceptions to agreement

- Excludes **warships, military aircraft, and naval auxiliaries.**
- Excludes **fishing activities** covered under other laws.
- MGR obligations don't apply to **military activities.**

### Significance of the Treaty

- **Fills governance gaps** – covers ~50% of Earth's surface and 95% of ocean volume (only 1% protected).
- Promotes **equity** – benefits small island & developing states.
- Supports **climate goals** – tackles ocean acidification, pollution; aligns with polluter-pays principle.
- Recognizes **indigenous and local knowledge.**
- Contributes to **SDG-14** and **"30x30" global target** (protecting 30% of seas by 2030).
- For **India:** aligns with UNCLOS stance, Blue Economy Policy, and Deep Ocean Mission.

### Challenges

- Major powers (U.S., China, India) yet to ratify.
- Possible conflict with national/territorial claims.
- **Weak enforcement** – relies on flag states; lacks punitive body.

- ➔ **Technology transfer & benefit sharing** commitments uncertain.

## Way Forward

- ➔ Encourage ratification via UN, G20, and ocean platforms.
- ➔ Create a **global compliance system** under UN.
- ➔ Promote **regional cooperation** (ASEAN, IORA) for MPAs.
- ➔ Ensure **financial and technology support** for developing nations (GEF, UNDP, GCF).
- ➔ Broaden **EIAs** to cover accidents and unplanned activities.

## 5.2. Sustainable Development: Harmonizing Growth with People's Needs

### Why in the News?

The Uttarakhand Government recently granted in-principle approval for the **Netala bypass in the fragile Bhagirathi Eco-sensitive Zone**.

### More on the News

- ➔ Ministry of Defence has classified project as **strategically important but concerns persist**.
- ➔ The decision highlights a potential conflict between **national security/strategic project designations, sustainable development and people's needs**.

### About Eco-Sensitive Zone

- ➔ They are **ecologically important and fragile areas** around protected areas.
- ➔ Notified by **central government** under the **Environment (Protection) Act, 1986**.
- ➔ **ESZ** Guidelines classify activities under three categories: Prohibited, Regulated, Permitted.

### Why is there conflict between Sustainable Development and People's needs?

- ➔ **Economic Dependence of People on Natural Resources**
- ➔ **Development and Displacement:** More than 40% of the tribal population is being displaced.
- ➔ **For protecting national interest: Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025**, provide special dispensation to critical minerals sector for compensatory afforestation.
- ➔ **Policy and Governance Gaps:** Environmental regulations are often designed without local participation.
- ➔ **Environmental solutions are costly:** Limited Access to Cleaner Tech and Credit Constraints.

### Initiatives taken by Government to reduce conflict

- ➔ The Right to Fair Compensation and Transparency in Land Acquisition, **Rehabilitation and Resettlement (RFCTLARR) Act, 2013:** Social Impact Assessment is mandated under this act.
- ➔ **Environmental Impact Assessment (EIA).**
- ➔ **Compensatory Afforestation Fund Act (2016).**
- ➔ **District Mineral Foundation (DMF), 2015.**

### Way Forward

- ➔ **Regional & Climate-Specific Planning:** Himalayas (landslide-sensitive infrastructure), Coastal Zones etc.
- ➔ **Strengthen Environmental Justice System:** Fast-track NGT, improve State Pollution Control Boards etc.
- ➔ **Participatory Decision-Making:** E.g., Social audits can include local communities.
- ➔ **Green Livelihood Programmes** and **Just Transition Fund**.

## 5.3. Public Consultation and Environment Impact Assessment (EIA)

### Why in the News?

MoEFCC exempted mining projects involving **atomic, critical, and strategic minerals** (e.g. uranium, lithium, rare earths) from **Public Consultation** under **EIA, 2006**. Projects will still undergo **Central-level appraisal**.

## Reasons for Exemption

- **Energy Security:** Boosts domestic production of uranium & thorium for India's 3-stage nuclear power programme.
- **Strategic Use:** REEs vital for defence and advanced technology (radar, sonar, lasers, etc.).
- **Reduce Import Dependence:** Ensures supply chain stability and access to scarce minerals.
- **Ease of Doing Business:** Faster project clearance and investment promotion.

## What is Public Consultation in EIA?

- Seeks opinions of **local affected persons and stakeholders** on environmental impacts.
- Applies to **Category A & B1 projects**. Two components: **public hearing** and **written responses**.
- Conducted by **State Pollution Control Boards, UT Pollution Control Committees** report sent within **45 days**.

## Concerns associated with Exemption of Public Consultation

- **Dilutes Environmental Governance:** Undermines EIA mandate and weakens rights under **Articles 21 & 48A**.
- **Poor Appraisal Quality:** Ignores local knowledge; risks like **Silkylara tunnel collapse** show consequences.
- **Risk of Conflict:** Lack of early engagement may trigger protests (e.g. **Sterlite plant** case).
- **Weakens Participatory Governance:** Reduces transparency, accountability, and citizen involvement.
- **Violates Global Principles:** Contradicts **Rio Declaration (1992)** and **Aarhus Convention (1998)** on public participation and environmental justice.

## Environmental Impact Assessment (EIA)

- **Objective:** To assess environmental, socio-economic, cultural, and health impacts of proposed projects.
- **Project Categories:**
  - ➔ **Category A:** Prior clearance from **Central Government**.
  - ➔ **Category B:** Clearance from **SEIAA**.
  - ➔ **B1:** Requires full EIA.
  - ➔ **B2:** Exempted from EIA.

## 5.4. Environment Audit Rules, 2025

### Why in the News?

The **Ministry of Environment, Forest and Climate Change (MoEFCC)** notified **Environment Audit Rules, 2025**.

### Environment Audit (EA)

- **Definition:** A systematic **audit, verification, and analysis** of any project or process affecting the environment.
  - ➔ Conducted **after project establishment** (unlike EIA).
  - ➔ Evaluates conformity with the **Environmental Management Plan (EMP)**.
- **Origin in India:** Introduced in **1992** under **Rule 14 of the Environment (Protection) Rules**.
- Industries under **Water Act (1974)**, **Air Act (1981)**, or **Hazardous Waste Rules (1989)** must submit an **annual environmental statement** to the **SPCB**.

### About Environment Audit Rules, 2025

- **Objective:** Establish a formal, nationwide framework for auditing to strengthen **environmental compliance** and **ease of doing business**.
- **Significance:** Enables **third-party audits**, aligns with **EPR, ESG, Eco-mark**, provides reliable data, and ensures early risk detection.
- **Legal Basis:** Formed under **Environment (Protection) Act, 1986**; aligned with laws like **Forest Conservation (1980)** and **Wildlife Protection Act (1972)**.
- **Certification and Registration**
  - ➔ **Auditor Registration:** Conducted by **Environment Audit Designate Agency (EADA)** notified by MoEFCC.
  - ➔ EADA handles **certification, monitoring, discipline, and capacity building**.
  - ➔ **Modes of Certification:**
    - ◆ **Recognition of Prior Learning (RPL)** or **National Certification Examination (NCE)**.
    - ◆ **Responsibilities of EAs:**
      - » Compliance evaluation, sampling, analysis, and compensation calculation.
      - » Verification under **Green Credit Rules** and other environmental laws.
      - » Conduct audits under **EIA (2006)**, **CRZ (2011)**, etc.

## 5.5. Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025

### Why in the News?

MoEFCC has notified the **Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025** marking significant changes in the Van (Sanrakshan Evam Samvardhan) Rules, 2023 under the **Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980** (Forest Conservation Act 1980).

### Major highlights of the Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025

#### ➔ Compensatory Afforestation (CA)

- ➔ Protected forest notification made **optional**
  - ◆ CA land can either be:
    - ◆ Transferred to **Forest Department**, or
    - ◆ **Notified as protected area** under the **Indian Forest Act, 1927** or other laws.
- ➔ **Definition:** Afforestation done in lieu of diversion of forest land for non-forest use under the **Forest (Conservation) Act, 1980**.

#### ➔ Critical & Strategic Minerals

- ➔ Mining of such minerals (under **MMDR Act, 1957**) must conduct CA on **degraded forest land, at least double** the diverted area.

#### ➔ Working Permission

- ➔ **State governments** allowed to grant **initial working permission** for linear projects (roads, railways, transmission lines).
- ➔ Earlier, mobilization was allowed **only after Stage-I approval** from the Centre.

### Evolution of Forest Conservation Act in India

- ➔ **Indian Forest Act, 1865:** Asserted state claims over required forest areas.
- ➔ **Indian Forest Act, 1878:** Classified forests (reserved, protected, village) and regulated local use.
- ➔ **Indian Forest Act, 1927:** Consolidated prior laws to strengthen **state control** and regulate forest produce.
- ➔ **Pre-1980s:** Forests were a **State subject**; moved to **Concurrent List** via 42nd Amendment (1976).
- ➔ **Forest (Conservation) Act, 1980:** Centralized approval for **forest land diversion**; prohibited de-reservation or non-forest use without Centre's consent.
- ➔ **Amendment, 1988:** Banned leasing forest land to private entities; expanded scope of "non-forest purpose."
- ➔ **Amendment, 2023:**
  - ➔ Defined "forest" as land **notified or recorded** as forest (post-1980).
  - ➔ **Exempted** land within **100 km of borders** for national security or road projects.
  - ➔ **SC (2024):** Directed States/UTs to apply **T.N. Godavarman (1996)** definition till new identification is finalized.

### T N Godavarman Thirumalpad vs Union of India case (1996)

- ➔ **Landmark Supreme Court ruling** that gave a **broad, inclusive definition** of "forest."
- ➔ **Forest includes:**
  - ➔ All areas **recorded as forest** in any government record (Union or State), regardless of ownership or classification.
  - ➔ Areas matching the **dictionary meaning** of forest.
  - ➔ Areas **identified by expert committees** constituted by States as per the 1996 SC order.

## 5.6. Green Credit Program

### Why in the News?

Ministry of Environment, Forests, and Climate Change (MoEFCC) has issued a **new methodology for calculating Green Credit** for tree plantation under the Green Credit Rules, 2023.

### More on the News

- ➔ Green Credit Rules, 2023 enacted under the Environment (Protection) Act, 1986.
- ➔ **Implementation:** State/UT Forest Departments to identify degraded lands for green cover enhancement.

## Revised Green Credit calculation Methodology with respect to Tree plantation

- ➔ **Credit Criteria:** 1 Green Credit = 1 tree (over 5 years old) with at least **40% canopy density** on restored land.
- ➔ **Credit Rules:** Credits are **non-tradable, non-transferable**, and can be **exchanged only once**.

### About Green Credits

- ➔ **Green Credit** means a **singular unit of an incentive provided** for a specified activity, delivering a positive impact on the environment. These credits can be **traded on a dedicated exchange**, similar to how carbon credits are traded.
- ➔ **Carbon Credit:** Under the Carbon Credit Trading Scheme operating under The Energy Conservation Act, 2001. It primarily benefit industries and corporations.

### About the Green Credit Program

- ➔ **Initiative:** Market-based mechanism under Environment (Protection) Act, 1986 and part of Mission LIFE to promote voluntary environmental actions.
- ➔ **Nodal Agency:** MoEFCC; **ICFRE (Indian Council of Forestry Research and Education)** serves as administrator for implementation, monitoring, and management.
- ➔ **Objectives:** Create a land bank of degraded forest areas and encourage participation from government, private sector, NGOs, and individuals.
- ➔ **Governance:** Managed by an inter-ministerial Steering Committee with a user-friendly digital platform for registration and credit issuance.
- ➔ **Activities Covered:** Tree plantation, water and air management, sustainable agriculture, mangrove and ecosystem conservation, eco-friendly buildings, and Ecomark labeling.

### Other Initiatives taken for Afforestation

- ➔ Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) (2023)
- ➔ Compensatory Afforestation Fund Act, 2016
- ➔ National Mission for a Green India (2014)
- ➔ National Bamboo Mission (2006)

## 5.7. National Policy on Geothermal Energy

### Why in the News?

The Union Ministry of New & Renewable Energy (MNRE) notified **National Policy on Geothermal Energy (2025)**, India's first such Policy to reinforce efforts for an energy transition.

### About Geothermal Energy

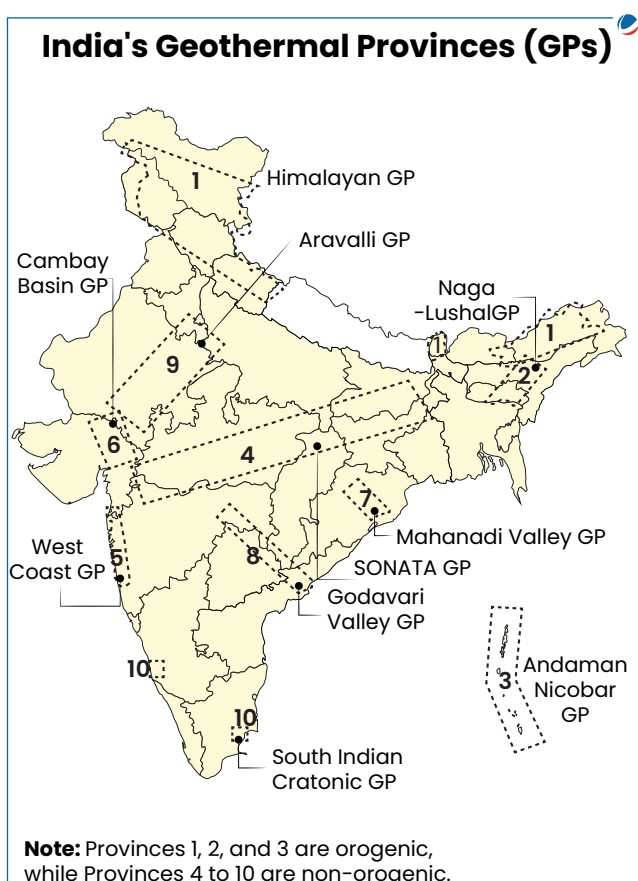
- ➔ **Definition & Sources:** Utilizes Earth's internal heat.
- ➔ **High enthalpy (~200°C):** Volcanic areas, geysers, hot springs → electricity generation.
- ➔ **Low-medium enthalpy (100–180°C):** Hot rocks, shallow layers → heating, cooling, agriculture, aquaculture.
- ➔ **Significance:** Renewable, clean, reliable, and economical; **India's estimated potential – 10,600 MW** (GSI, 2022).

### Challenges

- ➔ High upfront and exploration costs; investment risks due to uncertain reservoirs.
- ➔ Limited data and deep-drilling capability; lack of commercial-scale projects (only 20 kW pilot at Manuguru, Telangana).
- ➔ Technological and skill gaps; environmental risks (land subsidence, seismicity, contamination).

### National Policy on Geothermal Energy (NPGE, 2025)

- ➔ **Vision:** Make geothermal a major renewable pillar for India's **net-zero 2070 goal**.



- **Nodal Agency:** MNRE.
- **Goals:** Boost R&D, adopt global best practices, promote direct-use and heating/cooling applications etc.

### Key Features

- Covers **resource assessment, power production, direct use, GSHP** (Ground (geothermal) Source Heat Pump).
- Use of **abandoned oil/gas wells** and extraction of **by-products** (lithium, borax, etc.) under MMDR Act.
- **Data repository** via collaboration with Geological Survey of India (GSI), National Data Repository (NDR) etc.

### Development Model

- Promote **indigenous technology**, joint ventures (oil/gas firms + developers), **pilot projects**, and (Centres of Excellence) **CoEs**.
- Funding support for NE and special category states; **economic feasibility models** (revenue sharing, milestone-based).

### Sustainability & Financing

- ESIA guidelines, safe use of geothermal fluids.
- **Funding:** Renewable Energy Research and Technology Development Programme (RE-RTD) (100% for govt orgs, 70% for private/startups), concessional loans, Green Bonds etc.
- **Fiscal & Policy Incentives:** GST/import duty exemption, tax holidays, inclusion in **Carbon Credit Scheme**, Renewable Purchase Obligation (**RPO**) **eligibility**, open access benefits.

### State Role

- States/UTs grant exploration (3–5 yrs) and development leases (up to 30 yrs).
- Create **single-window clearance** and ensure stakeholder consultation, especially in tribal/remote areas.

## 5.8. National Biofoundry Network & BioE3 Policy

### Why in the News?

India's first **National Biofoundry Network** was launched on **August 25, 2025**, which also marked the first anniversary of India's BioE3 Policy.

### About National Biofoundry Network

- **Objective:** Scale up *proof-of-concept (POC)* projects into viable technologies.
- **Part of:** *BioE3 Policy* under the "Bioenablers" category.
- **Biofoundry Definition:** Automated facility integrating DNA synthesis, gene editing, and high-throughput biomanufacturing to design and optimize engineered organisms.
- **Functions:**
  - ➔ Supports research in diverse areas (e.g. IIT-Madras – animal-free hyaluronic acid).
  - ➔ Provides shared infrastructure for startups, SMEs, industry, academia.
  - ➔ Offers training and internships for interdisciplinary biomanufacturing skills.

### About BioE3 (Biotechnology for Economy, Environment & Employment) Policy, 2024

- **Ministry:** *Department of Biotechnology (DBT), Ministry of Science & Technology.*
- **Vision:** Transform biomanufacturing for sustainability, efficiency, and quality; double India's **bioeconomy to US\$300 billion by 2030**.
- **Focus Sectors:** Precision biotherapeutics, carbon capture, smart proteins, functional foods, etc.
- **Key Features:**
  - ➔ Innovation-driven R&D and startup support.
  - ➔ Biofoundries, Bio-AI hubs for technology commercialization.
  - ➔ Green growth and circular bioeconomy models.
  - ➔ PPP-based implementation for skill, employment, and industry expansion.
- **Achievements:**
  - ➔ 21 advanced *BioEnabler* facilities, *BRIC-National Agri-Food Bio-Manufacturing Institute* established.
  - ➔ *DBT-ISRO* MoU for space biotechnology.
  - ➔ *Centre-State partnerships* (e.g., Assam for biodiversity-based biomanufacturing).



