

**FOR UPSC EXAM**

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# **VIDHVATH VIMARSHA**



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# POLITY & CONSTITUTION

## 1. Next Census to Conclude by March 2027

### 1. First Digital and Caste-Based Census

- India will conduct its **first-ever digital census**, with data collection aided by a **mobile application**.
- For the **first time in Independent India**, the **Census will include caste enumeration**, apart from the Scheduled Castes (SCs) and Scheduled Tribes (STs).
- The exercise will be conducted in **two phases**:
  - House listing and housing schedule**
  - Population enumeration** (including caste details)

### 2. Timeline and Reference Dates

- The Census will **conclude by March 1, 2027**, after a **16-year gap** since the last Census in 2011.
- For most of India, the **reference date is 12 a.m., March 1, 2027**.
- For snowbound and non-synchronous regions (Ladakh, J&K, Himachal Pradesh, Uttarakhand), the **reference date is October 1, 2026**.
- Notification for the two phases will be **officially published on June 16, 2025**.

### 3. Legal and Constitutional Framework

- The Census is governed under the **Census Act, 1948** and **Census Rules, 1990**.
- Section 3 of the Census Act, 1948** empowers the Central Government to notify the intention to conduct a Census.
- Article 82 and Article 170** of the Indian Constitution link the Census data with **parliamentary and assembly constituency delimitation**.
- The **first Census after 2026** will serve as the basis to **redraw Lok Sabha constituencies**, currently based on the **1971 Census**.

### 4. Delayed Due to COVID-19

- The Census originally scheduled for **2021** was **indefinitely delayed due to the COVID-19 pandemic**.
- This caused an **unprecedented gap of 16 years** between two censuses, affecting planning and policy implementation.

### 5. Training and Technological Shift

- Around **30 lakh enumerators**, mainly **government school teachers**, will be **retrained** for using the mobile app and updated procedures.
- 24 lakh enumeration blocks** finalized earlier will be reused for this Census.





- A **new drop-down box for caste enumeration** will be added in the app, in addition to SC and ST categories.

## 6. Definition of Key Terms

- **Census:** A systematic and official count of a country's population, including demographic, economic, and social data.
- **Enumeration:** The formal process of counting individuals and households during a Census.
- **Delimitation:** The act of redrawing boundaries of electoral constituencies based on the latest population data.
- **Reference Date:** The fixed point in time on which the population is counted (e.g., 12 a.m., March 1, 2027).

## Conclusion (UPSC Perspective)

- The **2027 Census** marks a **historic shift in data collection**, bringing in **digital methodology** and **caste-based enumeration** for the first time.
- It holds **significant implications for public policy, welfare targeting, electoral reforms, and constitutional representation**.
- For UPSC, this topic is relevant under **GS Paper II (Governance, Constitution, Polity)** and **GS Paper I (Society, Demographics)**.
- Candidates should also note the **legal provisions, digital governance aspects, and constitutional links to delimitation and representation**.

## 2. Delimitation and Southern States' Concerns

### 1. Delimitation: Definition and Constitutional Basis

- **Delimitation** refers to the act of redrawing the boundaries of Lok Sabha and State Assembly constituencies based on recent population data to ensure fair representation.
- **Constitutional Provisions:**
  - **Articles 82 and 170** empower Parliament to readjust constituencies after every Census.
  - A **Delimitation Commission** is set up by the Central Government under the **Delimitation Act**.
  - **42nd Constitutional Amendment Act, 1976** froze delimitation based on 1971 Census until 2001. This was extended to **2026** by the **84th Amendment Act, 2001** to promote population control.

### 2. Southern States' Concerns Regarding Population-Based Delimitation

- Southern states like **Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, and Telangana** have successfully implemented **population control measures**.
- If future delimitation is based on **post-2026 Census (likely 2031)**, states with higher population growth (mainly northern states) will gain more Lok Sabha seats, **reducing the relative representation** of southern states.
- This is viewed as a **disincentive for population control** and an attack on **federal equity**.

### 3. Centre's Assurance on Addressing Regional Concerns

- The Ministry of Home Affairs (MHA) clarified that **Union Home Minister Amit Shah** has repeatedly assured that **southern states' concerns will be addressed**.
- It emphasized that **discussions with all stakeholders** will be held at an appropriate time before delimitation begins.

### 4. Delay in Census and Political Implications

- The **Census 2021** has been delayed due to the **COVID-19 pandemic**; it is now scheduled to be completed by **March 1, 2027**.
- **Tamil Nadu CM M.K. Stalin** criticized this delay, alleging that it is a deliberate attempt by the **BJP-led Centre** to influence delimitation and reduce Tamil Nadu's parliamentary representation.
- The Centre responded that enumerators (mostly school teachers) could not be spared during the pandemic, and **quality of Census** would have been compromised otherwise.



### 5. Budget and Resource Allocation for Census

- The MHA clarified that **budget has never been a constraint**, and the **Centre is committed to funding** the Census exercise fully.
- The logistical challenge includes mobilizing over **30 lakh enumerators**, highlighting the massive scale of the operation.

### 6. Broader Constitutional and Political Dimensions

- The issue brings into focus **India's federal structure**, balancing **population size and equitable representation**.
- A future **constitutional or political consensus** might be required to ensure **representation does not penalize demographic discipline**.
- Key debates: **"One person, one vote"** vs. **"Equity in federal representation."**

### Conclusion:

The upcoming delimitation, based on a post-2026 Census, will have far-reaching political and federal implications. While the Centre has assured that southern states' concerns will be considered, the controversy underlines tensions between demographic equity and federal balance. The debate also emphasizes the need for a **politically sensitive and constitutionally sound approach** to future delimitation exercises.



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### 3. Ladakh Gets New Domicile and Reservation Policies

#### 1. New Domicile Criteria Introduced

- A person must reside continuously in Ladakh for **15 years from October 31, 2019** (the date Ladakh became a Union Territory) to qualify as a **domicile**.
- Children of Central government officials posted in Ladakh may also qualify under this criterion.
- This move aims to **protect local rights over jobs and resources** amid growing demands for safeguards.


#### 2. Reservation in Government Jobs and Hill Councils

- Up to **85% reservation** for **resident Ladakhis** in government employment has been introduced.
- **Scheduled Tribes (STs)** are expected to receive **80% quota**, with other categories like SCs (1%), EWS (10%), and border residents (4%).
- **Total reservation will stand at 95%**, making it one of the **highest in India**.
- A **33% reservation for women** has been introduced in the **Autonomous Hill Development Councils** on a **rotational basis**.

#### 3. Constitutional and Legal Backing

- The changes were made via the **Union Territory of Ladakh Reservation (Amendment) Regulation, 2025**, which amends the **Jammu and Kashmir Reservation Act, 2004**, for Ladakh's context.

**Policy progress**  
Key events in the ongoing negotiations regarding Ladakh from 2023 to 2025

<ul style="list-style-type: none"> <li>■ <b>Jan. 3, 2023:</b> Committee forms to address Ladakh concerns</li> <li>■ <b>Nov. 30:</b> Committee is reconstituted with new members</li> <li>■ <b>March 4, 2024:</b> Talks between govt. and Ladakh leaders collapse</li> <li>■ <b>Oct. 6:</b> Activist Sonam Wangchuk begins fast</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Oct. 21:</b> Govt. agrees to resume talks, fast ends</li> <li>■ <b>Dec. 3:</b> Committee meets with Leh and Kargil leaders</li> <li>■ <b>Jan. 15, 2025:</b> Follow-up meeting takes place in Delhi</li> <li>■ <b>May 27:</b> Domicile and reservation policy is hammered out</li> </ul>	 <p><b>Major demand:</b> Protests demanding Statehood for Ladakh have been continuing for the past few years. ANI</p>
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- It includes a new clause allowing **reservation to exceed 50%**, specifically excluding the 10% EWS quota.

- This raises constitutional questions around the **50% ceiling set by the Supreme Court in *Indra Sawhney vs Union of India* (1992)**, though exceptions exist for unique socio-political contexts.

#### 4. Official Languages and Cultural Identity

- The official languages of Ladakh are now **Hindi, English, Urdu, Bhoti, and Purgi**, ensuring **cultural and linguistic representation** for tribal communities.
- The move is also seen as an effort to preserve **local heritage and identity**.





## 5. Background: Demands for Safeguards Post Article 370 Abrogation

- After **Article 370 was diluted in 2019**, civil society groups in Ladakh feared loss of land, jobs, and demography to outsiders.
- Protests, shutdowns, and demands for **statehood and Sixth Schedule protections** intensified, leading to the formation of a **High-Powered Committee** by the Centre.
- Key stakeholders include **Leh Apex Body (LAB)** and **Kargil Democratic Alliance (KDA)**.

## 6. Demographic and Strategic Significance

- **Ladakh's tribal population** is approximately **80%** (2011 Census), justifying the high ST reservation.
- Being a border region with **strategic concerns** (near China and Pakistan), local representation in governance is also a national security imperative.

### Key Definitions

- **Domicile**: A legal residency status that entitles a person to certain rights and privileges in a region.
- **Scheduled Tribes (STs)**: Indigenous communities recognized under the Constitution (Article 342) for affirmative action and socio-economic safeguards.

### Conclusion

The new policies in Ladakh aim to balance local aspirations with national interests. By offering high reservation quotas, protecting tribal identity, and introducing gender inclusivity, the government addresses longstanding concerns post-Article 370 abrogation. However, **demands for statehood and inclusion under the Sixth Schedule** continue, keeping the dialogue on Ladakh's constitutional future open.

## 4. UMEED Portal and Waqf Property Management: Key Points

### 1. UMEED Portal: Purpose and Objective

- **UMEED** stands for **Unified Waqf Management, Empowerment, Efficiency, and Development**.
- Launched by the **Union Ministry of Minority Affairs**, it is a **centralized digital platform** designed to manage and document **waqf properties** across India.
- The aim is to improve **transparency, record-keeping, and monitoring** of waqf properties through digital integration.

### 2. Waqf: Definition and Legal Context

- A **waqf** is a permanent endowment made by a Muslim for religious, pious, or charitable purposes.
- Waqf properties are governed by the **Waqf Act, 1995**, which provides for the **Central Waqf Council** and **State Waqf Boards**.
- Key provisions:
  - **Section 3(r)** defines waqf property.
  - **Section 4–6** deal with surveys, registration, and management of waqf assets.
  - **Section 40–51** deal with protection, transfer, and recovery of waqf properties.





### 3. Telangana Waqf Board's Concerns and Readiness

- The **Telangana State Waqf Board (TGSWB)** has expressed concerns about **lack of clear guidelines** from the Centre regarding required documents.
- Challenges include **documentation of historical properties**, especially **Qutb Shahi-era masjids**, many of which lack formal or digitized records.
- The TGSWB is still **preparing property records** and coordinating with other government agencies to retrieve documents.

### 4. Functional Mechanism of the UMEED Portal

- Expected to follow a **three-tier verification process**:
  - **Mutawalli** (manager of the waqf) uploads documents (e.g., gazette notifications).
  - **Verification** by State Waqf Board officials.
  - **Final approval** by the Chief Executive Officer of the Board.
- Previous waqf management systems will not be integrated, raising concerns over **data migration** and continuity.



### 5. Legal Sensitivities and Pending Supreme Court Case

- TGSWB officials have noted that it would have been more appropriate for the Centre to **await the Supreme Court judgment** related to waqf matters before launching the portal.
- This points to **inter-jurisdictional tensions** between central and state waqf governance structures.

### 6. Importance for Governance and Minority Welfare

- The UMEED portal represents a move towards **good governance, digital record management, and curbing encroachments** on waqf land.
- It also intersects with **minority rights, religious freedom (Article 25–26), and federalism**, as religious endowments fall under the **Concurrent List (Entry 28 of List III)**.

### Conclusion:

The launch of the UMEED portal is a significant step in modernizing and regulating waqf property management across India. However, **state-level readiness, data clarity, and legal alignment** remain critical. The initiative must balance **technological efficiency with legal sensitivity and cooperative federalism**, ensuring protection and fair use of religious endowments for the benefit of the Muslim community.



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## 5. Bharatiya Bhasha Anubhag (BBA) Initiative: Promoting Indian Languages in Governance

### Key Highlights

#### 1. Launch of Bharatiya Bhasha Anubhag (BBA)

- **Union Home Minister Amit Shah** launched the **Bharatiya Bhasha Anubhag (BBA)**, i.e., *Indian Languages Section*, aiming to reduce the dominance of foreign languages in Indian governance.
- It is a **landmark step towards linguistic decentralisation**, promoting governance in **Indian mother tongues**.

#### 2. Objective: Linguistic Inclusion in Administration

- The BBA seeks to promote **thinking, decision-making, and administration** in Indian languages, underlining that true national potential is realized when governance aligns with citizens' linguistic identities.
- The initiative is aimed at freeing the system from "**colonial language legacies**", especially English, and strengthening India's **cultural and civilizational roots**.

#### 3. Budgetary Allocation and Scope

- The **Union Budget 2024–25** allocated **₹56 crore** to develop a platform that facilitates translation among Indian languages and between **Hindi and other regional languages**.
- The BBA will act as a **central hub for multilingual translation**, improving inter-state and centre-state communication and inclusivity.

#### 4. Legal and Constitutional Framework

- **Article 343–351 (Part XVII of the Constitution)** deals with **Official Language** provisions:
  - Article 343: Hindi in Devanagari script as the official language of the Union.
  - Article 345: States can adopt their own official languages.
  - Article 351: Duty of the Union to promote the spread of Hindi while respecting linguistic diversity.
- The **Official Languages Rules** divide states into **Region A, B, and C** for communication purposes. Region C (e.g., Tamil Nadu, Kerala, Karnataka) mandates English in correspondence, which is being revisited with BBA's translation mechanisms.





## 5. Addressing Federal Concerns and Inclusivity

- The BBA aims to empower states to use their **official regional languages** in communication with the Centre.
- If a CM of a Region C state (e.g., Tamil Nadu) sends communication in Tamil, the reply will now also be in Tamil — symbolizing **respect for state linguistic identity** and fostering cooperative federalism.

### Key Definitions and Concepts

- **Linguistic Diversity:** India is home to 22 scheduled languages (as per the Eighth Schedule) and hundreds of dialects, representing a deeply multilingual society.
- **Official Languages Rules:** Legal rules guiding language use in government communications at the central and state levels.
- **Colonial Language Legacy:** The continued use of English in governance and education, inherited from British rule.

### Conclusion

The **Bharatiya Bhasha Anubhag (BBA)** is a significant step in making Indian governance **linguistically inclusive and culturally rooted**. By promoting administration in mother tongues and enabling effective **inter-lingual communication**, the initiative embodies the spirit of **constitutional federalism and cultural pluralism**. For UPSC aspirants, this move reflects the evolving dynamics of **language, identity, and governance** in India's democratic framework and opens debates on balancing **national unity and regional diversity**.

## 6. Kuki-Zo SoO Talks with Centre

### 1. What is the Suspension of Operations (SoO) Agreement?

- **Definition:** The **SoO agreement** is a **ceasefire arrangement** between the Government of India, Manipur Government, and various insurgent groups to **suspend hostilities** and initiate **peace talks**.
- **Initiated in 2008** with **Kuki-Zo insurgent groups** in Manipur.
- It allows insurgent groups to **stay in designated camps** under suspension of operations while negotiating for a **political solution**.
- The **Ministry of Home Affairs (MHA)** is the nodal authority for implementation.

### 2. Key Issues Discussed in Latest SoO Meeting (2024–25)

- Held after **two years**, following **May 2023 ethnic violence** between **Meiteis and Kuki-Zo** communities in Manipur.





- Key issues:
  - **Review of SoO ground rules.**
  - **Opening of National Highways (NH-2 & NH-37)** for unrestricted movement.
  - **Surrender of looted police weapons.**
  - **Relocation/shutdown of armed camps** near Meitei-dominated areas.
- **Reiteration of Kuki-Zo demand: Creation of Union Territory with Legislature.**

### 3. Strategic Importance of National Highways

- **NH-2 and NH-37** connect **Imphal Valley** to **Nagaland** and **Assam** respectively.
- These roads pass through **Kuki-Zo dominated hill areas**, making their opening critical for **uninterrupted supply of essentials**.
- Blockades and road control have become tools of **ethnic assertion** and **political leverage**.

### 4. Security and Governance Measures Discussed

- **Relocation of camps** away from Meitei areas to avoid clashes.
- Urged groups to **surrender looted weapons** for restoration of **rule of law**.
- Talks led by **A.K. Mishra**, Adviser (Northeast), MHA, along with **Intelligence Bureau** officials.
- Emphasis on building a **roadmap for long-term peace** and **inter-community reconciliation**.

### 5. Legal and Constitutional Provisions Relevant to the Issue

- **Article 355**: Union can intervene in state affairs to protect from internal disturbances.
- **Article 2 & 3**: Parliament can create new states or Union Territories (demand raised by Kuki-Zo).
- **Sixth Schedule**: Provides for autonomous district councils in tribal areas of Northeast — potential model for compromise.
- **AFSPA (Armed Forces Special Powers Act), 1958**: Applied in disturbed areas of Manipur—often criticized for human rights violations.

### 6. Ethnic Dimensions and Peace Process Challenges

- **Ethnic fault lines** in Manipur: Meitei (valley) vs. Kuki-Zo (hills).
- Kuki-Zo groups seek **greater autonomy** amidst allegations of **marginalization** and **discrimination**.
- Meitei groups oppose any territorial division of the state.
- Restoration of **trust, state capacity, and neutral law enforcement** are critical for peace.

### Conclusion

The renewed SoO talks between the **Union Government** and **Kuki-Zo insurgent groups** mark a **cautious step toward peace** in Manipur. While the ground rules are under review, key issues like **unrestricted road access, disarmament, and camp relocation** remain contentious. The demand for a **Union Territory with legislature** adds a **constitutional dimension** to the conflict. A long-lasting solution will require **multi-level dialogue, political compromise, and ethnic reconciliation** backed by **institutional safeguards** and **inclusive governance**.



## 7. Madras High Court on RTE Funds and NEP Dispute: Key Points

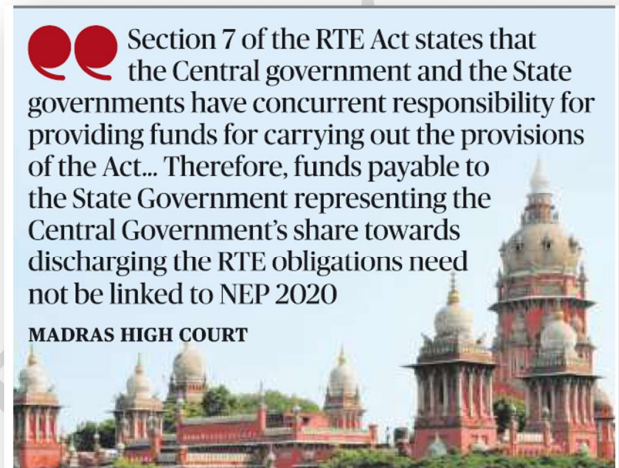
### Key Highlights:

#### 1. RTE Funds Must Not Be Withheld Over NEP Row:

- The **Madras High Court** directed the **Union Ministry of Education** to consider **disbursing ₹200 crore** under the **Right to Education (RTE) Act**, even though **₹2,151.59 crore** is pending under the **Samagra Shiksha Scheme (SSS)**.
- The delay stems from **Tamil Nadu's refusal to implement the National Education Policy (NEP) 2020**, but the Court held that **RTE obligations are independent of NEP**.

#### 2. RTE Act, 2009: Legal Mandate:

- Under **Section 7 of the Right of Children to Free and Compulsory Education Act, 2009**, both the **Centre and States share concurrent responsibility** for funding and implementing the Act.
- The **RTE Act mandates free and compulsory education for children aged 6 to 14** under **Article 21A** of the Constitution.



#### 3. State's Obligations Unaffected by Central Funds:

- The High Court clarified that **Tamil Nadu cannot evade its obligation** to reimburse private unaided schools that admit students under RTE.
- Non-receipt of Central funds **cannot be an excuse** for the State to delay or deny reimbursement.

#### 4. Pending Civil Suit in Supreme Court:

- Tamil Nadu has already filed a **civil suit in the Supreme Court** demanding the release of its full **Samagra Shiksha funds**.
- Due to this pending litigation, the High Court **refrained from issuing a binding order** but urged the Centre to **"consider" delinking RTE from SSS**.

#### 5. Judicial Precedents & PIL Outcome:

- The Court relied on **existing precedents** and directed the **State government to begin RTE admissions for 2025–26 without delay**, as sought in a **Public Interest Litigation (PIL)**.
- It upheld that **statutory duties under the RTE Act** must be fulfilled regardless of inter-governmental policy disputes.



**Important Concepts & Provisions:**

- **Right to Education (Article 21A):** Introduced via the **86th Constitutional Amendment Act, 2002**, making **education a Fundamental Right** for children aged 6–14.
- **Samagra Shiksha Scheme (SSS):** Centrally sponsored scheme integrating **SSA, RMSA, and Teacher Education** schemes to promote **school education**.
- **National Education Policy (NEP) 2020:** A **non-binding policy framework** aimed at transforming India's education system; its adoption is optional for states in a federal setup.
- **Concurrent List (List III, Seventh Schedule):** Education is a **shared responsibility** under the Constitution.

**Conclusion:**

The case reinforces that **statutory entitlements under the RTE Act must be insulated from political or policy-level disagreements** such as over NEP. It also reflects the **principle of cooperative federalism**, where both Centre and States must act in **good faith** to uphold constitutional mandates like **universal education**. For UPSC aspirants, this issue highlights the **interplay between constitutional duties, fiscal federalism, and judicial oversight** in safeguarding social welfare legislations.



## 8. Census 2027 to Include Nationwide Caste Enumeration

**1. Census 2027 Notification and Timeline**

- The **Government of India** has officially **notified the 16th Census**, to be held in **two phases**:
  - **1 October 2026** for **snowbound and remote regions** (Ladakh, J&K, Himachal Pradesh, Uttarakhand).
  - **1 March 2027** for the **rest of India**.
- This will be India's first full Census after **2021 was postponed due to the COVID-19 pandemic**.

**2. Historic Nationwide Caste Enumeration**

- The 2027 Census will include a **nationwide caste-based enumeration**, the **first since 1931**, marking a **historic shift in India's demographic data collection**.
- This move comes amid growing demands from states and political parties to **update caste data** to inform **affirmative action and welfare policies**.

**3. Constitutional and Legal Backing**

- The **Census Act, 1948** empowers the Central Government to conduct a population census of India.
- However, **data related to caste (other than SC/ST)** has historically not been included in the decadal census post-1931.



- **Articles 15 and 16 of the Constitution** allow for **affirmative action** based on **social and educational backwardness**, which could now be better guided by updated caste data.

#### 4. Implications for Policy and Social Justice

- Caste data could become crucial in **reforming reservation policies**, especially in the context of demands for **EWS, OBC sub-categorisation**, and better **targeting of welfare schemes**.
- The data is likely to impact **political representation, budgetary allocation, and development indices** across castes and sub-castes.

#### 5. Administrative and Political Challenges

- Conducting caste enumeration alongside the regular Census involves **complex logistics, data privacy concerns, and political sensitivities**.
- Experts warn about the **possibility of underreporting or misclassification**, and emphasize the need for **data transparency and scientific methodology** in enumeration.

#### Key Definitions and Concepts

- **Census:** A decennial process conducted to collect comprehensive data on population, housing, socio-economic indicators, etc.
- **Caste Enumeration:** Systematic counting and classification of individuals by caste or social group to understand population structure.
- **Affirmative Action:** Measures like reservation or special provisions to uplift socially and educationally backward groups (Article 15(4) and Article 16(4)).

#### Conclusion

The 2027 Census with **nationwide caste enumeration** is a **landmark demographic and social policy initiative**, likely to shape the future of **India's social justice architecture**. While it promises better data for inclusive governance, it also demands a **transparent, scientific, and politically neutral approach** to ensure it serves as a **tool for equity, not division**. This topic is highly relevant for **GS Paper I (Indian Society), GS Paper II (Governance and Constitution), and Essay Paper** in the UPSC Civil Services Exam.

## 9. Centre Sets Up Committee for Air Crash Response Guidelines

#### Key Highlights of the Decision

- The Central Government has constituted a **high-level committee** under the **Union Home Secretary** to draft **comprehensive guidelines and SOPs** for managing aviation accidents.
- This move follows the **Air India Flight AI-171 crash in Ahmedabad**, highlighting gaps in crash preparedness and response coordination.
- The committee will **formulate Standard Operating Procedures (SOPs)** for both **prevention and effective response** to air crashes.
- It will **review emergency responses** of various stakeholders (rescue agencies, airport authorities, medical teams, etc.) and suggest **role clarity** for better **post-crash incident management**.
- It will submit its **report within three months**.



### Scope of Inquiry and Coordination

- The committee is **not a substitute** for statutory investigations by the **Aircraft Accident Investigation Bureau (AAIB)**, which leads the technical probe.
- It will have access to **flight data recorders, cockpit voice recorders, aircraft maintenance logs, ATC records, and witness accounts.**
- It may conduct **site inspections** and interviews with **pilots, crew, ATC officials**, and coordinate with **international agencies** where relevant.

### Legal and Institutional Framework

- Investigations into civil aviation accidents in India are governed by the **Aircraft (Investigation of Accidents and Incidents) Rules, 2017**, under the **Aircraft Act, 1934**.
- The **AAIB** functions under the **Ministry of Civil Aviation**, and is responsible for independent probe and analysis to improve safety.
- Coordination with bodies like **DGCA, NDRF, and local police** falls under **disaster response provisions** in line with the **Disaster Management Act, 2005**.

### Important Definitions

- **Standard Operating Procedure (SOP):** A set of step-by-step instructions compiled to help workers carry out routine operations to ensure consistency and compliance.
- **Black Box:** A device in aircraft that records flight data and cockpit voice conversations for post-crash investigations.
- **AAIB (Aircraft Accident Investigation Bureau):** The nodal agency for investigating civil aircraft accidents and incidents in India.



### Conclusion

This committee marks a significant step toward **institutionalizing aviation disaster preparedness** in India. By creating a unified, well-coordinated framework for air crash response and prevention, the government aims to minimize loss of life and improve public safety confidence in civil aviation. For UPSC aspirants, this development reflects key themes of **disaster management, governance, institutional coordination, and policy formulation**—relevant for both **GS Paper II (Governance)** and **GS Paper III (Disaster Management)**.

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## 10. Panel to Review Competitive Exams and Coaching Dependency

### 1. Constitution of Expert Panel by the Education Ministry

- The Union Ministry of Education has formed a **high-level committee** chaired by *Higher Education Secretary Vineet Joshi* to review India's competitive entrance exam system.
- **Objective:** To reduce student dependency on private coaching institutes and assess the **effectiveness and fairness** of competitive exams such as JEE, NEET, CUET, etc.

### 2. Panel Composition and Stakeholders Involved

- Members include representatives from premier institutions (IIT Madras, IIT Kanpur, NIT Trichy), NCERT, CBSE, school principals (KV, Navodaya, private), and relevant government departments.
- A Joint Secretary from the Higher Education Department will serve as **Member Secretary** of the panel.

### 3. Key Issues to be Addressed by the Panel

- **Rote Learning Culture:** The committee will examine how limited focus on **critical thinking, analytical ability, and innovation** in school's fosters coaching dependence.
- **'Dummy Schools':** These institutions enroll students only to maintain formal school records while they undergo full-time coaching. The panel will recommend measures to curb this practice.
- **Gap in Formative Assessments:** The panel will study how inadequate continuous evaluation affects **conceptual learning** and readiness for competitive exams.

### 4. Broader Structural Challenges Identified

- **Supply-Demand Imbalance:** Fewer seats in premier institutions vs. rising demand for higher education pushes students toward aggressive coaching culture.
- **Limited Career Awareness:** The panel will assess **career counselling gaps** and the need to expand awareness of diverse career options beyond medical and engineering streams.
- **Advertising Ethics:** The panel will review **misleading claims** by coaching centres that showcase selective success stories, creating unrealistic expectations.

### 5. Legal, Policy, and Constitutional Linkages

- **Constitutional Provision:**
  - **Article 21A:** Ensures right to quality education for all children aged 6–14 years. Excessive coaching undermines equitable and holistic education.
- **Legal Frameworks:**
  - **Right of Children to Free and Compulsory Education Act, 2009** mandates quality schooling and discourages commercialization of education.
- **National Education Policy (NEP) 2020\*:** Emphasizes **reducing high-stakes exams**, promoting **multidisciplinary learning**, and **critical thinking**.

### Conclusion: Towards Holistic and Equitable Education

The constitution of this expert panel marks a critical step toward **reforming India's exam-driven education system**, which currently prioritizes coaching over classrooms. By addressing structural gaps, promoting school-based learning, regulating coaching centres, and improving formative assessments and career guidance, India can build an **inclusive and meritocratic educational ecosystem** aligned with the goals of NEP 2020 and constitutional values of equity and access.



## 11. Special Intensive Revision (SIR) of Electoral Rolls in Bihar

### 1. What is Special Intensive Revision (SIR) and Why Is It Being Conducted?

- **SIR** is a focused electoral roll revision exercise aimed at ensuring the **inclusion of all eligible voters** and exclusion of **ineligible or non-existent entries** (e.g., deceased, migrated, illegal immigrants).
- The last such exercise in **Bihar was held in 2003**. Rising urbanization, youth eligibility, and migration trends necessitated this 2025 update.

### 2. Methodology of Revision – House-to-House Verification

- **Booth Level Officers (BLOs)** will conduct **house-to-house verification** and distribute pre-filled **Enumeration Forms (EFs)** to existing voters.
- EFs will be available both **physically and digitally (ECINET)** for convenience.
- **Booth Level Agents (BLAs)** from all recognized parties will participate to ensure **transparency and fairness**.

### 3. Constitutional & Legal Provisions Involved

- **Article 324**: Empowers the Election Commission of India (ECI) to supervise elections.
- **Article 326**: Ensures **universal adult suffrage**—every Indian citizen aged 18+ is entitled to vote unless disqualified.
- **Section 16, RP Act 1950**: Lists disqualifications from voter registration.
- **Section 23 & 24, RP Act 1950**: Enables **verification by Electoral Registration Officer (ERO)** and allows for **appeals** against ERO decisions to **District Magistrate** and **Chief Electoral Officer**.

### 4. Grievance Redressal & Transparency Measures

- **Claims and objections** can be raised by voters or political parties against exclusions/inclusions.
- **AEROs** will inquire into such objections before decisions are finalized.
- All verifying documents (uploaded to **ECINET**) will be **restricted to authorized officials** to protect voter privacy.
- **Draft and Final Electoral Rolls** will be shared with political parties and uploaded online.



### 5. Special Focus on Vulnerable Groups & Technology Use

- The ECI has directed BLOs and officials to ensure **no harassment** of genuine voters, especially **elderly, PwDs, poor, and illiterate citizens**.
- **Volunteers** will be deployed to assist these groups.
- Use of **digital platforms like ECINET** enhances efficiency, reduces errors, and ensures **transparent record-keeping**.

### Conclusion

The Special Intensive Revision in Bihar is a **significant electoral reform step**, ensuring **clean, inclusive, and transparent voter rolls** ahead of future elections. It embodies India's commitment to **free and fair elections**, aligning with constitutional mandates and democratic values. Active participation from voters and political parties is **critical** to the success of this exercise.





## ECONOMY

### 1. RBI Cuts Repo Rate and CRR: Key Takeaways

#### 1. Monetary Easing by RBI to Boost Growth

- The Reserve Bank of India's Monetary Policy Committee (MPC) voted 5:1 to **cut the policy repo rate by 50 basis points (bps) to 5.50%**, signaling an accommodative stance to revive growth as inflation remains under control.
- This is the **third repo rate cut since February**, aimed at reducing borrowing costs and boosting credit demand.

#### 2. CRR Reduction to Inject Liquidity

- RBI announced a **100 bps reduction in the Cash Reserve Ratio (CRR)**—the percentage of a bank's total deposits that must be maintained with the RBI.
- This move will be implemented in four **staggered 25 bps cuts**, starting from September to November 2025, reducing CRR to **3% of Net Demand and Time Liabilities (NDTL)**.
- The measure is expected to **release ₹2.5 lakh crore of primary liquidity** into the banking system by December 2025.

#### 3. Impact on Borrowers and Depositors

- The **repo rate cut reduces lending rates**, easing the **interest burden for borrowers**, including businesses and households.
- However, it may also **lower interest income for depositors**, affecting savings returns, especially for fixed deposits.

#### 4. Inflation Targeting Framework Intact

- Despite the easing measures, the RBI reiterated its commitment to the **medium-term CPI inflation target of 4%** within a **tolerance band of  $\pm 2\%$** , in line with the **monetary policy framework under Section 45ZA of the RBI Act, 1934**.

- Current inflation is perceived to be under control, allowing policy space for growth support.

#### 5. Growth Forecast Retained

- **Real GDP growth projection for 2025–26 remains at 6.5%**, based on domestic demand recovery, improved rural consumption, and global factors.
- The RBI aims to maintain a **balance between inflation control and supporting economic expansion**.

#### 6. Legal and Institutional Framework

- **Monetary Policy Committee (MPC)**, constituted under **Section 45ZB of the RBI Act**, is responsible for setting the repo rate.

#### RBI'S RATE CUTS & IMPACTS

##### KEY CHANGES IN RBI'S POLICY

- **Repo Rate Cut** (50 bps to 5.5%)
  - Repo rate is the interest rate at which RBI lends to banks, third consecutive cut
- **CRR Cut** (100 bps to 3%)
  - Cash Reserve Ratio (CRR) is percentage w/ deposits banks must keep
- **Shift in Policy Stance** (Accommodative → Neutral)
  - Inflation has dropped to 3.2%, lowest in 6 years

##### IMPACTS

- **Bond Markets & Yield Compression**
  - 10-year bond yield has dropped to 6.18-6
- **Stock Market Rally**
  - Sensex surged over 800 points
- **Lower Loan EMIs**
  - Home loan EMIs of ₹50 lakh drop by ₹1790
- **Fixed Deposit Returns Decline**
  - FD rates are likely to fall
- **Rupee & Forex Reserves**
  - USD/INR rose to 85.98

- **Repo Rate** is the rate at which RBI lends to commercial banks, and **CRR** is a tool under RBI's statutory liquidity management functions.
- These instruments are part of the **quantitative tools** of monetary policy to manage money supply and inflation.