- BioE3 Youth Challenge for grassroots innovation.
- Development of *gene-edited rice varieties* for nutrition and climate resilience.

## Challenges

- ↻ Lack of clear milestones for progress tracking.
- ↻ Human resource shortages in microbial engineering and bioprocessing.
- ↻ Scale-up gaps (“valley of death”) due to limited funding.
- ↻ High costs, weak supply chains, and limited local manufacturing capacity.
- ↻ Public skepticism and biosafety concerns over gene-edited crops.

## 5.9. River Pollution in India

### Why in the News?

Central Pollution Control Board (CPCB) released assessment report on “**Polluted River Stretches for Restoration of Water Quality – 2025**”.

### About Polluted River Stretch (PRS)

- ↻ **Polluted River Stretch (PRS):** Continuous sequence of polluted sites where **BOD > 3 mg/L**.
- ↻ Classified under **five Priority Classes (I–V)** based on BOD levels (e.g., Class I: >30.1 mg/L).

### Current Status (2025)

- ↻ **296 polluted stretches** on **271 rivers** across **32 States/UTs** (down from 351 in 2018).
- ↻ *Maharashtra* has the highest number (54 PRS).
- ↻ Major polluted rivers: *Yamuna, Sabarmati, Chambal, Tungabhadra, Sarabanga*.

### Major Pollution Sources

- ↻ **Untreated sewage:** Over **60%** of wastewater flows into rivers; urban sewage generation at **72,368 MLD** (CPCB, 2021).
- ↻ **Industrial effluents:** Toxic discharges from chemical, sugar, paper, and tannery industries.
- ↻ **Other:** Solid waste, agricultural runoff, sand mining, encroachments.

### Framework

- ↻ **Laws:** Water Act, 1974; Environment (Protection) Rules, 1986; Waste Management Rules.
- ↻ **Major Programs:** Namami Gange (NMCG-led), Yamuna Action Plan, National River Conservation Plan (NRCP), and NWQM.
- ↻ **Supporting Schemes:** AMRUT, Smart Cities Mission, Swachh Bharat Mission for sewerage infrastructure.

### Key Recommendations

- ↻ **Source Control:** Strengthen STPs/ETPs and solid waste facilities.
- ↻ **Basin Management:** Protect floodplains, ensure *minimum e-flow*, promote rainwater harvesting and plantations.
- ↻ **Encroachment Removal:** Develop *biodiversity parks* on reclaimed floodplains.
- ↻ **Sewage Treatment:** Intercept and divert drains; promote *reuse of treated water*.
- ↻ **Technology Use:** Employ *AI, robotics, remote sensing* for real-time monitoring and waste management.

## 5.10. Great Nicobar Island Project

### Why in the News?

Union Ministry of Tribal Affairs recently sought a factual report from the Andaman and Nicobar Islands administration on complaint that **forest rights had not been settled** under Forest Rights Act, 2006 before diverting forest land for Great Nicobar Island Project.

- ↻ Tribal Councils in the Andaman and Nicobar Islands are **statutory bodies established under the Andaman and Nicobar Islands (Tribal Councils) Regulation, 2009**.

## About Great Nicobar Island Project

### Overview:

- A **Greenfield mega-infrastructure project** conceived by NITI Aayog and approved in **2021**.
- **Nodal Agency:** Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO).

### Main Components:

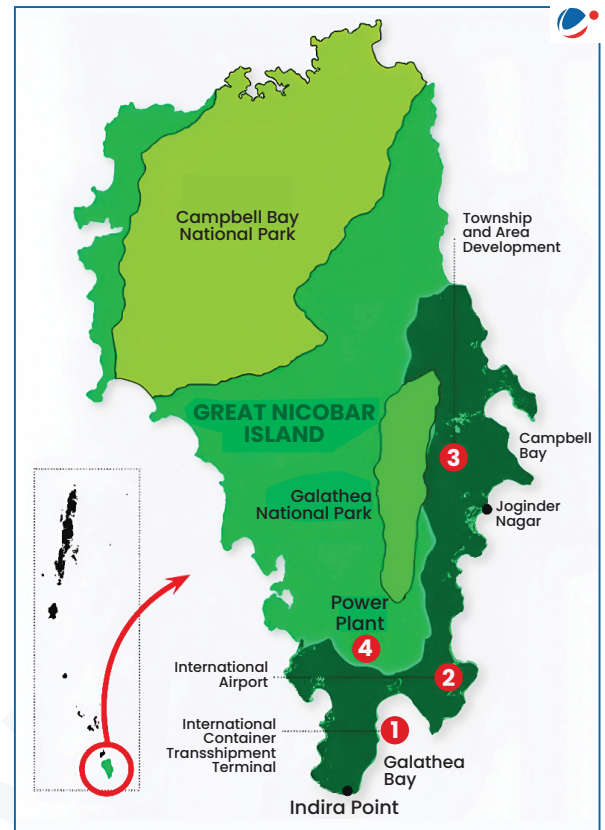
- **International Transshipment Port** at Galathea Bay (under MoPSW).
- **Greenfield International Airport, 450 MW Power Plant,** and **Modern Township.**

### Significance:

- **Strategic Location:** Near the Malacca Strait, key for global trade and India's maritime security.
- **Regional Hub:** Aims to divert cargo from Singapore and Colombo; 75% of India's cargo currently transshipped abroad.
- **Connectivity & Defence:** Enhances logistics, tourism, and supports tri-services command by allowing naval and aerial deployment near key Indo-Pacific choke points.
- **Economic Gains:** Expected to bring FDI, forex savings, employment, and boost to port-based industries.

### Ecological & Social Concerns:

- **Tribal Impact:** Threat to Shompens (PVTG) and Nicobarese tribes; risk of displacement and disease exposure.
- **Biodiversity Loss:** 85% forest cover; project site (Galathea Bay) is a Ramsar wetland and Leatherback Turtle nesting zone.
- **Deforestation:** About **9.6 lakh trees** to be felled; coral reefs, mangroves, and seagrass beds at risk.
- **Geological Risks:** Island lies in a **highly seismic zone**, near the fault line of the **2004 tsunami**, raising disaster vulnerability.



## 5.11. Dam Safety in India

### Why in the News?

Researchers from **IISER Bhopal** developed a comprehensive assessment of **sedimentation-induced vulnerabilities** in large **reservoirs** across India.

- Sedimentation is a process in which **soil particles are eroded and transported** by flowing water or other transporting media and **deposited as layers of solid particles in water bodies**.
- The study included more than 300 large reservoirs with storage exceeding 100 million cubic meters.

### Key Findings on Status of Sedimentation:

#### Sedimentation Status:

- Many reservoirs have lost **over 50% of storage capacity**; by **2050**, several East- and West-flowing river basins are projected to cross this threshold.
- **Most affected regions:** Himalayan Region (HR), West Flowing Rivers, Narmada-Tapi (NT), East Flowing Rivers, and Indo-Gangetic Plains (IGP).
- **Key causes:** Deforestation, soil erosion, agricultural runoff, and unregulated land-use change.
- **Impacts:** Reduced water storage, energy deficits, lower agricultural productivity, and rising water conflicts.

#### Dam Safety Issues:

- **Ageing:** 1,065 dams are 50–100 years old; 224 are over 100 years.
- **Failures:** Due to seepage, weak foundations, overtopping, and corrosion.
- **Natural Risks:** Seismic events (e.g., Bhuj 2001), Glacial Lake Outburst Floods (e.g., Chungthang 2023).
- **Compliance gaps:** Poor follow-up on CWC and audit recommendations.

#### Key Initiatives:

- **Dam Safety Act, 2021:** Establishes National & State Dam Safety Committees and Authorities for maintenance and surveillance.
- **National Register of Large Dams (NRLD):** Maintained by CWC.

- **DRIP (Phases II & III):** Rehabilitation of **736 dams** across **19 states**, funded by World Bank and AIB.
- **Technological Tools:** SHAISYS for seismic risk; DHARMA for dam monitoring; National Centre for Earthquake Safety of Dams at MNIT Jaipur.
- **Review Mechanisms:** Dam Safety Review Panels established by states.
- **Global Efforts:** World Commission on Dams (1998) – World Bank & IUCN initiative for global dam guidelines.

## Way Forward

- ➔ **Sediment Control:** Adopt bypass systems (Japan), flushing techniques (Switzerland), afforestation, watershed management, and desilting.
- ➔ **Innovation:** Explore subsurface dams as sustainable alternatives.
- ➔ **Technology Use:** IoT-based sensors, satellite monitoring, real-time safety tracking.
- ➔ **Governance:** Mandatory independent inspections phased decommissioning of unsafe dams, and adoption of **risk-based decision frameworks** for prioritization.

## 5.12. Disaster Risk Financing

### Why in the News?

Chief Minister of the State of Himachal Pradesh urged the **16<sup>th</sup> Finance Commission** to **reframe the Disaster Risk Index (DRI)** to more accurately reflect the **unique vulnerabilities of hill states**.

### Reasons for Higher Vulnerability of Himalayan Hill States to Disasters:

- ➔ **Geo-physical:** Tectonically active region with unconsolidated deposits; river under-cutting, land subsidence from rain, snowmelt, and cloudbursts (e.g., Joshimath 2023).
- ➔ **Climatic:** Glacial retreat, intense rainfall, cloudbursts, and avalanches due to temperature and rainfall variability (e.g., Uttarakhand floods 2013).
- ➔ **Socio-economic & Anthropogenic:** Deforestation, construction on slopes, obstruction of natural water flow (e.g., Tehri Dam), road/tunnel building, hydro projects, encroachment, and rising tourism (~100 million visitors annually, projected 240 million by 2025).

### About Disaster Risk Index

- ➔ Composite measure quantifying multi-hazard risk to guide **disaster financing and preparedness**.
- ➔ Assesses **hazard probability (70%)** and **vulnerability (30%)**, using BPL population as proxy.
- ➔ Adopted by **15<sup>th</sup> Finance Commission (2021–26)** for **NDRF and state contingency fund** allocations.

### Disaster Risk Financing Methodology:

- ➔ Allocation based on **capacity (past expenditure), risk exposure (area & population), and DRI score**.
- ➔ Creation of **National Disaster Mitigation Fund (NDMF)** and **State Disaster Mitigation Funds (SDMF)** – Centre contributes 75% (90% for NE/Himalayan states).

### Concerns & Limitations:

- ➔ **Uniform matrix** fails to capture hazards like landslides, avalanches, cloudbursts, forest fires, GLOFs.
- ➔ **Resource mismatch:** Low DRI states (e.g., Himachal Pradesh) get insufficient funds despite high risk.
- ➔ **Geographical inequities:** Larger states get more funds even with lower vulnerability.
- ➔ **Past expenditure bias:** 70% weightage on historical spending skews allocation.

### Way Forward:

- ➔ Develop **adaptive, science-based DRI** including expanded hazards and resilience indicators.
- ➔ Consider **geographically distinct sub-regions** prone to disasters (hills, wetlands, coasts).
- ➔ Replace poverty metric with **Composite Vulnerability Score** (NDMA model).
- ➔ Improve **data collection** via IoT, remote sensing, and local mapping; create district disaster repositories.
- ➔ Conduct **five-yearly DRF reviews** using updated climate and hazard data.

## 5.13. News in Shorts

### 5.13.1. State Energy Efficiency Index (SEEI), 2024

Maharashtra, Andhra Pradesh, Assam, Tripura are top performers in their respective groups in SEEI 2024 (sixth edition).

#### About State Energy Efficiency Index (SEEI)

- **Developed by:** Bureau of Energy Efficiency (BEE) in association with the **Alliance for an Energy Efficient Economy (AEEE)**.
- **Purpose:** The index assesses the energy efficiency performance of **36 States and Union Territories (UTs)** supporting data-driven monitoring, best practice sharing, and healthy competition.
- **Categories:** Front Runners (>60%), Achievers (50–60%), Contenders (30–50%), and Aspirants (<30%).

### 5.13.2. Monsoon-related Extreme Weather events

Recent events like the Punjab floods, **landslides and flash floods** in Uttarakhand, Himachal Pradesh and Jammu and Kashmir highlight the **growing frequency and intensity of monsoon-related extreme weather events**.

#### Changing nature of Monsoon

- Monsoon becoming **erratic**, with **weaker winds** but **intense short bursts of rainfall** separated by dry spells.
- **El Niño link weakening** due to altered global atmospheric circulation.
- **Shifting spatial pattern:** traditional humid regions (like Ganga basin) getting drier, while arid regions (Rajasthan, Saurashtra) see more rain.
- **Climate change** driving these shifts through rising sea and air temperatures, increasing moisture capacity and rainfall intensity.

#### Impact of Changing Monsoon Patterns in India

- **Disasters:** Intense, short-period rains cause loss of lives, damage infrastructure, strain disaster management.
- **Health:** Rising disease risks (heat stress, dengue) and reduced productivity.
- **Forecasting:** Rainfall variability and climate change hinder accurate predictions.
- **Economic:** Affects 51% of farmed area, 40% of agricultural output, and 47% of livelihoods.

### 5.13.3. State of Global Water Resources 2024

The report **released by World Meteorological Organization (WMO)** highlights that **water cycle has become increasingly erratic and extreme**, swinging between deluge and drought.

#### Key Highlights of Report

- **Global glacier loss** continues for the third year; many small glaciers nearing **Peak Water Point**, after which runoff will decline.
- Around **two-thirds of global river basins** face **too much or too little water**, causing floods in Africa, Europe, and Asia, and droughts in the Amazon.
- **Climate change intensifies the water cycle** by boosting evaporation, storing more moisture in the atmosphere, and increasing **extreme events** like droughts, heavy rains, and hurricanes.
- Rising temperatures also drive **sea-level rise** through glacier melt and ocean expansion, worsening **coastal flooding**.

### 5.13.4. Production Gap Report 2025

**Production Gap Report 2025** has been released by Stockholm Environment Institute, Climate Analytics, and International Institute for Sustainable Development.

#### Key Highlights

- **Massive Overproduction:**
  - ➔ Planned **fossil fuel production in 2030 will exceed levels** consistent with limiting warming to 1.5°C by more than 120% and to 2°C by 77%.
  - ➔ Coal remains the most misaligned, with **projected 2030 global output 500 % higher** than the 1.5°C pathway.
- **Fossil fuel subsidies by governments** remain near record highs despite pledges to cut them.

### 5.13.5. Grey Rhino Event

A study has revealed that **Wayanad landslides** were **grey rhino event**.

#### What is a Great Rhino Event?

- Grey Rhinos are defined as **highly probable, high impact but yet neglected** systemic disruptions.
- These are **not random surprises** (like Black Swan events) but **occur after clear warnings and accumulating evidence**.

### 5.13.6. Super Typhoon

Philippines was affected by Super Typhoon Ragasa.

#### About Super Typhoon

- A **tropical cyclone** has **wind speeds above 185 km/h (100 knots)**.
- It is a **warm-core low-pressure system** with spiral inflow at the surface and outflow aloft.
- Forms **over oceans** with **sea surface temperature > 26°C**, usually **beyond 5° latitude** from the equator.

#### Terms for Tropical Cyclones:

- **Hurricane** – North Atlantic, Eastern North Pacific and South Pacific Ocean.

- ➔ **Cyclone** – Indian Ocean.
- ➔ **Typhoon** – Western North Pacific Ocean.
- ➔ **Willy-willy**: Eastern part of the Southern Indian Ocean.

### 5.13.7. Hydro Electric Projects in News

- ➔ **Sawalkote Project**: A run-of-the-river project proposed on the river **Chenab**.
  - ➔ **Location**: District Ramban & Udampur of UT Jammu & Kashmir.
- ➔ **Heo and Tato-I**: Projects on **Siyom River**, in Arunachal Pradesh, close to the border with China.
  - ➔ **Siyom River originates** from the eastern Himalayas and flows for much of its range from West to East, before joining the **Siang (name used for Brahmaputra River in Arunachal Pradesh)**.
- ➔ **Oju Hydroelectric Project**: Project on **Subansiri River** near the India-China Border.

- ➔ **Subansiri River** originates in Tibet and is largest tributary of the Brahmaputra. It is a **trans-Himalayan antecedent river**.
  - ♦ Enters **Arunachal Pradesh, India, flows into Assam**, and joins Brahmaputra.
  - ♦ The river is also called the **"Gold River"** because of the gold dust found in its waters.

### 5.13.8. Barren Island Volcano

Fresh Eruption Reported at Barren Island Volcano, Andaman Islands.

#### About Barren Island

- ➔ **Location**: Situated in the **Andaman Sea**, Andaman and Nicobar Islands, India. **Northeast of Port Blair**
- ➔ **Status**: India's **only active volcano**.
- ➔ **Type**: **Stratovolcano**, part of the Andaman volcanic arc.



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# SOCIAL ISSUES



## 6.1. Gen Z protest in Nepal

### Why in the News?

Sushila Karki appointed interim Prime Minister after fall of the government due to “Gen Z protest” in Nepal.

### Reasons for Gen Z protests

- ➔ **Social Media Ban:** Government suspended 26 platforms (WhatsApp, etc), curbing freedom of expression.
- ➔ **Corruption:** High-profile scams, lack of legal reforms and lavish lifestyles of leaders’ children fueled mistrust.
- ➔ **Other:** Harsh state response, youth bulge (21% aged 15–24), inspiration from global movements (e.g., Bangladesh, Jana Andolan 1990, 2006), etc.