**Conclusion:**

RBI's recent monetary easing through a significant repo rate cut and phased CRR reduction reflects a calibrated effort to stimulate economic growth while ensuring inflation remains within the target band. These decisions align with RBI's dual mandate of **price stability and growth promotion**, making it a critical development for UPSC aspirants to understand the working of monetary policy in India's macroeconomic framework.

## 2. Indian Iron and Steel Exporters Fear \$1 Billion Hit Due to New U.S. Tariffs

### 1. Context and Impact of New U.S. Tariffs

- The U.S. plans to double tariffs on Indian iron, steel, and aluminum products from the current 25% to 50% under **Section 232 of the Trade Expansion Act**.
- India's exports to the U.S. in FY 2025 were worth about **\$4.56 billion**, including \$3.1 billion in iron and steel articles. The tariff hike is expected to cause a **\$1 billion loss** in export revenues.
- Key export items affected include iron and steel castings, fasteners, stainless steel pipes, and automotive steel parts.



### 2. Section 232 of the Trade Expansion Act, 1962

- Allows the U.S. President to impose tariffs on imports deemed a threat to national security, especially on steel and aluminum.
- India currently faces tariffs under this provision and is seeking exemptions similar to those granted to countries like the U.K.

### 3. Concerns and Strategy for Indian Exporters

- EEPC India and Federation of Indian Export Organisations highlight **tariff uncertainty** as a major challenge affecting business planning and competitiveness.
- They urge diversification of export markets beyond the U.S. to mitigate risks.
- Indian industry is seeking government intervention for exemptions and bilateral negotiations to avoid disproportionate disadvantage.

### 4. Economic and Trade Implications

- Higher tariffs increase costs for U.S. industries relying on imports, such as automobile, construction, and manufacturing sectors.



- The hike could disrupt global supply chains and negatively affect India's growing engineering exports.
- India has issued a formal notice at the **World Trade Organization (WTO)** signaling potential retaliatory tariffs on U.S. goods, which may escalate trade tensions.

## 5. Definitions and Key Terms

- **Tariffs:** Taxes imposed on imported goods to protect domestic industries or as a trade policy tool.
- **Retaliatory Tariffs:** Tariffs imposed by one country in response to tariffs or trade barriers imposed by another country.
- **Export Diversification:** Strategy to reduce reliance on a single market by expanding exports to multiple countries.

## 6. Constitutional and Legal Provisions

- **Article 301** of the Indian Constitution promotes freedom of trade and commerce throughout India but also recognizes the need for protective measures in international trade through government policies.
- India's trade policies must align with **WTO agreements** to avoid unlawful discrimination or trade barriers.

## Conclusion

The proposed U.S. tariff hike under Section 232 poses a significant threat to India's iron, steel, and aluminum exports, risking a \$1 billion loss and undermining India's export competitiveness. The situation underscores the need for strategic export diversification, strong government advocacy at bilateral and WTO forums, and greater focus on building resilient trade relations. This issue is crucial for understanding India-U.S. trade dynamics and the challenges of protectionism in global commerce for UPSC preparation.

## 3. GST Mop-up: Signals for India's Economy and Tax Structure

### 1. Definition and Significance of GST

- **Goods and Services Tax (GST)** is a comprehensive, destination-based indirect tax that subsumes multiple central and state taxes.
- It is a **value-added tax levied on most goods and services sold for domestic consumption**, collected at each point of sale.
- GST is a **broad-based barometer of domestic consumption** and reflects the health of the economy, especially consumption trends.

### 2. Record-High GST Collections and Trends

- GST collections have **exceeded ₹2 trillion for three consecutive months**:
  - April 2024: ₹2.36 trillion (reflecting March transactions)
  - May 2024: ₹2.01 trillion
- Earlier six-month average: ₹1.75 trillion.
- Reflects sustained consumption and formalization of the economy.

### 3. Economic Implications of Buoyant GST Revenues

- **Rising domestic GST collections** indicate improved consumer demand:
  - December: +8.4%
  - April: +10.7%
  - May: +13.7%
- **Rural demand** is recovering due to good monsoons and agricultural performance.
- **Urban demand** also rising, helped by lower inflation and increased disposable income.

### 4. Rising GST on Imports – A Mixed Signal

- GST on imports grew sharply:
  - April: +20.8%
  - May: +25.2%
- Indicates higher import volumes but raises concern about the **composition of imports** (consumption goods vs intermediate goods).
- **Trade concerns:** Possible dumping from China due to U.S. tariffs; government yet to release sector-specific import GST data.



### 5. Need for GST Rate Rationalization

- The **current GST structure is complex**, with multiple slabs (0%, 5%, 12%, 18%, 28%).
- With revenue stability achieved, experts recommend:
  - **Removing the 12% slab** (contributing <4% of revenues).
  - **Ending or restructuring the compensation cess** (possibly converting it to health or green cess after March 2026).
- Rationalization will improve tax compliance and reduce litigation.

### 6. Legal and Constitutional Backing

- GST was introduced via the **101st Constitutional Amendment Act, 2016**.
- Key provisions:
  - **Article 279A:** Formation of the GST Council
  - **Article 246A:** Concurrent powers to Parliament and State Legislatures to make laws on GST
  - **Article 269A:** GST on inter-state trade and commerce to be levied and collected by the Centre

### Conclusion

The robust GST mop-up signals a strengthening domestic economy with rising consumption. As revenue stabilizes, **GST rate rationalization becomes both feasible and essential** to enhance simplicity and efficiency in tax administration. Policymakers must now focus on refining the structure while monitoring trade patterns and ensuring equitable growth.

## 4. India–US Steel Tariffs Issue Amid BTA Talks

### 1. Context and Background of the Tariff Dispute

- In 2018, the **US imposed tariffs of 25% on steel and 10% on aluminium** imports under **Section 232** of its domestic law, citing national security concerns.
- **Section 232 of the US Trade Expansion Act, 1962**, allows the US President to restrict imports that threaten national security.
- India challenged these duties as ‘**safeguard measures**’ under the **WTO Safeguards Agreement**, demanding equivalent retaliation rights.



### 2. India’s Current Strategy: Negotiation Over Retaliation

- Instead of immediate retaliation, **India is using the Bilateral Trade Agreement (BTA) talks** to seek the rollback of these tariffs.
- A **US delegation is scheduled to visit New Delhi between 5–8 June 2025** to discuss the BTA, during which India plans to raise the issue.
- India reserves the **right to retaliate at the WTO** if talks fail but prefers a **structured diplomatic approach** for now.

### 3. WTO Legal Framework and India’s Position

- Under the **WTO Safeguards Agreement**, members can impose temporary trade restrictions to protect domestic industries from import surges—but must compensate affected nations.
- **India notified WTO** about suspending concessions in retaliation, but the **US rejected India's claim**, arguing the tariffs are **national security-based**, and thus not governed by safeguard rules.
- The US has **consistently refused to accept WTO rulings** against it on national security matters, undermining WTO’s dispute settlement credibility.

### 4. Impacts on Indian Trade and Industry Concerns

- India exported **\$4.56 billion worth of steel, aluminium, and related products** to the US in FY25.
- Indian exporters fear **market loss and price disadvantages** due to these tariffs.
- Domestic industry is urging the government to act diplomatically but decisively.

### 5. Strategic and Diplomatic Calculations by India

- India’s decision to **avoid escalation** reflects a pragmatic foreign trade policy approach.
- Experts like Ajay Srivastava of GTRI support **negotiated resolutions over WTO-based retaliation**, citing **fragile WTO mechanisms** and **US non-compliance with dispute rulings**.
- A **comprehensive BTA outcome** may offer India **greater long-term market access and legal clarity**.

### 6. Constitutional and Legal Framework (Indian Context)

- **Article 246 & 246A**: Empower Parliament to legislate on foreign trade and customs duties.



- **Foreign Trade (Development and Regulation) Act, 1992:** Governs India's foreign trade policy and retaliation rights.
- India can invoke **Section 8A of the Customs Tariff Act, 1975** to increase import duties in retaliation if needed.

### Conclusion

India is navigating the US steel tariffs dispute through **diplomatic engagement via BTA talks** rather than immediate confrontation. With the WTO dispute mechanism under stress and US resistance to rulings, **a negotiated settlement seems strategically sound**. India aims to defend its trade interests while maintaining constructive bilateral ties, reflecting a matured global trade posture.

## 5. Digital Payment-Related Frauds in India

### 1. Overview of Digital Payment Fraud Data

- A total of **63,315 digital payment-related fraud cases** involving **₹733.26 crore** were reported in the last **10 financial years (FY14–FY25 up to December)**.
- These cases were registered under **'card/internet and digital payments'** category, involving amounts of **₹1 lakh or more**, as per Finance Ministry data presented in **Lok Sabha on 10 March 2025**.

### 2. Distinction from Broader Banking Frauds

- Officials clarified that **digital payment frauds should not be conflated** with other banking frauds which may not directly impact the public.
- Broader **banking frauds** often involve **corporate loans, internal frauds**, and large-scale misappropriations not affecting individual consumers.



### 3. Definition and Nature of Digital Payment Fraud

- **Digital payment fraud** refers to **unauthorized transactions involving digital platforms**, including cards, UPI, mobile wallets, and net banking.
- These are usually **consumer-facing frauds** such as phishing, SIM swapping, OTP theft, and fake payment links.

### 4. Government & Institutional Safeguards

- Multiple measures by the **Finance Ministry, Reserve Bank of India (RBI)**, and **National Payments Corporation of India (NPCI)** have been implemented to secure digital transactions:
  - **Two-factor authentication,**
  - **Real-time fraud monitoring,**
  - **AI-based fraud detection,**
  - **User awareness campaigns and grievance redressal mechanisms.**

### 5. Legal and Constitutional Provisions Relevant to the Issue

- **Article 246 & 246A:** Provide Parliament powers to legislate on banking and taxation of digital financial services.



- **Information Technology Act, 2000 (Sections 43 & 66):** Deals with cyber frauds and imposes penalties for data theft and identity fraud.
- **RBI Act, 1934 and Payment and Settlement Systems Act, 2007:** Empower RBI to regulate digital payments, ensure consumer protection, and set operational guidelines.

#### 6. Political and Public Narrative Management

- The opposition cited inflated figures from **total banking frauds**, which may lead to **public misinformation** and **undue alarm** about digital payments.
- Officials emphasized that **digital fraud levels are not alarming**, indicating **continued public confidence in digital payments** is crucial for financial inclusion.

#### Conclusion

While the rise of digital payments has brought increased vulnerabilities, the data shows that the **scale of fraud is manageable and not systemically alarming**. India's robust legal and institutional framework, along with proactive efforts by RBI and NPCI, helps ensure the **safety and resilience of the digital**

**payment ecosystem**. Clear distinction between consumer-level digital frauds and institutional banking frauds is necessary to maintain **public trust and informed discourse**.

### 6. Expanding Banking Access through India Post

#### 1. Aim to Reduce Banking Access Radius to 3 km

- The **Government of India**, through the **Department of Financial Services (DFS)** and **Department of Posts (DoP)**, is preparing a proposal to provide **banking services within a 3 km radius** for all citizens.
- This is a follow-up to the earlier goal of 5 km banking access and aims to deepen **financial inclusion**, especially in **rural and remote areas**.

#### 2. Role of India Post and Panchayats

- India Post, with its **extensive rural network of over 1.5 lakh post offices**, will play a **central role** in delivering these services.
- The plan will map **panchayats and villages** within 3 km clusters and mandate banking presence in such areas, involving coordination with **state governments**.



#### 3. Financial Inclusion: Concept and Importance

- **Financial Inclusion** is defined as the process of ensuring **access to appropriate financial products and services** to all sections of society, especially the vulnerable groups, at an **affordable cost** in a **fair and transparent manner**.
- It is essential for reducing poverty, empowering rural communities, and achieving **inclusive economic growth**.

#### 4. Delivery Model and Infrastructure

- The model will combine **brick-and-mortar post offices**, **bank business correspondents**, and **state-run electronic Point-of-Sale (ePOS)** systems.
- The infrastructure will be supplemented by designated banking days, customized for **local demand and population needs**.



## 5. Benefits of the Initiative

- **Customer convenience** and increased **transaction frequency** due to proximity.
- **Better understanding of borrower profiles** by nearby staff, useful in areas with **low digital or credit history**.
- **Improved trust and engagement** between citizens and formal banking institutions.
- Strengthens the implementation of **Direct Benefit Transfers (DBTs)**, **Jan Dhan-Aadhaar-Mobile (JAM) trinity**, and **financial empowerment schemes**.

## 6. Relevant Constitutional & Legal Provisions

- **Article 38**: Directive Principle mandating the state to strive for minimizing inequalities in income and opportunities.
- **Article 243G & 243W**: Empower Panchayats and Municipalities to assist in economic development, including facilitating financial inclusion.
- **The Payment and Settlement Systems Act, 2007**: Provides for RBI oversight over payment systems, ensuring safe, secure transactions.
- **Indian Post Office Act, 1898 (amended)**: Empowers India Post to expand into financial services (e.g., India Post Payments Bank).

## Conclusion

This initiative aligns with India's vision of **inclusive development and universal banking access**. Leveraging India Post's vast rural network to reduce the banking access radius to 3 km is a **pragmatic and transformative move**. It not only ensures **financial empowerment of rural citizens** but also strengthens **state-centre-institution coordination** for delivering public services efficiently.

## 7. Manufacturing PMI Eases to 3-Month Low

### 1. What is PMI and Current Data Trends

- **Purchasing Managers' Index (PMI)** is an indicator of the **economic health of the manufacturing sector**, based on surveys of private sector companies. A value **above 50** indicates expansion, while **below 50** indicates contraction.
- The **HSBC India Manufacturing PMI**, compiled by S&P Global, **fell to 57.6 in May 2025**, the lowest in three months, from **58.2 in April** and **58.1 in March**.

### 2. Key Drivers Behind the Decline

- The **growth in new orders and output softened**, attributed to **heightened competition, rising inflation, and geopolitical tensions**, particularly the **India-Pakistan conflict**.
- Despite this decline, both output and new orders remained **above long-run averages**, suggesting sustained underlying demand.

### 3. Positive Trends: Employment and Exports

- **Job creation surged to a record high**, with sustained hiring momentum to manage workloads.
- **New export orders saw the strongest growth in three years**, boosted by demand from **Asia, Europe, West Asia, and the US**.
- Companies increased **input purchases**, indicating expectations of continued demand.

#### 4. Rising Input Costs and Inflationary Pressure

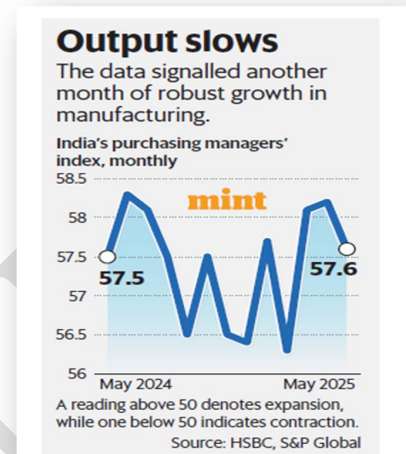
- **Input cost inflation** reached a **6-month high**, mainly due to increased prices of **aluminium, cement, iron, leather, rubber, and sand**.
- Manufacturers passed on higher costs to consumers, leading to **one of the sharpest increases in selling prices in over 11 years**, highlighting **cost-push inflation** dynamics.

#### 5. Macroeconomic Context: GDP Performance

- India's **GDP grew by 6.5% in FY25**, with a **7.4% expansion in the Jan-Mar quarter**.
- However, both figures are **lower than previous fiscal: 9.2% full-year growth in FY24 and 7.8% in Q4 of FY24**, indicating **moderation in economic momentum**.

#### 6. Constitutional & Policy Relevance

- **Article 39(c) of the Directive Principles** emphasizes securing an economic system that does not result in the concentration of wealth and ensures equitable growth, making inclusive industrial growth essential.
- **Make in India, Production-Linked Incentive (PLI) schemes, and National Manufacturing Policy (2011)** are key government interventions to boost manufacturing and employment.
- RBI's role in **monitoring inflation and monetary policy** becomes critical amid rising input costs.



#### Conclusion

While the slight dip in manufacturing PMI signals a **moderation in growth**, the sector remains robust, supported by **strong export demand, record hiring, and expansion in capacity**. However, **cost-push inflation** and **geopolitical uncertainties** remain key challenges. Policymakers must balance **growth support measures** with **inflation management** to sustain industrial momentum in the medium term.

## 8. Related-Party Transactions and MCA Advisory

#### 1. What Are Related-Party Transactions (RPTs)?

- **Related-Party Transactions** are business deals between two parties who are joined by a pre-existing relationship (e.g., director and company, company and relative of a director).
- As per **Section 2(76) of the Companies Act, 2013**, related parties include **directors, key managerial personnel (KMPs), their relatives, and entities under their control or influence**.

#### 2. MCA's Advisory and Gensol Case Trigger

- The **Ministry of Corporate Affairs (MCA)** has issued a **cautionary reminder** to promoters and businesses following the **Gensol Engineering Ltd. case**, where allegations were made regarding **violation of related-party transaction norms**.
- The government emphasized the need to maintain **arm's length principles**—meaning transactions should be conducted **as if the parties were unrelated**, ensuring **fair pricing and no undue advantage**.



### 3. Legal Framework and Penalties

- **Section 188** of the **Companies Act, 2013** governs RPTs and mandates **Board/Shareholder approval** in certain cases.
- Violation of Section 188 may result in **finances and imprisonment** under **Section 188(3)**, especially if the transaction is **not disclosed or approved**.
- **Listed companies** must also comply with **SEBI (LODR) Regulations, 2015**, which require **disclosure and audit committee approval** of material RPTs.



### 4. Importance of Arm's-Length Principle

- Ensures **transparency, good corporate governance, and prevention of insider benefits or siphoning of funds**.
- Critical for protecting the **interests of minority shareholders and investors**.

### 5. Role of Independent Directors and Audit Committees

- **Independent directors and audit committees** play a vital role in scrutinizing and approving RPTs, especially in listed entities.
- Their involvement enhances **accountability and oversight** and ensures **compliance with fiduciary duties**.

### 6. Constitutional and Institutional Backing

- **Article 39(b) & (c)** of the **Directive Principles of State Policy (DPSP)** promotes the **equitable distribution of resources** and prevents the **concentration of wealth**, which unchecked RPTs could violate.
- **MCA, SEBI, and the National Financial Reporting Authority (NFRA)** are key institutions responsible for **monitoring and enforcing corporate governance norms**.

### Conclusion

The MCA's reminder underscores the growing emphasis on **corporate transparency and ethical governance** in India. Related-party transactions, if not regulated, can lead to **conflict of interest, financial irregularities, and loss of investor confidence**. Hence, strict adherence to legal provisions, **enhanced board vigilance, and robust disclosures** are essential to uphold **corporate integrity and accountability**, particularly in the era of **stakeholder capitalism**.

## 9. RBI's \$73 Billion Short Book and Impact on Indian Rupee

### 1. What Is a "Short Dollar Book" or Net Short Forward Position?

- The **RBI's short dollar book** refers to **forward contracts** where the RBI has agreed to **sell US dollars in the future**.
- As of April 2025, this position stood at **\$73 billion**, down from a peak of **\$88.8 billion in February**, indicating **future obligations** to deliver dollars and manage forex liquidity.

## 2. Impact on the Indian Rupee

- The rupee is the **worst-performing currency in Asia this quarter**, despite strong GDP growth of **7.4% in Q4 FY25**.
- Expected **dollar purchases** by RBI to **replenish reserves** may **put downward pressure on the rupee**, with forecasts suggesting a drop to **₹86.50–₹87.50 per USD** by December.

## 3. RBI's Forex Management Strategy

- India's **foreign exchange reserves** stood at **\$693 billion** as of May 23, 2025, slightly below the **all-time high of \$705 billion** (September 2023).
- The RBI is gradually allowing its **forward book to run off** to avoid future **reserve depletion**, while **buying dollars in the spot market** to maintain reserve buffers.



## 4. Market Dynamics and Policy Shift

- RBI appears to be **shifting towards a more market-determined exchange rate regime**, allowing **greater rupee flexibility**.
- This is amid **capital outflows from the bond market** and global uncertainties, where **maintaining adequate reserves** is key to **ensuring currency stability**.

## 5. Constitutional and Institutional Relevance

- As per **Article 300A**, no person shall be deprived of property (including financial assets) except by authority of law, reflecting the need for **monetary stability**.
- The **Reserve Bank of India**, under the **RBI Act, 1934**, is tasked with **monetary policy, forex management, and financial stability**—crucial for national economic sovereignty and price stability.

## 6. Broader Economic Implications

- Weakening rupee could **raise import costs**, especially **crude oil**, leading to **imported inflation**.
- It could also affect **external debt servicing, capital flows, and investor confidence**, thereby impacting the **current account balance** and **India's global competitiveness**.

## Conclusion

The RBI's large short dollar book reflects a **complex balancing act** between **managing rupee volatility, rebuilding forex reserves, and ensuring macroeconomic stability**. For UPSC, this case highlights the importance of **prudent forex management, monetary autonomy, and the interplay between domestic policy and global financial pressures**. Understanding such dynamics is crucial for aspirants aiming to grasp India's economic policy landscape in a globally integrated world.

## 10. Bhu Bharati Act: A Landmark Land Reform Initiative in Telangana

### 1. What is the Bhu Bharati Act?

- The **Telangana Bhu Bharati (Record of Rights in Land) Act** is a **comprehensive land reform law** enacted in April 2025.
- Its aim is to **digitally survey agricultural land**, accurately identify **boundaries**, and resolve **land ownership disputes** through **scientific and transparent methods**.





## 2. Technological Tools for Implementation

- The Bhu Bharati project uses **drone-aided surveys** and **Differential Global Positioning System (DGPS)** technology for **high-precision mapping** of land boundaries.
- These methods significantly enhance accuracy over traditional land records and help minimize human error or manipulation.

## 3. Criticism of the Previous Dharani Portal

- The Act replaces the **Dharani portal**, introduced by the earlier BRS (Bharat Rashtra Samithi) government, which the current government claims had **curtailed farmers' land rights** and led to widespread dissatisfaction.
- Telangana Deputy CM **Mallu Bhatti Vikramarka** termed the Bhu Bharati Act a **fulfilment of electoral promises** and a **people-centric reform**.

## 4. Constitutional and Legal Relevance

- The Act aligns with **Entry 18 of the State List (List II)** in the **Seventh Schedule** of the Constitution, giving states authority over land and land records.
- It also adheres to **Article 300A**, which ensures that **no person shall be deprived of property except by authority of law**.
- Modernization of land records is in line with the **Digital India Land Records Modernization Programme (DILRMP)** initiated by the Centre.

## 5. Expected Benefits and Socio-Economic Impact

- The Act will help in **resolving long-pending land disputes**, reduce litigation, and bring **transparency and trust** in land ownership systems.
- Clear land titles are critical for **agricultural investments, rural credit, welfare scheme delivery, and reducing land-related violence**.
- The digital records will also aid in **planning infrastructure and welfare schemes** more efficiently.

## 6. Pilot Project and Public Engagement

- The pilot project has been launched in **Mulugumadu village, Yerrupalem mandal** of Khammam district, showing strong **government-village interface**.
- Ministers for Revenue and Agriculture were also present, signaling **inter-departmental coordination** and political commitment to implementation.

### Key Definitions

- **Record of Rights (RoR)**: An official document that contains details of the ownership, tenancy, and cultivation of agricultural land.
- **DGPS (Differential Global Positioning System)**: An advanced GPS system that provides **highly accurate location data**, ideal for surveying and mapping.

### Conclusion

The Bhu Bharati Act marks a **progressive shift in land governance**, combining **technology, legal clarity, and policy intent**. It demonstrates how state-led reforms can correct past administrative flaws and build **institutional trust among farmers**. For UPSC aspirants, the Act is a model for understanding **land reforms, state innovation in federal India, and the integration of digital tools in governance**.

## 11. New Centre of Excellence for South-South Cooperation in Agriculture

### 1. Launch of ISSCA – A Strategic Agricultural Initiative

- The **ICRISAT Centre of Excellence for South-South Cooperation in Agriculture (ISSCA)** was launched by **ICRISAT** and **RIS** during the “Conference on Global South and Triangular Cooperation” in New Delhi.
- It aims to **accelerate agricultural transformation** across the **Global South** through **knowledge sharing, innovation, and strategic partnerships**.

### 2. South-South and Triangular Cooperation – Key Concept

- **South-South Cooperation (SSC)** refers to **collaboration among developing countries** to share knowledge, skills, innovations, and resources.
- **Triangular Cooperation** includes partnerships between two or more developing countries supported by a third (typically a developed country or international organization).
- The ISSCA embodies both models to solve **agricultural and climatic challenges** common to Global South nations.

### 3. Key Partners – ICRISAT, DAKSHIN, and RIS

- **DAKSHIN** (Development and Knowledge Sharing Initiative) is a **Government of India initiative** aimed at promoting SSC via capacity building.
- **RIS** is a policy research institution supporting development partnerships.
- The MoU signed between ICRISAT and DAKSHIN strengthens this alliance to promote **climate-smart agriculture** and digital innovation.

### 4. Features and Functions of ISSCA

- Acts as a **digital repository and exchange hub** of **validated agricultural innovations** for dryland and semi-arid regions.
- Supports **peer-to-peer learning**, policy model replication, and deployment of **low-cost, high-impact technologies**.
- Promotes **inclusive growth, climate resilience, and sustainable practices** in agricultural systems.

### 5. Institutional Support and National Commitment

- **Indian Council of Agricultural Research (ICAR)** and **Department of Agricultural Research and Education (DARE)** have extended support for ISSCA.
- This reflects India's proactive role in **global agricultural diplomacy**, with a focus on **technology sharing, food security, and sustainability**.





## 6. Constitutional and Policy Relevance

- Aligns with **Article 51(c)** of the Constitution, promoting international peace and cooperation.
- Complements India's **Act East Policy** and **development partnership strategy**, especially in Africa, Southeast Asia, and Latin America.
- Supports **UN SDG Goals**, particularly **SDG-2 (Zero Hunger)** and **SDG-13 (Climate Action)**.

### Conclusion:

The establishment of ISSCA signals India's leadership in **global agricultural cooperation**, leveraging its scientific and institutional strengths. Through collaborative platforms like this, the **Global South can address shared developmental challenges**, enhance food security, and build climate-resilient agricultural systems—advancing the broader goal of **sustainable and inclusive growth**.

## 12. Clean Plant Projects & India's First International Agri Hackathon

### 1. Launch of 'Clean Plant' Program for Disease-Free Horticulture

- The Government of India is launching **9 'Clean Plant' projects**, with **3 located in Maharashtra** (Pune for grapes, Nagpur for oranges, and Solapur for pomegranates) at a cost of ₹300 crores.
- Aim: Ensure **disease-free planting materials** and promote **productivity and quality** in horticulture.
- Modern **nurseries** will be established: ₹3 crores for large and ₹1.5 crore for medium-sized ones, generating **8 crore clean seedlings annually**.

### 2. Key Constitutional & Legal Context

- **Article 48** (Directive Principles): Promotes modern agriculture and animal husbandry.
- **Article 51A(g)**: Fundamental duty to protect and improve the natural environment, including agriculture.
- Aligned with **National Horticulture Mission (NHM)** and **National Innovation in Climate Resilient Agriculture (NICRA)**.

### 3. India's First International Agri Hackathon

- Held in **Pune**, with participation from **startups, agri-innovators, and farmers**; focused on solving real-world farm problems using **technology and innovation**.
- Categories included **AI in agriculture, soil health, irrigation, pest control, post-harvest tech, and agri-market linkages**.
- Maharashtra praised for excellence in **grapes, pomegranates, oranges, and vegetables**.





#### 4. 'Lab to Land' Mission – Scientist-Farmer Linkage

- Government will deploy **16,000 agricultural scientists** to work directly with farmers to ensure that innovations reach the field.
- Objective: Bridge the gap between **research and farm-level implementation** for boosting yields and disease control.

#### 5. Youth Engagement & Global Vision

- The Minister emphasized youth participation in **agri-startups**, encouraging **climate-resilient seed innovation**.
- India aspires to become a **global food bank**, targeting **export surplus** after meeting domestic needs, especially in the horticulture sector.
- Support from **Israel and the Netherlands** will be leveraged for tech transfer and clean plant propagation.

#### 6. Vision for Developed India through Agricultural Transformation

- Reiterated PM's goal of '**Viksit Bharat by 2047**' is incomplete without **developed agriculture and prosperous farmers**.
- Emphasis on **reducing input costs, fair prices, insurance coverage, and climate adaptation** to make agriculture sustainable.

#### Conclusion:

The 'Clean Plant' program, in tandem with initiatives like the **Agri Hackathon** and **Lab to Land**, represents a comprehensive strategy to modernize Indian agriculture. By promoting disease-free horticulture, technology integration, and direct research application, these steps aim to ensure **food security, higher exports, and farmers' prosperity**, thereby contributing significantly to **India's developmental goals and agricultural diplomacy**.

## 13. Battery Energy Storage Systems (BESS) in India's Clean Energy Transition

### 1. Redefining Energy Security in the Climate Era

- **Energy Security** now hinges on four pillars: **availability, accessibility, affordability, and environmental acceptability**.
- Environmental acceptability emphasizes the need for cleaner energy sources to mitigate **pollution, biodiversity loss, and GHG emissions**.
- **SDG 7** (Sustainable Development Goal 7) advocates access to clean and affordable energy, where **renewables like solar and wind** are central.

### 2. Role and Significance of BESS

- **BESS (Battery Energy Storage Systems)** is a technological solution to manage **intermittency** in renewable energy supply.
- It enhances **grid stability**, enables **peak load management**, supports **microgrids**, and ensures **reliable power supply**.





- Benefits include:
  - ✓ Scalable & Affordable
  - ✓ Rapid Deployment
  - ✓ Geographic Flexibility
  - ✓ Reduced GHG emissions

### 3. India's BESS Targets and Policy Push

- **India's 2030 target:** 500 GW from non-fossil fuel sources (already achieved 217.62 GW by Jan 2025).
- **Government's commitment:** 47 GW of BESS by **2032**.
- **Policy Support Includes:**
  - **Viability Gap Funding (VGF)** for BESS
  - **Waiver of Interstate Transmission Charges** for BESS projects commissioned before June 2025.

### 4. Challenges in Scaling BESS

- **Regulatory & Financial Barriers:** Delays in agreements, lack of grid investments, slow adoption by bulk users.
- **Access to Critical Minerals:** Hurdles in indigenising BESS manufacturing.
- **Economic Survey 2024-25** flagged these issues and called for:
  - Enhanced **innovation**, investment in **critical minerals**, and **grid infrastructure**.
  - Development of **local manufacturing** and **recycling capabilities**.

### 5. Collaborations and Pilot Projects

- Public-private-philanthropic alliances (e.g., **GEAPP, BSES Rajdhani, IndiGrid**) are pioneering BESS deployment in India.
- Delhi's **BESS pilot project** sets a technical and regulatory benchmark, aiding future scalability.
- These initiatives can catalyze **policy reforms**, **technical assistance**, and **concessional finance** for more BESS adoption.

### 6. India's Leadership & Global Role

- India is emerging as a **renewable energy leader** in the developing world.
- To become **energy secure**, renewable capacity must be **complemented with storage systems**.
- As a member of the **BESS consortium**, India is poised to lead in **energy storage innovation** through:
  - **Grid-level BESS deployment**
  - **Flexible energy systems**
  - **Localized manufacturing & recycling ecosystem**

### Key Terms Defined

- **BESS:** A system that stores energy using rechargeable batteries for use at a later time, ensuring stability of power supply.
- **Intermittency:** Fluctuations in energy production due to weather-dependent renewable sources.
- **Viability Gap Funding (VGF):** Government financial support to cover the gap between project cost and returns.



- **Critical Minerals:** Essential minerals like lithium, cobalt, and nickel used in energy storage technology.

### Conclusion

Battery Energy Storage Systems are critical enablers in India's clean energy transition. While policy support and pilot projects are steps in the right direction, India must accelerate BESS deployment through innovation, financial reforms, and partnerships. Only then can it fully harness its renewable potential, achieve **SDG 7**, and emerge as a global leader in **sustainable energy security**.

## 14. Ayush Nivesh Saarthi Portal: Boosting Traditional Medicine Investment Ecosystem

### 1. Launch and Purpose of the Portal

- **Ayush Nivesh Saarthi**, launched on **29th May 2025**, is an **investor facilitation digital platform** created by the **Ministry of Ayush** in collaboration with **Invest India**.
- It was unveiled by **Union Ministers Piyush Goyal and Prataprao Jadhav** at the **Ayush Stakeholder Meet** in New Delhi.
- The portal aims to position **India as a global investment hub** for traditional medicine systems like **Ayurveda, Siddha, Unani, Yoga, and Naturopathy**.

### 2. Key Features and Functions

- The portal integrates:
  - **Policy frameworks, investment incentives, and project databases.**
  - **Real-time investor facilitation** for both **domestic and global investors.**
  - **Transparent and centralized access** to investment opportunities in **India's AYUSH sector.**
- Acts as a **single-window interface** to streamline investment and ease of doing business.



### 3. Sectoral Growth and Economic Significance

- India's **Ayush sector** recorded **17% annual growth (2014–2020)** and plays a crucial role in the **\$13 billion Medical Value Travel (MVT)** industry.
- The sector also contributes to the **global wellness economy**, catering to the rising demand for **natural and preventive health care**.
- India has **100% FDI permitted under the automatic route** in the Ayush sector—signaling openness for international collaboration.

### 4. Strategic Vision and Global Potential

- The portal is seen as a **transformational enabler** that connects:
  - India's **legacy of 8,000+ medicinal plant species,**
  - A **globally trusted wellness tradition,** and
  - **Proactive government policies** on traditional health systems.





- Enhances India's efforts to become a **global leader in holistic healthcare**, medical tourism, and **Ayurvedic pharmaceuticals**.

#### 5. Constitutional and Legal Backing

- **Directive Principles of State Policy** (Article 47): Encourage **promotion of health and nutrition** including traditional systems.
- The **National Commission for Indian System of Medicine (NCISM) Act, 2020** provides statutory regulation of education and practitioners in AYUSH systems.
- Aligns with **India's commitments to the WHO Global Traditional Medicine Centre** in Jamnagar, Gujarat.

#### Conclusion

The **Ayush Nivesh Saarthi portal** represents a pivotal step in **mainstreaming traditional medicine** as a vehicle for **economic growth, public health advancement, and global collaboration**. It marks India's strategic pivot toward becoming a **world leader in wellness and sustainable healthcare**, bridging **ancient heritage** with **modern investment frameworks**, and reinforcing the vision of **Viksit Bharat @2047** through health-centric development.

## 15. PM Inaugurates World's Highest Rail Bridge & Major Infrastructure in J&K

### 1. Chenab Rail Bridge: Engineering Marvel & Symbol of Integration

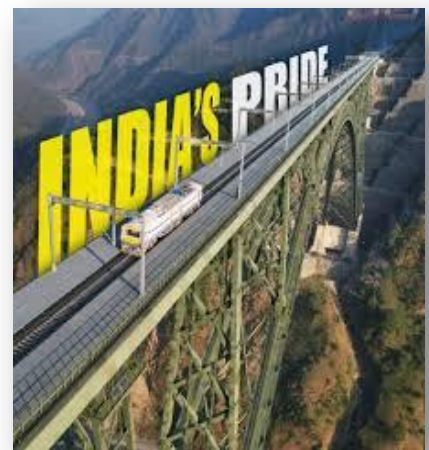
- Prime Minister Narendra Modi inaugurated the **Chenab Rail Bridge**, the **world's highest railway arch bridge**, located **359 meters above the Chenab River**.
- It is a **1,315m-long steel arch bridge**, designed to withstand seismic and wind conditions, signifying India's engineering capability in difficult terrain.
- The bridge is part of the **Udhampur-Srinagar-Baramulla Rail Link (USBRL)** project and **reduces travel time between Katra and Srinagar by 2–3 hours**.

### 2. USBRL Project: Strategic and Economic Importance

- The **USBRL is a 272 km railway project** worth **₹43,780 crores**, comprising **36 tunnels (119 km)** and **943 bridges**.
- It connects the **Kashmir Valley with the rest of India**, ensuring **all-weather, seamless rail connectivity**, which is crucial for national integration, regional mobility, and socio-economic development.

### 3. Other Major Rail and Road Projects

- PM also inaugurated the **Anji Bridge, India's first cable-stayed railway bridge**, enhancing connectivity through challenging topography.
- Two **Vande Bharat Express trains** between **Shri Mata Vaishno Devi Katra and Srinagar** were flagged off, alongside road projects aimed at **boosting last-mile connectivity in border areas**.





#### 4. Boost to Education and Health Infrastructure in J&K

- A **new medical college in Jammu** was inaugurated. The PM highlighted the presence of premier institutions like **IIT, IIM, AIIMS, NIT, and Central Universities** in the region.
- This reflects the government's commitment to making J&K a hub of education, research, and healthcare.

#### 5. National Security and Operation Sindoor Context

- These inaugurations follow **Operation Sindoor**, an anti-terror operation from **7–10 May**, underlining the strategic and security dimensions of infrastructure development in J&K.
- Enhanced transport and healthcare infrastructure also improve **response capabilities and civilian resilience** in sensitive border regions.

#### 6. Constitutional & Legal Framework

- Infrastructure development in J&K is aligned with the **reorganization under the J&K Reorganisation Act, 2019**, post abrogation of **Article 370**, allowing full application of central laws and developmental schemes.
- The projects are supported under **national infrastructure pipelines and centrally sponsored schemes** promoting inclusive development.

#### Conclusion:

The inauguration of the **world's highest rail bridge** and associated infrastructure projects in Jammu & Kashmir marks a milestone in engineering, connectivity, and national integration. It reflects India's focus on **border area development, strategic connectivity, and regional empowerment** post Article 370 reforms. These developments are not only critical from the perspective of national security and economic inclusion but also demonstrate the transformative potential of infrastructure in unifying diverse regions of India.

## 16. World Bank's New Poverty Line and Its Implications for India

### 1. Definition and Concept of Poverty Line

- **Poverty Line** refers to the minimum level of income or expenditure needed to meet basic necessities of life—**food, shelter, clothing**.
- Globally, poverty is measured in terms of **Purchasing Power Parity (PPP)** to account for price differences between countries.
- The **global poverty line** was first set at **\$1/day (1985 PPP)**, and has been updated to reflect inflation and better data. The latest line is now **\$3/day (2021 PPP)**, up from **\$2.15/day (2017 PPP)**.

### 2. What the World Bank Announced

- The World Bank has adopted the **2021 PPP estimates** and improved country-level data to revise global poverty statistics.
- Under the new **\$3/day line**, **10.5% of the world's population** was estimated to be poor in 2022, up from 9% under the earlier **\$2.15/day line**.
- This update ensures a **more realistic estimation** of poverty, especially in low- and middle-income countries.



### 3. Impact on India's Poverty Estimates

- India's poverty data was recalculated using the **2022-23 Consumption Expenditure Survey (CES)**—the first official survey in over a decade.
- Using the old \$2.15/day benchmark, **India's poverty rate in 2022 is 2.4%**, down from 12.9% in 2021.
- Using the new \$3/day benchmark, **India's poverty rate stands at 5.3%**, reflecting a sharp decline from 27.1% in 2011-12.
- Approximately **269 million people** moved out of extreme poverty in the last 11 years.

#### Poverty: A matter of numbers

While living standards may not change overnight, one's identity as a poor person can, thanks to the poverty line adjustments.

**mint**

World Bank's poverty estimates for India	Poverty line	Data source	Poverty rate (%)	Estimated poor population (in million)
<b>Extreme poverty rate</b>				
Last estimate (2024)	\$2.15/day <sup>1</sup>	CPHS* (2021)	12.9	182.1
Old poverty line applied to 2022-23 CES	\$2.15/day <sup>1</sup>	CES (2022)	2.4	33.7
New poverty line applied to 2022-23 CES	\$3/day <sup>2</sup>	CES (2022)	5.3	75.2
<b>LMIC** poverty rate</b>				
Last estimate (2024)	\$3.65/day <sup>1</sup>	CPHS* (2021)	44.1	621.1
Old poverty line applied to 2022-23 CES	\$3.65/day <sup>1</sup>	CES (2022)	28.1	402.9
New poverty line applied to 2022-23 CES	\$4.20/day <sup>2</sup>	CES (2022)	23.9	342.3

<sup>1</sup>Based on 2017 PPP. <sup>2</sup>Based on 2021 PPP. \*Consumer Pyramids Household Survey by Centre for Monitoring Indian Economy. The World Bank used this survey's data due to delay in CES; \*\*Lower-middle income country (this rate is more relevant for India)  
CES: India's official consumption expenditure survey.

Source: World Bank

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### 4. Multiple Poverty Lines and India's Position

- The World Bank has different poverty thresholds for income groups:
  - Low-Income Countries (LIC):** \$3/day (Extreme Poverty)
  - Lower-Middle Income Countries (LMIC):** \$4.20/day (revised from \$3.65)
  - Upper-Middle Income Countries (UMIC):** \$8.30/day (revised from \$6.85)
- India, being an LMIC, is better assessed on the **\$4.20/day line**.
  - Under this, **23.9% of Indians were poor in 2022**, a decline from 28.1%.

### 5. Improved Methodology and Its Significance

- The new CES captures **higher consumption levels** due to better data collection methods.
- Thus, **fewer people appear to be below the poverty line**, reflecting both **real economic improvement** and **refined measurement**.
- Direct comparisons between past and current data are methodologically invalid, but the trend clearly shows a **reduction in poverty**.

### 6. Constitutional & Policy Context (India)

- Article 21** (Right to Life) implicitly includes the right to live with dignity, which links to poverty alleviation.
- Schemes like **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**, **PMAY**, **NFSA**, and **Direct Benefit Transfers (DBT)** have contributed to improved consumption and poverty reduction.
- NITI Aayog's Multidimensional Poverty Index (MPI)** aligns with international standards and highlights reductions in education, health, and standard of living-based deprivations.

### Conclusion

The revision of the poverty line by the World Bank marks a crucial shift in how global poverty is assessed, with India showing notable improvement in poverty reduction. However, the focus should now move towards **addressing relative poverty, income inequality, and human development indicators**, as the country transitions from extreme poverty concerns to improving **quality of life and socio-economic resilience**.

## 17. MGNREGS Job Demand Rises: Seasonal Surge, Not Rural Distress

### 1. Context: Rising MGNREGS Job Demand in May–June 2025

- The **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** saw a rise in job demand in **May 2025**, with **28.39 million households** seeking work, up from **27.18 million in May 2024**.
- Early **June 2025** already saw **13.48 million households** seeking work, suggesting a continuation of the trend.
- **Economists clarify** that this increase is **seasonal**, not a sign of rural economic distress, and is **expected to decline** as monsoon sets in and sowing activity begins.

### 2. Understanding MGNREGS

- **Definition:** Enacted under the **MGNREGA, 2005**, it guarantees **100 days of unskilled manual work annually** to every rural household adult who seeks it.
- **Legal Provision:** Article **41** of the Directive Principles of State Policy (DPSP) supports the state's duty to provide work and assistance in cases of unemployment.
- **Objective:** Promote livelihood security, reduce rural poverty, and create durable rural assets.

### 3. Seasonal Trend, Not Crisis

- MGNREGS demand **rises during lean agricultural seasons** (pre-sowing and post-harvest).
- In **April 2025**, demand actually dipped to **20.12 million** from **21.52 million** a year earlier, suggesting **no broad-based rural job crisis**.
- As per economists, **post-sowing period will see demand drop again**, reinforcing its **cyclical nature**.



### 4. Link to Rural Economy and GDP Growth

- Rural job demand rise comes amid **strong rural consumption** and **GDP growth of 7.4% in Q4 FY25**.
- Rising rural incomes and agricultural recovery contributed to overall GDP performance, even as urban consumption remained weak.

### 5. Key Challenges and Policy Recommendations

- **Monsoon Distribution:** While forecasts predict a strong monsoon in FY26, **uneven or excess rainfall** (especially in onion/potato regions) may create **agri-price volatility**.
- **Wage Rate Issue:** Parliamentary Standing Committee in December 2024 recommended **revising MGNREGS wages**, which lag behind inflation, urging the **Ministry of Rural Development** to ensure **fair compensation**.
- **FY26 Budget Allocation:** Kept constant at **₹86,000 crore**, despite rising inflation and wage concerns.

### 6. Constitutional and Legal Dimensions

- **Article 41 (DPSP):** Obliges the state to secure the right to work and public assistance.
- **MGNREGA Act, 2005:** A legal right to employment, backed by time-bound grievance redressal and wage payments.
- **Schedule I & II** of the Act outline wage entitlements and permissible work categories.



## Conclusion

The rise in MGNREGS job demand in May–June 2025 is largely a **seasonal phenomenon**, not a sign of deepening rural distress. However, it offers a timely reminder to **strengthen implementation, revise wage structures, and monitor monsoon impacts** on rural employment and inflation. MGNREGS continues to play a **vital role as a social safety net**, and its effective management is crucial for both **livelihood security and macroeconomic stability** in rural India.

## 18. Centre Reviews MSP Formula to Boost Pulse Output

### 1. Context: Review of MSP Formula for Pulses

- The **Central Government** is reviewing the **Minimum Support Price (MSP)** formula for key pulses—**tur (arhar), urad, chana, and masur**—to make pricing more aligned with actual demand and production trends.
- The move is aimed at encouraging **crop diversification**, improving **domestic production**, and reducing **import dependency**, especially under the **Mission for Aatmanirbharta in Pulses**.

### 2. Issues with Current MSP Mechanism

- The current MSP system is **cost-based**, focusing on input costs (A2 + FL or C2 formula), but **does not reflect market demand and consumption patterns**.
- For example, **tur** is more expensive and time-consuming to grow (120–160 days), but its MSP (₹8,000/quintal) is lower than **moong** (₹8,868/quintal), which has **lower demand** and grows faster (60–70 days).
- Such misaligned incentives **discourage tur cultivation**, worsening import dependence.

### 3. Rising Imports & Production Challenges

- **India's pulse imports rose to 6.7 million tonnes in FY25**, a 9-year high, mainly from **African nations and Myanmar**.
- **Tur production** dropped from 4.3 mt (FY21) to 3.5 mt (FY25); **yields fell** from 914 kg/ha to 823 kg/ha.
- In contrast, **moong production increased** to 3.8 mt, with improved yields.
- Overall **pulse production declined to 24 mt in FY24** from 26 mt in FY23, due to erratic weather.

### 4. Policy and Institutional Measures Proposed

- **Revision of MSP formula** to incorporate:
  - **Market demand-supply trends**
  - **Cost of production**
  - **Consumption patterns**
- **Better quality seed distribution and yield-enhancing technologies** planned.
- **Region-specific procurement strategies** to improve farmer returns and stabilize local prices.
- **Stakeholder consultations** between ministries (Agriculture, Consumer Affairs, Finance) are planned to draft a comprehensive roadmap.





### 5. Constitutional & Legal Backing

- **Article 39(b)** of the Constitution: Mandates equitable distribution of material resources, which supports food security and fair farmer compensation.
- **Essential Commodities Act, 1955**: Ensures the availability of essential commodities, including pulses.
- **National Food Security Act, 2013**: Promotes access to affordable food grains; pulse supply under PDS linked to this framework.
- **Commission for Agricultural Costs and Prices (CACP)**: Recommends MSP, needs updated methodology in light of changing crop dynamics.

### Keywords for UPSC:

- **Minimum Support Price (MSP)**: Government-set floor price to safeguard farmers.
- **Aatmanirbharta Mission**: Self-reliance initiative focused on critical sectors.
- **Pulse Import Dependency**: India's reliance on other countries due to supply gaps.
- **Crop Diversification**: Shifting focus from water-intensive cereals to pulses and oilseeds.
- **Region-Specific Procurement**: Localized approach to government crop purchases.

### Conclusion

India's heavy reliance on imported pulses and the declining domestic production of key varieties like **tur** necessitate a **paradigm shift in MSP policy**. Aligning MSPs with **market demand, regional preferences, and crop economics** under the **Aatmanirbharta Mission in Pulses** is critical for long-term food and nutritional security. **Holistic policy interventions** including **pricing reforms, better seeds, procurement redesign, and stakeholder engagement** will be vital in achieving **self-reliance in pulses by the next decade**.

## 19. RBI to End Daily Fund Infusions: Implications of Monetary Stance Shift

### 1. Context: RBI Ends Daily Liquidity Support Operations

- The **Reserve Bank of India (RBI)** has announced that it will **discontinue daily Variable Rate Repo (VRR) operations** from **11 June 2025**, marking a shift in its monetary policy operations.
- This move comes shortly after the RBI **cut the policy rate** and introduced a **phased reduction in the Cash Reserve Ratio (CRR)** to inject liquidity into the banking system.

### 2. Understanding Key Terms and Tools

- **Variable Rate Repo (VRR)**: A short-term borrowing tool where banks borrow money from RBI at variable interest rates through auctions. Used to manage day-to-day liquidity needs.
- **Cash Reserve Ratio (CRR)**: The share of a bank's total deposits that must be maintained with RBI in cash. A reduction in CRR injects liquidity into the economy.
- **Monetary Policy Stance**: RBI's policy direction (accommodative, neutral, or tightening) which influences liquidity and interest rates in the economy.



### 3. Reason Behind the Policy Shift

- The RBI signaled that **scope for further monetary easing is limited**, likely due to:
  - Rising **inflationary pressures**,
  - Need for **liquidity normalization** post-pandemic,
  - Global macroeconomic uncertainty and **interest rate tightening** by developed economies.
- Stopping daily VRR operations aligns with a **gradual withdrawal of accommodative measures** taken during the COVID-19 crisis.



### 4. Impact on Financial System and Economy

- Banks will have to rely on **market mechanisms** and **longer-tenure RBI operations** (e.g. 14-day repo) to meet liquidity needs.
- Liquidity may become **tighter in the short term**, possibly affecting **lending rates, credit availability, and bond yields**.
- Reflects RBI's intent to return to **pre-pandemic monetary management norms** while still ensuring adequate liquidity through other tools.

### 5. Legal and Institutional Framework

- The **RBI Act, 1934** provides legal authority for conducting **monetary operations**, including repo auctions, CRR management, and liquidity tools.
- The **Monetary Policy Committee (MPC)**, as per the **Finance Act, 2016**, is responsible for policy rate decisions, targeting **inflation within a 2%–6% band**.
- Liquidity management is a core RBI function under its **mandate to ensure financial stability and price control**.

### Conclusion

The RBI's decision to **end daily fund infusions** through VRR auctions signals a **strategic shift toward liquidity normalization** and reflects cautious optimism about India's economic recovery. While liquidity will still be managed through alternative tools like CRR cuts and longer-tenure repos, the move underscores

RBI's balancing act between **supporting growth** and **containing inflation**. For aspirants, it highlights the evolving nature of **monetary policy tools** and the importance of understanding **liquidity management mechanisms** in a dynamic economic environment.

## 20. Centre to Roll Out ₹5,400 Crore Battery Storage Incentive Scheme

### Key Highlights:

#### 1. Viability Gap Funding (VGF) for Battery Storage:

- The Union Government will provide an **additional ₹5,400 crore VGF** to promote **30 GWh of Battery Energy Storage Systems (BESS)**.



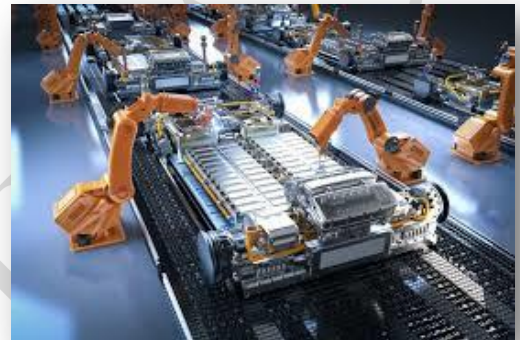
- This is **in addition to the ₹3,700 crore** VGF already committed for **13.2 GWh of BESS**, bringing total support to ₹9,100 crores for large-scale energy storage.

## **2. Strategic Role of BESS in Renewable Energy Integration:**

- India is targeting **393 GW renewable capacity by 2030**, including **293 GW solar** and **100 GW wind**.
- As these sources are **intermittent**, **BESS is essential** for ensuring **grid stability** and **round-the-clock power supply**, especially during peak demand in non-solar hours.

## **3. Infrastructure Allocation and Investment Potential:**

- **25 GWh of BESS capacity** will be allocated across **15 states**, while **5 GWh will be implemented by NTPC Ltd**, India's central public sector utility.
- The scheme is expected to attract **private and public investments worth ₹33,000 crores**, highlighting its role in clean energy transition.



## **4. Massive Future Demand for Energy Storage:**

- According to the **Central Electricity Authority (CEA)**, India will need **411.4 GWh** of energy storage by FY32 (**236.22 GWh from BESS**, **175.18 GWh from Pumped Storage Projects - PSP**).
- The **India Energy Storage Alliance (IESA)** projects that the energy storage sector may attract **₹4.79 trillion investments by 2032**.

## **5. Additional Policy Measure – Standardization of AC Temperatures:**

- The government will standardize **air conditioner temperature settings** between **20°C and 28°C**, aiming to enhance **energy efficiency** and reduce **power consumption**, in line with India's energy conservation goals.

### **Key Definitions & Concepts:**

- **Battery Energy Storage Systems (BESS):** Systems that store energy in battery form for later use, ensuring grid reliability and smoothing renewable power supply.
- **Viability Gap Funding (VGF):** Financial support from the government to cover the shortfall between project cost and revenue viability, making infrastructure projects attractive to investors.
- **Intermittent Renewable Energy:** Energy sources like solar and wind that are not available continuously due to natural variability.
- **Pump Storage Plant (PSP):** A hydroelectric energy storage method where water is pumped to a higher elevation during low demand and released during peak demand.

### **Constitutional & Legal Provisions:**

- **Article 48A (Directive Principles):** Mandates the State to protect and improve the environment.
- **Energy Conservation Act, 2001:** Provides legal framework for efficient energy use and promotes energy-saving technologies like BESS.





- **Electricity Act, 2003:** Empowers the government to promote development of the power sector including renewable energy and energy storage.

**Conclusion:**

The ₹5,400 crore VGF initiative reflects **India's strategic commitment** to achieving **net zero emissions by 2070** through the deployment of advanced storage infrastructure like **BESS**. These efforts are vital to addressing the challenges of **intermittency in renewable energy**, ensuring **grid reliability**, and stimulating **green economic growth**. For UPSC aspirants, this scheme highlights the synergy of **policy, technology, and investment** in India's clean energy roadmap.

## 21. Surge in E-Way Bill Generation – Indicator of Economic Momentum

**Key Highlights:****1. E-Way Bill Generation Shows Strong Economic Activity:**

- In **May 2025**, businesses generated **122.7 million e-way bills**, a **19% year-on-year increase** and second only to March's record of 124.5 million.
- This reflects **robust intra- and inter-state movement of goods**, signifying **high logistics and production activity** in the second month of FY 2025–26.

**2. Definitions:**

- **E-Way Bill:** An electronic permit required under the GST regime for transporting goods worth over ₹50,000 across state or within a state (Section 68 of the CGST Act, 2017).
- It ensures **compliance, transparency**, and helps **prevent tax evasion** during goods movement.

**3. Multiple Drivers Behind the Surge:**

- Anticipation of policy changes in the **upcoming GST Council meeting** led businesses to **advance dispatches**.
- **Post-election resumption** of infrastructure and public sector projects likely boosted movement.
- **PLI scheme expansions**, seasonal pre-Kharif demand, and **enhanced anti-evasion drives** also contributed to the increase.

**4. Macroeconomic Indicators Support Growth Outlook:**

- The **HSBC India Manufacturing PMI** stood at **57.6 in May**, indicating **expansion**, although it slightly dipped from April's 58.2.
- PMI above 50 = economic expansion; the reading suggests **continued growth**, albeit with marginal deceleration.

**5. Mixed Signals from the Automobile Sector:**

- According to **FADA**, May saw a **5% annual growth in vehicle sales**, led by **rural-focused segments** like two-wheelers, tractors, and three-wheelers.
- **Urban segments** such as passenger vehicles and commercial vehicles showed contraction, pointing to **divergent recovery patterns**.

**Constitutional & Legal Provisions:**

- **Article 301** of the Constitution ensures **freedom of trade and commerce throughout India**—relevant to the smooth flow of goods supported by the e-way bill system.
- **Goods and Services Tax (GST)** framework: E-way bills are governed under the **Central Goods and Services Tax (CGST) Rules**, ensuring uniform compliance across states.
- **Digital Governance and Ease of Doing Business** initiatives under **Article 38** (State's responsibility to promote welfare) are fulfilled through such digital compliance measures.

**Additional Insights:**

- The rise in e-way bills is a **proxy indicator** of formal sector performance and helps in measuring **GST buoyancy**.
- It reflects **greater tax compliance**, possibly due to **enhanced administrative vigilance**, and also demonstrates the **resilience of India's supply chains** despite global trade tensions (e.g., US tariff issues).
- The **temporary suspension of 26% US tariffs on Indian goods** helped maintain export momentum.

**Conclusion:**

The significant rise in e-way bill generation in May 2025 signifies a **resilient and formalizing Indian economy**, buoyed by infrastructural momentum, seasonal demand, and effective GST compliance. It reflects **reviving rural demand**, sustained **manufacturing growth**, and the potential of **digital tax systems** to monitor and support real-time economic activity. For UPSC aspirants, this serves as a case study in **economic indicators**, **GST implementation**, and the role of **fiscal and administrative tools** in promoting transparency and efficiency.

## 22. Implementation of India-EFTA Trade and Economic Partnership Agreement (TEPA)

**1. Forward-Looking Plan for TEPA Implementation**

- Union Commerce and Industry Minister **Piyush Goyal** has laid out a roadmap for implementing the **Trade and Economic Partnership Agreement (TEPA)** between India and the **European Free Trade Association (EFTA)**.
- The plan focuses on **innovation**, **regulatory alignment**, and **skill development** as core pillars of cooperation.

**2. Strengthening Bilateral Economic Relations**

- Goyal's five-day visit to **Switzerland and Sweden** aimed at enhancing economic and trade ties.
- He addressed the **18th Swissmem Industry Day**, inviting Swiss industries, especially in **mechanical and precision engineering**, to deepen engagement with India.

**3. Strategic Meetings and Key Focus Areas**

- Held meetings with top Swiss leaders including **Federal Councillor Guy Parmelin** and **State Secretary Helene Budliger Artieda**.



- Discussions centered on:
  - **Regulatory cooperation** and alignment,
  - **Skill development and vocational training**,
  - **Faster investment decision mechanisms**,
  - **Innovation and technology transfer**.

#### **4. EFTA's Investment and Employment Commitments**

- As part of the TEPA, the **EFTA bloc (Iceland, Liechtenstein, Norway, Switzerland)** has committed to:
  - **\$100 billion investment** in India over 15 years,
  - Creation of **1 million direct jobs** in India,
  - Integration of **supply chains** and facilitation of **market access**.

#### **5. Legal and Institutional Provisions**

- The TEPA aligns with **Article 301 of the Indian Constitution**, ensuring freedom of trade and commerce within the territory of India.
- International agreements like TEPA fall under **Entry 14 of the Union List (Seventh Schedule)**, allowing Parliament to legislate on foreign trade.
- India's foreign trade policy is governed by the **Foreign Trade (Development and Regulation) Act, 1992**, which provides the legal framework for such trade deals.

#### **6. Significance in India's Trade Diplomacy**

- The deal reinforces India's strategy to **diversify trade partnerships** beyond traditional blocs like the EU and US.
- TEPA is expected to **boost manufacturing, innovation ecosystems, and upskilling**, particularly in sectors aligned with **Make in India** and **Skill India** missions.
- It also helps India integrate more deeply into **global value chains (GVCs)**.

#### **Conclusion**

The India-EFTA TEPA represents a landmark shift in India's global trade strategy, focused on **long-term investment, job creation, and technological collaboration**. With legal backing and strategic intent, the agreement complements India's developmental priorities and enhances its role as a reliable economic partner in the global arena. The emphasis on regulatory cooperation and skills is particularly crucial for sustaining inclusive and innovation-driven growth.

## **23. New Nutrient-Based Fertilizer Distribution Reform in India**

### **1. Shift from Fertilizer Subsidy to Nutrient-Based Allocation**

- The **Union Government** is planning to **cap the distribution of subsidized fertilizers** and shift toward a system based on **soil nutrient needs, crop type, and regional sowing patterns**.
- Fertilizer distribution will be regulated through **Point-of-Sale (PoS) units** located in **villages or panchayats**, aiming to **scientifically optimize fertilizer use**.



## 2. Rationale Behind the Reform

- The initiative targets:
  - **Reducing overuse of fertilizers**, especially **urea**,
  - **Restoring soil health** and improving **crop quality**,
  - Aligning farming with **global residue norms** to boost **agri-exports**,
  - **Controlling the rising fertilizer subsidy burden** on the government.



## 3. Rising Fiscal Pressure from Fertilizer Subsidies

- Government fertilizer subsidies have significantly burdened the fiscal exchequer:
  - ₹2.54 lakh crore in FY23 → ₹1.88 lakh crore in FY24 → ₹1.77 lakh crore in FY25.
  - Projected to further reduce to **₹1.68 lakh crore in FY26**.
- Current urea price: ₹242 per 45 kg bag vs actual cost of ₹2,650 (subsidy of ₹2,408 per bag).

## 4. Proposed Direct Benefit Transfer (DBT) to Farmers

- Experts and farmer representatives (e.g., **Bhartiya Kisan Sangh**) suggest:
  - **Routing subsidies directly to farmers' accounts** instead of fertilizer companies.
  - Allowing fertilizer companies to sell at **market-determined prices**, thereby encouraging **efficiency and competition**.

## 5. Challenges: Political Sensitivities and Farmer Reactions

- The reform may trigger **resistance from farmers**, as witnessed during:
  - The **farm laws protests (2020–21)**,
  - Opposition to **private sector involvement** in agriculture.
- **MSP-related concerns** and fears of subsidy cuts may escalate tensions if the policy is not communicated transparently.

## 6. Constitutional and Legal Framework

- **Article 48 (Directive Principles)**: Promotes **scientific agriculture** and preservation of soil health.
- **Essential Commodities Act, 1955**: Regulates fertilizers as essential commodities.
- Fertilizer subsidy policy operates under the **Fertilizer Control Order (FCO), 1985**, issued under the **Essential Commodities Act**.
- **Fiscal Responsibility and Budget Management (FRBM) Act** indirectly encourages pruning unsustainable subsidies.

## Conclusion

The proposed fertilizer reform marks a transformative shift from quantity-based to **quality- and need-based distribution**, aligning Indian agriculture with **sustainability goals** and **export competitiveness**. However, successful implementation requires **farmer sensitization**, **technological infrastructure**, and **transparent communication** to mitigate political and social backlash. The move has the potential to **enhance soil productivity**, **reduce fiscal burden**, and promote **climate-resilient agriculture** in the long run.





## 24. RBI to Use CRR as an Active Liquidity Management Tool

### 1. RBI's New Approach: CRR as a Dynamic Instrument

- The **Reserve Bank of India (RBI)** will now use the **Cash Reserve Ratio (CRR)** more actively to manage liquidity in the financial system, rather than limiting it to extreme situations.
- A recent **100 basis point reduction** in CRR (in four tranches) has brought it down to **3%**, infusing around **₹2.5 trillion (\$29.25 billion)** into the banking system.

### 2. Definition and Purpose of CRR

- **Cash Reserve Ratio (CRR):** The percentage of a commercial bank's total deposits that must be kept in cash reserve with the RBI.
- It is a **monetary policy tool** used to regulate **liquidity**, ensure **monetary stability**, and **aid policy transmission**.

### 3. Liquidity Management: Shift from OMOs to CRR

- The move reflects a shift away from **Open Market Operations (OMOs)** and **Forex swaps** (which injected ~\$100 billion between Dec–May) due to their **market distortive impact**.
- CRR is now seen as a **more precise and less disruptive** liquidity tool compared to frequent bond purchases.

### 4. Impact on Policy Transmission and Interest Rates

- A large liquidity surplus had caused the **overnight call rate** to fall **below the repo rate (currently 5.5%)**, disrupting the monetary policy stance.
- By adjusting CRR, the RBI aims to **align the call money rate with the repo rate**, improving the effectiveness of monetary policy transmission.

### 5. Constitutional and Legal Framework

- The **Reserve Bank of India Act, 1934**, empowers the RBI to regulate CRR under **Section 42(1)**.
- The **Monetary Policy Framework Agreement (2015)** between RBI and Government of India reinforces liquidity and inflation targeting as key mandates of the central bank.

### 6. Future Measures and Market Expectations

- The RBI may conduct **Variable Rate Reverse Repo (VRRR) Auctions** to absorb excess liquidity periodically.
- CRR may also be increased in response to **sustained foreign capital inflows** to prevent inflationary pressures.

### Conclusion

The RBI's decision to make **CRR a frontline tool** in its liquidity management strategy marks a shift towards **more flexible and responsive monetary policy operations**. This approach aims to improve **market stability**, **reduce interest rate volatility**, and ensure better **transmission of the central bank's policy stance**. For UPSC aspirants, this reflects a nuanced evolution in India's **monetary toolkit**, crucial for understanding central banking and macroeconomic policy.



## 25. Insurance Laws (Amendment) Bill – Key Reforms and Implications

### 1. Key Provisions of the Insurance Laws (Amendment) Bill

- The **Insurance Laws (Amendment) Bill** is likely to be tabled during the **Monsoon Session of Parliament (July 2025)**.
- Major proposals include:
  - **100% Foreign Direct Investment (FDI)** in insurance.
  - Introduction of **composite insurance licences**, allowing a single entity to offer both life and non-life insurance products.
  - Revision of key laws: **Insurance Act, 1938, LIC Act, 1956, and IRDA Act, 1999**.
  - Increased capital requirement for composite licences to **₹150 crore**, with existing capital norms for insurers and reinsurers (₹100 crore and ₹200 crore) retained.

### 2. What is a Composite Insurance Licence?

- A **composite licence** permits insurers to underwrite both life and non-life insurance through one entity, which is currently not allowed in India.
- Already adopted in countries like **Singapore, Malaysia, and the UK**, this model can increase operational efficiency and service coverage in India.

### 3. Key Structural and Regulatory Reforms

- The bill aims to:
  - Enhance **autonomy of LIC and IRDAI** in appointments, staffing, and infrastructure decisions.
  - Simplify the operational framework for **foreign reinsurers**, including reducing **net-owned fund** requirements from ₹5,000 crore to ₹1,000 crore.
  - Reduce the need for **future legislative amendments** through comprehensive reform.

### 4. Constitutional and Legal Framework

- The amendment affects three statutes:
  - **Insurance Act, 1938** (governs general insurance operations),
  - **LIC Act, 1956** (governs functioning of Life Insurance Corporation),
  - **IRDA Act, 1999** (provides for establishment of the Insurance Regulatory and Development Authority).
- These amendments align with **Article 19(1)(g)** (freedom to practice any profession or business), subject to **reasonable restrictions** in public interest.