### Unique Characteristics of Youth protests

- ➔ **Decentralized & Leaderless:** “Be Water” strategy, e.g., **Hong Kong protests (2019)** where absence of central leadership made it hard for authorities to dismantle the movement.
- ➔ **Technology:** Use of encrypted apps (Telegram, Signal), VPNs e.g., **Myanmar (2021)**.
- ➔ **Social Media Mobilization:** Viral hashtags, memes, e.g., **MilkTeaAlliance, ArabSpring**.
- ➔ **Hybrid Tactics:** Online planning, offline expressions, e.g., Hong Kong’s Lennon Walls.
- ➔ **Youth-Centric:** Students challenge authority, e.g., **Thai monarchy reform protests (2020)**.
- ➔ **Intersectional Issues:** Climate (**FridaysForFuture**), gender (Iran’s “**Women, Life, Freedom**” 2022).
- ➔ **Symbolic Styles:** Silent protests, flash mobs, e.g., China’s blank paper protests (2022).
- ➔ **Short-Lived, High-Impact:** E.g. Sri Lanka’s “Aragalaya” (2022).

## Role of youth in civilian protests



**Decolonization:** India’s Congress youth wings, revolutionary groups (Anushilan Samiti).



**Civil rights:** E.g., US Civil Rights Movement, Vietnam War protests.



**Democratic Rights:** E.g., **Belarus (2020)** Student protests against electoral fraud.



**Good governance:** E.g., India against Corruption (2011) led to Lokpal.

### Way forward

- ➔ **Youth-Centred Policy:** Promote entrepreneurship, skills, e.g. Colombia’s Ruta N (innovation hub).
- ➔ **Policy Engagement:** Involve youth to prevent alienation, ensure stability.
- ➔ **Urban Resilience:** E.g., **Cape Town’s Resilience Strategy**
- ➔ **Responsive Governance:** Use social media for dialogue, counter misinformation.
- ➔ **Community Engagement:** Promote civic education, volunteerism, SDGs, etc.

## Conclusion

Gen Z protests, echoing Elie Wiesel's call to resist injustice, challenge authority, amplify marginalized voices, and reshape democratic participation.

## 6.2. Protection of Women from Domestic Violence Act (PWDVA), 2005

### Why in the News?

PWDVA Act, 2005 has completed 20 years.

### About PWDV Act, 2005

- ➔ Act aimed to guaranteed women rights under **Articles 14, 15 and 21**.
- ➔ Aligns with **Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)**, addressing domestic violence as a human rights violation.

### Key provisions of the Act

- ➔ **Domestic Violence (DV):** Includes actual abuse or threat of abuse including **physical, sexual, emotional, verbal, and economic abuse** (e.g. Harassment by way of unlawful dowry demands).
- ➔ **Scope:** Applies to all women in **domestic relationships: marriage, live-in relationships, familial ties**, etc.
- ➔ **Rights:** Residence in shared household, child custody, protection/monetary/compensation orders.
- ➔ **Institutional Framework:** Involves **Protection Officers** (provide legal aid, etc), **Service Providers** (NGOs giving counseling, shelter, etc) **and Government** (awareness, training, etc).
- ➔ **Procedure: Time-bound justice** (60 days), victim's testimony admissible, penalties for breaching orders.

### Successes

- ➔ **Judicial Expansion:** Extended to live-in relationships (D. Velusamy, 2010), broader respondent scope (Hiralal P. Harsora, 2016).
- ➔ **Decline in Cases:** DV cases dropped from 507 (2021) to 468 (2022); spousal violence from 31.2% (NFHS-4) to 29.3% (NFHS-5).
- ➔ **Cultural Shift:** DV recognized as a social issue, not private matter.
- ➔ **Civil Remedies:** Protection orders, residence rights, and maintenance enhance safety.
- ➔ **Other achievements:** Recognizes diverse abuses, accessible through multiple avenues.

### Challenges in implementation

- ➔ **Low Conviction Rate:** Only 18% (2022 NCRB).
- ➔ **Judicial Limits:** Narrow "shared household" definition (S.R. Batra, 2007), evidence challenges.
- ➔ **Social Barriers:** Patriarchal mindsets, stigma deter reporting.
- ➔ **High DV Incidence:** Cruelty (IPC Sec. 498A) is 31.4% of crimes against women (2022).
- ➔ **Other:** Undertrained Protection Officers, limited rural shelters, insensitive police, gender-specific focus.

### Government Measures for tackling DV

- ➔ **One Stop Centre (OSC):** Mission Shakti integrated support.
- ➔ **ERSS-112:** Nationwide emergency response system
- ➔ **Nirbhaya Fund:** Training for police, prosecutors and medical officers.
- ➔ **Other:** Women Help Desks, universalized Women Helpline, etc.

### Way Forward

- ➔ Strengthen Protection Officers training, accountability.
- ➔ Expand women-focused police units for trust.
- ➔ Increase shelter homes, holistic rehabilitation.
- ➔ **Promote education, economic empowerment** to challenge patriarchy.
- ➔ Amend laws for female perpetrators, broader rehabilitation.
- ➔ **Leverage schemes** (like STEP) for survivor independence.

### Conclusion

- ➔ PWDVA marks progress in women's rights but reflects ongoing challenges. Dismantling social, economic, cultural barriers remains crucial to end domestic violence.

## 6.3. Decline in Fertility rate in India

### Why in the News?

**Sample Registration System (SRS)** shows India's rural Total Fertility Rate (TFR) reached replacement level (2.1) for the first time.




### Key Highlights of the report

- ➔ **TFR:** National 1.9; 18 States/UTs below 2.1; rural 2.1, urban 1.5.
  - ➔ **Highest:** Bihar (2.8); **Lowest:** Delhi (1.2).
- ➔ **TFR by Education:** Inverse relationship between mother's education level and TFR (Illiterate women 3.3; literate 1.8).
- ➔ **Gross Reproduction Rate (GRR):** Average number of daughters a woman would have during her lifetime (National 0.9; rural 1.0, urban 0.7).
- ➔ **Age-Specific Fertility Rates (ASFR):** Number of live births in a specific age group per 1,000 female population of that same age group (**Declined for ages 15–29**, increased for 30–49; highest in 25–29 (136.8)).
- ➔ **Crude Birth Rate (CBR):** Number of live births per 1,000 populations in a year (National 18.4; rural 20.3, urban 14.9; highest Bihar (25.8), lowest Tamil Nadu (12.0)).

### Reasons for Decline in Fertility Rate

- ➔ **Family Planning:** Promotes small family norm.
- ➔ **Social Changes:** Late marriages, career prioritization, financial independence, high parenting standards, etc.
- ➔ **Health Improvements:** Lower IMR, higher contraceptive use.
- ➔ **Weakening Son Preference:** Reduces multiple births for male children.
- ➔ **Infertility/ Abortion:** Rising infertility and abortions contribute.

### Government Initiatives

-  **National Population Policy (2000):** Targets replacement-level fertility, improves health, contraception access.
-  **Contraceptive Basket:** Includes Antara, Chhaya, condoms, IUCDs, and sterilization.
-  **Mission Parivar Vikas:** Enhances family planning in high-fertility states.

### Impact of declining Total Fertility Rate

- ➔ **Positive:** Increases economically active population (15–59 years), boosts economic growth, reduces social inequities and supports environmental sustainability.
- ➔ **Negative:** Impede economic and social progress, ageing population (Kerala:15.1% elderly), regional disparities and irreversible decline of fertility (South Korea).





### Way Forward

- ➔ **Differential policy:** Pro-natal incentives for low-TFR states; education, health for high-TFR states.
- ➔ **Rights-Based Family Planning:** Expand contraceptive choices.
- ➔ **Ageing Population:** Strengthen social security, pension.
- ➔ **Childcare:** Subsidized **crèche** (Palna Scheme) to support working women.
- ➔ **Gender-Neutral Leave:** Normalize shared caregiving, reduce career penalties.

## 6.4. Obesity and Overweight

### Why in the news?

UNICEF's 2025 report on obesity marking a global nutrition shift.

Rising Rates of overweight and obesity in India		
Parameters 	NFHS-3 (2005–06)	NFHS-5 (2019–21)
Children (Under 5 years) 	1.5%	3.4%
Adolescent 	<b>Girls:</b> 2.4%	5.4%
	<b>Boys:</b> 1.7%	6.6%
Adults 	<b>Women:</b> 12.6%	24.0%
	<b>Men:</b> 9.3%	22.9%



## Key Findings of UNICEF Report

- ➔ **Obesity** (5–19) tripled since 2000 (3% to 9.4%).
- ➔ **Overweight:** Globally, 5% of under-5s, 20% of 5–19s age, steepest rise in low/middle-income countries.
- ➔ **Obesity exceeds underweight** except in sub-Saharan Africa, South Asia.

## Causes of Rising Childhood Obesity

- ➔ **Unhealthy Diets:** Ultra-processed foods (high sugar, salt, fats) dominate.
- ➔ **Economic Factors:** Cheap processed foods due to agricultural subsidies.
- ➔ **School Meals:** 25% serve processed meat, sweets, sugary drinks.
- ➔ **Physical Inactivity:** Urbanization, fewer open spaces reduce activity.
- ➔ **Genetic Factors:** Some obesity linked to genetic variants.
- ➔ **Weak Policies:** Only 7% have mandatory nutrition labeling; 8% subsidies healthy foods.

## Impact

- ➔ **Double Burden:** Overweight and undernutrition coexist (e.g., India).
- ➔ **NCD Risk:** Higher chance of diabetes, cardiovascular diseases.
- ➔ **Economic Costs:** Obesity costs may exceed \$4 trillion by 2035.
- ➔ **Mental Health:** Linked to low self-esteem, anxiety, depression.

## Government Initiatives

- ➔ **POSHAN Abhiyaan:** Improves nutrition for children, mothers.
- ➔ **Eat Right India Movement:** Promotes safe, healthy food via awareness, school programs.
- ➔ **'Aaj Se Thoda Kam' Campaign:** Encourages reduced fat, sugar, salt intake.
- ➔ **RUCO (Repurpose Used Cooking Oil) Initiative:** Repurposes used cooking oil for biodiesel, soap.

## Global Policy Actions

- ➔ **WHO & UNICEF:** Support school environments, tax sugary drinks, regulate marketing.
- ➔ **SDG 3.4:** Targets reduced NCD mortality, emphasizes obesity control.

## Way forward

- ➔ **Promote nutritious foods:** Enhance affordability via subsidies, local food systems.
- ➔ **Protect Breastfeeding:** Restrict breast-milk substitute marketing.
- ➔ **Legal Measures:** Enforce marketing, labeling rules, e.g., 40% GST on sugary drinks.
- ➔ **Promote Activity:** Promote Fit India, Khelo India programs.
- ➔ **Public Awareness:** Educate on healthy eating, junk food risks.

## Conclusion

Addressing childhood obesity needs multi-sectoral action, aligning with SDGs, through legal measures, nutritious food access, awareness, and active lifestyles for healthier children.

## 6.5. News in Shorts

### 6.5.1. Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (POSH Act)

Supreme Court ruled political parties **are not** "workplaces" excluding them from POSH act.

#### About POSH act 2013

- ➔ **Origin:** Based on **Vishaka judgement 1997**

- ➔ **Scope:** Covers all workplaces (government, private sector, NGOs, educational institutions, hospitals, sports facilities, etc) and domestic workers.
- ➔ **Internal Complaints committee (ICC):** Mandatory for workplaces with 10+ employees, with ≥50% women members, led by a woman.
- ➔ **Local complaints committee (LCC):** In each district for workplace with less than 10 employees.
- ➔ **Complaint:** Filed within 3 months, inquiry completed within 90 days.

### 6.5.2. Swasth Nari Sashakt Parivar Abhiyan

Prime Minister launched 'Swasth Nari Sashakt Parivar' Abhiyan.

#### About Abhiyan

- **Objective:** Organize 1 lakh+ health camps to screen women for anaemia, hypertension, diabetes, cancer, and support immunization, nutrition to reduce maternal/child mortality.
- **Ministry of Health & Family Welfare** and **Ministry of Women & Child Development.**
- **Technology:** SASHAKT portal tracks progress, ensures real-time accountability.
- **Community Role:** Anganwadis, Nikshay Mitras, private hospitals, etc.

### 6.5.3. "Progress on the Sustainable Development Goals: The Gender Snapshot 2025"

UN Women and UN DESA (Department of Economic and Social Affairs) released Gender Snapshot 2025, assessing gender equality across all 17 SDGs

#### Key Highlights of the Gender Snapshot 2025

- **Poverty & Food Security:** 376M women in extreme poverty (9.2%); anaemia may rise to 33% by 2030.
- **Health:** Maternal mortality decreased by 39% (2000–23), women spend 3 more years in poor health.
- **Education:** Girls lead in enrolment, but lag in secondary completion (Africa, Asia).
- **Leadership & Work:** Women hold 27% of parliamentary seats, 30% of management roles.
- **Violence:** 12.5% women face partner violence; 19% young women married before 18.
- **Digital Divide:** 65% women online vs 70% men; women's jobs more exposed to AI automation.
- **Climate & Resources:** Climate change may push 158M more women into poverty; 896M lack clean cooking fuels.
- **Peace & Security:** 676M women near deadly conflict..
- **Intersectionality:** Women with disabilities face limited reproductive rights, Internet access, and political participation.

**Priority Actions under Beijing+30 Action Agenda:** Digital revolution, equal decision-making power, freedom from poverty, zero violence, etc.

### 6.5.4. UDISE+ 2024-25 Report

Ministry of Education released Unified District Information System for Education Plus (UDISE+) 2024-25 Report, aligning with NEP 2020.

#### Major Findings

- **Teachers:** Over 1 crore teachers (6% rise from 2022-23).

- **Pupil-Teacher Ratios (PTRs):** Surpassed NEP's 1:30; Foundational (10), Preparatory (13), Middle (17), Secondary (21).
- **Drop-out Rates:** Decreased to 2.3% (Preparatory), 3.5% (Middle), 8.2% (Secondary).
- **Gross Enrolment Ratio:** Improved to 90.3% (Middle), 68.5% (Secondary).
- **Progress:** Zero enrolment schools down 6%; single-teacher schools reduced 38%.
- **Data and Trends in Indian School Education in percentage terms (2022-23 to 2024-25)**

Category	Indicator	2023-24	2024-25
Infrastructure Facilities	Computer access	57.2	64.7
	Internet	53.9	63.5
	Girls Toilet	97.2	97.3
Female Representation	Girls Enrollment	48.1	48.3
	Female Teachers	53.3	54.2

### 6.5.5. Comprehensive Modular Survey (CMS) on Education

National Statistics Office (NSO) released CMS on Education, part of NSS 80th Round, using CAPI.

- **Coverage:** Focuses only on school education.
- **Anganwadi Centres:** Classified as pre-primary, unlike 'non-formal' in 75th Round.
- **Private Coaching:** Separately collected spending data.

#### Key Highlights

- **Government Schools:** 55.9% of enrolments; rural (66%), urban (30.1%).
- **Private Schools:** 31.9% enrolment in unaided schools.
- **Private Coaching:** 27% students involved; urban (30.7%), rural (25.5%).
- **Funding:** 95% of students rely on household funding for education.

### 6.5.6. National Institutional Ranking Framework (NIRF) 2025

NIRF rankings 2025 released by the Union Government.

#### Key highlights

- **IIT Madras** topped overall category
- **Indian Institute of Science, Bengaluru** topped Universities Category.

#### About NIRF

- **Origin:** 2015 by Ministry of Education to rank Indian institutions.
- **Aim:** To provide reliable system for evaluating colleges and universities.

**Assessment Parameters:** 5 broad categories with different weightage - Teaching, Learning & Resources, Research and Professional Practice, Graduation Outcome, Outreach and Inclusivity and Perception.

### 6.5.7. Road Accidents in India 2023 Report

Report released by Ministry of Road Transport and Highways.

#### Key Statistics

- ➔ **Total Accidents and Fatalities:** In 2023, road accidents increased by 4.2% compared to 2022.
  - ➔ **Young adults (18 - 45 years):** 66.4% of victims during 2023.
- ➔ **Highest Share: Tamil Nadu, Madhya Pradesh (Uttar Pradesh, Tamil Nadu most fatalities)**
- ➔ **Accident prone Highways:** Highways with ~5% of total road network accounted for > 53% of total accidents and 59% of fatalities.
- ➔ **Road user categories:** Two-wheeler riders constituted highest percentage of accident deaths (45%) followed by pedestrians.

**Major causes of Road Accidents:** Human error (traffic rule violations, non-use of safety devices), road features, weather conditions, vehicular conditions, etc.