### 5. Implications for Economy and Insurance Sector

- Potential benefits:
  - Increased **foreign investment** and **capital inflow** in the sector.
  - Expanded insurance access in **rural and semi-urban areas**.
  - Enhanced **risk management, technology adoption, and consumer base**.



- Industry concerns:
  - Uncertainty about how many foreign players will opt for 100% FDI.
  - Doubts about effectiveness of composite licensing in the Indian market context.
  - Capital threshold relaxations may have limited impact on serious players.

#### 6. Associated Legislative Developments (for context)

- **Income Tax Bill, 2025:** A draft to simplify direct tax laws is expected to be introduced in the **Winter Session**.
- **IBC and Companies Act Amendments:** Deferred for now due to ongoing consultations and legislative priorities.

#### Conclusion

The **Insurance Laws (Amendment) Bill** signifies a major step in liberalizing and modernizing India's insurance sector. With provisions aimed at enhancing **FDI**, introducing **composite licensing**, and increasing **regulatory flexibility**, the bill aligns with India's goal of boosting financial inclusion and global competitiveness. However, its success will depend on **implementation**, **market response**, and **regulatory preparedness**—key concerns for UPSC aspirants analyzing financial sector reforms.

## 26. India Marks a Relative Drop in Gender Parity – Global Gender Gap Report 2025

#### Key Points for UPSC:

- **India's Global Ranking Falls Further:**

India ranked **131 out of 148 countries** in the **Global Gender Gap Report 2025** by the **World Economic Forum (WEF)**, slipping two ranks from 129 in 2024. India's **gender parity score is 64.1%**, lower than the **global average of 68.8%** and **South Asia's regional average of 64.6%**.

- **Dimension-wise Performance:**

The **Global Gender Gap Index** measures gender parity in four core areas:

1. **Economic Participation and Opportunity**
2. **Educational Attainment**
3. **Health and Survival**
4. **Political Empowerment**

- India showed improvement in *educational attainment* (97.1%) and *health & survival* due to better sex ratio at birth and life expectancy parity.

- However, **political empowerment deteriorated**, with a fall in women's representation in Parliament (from 14.7% to 13.8%) and in ministerial roles (from 6.5% to 5.6%).

- **South Asia's Status & Bangladesh's Success:**

- South Asia ranked **7th** among global regions in gender parity.





- **Bangladesh** emerged as a standout, ranking **24th globally**, driven by notable gains in *political empowerment* and *economic participation*.
- **Pakistan ranked lowest globally** (148), while **Nepal (125)**, **Sri Lanka (130)**, and **Bhutan (119)** all ranked above India.
- **Leadership & Wage Gaps Persist Globally:**
  - Women comprise **41.2% of the global workforce**, but only **28.8% hold top leadership positions**, indicating a persistent **glass ceiling**.
  - South Asia recorded a **drop of 7.8 percentage points in estimated earned income parity**, showing growing economic inequality despite improvement in representation in technical/senior roles.
- **India's Labour Force Participation Static:**
  - Female **labour force participation rate** remained **stagnant at 45.9%**, indicating a structural barrier to economic parity.
  - This stagnation, coupled with high dropout rates post-schooling and lack of safe workplaces, hampers India's gender equity efforts.

**Key Definitions:**

- **Gender Parity:**

The relative access to resources and opportunities regardless of gender, measured across health, education, economy, and politics.
- **Glass Ceiling:**

An invisible barrier that prevents women from rising to upper rungs of the corporate or political hierarchy.
- **Gender Gap Index:**

An annual index published by the **World Economic Forum** to track gender-based disparities globally across four key dimensions.

**Constitutional & Legal Provisions:**

- **Article 14** – Equality before law and equal protection of laws.
- **Article 15(3)** – Allows the State to make special provisions for women and children.
- **Article 16** – Equal opportunity in matters of public employment.
- **73rd and 74th Amendments** – Provide **33% reservation for women** in Panchayati Raj Institutions and Urban Local Bodies.
- **The Equal Remuneration Act, 1976** – Mandates **equal pay for equal work** for men and women.
- **Maternity Benefit (Amendment) Act, 2017** – Extends paid maternity leave to 26 weeks.

**Conclusion:**

Despite some **incremental gains** in education and health parity, India's drop in the **Global Gender Gap Ranking** highlights the **urgent need for focused policy reforms** in **economic inclusion**, **political representation**, and **workplace safety**. While progress in education offers hope for long-term change, **structural challenges**, especially in the labour market and political leadership, must be addressed to move towards a **more inclusive and gender-equal society**.



## 27. Startup 'Pehle Jaisa' Raises Pre-Series A Funding to Expand Organic Fertilizer Production

### 1. About the Startup and Funding

- **Pehle Jaisa**, a rural-based agri-tech startup, has **raised \$300,000 in pre-Series A funding** from **Pantnagar Capital** and **Climate Angels**.
- The company focuses on **waste management solutions**, particularly the **production of organic fertilizers** tailored to **crop types** and **regional soil conditions**.

### 2. Sustainable Agriculture and Rural Development Focus

- The company converts **animal waste into organic fertilizers**, contributing to **circular economy principles** and **sustainable agriculture**.
- This innovation supports **soil health**, reduces dependency on **chemical fertilizers**, and addresses **organic waste disposal** in rural India.

### 3. Relevance to Government Policies and Climate Goals

- The initiative aligns with:
  - **National Mission on Sustainable Agriculture (NMSA)**.
  - **Swachh Bharat Abhiyan** (clean village ecosystems).
  - **PM-PRANAM** (Promotion of Alternate Nutrients for Agriculture Management Yojana).
- Also supports India's **climate goals** under the **Nationally Determined Contributions (NDCs)** and **SDG-13 (Climate Action)**.



### 4. Startup Ecosystem and Rural Innovation

- The funding reflects growing interest in **climate tech**, **agri-innovation**, and **rural entrepreneurship**.
- Pehle Jaisa's success demonstrates how **grassroots innovations** in rural areas can attract **climate-focused investors**, encouraging **scalable impact ventures**.

### 5. Constitutional and Policy Context

- Related constitutional provisions include:
  - **Article 48** (Directive Principles): Promotes **organised agriculture and animal husbandry** using scientific methods.
  - **Article 21**: Right to a clean and healthy environment (expanded through judicial interpretation).
- Supported by national policies on **organic farming**, **bio-fertilizers**, and **rural employment generation**.

### Key Definitions

- **Organic Fertilizer**: Natural substances made from plant or animal waste that enrich soil fertility without harming ecological balance.



- **Pre-Series A Funding:** Early-stage investment made before a formal Series A round, typically to support scaling operations or product development.

### Conclusion

The funding of **Pehle Jaisa** marks a **significant step in promoting rural, climate-resilient, and sustainable agriculture**. It showcases how **innovation and green entrepreneurship** can address both **environmental challenges** and **rural development goals**. This case is relevant for **GS Paper III (Agriculture, Environment, Startup Ecosystem)** and for **Essay and Prelims** on climate action, sustainability, and innovation-led rural transformation.

## 28. Catch-22 for Banks Amid Falling Interest Rates

### 1. Background: Decline in Interest Rates and Banking Pressure

- **Savings and term deposit rates** have dropped to **25-year lows**, with **savings rates around 2.5–2.75%**, the lowest since FY2001.
- Triggered by **repo rate cuts** (100 basis points recently), banks are **forced to reduce deposit rates** to maintain **net interest margins**.
- **Key Term – Repo Rate:** The rate at which the RBI lends to commercial banks. Lower repo → cheaper borrowing → lower deposit and lending rates.

### 2. Monetary Policy Transmission and Deposit Rate Challenges

- Around **60% of floating rate loans** are benchmarked to the repo rate; hence, **loan rates fall instantly** with RBI cuts.
- But **term deposit rate cuts** take effect **only upon renewal**, so **banks slash savings deposit rates**, which are more immediately adjustable.
- This affects **financial savings behaviour** and discourages retail depositors seeking real returns.

### 3. Structural Liquidity Risks and CASA Ratio Decline

- Former RBI Governor Shaktikanta Das had warned (2024) that aggressive deposit rate cuts could lead to **structural liquidity issues**.
- CASA (Current and Savings Account) share in total deposits is shrinking:
  - SBI's CASA fell by 110 bps, HDFC by 340 bps, and ICICI by 40 bps (Q4 FY24 to Q4 FY25).
- **Key Term – CASA Ratio:** Indicates the share of low-cost funds; higher CASA means cheaper capital for banks.

### 4. Credit-Deposit Imbalance and Regulatory Risks

- **Credit growth** has moderated (10.2% in April 2025 vs 19% in April 2024), giving banks **temporary relief**.
- But when **credit demand revives**, banks may face **liquidity crunch** if they fail to mobilize enough deposits.
- **Key Term – Credit-Deposit (CD) Ratio:** Reflects the proportion of deposits used for lending. High CD ratio without deposit growth may invite **regulatory concern**.

### 5. Constitutional & Legal Linkages

- **Article 39(b)** of the Constitution (Directive Principles) promotes **equitable distribution of resources**, which includes **access to fair financial services**.



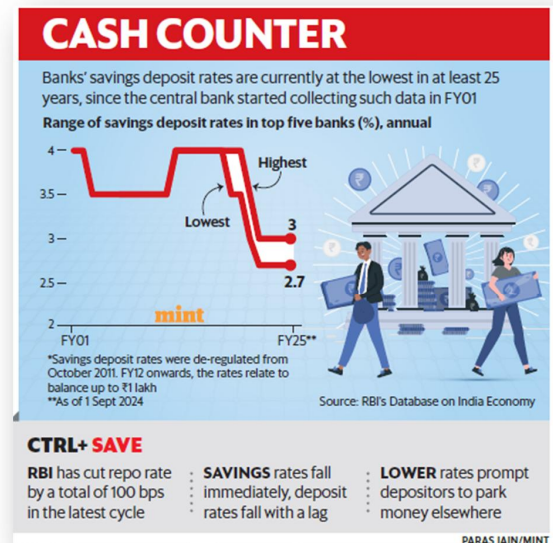
- **Banking Regulation Act, 1949:** Empowers RBI to supervise banks, including credit-deposit ratios and interest rate transmission.
- **Financial Inclusion Mandate:** RBI's priority sector lending and Jan Dhan Yojana are impacted if low savings interest demotivates small savers.

## 6. Strategic Implications & Policy Dilemma

- Banks are caught in a **policy Catch-22**:
  - Cut deposit rates → risk liquidity issues and depositor flight.
  - Keep rates high → erode margins amid falling lending rates.
- Need for **digital competitiveness, better service offerings, and financial product diversification** to retain depositors in a low-return era.

### Conclusion:

India's banking sector is facing a structural challenge: maintaining liquidity and depositor trust amid **persistently low interest rates**. The RBI must balance its **monetary easing objectives** with **systemic financial stability**.



## 29. RBI Reduces Priority Sector Lending (PSL) Mandate for Small Finance Banks (SFBs)

### 1. Change in Priority Sector Lending Norms for SFBs

- The **Reserve Bank of India (RBI)** has **reduced the mandatory lending to priority sectors** by **Small Finance Banks (SFBs)** from **75% to 60%** of their Adjusted Net Bank Credit (ANBC).
- This decision was taken after a comprehensive review of the PSL framework applicable to SFBs.

### 2. What is Priority Sector Lending (PSL)?

- **Priority Sector Lending** refers to **mandatory credit allocation** by banks to sectors crucial for **inclusive development**, including:
  - Agriculture and allied activities
  - Micro, Small and Medium Enterprises (MSMEs)
  - Education
  - Housing
  - Renewable energy
  - Export credit
- For regular commercial banks, the PSL target is **40% of ANBC**, but for SFBs, it was earlier **75%**, now reduced to **60%**.



### 3. What are Small Finance Banks (SFBs)?

- **SFBs** are a category of niche banks established to further **financial inclusion** by providing credit and deposit services to **underserved and unbanked segments**.
- Regulated under the **Banking Regulation Act, 1949**, they are required to maintain high exposure to priority sectors.
- Examples: Equitas SFB, AU Small Finance Bank, Ujjivan SFB.

### 4. Rationale Behind the Policy Shift

- The relaxation may have been driven by:
  - **Operational flexibility** to enhance profitability and risk management.
  - SFBs facing constraints in maintaining a high PSL exposure.
  - Ensuring **sustainable credit growth** without undermining financial health.
- However, it raises concerns about **reduced credit access** for key sectors such as agriculture and MSMEs.

### 5. Legal and Policy Framework Related to PSL

- *Statutory Basis:*
  - Governed under **Section 21 and 35A of the Banking Regulation Act, 1949**.
  - RBI issues PSL guidelines through **Master Directions**.
- *Policy Support:*
  - PSL is a vital component of **financial inclusion**, a core goal of the **National Strategy for Financial Inclusion (NSFI) 2019–24**.
  - Supports the objectives of **Atmanirbhar Bharat** and **Doubling Farmers' Income**.



### Conclusion: Balancing Inclusion and Efficiency

While the RBI's decision to reduce the PSL mandate for SFBs enhances **operational flexibility and financial health**, it must be balanced with the imperative of **inclusive credit delivery** to underserved sectors. Ensuring robust **monitoring, targeted refinancing schemes**, and **alternative inclusion strategies** will be critical to prevent the dilution of developmental priorities.

This change reflects RBI's evolving regulatory stance, aiming to optimize **prudential norms** without compromising on the **social banking mandate**.

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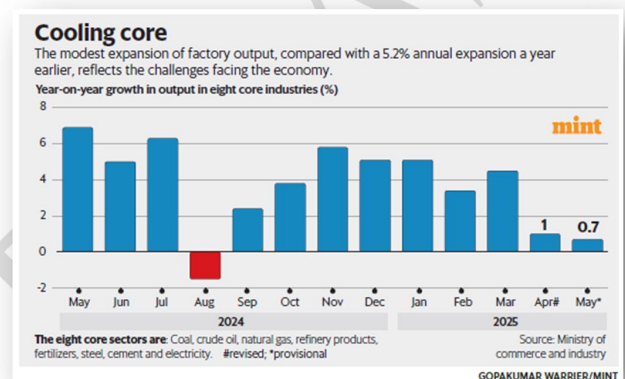
## 30. Core Sector Growth at 9-Month Low

### 1. What are Core Sectors and Their Role?

- The **Eight Core Sectors** include: **Coal, Crude Oil, Natural Gas, Refinery Products, Fertilisers, Steel, Cement, and Electricity**.
- These sectors contribute **40.27%** to the **Index of Industrial Production (IIP)** — a key indicator of the overall industrial activity.
- Their performance has a **multiplier effect** on the economy, influencing employment, investment, and exports.

### 2. Current Growth Figures (May 2025)

- **Core sector output** grew just **0.7%** in May 2025 – the **lowest in nine months**, down from **6.9%** in May 2024.
- Only **three sectors (refinery products, steel, and cement)** recorded **positive sequential growth**.
- Key contractions:
  - **Fertilisers:** -5.9%
  - **Electricity:** -5.8%
  - **Natural Gas:** -3.6%
  - **Crude Oil:** -1.8%



### 3. Industrial Production and PMI Trends

- **Index of Industrial Production (IIP)** grew by only **2.7%** in **April 2025**, marking the **slowest pace in 8 months**.
- **HSBC India Manufacturing PMI** (May 2025): **57.6**, down from 58.2 in April — though still in the expansion zone (>50).
- Slower new orders and output growth indicate a **cooling in manufacturing demand**.

### 4. Key Sectoral Insights and Drivers

- **Steel sector** grew by **6.7%**, driven by increased demand from **infrastructure, construction, and automobile sectors**.
- **Cement** output rose by **9.2%**, indicating some revival in construction and infrastructure spending.
- However, **energy-intensive sectors** like electricity and fertilizers showed **weakness**, raising concerns over **input supply constraints and high costs**.

### 5. Implications for the Indian Economy

- The core sector's weak performance may **drag down overall industrial growth**, potentially affecting **GDP in Q1 2025-26**.
- **Sluggish infrastructure activity**, supply chain issues, and lower rural demand may be contributing factors.



- A **revival in public capital expenditure** and easing of input costs could be needed to boost output in coming months.

#### **Legal & Policy Context (Constitutional & Statutory)**

- **Entry 52, Union List:** Regulates industries declared as of national importance (e.g., coal, steel, oil).
- **Index of Industrial Production (IIP)** is published monthly by the **National Statistical Office (NSO)** under **Ministry of Statistics and Programme Implementation (MoSPI)**.
- Government policies like **PM Gati Shakti**, **PLI Scheme**, and **National Infrastructure Pipeline (NIP)** aim to boost these core sectors in the long run.

#### **Conclusion:**

Understanding core sector performance is critical for evaluating the **health of the industrial economy**. The May 2025 data reflects **sectoral imbalances**, structural constraints, and **slowdown in foundational industries**. For India to maintain growth momentum, **reviving infrastructure-linked sectors**, addressing supply constraints, and promoting demand-driven growth through policy reforms will be essential. This case highlights the **interdependence between core sectors and macroeconomic stability**, an important theme in UPSC GS-3 and Essay papers.

## **31. India Imposes Anti-Dumping Duties on Chinese Imports**

### **1. What Has India Done?**

- India has **imposed five-year definitive anti-dumping duties** on:
  - **Chinese aluminium foil**, and
  - **Acetonitrile from China, Russia, and Taiwan**.
- These duties follow investigations showing **underpriced imports** were **harming domestic producers**.
- The new measure **replaces earlier provisional tariffs** imposed in March 2025.

### **2. Why Was the Duty Imposed?**

- The **Directorate General of Trade Remedies (DGTR)** found that aluminium foil from China was being sold **below normal value**, leading to:
  - **Erosion of profit margins** of Indian firms like **Hindalco** and **Jindal Aluminium**.
  - **Reduced capacity utilization** in domestic manufacturing units.
- The duty aims to **protect strategic sectors** such as **packaging, defence, and energy**.



### **3. Details of the Anti-Dumping Duty**

- **Definitive duty** on aluminium foil ranges between **\$479 to \$721 per tonne**, effective **March 17, 2025**.
- The earlier **provisional duty** (6-month) was **\$619 to \$873 per tonne**.
- A **general duty of \$721/tonne** applies to producers **not specifically named** in the notification.
- The long-term imposition shows India's **intent for structural trade protection**.



#### 4. What Is Anti-Dumping Duty? (*Definition*)

- **Anti-Dumping Duty:** A protectionist tariff imposed by a domestic government on **foreign imports** priced below **fair market value**.
- Permitted under **WTO rules**, anti-dumping measures aim to **protect domestic industry from unfair trade practices**.
- The **Customs Tariff Act, 1975 (Section 9A)** provides for anti-dumping duty in India, based on **DGTR recommendations**.

#### 5. Legal & Institutional Framework

- Imposition done under **Customs Tariff (Identification, Assessment and Collection of Anti-Dumping Duty on Dumped Articles and for Determination of Injury) Rules, 1995**.
- DGTR functions under the **Ministry of Commerce and Industry**.
- India must **notify WTO's Committee on Anti-Dumping Practices** for such measures, ensuring **transparency and procedural fairness**.

#### Conclusion: Strategic Economic Significance

The imposition of long-term anti-dumping duties underscores India's growing assertiveness in **protecting domestic manufacturing capacity**, especially in **strategic sectors**. It aligns with the **Atmanirbhar Bharat** vision by reducing dependency on **cheap imports**, especially from China. For UPSC aspirants, this is a significant case study highlighting India's use of **trade remedy instruments** to balance **free trade obligations** with **economic self-reliance**.

## 32. Expert Panel Set Up for Income Distribution Survey

### 1. Key Development: Expert Group Constituted

- The **Ministry of Statistics and Programme Implementation (MoSPI)** has constituted a **Technical Expert Group** headed by **Surjit S. Bhalla**.
- The panel will advise the **National Statistical Office (NSO)** on the **design and execution of an all-India income distribution survey**, tentatively planned for **2026**.
- The move signals the government's intention to **generate granular and reliable data** on **household incomes** and **inequality levels**.

### 2. Purpose of the Income Distribution Survey

- The survey aims to:
  - Measure **income levels across households and regions**.
  - Assess **income inequality and redistribution trends**.
  - Provide a **comprehensive database** for evidence-based policy-making.
- Current economic data (like consumption expenditure surveys) **does not capture income distribution comprehensively**, hence the need for this new initiative.





### 3. Significance for Policy and Governance

- Reliable income distribution data is critical for:
  - Designing **targeted welfare programs**.
  - Assessing the **impact of fiscal transfers and subsidies**.
  - Understanding disparities across **caste, gender, region, and occupation**.
- It supports better implementation of **inclusive growth strategies** and helps in **evaluating poverty alleviation efforts**.

### 4. Constitutional & Legal Framework

- **Article 38(2)** of the Indian Constitution directs the State to **minimize inequalities** in income and opportunities.
- **Article 39(b & c)** under **Directive Principles of State Policy (DPSP)** mandates equitable distribution of material resources and avoidance of wealth concentration.
- The **Collection of Statistics Act, 2008**, empowers the central government to conduct such surveys to inform policy.

### 5. Institutional Bodies Involved

- **MoSPI**: The nodal ministry responsible for statistical coordination and surveys.
- **NSO (National Statistical Office)**: Executes large-scale statistical operations like the Economic Census, PLFS, and now, this income survey.
- **Surjit Bhalla**: An eminent economist, also associated with global economic advisory roles, lending credibility to the process.

### Conclusion

The formation of an expert panel for India's first comprehensive **Income Distribution Survey** is a significant step toward **data-driven governance** and **inclusive economic planning**. It aligns with constitutional mandates for social and economic equity and fills a critical gap in the country's economic statistics.

## 33. India's First Maritime NBFC – Sagarmala Finance Corporation Limited (SMFCL)

### SMFCL: A New Era in Maritime Financing

- **Inauguration of India's First Maritime NBFC:**

On **26th June 2025**, Union Minister **Sarbananda Sonowal** inaugurated the **Sagarmala Finance Corporation Limited (SMFCL)**, India's first **sector-specific Non-Banking Financial Company (NBFC)** dedicated to the maritime sector. Registered with the **Reserve Bank of India (RBI)** on **19th June 2025**, SMFCL is a **Mini Ratna, Category-I CPSE** and a successor to **Sagarmala Development Company Limited**.

- **Objective – Bridging Financial Gaps in Maritime Sector:**

SMFCL aims to **provide tailored financial solutions** for stakeholders in India's maritime ecosystem. These include **port authorities, shipping companies, MSMEs, startups, and maritime training institutes**. It will offer **short-, medium-, and long-term financial products**, addressing a major structural gap in port and maritime infrastructure financing.





## Role in Maritime Amrit Kaal Vision 2047

- **Alignment with Amrit Kaal Vision & Viksit Bharat 2047:**

SMFCL supports the **Maritime Amrit Kaal Vision 2047**, which aspires to position India as a **global maritime leader**. It complements national goals of **logistics efficiency**, **blue economy development**, and **coastal infrastructure modernization**, key pillars under **PM Gati Shakti** and **Sagarmala Programme**.

- **Support for Strategic and Emerging Sectors:** SMFCL will also finance **shipbuilding**, **cruise tourism**, **renewable energy**, **maritime education**, and **green port development**—sectors crucial to **climate-resilient maritime infrastructure** and **economic diversification** under the blue economy framework.



## Key Concepts & Definitions

- **NBFC (Non-Banking Financial Company):**

A financial institution registered with the **RBI** that provides banking-like services such as loans and investments but **does not hold a banking license** or accept demand deposits.

- **Mini Ratna CPSE (Category-I):**

A classification of Central Public Sector Enterprises (CPSEs) with financial autonomy based on consistent profit-making track record, allowing independent investment decisions up to a certain threshold.

- **Blue Economy:**

The **sustainable use of ocean resources** for economic growth, improved livelihoods, and ocean ecosystem health. It includes activities such as **fisheries**, **marine transport**, **renewable ocean energy**, and **tourism**.

## Constitutional and Legal Provisions

- **Article 297 – Union's Control over Maritime Resources:**

Empowers the Union Government over lands, minerals, and resources in territorial waters and continental shelf—enabling it to lead initiatives like Sagarmala and SMFCL.

- **Entry 30, List I (Union List) – Shipping and Navigation:**

Places **maritime infrastructure** under the exclusive legislative and administrative jurisdiction of the Union Government, justifying MoPSW's role.

- **RBI Act, 1934 & Companies Act, 2013:**

Governs **registration and regulation of NBFCs**, ensuring **financial prudence**, **oversight**, and **legal compliance** of entities like SMFCL.

## Strategic Significance

- **Boost to Coastal Employment and Innovation:**

By financing startups and MSMEs, SMFCL will promote **coastal entrepreneurship**, **employment generation**, and **maritime R&D**, contributing to **inclusive regional growth**.



- **Fills a Critical Institutional Void:**

- India previously lacked a **dedicated financial institution** for maritime project lending. SMFCL bridges this gap, ensuring **faster project execution and investment flow** in this capital-intensive sector.

- **Supports Sustainable and Green Infrastructure:**

With a focus on **eco-friendly port development**, **clean energy integration**, and **maritime tourism**, SMFCL supports India's **Net Zero Emission** targets and **climate commitments**.

### Conclusion

The launch of **Sagarmala Finance Corporation Limited** marks a **pivotal step in maritime sector reform and financial innovation**. It not only fills a long-pending gap in **sector-specific financing**, but also reinforces India's ambition to emerge as a **global maritime power** by 2047.

## 34. India's Current Account Surplus in Q4 FY25: Trends, Drivers, and Outlook

### Key Highlights from the RBI Data:

- **Q4 FY25 Current Account Surplus:**

India recorded a **current account surplus (CAS) of 1.3% of GDP** in the **January–March 2025** quarter, amounting to **\$13.5 billion**, a significant improvement from the **deficit of 1.1% of GDP** (approx. \$11.3 billion) in Q3. This was also much higher than the **\$4.6 billion surplus** in Q4 of the previous year.

- **Major Drivers of Surplus:**

The surplus was driven by a **surge in net services receipts**, which rose to **\$53.3 billion** (from \$42.7 billion last year), especially in **business and computer services**. **Personal transfers (remittances)** also increased to **\$33.9 billion**, defying expectations of a decline due to falling oil prices.

- **Dip in Primary Income Outflows:**

A **lower-than-expected outflow of primary income** (like interest, dividends, and profits repatriated by foreign investors) further improved the current account position. As a result, the **overall current account deficit for FY25** narrowed to **0.6% of GDP (\$23.3 billion)** from **0.7% in FY24 (\$26 billion)**.

- **Structural Strength in Invisibles:**

The **structural improvement in services exports** and a **seasonal narrowing of the goods trade deficit** contributed to the Q4 surplus, despite muted foreign direct investment inflows.

### Key Economic Definitions:

- **Current Account:**

A part of the Balance of Payments (BoP), it records transactions related to **trade in goods and services, income from abroad (interest, dividends), and current transfers (like remittances)**. A **surplus** indicates **more foreign exchange inflows than outflows**.

- **Invisible Receipts:**

Income from **services, remittances, and investment income** that do not involve tangible goods but contribute to the current account.





- **Primary Income:**

Refers to **payments made to and received from non-residents** in the form of compensation of employees and investment income.

**Legal and Institutional Framework:**

- **Foreign Exchange Management Act (FEMA), 1999:**

Governs India's external transactions and capital flows, including current and capital account transactions, under the RBI's regulation.

- **Article 266 of the Indian Constitution:**

Deals with Consolidated Fund of India, which includes receipts from external transactions that form part of public finance.

- **RBI's Role:**

The Reserve Bank of India manages the **Balance of Payments, foreign exchange reserves**, and ensures **external sector stability**.

**Forecast and Economic Implications:**

- **Likely Deficit in Q1 FY26:**

Economists project a **return to current account deficit** in the April–June 2025 quarter, due to a **wider merchandise trade deficit** and **seasonal moderation in services exports**. ICRA expects it at around **1.3% of GDP**.

- **External Sector Stability:**

The surplus strengthens **rupee stability**, reduces reliance on foreign debt, and enhances investor confidence. However, a return to deficit highlights **volatility risks** and continued dependence on **remittances and services exports**.

**Conclusion:**

India's **Q4 FY25 current account surplus** marks a positive development for the country's **external macroeconomic stability**, driven by robust **services exports** and **remittance flows**. However, this surplus is likely **temporary**, and the country may revert to a **current account deficit** as structural challenges in merchandise trade persist. Policymakers must focus on **enhancing export competitiveness, diversifying services**, and **reducing oil import dependence** to ensure sustainable **current account management** and **currency stability** in the medium to long term.

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# GEOGRAPHY & ENVIRONMENT

## 1. Ban on Diesel and Petrol Delivery Fleets in NCR from 2026

### 1. Policy Shift Toward Clean Mobility in NCR

- From **January 1, 2026**, no new diesel or petrol vehicles can be added to **commercial fleets** of:
  - E-commerce companies
  - Delivery service providers
  - Vehicle aggregators in **Delhi-NCR**.
- Applies across **2-wheelers, 3-wheelers, and 4-wheelers** used for commercial purposes.



### 2. Role of CAQM and Covered Areas

- The directive was issued by the **Commission for Air Quality Management (CAQM)**.
- While applicable to **Delhi-NCR**, CAQM has urged **Haryana, Uttar Pradesh, and Rajasthan** to expand the mandate to key NCR cities like:
  - Gurugram, Faridabad, Sonipat, Noida, Greater Noida, and Ghaziabad.**

### 3. Approved Alternatives: EVs and CNG

- Only **Electric Vehicles (EVs)** and **Compressed Natural Gas (CNG)** vehicles will be allowed for **new fleet induction** from 2026.
- Priority given to **Battery Electric Vehicles (BEVs)**, being **zero-emission** options.

### 4. Environmental Justification

- The **transport sector** is a **major contributor to air pollution** in NCR, especially **worsening during winter** due to stagnant air conditions.
- The transition is described as **“imperative”** by CAQM for cleaner air and sustainable urban mobility.

### 5. Legal and Policy Framework

- Though **CAQM is not a constitutional body**, it was constituted under **The Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021**.
- It is empowered to **issue directions** that have overriding effect over any other law or authority, including **CPCB and SPCBs**.
- The directive aligns with India’s commitments under:
  - National Electric Mobility Mission (NEMM)**
  - FAME-II Scheme (Faster Adoption and Manufacturing of Hybrid and EVs)**
  - Paris Climate Agreement Goals**

### 6. Definitions of Key Terms

- Electric Vehicle (EV)**: A vehicle powered entirely or partially by electricity stored in batteries, with no tailpipe emissions in Battery EVs.





- **CNG Vehicle:** A vehicle that uses compressed natural gas as a fuel, which emits less particulate matter and nitrogen oxides than diesel/petrol.
- **CAQM:** A statutory commission set up for coordinated pollution control in Delhi-NCR.

### Conclusion (UPSC Perspective)

- The 2026 ban on diesel/petrol fleet additions in NCR marks a **significant step in India's transition to green transport**, particularly in **pollution-prone urban regions**.
- This topic is highly relevant for **GS Paper III (Environment and Ecology)** and **GS Paper II (Governance and Statutory Bodies)**.
- UPSC aspirants should also track its **economic, technological, and federal implications**, especially with regard to **urban mobility, cooperative federalism, and sustainable development**.

## 2. Exposomics for Better Environmental Health

### 1. What is Exposomics? – A Definition and Scientific Paradigm Shift

- **Exposome:** Refers to the **totality of environmental exposures** (chemical, physical, biological, psychosocial) experienced by an individual throughout their lifetime and their impact on health.
- **Exposomics:** The science that studies these exposures and their interaction with **genetics, physiology, and behavior** to understand disease patterns and design preventive strategies.
- Acts as a **complement to genomics**, recognizing that **genes alone do not fully explain most common diseases**.

### 2. Why India Needs Exposomics – Environmental Disease Burden

- India contributes to **25% of the global environmental disease burden**, highlighting the **urgent need for integrated environmental health management**.
- According to the **Global Burden of Disease (GBD) Study (2021)**:
  - Environmental & occupational hazards account for **18.9% of global deaths**.
  - In India, nearly **3 million deaths annually** are due to these risk factors.
  - Major contributors: **Air pollution (PM2.5), solid fuel use, lead exposure, noise pollution**, etc.



### 3. Limitations of Current Health Risk Assessments

- Existing models focus on **limited, isolated risk factors** (~11), ignoring **complex environmental mixtures** like microplastics, chemicals, and psychosocial stressors.
- Risk estimation ignores **interactions between environmental, behavioral (diet, smoking), metabolic (BP, glucose), genetic, and socio-economic factors**.
- **Climate change** magnifies risk through **compound events**: e.g., heatwaves + poor air + vector-borne diseases → synergistic health impacts.



#### 4. Technological Components of Exposomics

- **Wearable sensors** for real-time exposure tracking.
- **Organs-on-chip**: lab models simulating real human tissues/organs.
- **Untargeted chemical analysis** from biomonitoring samples (e.g., blood, urine).
- Use of **AI, Big Data** to identify Exposure-Wide Associations (EWAS), just like Genome-Wide Associations (GWAS).
- Requires **data infrastructure** – standardized, interoperable, and shareable databases.

#### 5. Relevance to Policy, Constitution & Public Health Strategy

- Related to **Article 21 (Right to Life)** – includes the right to a clean and healthy environment.
- **Directive Principles (Article 47)** – duty of the State to improve public health.
- **Environment (Protection) Act, 1986** and **Air Act, 1981** provide statutory backing for air quality improvement.
- Aligns with **UN SDG Goal 3 (Good Health)**, Goal 6 (Clean Water), and Goal 13 (Climate Action).
- Can improve outcomes in **National Health Mission, Ayushman Bharat, and Aspirational Districts Programme** by enabling **precision public health**.

#### 6. Way Forward for India – Mainstreaming Exposomics

- India must **invest in exposomic research, data systems, and interdisciplinary capacity-building**.
- Public health surveillance should integrate **environmental, behavioral, genetic, and social factors** to predict and prevent disease early.
- Exposomics can shift India's healthcare focus from **treatment to prevention**, helping manage rising **non-communicable diseases (NCDs)** and mental health disorders.