### Mitigation Measures by Ministry of Road Transport & Highways



**Education:** Road Safety Advocacy, National Road Safety Month/Week awareness campaigns.



**Engineering:** Road safety audits, accident-spot identification, vehicle safety features (airbags, child safety).



**Enforcement:** Penalties (Motor Vehicles Act, 2019), electronic monitoring.



**Emergency Care:** Good Samaritan protection, victim compensation, ambulance services.

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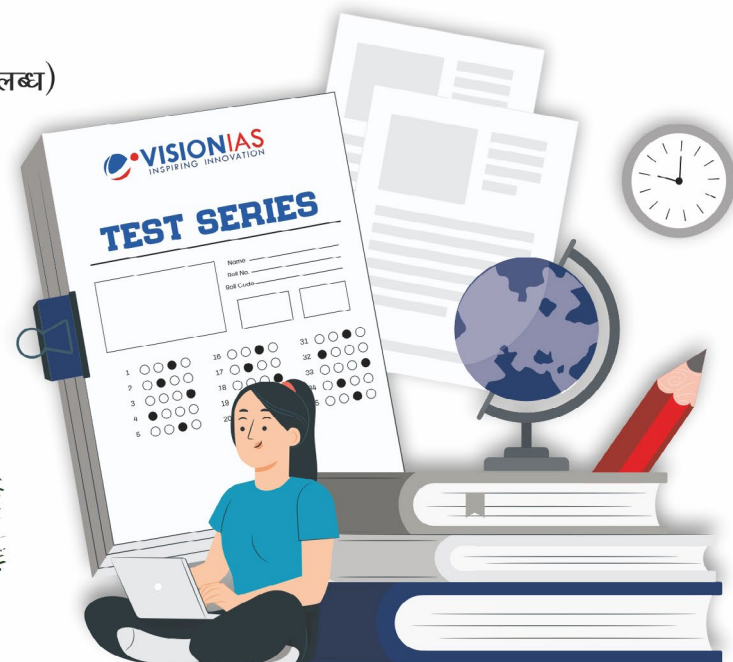
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# SCIENCE AND TECHNOLOGY



## 7.1. Artificial Intelligence & Healthcare

### Why in the News?

India joins Health AI Global Regulatory Network (GRN) to strengthen AI oversight in healthcare.

### More on the News:

- ➔ **HealthAI:** Geneva-based non-profit promoting responsible AI in health through global standards.
- ➔ **GRN:** Offers access to 'Global Public Repository of AI-related Registered Solutions for Health'; India's ICMR- National Institute for Research in Digital Health and Data Science (NIRDHDS) and IndiaAI collaborate with members like the UK and Singapore.
- ➔ Aligns with **IndiaAI under MeitY**, aiming India as an AI innovation leader.

### Need for strengthening oversight of AI in Healthcare:

- ➔ **Patient Safety:** Regulations ensure safe AI use in diagnosis and treatment.
- ➔ **Data Privacy:** Protects sensitive health data, per ICMR guidelines.
- ➔ **Ethical Use:** Prevents biases and ensures fairness in AI applications.
- ➔ **Transparency:** Requires explainable AI to avoid "black box" (they generate results without explaining how they arrived at them) issues
- ➔ **Liability:** Addresses accountability for AI-related medical errors.

### Applications of AI in Healthcare:

- ➔ **Diagnostics:** **iOncology.ai** (AIIMS-CDAC) aids early cancer detection.
- ➔ **Hospitals:** **Robotic surgeries - da Vinci robot (AIIMS)** enables precise surgeries; **eSanjeevani** offers AI-based diagnosis.
- ➔ **Data Management:** Enhances **Electronic Health Records** under Ayushman Bharat; automates tasks like claims processing.

### Challenges of AI in Healthcare

- ➔ **Technological:** Lack of interoperability and algorithmic bias (e.g., biased models for Black patients).
- ➔ **Ethical:** Ensuring fairness, patient consent, and preventing misinformation.
- ➔ **Inclusivity:** Representation bias and resistance from healthcare professionals due to trust issues.

### Global Innovations India Can Learn Through

- ➔ **AI for Remote Patient Monitoring:** **Finland** uses AI wearables for remote monitoring, applicable to India's **non-communicable diseases** management.
- ➔ **Federated Learning for Data Security:** **Singapore** train models on decentralised data without sharing sensitive information.

### Recommendations for integrating AI in Healthcare in India

- ➔ **Improve data diversity** to reduce bias.
- ➔ Use AI telemedicine to **bridge urban-rural gaps**.
- ➔ **Adopt regulatory sandboxes** for innovation and evaluate AI-driven digital health solutions.
- ➔ Implement "**Human in the Loop**" model to oversight the functioning and performance of the system.

## 7.2. News in Shorts

### 7.2.1. Oncolytic & PERSONALIZED mRNA Vaccines

Russia is developing oncolytic vaccine Enteromix and Personalized mRNA cancer vaccines for cancer treatment.

#### About oncolytic vaccine Enteromix

- ➔ Uses **oncolytic viruses (OVs)** to **kill cancer cells and boost anti-tumor immunity**.
- ➔ **Enteromix: Combines four non-pathogenic viruses** to destroy malignant cells and **activate immunity**.
  - ➔ Showed **100% success in preclinical trials**.
- ➔ Targets **colorectal cancer**, with progress for glioblastoma and melanoma.

#### About Personalized mRNA Vaccines

- ➔ **Personalized Vaccine:** Customised based on tumor genetic analysis to train immune system to target cancer cells.
- ➔ mRNA vaccines **use a small piece of messenger RNA (mRNA)** to instruct our cells to **produce a protein specific to a virus**, to deliver **genetic material**, encapsulated in **lipid nanoparticles**, (to prompt protein production matching pathogen called antigens).
- ➔ Immune system sees these **foreign antigens** as invaders, dispatching **defenders called antibodies and T-cells** and training immune system for potential future attacks.

**Benefits of mRNA Vaccines:** Rapid development of vaccine, strong immune response and no live virus needed.

#### Challenges of mRNA vaccines:

- ➔ **Storage requirements:** Require ultra-cold storage
- ➔ **Short-term side effects:** E.g. fever, fatigue, etc.
- ➔ **Long-term safety:** are still being studied due to their novelty.

### 7.2.2. World's Largest Neutrino Detector Activated

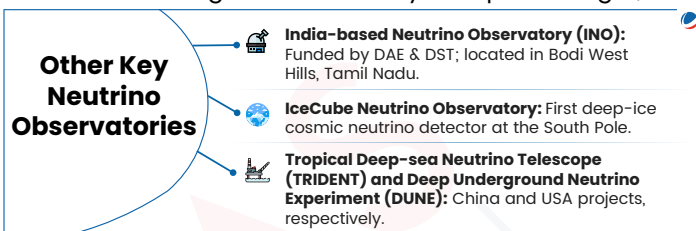
**Jiangmen Underground Neutrino Observatory (JUNO)**, activated in **China**.

- ➔ Most of neutrino observatories are underground, as physical bulk of Earth's crust helps **block most other interfering particles**, like muons (elementary subatomic particles similar to electron).
- ➔ **Goals**
  - ➔ Determine mass hierarchy of three neutrino types (**Electron, Muon, and Tau**).
  - ➔ Measure **frequency of neutrino oscillation** (shifting between types).

#### About Neutrinos

- ➔ Subatomic (**ghost**) particles with zero charge, zero size and tiny mass.

- ➔ **Second-most abundant particle** in universe **after photons**.
- ➔ Difficult to detect as they interact with matter via **weak nuclear force and gravity**.
- ➔ **Features:** Undisturbed by strongest magnetic field, Travel in straight lines at nearly the speed of light, etc.



### 7.2.3. Extreme Nuclear Transients (ENTs)

Astronomers identified Extreme Nuclear Transients (ENTs) a new category of events.

#### About ENTs

- ➔ Occur when **stars (masses at least three times sun)** are disrupted by supermassive black holes.
- ➔ Tidal forces **nears event horizon stretch star, emitting massive electromagnetic energy as an ENT**.

### 7.2.4. Quasi-Moon

Astronomers identified 2025 PN7, tiny quasi-moon orbiting near Earth for about 60 years.

#### About Quasi-Moon (Quasi-satellite)

- ➔ **A celestial body that:**
  - ➔ **Orbits the Sun**, synchronized with a planet's orbit.
  - ➔ Is influenced by sun's gravity, not planet's.
  - ➔ Does not directly orbit the planet, unlike **true moon**.
- ➔ **Earth has about 6 known quasi-moons. a**

### 7.2.5. India's Largest Lithium-ion (Li-ion) Battery Manufacturing Plant

India's Largest Lithium-ion (Li-ion) Battery Manufacturing Plant was inaugurated in Haryana.

- ➔ Will produce about **20 crore battery packs** annually, meeting nearly 40% of India's 50 crore pack requirement.
- ➔ Established under Centre's **Electronics Manufacturing Cluster (EMC) scheme**.

#### About Li-ion Battery

- ➔ **Rechargeable battery** where lithium ions move between a negative electrode (graphite) and a positive electrode (Lithium metal oxides) electrodes through a non-aqueous electrolyte during charging/ discharging.

#### Benefits of Lithium-ion Batteries

- ➔ **High energy density:** 75-200 Watt-hours /KG, compact with **long charge cycle**.

- ➔ **Lightweight:** Uses less toxic **lithium and carbon**, unlike **lead-acid batteries**.
- ➔ **Performance:** High efficiency, stability, low self-discharge, no memory effect.

### Challenges

- ➔ **Supply Chain:** China dominates global lithium (50%) and battery production (70%); India imported \$1.2 billion (2018-2022).
- ➔ **Safety: Flammable electrolyte** risks explosions if mishandled.
- ➔ **Environmental impact: Water-intensive** lithium mining; limited recycling units hinder safe disposal.

### 7.2.6. Hierarchical reasoning model (HRM)

**Current Large Language Models (LLMs)** like ChatGPT have certain **limitations** due to use of Chain-of-Thought (CoT) reasoning.

### About Hierarchical Reasoning Model (HRM)

- ➔ **Modelled on:** Human brain's hierarchical, multi-time scale processing.
  - ➔ Mimics how different brain regions integrate information across durations.

### 7.2.7. Ayurveda Ahara

FSSAI and Ministry of Ayush released definitive list of '**Ayurveda Ahara**' Products.

### Ayurveda Ahara

- ➔ Part of **Food Safety and Standards (Ayurveda Ahara) Regulations, 2022**.
- ➔ Provides rules for **Food Business Operators (FBOs)** to ensure authentic and safe Ayurvedic food products.
- ➔ Formulations sourced from **classical Ayurvedic texts** (Products- **Angarkarkati** (wheat balls), **Krishara** (Khicdi), **Panaka** (fruit drinks), and **Gulkand** (rose petal jam)).

### 7.2.8. DRAVYA Portal

**DRAVYA (Digitized Retrieval Application for Versatile Yardstick of AYUSH Substances) portal** launched on **National Ayurveda Day (Sep 23, 2025)**.

### About DRAVYA Portal

- ➔ **Ministry of Ayush.**
- ➔ Largest digital collection of data on Ayurvedic Ingredients and Products accessible to all.
- ➔ Evolving database covering **classical Ayurveda texts, modern scientific literature and field studies**.


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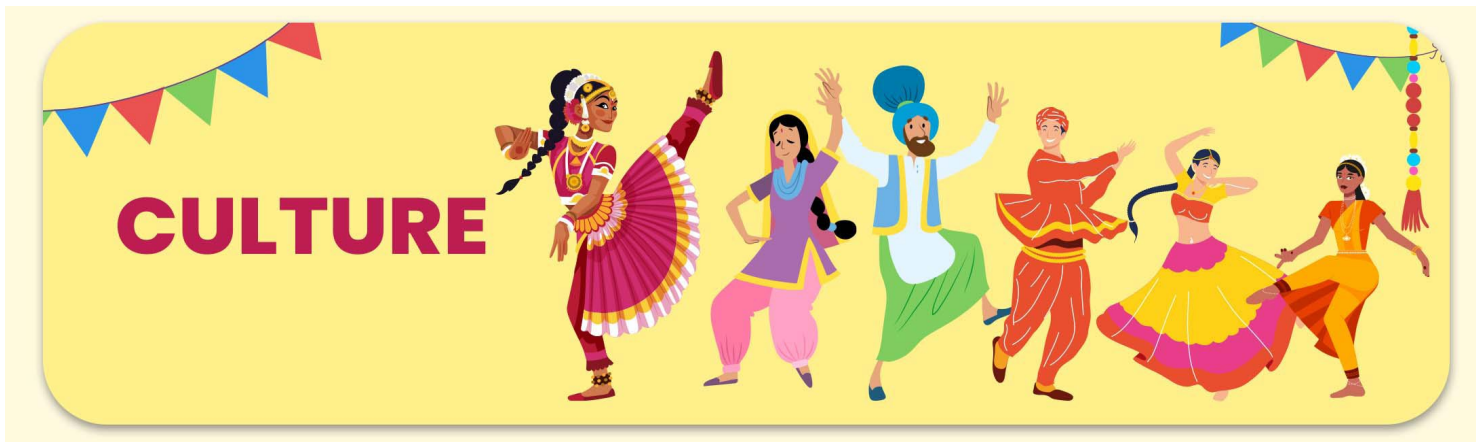
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## 8.1. 200th Birth Anniversary of Dadabhai Naoroji

### Why in the News?

His **200th Birth Anniversary** recently celebrated.

### About Dadabhai Naoroji (1825–1917)

- **Indian scholar, trader and politician.**
- Known as the “**Grand Old Man of India**” and “**Unofficial Ambassador of India**”.
- **Founding member and three time president of the Indian National Congress** (1886, 1893, and 1906).
  - ➔ In **1906**, bridge differences between **moderates and extremists**.
- **First Indian Professor at Elphinstone College**; later **Professor of Gujarati at University College London**.
- Elected to Bombay **Municipal Corporation in 1875**.

### Key Contributions

- **Social Reform**
  - ➔ **Promoted Women’s Education** through **Student Literary and Scientific Society (1848)**.
  - ➔ Founded **Rast Goftar newspaper**, Co-founded **Rahnumai Mazdayasan Sabha (1851)**.
- **Economic**
  - ➔ Developed **Drain of Wealth Theory** exposing British economic exploitation of India.
  - ➔ **Key works:** Poverty of India, Poverty and Un-British Rule in India.
    - ◆ **Member of the Welby (Royal) Commission.**
    - ◆ Started ‘**Voice of India**’ newspaper.
- **Political**
  - ➔ **Moderate leader** advocating **constitutional methods** (petitions, protests).
  - ➔ **Founded London Indian Society** (1865) and **East India Association** (1866).
  - ➔ **First Indian MP in British Parliament** (1892, Liberal Party, Finsbury Central).
  - ➔ **Mentored** INC leaders like Tilak, Gokhale, and Gandhi.
- **Ethical:** Emphasized purity in thought, speech, and action in Duties of the Zoroastrians.
- **Education:** Advocated **compulsory primary education** with Jyotiba Phule before Hunter Commission (1882).

### Conclusion

Dadabhai Naoroji’s contribution in **social reform, economic critique, and political leadership** laid the foundation for India’s freedom struggle. His vision of equity, education, and Swaraj continues to inspire India’s democratic journey.

## 8.2. 100 Years of the Self-Respect Movement in Tamil Nadu

### Why in the News?

2025 marks the centenary of the Self-Respect Movement, a transformative force in South India’s socio-political discourse.

## About Self Respect Movement

- **Launched by: E.V. Ramaswamy (Periyar)** in 1925.
- **Concept:** Aimed to create an egalitarian society free from caste, religion, and gender discrimination.
- **Described as: Arivu Vidutalai Iyakkam,** (intellect liberation movement).
- **Objectives outlined in two pamphlets:** Namathu Kurikkol and Tiravitak Kalaka Lateiyam.
- **Features:**
  - ➔ Opposed Devadasi system, caste discrimination, and widow remarriage restrictions.
  - ➔ Promoted self-respect marriages without priests and encouraged intercaste marriages.
  - ➔ First provincial conference held in 1929 at Chengalpattu.

### About E. V. Ramaswamy (Periyar) (1879–1973)

- **Social reformer and philosopher** advocating social equality through rationalism.
- Influenced by Gandhi's Khadi and temple entry programs; participated in Vaikom Satyagraha.
- Published **Kudi Arasu (Tamil weekly)**; earned titles **"Vaikom Veeran"** and **"Periyar."**
- Founded Self-Respect Socialist Party (1932) with Singara Velu Chattiyer.

## Significance of the Self-Respect Movement

- **Anti-Caste:** Challenged Brahminical dominance.
- **Women's Rights:** Advocated widow remarriage, property rights, and reproductive choices.
- **Rationalism:** Promoted critical thinking and rejection of superstition.
- **Cultural Renaissance:** Strengthened Tamil language and Dravidian identity.
- **Education:** Demanded **literacy and education** for marginalized sections.
- **Economic Justice:** Linked **caste inequality to economic exploitation**, demanded fair representation.
- **Political Impact:** Shaped Dravidian parties (Justice Party, DMK, AIADMK) and Tamil Nadu's welfare politics.
- **Global Influence:** Inspired Tamil diaspora movements in Malaysia, Singapore, etc.

## Other Social Reform & Anti-Caste Movements

- **Satyashodhak Samaj (1873): Jyotirao Phule's** movement for lower-caste education and anti-Brahminism.
- **SNDP Movement (1903): Narayan Guru's** fight against caste discrimination in Kerala.
- **Bahishkrit Hitkarini Sabha (1924):** Ambedkar's initiative for Dalit advancement.
- **Vaikom Satyagraha (1924–25):** Demanded temple-road access for oppressed castes.
- **All India Depressed Classes Association (1930):** Ambedkar's platform for Dalit rights.
- **All India Anti-Untouchability League (1932):** Gandhi's effort to eradicate untouchability.

## Conclusion

Self-Respect Movement revolutionized South India by **challenging caste, promoting rationalism, and advancing gender and social equality**. Its legacy continues to shape Tamil Nadu's politics and inspire inclusivity and empowerment.

## 8.3. News in Shorts

### 8.3.1. FIDE World Cup

The International Chess Federation (FIDE) announced FIDE World Cup 2025 will be hosted in Goa, India.

#### About FIDE World Cup

- **Major chess event** organized by FIDE, global chess governing body.
  - ➔ **FIDE:** Founded in 1924 in Paris, **now headquartered in Lausanne, Switzerland.**

### 8.3.2. World Boxing Championships 2025

Jaismine Lamboria and Minakshi Hooda won gold at World Boxing Championships, 2025.