#### Conclusion

Exposomics represents the **next frontier in environmental and public health**. For a country like India—facing a rising environmental health burden, climate vulnerability, and NCD crisis—it offers a **scientifically advanced, cost-effective, and preventive** approach. Integrating exposomic science with policy, technology, and community-level interventions could transform India's public health landscape and uphold the **constitutional promise of health and dignity for all**.

### 3. Aiming for an Era of 'Biohappiness' in India

#### 1. Understanding Biohappiness and Agrobiodiversity

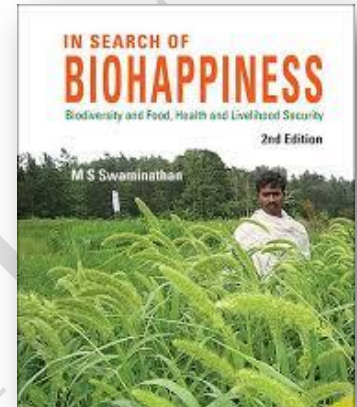
- **Biohappiness** refers to improved well-being through the sustainable use of biodiversity, especially agrobiodiversity.
- India is one of the world's 17 *megadiverse* countries and contains parts of four of the 36 global biodiversity hotspots.
- Despite comprising only 2% of global land area, India holds 8% of global biodiversity, including traditional crops and wild foods used by tribal communities.
- **Agrobiodiversity** includes all species used directly or indirectly for food and agriculture—crops, livestock, forestry, and fisheries.

## 2. Neglected and Underutilized Species (NUS): The 'Opportunity Crops'

- NUS or *Orphan Crops* like small millets, amaranth, yams, legumes, and jackfruit are:
  - Nutrient-dense,
  - Climate-resilient, and
  - Adapted to local agro ecological zones.
- These crops are part of local traditions but have been marginalized by modern commercial agriculture.
- Their revival helps in promoting sustainable diets, improving soil health, and boosting local economies.

## 3. Threats to Biodiversity and Traditional Knowledge

- Agrobiodiversity is rapidly disappearing in India, especially in the Northeast, due to:
  - Commercialization of agriculture,
  - Urbanization, and
  - Loss of traditional knowledge systems.
- Example: In Tamil Nadu's Kolli Hills, the cultivation of millets declined due to a shift to cash crops like cassava and coffee.
- This threatens not just nutrition but also cultural identity and ecological knowledge.



## 4. Reviving Forgotten Foods: Policy and Community Initiatives

- The **International Year of Millets (2023)** and India's **Shree Anna Yojana** aimed to boost production, processing, branding, and export of millets.
- Odisha Millet Mission and MSSRF initiatives promote seed-to-consumption revival of millets, especially involving women farmers.
- Next steps include:
  - Including diverse minor millets in **Public Distribution System (PDS)**.
  - Expanding state missions for millet promotion.
  - Incentivizing local processing and marketing of indigenous crops.

## 5. The Evergreen Revolution and Interdisciplinary Biodiversity Science

- **Evergreen Revolution**, a concept by Prof. M.S. Swaminathan, advocates:
  - Sustainable agriculture,
  - Nutritional security, and
  - Ecological balance (as against Green Revolution's chemical intensification).
- Emerging **interdisciplinary biodiversity science** in India aims to tackle challenges like:
  - Sustainable agriculture and nutrition,
  - Climate change and disaster risk reduction,
  - Livelihood creation for 1.4 billion citizens.



- With its scientific infrastructure and human capital, India can become a **global leader in sustainable biodiversity use**.

#### 6. Constitutional & Legal Provisions Related to Biodiversity

- **Article 48A** (Directive Principles): State shall protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g)**: Fundamental duty of every citizen to protect the natural environment.
- **Biological Diversity Act, 2002**: Provides for conservation, sustainable use of biodiversity, and fair benefit sharing.
- **National Biodiversity Authority (NBA)**: Established under the Act to regulate access to biological resources and protect traditional knowledge.

#### Key Definitions

- **Biohappiness**: A state of well-being achieved through sustainable use of biodiversity and ecosystem services.
- **Agrobiodiversity**: The variety and variability of plants, animals, and microorganisms used for food and agriculture.
- **Orphan Crops / NUS**: Neglected and underutilized species not widely cultivated but possessing high nutrition and climate resilience.
- **Evergreen Revolution**: Sustainable increase in agricultural productivity that preserves ecological balance.

#### Conclusion

India is at a critical juncture where revitalizing forgotten food systems can promote ecological sustainability, cultural preservation, and human well-being. The concept of *biohappiness* offers a forward-looking vision rooted in biodiversity, traditional wisdom, and scientific innovation. Integrating these strategies with national missions and constitutional mandates can help India lead the world in climate-resilient, nutrition-sensitive, and inclusive agricultural practices.

## 4. Two New Ramsar Sites in Rajasthan Added – Strengthening India's Wetland Conservation

### 1. India Adds Two New Ramsar Sites

- Two wetlands from Rajasthan — **Khichan (Phalodi)** and **Menar (Udaipur)** — have been newly designated as **Ramsar Sites**, making India's total **91 Ramsar Sites** (as of June 2025).
- This move reflects India's commitment to **wetland conservation** and its adherence to the **Ramsar Convention** on Wetlands of International Importance.

### 2. Importance of Ramsar Sites

- **Ramsar Sites** are wetlands designated under the **Ramsar Convention, 1971**, an international treaty for the conservation and sustainable use of wetlands.
- Wetlands are vital for **biodiversity, climate regulation, flood control, and water purification**.
- India is a **signatory to the Ramsar Convention** since **1982**, and actively works toward identifying and preserving ecologically significant wetlands.





### 3. Ecological & Biodiversity Value of Khichan and Menar

- **Khichan** is globally known for hosting large populations of **migratory Demoiselle Cranes**, making it a crucial bird habitat.
- **Menar** is popularly known as the "**bird village**" and is a thriving bird conservation area with several resident and migratory species.
- Both sites play a vital role in maintaining **ecological balance, local livelihoods, and eco-tourism** in Rajasthan.

### 4. Government's Policy Focus and Public Participation

- PM Modi highlighted that India's conservation success is driven by **public participation** and **community engagement**.
- The Ministry of Environment, Forest and Climate Change (MoEF&CC) is the **nodal agency** for Ramsar site declarations in India.
- Efforts align with constitutional provisions:
  - **Article 48A**: Directive to protect and improve the environment.
  - **Article 51A(g)**: Fundamental duty of citizens to protect natural environment including forests, lakes, rivers, and wildlife.

### 5. Global and National Commitments

- Ramsar site recognition supports India's commitment to:
  - **Convention on Biological Diversity (CBD)**
  - **United Nations Sustainable Development Goals (especially SDG 13 – Climate Action, and SDG 15 – Life on Land)**
  - **National Wetland Conservation Programme (NWCP)**

### 6. Way Forward

- With 91 Ramsar Sites, India stands among the countries with the highest number of designated wetlands.
- There is a need to focus on:
  - **Sustainable management of wetlands**
  - **Community-based conservation**
  - **Ecological restoration and wetland buffer zone protection**
  - **Monitoring and research**, especially regarding climate impacts

### Key Terms Defined

- **Ramsar Convention**: A global treaty signed in 1971 at Ramsar, Iran, for wetland conservation and wise use.

The latest to join the list of Ramsar sites in India are:

- 1 Khichan, in Phalodi, Rajasthan
- 2 Menar in Udaipur, Rajasthan

This addition takes our tally



10:10 PM · Jun 4, 2025





- **Wetlands:** Ecosystems saturated with water, such as lakes, swamps, marshes, estuaries, and mangroves, crucial for biodiversity and ecosystem services.

### Conclusion

The addition of **Khichan and Menar** to the Ramsar list is a significant step in India's ecological journey, emphasizing the importance of **wetland ecosystems**. These designations not only enhance global recognition but also highlight India's **inclusive, participatory approach to conservation**. Continued efforts in wetland protection will strengthen India's resilience to climate change and ensure long-term ecological sustainability.

## 5. Is Global Warming Becoming a Distraction? – Critical Analysis

### 1. Limitations of Long-Term Climate Models

- Climate models projecting **warming beyond 2050** are based on **speculative assumptions** like future energy sources, policies, and population growth.
- Such **projections carry high uncertainties**, making **long-term global mean temperature rise (e.g., 2°C by 2100)** unreliable for planning.
- The **Paris Agreement** targets (1.5°C and 2°C) are **more political than scientific**, with no sharp climatic threshold attached.

**Key Term – Climate Models:** Mathematical simulations used to predict changes in climate based on greenhouse gas emissions and other variables.

### 2. Overemphasis on Global Mean Warming

- While **1.5°C and 2°C thresholds** have symbolic value, they are not absolute indicators of catastrophe or safety.
- Focusing on **global mean temperatures** may **overshadow urgent needs** such as disaster preparedness and local risk management.
- Real-world impacts vary regionally — warming levels don't reflect the **intensity or location** of extreme events.



### 3. Urgency of Localised, Short-Term Climate Strategies

- Emphasis must shift to **short- and medium-term predictions** (days to decades) for **hyperlocal planning**.
- **Immediate focus areas** should include:
  - Strengthening **early warning systems**
  - Enhancing **disaster preparedness**
  - Investing in **community resilience and climate infrastructure**

### 4. Rising Frequency of Climate Disasters

- Events like **heatwaves, floods, and droughts** are becoming more **frequent, intense, and prolonged**.
- These result in **rising economic and human losses**, underscoring the need for **local-level actionable data and response mechanisms**.



- Examples such as the **Valencia floods (2024)** demonstrate that **forecast accuracy alone is not enough** — last-mile preparedness is crucial.

#### 5. Governance, Accountability & Climate Risk

- Effective **disaster management** requires:
  - **Timely communication** to all stakeholders
  - **Post-event accountability audits** (Was the forecast accurate? Was the response adequate?)
  - Strengthening **institutional coordination**
- Recognizes that while **climate risk is uncertain**, **governments have agency** to mitigate its effects.

#### Key Terms & Constitutional Provisions

- **Global Mean Temperature (GMT)**: The average temperature of Earth's surface, used as a benchmark in climate science.
- **Paris Agreement (2015)**: Legally binding global treaty to limit warming to well below 2°C, preferably to 1.5°C.
- **Fundamental Duty (Article 51A(g))**: Citizens must protect the environment and show compassion for living creatures.

#### Conclusion

The debate on **whether global warming targets are becoming a distraction** calls for a **paradigm shift in climate discourse**. Instead of over-focusing on abstract global averages, we must **prioritize actionable, short-term, and local strategies** for disaster resilience, infrastructure adaptation, and risk-informed governance. **India's policy responses**, therefore, should align with **hyperlocal risk management**, investment in **scientific infrastructure**, and **community-based adaptation** to mitigate the real impacts of a changing climate.

## 6. India's Commitment to Global Disaster Resilience & Public Health at GPDRR 2025: Key Points

### 1. India's Engagement at GPDRR 2025 and G20 DRR Roundtable

- Dr. **P.K. Mishra**, Principal Secretary to the Prime Minister, represented India at the **Global Platform for Disaster Risk Reduction (GPDRR) 2025** in Geneva.
- He addressed the **G20 Disaster Risk Reduction (DRR) Working Group Roundtable**, highlighting G20's role in **leveraging economic power for global disaster resilience**.
- Emphasis was placed on **international cooperation, shared responsibilities, and collective resilience** against transboundary disasters.

### 2. Coalition for Disaster Resilient Infrastructure (CDRI) and Africa

- India welcomed the **African Union (AU)** as a new member of the **CDRI**, underlining the expanding global reach of India-led initiatives.
- This aligns with the AU's inclusion as a **permanent G20 member** during India's G20 presidency in **2023**, reflecting India's push for **Global South representation**.
- **CDRI**, launched by India in 2019, is a **multi-stakeholder global initiative** aimed at promoting resilience in infrastructure against climate and disaster risks.

### 3. Collaboration with the World Health Organization (WHO)

- Dr. Mishra held discussions with **WHO Director-General Dr. Tedros Adhanom Ghebreyesus** on **global public health collaboration**.
- India reiterated support for:
  - **Second WHO Global Traditional Medicine Summit** (to be hosted in New Delhi in December 2025).
  - **WHO Global Centre for Traditional Medicine** in **Jamnagar, Gujarat**, which focuses on evidence-based research and policy on traditional medicine systems.



### 4. Key Themes: Disaster Resilience and Public Health Diplomacy

- India linked **disaster risk reduction (DRR)** with **sustainable development** and **climate adaptation goals**.
- Promoted **South-South cooperation**, health security, and infrastructure resilience as tools to strengthen **global commons**.
- Highlighted India's role as a **bridge between developing nations and global governance bodies** like WHO, G20, and now, the AU.

### 5. Constitutional & International Relevance

- **Entry 23 of State List:** Concerns with social security and social insurance, which are relevant in disaster and health preparedness.
- **Entry 29 of Concurrent List:** Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting humans, animals, or plants.
- India's commitment is aligned with **Sendai Framework for Disaster Risk Reduction (2015–2030)** and **UN SDGs**, especially **SDG 3 (Health)** and **SDG 13 (Climate Action)**.

### 6. India's Soft Power and Global Image

- Through platforms like **GPDRR**, **WHO summits**, and **CDRI**, India is enhancing its image as a **responsible global leader** advocating for inclusive, sustainable, and resilient development.
- Promotion of **traditional medicine** also strengthens India's **cultural diplomacy and knowledge systems** on the global stage.

### Conclusion:

India's active participation in GPDRR 2025 and support for global disaster resilience and health initiatives signal its evolving leadership role in **climate-resilient development and global health governance**. The inclusion of Africa in CDRI and cooperation with WHO reinforces India's commitment to **multilateralism, equity, and sustainable development**, making it a key stakeholder in shaping future global responses to disasters and pandemics.



## 7. “Ek Ped Maa Ke Naam” – Highlights on World Environment Day 2025

### 1. Campaign Overview and Emotional Connect

- “Ek Ped Maa Ke Naam” (One Tree in Mother's Name) is a mass plantation and environmental awareness campaign launched by **Prime Minister Narendra Modi**.
- Celebrated under the theme “**One Nation, One Mission: End Plastic Pollution**” on **World Environment Day (5 June 2025)**.
- The initiative blends **environmental consciousness with emotional symbolism**, encouraging citizens to plant trees in honor of their mothers—linking personal sentiment with ecological responsibility.

### 2. Massive Outreach and Scale of Implementation

- Organized by **Coal and Lignite PSUs** under the Ministry of Coal at **~350 locations across 47 districts in 11 states**.
- Activities included **mass plantation drives, anti-plastic campaigns, eco-rallies, and pledges for plastic-free workplaces**.
- The initiative engaged a large cross-section of society, including **PSU employees, school students, and local communities**.



### 3. Environmental Achievements and Green Technologies

- Over the past six years, **29 million saplings** have been planted over **13,400 hectares** in coal and lignite mining areas.
- Use of **innovative afforestation techniques** like the **Miyawaki method, drone seeding, and seed ball broadcasting** to accelerate restoration of mined-out lands.
- **Target set:** 16,000 hectares of green cover in five years, including 2,800 hectares in FY 2025–26.

### 4. Strategic Relevance and Net-Zero Alignment

- The campaign directly aligns with India's commitment to **Net-Zero emissions by 2070**.
- Plantation activities help create **natural carbon sinks**, restore **air and water quality**, and reclaim **ecological balance** in degraded mining regions.
- Combines **climate mitigation (carbon absorption)** with **climate adaptation (ecosystem restoration & community health)**.

### 5. Legal and Policy Linkages

- **Article 48A** (Directive Principles of State Policy) of the Constitution directs the State to protect and improve the environment and safeguard forests and wildlife.
- **Environment (Protection) Act, 1986** empowers the government to take all necessary measures to protect and improve environmental quality.
- The campaign supports the **Mission LiFE (Lifestyle for Environment)** vision, promoting citizen-led environmental actions.

## Conclusion

The “**Ek Ped Maa Ke Naam**” campaign symbolizes a transformative shift in India’s coal sector—from **extraction-driven operations to restoration-led development**. It exemplifies how **economic growth can be harmonized with ecological integrity**, making the campaign a model for sustainable industrial practices. Through **massive plantations, anti-plastic efforts, and green technologies**, Coal/Lignite PSUs are not just reducing environmental damage, but **healing the earth—one sapling at a time**.

## 8. India’s First E-Waste Recycling Park to be Built in Delhi

### 1. Project Overview and Significance

- The **Delhi Government** has announced the development of **India’s first e-waste eco-park** in **Holambi Kalan**, North Delhi.
- The project will be implemented under the **Design, Build, Finance, Operate and Transfer (DBFOT)** model on a **Public-Private Partnership (PPP)** basis, for a **15-year concession period**.
- It will span **11.4 acres** and is expected to process **51,000 tonnes of e-waste annually**, covering all **106 categories** listed under the **E-Waste Management Rules, 2022**.

### 2. Objectives and Features of the Park

- The park is aimed at establishing a **circular economy** by promoting recycling, reuse, and responsible disposal of electronic waste.
- It will include dedicated zones for:
  - **Dismantling and refurbishing**
  - **Plastic recovery**
  - **Second-hand electronics market**
  - **Skilling and training centers** for informal workers
- Construction is expected to be completed within **18 months**.

### 3. Economic and Social Impact

- The eco-park is projected to generate **₹350 crore** in revenue.
- It is expected to create over **1,000 “green jobs”**, contributing to sustainable urban employment.
- The project seeks to **formalize the informal sector** by integrating unregulated e-waste workers into a **safe and technologically advanced system**.

### 4. Legal and Policy Framework

- **E-Waste Management Rules, 2022**: These rules expand the scope of e-waste management to include producers, dismantlers, recyclers, and refurbishers. It mandates **Extended Producer Responsibility (EPR)**.
- **Environment Protection Act, 1986**: Serves as the umbrella legislation under which e-waste rules are notified.





- **Article 21 of the Constitution:** Ensures the right to life and a **clean, healthy environment**, thereby justifying government action on hazardous waste management.
- The initiative aligns with **SDG 12 (Responsible Consumption and Production)** and **SDG 8 (Decent Work and Economic Growth)**.

#### 5. Importance for UPSC Preparation

- Connects with **GS Paper III – Environment and Ecology** and **GS Paper II – Governance and Policy Implementation**.
- Highlights government efforts toward **waste management, urban sustainability, and public-private partnership models**.
- Demonstrates **inclusive growth** by focusing on skilling and integrating the **informal sector** into formal waste recycling ecosystems.

#### 6. Additional National Context

- The Delhi park is part of a larger national plan to develop **four such e-waste parks** across India.
- India is the **third-largest e-waste generator globally**, making such facilities critical for **environmental and public health** protection.
- Promotes the "**Swachh Bharat**", **Digital India**, and **Skill India** missions by improving e-waste processing infrastructure and workforce capabilities.

#### Conclusion

The establishment of India's first e-waste recycling park in Delhi is a landmark step in promoting a **circular economy, environmental sustainability, and social inclusion**. By combining **green technology, job creation, and regulatory reform**, it offers a replicable model for **urban environmental governance**. For aspirants, this initiative embodies how policy, law, environment, and inclusive development intersect—making it a vital current affairs topic for UPSC.

### 9. Water Harvesting Model to Aid Rajasthan Farmers

#### 1. Overview of the Water Harvesting Initiative

- A **scientifically designed water conservation model** using 50 climate-resilient **farm ponds** is being implemented in Kukas village, Jaipur district, Rajasthan.
- The project aims to capture **10 crore litres** of seasonal monsoon runoff to support irrigation and farming activities.
- This model follows the success in Dausa district, where 250 farm ponds helped farmers cultivate **perennial crops**.

#### 2. Significance of Farm Ponds

- Farm ponds are **small water harvesting structures** dug in agricultural fields, lined with plastic and fenced, to capture and store rainwater.
- These ponds cover **5% of each farmer's land** and provide **year-round irrigation** for both **rabi (winter)** and **kharif (monsoon)** crops.
- The ponds also support sustainable livestock rearing and high-value horticulture, promoting **farm diversification**.

### 3. Groundwater Depletion and Irrigation Challenges

- Jaipur's agricultural land heavily relies on **groundwater irrigation**; about **99.4% of cultivable land** depends on it.
- The district extracts **2.22 times** more groundwater annually than what is recharged by rainfall, leading to severe **water stress and depletion**.
- The farm pond model helps **recharge groundwater** by capturing excess monsoon runoff that otherwise flows unused.

### 4. Key Stakeholders and Implementation

- The initiative is led by **Vipra Goyal**, an IIT Kharagpur alumnus, with active involvement from local farmers and the village panchayat.
- Local farmer testimonies highlight the transition from drought-resistant crops like **bajra** to more water-demanding, profitable crops such as **groundnut** and **chaula (cowpeas)**.
- The model promotes **self-reliance and sustainability** by ensuring consistent water availability.

### 5. Broader Impact and Future Prospects

- The continuous water supply can enable the growth of **dairy, food processing units, and improved market linkages** for agricultural produce.
- The project has sought **Central Government support and multilateral funding** for further expansion and capacity building.
- It addresses **key Sustainable Development Goals (SDGs)**: SDG 6 (Clean Water and Sanitation), SDG 2 (Zero Hunger), and SDG 13 (Climate Action).



### 6. Legal and Policy Context

- Water is a **State subject** under the Indian Constitution (Entry 17, List II), but sustainable water management often requires **coordination with Central government initiatives**.
- The model aligns with the **National Water Policy (2012)** which emphasizes rainwater harvesting and groundwater recharge.
- Supports **PMKSY (Pradhan Mantri Krishi Sinchayee Yojana)** objectives for efficient water use in agriculture.

### Conclusion


This innovative water harvesting model demonstrates a **climate-resilient, sustainable approach** to tackle Rajasthan's water scarcity crisis, enhancing farmer livelihoods through assured irrigation and crop diversification. It embodies a successful blend of **scientific innovation, community participation, and government support**, essential for ensuring **water security and agricultural sustainability** in arid regions.

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## 10. Monsoon Outlook and Its Impact on India (2025)

### Key Highlights:

#### 1. Early Onset of Monsoon (2025):

- The **southwest monsoon** arrived unusually early, reaching **Kerala and Mumbai by late May**, the earliest onset since **2009** for Kerala and **1989** for Mumbai.
- The **India Meteorological Department (IMD)** predicted a *normal monsoon*, but regional disparities and pauses in progress have emerged.
- Pre-monsoon rainfall caused **urban flooding** in cities like **Delhi, Mumbai, Pune, Bengaluru**, and landslides in **northeastern states**.

#### 2. Reasons for Monsoon Stalling:

- The stalling is due to **weakening low-pressure systems** over the **Bay of Bengal and Arabian Sea**, which usually pull the southwest monsoon inland.
- With the systems weakening, **northern and interior Deccan regions** have experienced **dry spells and heatwaves**, including Delhi's **hottest day of the year**.

#### 3. Impacts of Early and Uneven Rains:

- While early rains **relieve heat stress**, they **disrupt cropping cycles** for fruits and vegetables like **mangoes, bananas, onions** in Peninsular India.
- Flash floods and landslides have affected **urban infrastructure and rural transport**.
- Early rain also **hurt consumer durables sales** like air conditioners, affecting seasonal demand patterns.

#### 4. Economic Implications – Demand & Agriculture:

- India faces **urban demand slowdown** due to rising inflation and stagnant incomes.
- **Rural demand** remains stronger for now, but poor monsoon performance could hit **farm incomes**, further denting **FMCG and auto sector sales**.
- Companies like **HUL, ITC, Tata Consumer** and carmakers are **relying on good monsoon** for demand recovery in FY25.

#### 5. Forecast Going Forward:

- IMD predicts **normal progression** of monsoon as **new low-pressure systems** and **western disturbances** are developing.
- Monsoon is expected to **cover central and northern India by June 30**, but **heatwaves** are forecast to persist alongside.
- If the rains resume normally, agricultural operations and rural demand may stabilise in the **kharif season**.

### Key Terms & Concepts:

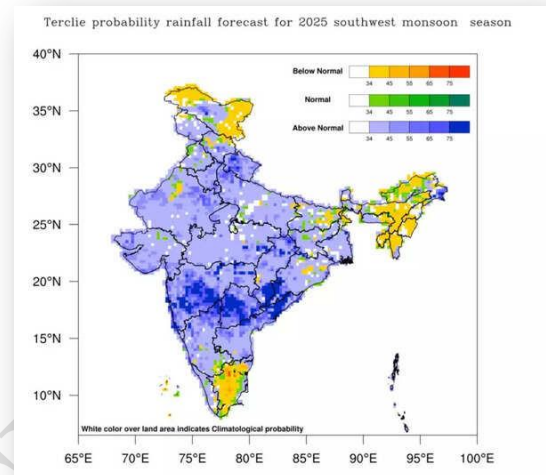
- **Southwest Monsoon:** Major weather system delivering ~70–75% of India's annual rainfall; essential for **kharif agriculture**, water security, and power generation.



- **Low-Pressure System:** A meteorological phenomenon that draws monsoon winds inland, facilitating rainfall.
- **IMD: India Meteorological Department**, under the **Ministry of Earth Sciences**, is responsible for weather forecasting and issuing advisories.
- **Western Disturbances:** Weather systems originating in the **Mediterranean**, affecting rainfall patterns in north and northwest India during pre-monsoon and winter seasons.

**Legal and Policy Context:**

- **Disaster Management Act, 2005:** Empowers NDMA and state governments to respond to floods and landslides caused by erratic monsoons.
- **Article 48A** of the Constitution (Directive Principles): Directs the State to **protect the environment and safeguard forests and water resources**, linking to monsoon-dependent agriculture.
- **National Monsoon Mission (NMM):** Government initiative to improve prediction of monsoon variability, led by the Indian Institute of Tropical Meteorology (IITM), Pune.

**Conclusion:**

India's early monsoon in 2024 brought both **climate relief** and **infrastructural disruptions**. The stalling of rains reveals the **fragility of monsoon dependence**—not just for agriculture, but also for **economic planning, rural demand, and urban infrastructure resilience**. While IMD's forecast offers optimism, UPSC aspirants must understand that **climate variability, urban planning deficits, and agriculture-linked vulnerabilities** make monsoon management a **critical policy challenge** in India's governance and economic stability.

## 11. Preferential Treatment in Wildlife Trophy Amnesty: Legal and Ethical Concerns

### 1. Kerala's One-Time Amnesty Proposal: Legal Background

- The Kerala Forest Department has sought the **Union Environment Ministry's approval** for a **one-time amnesty scheme** to allow **legal heirs** to declare inherited *wildlife trophies* under **Section 40 of the Wildlife (Protection) Act, 1972**.
- **Section 40** mandates that possession of Schedule I animal trophies must be declared within 30 days. Non-compliance can lead to **3–7 years imprisonment** and a **fine not less than ₹25,000**.
- The department claims the proposal aims to help **genuine inheritors** regularize ownership due to procedural delays.

### 2. Allegations of Preferential Treatment and Selective Enforcement

- The issue has triggered public outrage over the **perceived double standards** in enforcement:
  - **Actor Mohanlal's case:** Found with ivory in a mirror stand, handled leniently.
  - **Rapper Vedan's case:** Arrested immediately for possessing a pendant allegedly made from leopard tooth.



- Both cases were from **Malayattoor Forest Range**, yet **differently treated**, raising questions of **bias and inequality before law**.

### 3. Concerns on Evidence Handling and Judicial Process

- In Mohanlal's case, **ivory was not shifted to official custody (Treasury/Strongroom)**, inviting suspicion of **evidence destruction or tampering**.
- In contrast, Vedan faced immediate arrest, despite claiming the pendant was a **gift** and he was unaware of its wildlife origin.
- There's **lack of clarity and uniformity** in procedural follow-up, damaging **judicial credibility**.

### 4. Legal and Ethical Implications

- The **Wildlife (Protection) Act, 1972**, especially after the **2022 Amendment**, aims to **strictly curb illegal possession and trade of wildlife articles**, especially from **Schedule I species** like elephants, leopards, and tigers.
- **Ethical concern**: Arbitrary and unequal application of laws undermines **Article 14** of the **Indian Constitution** (Right to Equality).
- The **Rule of Law** is compromised when **influential individuals** are treated with leniency, while others face strict enforcement.

### 5. Public Response and Expert Opinion

- The public, conservationists, and even **former forest officials** (e.g., Gopinath Vallilil) have **condemned the disparity**, calling it a blow to **public trust** in environmental justice.
- Social media amplified discontent, especially as **other similar offenders in the film industry were allegedly ignored**.
- Demand is growing for **transparent, consistent enforcement** and **institutional accountability**.

### Key Terms for UPSC

- **Wildlife Trophy**: Whole or part of any wild animal preserved through taxidermy.
- **Section 40, Wildlife Protection Act**: Mandates declaration of wildlife articles.
- **Rule of Law**: The principle that all individuals, regardless of status, are equally subject to the law.
- **Amnesty Scheme**: A temporary legal pardon, usually conditional, to allow people to declare offences or holdings without penalty.



### Conclusion

The Kerala Forest Department's amnesty proposal, while aimed at procedural regularization, has **exposed a deeper crisis of selective justice** and erosion of **public faith in environmental governance**. For India's wildlife protection efforts to be credible, enforcement must be **uniform, transparent, and legally sound**—ensuring that **no individual, regardless of fame or power, is above the law**. Upholding the **principles of equality, accountability, and ecological ethics** is essential in maintaining both **biodiversity and constitutional integrity**.

## 12. Arunachal Pradesh Declares 2025–2035 as the ‘Decade of Hydropower’

### Key Highlights of the Decision

- **Arunachal Pradesh Cabinet**, under CM **Pema Khandu**, declared the decade 2025–2035 as the ‘**Decade of Hydropower**’ to tap the state's **hydropower potential of 58,000 MW**.
- The move aims to integrate **mega, large, and small hydro projects** into a **strategic industrial development** and revenue model.

### Strategic and Financial Objectives

- State to receive **12% free power** from each Hydroelectric Project (HEP) and **1% additional** for **Local Area Development Funds**.
- Expected annual revenue of **₹4,525 crores by 2035**, with **investments over ₹2 lakh crore** over 10 years for projects generating **19 GW**.
- Establishment of an **escrow account** to ensure transparent, accountable, and strategic utilization of hydro-revenue.

### Governance and Public Engagement Measures

- Aims to develop a **stable and supportive regulatory framework** for industrial ecosystem growth.
- Special focus on the **Siang Upper Multipurpose Project (SUMP)** (11,000 MW), declared a **National Project** in 2008, seen as a **strategic counter** to China's 60,000 MW dam on Yarlung Tsangpo.
- Emphasis on **consensus-building and fair compensation** for **Project Affected Families (PAFs)** in Siang, East Siang, and Upper Siang districts.

### Urban Planning and Rehabilitation

- Two new authorities—**New Yingkiong Development Authority** and **New Geku Development Authority**—to develop **alternate towns** in Upper Siang district.
- Approval for a **resettlement and rehabilitation (R&R) committee** to determine compensation mechanisms.
- Survey ordered for a “**necklace road**” along the Siang River, above the submergence zone, as an adaptive infrastructure plan.



### Constitutional & Legal Provisions

- **Article 48A**: Directive Principle – Protection and improvement of environment and safeguarding forests and wildlife.
- **Environment (Protection) Act, 1986** and **EIA Notification, 2006** govern project clearance procedures.
- **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR Act)**: ensures justice to PAFs.





- **Electricity Act, 2003:** Provides legal framework for generation, distribution, and transmission of electricity in India.

### Key Definitions

- **Hydropower:** Electricity generated using flowing or falling water, typically via dams or river diversions.
- **Escrow Account:** A financial arrangement where funds are held by a third party to ensure secure and conditional transactions.
- **Project Affected Families (PAFs):** Families whose livelihood, land, or residence is adversely affected due to developmental projects.

### Conclusion

The declaration of the **Decade of Hydropower** marks a bold and strategic vision by Arunachal Pradesh to emerge as **India's hydropower hub**, balancing **economic development**, **energy security**, and **environmental concerns**. For UPSC aspirants, this development is highly relevant for **GS Paper III (Environment & Infrastructure)**, **GS Paper II (Governance & Federalism)**, and **Essay Paper** themes such as **Sustainable Development**, **Energy Transition**, and **Centre-State Dynamics**.

## 13. Cooking Oils as a Green Solution for Silver Recovery from E-Waste

### Importance of Silver in Modern Technology and Clean Energy

- **Silver** is extensively used in **solar panels**, **mobile phones**, **laptops**, and **electrical conductors**, playing a **critical role in the clean energy transition**.
- India generates about **108 GW of solar power**, partly dependent on silver components. Each smartphone contains **100–200 mg** of silver; laptops contain around **350 mg**.
- Globally, **7,275 metric tonnes of silver** are consumed annually for electronics, but only **15% is recovered**, resulting in massive **precious metal loss** from e-waste.

### Rising Global Demand for Silver

- According to the **2025 Sprott Silver Report**, silver demand is expected to **rise by 170%** due to increasing **electric vehicle (EV)** and **renewable energy adoption**.
- With the **International Energy Agency** predicting that **50% of all cars sold globally by 2035** will be electric, silver use is projected to **skyrocket**, especially in solar-powered transport.

### Innovative Recovery Method Using Cooking Oils

- A Finnish research team led by **Anze Zupanc** and **Prof. Timo Repo** developed a **green chemistry method** using **unsaturated fatty acids** (like **oleic** and **linolenic acid** from olive, sunflower, and groundnut oil) to **recover silver** from **waste electrical and electronic equipment (WEEE)**.
- This method avoids toxic chemicals like **cyanide** and **strong acids**, and promotes **urban mining**—the extraction of precious metals from discarded electronics.

### Environmental & Technological Relevance

- **Fatty acid-based recovery** is **recyclable**, **non-toxic**, and **eco-friendly**, making it superior to traditional chemical methods.
- The approach can contribute to **sustainable resource management**, **waste minimization**, and **circular economy models**.



### Key Definitions & Legal Provisions

- **E-Waste (WEEE):** Waste Electrical and Electronic Equipment; discarded gadgets and appliances that contain recoverable metals like silver, gold, copper, etc.
- **Urban Mining:** Recovery of valuable metals from city-generated waste instead of natural ore mining.
- **Circular Economy:** An economic system aimed at eliminating waste and continually using resources through reuse, recycling, and regeneration.
- **E-Waste Management Rules, 2022 (India):** Mandate extended producer responsibility (EPR), eco-friendly recycling practices, and scientific handling of e-waste under the **Environment (Protection) Act, 1986**.
- **Article 48A (Directive Principles):** Calls for protection and improvement of the environment.
- **Article 51A(g):** Fundamental duty of citizens to protect and improve the natural environment.

### Conclusion

The use of **edible oils for silver recovery** from e-waste is a **revolutionary, low-impact solution** that aligns with India's and the world's **green energy goals** and **waste reduction targets**. It promotes sustainable practices within **urban mining**, contributes to a **circular economy**, and is highly relevant for **GS Paper III** (Environment, Science & Tech, Resource Conservation), **GS Paper II** (Governance – Environmental Laws), and **Essay Paper** themes on **green innovation and sustainable development**.

## 14. Kerala High Court Bans Single-Use Plastics in Hilly Areas and Public Functions

### 1. Judicial Intervention to Protect Ecology

- The **Kerala High Court** has issued a landmark **ban on single-use plastic** in **ecologically sensitive hilly areas**, public functions like weddings, and **official events** hosted by government agencies.
- The order takes **effect from October 2**, commemorating **Gandhi Jayanti**, symbolizing environmental responsibility and public duty.

### 2. Scope of the Ban

- The ban includes **plastic water bottles below 5 litres**, **soft drink bottles under 2 litres**, **plastic food containers**, **plates**, **cups**, and **straws**.
- The move specifically targets **high-tourist footfall areas**, which are prone to **plastic littering**, severely affecting wildlife and forest ecology.



### 3. Environmental Concerns Cited by the Court

- The Court cited the **serious threat posed to wildlife**, especially wild elephants, who consume plastic from **open dumping yards** (e.g., at Kallar near Munnar).
- It emphasized that **irresponsible disposal of plastic** endangers **all life forms** and disrupts **fragile hill ecosystems and waterbodies**.

### 4. Judicial Directions for Sustainable Alternatives



- The Court ordered that **kiosks providing safe drinking water** must be set up at **tourist spots and events** to eliminate reliance on plastic bottles.
- Water should be served in **glass or stainless-steel containers**, promoting **reusability and sustainability**.

#### 5. Duties of State and Local Bodies

- The **State Government and Local Self-Governments** have been directed to prevent **plastic dumping into water bodies** and ensure **solid waste management**.
- There is also an obligation to **spread awareness** regarding the **harmful effects of single-use plastics** and encourage **behavioral change** among citizens.

#### Key Definitions & Legal Context

- **Single-use plastic (SUP):** Plastic items intended to be used once and then discarded, such as carry bags, straws, and cutlery.
- This move aligns with **Article 48A** (Protection and improvement of environment) and **Article 51A(g)** (Fundamental Duty to protect and improve the natural environment) of the **Indian Constitution**.
- The **Plastic Waste Management Rules, 2016** (amended in 2021) already provide for phased bans and extended producer responsibility (EPR).

#### Conclusion

The Kerala High Court's proactive order represents a **judicially-led environmental governance model**, focusing on **plastic pollution control**, **public accountability**, and **eco-sensitive zone protection**. This ban could serve as a **model for other states** to regulate plastic usage in fragile ecological regions. By aligning with national plastic waste rules and fundamental duties under the Constitution, this initiative reflects the judiciary's role in promoting **sustainable development and environmental justice**.



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# INTERNATIONAL RELATIONS

## 1. India's Engagement with the U.S. on FATF Grey Listing of Pakistan

### 1. India's Diplomatic Push at FATF

- India, through Foreign Secretary Vikram Misri, engaged U.S. officials ahead of the **Financial Action Task Force (FATF)** plenary session scheduled for June 2025.
- India aims to **re-instate Pakistan on the FATF 'grey list'**, a list of countries under increased monitoring for deficiencies in combating money laundering and terror financing.

### 2. Significance of FATF Grey Listing

- The **'grey list'** status means enhanced scrutiny on a country's financial systems and greater international pressure to curb **terror financing and money laundering**.
- Pakistan's continued grey listing would signal global concern over its alleged role in supporting terror activities, crucial to India's counter-terrorism diplomacy.



### 3. India-U.S. Strategic Partnership

- Discussions during Misri's U.S. visit highlighted cooperation on **technology, trade, and talent**, underpinning the growing **India-U.S. bilateral relationship**.
- Collaboration extended to economic and financial sectors, including coordination in **international financial institutions** like FATF.

### 4. Defence and Security Cooperation

- India and the U.S. reaffirmed commitments to a **robust defence partnership**, including **co-production, co-development of defence technologies**, joint military exercises, and logistics support.
- Efforts to enhance **interoperability between armed forces** reflect deepening strategic ties in the Indo-Pacific region amid regional security challenges.

### 5. Geopolitical Context and U.S. Role

- The U.S., under President Trump (note the timeline may be earlier), played a role in de-escalating the **four-day India-Pakistan military conflict (Operation Sindoor)** through diplomatic pressure.
- India's engagement with the U.S. in financial and defence diplomacy aims to leverage this partnership for regional security and counter-terrorism objectives.

### 6. Legal and Institutional Framework

- **Financial Action Task Force (FATF)** is an inter-governmental body established in 1989 to develop policies to combat **money laundering** and **terrorist financing** globally.





- Grey listing is governed by FATF's **mutual evaluation process**, requiring countries to comply with its **40 Recommendations** on anti-money laundering and counter-terrorism financing (AML/CFT).
- India's action aligns with its obligations under the **United Nations Security Council (UNSC) resolutions** on counter-terrorism and international financial regulations.

### Key Definitions for UPSC

- **Financial Action Task Force (FATF):** An inter-governmental body aimed at developing policies to combat money laundering and terror financing worldwide.
- **Grey List:** A list maintained by FATF of countries with deficiencies in AML/CFT regimes but that have committed to resolve them.
- **Money Laundering:** The process of concealing origins of illegally obtained money.
- **Terror Financing:** Providing funds for terrorist activities, often targeted by international sanctions.

### Conclusion

India's proactive engagement with the U.S. over FATF's grey listing of Pakistan illustrates its use of **multilateral financial diplomacy** to combat terrorism and pressure Pakistan internationally. Strengthening ties with the U.S. in economic, technological, and defence domains bolsters India's strategic position in South Asia. The FATF mechanism remains a vital tool in India's broader counter-terrorism and national security strategy, highlighting the intersection of **financial regulations with global security governance** — a critical subject for UPSC aspirants.

## 2. French Nuclear Umbrella and Its Implications for Europe

- **Context and Background**
  - On May 14, 2025, French President Emmanuel Macron expressed openness to stationing French nuclear weapons on other European countries' soil.
  - This move responds to growing European security concerns amid the ongoing Russia-Ukraine conflict and perceived unreliability of U.S. security guarantees under NATO.
- **French Policy of European Strategic Autonomy**
  - Macron's initiative aligns with France's goal of "European strategic autonomy" — the EU's capacity to independently manage its defense and security without over-reliance on the U.S.
  - This represents a shift from France's traditional stance of guarding its nuclear deterrent as a strictly national tool.
- **Nuclear Sharing Model**
  - Nuclear sharing involves a nuclear-armed state deploying weapons in allied non-nuclear states with specific use arrangements.
  - The U.S. practices nuclear sharing within NATO by stationing B61 nuclear bombs in Belgium, Germany, Italy, Netherlands, and Turkey.
  - Legally, ownership and control remain with the nuclear state; the host country neither owns nor independently controls the weapons.

- **France's Nuclear Arsenal and Challenges**

- France possesses approximately 290 nuclear warheads deliverable via submarines and Rafale fighter jets.
- Extending deterrence by basing weapons abroad presents logistical, doctrinal, and command-control challenges.
- It might require increasing warhead numbers and deploying French military units and infrastructure overseas.

- **Security Implications and Risks**

- Supporters argue that stationing French nuclear weapons in Europe would enhance deterrence against Russia by demonstrating stronger European resolve.
- Critics warn it may provoke Russian military escalation, citing Russia's deployment of tactical nuclear weapons in Belarus as a countermeasure.
- Such developments risk intensifying a nuclear arms competition in Europe.

- **International Legal Aspect**

- The 1968 **Nuclear Non-Proliferation Treaty (NPT)** forbids nuclear-weapon states from transferring weapons or control over them (Article I).
- NATO's nuclear sharing is justified as compliant because no transfer of legal ownership or peacetime control happens.
- However, the legality of such arrangements remains debated among experts and non-proliferation advocates.



### **Key Definitions**

- **Nuclear Umbrella:** A security guarantee by a nuclear-armed state to defend its non-nuclear allies, extending the deterrent effect.
- **European Strategic Autonomy:** The EU's goal to independently manage its security and defense policies without dependence on external powers.
- **Nuclear Sharing:** Deployment of nuclear weapons by a nuclear state on allied non-nuclear states' territory with shared operational planning but no transfer of ownership or control.

### **Conclusion**

France's offer to extend its nuclear deterrent across Europe signifies a major shift towards European strategic autonomy, reflecting changing geopolitical dynamics amid Russia's aggression and doubts over U.S. commitments. While it could bolster Europe's defense posture, it also raises legal questions under international law and risks escalating nuclear tensions with Russia. For UPSC, this issue highlights the intersection of global strategic diplomacy, international treaties like the NPT, and evolving security architectures in Europe.



### 3. FATF to Analyze Global Terror Financing Trends

#### 1. FATF Condemns Pahalgam Terror Attack

- The **Financial Action Task Force (FATF)**, a global watchdog on **money laundering and terrorism financing**, has **condemned the 22 April 2025 terror attack in Pahalgam, Jammu & Kashmir**, where 26 tourists were killed.
- FATF rarely issues such condemnations—**this is only the third instance in a decade**, indicating the **severity and global impact** of the attack.

#### 2. Focus on Terror Financing and State Sponsorship

- FATF will soon release a **comprehensive report on global trends in terror financing**, with **specific emphasis on “state-sponsored terrorism”**, being acknowledged as a **funding source for the first time**.
- The report will use **case studies and financial intelligence** from over 200 jurisdictions to identify emerging threats and patterns in **terrorist fund movements**.

#### 3. India’s Diplomatic Offensive Against Pakistan

- India has leveraged the global platform to **highlight Pakistan’s alleged role in sponsoring terrorism**, particularly in light of **funds received from multilateral institutions** like the **IMF and ADB**.
- India has **objected to IMF’s \$2.4 billion and ADB’s \$800 million loans** to Pakistan, urging scrutiny to ensure the funds are used for **economic reforms, not military or terror-linked activities**.

#### 4. FATF's Global Role in CFT (Countering Financing of Terrorism)

- FATF assists over 200 member jurisdictions to **develop institutional capacities**, conduct **financial surveillance**, and enhance **anti-terror financing measures**.
- It promotes **strategic use of financial intelligence** as a powerful tool to **disrupt terrorist networks** by choking their funding sources.

#### 5. Future Outlook and Global Cooperation

- FATF is set to conduct **webinars and outreach programs** for public and private sectors to **raise awareness on CFT risks**, educate stakeholders, and **improve early detection mechanisms**.
- The upcoming report is expected to be a **benchmark reference** for future policymaking and global cooperation in the **war against terror financing**.

#### Key Concepts & Constitutional Linkages

- **FATF**: An inter-governmental body established in 1989 by the G7 to develop policies to combat money laundering and terror financing.
- **Countering Financing of Terrorism (CFT)**: A set of legal, institutional, and operational measures to identify, track, and block funds used for terror activities.
- **Article 51 of the Indian Constitution**: Advocates promotion of international peace and security, under which India’s actions at FATF align.
- **Article 73**: Empowers the Union to conduct international affairs and negotiations like those involving FATF or IMF objections.

## Conclusion

FATF's decision to **highlight terror financing trends**, particularly **state-sponsored terrorism**, is a **diplomatic win for India** and a **crucial step in global security architecture**. India's proactive stance strengthens its global image as a responsible actor combating terrorism. For UPSC aspirants, this issue is relevant to **GS Paper II (IR & International Organizations)**, **GS Paper III (Internal Security & Terrorism Financing)**, and topics on **India's foreign policy and multilateral diplomacy**.

## 4. Operation Sindhu: India's Strategic Evacuation Amid Israel-Iran Conflict

### 1. What is Operation Sindhu?

- **Operation Sindhu** is a humanitarian evacuation operation launched by the **Government of India** to **evacuate Indian nationals from Iran** amid escalating hostilities between **Israel and Iran**.
- The operation was initiated after reports of **Indian students being injured** in missile strikes, including at a **medical dormitory in Tehran's Keshavarz Street**.

### 2. Context: Israel-Iran Conflict Escalation

- The operation was triggered as the ongoing **Israel-Iran air war** intensified, endangering civilians and foreign nationals, including **Indian expatriates and students**.
- Given the **volatile security environment**, India opted for preemptive evacuation to ensure **safety of its citizens abroad**, reflecting its commitment to **diaspora protection**.



### 3. Diplomatic Coordination and Crisis Response

- The **Indian Embassy in Tehran** and the **Iranian Foreign Ministry** are in **active coordination**, ensuring **medical support and logistical help** for affected Indians.
- The **Ministry of External Affairs (MEA)** and **Indian defence and civil aviation authorities** are likely involved in organizing flights and ensuring safe passage.

### 4. India's Track Record in Evacuation Operations

- Operation Sindhu joins India's successful past evacuation missions like:
  - **Operation Ganga** (Ukraine, 2022)
  - **Operation Kaveri** (Sudan, 2023)
  - **Operation Devi Shakti** (Afghanistan, 2021)
  - These efforts align with India's policy of **Non-resident Indian (NRI) welfare** and **Vasudhaiva Kutumbakam** (the world is one family).

### 5. Legal and Policy Underpinnings

- Under **Article 51(c)** of the Indian Constitution, India promotes respect for international law and humanitarian obligations.





- The **Emigration Act, 1983** governs welfare of Indian workers abroad and provides legal basis for such protective actions.
- India's **Citizens Charter** under the MEA mandates the **protection of Indian citizens abroad** as a core responsibility.

**Key Definitions**

- **Evacuation Operation:** A government-led mission to safely remove citizens from zones of conflict, natural disasters, or political upheaval.
- **Diaspora:** People of Indian origin residing outside India, including workers, students, and professionals.

**Conclusion**

Operation Sindhu underscores India's **proactive diplomatic and humanitarian strategy** in crisis zones. It highlights India's growing **global responsibility** and readiness to protect its diaspora. For UPSC aspirants, this reflects India's commitment to **citizen welfare, swift crisis diplomacy**, and its evolving stature as a **responsible global actor** in line with international norms and constitutional values.

## 5. World Bank Reclassifies Pakistan and Afghanistan Outside South Asia Region

**Key Highlights for UPSC (GS 2 – International Institutions; GS 3 – Security and Economy)****1. Pakistan and Afghanistan Shifted to MENA Region**

- The **World Bank** has moved **Pakistan and Afghanistan** from its **South Asia Region** to the **Middle East and North Africa (MENA) Region**.
- This **administrative shift** pertains to **managerial oversight** of the **International Bank for Reconstruction and Development (IBRD)** and **International Development Association (IDA)** programs.

**2. Impact on South Asia Grouping**

- With this change, the **South Asia group** now includes only **six countries**: India, Bangladesh, Bhutan, Maldives, Nepal, and Sri Lanka.
- The **realignment aligns with International Finance Corporation (IFC)** and **International Monetary Fund (IMF)** practices and is said to streamline program administration.

**3. India's Concerns Over Lending to Pakistan**

- India has **consistently opposed multilateral lending** (e.g., \$2.4 billion IMF aid) to Pakistan, citing concerns over **misuse of financial aid** for military purposes and **state-sponsored terrorism**.
- India also advocates for **greater oversight on loans** to ensure they are used strictly for development and not for **arms procurement**.





#### 4. Call for Greylisting Pakistan by FATF

- India has urged that **Pakistan be re-listed in the 'Grey List' of the Financial Action Task Force (FATF)** for failure to curb **terror financing and money laundering**.
- FATF plays a vital role in assessing a country's compliance in **curbing terror-related financial flows**.

#### 5. Administrative Update within World Bank

- **Johannes Zutt**, currently Country Director for Brazil, has been appointed **Vice President of the South Asia Region** (effective 1 July 2025), and will be **based in India**.
- He will oversee **operations across South Asia**, now redefined without Pakistan and Afghanistan.

#### 6. Key Institutions Involved

- **IBRD**: Lends to middle-income and creditworthy low-income countries for development.
- **IDA**: Provides concessional loans and grants to the world's poorest countries.
- India is also a member of **IFC (private sector arm)** and **MIGA (insurance for foreign investment)**.

#### Definitions & Legal/Constitutional Relevance

- **Multilateral Lending Institutions**: International financial entities like the **World Bank, IMF, ADB**, which offer loans/grants for development.
- **FATF Grey List**: Countries under increased monitoring due to **deficiencies in anti-terror funding and money laundering controls**.
- **Article 51(c) – Indian Constitution**: Advocates **respect for international law and treaty obligations**, relevant to India's engagement with multilateral bodies.
- **External Affairs and International Financial Institutions** fall under the **Union List (Entry 14 & 41, Schedule VII)** of the Constitution.

#### Conclusion

The World Bank's reclassification of **Pakistan and Afghanistan into the MENA region** marks a significant **geopolitical and administrative shift**, effectively **distancing them from South Asia's developmental priorities**. For India, this could serve as a strategic opening to **reduce Pakistan's multilateral funding footprint**, particularly in light of **security concerns and misuse of aid**.



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## SOCIAL

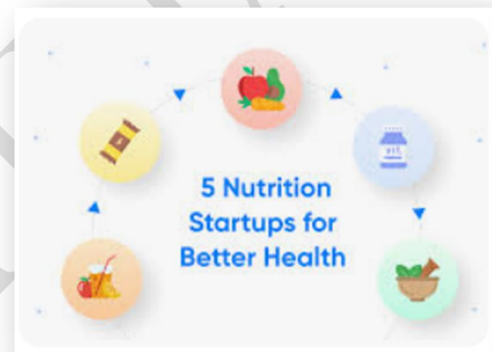
### 1. India's Protein Deficiency & the Rise of Health-Focused Startups

#### 1. Context: Protein Deficiency in India

- **Definition:** Protein is a **macronutrient** essential for **muscle repair, enzyme function, and immune strength**.
- According to the **FAO**, India's **per capita protein supply in 2021** was **70.5 grams/day**, far behind **China (124.6g)** and **USA (124.3g)**.
- A **2024 IMRB** survey found **90% Indians are unaware** of protein needs; **73% of urban diets** fall short of required intake.

#### 2. Rise of Protein-Based Startups and Market Trends

- Startups like **Be Brawn** (protein-infused water) and **Naturaltein** (supplements) are gaining investor attention.
- **Super You** (co-founded by actor Ranveer Singh) and **iD Fresh Foods** have introduced **innovative protein-rich snacks and traditional foods**.
- India's **protein supplement market** is projected to grow from **\$1.4 billion (2024)** to **\$1.8 billion by 2029** (Mordor Intelligence).



#### 3. Entry of Large Food Brands

- **Mother Dairy** launched **Pro Milk**, with **30% more protein** than regular milk.
- **Brittania** and **Amul** have added **protein-rich biscuits, curd, and shakes**, signaling mainstream adoption.
- These brands aim to **democratize protein access** through affordable, familiar formats.

#### 4. Policy and Institutional Implications

- Though **no specific constitutional article** mentions nutrition, **Directive Principles of State Policy (DPSP)** under **Article 47** direct the state to **raise the level of nutrition and public health**.
- The **Food Safety and Standards Authority of India (FSSAI)** regulates labeling and nutritional claims under the **FSS Act, 2006**.
- Promoting protein intake aligns with **National Nutrition Mission (POSHAN Abhiyaan)** targets and **SDG Goal 2 (Zero Hunger)**.

#### 5. Investment and Innovation Focus

- Venture capital firms such as **Sauce.vc** are funding brands that show **product innovation** (e.g., wafer bars, multigrain protein chips).
- Focus is on **format innovation and clean labels**, moving away from traditional powders to **convenient, on-the-go products**.



## 6. Societal Shift and Health Awareness

- Urban India is witnessing a **behavioral shift** toward **healthier, protein-focused diets**, cutting across **age groups and socio-economic segments**.
- Consumer education remains key as **protein awareness is still low**, indicating a need for **public-private collaboration**.

### Conclusion

India's growing awareness of **protein deficiency** is driving **startups, FMCGs, and investors** to innovate and expand access to affordable, protein-rich foods. This aligns with the broader goals of **public health, nutritional equity, and sustainable development**. For UPSC aspirants, it reflects a crucial intersection of **health, entrepreneurship, food security, and regulatory governance**, underlining the role of **policy, market, and innovation** in addressing nutritional challenges.

## 2. Chhattisgarh Homestay Policy 2025–30 – Promoting Tribal Tourism and Local Economy

### 1. Launch of Chhattisgarh Homestay Policy 2025–30

- The Chhattisgarh Cabinet, chaired by CM Vishnu Deo Sai, has approved a **Homestay Policy (2025–2030)**.
- Aimed at **promoting tourism in tribal-dominated and rural areas**, particularly in **Bastar and Sarguja**, including regions affected by **Left Wing Extremism (LWE)** or Maoism.



### 2. Objectives and Features of the Policy

- Focuses on creating **homestay experiences** that showcase **tribal culture, art, craft, and rural life**.
- Seeks to **generate livelihood** for local tribal communities through **tourism-based entrepreneurship**.
- Aligns with the **'Vocal for Local'** initiative, encouraging economic self-reliance and community participation in tourism.

### 3. Tourism for Inclusive Development & Internal Security

- Promoting tourism in **Maoism-affected Bastar** is also a **strategic move** to integrate isolated regions into the mainstream economy.
- Development efforts like tourism are seen as **non-military strategies** to counter **Naxalism** by addressing root causes like **poverty, unemployment, and alienation**.

### 4. Economic and Social Significance

- Offers **alternative income sources** to tribal populations, helping reduce migration and dependency on forest-based subsistence.
- Promotes **rural entrepreneurship**, especially among **women and youth**, contributing to **sustainable development and rural empowerment**.





### 5. Legal, Constitutional, and Policy Context

- Aligned with **Article 244** and **Fifth Schedule** of the Constitution, which mandate special provisions for the governance of **Scheduled Areas** (like Bastar & Sarguja).
- Supports the **Directive Principles of State Policy (Article 39 & 43)** which call for promoting cottage industries and securing livelihoods.
- Complements national schemes like:
  - **Swadesh Darshan Scheme** (for thematic tourism)
  - **Dekho Apna Desh**
  - **Tribal Sub-Plan (TSP)** and **Aspirational Districts Programme**

### 6. Definition of Key Terms

- **Homestay**: A tourism model where tourists stay in a local resident's home, experiencing local lifestyle and culture.
- **Vocal for Local**: An initiative encouraging the promotion and use of **local products and services** to strengthen the domestic economy.
- **Scheduled Areas**: Areas with a predominant tribal population governed under **Fifth Schedule** provisions for protection of tribal rights and culture.
- **Left Wing Extremism (LWE)**: Armed insurgency by Maoist groups, primarily active in tribal and forested belts of central and eastern India.

### Conclusion (UPSC Relevance)

- The **Chhattisgarh Homestay Policy 2025–30** is a critical initiative combining **economic development, cultural preservation, and internal security**.
- It reflects the government's approach to **inclusive development in marginalized and conflict-prone areas** through **participatory tourism**.
- For UPSC, it is relevant under topics like **tribal welfare, tourism development, rural economy, decentralized governance, and counter-insurgency strategies through development**.

## 3. New National Policy on Senior Citizens

### 1. Demographic Shift and Policy Need

- A new **National Policy on Senior Citizens** is under draft by the **Ministry of Social Justice and Empowerment**.
- Population projections show a **rapid rise in the elderly population**:
  - **8.23%** in 2011 → **12.16%** by 2026 → **20%** by 2047.
- The policy aims to **reflect India's changing demographic realities** and provide long-term welfare solutions.

**Key Term – Senior Citizens:** As per the **Maintenance and Welfare of Parents and Senior Citizens Act, 2007**, a senior citizen is a person aged 60 years or above.

## 2. Key Areas of Focus in the Draft Policy

- **Digital Inclusion:** Bridging the digital divide to enable access to government services and communication for the elderly.
- **NGO & Civil Society Involvement:** Institutionalising their role in **policy design, implementation, and feedback.**
- **Grievance Redressal:** Dedicated mechanisms to tackle **elder abuse, neglect,** and ensure dignity in ageing.



## 3. Senior Care Infrastructure and Standards

- The policy proposes:
  - Establishing **minimum standards for old age homes** and senior care institutions.
  - Promoting **community engagement** and **intergenerational bonding** to reduce isolation.
  - Creating models of **community-based elder support systems.**

## 4. Ongoing Initiatives Reviewed

- **Rashtriya Vayoshri Yojana (RVY):** Over 5 lakh senior citizens provided with **free assisted living devices** (hearing aids, walking sticks, etc.).
- **Integrated Programme for Senior Citizens (IPSrC):** Supports **senior care services**, including housing, daycare, and healthcare.
- **Senior Citizen Portal:** Focused on **quality monitoring and post-distribution follow-up** of welfare schemes.

## 5. Constitutional & Legal Provisions

- **Directive Principles of State Policy (Article 41):** State shall provide public assistance in old age.
- **Article 15(3):** Allows the State to make special provisions for vulnerable groups including the elderly.
- **MWPSC Act, 2007:** Legal obligation for children/heirs to maintain parents/senior citizens; also enables establishment of old age homes.

## Conclusion

India is undergoing a **silent demographic transition**, with a steadily growing elderly population. A proactive and inclusive **national policy on senior citizens** is vital to address their social security, healthcare, digital access, and emotional well-being. With a rights-based, participatory, and multi-stakeholder approach, the policy can ensure **ageing with dignity** and integrate the elderly into mainstream development planning—essential for achieving **inclusive growth and intergenerational equity** in **Amrit Kaal**.

## 4. Maintaining India's Progress in Food Safety Standards

### Key Summary Points

#### 1. Evolution of Food Safety Framework in India

- India's food safety journey began with the *Prevention of Food Adulteration Act, 1954*, which treated food safety as a binary issue — adulterated or not.
- The paradigm shift came with the *Food Safety and Standards Act (FSSA), 2006*, establishing the **Food Safety and Standards Authority of India (FSSAI)**, which embraced a **risk-based scientific approach**, aligned with *Codex Alimentarius* global standards.
- Introduction of Maximum Residue Limits (MRLs), Acceptable Daily Intake (ADI) values, and safety thresholds for contaminants were key developments.

#### 2. Scientific Challenges in Risk Assessment

- **India lacks India-specific toxicological studies**; most standards rely on global data that may not suit Indian food patterns, agricultural practices, or climate.
- Absence of **Total Diet Studies (TDS)** means India cannot accurately estimate cumulative dietary exposure to various contaminants, weakening the scientific basis for safety norms.

#### 3. Issues in Risk Communication and Public Perception

- Technical jargon like “MRL in ppm” or “ADI in ppb” creates **communication gaps with consumers**, leading to fear or misinformation.
- E.g., when MRL for a pesticide was relaxed from 0.01 mg/kg to 0.1 mg/kg for practicality, it sparked **unfounded public anxiety** over reduced safety.



#### 4. Legacy Regulation and MSG Case Study

- MSG (Monosodium Glutamate), deemed safe globally since 1971 by JECFA (Joint FAO/WHO Expert Committee on Food Additives), is still labelled with **misleading warnings in India**.
- This contradicts scientific consensus, as glutamates occur naturally in foods like tomatoes, garlic, and even breast milk — exposing flaws in legacy regulatory attitudes and poor science communication.

#### 5. Way Forward: Strengthening Scientific and Institutional Capacity

- India must invest in *localized research*, including TDS and toxicological studies.
- Risk communication should be simplified with **transparent, evidence-based labelling and public outreach**.
- FSSAI should continue *capacity-building of food regulators*, adopt periodic reviews, and **engage openly with industry and consumers** to build trust.

## 6. Constitutional and Legal Context

- Article **47 of the Indian Constitution** (Directive Principles of State Policy) mandates the State to raise the level of nutrition and public health.
- Food safety falls under the ambit of *concurrent list*, allowing both Centre and States to legislate on public health and food-related matters.
- The **Food Safety and Standards Act, 2006** is the comprehensive legal framework governing food safety regulation in India.

### Conclusion

India has made significant progress in aligning food safety standards with global benchmarks. However, **sustaining this momentum** requires India-specific scientific studies, improved risk communication, elimination of outdated regulatory approaches, and **greater transparency in public engagement**. Regulatory bodies like FSSAI must balance scientific evidence with public awareness to ensure that consumers are not only **protected** but also **informed and empowered**.

## 5. Poverty to Prosperity: India's Decline in Extreme Poverty

### 1. Defining Extreme and Multidimensional Poverty

- **Extreme Poverty:** Defined by the World Bank as living on less than **\$3 per day (2021 PPP)**. It indicates the inability to meet even basic needs such as food, shelter, and healthcare.
- **Multidimensional Poverty:** A broader concept that includes **non-income deprivations** like lack of education, health, sanitation, and housing.
- These measures provide a **more holistic understanding** of poverty beyond just income metrics.

### 2. Key Findings from the World Bank (2022-23)

- India's **extreme poverty rate** declined sharply from **27.1% in 2011-12** to **5.3% in 2022-23**.
- This equates to **269 million people** escaping extreme poverty in just over a decade.
- The absolute number of extremely poor individuals dropped from **344.47 million** to **75.24 million**.
- **Multidimensional poverty** also saw a significant drop from **53.8% in 2005-06** to **15.5% in 2022-23**, reflecting improvements in social indicators.



### 3. Contributing Factors

- **Government welfare schemes** like MGNREGA, PMAY, Ujjwala Yojana, NFSA, and Ayushman Bharat improved livelihoods and basic service access.
- Economic reforms and **targeted direct benefit transfers (DBT)** reduced income gaps.
- **Digital inclusion**, Jan Dhan-Aadhaar-Mobile (JAM) trinity, and better **data monitoring** have helped direct support to the poor.





- Strong **rural consumption growth** and enhanced **infrastructure access** in marginalized regions have contributed.

#### 4. Constitutional and Legal Framework

- **Article 21** ensures the **Right to Life with Dignity**, which underpins anti-poverty efforts.
- **Directive Principles of State Policy (DPSPs)**, especially **Articles 38, 39, and 41**, mandate the State to reduce inequality and ensure adequate livelihood.
- **National Food Security Act (NFSA), 2013**, is a legal guarantee to food for two-thirds of India's population.

#### 5. The Emerging Challenge: Relative Poverty

- While **extreme poverty is declining**, **relative poverty and inequality** remain challenges.
- Many people above the poverty line still **lead precarious lives** with **limited access** to education, healthcare, and stable employment.
- The need is to **build a large middle class** and **expand domestic demand** to fuel sustainable economic growth.
- Prosperity must be **inclusive and regionally balanced** to prevent disparities.

#### 6. Way Forward

- Focus on **quality education, skilling, employment generation, and social protection** to uplift the vulnerable.
- Use poverty eradication as both a **humanitarian obligation** and a **strategic economic goal**.
- Strengthen **urban social safety nets** and address **inter-state and inter-caste disparities**.

#### Conclusion

India's transformation from poverty to prosperity reflects a decade of impactful policy measures, economic reforms, and improved governance. However, the task ahead is to ensure **equitable development** that not only eliminates extreme poverty but also **lifts millions into economic security and dignity**. A **resilient and broad-based middle class** is essential—not only for ethical reasons but also for sustaining long-term national growth.

### 6. India's Population Trends: Key Highlights from UNFPA's "State of the World Population 2025"

#### Key Highlights:

##### 1. Population Milestone & Future Peak:

- India's estimated population reached **146.39 crore (1.4639 billion)** by April 2025, surpassing China (141.61 crore).
- Population is projected to **peak at 170 crore around 2065**, after which a decline is expected.
- This aligns with **Technical Group projections (2019)** and highlights India as the **world's most populous nation**.

##### 2. Total Fertility Rate (TFR) Decline:

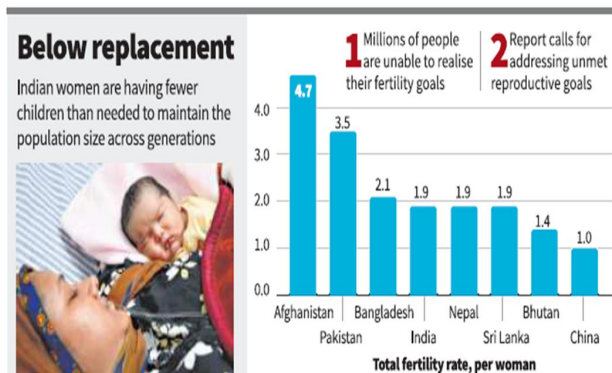
- India's **TFR has dropped to 1.9**, below the **replacement level of 2.1**.

- According to the **Sample Registration System (2021)**, the TFR had already reached 2.0 nationally.
- **Replacement-level fertility** means that each generation replaces itself without growth or decline in population in the long run.

### 3. Demographic Structure – Youth & Elderly:

- Youth population remains significant:
  - **0–14 years: 24%,**
  - **10–19 years: 17%,**
  - **10–24 years: 26%.**
- **Working-age population (15–64 years)** constitutes **68%**, offering a **demographic dividend** window.
- Elderly (65+ years) at **7%**, expected to grow with improved **life expectancy** (71 years for men, 74 for women).