#### About World Boxing Championships 2025

- Held in **Liverpool, UK.**
- First time featuring **combined men's and women's** events.
- India won **four medals: Golds by Jaismine Lamboria (57kg) and Minakshi Hooda (48kg) and silver by Nupur Sheoran**, and bronze by **Pooja Rani.**
- **Kazakhstan topped** the medal table.



### 8.3.3. Raja Prithu Rae

He ruled **Kamrupa (Assam)** during the **early 13th century** and marked the **beginning of the Kamata Kingdom (Kamrupa, Koch)**.

- Belonged to **Khen Dynasty**, tracing **lineage to Narakasura**.
  - ➔ They worshipped **Goddess Kamteswari** (Durga) and emerged **post- Pala Dynasty**.
- **Contribution:**
  - ➔ **Defeated Bakhtiyar Khilji's** attack, evidenced by Kanai Varasi rock inscription.
  - ➔ **Pardoned war prisoners, adhering to Dharma Yuddha** principles.

### 8.3.4. Magsaysay Award

Educate Girls NGO becomes first Indian organisation to win Ramon Magsaysay Award, in 2025.

#### About RGamon Magsaysay Award (Established, 1957):

- **First Award:** 1958. It is Asia's highest honor, akin to **Nobel Prize**.
- **Awarded:** Annually.
- Honors legacy of **Philippine president, Ramon Magsaysay**.
- **Recognises** individuals/ organisations in Asia for distinguished service and selfless contributions, regardless of race, creed, gender, or nationality.

### 8.3.5. Gyan Bharatam Portal


PM launched Gyan Bharatam Portal to digitize and preserve India's manuscript heritage, enhancing access to cultural knowledge.

- **Union Budget 2025-26**, announced the **Gyan Bharatam Mission** for manuscript survey, documentation, and conservation.


### About Manuscript

- **Handwritten compositions on materials** (paper, palm leaf) at least 75 years old, with significant scientific, historical, or aesthetic value.
- **Excludes** lithographs (technique involving drawing on a stone and then transferring image to paper) and printed volumes.
- India possesses **'memory of the world'** with an estimated 10 million manuscripts in 80 ancient scripts (e.g., Brahmi, Maithili), with ~75% in Sanskrit and 25% in regional languages.
- **Significance**
  - ➔ Evidence of human activities and societal aspects (e.g., Kautilya's Arthashastra).
  - ➔ Reflects ancestors' devotion to **knowledge, science, and learning** despite historical destruction.


### Other Initiatives for Manuscript Conservation

 **National Manuscripts Mission (NMM):** Launched In 2003, by the Ministry of Tourism and Culture to locate and preserve manuscripts.



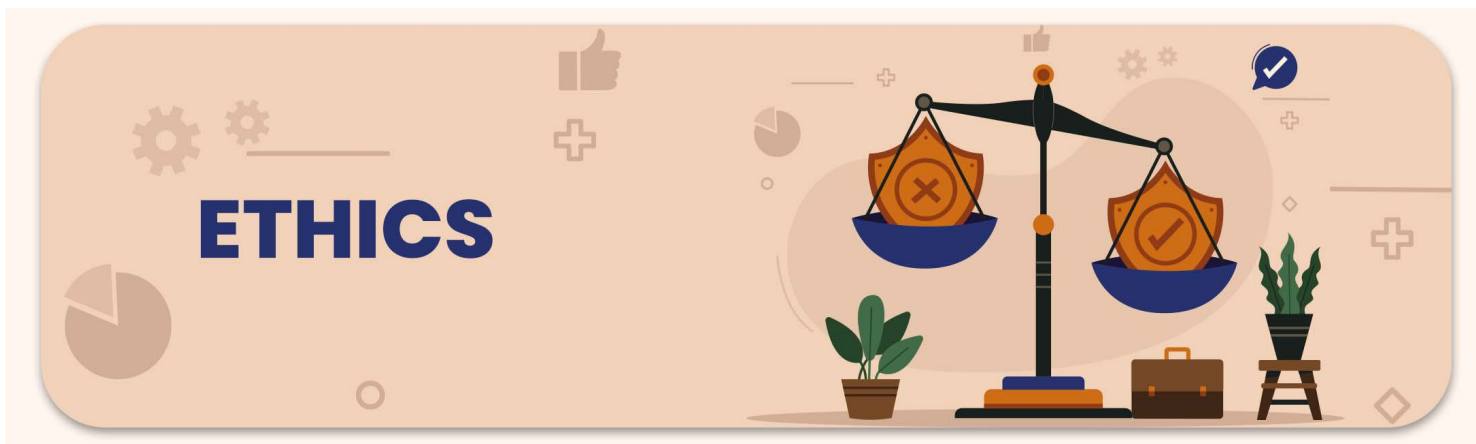
 **National Library of India, Kolkata:** It has about 3600 rare and historically important manuscripts.



 **Asiatic Society of Bengal:** Founded in 1784, by Sir William Jones, undertakes digitization of ancient manuscripts.



The 67<sup>th</sup>  
Ramon Magsaysay Awards  
Asia's premier prize and highest honor



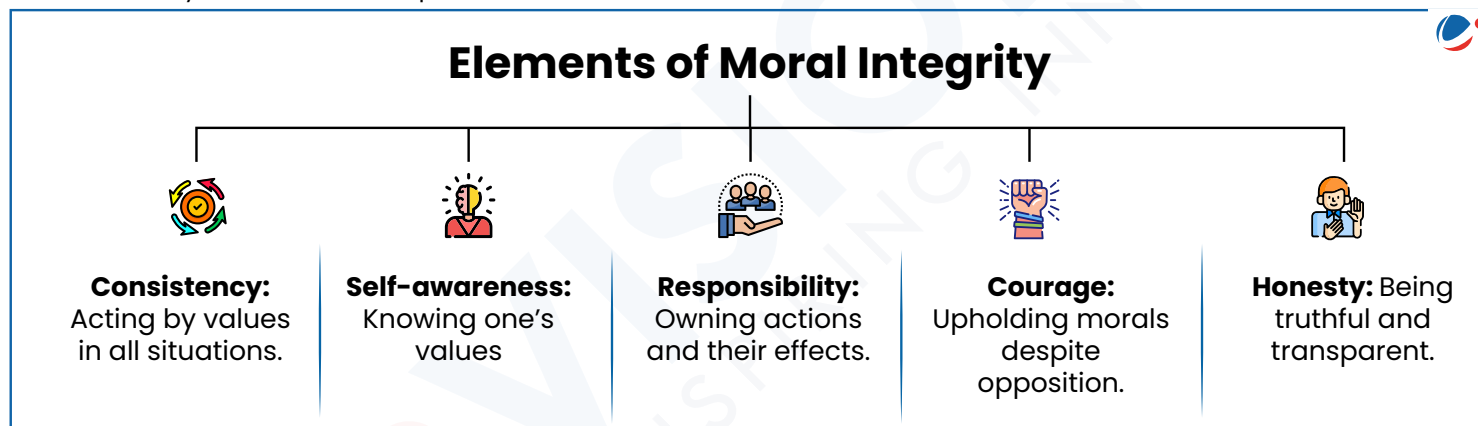
## 9.1. Moral Integrity

### Introduction

Supreme Court Judge Justice Surya Kant emphasized that moral integrity guides ethical decisions, fostering justice, fairness, and accountability.

### What is Moral Integrity?

➔ **Definition:** Moral integrity is **steadfast adherence to ethical principles** even under difficult circumstances, ensuring consistency between beliefs, speech, and actions.



### Key Stakeholders and their Interests

Stakeholder	Interests / Concerns
Individuals	Build credibility, resist corruption.
Public Servants	Uphold probity, transparency and impartiality in governance.
Judiciary	Ensure impartial justice, uphold constitutional morality.
Corporate Leaders	Promote ethical business, build trust.
Political Leadership	Serve public interest, upholding democratic values.
Society	Cultivating honesty, fairness, and justice.

### Factors Inhibiting Moral Integrity

- ➔ **Conflict of Interest: Personal gain vs. public duty** (e.g. 2G Spectrum case)
- ➔ **Systemic Pressures: Bureaucratic red tape, political interference** (E.g. Vyapam Scam).
- ➔ **Greed: Consumerism and materialism** drive unethical behavior (e.g. Satyam Scam).
- ➔ **Lack of Transparency:** Opaque systems enable corruption (e.g. pre- RTI era).
- ➔ **Peer Pressures: Group conformity** overrides ethics (e.g. Edward Snowden backlash).

- ➔ **Culture of Impunity:** Unpunished corruption discourages integrity (e.g. criminals winning elections).

## Importance of Moral Integrity in Contemporary Times

- ➔ **Individuals:** Builds trust, guides ethical choices (e.g., Ratan Tata's ethical practices, Satyendra Dubey's whistleblowing).
- ➔ **Public Administration:** Prevents corruption (e.g., Ashok Khemka, RTI Act), ensures citizen-centric governance (e.g. Metro Man E. Sreedharan, Singapore's public service code).
- ➔ **Judiciary:** Judges must act with impartiality, resisting political or social pressures (e.g., Navtej Johar Case, 2018).
- ➔ **Corporate Sector:** Promotes ethical practices, ESG norms (e.g., Infosys, Toyota's net-zero goal by 2050).
- ➔ **Civil Society:** Ensures ethical journalism, activism (e.g., Anna Hazare's movement).
  - ➔ **Technology:** Guides ethical decisions on privacy, bias (e.g., Tim Berners-Lee's advocated for an open, decentralized, and privacy-respecting internet).

## Conclusion

Moral integrity is the bedrock of a just society, ensuring ethical conduct, fairness and accountability. As **Mahatma Gandhi observed**, "Morality is the basis of things and truth is the substance of all morality."

## 9.2. Big Tech & Ethics of AI: A Growing Regulatory Challenge

### Introduction

Concerns over Big Tech's AI dominance, like Google's search monopoly and Apple's alleged use of pirated books for training its "OpenELM" AI, highlight growing legal challenges over copyrighted content and digital monopolies in AI development.

### Key Stakeholders and their Interests

Stakeholder	Interests / Concerns
<b>Big Tech</b>	Market dominance, profits, control over data & algorithms.
<b>Content Creators</b>	Protect copyright, ensure fair compensation.
<b>Consumers</b>	Affordable, safe AI; privacy protection.
<b>Governments</b>	Preventing monopolies, ensure safeguard national security and citizens' rights.
<b>Society</b>	Ethical, equitable AI; prevent bias, misinformation.

### Ethical concerns in AI LLMs

- ➔ **Digital monopoly:** Big Tech's control over data and markets stifles competition (e.g., Google's search dominance).
- ➔ **Copyright and IPR Infringement:** Using creators' works without consent (e.g., scraping books, art for AI training).
- ➔ **Privacy Risks:** Breaches from sensitive data use (e.g., South Korea's DeepSeek suspension).
- ➔ **Privatization of Knowledge:** Turning public data into proprietary products (e.g., Wikipedia misuse).
- ➔ **Profit vs. Ethics:** Prioritizing market gains over fairness.
- ➔ **North-South Divide:** Global South creators exploited, deepening inequality & digital colonialism.

### Status of AI regulation

- ➔ **India:** No Specific AI law; IT Act, 2000, DPDP Act, 2023, Copyright Act, 1957 and Competition Act, 2002, etc. are indirectly applied.
- ➔ **Global:** EU's AI Act ensures safe, transparent AI; **UNESCO's 2021 AI Ethics recommendation** adopted by India; **G20 AI Principles, Bletchley Declaration, Paris AI Summit** support ethical AI.

### Way Ahead

- ➔ **Legal Frameworks:** Enact a comprehensive AI law, addressing consent, IPR and accountability.
- ➔ **Fair Use:** Ensure creators are credited and compensated.
- ➔ **Prevent Monopolies:** Empower CCI, promote open-source AI.

- ➔ **Privacy:** Mandate consent-based data and audits of AI firms.
- ➔ **Knowledge Access:** Protect public data, promote AI literacy.
- ➔ **Balancing Corporate Profit with Ethical Responsibility:** Establish **Ethics Review Boards** within AI firms.
- ➔ **Global Treaty:** Advocate UN-led AI governance for equitable benefits.
- ➔ **India's Capacity:** Create **National AI Regulation Authority**, foster ethical AI development.

## Conclusion

Generative AI's potential must be balanced with strong regulation, ethical innovation, and global cooperation to prevent monopolies, protect creators, and ensure equitable benefits.

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# GOVERNMENT SCHEMES



## 10.1. PM Street Vendors AtmaNirbhar Nidhi (PM SVANidhi) Scheme

### Why on the News?

Cabinet **approved restructuring & extension** of PM SVANidhi Scheme beyond 2024 to support street vendors.

### Objectives

- Support holistic development of street vendors through reliable finance for business growth..
- Provide working **capital loans**.
- Promote **financial inclusion, digital payments, and vendor recognition**.

### Salient Features

- **Background:** Launched in 2020 to aid street vendors during COVID-19.
- **Type:** Central Sector Scheme.
- **Ministry:** Ministry of Housing and Urban Affairs (MoHUA).
- **Implementation:** MoHUA and Department of Financial Services (DFS).
- **Target Beneficiary:** Street Vendors in urban areas (pre- 24 March 2020), aiming to benefit 1.15 crore beneficiaries.
- **Key Benefits:** Working capital loans with 7% interest subsidy; higher loan eligibility for timely repayment.
- **New Features:**
  - ➔ **Enhanced Working capital Loan Tranches:**
    - ◆ **First:** up to ₹15,000 (up from ₹10,000).
    - ◆ **Second:** up to ₹25,000 (up from ₹20,000).
    - ◆ **Third:** unchanged at ₹50,000.
  - ➔ **Digital Access:** UPI-linked RuPay Credit Card after second loan repayment.
  - ➔ **Digital Push:** Up to **₹1,600** cashback for transactions.
  - ➔ **Coverage Expansion:** includes **census, peri-urban areas**.
  - ➔ **Capacity Building:** Training in entrepreneurship, financial literacy, digital skills and hygiene (with FSSAI).
  - ➔ **SVANidhi se Samridhhi:** Monthly Lok Kalyan Melas to link vendors with welfare schemes.


**PM SVANidhi योजना**  
**रेहड़ी-पटरी वालों का**  
**स्वाभिमान**





Topics	Key facts/Data
<b>Criminalisation of Politics</b>	<ul style="list-style-type: none"> <li>➔ <b>Vohra Committee (1993)</b>: highlighted the nexus of politicians, criminals and bureaucrats.</li> <li>➔ <b>Related Judicial pronouncements</b> <ul style="list-style-type: none"> <li>➔ <b>Union of India v ADR (2002)</b>: Candidates must disclose all criminal charges and convictions.</li> <li>➔ <b>Lily Thomas v Union of India (2013)</b>: Legislators convicted with ≥2-year sentence is immediately disqualified.</li> <li>➔ <b>Public Interest Foundation v Union of India (2019)</b>: Parties must publish candidates' criminal records online and in media.</li> </ul> </li> </ul>
<b>Judicial Pendency</b>	<ul style="list-style-type: none"> <li>➔ <b>Pendency across courts: SC</b> (88,417); <b>HCs</b> (63 lakh); <b>District Courts</b> (4.6 crore)</li> <li>➔ Judicial Pronouncements:           <ul style="list-style-type: none"> <li>➔ <b>Hussainara Khatoun Vs. State of Bihar (1979)</b>: right to speedy trial is part of <b>Article 21</b></li> </ul> </li> <li>➔ <b>Undertrial prisoners</b>: about <b>76% of prisoners</b> in India</li> </ul>
<b>National Medical Commission</b>	<ul style="list-style-type: none"> <li>➔ <b>Statutory body</b> under the <b>National Medical Commission Act, 2019</b>.</li> <li>➔ <b>Composition</b>: Appointed by the Central Government           <ul style="list-style-type: none"> <li>➔ Chairperson, Ten ex officio Members, Twenty-two part-time Members.</li> </ul> </li> </ul>
<b>Visakhapatnam Declaration</b>	<p><b>Replication of Successful e-Gov Models:</b></p> <ul style="list-style-type: none"> <li>➔ <b>SAMPADA 2.0</b> (MP)</li> <li>➔ <b>eKhata</b> (Bengaluru)</li> <li>➔ <b>Rohini Gram Panchayat</b> (Maharashtra)</li> <li>➔ <b>Drone Analytics Monitoring System (DAMS)</b> by NHAI.</li> </ul>
<b>Shanghai Cooperation Organisation (SCO)</b>	<ul style="list-style-type: none"> <li>➔ 25th <b>Shanghai Cooperation Organisation (SCO)</b> Summit 2025, was held in Tianjin, China.</li> <li>➔ <b>Laos</b> has been admitted as a partner country; SCO now has <b>27 countries (10 members + 17 partners)</b>.</li> </ul>
<b>India-China Relations</b>	<ul style="list-style-type: none"> <li>➔ <b>India's trade deficit with China</b>: USD 99 billion (2024-25)</li> <li>➔ In August 2025, China became India's largest trading partner.</li> <li>➔ <b>China</b> accounts for <b>70% of global rare earth ore extraction</b> and <b>90% of rare earth ore processing</b>.</li> </ul>
<b>India-Japan Partnership</b>	<ul style="list-style-type: none"> <li>➔ <b>Bilateral Trade</b>: US\$ 22.85 billion during FY 2023-24</li> <li>➔ <b>Important Initiatives</b>:           <ul style="list-style-type: none"> <li>➔ Asia-Africa Growth Corridor (AAGC);</li> <li>➔ India Japan Act East Forum;</li> <li>➔ India-Japan Comprehensive Economic Partnership Agreement (CEPA), etc.</li> </ul> </li> </ul>
<b>India-Israel</b>	<ul style="list-style-type: none"> <li>➔ <b>Bilateral investments</b>: USD 800 million</li> <li>➔ <b>Bilateral trade</b>: USD 6.53 billion (excluding defense) in FY 2023-24.</li> </ul>

<b>Pakistan and Saudi Arabia Strategic Mutual Defence Agreement</b>	<b>India–Saudi Relations:</b> <ul style="list-style-type: none"> <li>➔ <b>Bilateral trade (2023):</b> USD 42.98 billion</li> <li>➔ In 2024, Saudi Arabia contributed <b>6.7% of India's total inward remittances.</b></li> </ul>
<b>International Criminal Court (ICC)</b>	<b>About ICC (HQ: Hague, Netherlands)</b> <ul style="list-style-type: none"> <li>➔ <b>Origin:</b> Founded by Rome Statute (adopted 1998, effective 2002).</li> <li>➔ <b>Membership:</b> 125 countries; India, Israel, US, Russia, and China are not parties.</li> <li>➔ <b>Enforcement:</b> ICC decisions are binding.</li> </ul>
<b>Goods and Services Tax (GST) Reform</b>	<b>GST 2.0: Key Reforms</b> <ul style="list-style-type: none"> <li>➔ <b>Two-slab system of 5% and 18%</b></li> <li>➔ <b>40% Special De-Merit Rate</b> applies to 'sin' goods and select luxuries.</li> </ul>
<b>India's Semiconductor Ecosystem</b>	<ul style="list-style-type: none"> <li>➔ <b>Taiwan</b> produces over <b>60 per cent of the world's semiconductors</b> and nearly <b>90 per cent of the most advanced chips.</b></li> <li>➔ <b>Vikram 32-bit processor:</b> India's first fully indigenous 32-bit microprocessor.</li> </ul>
<b>PM MITRA Scheme</b>	<b>Overview of India's Textile and Apparel Sector</b> <ul style="list-style-type: none"> <li>➔ <b>2<sup>nd</sup> largest manufacturing capacity</b> (after China)</li> <li>➔ <b>6<sup>th</sup> largest exporter (3.91%</b> of the global trade).</li> <li>➔ <b>Contributes:</b> ~ 2.3% of GDP, 45 million jobs, 13% to industrial production, and 12% to exports (US\$ 34.4 billion in 2023–24).</li> </ul>
<b>STATE FINANCES 2022–23 REPORT</b>	<b>Key Findings</b> <ul style="list-style-type: none"> <li>➔ <b>Debt-to-GSDP:</b> Highest in Punjab 40.35%, Nagaland 37.15%, West Bengal 33.70%.</li> <li>➔ <b>Fiscal Deficit:</b> All states in deficit; <b>Gujarat 0.76%, Himachal Pradesh 6.46%; FRBM target 3.5%.</b></li> <li>➔ <b>Gaps in Revenue Capacity:</b> States' Own Tax Revenue (SOTR) ranges from <b>Haryana 70% to Arunachal Pradesh 9%.</b></li> </ul>
<b>GLOBAL INNOVATION INDEX (GII) 2025</b>	<ul style="list-style-type: none"> <li>➔ Released by <b>World Intellectual Property Organisation, assessing 139 economies on investment, technology, adoption, and socio-economic impact.</b></li> <li>➔ <b>India's Rise:</b> Ranked 38th, up from 81st (2015).</li> </ul>
<b>POLYMETALLIC SULPHIDES</b>	<b>International Seabed Authority (ISA)</b> <ul style="list-style-type: none"> <li>➔ <b>Members:</b> 170 (including India).</li> <li>➔ <b>Genesis:</b> 1994, with <b>United Nations Convention on the Law of the Sea (UNCLOS)</b> entry into force.</li> </ul>
<b>PRADHAN MANTRI MATSYA SAMPADA YOJANA</b>	<ul style="list-style-type: none"> <li>➔ <b>Genesis:</b> Launched in 2010 by Department of Fisheries, Ministry of Fisheries, Animal Husbandry &amp; Dairying.</li> <li>➔ <b>Nodal Agency:</b> NFDB implements training, awareness, and capacity-building.</li> </ul>
<b>WORLD TRADE REPORT 2025</b>	<ul style="list-style-type: none"> <li>➔ <b>Released by:</b> WTO</li> <li>➔ <b>Recognizes AI as a transformative technology reshaping global wealth and income.</b></li> </ul>
<b>Cybercrime in India</b>	<ul style="list-style-type: none"> <li>➔ <b>Important sections of the IT Act:</b> <ul style="list-style-type: none"> <li>➔ <b>Section 69A</b> (blocking public access to information)</li> <li>➔ <b>Section 79</b> (intermediary liability and "safe harbour")</li> <li>➔ <b>Section 70B</b> (establishing CERT-In)</li> </ul> </li> <li>➔ <b>Institutional Mechanism:</b> Indian Cybercrime Coordination Centre (I4C); CERT-In; National Critical Information Infrastructure Protection Centre (NCIIPC); CBI &amp; NIA</li> <li>➔ <b>Inter-agency Cooperation:</b> SAHYOG Portal (I4C)</li> </ul>
<b>Enforcement Directorate</b>	<b>About Enforcement Directorate: (Headquarter: New Delhi)</b> <ul style="list-style-type: none"> <li>➔ <b>Genesis:</b> 1956; <b>Administrative Control:</b> Department of Revenue, Ministry of Finance.</li> <li>➔ <b>Statutory function:</b> Enforcement of <b>Prevention of Money Laundering Act (2002), Foreign Exchange Management Act (1999), Fugitive Economic Offenders Act (2018).</b></li> </ul>

<b>Indian Ocean Naval Symposium (IONS)</b>	<b>About IONS</b> <ul style="list-style-type: none"> <li>➤ <b>Launched:</b> 2008 by the Indian Navy to enhance maritime cooperation among Indian Ocean littoral states.</li> <li>➤ <b>Membership:</b> 25 members and 9 observers: open to states bordering the Indian Ocean with naval or maritime forces.</li> </ul>
<b>Peace Pact with Kuki-Zo Groups</b>	<b>About the Agreement</b> <ul style="list-style-type: none"> <li>➤ <b>Came into force:</b> from August 22, 2008</li> <li>➤ <b>Objective:</b> to end hostilities by initiating political dialogue and finding a <b>political settlement within the Constitution</b> of India.</li> </ul>
<b>Operation Black Forest</b>	<ul style="list-style-type: none"> <li>➤ It is the <b>biggest anti-Naxal operation</b> ever conducted along the <b>Chhattisgarh-Telangana border</b>.</li> </ul>
<b>UN High Seas treaty</b>	<b>About UN High Seas treaty</b> <ul style="list-style-type: none"> <li>➤ Implemented under <b>UNCLOS</b> – third implementing agreement after:           <ul style="list-style-type: none"> <li>➔ 1994 Part XI Implementation Agreement (deep seabed mining).</li> <li>➔ 1995 UN Fish Stocks Agreement.</li> </ul> </li> </ul>
<b>Green Credit Program</b>	<b>About the Green Credit Program</b> <ul style="list-style-type: none"> <li>➤ <b>Initiative:</b> Market-based mechanism under <b>Environment (Protection) Act, 1986</b> and part of <b>Mission LIFE</b> to promote voluntary environmental actions.</li> <li>➤ <b>Nodal Agency:</b> MoEFCC; <b>ICFRE (Indian Council of Forestry Research and Education)</b> serves as administrator for implementation, monitoring, and management.</li> </ul>
<b>River Pollution in India</b>	<b>About Polluted River Stretch (PRS)</b> <ul style="list-style-type: none"> <li>➤ <b>Polluted River Stretch (PRS):</b> Continuous sequence of polluted sites where <b>BOD &gt; 3 mg/L</b>.</li> <li>➤ Classified under <b>five Priority Classes (I–V)</b> based on BOD levels (e.g., Class I: &gt;30.1 mg/L).</li> </ul>
<b>State Energy Efficiency Index (SEEI), 2024</b>	<b>About State Energy Efficiency Index (SEEI)</b> <ul style="list-style-type: none"> <li>➤ <b>Developed by:</b> Bureau of Energy Efficiency (BEE) in association with the <b>Alliance for an Energy Efficient Economy (AEEE)</b>.</li> </ul>
<b>State of Global Water Resources 2024</b>	<b>Key Highlights of Report released by WMO</b> <ul style="list-style-type: none"> <li>➤ <b>Global glacier loss</b> continues for the third year; many small glaciers nearing <b>Peak Water Point</b>, after which runoff will decline.</li> <li>➤ Around <b>two-thirds of global river basins</b> face <b>too much or too little water</b>, causing floods in Africa, Europe, and Asia, and droughts in the Amazon.</li> </ul>
<b>Production Gap Report 2025</b>	<b>Key Highlights</b> <ul style="list-style-type: none"> <li>➤ <b>Massive Overproduction:</b> <ul style="list-style-type: none"> <li>➔ Planned <b>fossil fuel production in 2030 will exceed levels</b> consistent with limiting warming to 1.5°C by more than 120% and to 2°C by 77%.</li> <li>➔ Coal remains the most misaligned, with <b>projected 2030 global output 500 % higher</b> than the 1.5°C pathway.</li> </ul> </li> </ul>
<b>Grey Rhino Event</b>	<ul style="list-style-type: none"> <li>➤ Grey Rhinos are defined as <b>highly probable, high impact but yet neglected</b> systemic disruptions.</li> <li>➤ These are <b>not random surprises</b> (like Black Swan events) but <b>occur after clear warnings and accumulating evidence</b>.</li> </ul>
<b>Super Typhoon</b>	<b>About Super Typhoon</b> <ul style="list-style-type: none"> <li>➤ A <b>tropical cyclone</b> has <b>wind speeds above 185 km/h (100 knots)</b>.</li> <li>➤ It is a <b>warm-core low-pressure system</b> with spiral inflow at the surface and outflow aloft.</li> <li>➤ Forms <b>over oceans</b> with <b>sea surface temperature &gt; 26°C</b>, usually <b>beyond 5° latitude</b> from the equator.</li> </ul>



<b>Barren Island Volcano</b>	<b>About Barren Island</b> <ul style="list-style-type: none"> <li>➔ <b>Location:</b> Situated in the <b>Andaman Sea</b>, Andaman and Nicobar Islands, India. <b>Northeast of Port Blair</b></li> <li>➔ <b>Status:</b> India's <b>only active volcano</b>.</li> <li>➔ <b>Type:</b> <b>Stratovolcano</b>, part of the Andaman volcanic arc.</li> </ul>
<b>Gen Z protest in Nepal</b>	<b>Examples of Gen Z Movements:</b> <ul style="list-style-type: none"> <li>➔ <b>India: Freedom &amp; Youth Movements</b> (Congress youth, Anushilan Samiti, Yugantar).</li> <li>➔ <b>Global:</b> US Civil Rights &amp; Vietnam War protests (youth vs. authoritarianism), Belarus (2020, protests against electoral fraud), India Against Corruption (2011, transparency &amp; Lokpal creation).</li> </ul>
<b>Protection of Women from Domestic Violence Act (PWDVA), 2005</b>	<b>About the Act</b> <ul style="list-style-type: none"> <li>➔ Applies to <b>all women in domestic relationships</b> – marriage, live-in, familial ties, shared households.</li> <li>➔ Defines <b>Domestic Violence</b> as actual abuse or threat of abuse including <b>physical, sexual, emotional, verbal, and economic abuse</b> and <b>dowry-related harassment</b>.</li> <li>➔ <b>Key Rights</b> – Right to reside in shared household, protection orders, monetary relief, custody &amp; compensation orders, civil remedy, etc.</li> </ul>
<b>Decline in Fertility rate in India</b>	<b>Key Terms</b> <ul style="list-style-type: none"> <li>➔ <b>Total Fertility Rate (TFR):</b> Avg. number of children a woman would bear during her lifetime.</li> <li>➔ <b>Gross Reproduction Rate (GRR):</b> Avg. number of daughters a woman would have.</li> <li>➔ <b>Crude Birth Rate (CBR):</b> Number of live births per 1,000 population in a year.</li> <li>➔ <b>Age-Specific Fertility Rate (ASFR):</b> Live births per 1,000 women in a specific age group.</li> </ul>
<b>Obesity and Overweight</b>	<b>Indian Government Initiatives</b> <ul style="list-style-type: none"> <li>➔ <b>POSHAN Abhiyaan:</b> Improved nutrition outcomes</li> <li>➔ <b>Eat Right India Movement:</b> Healthy, safe, sustainable food</li> <li>➔ <b>'Aaj Se Thoda Kam' Campaign:</b> Reduce fat, sugar, salt</li> <li>➔ <b>RUCO Initiative:</b> Repurposing used cooking oil.</li> </ul>
<b>POSH Act, 2013</b>	<b>About POSH Act 2013</b> <ul style="list-style-type: none"> <li>➔ Based on <b>Vishaka judgement 1997</b></li> <li>➔ <b>Scope:</b> Applies to all workplaces: government, private sector, NGOs, educational institutions, hospitals, sports facilities, etc and covers domestic workers as well.</li> </ul>
<b>Comprehensive Modular Survey (CMS) on Education</b>	<b>About CMS</b> <ul style="list-style-type: none"> <li>➔ Released by <b>National Statistics Office (NSO), MoSPI</b></li> <li>➔ Uses <b>Computer-Assisted Personal Interviews (CAPI)</b> for data collection</li> </ul>
<b>Oncolytic &amp; PERSONALIZED mRNA VaccinES</b>	<b>About Oncolytic Vaccine &amp; Enteromix</b> <ul style="list-style-type: none"> <li>➔ <b>Oncolytic vaccines</b> use viruses (OVs) that directly kill cancer cells and activate anti-tumor immunity.</li> <li>➔ <b>Enteromix</b> combines four non-pathogenic viruses that destroy malignant cells and trigger immune response.</li> </ul>
<b>World's Largest Neutrino Detector Activated</b>	<b>About Neutrinos:</b> <ul style="list-style-type: none"> <li>➔ <b>Nature:</b> Subatomic "ghost" particles with neutral charge, zero size, tiny mass.</li> <li>➔ <b>Occurrence:</b> 2nd most abundant particle after photons; most abundant massive particle in the universe.</li> <li>➔ <b>Detectability:</b> Extremely hard to detect as interact only via weak nuclear force and gravity.</li> <li>➔ <b>Key Features:</b> Travel nearly at the speed of light, unaffected by magnetic fields and move in straight lines from their source.</li> </ul>
<b>Extreme Nuclear Transients (ENTs)</b>	<b>About ENTs</b> <ul style="list-style-type: none"> <li>➔ ENTs occur when <b>stars with masses at least three times</b> greater than that of the sun.</li> <li>➔ <b>Star nears a black hole's event horizon</b>, extreme tidal forces stretch and compress the star into a long, thin spaghetti-like shape, releasing enormous amounts of electromagnetic energy. This emission is the ENT.</li> </ul>

<b>Quasi-Moon</b>	<b>About Quasi-Moon (a.k.a. Quasi-satellite)</b> ↻ It is a celestial body that <b>orbits the Sun</b> , appearing to travel with a planet due to a synchronized orbit.
<b>Hierarchical reasoning model (HRM)</b>	<b>About HRM</b> → <b>Modelled on:</b> Human brain's hierarchical, multi-time scale processing. → Mimics how different brain regions integrate information across durations.
<b>DRAVYA Portal</b>	<b>About DRAVYA Portal</b> ↻ Ministry of Ayush. ↻ Largest collection of data on Ayurvedic Ingredients and Products
<b>Dadabhai Naoroji</b>	<b>About Dadabhai Naoroji</b> ↻ Also known as the <b>"Grand Old Man of India"</b> and <b>"Unofficial Ambassador of India."</b> ↻ <b>First Indian professor</b> at Elphinstone College; also taught at <b>University College London</b> . ↻ <b>First Indian MP</b> in British Parliament (Liberal Party, Finsbury Central, 1892).
<b>100 Years of the Self-Respect Movement in Tamil Nadu</b>	<b>About Self-Respect Movement</b> ↻ <b>Launched by:</b> E.V. Ramaswamy (Periyar) in <b>1925</b> . ↻ <b>Core Idea:</b> Establish an <b>egalitarian society</b> free from caste, gender, and religious discrimination. ↻ <b>Key Features:</b> Social upliftment, self-respect marriages, inter-caste & love marriages, etc.
<b>FIDE World Cup</b>	↻ It is a <b>major chess event</b> organized by the FIDE ↻ <b>FIDE</b> was constituted as a <b>non-governmental institution</b> in Paris in 1924, but is now headquartered in <b>Lausanne, Switzerland</b> .
<b>World Boxing Championships 2025</b>	↻ Featured <b>both men's and women's</b> events together for the <b>first time</b> . ↻ India won <b>four medals: Golds by Jaismine Lamboria (57kg) and Minakshi Hooda (48kg) and Nupur Sheoran</b> earning silver, and <b>Pooja Rani</b> adding a bronze. ↻ <b>Kazakhstan topped</b> the medal table.
<b>Raja Prithu Rae</b>	↻ Ruled <b>Kamrupa (Assam, 13<sup>th</sup> century)</b> , belonged to the <b>Khen Dynasty</b> . ↻ <b>Contribution: Raja Prithu Rae defeated Bakhtiyar Khilji</b> who attacked Kamrupa.
<b>Magsaysay Award</b>	↻ Asia's highest honor, the <b>Asian version of the Nobel Prize</b> . ↻ <b>Awarded:</b> Annually. ↻ It celebrates the memory and leadership example of the <b>third Philippine president, Ramon Magsaysay</b> .
<b>Moral Integrity</b>	<b>Quotes on moral Integrity:</b> ↻ <b>C.S. Lewis:</b> Integrity is doing the right thing, even when no one is watching. ↻ <b>Mahatma Gandhi:</b> Morality is the basis of things, and truth is the substance of all morality.
<b>Big Tech &amp; Ethics of AI</b>	<b>AI regulations:</b> ↻ <b>India:</b> No Specific Law; but indirectly covered under IT Act of 2000, Digital Personal Data Protection Act, 2023, The Copyright Act, 1957, The Competition Act, 2002, etc ↻ <b>Global:</b> European Union's AI Act, UNESCO's 2021 Recommendation on the Ethics of AI, G20 AI Principles, 2023 Bletchley Declaration of U.K. AI Summit, and 2025 Paris AI Action Summit.
<b>PM SVANidhi Scheme</b>	↻ <b>Nodal Ministry:</b> Ministry of Housing & Urban Affairs (MoHUA). ↻ <b>Implementation:</b> By <b>MoHUA &amp; Department of Financial Services (DFS)</b> .