### 4. Delayed Census & Data Gap:



- The **2021 Census** is delayed; now scheduled to be completed by **March 2027**.

- The last completed Census was in **2011**, creating a data vacuum during a period of demographic transition.

### 5. Fertility Autonomy & Reproductive Rights:

- UNFPA highlights the “**real fertility crisis**” as the **gap between desired and actual fertility outcomes**.

- Emphasizes **reproductive agency** — the ability to freely choose about **sex, contraception, and childbirth**.
- Advocates shift from **population control narrative** to **rights-based reproductive policies**.

### Conceptual & Legal Linkages:

- **Article 21 (Right to Life and Personal Liberty):** Implies **reproductive rights** as part of personal autonomy.
- **National Population Policy (2000):** Advocates for **voluntary and informed choice** in family planning.
- **Sustainable Development Goal (SDG) 3.7:** Aims to ensure **universal access to sexual and reproductive health-care services**.

### Conclusion:

India is transitioning from a high to a **replacement-level fertility regime**, and the current demographic phase offers **critical opportunities** and **policy challenges**. The focus must now shift from population control to ensuring **reproductive rights, healthcare infrastructure, and social security** for a growing elderly population. Timely and **granular Census data**, along with **empowered reproductive choices**, will be crucial for designing inclusive population policies in the 21st century.



## 7. Recounting Velpur's Story in Ending Child Labour – A Model for Social Reform

### 1. Context: World Day Against Child Labour & Global Scenario

- **June 12** is observed as **World Day Against Child Labour (WDACL)** under the **International Labour Organization (ILO)**.
- The objective is to unite stakeholders—governments, employers, civil society—to eradicate child labour globally.
- As per **SDG Target 8.7**, the world is committed to ending all forms of child labour by **2025**; however, **160 million children** globally are still affected, with **Africa, Asia, and Pacific** accounting for 90% of the cases.
- **COVID-19 pandemic** worsened the situation by pushing many children out of school and into labour.

### 2. Child Labour in India: Data and Legislative Framework

- As per **Census 2011**, **43.53 lakh children** (5–14 years) in India were engaged in labour, especially in **beedi, carpet weaving, and fireworks industries**.
- Major laws and policies:
  - **Child Labour (Prohibition and Regulation) Act, 1986**: Regulated employment of children in certain occupations.
  - **Child Labour (Prohibition and Regulation) Amendment Act, 2016**: Prohibited employment of children under 14 and adolescents (14–18) in hazardous occupations.
  - **Right to Education (Article 21A)**: Mandates free and compulsory education for children aged 6–14.
  - **National Child Labour Project (NCLP)**: Provides for rehabilitation and education through bridge schools in high-incidence areas.
  - **Andhra Pradesh Compulsory Primary Education Rules, 1982**: Used as a legal basis in Velpur's campaign.

### 3. Velpur Mandal Success Story (Telangana)

- Once notorious for child labour, **Velpur (Nizamabad district)** was declared **child labour free** on **October 2, 2001**, after a **100-day community-led campaign**.
- Strategies used:
  - Enrolment drives for out-of-school children.
  - Community sensitisation through **public meetings** and **school enrolment campaigns**.
  - **Bridge schools under NCLP** provided transitional education for former child workers.
  - Former employers **wrote off ₹35 lakh in informal debts**, ending bonded child labour.
  - Villages erected boards stating: *"There is no child labour in our village."*

### 4. Community Participation & Policy Innovation

- Local leadership by **sarpanchs, district officials, and teachers** was instrumental.



- **MoUs** signed between sarpanchs and the government ensured accountability for universal school enrolment.
- The model was unique for transforming resistance into **public ownership**, creating a **sustained people's movement**.
- Honoured by **ILO, VVGNI, NHRC**, and even appreciated by **President A.P.J. Abdul Kalam**.
- **Parliamentary Standing Committee on Labour** acknowledged Velpur as a replicable model and invited presentations.

### 5. Legal & Constitutional Relevance

- **Article 24** of the Indian Constitution prohibits employment of children below 14 in hazardous industries.
- **Article 21A (RTE)** makes education a fundamental right for 6–14 years.
- Velpur's model aligns with the spirit of these constitutional guarantees, ensuring education as a tool for **eliminating exploitation**.

### 6. Replication & National Significance

- Velpur's model is now part of training programmes by the **VVGNI** under the Ministry of Labour & Employment.
- Serves as a **case study in grassroots governance, inter-sectoral collaboration, and rights-based policy implementation**.



### Conclusion

The **Velpur model** of eradicating child labour exemplifies how **community ownership, legal backing, and sustained administrative will** can create lasting social change. For UPSC aspirants, it highlights the importance of **policy implementation, participatory governance, and ethical public administration** in tackling complex issues like child labour. This case serves as a replicable model for **SDG implementation** and reflects the power of local action in achieving national goals.

## 8. Rising Trend of Violent Crimes by Juveniles in India

### 1. Context and Definition

- **Juvenile** refers to a person below the age of 18 years as per the **Juvenile Justice (Care and Protection of Children) Act, 2015**.
- **Violent crimes** include **rape, murder, attempted murder, grievous hurt, dacoity, robbery, arson**, etc.  
Non-violent offences like theft, rash driving, cheating, and public nuisance are excluded from this analysis.
- The issue of juvenile involvement in violent crimes is gaining prominence globally and in India due to **changing adolescent behaviour, cyberbullying, and toxic online cultures**.

### 2. Rising Trend in India: Key Statistics

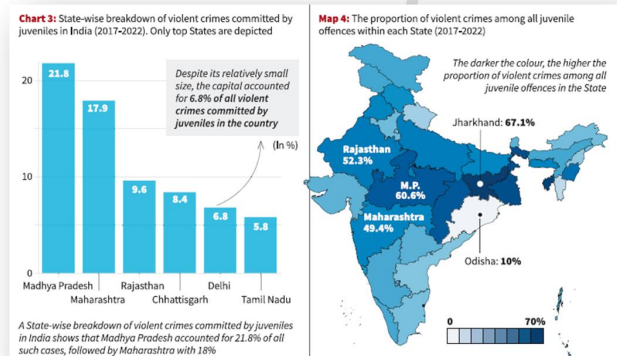




- Although the total number of **juveniles in conflict with the law** fell from **37,402 (2017)** to **33,261 (2022)**, the **share of violent offences rose sharply**.
  - In **2016**, **32.5%** of juveniles apprehended were for violent crimes.
  - By **2022**, this rose to **49.5%** — almost **half**.
- Recent cases:
  - A 13-year-old stabbed a 15-year-old in **Hubli, Karnataka**.
  - A group of **minors involved in sexual assault in Chennai**.

### 3. State-wise Analysis

- **Madhya Pradesh (21.8%)** accounted for the highest number of juvenile violent crimes (2017–2022), followed by:
  - **Maharashtra (18%)**
  - **Rajasthan (9.6%)**
  - **Chhattisgarh (8.4%)**
  - **Tamil Nadu (5.8%)**
- **Delhi**, despite its size, accounted for **6.8%**, possibly due to better reporting and policing.



### 4. Violent Crimes as Proportion of Total Juvenile Offences (2017–2022)

- **Jharkhand** had the **highest proportion** of violent crimes among juveniles (**67%**).
- Other high-ranking states:
  - **Tripura, West Bengal, Chhattisgarh, Madhya Pradesh** (each over 60%)
- Contrastingly, **Odisha** reported only **10%** of juvenile crimes as violent, an exception in eastern India.

### 5. Legal and Institutional Framework

- **Juvenile Justice (Care and Protection of Children) Act, 2015:**
  - Allows juveniles aged **16–18** to be tried as adults for heinous crimes after assessment by the **Juvenile Justice Board (JJB)**.
- **National Commission for Protection of Child Rights (NCPCR)** monitors juvenile justice implementation.
- **Article 15(3)** and **Article 39(e & f)** of the **Indian Constitution** urge the State to protect children from abuse and ensure opportunities for development.
- India is a signatory to the **UN Convention on the Rights of the Child (UNCRC)**, which mandates child protection from all forms of violence.

### 6. Possible Causes and Concerns

- Increased exposure to **violence in media**, **online misogyny**, and **digital radicalisation**.
- **Family dysfunction**, **economic distress**, and **peer pressure** are contributing factors.
- Lack of access to **mental health services** and **counselling** in schools and juvenile homes.

## Conclusion

The rising trend of violent crimes among juveniles in India signals a deep-rooted **societal and institutional failure** in early intervention, education, and rehabilitation.

There is an urgent need for a **multi-pronged approach** that includes:

- **Strengthening family and community-based interventions.**
- **Upgrading juvenile justice infrastructure** with psychological and behavioral experts.
- **Targeted policies** in violence-prone states.

This issue must be addressed within the broader framework of **child rights protection** and **constitutional guarantees**, to prevent the alienation and criminalization of vulnerable adolescents.

## 9. Falling Fertility Rate in India and the Need for Accelerated Gender Justice

### 1. Current Fertility Trends in India

- **Total Fertility Rate (TFR)** is the average number of children a woman is expected to have in her lifetime.
- As per the **UN State of World Population Report 2025**, India's **TFR has fallen to 1.9**, below the replacement level of 2.1.
- The **National Family Health Survey (NFHS-5)** (2019–21) had earlier recorded TFR at **2.0**, indicating a continuing downward trend.
- There is **wide regional variation** in TFR across Indian states due to differing socio-economic and cultural factors.

### 2. Core Concern: Reproductive Rights and Gender Equality

- The UN emphasizes that the real **fertility crisis** lies not in population explosion or implosion, but in **unrealized reproductive rights**.
- **Reproductive agency** involves a woman's ability to make informed choices regarding childbearing, influenced by societal norms, gender roles, and autonomy.
- In many societies, including India, **gender inequality** limits women's decision-making power on reproductive and domestic issues.

### 3. Global Context and Lessons from South Korea

- South Korea's TFR has **plummeted to 0.8**, one of the lowest in the world, despite being a developed nation.
- Korean women are increasingly **rejecting motherhood and marriage** in protest against **gender-unequal roles**, lack of **childcare support**, and financial insecurity.
- This suggests that **economic growth alone does not guarantee reproductive freedom or gender justice**.





#### 4. Gender Dynamics in India

- In India, professional success among women often depends on **outsourcing domestic responsibilities** to lower-income women.
- As **economic upliftment** spreads, domestic help will become **unaffordable**, making the current model unsustainable.
- Without **structural changes in gender roles within households**, India may face a **fertility crisis similar to South Korea** in the future.

#### 5. Constitutional and Legal Provisions

- **Article 15(3)** allows the State to make special provisions for women and children.
- **Article 42** directs the State to ensure **just and humane conditions of work and maternity relief**.
- **National Population Policy (2000)** emphasizes voluntary and informed choice, reproductive health services, and women's empowerment.
- **Sustainable Development Goal (SDG) 5** focuses on achieving **gender equality and empowering all women and girls**.

#### 6. Key Issues and Way Forward

- India must **prioritize gender-equitable social reforms** to ensure shared domestic responsibilities and strengthen **childcare infrastructure**.
- **Awareness, legal safeguards, education, and economic participation** are essential to ensure **reproductive autonomy and equity at home**.
- Redesigning **family systems**, removing **patriarchal practices**, and embedding **inclusive social norms** are critical.

#### Conclusion

India's declining fertility rate signals both **progress in population stabilization** and a **challenge of deep-rooted gender injustice**.

To avoid the social pitfalls seen in countries like South Korea, **gender equality must become a foundational pillar** of national policy.

This includes promoting **reproductive rights**, ensuring **economic security**, and **dismantling regressive domestic norms**—only then can India's demographic transition be truly inclusive and sustainable.

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## 10. Yoga Connect 2025: Strengthening India's Global Leadership in Holistic Wellness

### 1. Global Yoga Connect 2025: A Hybrid Wellness Summit

- **Yoga Connect 2025**, organized by **Ministry of Ayush** and **CCRYN** at **Vigyan Bhawan, Delhi**, is a major initiative leading to **11th International Day of Yoga (IDY)** on **June 21, 2025**.
- Theme: **"Yoga for One Earth, One Health"**, aligning with India's **LiFE Mission (Lifestyle for Environment)** and **Global Wellness Diplomacy**.



### 2. Key Initiatives and Reports Launched

- Launch of key reports:
  - **"Yoga Prabhava"** – Decade-long impact assessment of IDY.
  - **"Surveykshan"** – Yoga's national reach.
  - **Scientometric study** on global Yoga research by **Pahle India Foundation & CCYN**.
  - E-book – *"IDY: The Yogic Path of a Statesman's Vision"*.
- 6 special sessions held on **Yoga's impact on NCDs, women's health, Yoga Tech, and industrial-commercial opportunities**.

### 3. Yoga as Preventive and Curative Healthcare

- Union Ayush Minister **Shri Prataprao Jadhav** emphasized Yoga's scientifically proven benefits in:
  - **Managing diabetes, cardiovascular health, elderly care, and post-cancer recovery**.
  - **Skill development and employability** in India's growing **wellness economy**.
- **Yoga Anushasan** (discipline of body-mind) projected as vital for national development.

### 4. Yoga: From Individual Practice to National Ethos

- Union Culture Minister **Gajendra Singh Shekhawat** described Yoga as a journey from **Chiti (individual consciousness)** to **Rashtrachiti (national consciousness)**.
- Spiritual leaders like **Swami Ramdev** and **Dr. Hansaji Yogendra** reiterated that:
  - Yoga is not just an exercise but a **holistic lifestyle**.
  - Each chapter of the **Bhagavad Gita** represents a form of Yoga.
  - India's global cultural leadership is growing through Yoga diplomacy.

### 5. Constitutional, Cultural, and Global Relevance

- Supports **Article 47** (duty of state to improve public health), and **Article 51A(f)** (value and preserve composite culture).
- Aids **UN SDG Goal 3 – Good Health and Well-being**.





- Reinforces India's **soft power** and its role in **health diplomacy**, **spiritual tourism**, and **global cultural leadership**.

## 6. Conclusion

**Yoga Connect 2025** is not just a countdown to **IDY 2025**, but a **transformational movement** that blends spiritual insight, scientific research, and policy innovation. It positions India as a **vishwa guru (global guide)** in health, wellness, and sustainable living. As urged by Ayush Ministry, yoga should be adopted *not just as a one-day event, but as a lifelong discipline for both personal and planetary healing*.

## 11. Challenges in Organ Transplantation in India – Ministry of Health Report (June 2024)

### 1. Organ Transplantation Hampered by Infrastructure Deficiency

- A report by the **Union Ministry of Health and Family Welfare** (June 19, 2024) highlights **critical gaps** in India's organ transplantation programme.
- Government hospitals face **inadequate ICU beds**, **lack of dedicated transplant operation theatres (OTs)**, and **non-availability of Transplant ICUs (TICUs)** needed to preserve brain-dead donors.

### 2. Skilled Manpower & Laboratory Shortages

- There is a **serious scarcity of trained transplant surgeons, intensivists, anaesthetists, and nephrologists** in government hospitals.
- Many institutions, including **several AIIMS centres**, **lack in-house HLA cross-matching labs**, delaying transplants due to reliance on external labs.

### 3. Low Capacity vs High Demand

- Only **13,476 kidney transplants** were conducted across all hospitals in 2023–24, against the **estimated requirement of 1 lakh**.
- The existing capacity of public sector hospitals is **inadequate**, and the **creation of new transplant centres** is urgently needed.

### 4. Procedural Bottlenecks and Legal Delays

- Delays in forming **Brain-Stem Death (BSD) Committees** and handling **medico-legal cases** involving trauma patients (a major donor pool) have emerged as major obstacles.
- **Formal approvals** and legal clearances required for deceased donation are cumbersome and slow.

### 5. Financial Constraints and Burden on Patients

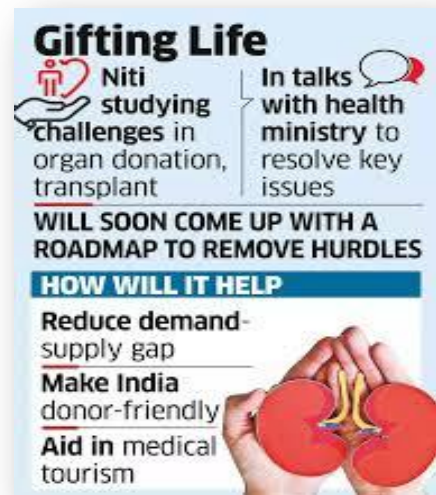
- **High cost of lifelong immunosuppressant drugs**, essential post-transplant, is not fully covered under public schemes.
- **Liver and heart transplants**, and associated post-operative care costs, are **not yet included** under **Ayushman Bharat–PMJAY**, leading to significant financial strain.
- **Inadequate funding for advanced transplant programmes** (e.g., lung transplant) and **no formal incentives** for transplant teams have also been flagged.

### Key Definitions & Constitutional Provisions

- **Organ Transplantation:** Medical procedure in which an organ is removed from one body and placed in another to replace a damaged or missing organ.



- **National Organ and Tissue Transplant Organisation (NOTTO):** Apex body under Ministry of Health for regulation and promotion of organ donation and transplantation.
- **Legal Framework:**
  - **Transplantation of Human Organs and Tissues Act, 1994** – Regulates organ donation and transplantation.
  - **Right to Health** (implicit under Article 21 – Right to Life) requires State to ensure availability of life-saving procedures like transplants.
  - **Ayushman Bharat PM-JAY:** Centrally sponsored health insurance scheme for the poor, but does not fully cover major transplant-related expenses yet.



### Conclusion

India's organ transplant ecosystem faces **systemic challenges** ranging from **infrastructure shortages**, **manpower gaps**, to **funding constraints**. The Health Ministry's report rightly calls for a **comprehensive inclusion of organ transplant procedures and post-operative care** under Ayushman Bharat PM-JAY, and **capacity-building at government hospitals**. For a nation of India's size, a **robust, equitable, and efficient transplant programme** is essential to achieve the constitutional mandate of **Right to Life with dignity and access to healthcare**.

## SECURITY & RELATED EVENTS

### 1. India's Tactical Response and Military Advantage After May 7 Air Conflict

#### 1. Operation Sindoor and Initial Setbacks

- India launched **Operation Sindoor** in retaliation for the **Pahalgam terror attack**, which saw 26 civilians killed after religious profiling.
- Chief of Defence Staff (CDS) General Anil Chauhan confirmed "**losses in the air**" on May 7 but emphasized that India **rectified tactical errors** swiftly.
- These air losses mark one of the rare official acknowledgments of such incidents in Indo-Pak conflict narratives.

#### 2. Rectification of Tactics and Deep Strikes

- General Chauhan stated that after initial setbacks, the Indian Air Force (IAF) changed tactics and conducted **precision strikes deep into Pakistan** on May 8 and 10.
- These strikes reportedly penetrated **Pakistani air defences with impunity**, showcasing India's advanced operational capability.



- Indian jets used **various platforms and ordnance types**, indicating full-spectrum air operations.

### 3. Disputed Claims by Pakistan and Rebuttal by India

- Pakistan claimed to have downed **six Indian fighter jets**, including three Rafales.
- General Chauhan called these claims **“absolutely incorrect”**, and emphasized that focusing on rectifying tactical flaws was more critical than confirming losses.
- Indian authorities consistently refused to specify numbers, although all IAF pilots reportedly returned safely.



### 4. China-Pakistan Defence Nexus

- CDS Chauhan highlighted that **80% of Pakistan’s recent military equipment is sourced from China**, with ongoing **OEM (Original Equipment Manufacturer) support** for maintenance and upgrades.
- This underscores concerns over the **strategic China-Pakistan military partnership**, relevant to India's regional security calculus.

### 5. Avoidance of Nuclear Escalation and Diplomacy

- Despite the intensity of the conflict, both sides stated that there was **no risk of nuclear war**.
- Pakistan’s CJCSC General Shamshad Mirza confirmed that **military de-escalation** following the ceasefire agreement on May 10 was nearly complete.
- The **Shangri-La Dialogue** served as a platform for parallel diplomatic engagement.

### 6. Constitutional and Legal Context

- **Defence of India Act, 1971**, and related rules provide the legal basis for wartime and national security responses.
- **Article 355 of the Indian Constitution** empowers the Union to protect states from external aggression and internal disturbances.
- India’s counter-terror operations are also backed by **UN Charter provisions under the right to self-defence (Article 51)**.

### Key Definitions for UPSC

- **CDS (Chief of Defence Staff):** Principal military advisor to the Government of India, overseeing tri-service coordination.
- **OEM Support:** Manufacturer assistance provided for complex military systems, often in foreign defence collaborations.
- **Precision Strike:** A military attack aimed at a specific target to minimize collateral damage while achieving strategic goals.

## Conclusion

India's response to the Pahalgam terror attack, despite initial tactical errors, demonstrated operational agility and strategic depth through **Operation Sindoor**. The swift correction in air tactics, coupled with deep strikes and diplomatic messaging, reinforced India's conventional deterrence against Pakistan. The episode also brings attention to **China's role in equipping Pakistan**, highlighting the evolving dynamics of **regional security and defence diplomacy** — a crucial topic for civil service aspirants.

## 2. India to Receive Remaining S-400 Missile Systems by 2026

### 1. S-400 Air Defence System: Definition and Importance

- The **S-400 Triumf** is a **long-range surface-to-air missile system** developed by **Russia's Almaz Central Design Bureau**, capable of neutralizing aircraft, UAVs, cruise and ballistic missiles at a range of up to **400 km** and altitude of **30 km**.
- It is considered one of the **most advanced air defence systems globally**, significantly enhancing **India's strategic deterrence and airspace security**.

### 2. Status of Delivery and Strategic Relevance

- As per **Russia's Deputy Chief of Mission in India, Roman Babushkin**, the **remaining units of the S-400** will be delivered by **2025–26**.
- The system has reportedly **performed effectively during India-Pakistan tensions**, reinforcing its operational reliability and India's defence preparedness.

### 3. India-Russia Defence Ties

- India signed a **\$5.43 billion deal in 2018** for **five S-400 units** under the framework of the **India-Russia Inter-Governmental Agreement (IGA)**.
- The S-400 deal is emblematic of **India's strong defence ties with Russia**, which spans across **fighter aircraft, submarines, tanks, and nuclear cooperation**.
- Russia has shown interest in **expanding bilateral defence cooperation**, including in **joint production and technology transfer**.

### 4. Geopolitical and Strategic Concerns

- The deal has **geo-strategic implications**, particularly concerning the **U.S. Countering America's Adversaries Through Sanctions Act (CAATSA)**, which threatens sanctions on countries dealing with Russia's defence sector.
- However, India has pursued **strategic autonomy in foreign policy**, balancing ties with both Russia and the U.S. under its **multi-alignment approach**.



### 5. Constitutional & Policy Linkages

- **Article 51** of the Indian Constitution urges the state to promote international peace and security, which indirectly underscores the need for **credible national defence** to preserve sovereignty.





- The acquisition aligns with the goals of the **Defence Acquisition Procedure (DAP)** and India's efforts toward building a **comprehensive national security architecture**.

#### 6. National Security and Indigenization Goals

- While the S-400 is an import, it complements indigenous efforts under '**Aatmanirbhar Bharat**' and **DRDO-led projects** like the **Ballistic Missile Defence (BMD)** system.
- India is also aiming to reduce dependence on imports through the development of **local air defence systems** like **Akash-NG**.

#### Conclusion

The timely completion of the S-400 delivery by 2026 will significantly **boost India's air defence capabilities**, especially amid regional threats from **China and Pakistan**. The deal symbolizes **strong India-Russia defence cooperation**, while also testing India's ability to **balance strategic partnerships** in a multipolar world. Going forward, synergy between **imported high-tech systems and indigenous development** will be key to achieving a **self-reliant and secure India**.

### 3. Indian Navy Commissions 'Arnala' – First in Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) Series

#### Key Highlights

##### 1. Strategic Induction into Indian Navy

- '**Arnala**', the **first Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)**, will be commissioned on **18 June 2025** at Visakhapatnam.
- It is the **first of 16 planned ships** under the ASW-SWC project aimed at strengthening India's coastal defence.
- The commissioning ceremony will be led by **Chief of Defence Staff Gen Anil Chauhan** and other senior naval officials.

##### 2. Indigenous Development under Aatmanirbhar Bharat

- Arnala is a product of **Public-Private Partnership (PPP)** between **Garden Reach Shipbuilders & Engineers (GRSE)** and **L&T Shipbuilders**, under the **Directorate of Ship Production**.
- Over **80% of the ship's content is indigenous**, involving key defence firms like **BEL, L&T, Mahindra Defence**, and **MEIL**.
- The project has empowered **55+ MSMEs**, promoting defence industrialisation and local economic activity.

##### 3. Advanced Capabilities & Strategic Features

- Arnala is **77.6 metres long**, weighs **1490+ tonnes**, and is India's largest naval warship using a **Diesel Engine-Waterjet propulsion system**.
- It is equipped for **anti-submarine warfare (ASW)**, **subsurface surveillance**, **search & rescue (SAR)**, and **low-intensity maritime operations (LIMO)**.

- Its design enables operations in **shallow waters**, making it ideal for securing India's **coastal zones** and **island territories**.

#### 4. Cultural and Historical Significance

- Named after the **Arnala Fort** off Vasai, Maharashtra, symbolising India's **maritime legacy** and resistance against invaders.
- This naming convention reinforces India's focus on **heritage-driven defence symbolism** and national pride.



#### 5. Constitutional, Strategic & Policy Context

- Falls within India's **Article 51(c)** mandate on fostering international peace and security, and **Article 73**, empowering the Union on defence.
  - The ASW-SWC series supports the **Indian Maritime Security Strategy (IMSS)** and **Sagarmala Project**, enhancing security in the **Indian Ocean Region (IOR)**.
  - Aligned with **Defence Acquisition Procedure (DAP) 2020**, promoting self-reliance and indigenous manufacturing under **Aatmanirbhar Bharat Abhiyan**.
6. **Prelims Tip:** INS Arnala is the first ASW-SWC built under PPP between GRSE and L&T; over 80% indigenous content.  
**Mains Angle:** Evaluate the role of public-private partnerships and Aatmanirbhar Bharat in strengthening India's maritime security.

#### Key Definitions

- **ASW (Anti-Submarine Warfare):** Naval operations designed to detect, track, and neutralize enemy submarines.
- **Shallow Water Craft (SWC):** Warships designed for operations in shallow coastal waters with agility and stealth.
- **Public-Private Partnership (PPP):** A model involving collaboration between government and private industry for public infrastructure or service delivery.
- **Aatmanirbhar Bharat:** A self-reliance campaign launched in 2020 to boost indigenous innovation, especially in defence and strategic sectors.

#### Conclusion

The commissioning of **INS Arnala** signifies a **critical leap in India's coastal and undersea warfare capabilities**, integrating indigenous technology with modern warfare needs. It showcases India's transition from defence import dependence to **domestic defence innovation**, strengthens **coastal security**, and enhances India's **strategic autonomy in the Indian Ocean Region (IOR)**. The Arnala-class reflects the synthesis of **heritage, modern science, and self-reliance**, aligning with national security and economic goals.

## 4. Defence Production in India Receives a Fillip

### 1. Rising Indigenous Defence Manufacturing and Exports

- India's defence production reached a record **₹1.3 lakh crore in FY24**, growing at **17%** over the previous year. This marks the **second consecutive year** of production crossing ₹1 lakh crore.
- Exports** also exceeded **₹20,000 crores for two consecutive years**, with a current target of **₹30,000 crores in FY25**, doubling pre-FY20 levels.

### 2. Boost from Operation Sindoor and Market Response

- Operation Sindoor**, India's recent cross-border military operation, significantly improved investor confidence in the defence sector.
- Defence company stocks** outperformed the Nifty50 index post-operation—**rising 21%** in a single week (vs Nifty50's 3.1%).

### 3. Greater Role of Private Sector and MSMEs

- Private defence firms, such as **Paras Defence** and others, now account for **~24% of total defence production** in FY25, up from **20% in FY17–FY24**.
- Private players lead in defence exports**, holding a larger share due to export authorisations.
- MSMEs** have expanded their role, with public procurement from them exceeding ₹13,000 crore in FY25—**double the target**. This is a significant leap from ₹3,000 crore between FY18–FY20.

### 4. Key Definitions and Concepts

- Defence Production:** Manufacturing of weapons, systems, platforms, and accessories for military use.
- MSMEs:** Micro, Small, and Medium Enterprises—key suppliers in India's defence value chain.
- Export Authorisations:** Approvals required for companies to export defence-related items internationally.

### 5. Challenges and Structural Concerns

- Despite impressive figures, **India still imports a major share** of its high-end defence equipment.
- The **share of defence in overall government expenditure is declining**, raising concerns about long-term prioritisation and sustainability.
- Limited R&D, technological dependency**, and the need for ecosystem-level reforms continue to be key bottlenecks.

### 6. Constitutional & Policy Backing

- Article 51(c)** promotes international peace and security—defence production aligns with national interest and strategic autonomy.
- Make in India & Atmanirbhar Bharat Abhiyan** have pushed indigenous manufacturing.





- The **Defence Acquisition Procedure (DAP) 2020** encourages procurement from Indian vendors, including MSMEs.
- **Offset Policy** aims to attract foreign investment and technology in defence manufacturing.

### Conclusion

India's defence production landscape is **transforming**, with rising indigenous output, increased exports, and greater participation by private firms and MSMEs. While recent military actions and market performance have provided a **momentum boost**, structural challenges such as **import dependency, innovation gaps, and declining budgetary share** remain. To achieve **true strategic autonomy**, India must foster a robust defence industrial base backed by consistent policy, fiscal support, and technological upgradation.

## 5. India–Mongolia Joint Military Exercise: Nomadic Elephant

### 1. Overview of the Joint Exercise

- India and Mongolia are conducting the **17th edition of the bilateral military exercise 'Nomadic Elephant'** from **May 31 to June 13, 2025**, at the **Special Forces Training Centre, Mongolia**.
- The exercise aims to **enhance interoperability**, share **best practices in counter-terrorism and precision sniping**, and build mutual capability for joint operations.

### 2. Key Objectives and Focus Areas

- The exercise is focused on **non-conventional operations** in **semi-urban and mountainous terrain**, under **United Nations mandates**.
- It simulates **UN peacekeeping operations**, reflecting **real-world multinational cooperation scenarios** in complex environments.
- Special attention is given to **training for contemporary security threats**, such as terrorism and asymmetric warfare.

### 3. Strategic and Diplomatic Significance

- The exercise is a **symbol of growing defence cooperation** between India and Mongolia, a **landlocked democracy in East-Central Asia**, important in India's **Act East Policy** and **Indo-Pacific strategy**.
- It strengthens **bilateral ties**, boosts **regional security**, and supports India's aim to be a **net security provider** in Asia.

### 4. Constitutional and Legal Backing

- Defence and international relations are covered under the **Union List (List I) of the Seventh Schedule** of the Indian Constitution.
- The conduct of foreign military exercises is part of India's **external sovereignty** and is overseen by the **Ministry of Defence** and **Ministry of External Affairs**.

### 5. Key Definitions for UPSC

- **Interoperability**: The ability of different military forces to operate together efficiently in joint operations.







- **UN Peacekeeping Operations:** Missions led by the UN to help countries navigate the difficult path from conflict to peace.
- **Non-conventional Warfare:** Military operations involving irregular tactics, often including guerrilla warfare, terrorism, and cyber threats.

#### 6. India's Broader Military Diplomacy

- Exercises like **Nomadic Elephant**, **Yudh Abhyas (with the U.S.)**, and **Hand-in-Hand (with China)** are part of India's **military diplomacy**.
- These enhance **tactical synergy**, **cultural understanding**, and **global peacekeeping readiness**.
- Mongolia, located between China and Russia, offers a **strategic partnership** without geopolitical encumbrances.

#### Conclusion

The **India–Mongolia ‘Nomadic Elephant’ exercise** is a critical pillar of **India's defence cooperation and strategic outreach**. It not only boosts **military capabilities and coordination** in hostile terrains but also strengthens India's **role in UN peacekeeping and regional security frameworks**. Such initiatives reflect India's evolving position as a responsible global actor committed to **peace, security, and multilateral collaboration**.

## 6. Government Targets ₹3 Trillion Defence Exports by 2029

#### Key Highlights:

##### 1. Defence Export Target of ₹3 Trillion by 2029:

- The **Government of India** has set an ambitious target of achieving **₹3 trillion in defence exports** by the year **2029**.
- This move aligns with India's vision to emerge as a **global defence manufacturing hub** under the **Atmanirbhar Bharat Abhiyan**.

##### 2. Shift from Importer to Exporter:

- Historically known as one of the **largest importers** of defence equipment, India is now **exporting to over 92 countries**, signaling a strategic shift in its defence posture.
- This transformation is credited to reforms and **policy initiatives led by Prime Minister Narendra Modi's government**, fostering indigenous defence production.



##### 3. Major Policy Measures Driving Exports:

- **Defence Production and Export Promotion Policy (DPEPP) 2020:** Aims to achieve self-reliance and expand exports.
- **Positive Indigenization Lists:** Banning imports of certain weapons/platforms to encourage domestic industry.



- **Simplification of export licensing process** and **faster clearances** for Indian defence manufacturers.

#### 4. Key Constitutional and Legal Provisions:

- **Entry 7, Union List, Seventh Schedule** – Defence falls under the exclusive legislative and executive jurisdiction of the Union.
- Governed by laws like the **Arms Act, 1959**, and the **Defence Acquisition Procedure (DAP)**.
- **Strategic Partnership Policy (SPP)** promotes private sector participation in defence manufacturing.

#### 5. Geopolitical and Strategic Significance:

- Expanding exports strengthen India's **soft power**, **strategic alliances**, and **global defence footprint**.
- Enhances defence ties with **Southeast Asia**, **Africa**, **Middle East**, and **South America**.
- Supports India's aspiration to become a **net security provider** in the Indian Ocean Region (IOR).