# ACTIVITIES



## 12.1. MCQS

### 1. Consider the following statements about Criminalisation of Politics in India.

- Section 8 of the Representation of People's Act (RPA), 1951, disqualifies persons convicted for two years or more.
- The Election Commission can reduce such disqualification under Section 11 of RPA, 1951.

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

### 2. The Visakhapatnam Declaration (2025) primarily focuses on—

- Federal fiscal reforms
- Data-driven digital governance
- Panchayati Raj reform
- Digital currency framework

### 3. Which of the following countries is NOT part of the I2U2 Partnership?

- India
- Israel
- United Arab Emirates
- Saudi Arabia

### 4. The International Criminal Court (ICC) can prosecute individuals for which crimes?

- Genocide
- War Crimes
- Crimes against Humanity
- Crime of Aggression

Select the correct answer using the code given below.

- 1, 2 and 3 only
- 1 and 4 only
- 1, 2, 3 and 4
- 2 and 3 only

### 5. Under SARFAESI Act, which of the following statements is NOT correct?

- It allows banks to auction secured assets without court intervention.

- Agricultural land can be sold under SARFAESI.
- Borrowers can approach the Debt Recovery Tribunal for grievance redressal.
- Cooperative banks are included within its ambit.

### 6. Consider the following statements regarding GST 2.0 reforms:

- It introduces a two-slab structure of 5% and 18%.
- The "special de-merit rate" replaces the earlier compensation cess on sin/luxury goods.

Which of the above are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

### 7. Consider the following statements about the Global Innovation Index (GII):

- It is released annually by the World Economic Forum.
- It assesses economies based on investment, technology, adoption, and socio-economic impact.

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

### 8. With reference to the Wheeled Armoured Platform (WhAP), consider the following statements:

- It is India's first amphibious infantry combat vehicle.
- It has been jointly developed by DRDO and Tata Advanced Systems.
- It is equipped with an integrated power pack and automatic transmission.
- The first overseas plant to produce WhAP has been inaugurated in Oman.

Which of the statements given above are correct?

- 1 and 3 only
- 1, 2 and 3 only
- 2 and 4 only
- 1, 3 and 4 only

**9. Consider the following statements regarding INS Androth:**

1. It is the second ship in the Arnala-class series of ASW SWCs.
2. It is powered by a diesel engine-waterjet combination.
3. It is equipped with lightweight torpedoes and indigenous ASW rockets.

Which of the statements given above are correct?

- (a) 1 and 2 only  
 (b) 2 and 3 only  
 (c) 1 and 3 only  
 (d) 1, 2 and 3

**10. Which of the following statements about the UN High Seas Treaty (BBNJ Agreement) are correct?**

1. It governs marine biodiversity in areas beyond national jurisdiction, covering about 50% of Earth's surface.
2. It applies to military activities including warships and naval aircraft as well.
3. It establishes mechanisms for Marine Protected Areas (MPAs), benefit-sharing of Marine Genetic Resources (MGRs), and Environmental Impact Assessments (EIAs).
4. India has ratified the treaty and is actively implementing it.

Select the correct answer using the code below:

- (a) 1 and 3 only  
 (b) 2 and 4 only  
 (c) 1, 3, and 4 only  
 (d) 1, 2, 3, and 4

**11. Consider the following statements regarding Public Consultation under the Environmental Impact Assessment (EIA), 2006:**

1. All mining projects in India, including uranium and rare earths, are required to undergo Public Consultation.
2. Public Consultation is mandatory only for Category A and B1 projects under EIA, 2006.

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

**12. Consider the following statements regarding the Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025:**

1. Mining of critical and strategic minerals under the MMDR Act, 1957 requires compensatory afforestation on at least double the diverted forest area.
2. State governments can now grant initial working permission for linear projects like roads and transmission lines without prior Stage-I approval from the Centre.

3. Compensatory Afforestation land must mandatorily be notified as a protected area under the Indian Forest Act, 1927.

Which of the statements given above is/are correct?

- (a) 1 only  
 (b) 1 and 2 only  
 (c) 2 and 3 only  
 (d) 1, 2, and 3

**13. With reference to the recent Sample Registration System (SRS) Statistical Report 2023 consider the following statements:**

1. The Total Fertility Rate (TFR) for India in 2023 stands below the replacement level of 2.1.
2. Bihar continues to have the highest Crude Birth Rate (CBR) among Indian states.

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

**14. With reference to the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, consider the following statements:**

1. The Act applies only to government offices and excludes private sector and domestic workers.
2. An Internal Complaints Committee (ICC) is mandatory in every workplace having ten or more employees, with at least half of its members being women.
3. Which of the statements given above are NOT correct?

- (a) 1 only  
 (b) 2 only  
 (c) Both 1 and 2  
 (d) None

**15. With reference to the Unified District Information System for Education Plus (UDISE+) 2024-25 Report, consider the following statements:**

1. For the first time, the total number of teachers in India has crossed the 1 crore mark.
2. The pupil-teacher ratio (PTR) at the secondary level is higher than that at the preparatory level.
3. Girls' enrollment in schools has declined marginally compared to the previous year.

Which of the statements given above are correct?

- (a) 1 and 2 only  
 (b) 1 and 3 only  
 (c) 2 and 3 only  
 (d) 1, 2 and 3 only

**16. With reference to the Comprehensive Modular Survey (CMS) on Education released as part of the 80th Round of the National Sample Survey (NSS), consider the following statements:**

1. The CMS focuses exclusively on school education, unlike the previous 75th Round which covered all levels of education.

2. The survey classifies Anganwadi Centres under non-formal education as in the 75th Round.
3. Government schools account for a majority of total enrolments in India, with their share higher in rural areas than in urban areas.
4. Which of the statements given above are correct?
  - (a) 1, 2 and 3
  - (b) 1 and 3 only
  - (c) 2 and 3 only
  - (d) 1 and 2 only

**17. With reference to the "Road Accidents in India 2023" report, consider the following statements:**

1. The report was released by the National Crime Records Bureau (NCRB).
2. Two-wheeler riders accounted for the highest share of accident deaths in 2023.
3. National and State Highways, which make up only about 5% of India's total road network, accounted for more than half of total accidents and fatalities.
4. Uttar Pradesh recorded the highest number of accidents, followed by Tamil Nadu.

Which of the statements given above are correct?

- (a) 2 and 3 only
- (b) 1, 2 and 3 only
- (c) 2, 3 and 4 only
- (d) 1 and 4 only

**18. With reference to Extreme Nuclear Transients (ENTs) consider the following statements:**

1. ENTs occur when low-mass stars are engulfed by supermassive black holes located at the centers of galaxies.
2. The phenomenon of ENTs involves extreme tidal forces that distort a star's shape, releasing high levels of electromagnetic radiation.
3. ENTs help scientists understand the interaction between stellar material and black hole gravity near the event horizon.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**19. With reference to India's largest Lithium-ion (Li-ion) battery manufacturing plant recently inaugurated in Haryana, consider the following statements:**

1. The plant was established under the Electronics Manufacturing Cluster (EMC) scheme of the Government of India.
2. Lithium-ion batteries use aqueous electrolytes to facilitate the movement of lithium ions between electrodes.
3. Lithium-ion batteries are lighter and less toxic compared to traditional lead-acid batteries.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**20. With reference to Dadabhai Naoroji, consider the following statements:**

1. He was the first Indian to become a member of the British Parliament.
2. He was one of the founding members of the Indian National Congress in 1885.
3. He was associated with the Welby Commission on Indian finances.
4. He advocated for compulsory primary education before the Hunter Commission.

Which of the statements given above are correct?

- (a) 1, 3 and 4 only
- (b) 1 and 2 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

## 12.2. True/False Statements

1. France follows a federal system similar to India's quasi-federal design.
2. The Immigration and Foreigners (Exemption) Order, 2025 grants visa exemptions to religious minorities from Pakistan, Afghanistan, and Bangladesh.
3. The National Medical Commission is a Statutory Body.
4. Scarborough Shoal is a small atoll in the South China Sea.
5. Saudi Arabia is India's 3rd largest crude oil supplier.
6. Economic Outlook Report is released by OECD.
7. India's first global licence for exploring Polymetallic Sulphides was granted in the Pacific Ocean.
8. Exercise Maitree is Joint training exercises between India and Thailand.
9. National Biofoundry Network is part of the BioE3 Policy under the "Bioenablers" category.
10. Polluted River Stretch (PRS) is the Continuous sequence of polluted sites where BOD > 3 mg/L.
11. State Energy Efficiency Index (SEEI) is developed by Bureau of Energy Efficiency (BEE) in association with the Alliance for an Energy Efficient Economy (AEEE).
12. According to the Gender Snapshot 2025, women now constitute nearly 50% of global management positions.
13. According to the UDISE+ 2024-25 Report, the percentage of schools with Internet access has declined compared to 2023-24.
14. In the NIRF 2025 rankings, the Indian Institute of Science (IISc), Bengaluru topped the Universities Category.
15. IndiaAI operates under the Ministry of Electronics & Information Technology (MeitY).

16. Neutrinos have zero electric charge and can travel almost at the speed of light.
17. 'Poverty and Un-British Rule in India' Book was written by Dadabhai Naoroji
18. The Self-Respect Movement sought to reform Hinduism from within rather than rejecting its hierarchical framework.
19. Lithographs and printed volumes are considered manuscripts under the Gyan Bharatam Mission.
20. The FIDE Chess World Cup is organized by the Indian Chess Federation under the supervision of FIDE.

## 12.3. Mains Practice Questions

1. "Criminalisation of politics undermines democratic legitimacy." Discuss with constitutional and judicial references. (10 Marks, 150 Words)
2. Examine the causes and consequences of judicial pendency in India. Suggest measures to improve the justice delivery system. (10 Marks, 150 Words)
3. Compare the Indian and French political systems in terms of executive structure and secularism. (10 Marks, 150 Words)
4. Critically examine India's preparedness to become a global semiconductor hub. (10 Marks, 150 Words)
5. How does the PM MITRA Scheme aim to strengthen India's textile sector amidst rising global competitiveness? (10 Marks, 150 Words)
6. "GST 2.0 reforms mark a move towards simplicity and social protection." Discuss. (10 Marks, 150 Words)
7. What are the major challenges faced by the ED in tackling money laundering in India? How can its functioning be made more transparent and effective? (10 marks, 150 words)
8. "The current framework of Disaster Risk Financing (DRF) in India inadequately captures the vulnerabilities of Himalayan hill states." Critically examine the limitations of the Disaster Risk Index (DRI) used by the Finance Commission, and suggest reforms to make disaster financing more equitable and risk-sensitive. (10 Marks, 150 Words)
9. Examine the key features, achievements, and persistent challenges in implementing the The Protection of Women from Domestic Violence Act, 2005? (15 Marks/ 250 Words)
10. The restructuring and extension of the PM Street Vendors' AtmaNirbhar Nidhi (PM SVANidhi) Scheme represent a significant move toward inclusive urban development and financial empowerment in India. Examine. (10 marks, 150 words)
11. Examine the key challenges and opportunities in India-China relations in the current decade. (15 Marks, 250 Words)
12. "India-Japan partnership forms the economic and strategic core of the Indo-Pacific vision." Elaborate. (15 Marks, 250 Words)
13. Discuss the major factors contributing to the rise in cybercrime in India and evaluate the measures taken by the government to tackle them. Suggest further reforms needed to strengthen cyber resilience. (15 Marks, 250 Words)
14. "India's National Biofoundry Network and BioE3 Policy mark a new phase in the country's journey towards a sustainable and innovation-driven bioeconomy." Discuss the significance of these initiatives in strengthening India's biomanufacturing ecosystem. Also examine the challenges in realizing the goals of the BioE3 Policy. (15 Marks, 250 Words)
15. "The Gen Z protests in Nepal reflect a new model of decentralized, tech-driven civic activism in South Asia." Discuss the causes, unique features, and implications of such youth-led movements for democratic governance. (15 Marks, 250 words)
16. Examine the factors responsible for the declining fertility rate in India and assess its implications for the economy and society. (15 Marks, 250 Words)
17. The rise of childhood obesity marks a major shift in global and national nutrition challenges. Discuss the causes for increasing childhood obesity and enumerate the policy measures needed to address this growing concern in India. (15 Marks, 250 Words)
18. "Artificial Intelligence has the potential to transform healthcare in India, but without adequate regulation, it may deepen existing inequalities." Discuss. (15 marks, 250 Words)
19. Dadabhai Naoroji's contributions went far beyond economic critique; he laid the moral and intellectual foundation of India's freedom struggle. Discuss. (15 marks, 250 words)
20. "The Self-Respect Movement spearheaded by Periyar was not merely a social reform initiative but a radical redefinition of equality and selfhood in colonial India." Examine the impact of the movement on Indian society and politics. (15 marks, 250 words)

## 12.4. Ethics Case Study

1. Vijay, an IAS officer, is posted as the District Collector in a region suffering from severe water scarcity. A private multinational company proposes a large-scale groundwater extraction project, promising significant funding for local infrastructure development, including schools, hospitals, and roads. While the project could provide immediate relief and stimulate the local economy, it risks depleting water sources vital for agriculture and rural livelihoods.

Farmers and community leaders oppose the project, fearing loss of irrigation and long-term environmental degradation. At the same time, the state government and political leaders are pressing for approval to attract investment and showcase development. Media outlets and social media campaigns amplify the issue, often framing it in polarized ways. Vijay faces the challenge of balancing development goals, environmental sustainability, public welfare, and political expectations. His decision will have both immediate and long-term consequences for the community, his career, and public trust in governance.

- Identify the ethical dilemmas faced by Vijay in this scenario.
  - What are the options before Vijay? Critically evaluate and examine each of these options.
  - Which of the options, do you think, would be most appropriate for Vijay to adopt and why?
2. A large global Artificial Intelligence (AI) company has recently been accused of copying books, news articles, and online content without permission to train its large language models. Several authors and small content creators claim that their intellectual property has been used without consent, credit, or compensation. They argue that this practice not only violates copyright but also endangers their livelihoods by creating unfair competition.
- The company, however, argues that AI development requires massive datasets, and restricting data would slow innovation. Their models indirectly benefit society by providing free or low-cost AI tools to millions. Strict copyright restrictions could give monopoly power to a few big publishers, stifling knowledge democratization.
- You are a policymaker in India tasked with drafting an ethical and regulatory response to this emerging issue.
- Identify the ethical issues involved in this case.
  - As a policymaker, what principles of ethical governance will guide your decision?
  - Suggest a balanced course of action that ensures both innovation and protection of creators' rights.
  - What values should AI companies uphold in their functioning to avoid such ethical dilemmas in the future?



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# ANSWERS AND EXPLANATION



## 13.1. MCQs Answer and Explanation

### 1. Answer: (c)

#### Explanation:

- **Statement 1 is correct:** Section 8 disqualifies individuals convicted for  $\geq 2$  years or heinous crimes;
- **Statement 2 is correct:** Section 11 allows EC to reduce the period. This power was utilized in September 2019 to reduce the disqualification period of Prem Singh Tamang.

### 2. Answer: (b)

#### Explanation:

- It aims for a whole-of-government approach with AI, ML, GIS, and data analytics for transparent, citizen-centric governance.

### 3. Answer: (d)

#### Explanation:

- I2U2 members include India, Israel, UAE, and USA; Saudi Arabia is not a member.

### 4. Answer: (c)

#### Explanation:

- ICC's jurisdiction includes all four – Genocide, War Crimes, Crimes against Humanity, and Crime of Aggression.

### 5. Answer: (b)

#### Explanation:

- Agricultural land is excluded from SARFAESI's scope.

### 6. Answer: (c)

#### Explanation:

- **Statement 1 is correct:** New Rate Structure with 2 slabs 5% and 18% replacing 12% and 28%.
- **Statement 2 is correct:** 40% Special De-Merit Rate on sin/luxury goods replacing compensation cess.

### 7. Answer: (b)

#### Explanation:

- **Statement 1 is Not correct:** GII is released by the World Intellectual Property Organisation (WIPO), not the WEF.
- **Statement 2 is correct:** It measures innovation performance across investment, technology, and socio-economic indicators and is UN-recognized for STI policy reference.

### 8. Answer: (b)

#### Explanation:

- **Statements 1 and 2 are correct:** WhAP (Wheeled Armoured Platform) is India's first amphibious infantry combat vehicle, jointly developed by DRDO and Tata Advanced Systems.
- **Statement 3 is correct:** It uses integrated power pack and automatic transmission, with floatation and propulsion technology for amphibious operation.
- **Statement 4 is Not correct:** The first overseas defence manufacturing plant for WhAP was inaugurated in Morocco, not Oman.

### 9. Answer: (d)

#### Explanation:

- **Statement 1 is correct:** INS Androth is the second ship after Arnala in the ASW Shallow Water Craft (SWC) series.
- **Statements 2 and 3 are correct:** The ship uses diesel engine-waterjet propulsion, equipped with lightweight torpedoes and indigenous ASW rockets for coastal submarine warfare.



**10. Answer: (a)****Explanation:**

- **Statement 1:** Correct. The BBNJ Agreement governs marine biodiversity in areas beyond national jurisdiction (ABNJ), which cover about 50% of Earth's surface and 95% of ocean volume.
- **Statement 2:** Incorrect. The treaty excludes military activities, including warships, military aircraft, and naval auxiliaries. Obligations on Marine Genetic Resources do not apply to military operations.
- **Statement 3:** Correct. Key pillars of the treaty include:
  - Marine Protected Areas (MPAs) for biodiversity conservation.
  - Marine Genetic Resources (MGRs) and benefit-sharing mechanisms.
  - Environmental Impact Assessments (EIAs) for high-sea activities such as deep-sea mining.
  - Capacity-building and technology transfer provisions for developing countries.
- **Statement 4:** Incorrect. India has signed but not ratified the treaty yet; implementation has not started.

**11. Answer: (b)****Explanation**

- **Statement 1:** Incorrect. The MoEFCC recently exempted mining projects involving atomic, critical, and strategic minerals (e.g., uranium, lithium, rare earths) from Public Consultation, though they still undergo central-level appraisal.
- **Statement 2:** Correct. Public Consultation is mandatory only for Category A and B1 projects, which require full EIA, whereas Category B2 projects are generally exempt.

**12. Answer: (b)****Explanation:**

- **Statement 1:** Correct. The Amendment Rules, 2025 mandate that mining of critical and strategic minerals must conduct compensatory afforestation (CA) on degraded forest land, at least double the area diverted.
- **Statement 2:** Correct. The new rules allow State governments to grant initial working permission for linear projects (roads, railways, transmission lines) without requiring Stage-I approval from the Centre, which was previously mandatory.
- **Statement 3:** Incorrect. The amendment made notification as a protected forest optional. CA land can either be transferred to the Forest Department or notified as a protected area under the Indian Forest Act, 1927 or other laws.

**13. Answer: (c)****Explanation:**

- **Statement 1 is correct:** India's TFR is 1.9, below the replacement rate of 2.1. The rural TFR (2.1) is higher than urban TFR (1.5).
- **Statement 2 is correct:** Bihar records the highest CBR (25.8) in 2023, while Tamil Nadu and Delhi have the lowest.

**14. Answer: (a)****Explanation:**

- **Statement 1 is incorrect:** The POSH Act, 2013 is based on the Vishaka v. State of Rajasthan (1997) judgment, which laid down guidelines for workplace sexual harassment. The Act applies to all workplaces i.e. government, private, NGOs, educational institutions, hospitals, and also covers domestic workers.
- **Statement 2 is correct:** ICC is mandatory in every workplace with 10 or more employees, with at least 50% women members and a woman presiding officer. The Supreme Court has held that political parties are not "workplaces" under the POSH Act, hence excluded from its ambit.

**15. Answer: (a)****Explanation:**

- **Statement 1 is correct:** The report explicitly aligns with NEP 2020 recommendations, emphasizing individual student-wise data collection. Total teachers crossed 1 crore for the first time since UDISE+ began, marking a 6% rise from 2022-23.
- **Statement 2 is correct:** PTR is higher at Secondary (21) than Preparatory (13) level.
- **Statement 3 is incorrect:** Girls' enrollment increased slightly from 48.1% to 48.3%.

**16. Answer: (b)****Explanation:**

- **Statement 1 is correct:** The CMS (80th Round) focuses only on school education, unlike the 75th Round, which covered all levels.
- **Statement 2 is incorrect:** Anganwadi Centres are classified under pre-primary education, not "non-formal" as in the 75th Round.
- **Statement 3 is correct:** Government schools account for 55.9% of enrolments, higher in rural (66%) than urban (30.1%) areas.

**17. Answer: (a)****Explanation:**

- **Statement 1 is incorrect:** The report is released by the Ministry of Road Transport and Highways (MoRTH), not NCRB.

- **Statement 2 is correct:** Two-wheeler riders accounted for the highest percentage of accident deaths (45%) in 2023.
- **Statement 3 is correct:** Highways (~5% of total road network) accounted for over 53% of accidents and 59% of fatalities.
- **Statement 4 is incorrect:** Tamil Nadu recorded the highest number of accidents, while Uttar Pradesh had the highest fatalities.

**18. Answer: (b)****Explanation:**

- **Statement 1 is incorrect:** ENTs occur when massive stars ( $\geq 3$  times the mass of the Sun) are torn apart, not low-mass stars.
- **Statement 2 is correct:** ENTs result from extreme tidal forces near a supermassive black hole's event horizon, causing the star to stretch into a "spaghetti-like" form and emit strong electromagnetic radiation.
- **Statement 3 is correct:** The observation of ENTs provides valuable insights into stellar-black hole interactions and gravitational dynamics near event horizons.

**19. Answer: (a)****Explanation:**

- **Statement 1 is correct:** The plant was established under the Centre's Electronics Manufacturing Cluster (EMC) scheme. On full completion, it will produce 20 crore battery packs per year, covering about 40% of India's total requirement of 50 crore packs.

- **Statement 2 is incorrect:** Li-ion batteries use a non-aqueous electrolyte, not aqueous, to allow lithium-ion movement between electrodes.
- **Statement 3 is correct:** Compared to lead-acid batteries, Li-ion batteries are lighter, more efficient, and contain fewer toxic heavy metals

**20. Answer: (d)****Explanation:**

- **Statement 1 is correct:** Dadabhai Naoroji was the first Indian MP (Liberal Party, Finsbury Central, 1892).
- **Statement 2 is correct:** He was a founding member and three time president of the Indian National Congress (in 1886, 1893, and 1906).
- **Statement 3 is correct:** He was a member of the Welby Commission, which examined India's financial policies.
- **Statement 4 is correct:** Along with Jyotiba Phule, he advocated compulsory primary education before the Hunter Commission (1882).

## 13.2. True/False Answers

**Answers**

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

## 13.3. Approach to the Mains Practice Questions

### 1. Approach:

- **Introduction:** Define criminalisation with current data (ADR 2024).
- **Body:** Briefly mention causes like nexus, money etc. Then mention legal safeguards: RPA Sections 8 & 11; key judgments (ADR 2002). Highlight the reforms needed like fast-track courts, false affidavit penalties etc.
- **Conclusion:** Conclude on need for clean politics and electoral integrity.

### 2. Approach:

- **Introduction:** Start by giving data related to judicial pendency in India.
- **Body:** Then mention what are causes like low judge ratio, weak infrastructure, procedural delays etc. Mention consequences like violation of Article 21 etc. and related measures.
- **Conclusion:** Conclude with need for judicial accountability and innovation.

### 3. Approach:

- **Introduction:** Start by giving brief introduction about both political systems.
- **Body:** Mention the similarities: republics, bicameral legislatures and differences like parliamentary vs semi-presidential etc. Mention Indian and French model of secularism.
- **Conclusion:** Conclude with need of checks and balances in democracy.

### 4. Approach:

- **Introduction:** Mention government schemes like India Semiconductor Mission to set the context of question.
- **Body:** Mention the achievements like 2 nm design, global collaborations etc. Then mention challenges like lack of core IP, supply chain gaps etc.
- **Conclusion:** Suggest way ahead like R&D push, advanced fab incentives, skilled manpower.

### 5. Approach:

- **Introduction:** Explain objectives of the scheme (5F vision, integrated value chain).
- **Body:** Discuss structure (SPV, PPP model, CIS/DCS incentives). Then evaluate benefits (scale, employment, exports).
- **Conclusion:** Mention challenges (land, environment, MSME readiness), then suggest what can be done ahead to enhance its effectiveness.

### 6. Approach:

- **Introduction:** Explain GST 2.0 features (2-slab structure, healthcare exemptions).
- **Body:** Discuss its inclusive impact (lower prices, MSME support) how it simplifies the whole process and how it provides social protection.
- **Conclusion:** Mention challenges (revenue loss, anti-profiteering gap) and then conclude with balanced assessment on fiscal sustainability.

### 7. Approach:

- **Introduction:** Begin by introducing about ED like genesis, statutory functions etc.
- **Body:** Discuss the challenges like operational, structural, legal etc.
- **Conclusion:** Conclude with way forward such as Strict adherence to Due Process, Evidence-Based Investigations etc.

### 8. Approach:

- **Introduction:** Begin by introducing Disaster Risk Financing (DRF) and Disaster Risk Index (DRI).
- **Body:** Discuss the Concerns & Limitations such as Uniform matrix fails to capture hazards like landslides, avalanches, cloudbursts, forest fires, GLOFs, resource mismatch etc.
- **Conclusion:** Conclude with the reforms to be taken such as adaptive, science-based DRI, geographically distinct sub-regions etc.

### 9. Approach:

- **Introduction:** Mention completion of 20 years of PWDVA and state its objective.
- **Body:** State key features of act, its achievements and challenges in implementation
- **Conclusion:** Conclude with a way forward.

### 10. Approach:

- **Introduction:** Give brief introduction on the scheme.
- **Body:** Explain scheme objectives and key features promoting financial empowerment. Discuss the need for restructuring—urban informality, limited credit access, etc.
- **Conclusion:** Conclude by linking the scheme's restructuring to sustainable and inclusive urban growth aligned with SDGs.

### 11. Approach:

- **Introduction:** start by mentioning recent visit of Indian and Chinese leaders.

- **Body:** Mention recent Border disputes (Galwan, Doklam), trade imbalance), then mention opportunities like trade, cultural exchanges, hydrological cooperation. Also mention Significance like rare earths, climate change.
- **Conclusion:** Conclude on need for mutual respect and de-escalation mechanisms.

#### 12. Approach:

- **Introduction:** Mention 2025 Joint Vision outcomes, Economic, defence, and technological cooperation (semiconductors, Chandrayaan-5, Act East Forum).
- **Body:** Mention Global role of India Japan partnership QUAD, UNSC reform (G4), AAGC.
- **Conclusion:** Conclude with shared democratic values and resilient supply chains.

#### 13. Approach:

- **Introduction:** Begin by introducing the report, titled 'Cyber Crime – Ramifications, Protection and Prevention'.
- **Body:** Discuss the Reasons for rise in Cybercrime such as Rapid Digital Transformation, Transnational Nature of Cybercrime etc. Also mention the reforms taken by the government.
- **Conclusion:** Conclude with Way forward such as Empowering CBI and Legal reforms etc.

#### 14. Approach:

- **Introduction:** Begin by introducing what is National Biofoundry Network and BioE3 Policy.
- **Body:** Discuss significance of these initiatives such as Supports research in diverse areas (e.g. IIT-Madras – animal-free hyaluronic acid), Provides shared infrastructure for startups, SMEs, industry, academia etc. Also discuss the challenges in realizing goals of BioE3 Policy like Lack of clear milestones for progress tracking etc.
- **Conclusion:** Conclude with the importance of National Biofoundry Network and BioE3 Policy for development of Bioeconomy.

#### 15. Approach:

- **Introduction:** Briefly introduce the event.
- **Body:** State its causes (like suppression of freedom, corruption and inequality, etc), unique characteristics of protests (like digital mobilization, etc) and its implications like digital sovereignty, etc.
- **Conclusion:** List down way forward for such movements.

#### 16. Approach:

- **Introduction:** Quote SRS 2023 finding and mention significance of population control.
- **Body:** In detail explain reasons for declining fertility and impacts of declining fertility (positive and negative).
- **Conclusion:** Highlight its significance for India's demographic window.

#### 17. Approach:

- **Introduction:** Cite UNICEF's 2025 finding.
- **Body:** Mention causes and impact of rising childhood obesity and then discuss key policy and measures needed to be taken.
- **Conclusion:** Discuss importance of health to harness demographic dividend.

#### 18. Approach:

- **Introduction:** Define AI and highlight its growing role in healthcare (diagnostics, drug discovery, telemedicine).
- **Body:** Mention potential of AI in healthcare, key challenges (like ethical & legal, inclusivity issues, etc.) and policy & regulatory measures needed.
- **Conclusion:** Conclude with positive impact of AI on society & economy.

#### 19. Approach:

- **Introduction:** Give a brief introduction of Dadabhai Naoroji.
- **Body:** Highlight his economic contribution, political leadership, social & educational reforms and ethical & philosophical vision.
- **Conclusion:** Reflect present significance of his ideas and initiatives.

#### 20. Approach:

- **Introduction:** Give a brief introduction about the Self-Respect Movement.
- **Body:** Give details on objectives, major features, methods and impact of the movement.
- **Conclusion:** Explain the cultural continuity of the movement.

## 13.4. Approach to Case Studies

### 1. Approach:


- **Introduction:** Give brief summary of the above case study.
- **Body:**
  - (a) Highlight ethical dilemmas involved in this case study like **Development vs. Environmental Sustainability, Public Welfare vs. Political Pressure, etc.**
  - (b) **Mention available options with Vijay like** approve the project fully, reject the project completely, **etc. and highlight their pros and cons.**
  - (c) Give reasons as to which option must be chosen.
- **Conclusion:** Highlight the principles that would be achieved and how will it balance out.

### 2. Approach:

- **Introduction:** Give brief summary of the above case study.
- **Body:**
  - (a) Identify key ethical issues involved like **Justice and Fairness, Consent and Transparency, Utilitarian vs. Deontological Dilemma, etc.**
  - (b) Explain principles of ethical governance to guide the decision like **Rawlsian Principle, Public Interest & Common Good, etc.**
  - (c) Give a balanced course of action.
  - (d) Explain values AI companies should uphold in their functioning to avoid such ethical dilemmas in the future.
- **Conclusion:** Highlight importance of ethics in AI.


# FAST TRACK COURSE 2026

# GENERAL STUDIES PRELIMS



PURPOSE OF THIS COURSE

The GS Prelims Course is designed to help aspirants prepare for & increase their score in General Studies Paper I. It will not only include discussion of the entire GS Paper I Prelims syllabus but also that of previous years' UPSC papers along with practice & discussion of Vision IAS classroom tests. Our goal is that the aspirants become better test takers and can see a visible improvement in their Prelims score on completion of the course.



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13 OCT, 5 PM

# 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



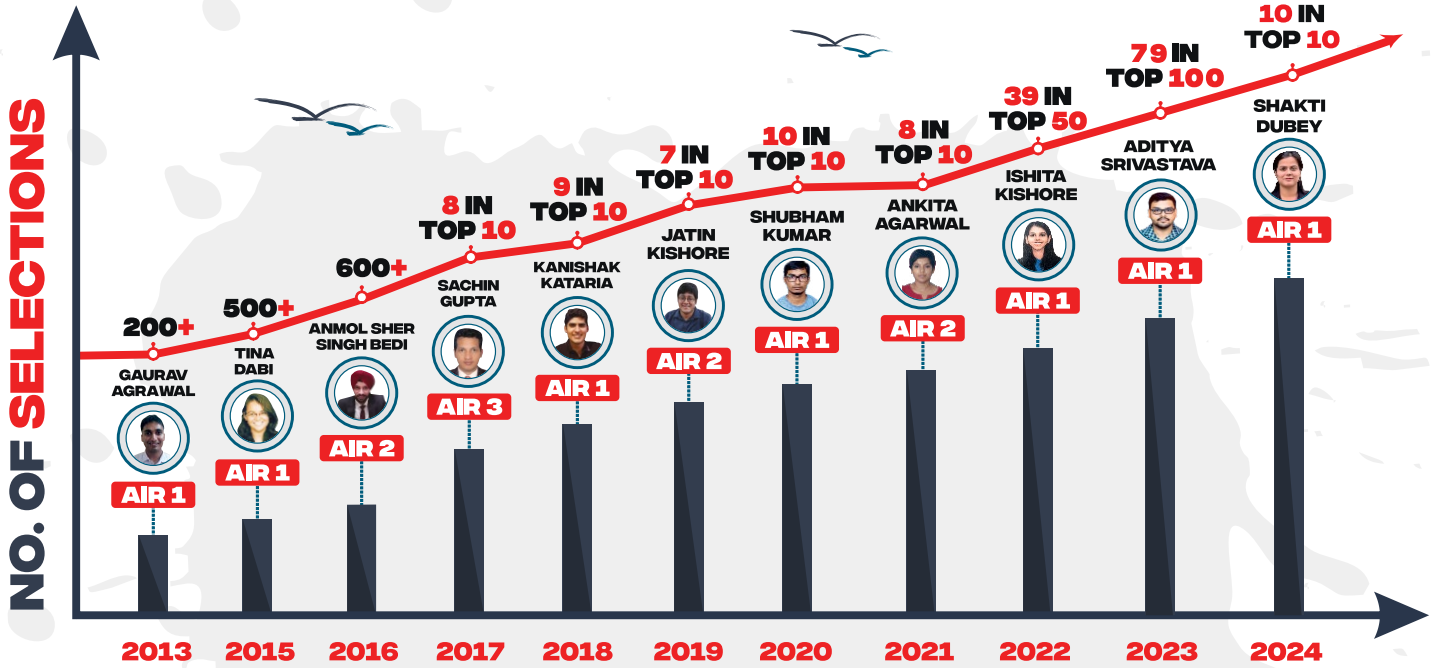
## Reflection Section

Strengths

Areas for Improvement

Goals for Next Month

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27 OCT | 5 PM

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