#### Definitions for Conceptual Clarity:

- **Defence Exports:** Sale or transfer of military goods, systems, and technologies produced domestically to other countries.
- **Atmanirbhar Bharat:** A national mission aimed at making India self-reliant across sectors, including defence, by promoting domestic production and reducing imports.

#### Additional Key Points:

- India's defence exports rose from **₹1,521 crore in 2016–17** to over **₹21,000 crore in 2023–24**, reflecting rapid growth.
- Public sector undertakings (like HAL, BEL) and private players (like L&T, Bharat Forge) are key contributors.
- Exported items include **missiles**, **radars**, **light helicopters**, **surveillance systems**, and **artillery guns**.

#### Conclusion:

India's target of ₹3 trillion defence exports by 2029 marks a **paradigm shifts in national defense strategy**. It reflects a concerted effort to boost **indigenous manufacturing**, enhance **strategic autonomy**, and expand India's influence in the global arms market. For UPSC aspirants, this development is relevant under **GS Paper 2 (Governance & International Relations)** and **GS Paper 3 (Security & Economy)**, showcasing India's rise as a **defence exporter and strategic power**.

## 7. India's Nuclear Arsenal Grows: Strategic Position Amid China-Pakistan Dynamics

### 1. India's Nuclear Arsenal – Comparative Update

- As per the **Stockholm International Peace Research Institute (SIPRI)** Yearbook (2025):
  - India** possesses **180 nuclear warheads** (up from 172 in 2024).
  - Pakistan** remains static at **170 warheads**.
  - China** has significantly expanded its arsenal to **600 warheads** (up from 500 in 2024), showing rapid modernization.

### 2. Strategic Significance: Nuclear Triad & Deterrence

- India is enhancing its **nuclear triad** (ability to launch nuclear weapons by **land, air, and sea**).
- INS Arighaat**, India's second nuclear-powered ballistic missile submarine (SSBN), was commissioned in 2024.
- India is developing **four to six SSBNs**, with **Aridaman (S-4)** set for commissioning in 2026.
- This enables **credible minimum deterrence** and strengthens second-strike capability.

### 3. Shift Toward Operational Readiness

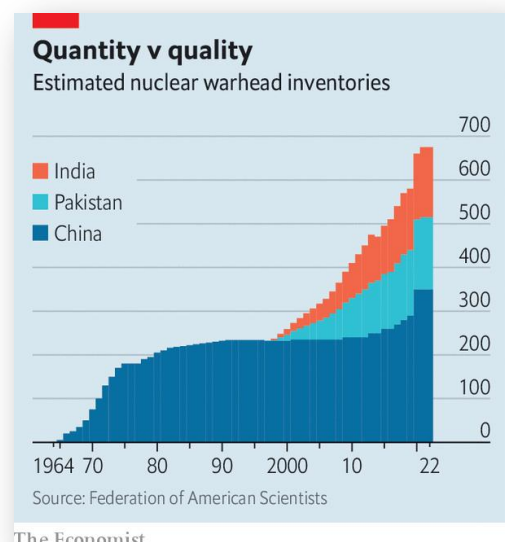
- India may be moving toward **mating some warheads with launchers** (keeping them ready for quick deployment), especially through **canisterized missiles** and **sea-based deterrence patrols**.
- Traditionally, India has kept **warheads de-mated** in peacetime, following its **no first use (NFU)** policy.

### 4. Broader Context: Regional Security

- India's nuclear development comes amid:
  - Tensions post-**Pahalgam terror attack** (April 2025) that led to **Operation Sindoor**, involving strikes on Pakistan and PoK.
  - China's strategic build-up, prompting India to extend range and capability of its arsenal toward Chinese targets.
- Pakistan** remains the primary focus of India's deterrent, but China is gaining importance in strategic planning.

### 5. Global Nuclear Trends

- Russia (5,459)** and **USA (5,177)** have the largest nuclear stockpiles.
- Only **six nations** currently have sea-based nuclear delivery platforms: **USA, Russia, UK, France, China**, and now **India**.
- The global trend reflects modernization, not disarmament, raising concerns about arms race dynamics.



**Key Definitions**

- **Nuclear Triad:** A country's capability to deliver nuclear weapons via aircraft, land-based missiles, and submarine-launched systems.
- **SSBN:** Ship Submersible Ballistic Nuclear – a nuclear-powered submarine capable of launching ballistic missiles.
- **No First Use (NFU):** A nuclear doctrine where a country commits to using nuclear weapons only in retaliation.

**Constitutional & Legal Provisions**

- While **nuclear weapons policy** is governed by executive powers, it is aligned with **India's sovereign defence policy** and **international commitments** under:
  - **UN Charter (Article 51):** Right to self-defence.
  - India is not a signatory to **NPT (Non-Proliferation Treaty)** but supports **universal, verifiable nuclear disarmament**.

**Conclusion**

India's growing nuclear capability underscores its evolving strategic posture amidst a volatile regional environment. The shift from **minimum deterrence to credible readiness**, particularly through sea-based systems, strengthens India's deterrence architecture. For UPSC, this topic links to **GS Paper II (International Relations)** and **GS Paper III (Security, Defence Technology)**, as well as ethics debates around **use of nuclear power in conflict**.

## 8. INS Arnala Inducted: Strengthening India's Coastal Anti-Submarine Warfare Capability

**1. What is INS Arnala?**

- **INS Arnala** is the **first ship** in the **Anti-Submarine Warfare Shallow Water Craft (ASW SWC)** series.
- It is **indigenously built** and was **commissioned** into the Indian Navy on **June 19, 2025**, at **Visakhapatnam**.
- Named after **Arnala Island** off Maharashtra, this class of warships will **replace the Abhay-class ASW corvettes**.

**2. Key Features and Capabilities**

- Designed for **coastal defence**, it is **equipped for anti-submarine warfare** in shallow waters.
- Capabilities include:
  - **Sub-surface surveillance** of coastal areas and sea lines of communication (SLOCs)
  - **Search and rescue operations**
  - **Mine-laying and mine countermeasures**
  - **Low-intensity maritime operations**
- It is equipped with advanced **sonar, radar, and electronic warfare systems**, enhancing **situational awareness** and **operational effectiveness**.





### 3. Strategic Significance

- Enhances India's capacity to **detect and deter enemy submarines**, especially **close to the coast** and in **narrow maritime corridors**.
- Important for **securing the eastern and western seabords**, especially amidst increasing Chinese naval presence in the Indian Ocean Region (IOR).
- Part of India's broader goal to become a **net security provider** in the Indo-Pacific.

### 4. Indigenisation and Defence Manufacturing

- Built under the **Make in India** initiative by **Garden Reach Shipbuilders & Engineers (GRSE), Kolkata**.
- Boosts **Aatmanirbhar Bharat** in defence sector and strengthens **Indian shipbuilding ecosystem**.
- Reduces dependence on foreign equipment and promotes **self-reliance in maritime defence**.

### 5. Constitutional and Policy Linkages

- **Article 51(c)**: Promotes international peace and security, requiring maritime readiness.
- **Defence Acquisition Procedure (DAP) 2020** promotes indigenous defence manufacturing.
- Linked to India's **Maritime Security Strategy (2015)** and **SAGAR** (Security and Growth for All in the Region) doctrine.

### Key Definition

- **Anti-Submarine Warfare (ASW)**: A branch of naval warfare that uses surface warships, aircraft, or other submarines to detect, track, and neutralize enemy submarines.



### Conclusion

The induction of INS Arnala marks a major milestone in India's pursuit of **coastal defence modernisation** and **blue water naval capability**. It not only addresses contemporary maritime threats but also reinforces India's commitment to **regional maritime security**, **defence indigenisation**, and **strategic deterrence** in the Indo-Pacific. For UPSC aspirants, it exemplifies synergy between **security preparedness**, **technological advancement**, and **policy direction** under the national security framework.

## 9. India Begins Development of Fifth-Generation Stealth Fighter Jet

### 1. AMCA: India's Indigenous Fifth-Generation Stealth Fighter

- India has officially initiated the development of a **fifth-generation stealth fighter jet** – the **Advanced Medium Combat Aircraft (AMCA)**.
- The **Aeronautical Development Agency (ADA)** under the **Ministry of Defence** has floated an **Expression of Interest (EOI)** for building **five prototypes**.
- This project aims to **enhance India's indigenous defence manufacturing** and reduce dependence on foreign fighter imports.



## 2. Features of a Fifth-Generation Fighter

- **Fifth-generation jets** are characterized by:
  - **Stealth technology** (low radar visibility),
  - **Advanced avionics and sensor fusion**,
  - **Supercruise ability**, and
  - **Network-centric warfare capabilities**.
- AMCA is envisioned to be a **multirole fighter**, capable of air superiority and ground strike missions.



## 3. Strategic and Security Significance

- Developing AMCA strengthens **India's self-reliance (Atmanirbhar Bharat)** in defence and aligns with the **Make in India** initiative.
- It enhances India's ability to deter threats from **regional adversaries**, especially in the Indo-Pacific region.
- The AMCA will complement existing platforms like the **Rafale** and **Sukhoi Su-30 MKI**, and possibly replace older MiG series aircraft.

## 4. Constitutional and Legal Provisions

- **Article 51** of the Constitution encourages development of scientific temper and pursuit of international peace and security.
- **Defence Procurement Procedure (DPP)** and **Defence Acquisition Procedure (DAP) 2020** govern the indigenous development and procurement of military platforms.
- The initiative is also part of India's obligations under the **Strategic Partnership Model** for high-tech defence development.

## 5. Institutional and Industrial Ecosystem

- The ADA collaborates with agencies like **HAL (Hindustan Aeronautics Ltd)**, **DRDO**, and private industry for design, development, and production.
- The **Department of Defence Production** oversees the policy and funding.
- **Private sector involvement** through the EOI process signals a push towards **public-private partnership (PPP)** in high-end defence manufacturing.

## 6. Challenges and Way Forward

- Key challenges include:
  - **Technological complexity** of stealth design,
  - **Delayed timelines**, and
  - **Cost overruns** typical of indigenous military projects.
- However, if successful, AMCA could place India among a select few nations with **fifth-generation combat aircraft capability**, like the USA (F-35), Russia (Su-57), and China (J-20).

## Conclusion:

The development of the AMCA marks a significant milestone in **India's strategic defence capabilities**, reinforcing national security, technological autonomy, and global standing.

## 10. Induction of ICGS 'Adamyra': A Strategic Boost to India's Maritime Security

### Key Highlights of the Induction

- **First of Eight Fast Patrol Vessels (FPVs):**

The Indian Coast Guard (ICG) on **June 26, 2025**, inducted 'Adamyra', the **first FPV** of a series of eight being built by **Goa Shipyard Limited (GSL)**. It is a **fully indigenously designed and constructed** high-speed vessel aimed at enhancing maritime operations.

- **Technological Advancement & Indigenous Innovation:**

'Adamyra' is the **first FPV in ICG's fleet** to incorporate **Controllable Pitch Propellers (CPPs)** and **indigenously developed gearboxes**, ensuring **superior maneuverability, fuel efficiency, and better sea-handling capabilities** in India's coastal waters.

- **State-of-the-Art Combat and Surveillance Features:**

Equipped with a **30mm CRN-91 naval gun**, **two 12.7mm stabilized remote-control guns**, and advanced systems like **Integrated Bridge System (IBS)**, **Integrated Platform Management System (IPMS)**, and **Automated Power Management System (APMS)** — 'Adamyra' significantly boosts ICG's **surveillance, firepower, and mission-readiness**.

### Strategic Importance for India

- **Maritime Security and EEZ Protection:**

The FPVs will serve as **force multipliers** for operations such as **coastal surveillance, search and rescue (SAR), anti-smuggling, and law enforcement** within India's **Exclusive Economic Zone (EEZ)**, enhancing **maritime domain awareness**.

- **Aatmanirbhar Bharat in Defence Manufacturing:**

The project aligns with India's **Aatmanirbhar Bharat** (Self-Reliant India) initiative, promoting **indigenization in shipbuilding**, reducing dependency on foreign technologies, and showcasing **domestic defense manufacturing capabilities**.

### Constitutional & Legal Framework

- **Article 51(c) – Promotion of International Peace and Security:**

Through enhanced coastal security, India strengthens its **international maritime obligations**, including anti-piracy and humanitarian missions.

- **Coast Guard Act, 1978:** Defines the statutory role of the **Indian Coast Guard** in ensuring **safety, protection of the maritime environment**, and enforcement of **maritime law** in the EEZ.

- **UNCLOS (United Nations Convention on the Law of the Sea):**

As a signatory, India is responsible for the **protection of its EEZ** up to 200 nautical miles — a domain where FPVs like 'Adamyra' play a vital role.



### Important Definitions

- **Fast Patrol Vessel (FPV):**

A class of **high-speed, agile naval ships** designed for **coastal patrolling, interdiction, and quick response** during maritime incidents.

- **Controllable Pitch Propellers (CPPs):**

A marine propulsion system where the **angle of the propeller blades can be changed while rotating**, allowing better speed control, direction changes, and fuel efficiency.

- **Integrated Platform Management System (IPMS):**

A ship automation system that **monitors and controls machinery and auxiliary systems**, ensuring enhanced **operational safety and efficiency**.

### Conclusion

The induction of ICGS 'Adamya' marks a **technological leap and strategic strengthening** of India's **coastal defense architecture**. With its indigenously developed systems and combat-readiness, it exemplifies the spirit of **Aatmanirbhar Bharat** and contributes significantly to India's commitment toward **maritime security, economic zone protection, and regional stability**. For UPSC aspirants, this reflects the convergence of **national security, technological innovation, and policy self-reliance** in India's evolving maritime doctrine.

## SCIENCE & TECHNOLOGY

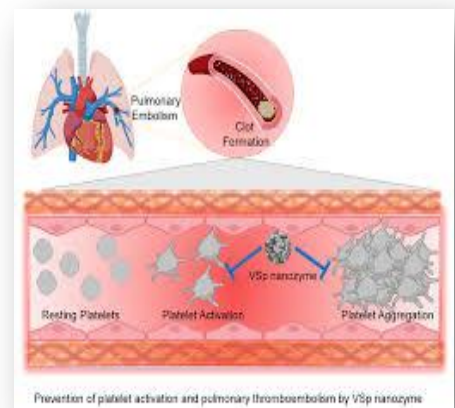
### 1. IISc Develops Artificial Nanozyme to Prevent Abnormal Blood Clotting

#### 1. What is the Discovery?

- Researchers at **Indian Institute of Science (IISc), Bengaluru** have developed a **metal-based artificial enzyme (nanozyme)** that mimics natural antioxidant enzymes to **prevent abnormal blood clotting**, especially in diseases like **pulmonary thromboembolism (PTE)** and **COVID-19**.
- The nanozyme, particularly **spherical-shaped vanadium pentoxide ( $V_2O_5$ )** particles, helps **reduce Reactive Oxygen Species (ROS)** levels, thereby controlling **excessive platelet aggregation**.

#### 2. Key Scientific Terms Defined

- **Nanozyme:** A **nanomaterial with enzyme-like activity**, designed to mimic the catalytic function of natural enzymes, often more stable and cost-effective.
- **Reactive Oxygen Species (ROS):** Chemically reactive molecules containing oxygen. Excess ROS leads to **oxidative stress**, a condition that damages cells and plays a key role in **abnormal blood clotting**.







- **Thrombosis:** Formation of **unwanted blood clots inside blood vessels**, potentially leading to serious conditions like **stroke, heart attack, or PTE**.
- **Haemostasis:** A natural process that stops bleeding at the site of injury by forming **protective blood clots** through **platelet activation** and **protein cascade** interactions.

### 3. Mechanism of Action

- The artificial nanozyme controls oxidative stress by **mimicking antioxidant enzymes** like **catalase and peroxidase**, which neutralize ROS.
- This **prevents the over-activation of platelets**, which, if unchecked, can lead to **excessive blood clot formation (thrombosis)**.

### 4. Constitutional and Legal Context

- Though scientific in nature, this innovation touches on **Article 21** of the Constitution (Right to Life), as it contributes to **preventive healthcare** and **life-saving treatments**.
- This also aligns with the **National Health Policy, 2017**, which promotes **research and innovation in biomedical sciences** and **indigenous technological development**.

### 5. Potential Applications and Future Plans

- The research team plans to test the nanozyme's effectiveness in **preventing ischemic strokes**, caused by **blockage of blood vessels in the brain**.
- This innovation could be a game-changer in **non-invasive therapies** for clot-related disorders and may reduce reliance on drugs like **blood thinners**, which often have side effects.

### 6. Relevance to UPSC and Indian Science Policy

- The development showcases **India's capabilities in nanotechnology and biomedical research**, essential for UPSC topics under **Science & Technology, Health, and Innovation in India**.
- Also relevant to schemes like **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)** and **Make in India** for scientific equipment.

### Conclusion

The artificial nanozyme developed by IISc offers a **cutting-edge solution to combat abnormal blood clotting** by using **nanotechnology to regulate oxidative stress**. It reflects the growing role of **indigenous scientific research** in improving public health outcomes and aligns with India's vision for **self-reliant innovation**. This breakthrough reinforces the importance of **interdisciplinary research**, combining chemistry, biology, and medicine to address **critical health challenges**.

## 2. Kerala Lab Develops Molecular Test Kits for Deadly Brain-Eating Amoeba: Key Points

### 1. Breakthrough in Public Health Diagnostics

- The **State Public Health Laboratory (PHL), Kerala**, has successfully developed **molecular diagnostic (PCR) test kits** to identify *five* species of **free-living amoeba (FLA)** known to cause **amoebic meningoencephalitis** – a **rare but fatal brain infection**.
- This makes Kerala the **first Indian state** with in-house capacity for early, confirmatory diagnosis of this disease without depending on central institutions like **PGI Chandigarh**.

### 2. Free-Living Amoeba and Its Health Impact

- **Free-living amoeba (FLA)** are unicellular protozoa found in soil and water; only **6 out of 400+ species** are **pathogenic to humans**.
- The five amoeba identified through Kerala's new kits include:
  - *Naegleria fowleri* (most fatal, aka "brain-eating amoeba")
  - *Acanthamoeba spp.*
  - *Vermamoeba vermiformis*
  - *Balamuthia mandrillaris*
  - *Paravahlkampfia francinae*

### 3. Significance of Early Diagnosis

- Previously, only **presumptive diagnosis** was possible based on **CSF sample microscopy**, prompting empirical treatment using broad drug cocktails.
- The new **PCR-based diagnosis** enables **pathogen-specific identification**, allowing for **targeted treatment** and improved patient outcomes.

### 4. Public Health Relevance

- Kerala has recently witnessed an **increase in Acute Encephalitis Syndrome (AES)** cases caused by FLAs.
- The lab's initiative was driven by the **urgent need for local diagnostic capabilities** in light of rising case numbers and limited time window for effective treatment.



### 5. Constitutional and Legal Frameworks Supporting Public Health Innovation

- Under **Article 47** of the Indian Constitution (Directive Principles), the **State is duty-bound to improve public health**.
- The **Clinical Establishments (Registration and Regulation) Act, 2010** and the **National Health Policy** support the creation of **state-of-the-art diagnostics** in regional laboratories.



## 6. Alignment with India's Health Goals and SDGs

- The development strengthens India's progress toward **SDG 3 (Good Health and Well-being)**.
- It also reflects the **Atmanirbhar Bharat** spirit in healthcare technology and decentralised public health capabilities.

### Conclusion:

Kerala's indigenous development of PCR test kits for detecting deadly free-living amoeba represents a **landmark in public health diagnostics**. It ensures **early detection, timely treatment, and reduced mortality** from amoebic meningoencephalitis. The initiative highlights the importance of **localised scientific innovation** in addressing emerging health threats and sets a model for other states to follow in developing **region-specific public health infrastructure**.

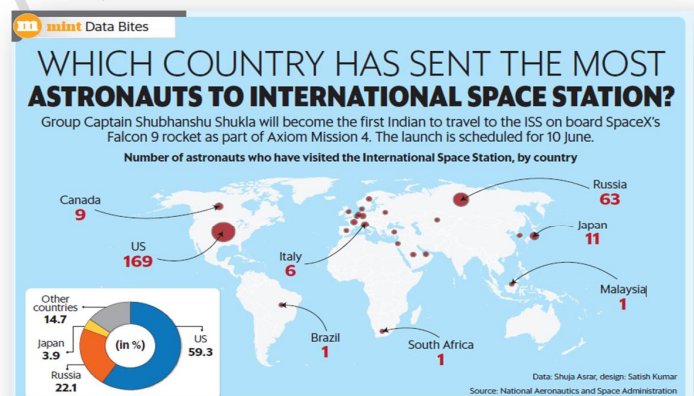
## 3. Which Country Has Sent the Most Astronauts to the International Space Station (ISS)?

### 1. India's Milestone in Human Spaceflight

- Group Captain Shubhanshu Shukla is set to become the **first Indian astronaut to travel to the ISS**, scheduled for launch on **10 June 2025**.
- The mission is part of **Axiom Mission 4**, launched via **SpaceX's Falcon 9** rocket.
- This represents a significant step in India's engagement with **international human spaceflight missions** and **public-private collaboration** in space.

### 2. Country-wise Contribution of Astronauts to the ISS

- **United States** – 169 astronauts (*largest contributor*)
- **Russia** – 63 astronauts
- **Japan** – 11 astronauts
- **Canada** – 9 astronauts
- **Italy** – 6 astronauts
- **South Africa** – 1 astronaut
- **Malaysia** – 1 astronaut
- **India** – Will join the list in 2025



### 3. What is the International Space Station (ISS)?

- The ISS is a **space laboratory in low Earth orbit** used for **scientific research and technological development**.
- It is a joint project of **NASA (USA), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada)**.
- The ISS enables studies in **microgravity, space medicine, materials science, and long-duration space habitation**.

### 4. India's Broader Human Spaceflight Program

- **Rakesh Sharma** was the first Indian in space (1984), aboard the Soviet Soyuz-T11.



- India is developing its own crewed space program — **Gaganyaan**, expected to launch by **2025–26**, which aims to send **three Indian astronauts to low Earth orbit**.
- India is also fostering **space-sector liberalization**, allowing private participation through bodies like **IN-SPACe** and **NSIL**.

#### 5. Constitutional and Legal Provisions

- **Article 51** of the Indian Constitution encourages promotion of **international peace, scientific cooperation**, and respect for international law.
- India is a signatory to the **Outer Space Treaty, 1967**, which mandates peaceful use of outer space and prohibits sovereign claims.
- The **draft Space Activities Bill** aims to define **commercial space activities**, ensure **regulatory clarity**, and promote **private space ventures**.

#### 6. Relevance for UPSC

- Important for **GS Paper III – Science & Technology**, especially under **space technology and developments**.
- Connects with **GS Paper II – International Relations**, due to India's collaborations in space.
- Highlights India's **strategic autonomy and technological progress** in the context of emerging space powers.

#### Conclusion

India's upcoming human presence aboard the ISS through an international commercial partnership signals a **new phase in India's space journey**. As India continues to transition from a state-dominated to a **collaborative space ecosystem**, it must balance its scientific aspirations with global cooperation and strategic foresight. This development underlines India's emerging role as a **credible space power** on the world stage.

### 4. Indian Astronaut Shubhanshu Shukla on Cusp of History

#### Key Highlights:

##### 1. India's Return to Spaceflight After 41 Years:

- **Shubhanshu Shukla**, a Group Captain in the **Indian Air Force**, is set to become the next Indian in space after **Rakesh Sharma's 1984** spaceflight under the Soviet **Interkosmos Programme**.
- The upcoming **14-day space mission**, supported by **ISRO** and **NASA**, is conducted via **Axiom Space**, a private commercial spaceflight company.



##### 2. International Collaboration & Mission Details:

- The flight is scheduled to **launch from Kennedy Space Center, Florida**, heading toward the **International Space Station (ISS)**.





- It marks India's **enhanced participation in commercial and international space missions**, aligning with its space diplomacy goals and technology capability advancement.

### 3. Background & Role in Gaganyaan Mission:

- Shukla, call sign '**Shuks**', was selected in 2019 for the **Gaganyaan Mission**—India's first manned space mission, expected by **2027**.
- Along with three other IAF officers, he is part of India's trained astronaut corps, developed through Indo-Russian collaboration and training at the **Gagarin Cosmonaut Training Centre**.

### 4. Constitutional & Legal Framework Related to Space:

- No dedicated constitutional article for space, but governed by international treaties like the **Outer Space Treaty (1967)** (India is a signatory).
- The **Draft Space Activities Bill (2017)** aims to regulate private sector participation in space and ensure compliance with international obligations.
- Article 51 of the Constitution promotes **international peace and cooperation**, relevant for space diplomacy and bilateral cooperation like with the U.S.

### 5. Importance for India's Strategic & Scientific Growth:

- This mission highlights India's **growing capabilities in space tech and astronaut training**, a precursor to human-rated launches under **Gaganyaan**.
- Strengthens India's **soft power**, global image, and furthers its aim to be a **leader among spacefaring nations**.
- Promotes private sector engagement in space through ISRO's support for international commercial missions.

### Definitions for Conceptual Clarity:

- **Interkosmos Programme:** A Soviet initiative to send astronauts from allied countries into space during the Cold War.
- **Gaganyaan Mission:** India's first indigenous crewed orbital spaceflight mission being developed by ISRO.
- **Axiom Space:** A U.S.-based private aerospace company facilitating human spaceflight to the ISS.

### Conclusion:

Shubhanshu Shukla's impending space journey symbolizes **India's revival of human spaceflight** after four decades and signifies deeper **global collaboration** in space science. For UPSC aspirants, this milestone is critical for GS Paper 3 (Science and Technology – Developments in space), GS Paper 2 (International Relations), and Essay writing on **science diplomacy, national pride, and technology-led development**. It also opens discussions on the future of India's space law, policy innovation, and commercialization of space.

## 5. The Replication Crisis in Science

- **Replication Crisis** refers to the failure of many scientific studies, especially in **psychology and medicine**, to produce the same results when repeated—raising doubts about their validity.
- It became prominent in the **2010s**, leading to a major credibility challenge for empirical research and public trust in science.

### Key Findings of the New Study

- A recent paper by **Paul Bogdan** (Duke University) analyzed **2.4 lakh psychology papers (2004–2024)** and found **improved research robustness** in the field.
- **“Fragile p-values”** (just below the threshold of statistical significance, i.e., 0.01–0.05) dropped from **32% to 26%**, indicating more reliable findings.
- Improvement observed across **all major sub-disciplines**, suggesting a **field-wide cultural shift** toward rigorous scientific practices.

### Role of Sample Size and Research Design

- Increase in **sample sizes** post-2015 led to **reduction in exaggerated effect sizes**, enhancing **statistical power** and **accuracy**.
- **High-impact journals** and frequently cited papers now show **fewer fragile results**, reversing the earlier trend of prioritizing sensationalism over substance.

### Persistent Challenges and Institutional Patterns

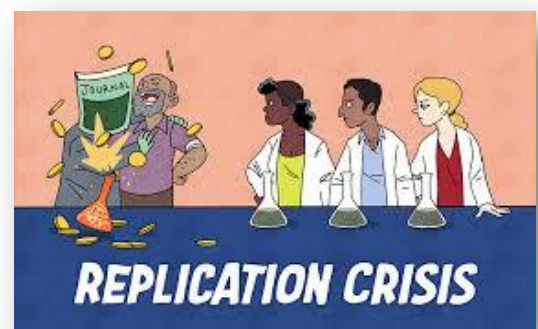
- Top-ranked universities still show **slightly shakier statistics**, especially in **biologically or clinically demanding studies**.
- Causes: **Ethical constraints, high costs, and complexity**, which limit the feasibility of large sample sizes in such research.

### Definitions & Concepts

- **Replication**: The ability to repeat a study and get the same results—key to scientific reliability.
- **p-value**: The probability that observed results are due to chance. A **lower p-value** ( $<0.05$ ) typically indicates statistical significance.
- **Statistical Power**: The likelihood that a study will detect an effect when there is one. Higher power requires larger sample sizes.
- **Pre-registration**: A research practice where study methods and hypotheses are registered publicly before data collection begins.

### Legal, Ethical & Policy Context

- **Ethics in Research**: As per **ICMR (Indian Council of Medical Research) Guidelines**, informed consent, transparency, and reproducibility are central to ethical studies.
- **Open Science Movement**: Calls for **data transparency, open access to research, and accountability**, aligning with **Right to Information (RTI)** in the scientific domain.





- **Government Role:** Increased **public funding** for large-scale, ethical research is essential to support replication and trust-building.

### Conclusion

Psychology, once at the heart of the **replication crisis**, is showing **significant recovery** through **larger sample sizes, improved research practices, and more reliable findings**. However, **resource-heavy studies still need systemic support**. For UPSC aspirants, this topic reflects themes from **GS Paper IV (Ethics in Research and Integrity)**, **GS Paper II (Governance & Public Policy)**, and **GS Paper III (Science and Tech – Research and Innovation)**. It also offers rich material for **Essay Paper** discussions on **science and public trust**.

## 6. SPArc Therapy: A Breakthrough in Precision Cancer Treatment

### Key Scientific Breakthrough

- U.S. researchers successfully applied **Step-and-Shoot Spot-Scanning Proton Arc Therapy (SPArc)** for the **first time in a human** to treat a complex case of **adenoid cystic carcinoma** (a rare salivary gland cancer).
- SPArc is a **form of proton therapy** that delivers **precise radiation** to tumors while **sparing nearby healthy tissues**, especially critical in **head and neck cancers**.

### Comparative Advantages over Conventional Methods

- Compared to standard **SFO-IMPT (Single Field Optimization - Intensity Modulated Proton Therapy)**, SPArc:
  - Reduced radiation exposure to the **brainstem by 10%, optical chiasm by 56%, oral cavity by 72%, and spinal canal by 90%**.
- These reductions minimize **long-term damage to vital organs**, reducing side effects such as **nausea, swallowing difficulties, and fatigue**.

### How SPArc Works

- SPArc delivers proton beams in a **layered fashion**, with each **energy layer** targeting a different depth of tissue.
- **Step-and-shoot mode** uses pre-programmed delivery at fixed angles, while **dynamic SPArc** (still under development) continuously adjusts the beam during delivery.
- A **machine-learning model** generates synthetic CT images for **daily dose recalibration**, ensuring treatment accuracy even as tumor size or body weight changes.

### Ethical, Medical, and Practical Considerations

- While SPArc is a **significant innovation**, concerns remain:
  - **Cost:** High setup and operational costs may limit accessibility, creating **healthcare equity challenges**.





- **Precision risks:** Risk of "geographic miss" due to tumor shrinkage or patient movement, reducing treatment efficacy.
- Requires **constant imaging, expert planning, and adaptive protocols**—not feasible for all settings.

### Definitions & Key Concepts

- **Proton Therapy:** A type of radiation therapy that uses **protons (positively charged particles)** instead of X-rays to treat cancer.
- **SPArc (Spot-scanning Proton Arc Therapy):** An advanced technique that "paints" tumors layer by layer with proton beams using multiple angles.
- **Geographic Miss:** Failure to irradiate the full tumor volume due to patient movement or tumor shrinkage.
- **Synthetic CT:** AI-generated imaging that mimics actual CT scans to track and adjust radiation delivery in real time.

### Legal and Constitutional Relevance (India Context)

- **Article 21:** Right to life includes the right to health and access to advanced medical technology.
- **Clinical Establishments (Registration and Regulation) Act, 2010:** Regulates quality in healthcare including use of emerging technologies.
- **Drugs and Cosmetics Act, 1940** (and associated rules): Governs import and use of radiological/oncological devices in India.
- Emphasis on **healthcare equity and affordability** aligns with **Directive Principles of State Policy** (Article 47).

### Conclusion

SPArc therapy represents a **paradigm shift in precision oncology**, especially for tumors located near sensitive structures like the brain or skull base. However, **ethical use, affordability, and infrastructure readiness** remain major challenges. For UPSC aspirants, this topic is highly relevant for **GS Paper III (Science and Technology – Developments in Medical Technology)**, **GS Paper II (Health Policy and Governance)**, and **GS Paper IV (Ethics – Medical Ethics and Equity)**.

## 7. Discovery of *Khankhuuluu mongoliensis* and the Evolutionary Rise of T. rex

### Key Scientific Discovery

- Scientists have discovered a new **meat-eating dinosaur** species named ***Khankhuuluu mongoliensis*** in **Mongolia**, dating back **90 million years**.
- It is a **mid-sized tyrannosaur**, identified as a **cousin of the Tyrannosaurus rex (T. rex)**, offering crucial insights into the **evolutionary lineage** of apex predators in the dinosaur age.



### Evolutionary Significance





- The discovery shows that **small-bodied tyrannosaurs** like *Khankhuuluu* originated in **Asia** and **migrated to North America** via **land bridges**.
- Once in North America, they **rapidly evolved** into **larger, dominant apex predators**, eventually leading to the rise of **T. rex** around 68 million years ago.

#### **Fossil Analysis and Implications**

- Comparative skeletal analysis with other tyrannosaurs helped **reconstruct evolutionary pathways**.
- The findings challenge previous assumptions that T. rex–like predators evolved exclusively in North America and suggest **complex intercontinental dispersal and adaptation** patterns.

#### **Key Definitions & Concepts**

- **Apex Predator:** An animal at the top of the food chain with no natural predators; e.g., T. rex during the Late Cretaceous.
- **Land Bridge:** A natural connection between two landmasses allowing migration of species; e.g., the **Bering Land Bridge** between Asia and North America.
- **Tyrannosaurid:** A family of theropod dinosaurs known for large skulls, strong jaws, and bipedal stance.

#### **Constitutional & Educational Relevance (India Context)**

- **Article 51A(h):** It is the duty of every citizen to develop a scientific temper, humanism, and the spirit of inquiry and reform.
- The **National Education Policy (NEP) 2020** emphasizes **scientific inquiry and multidisciplinary research**, including paleontology and evolutionary biology.
- Initiatives like **Earth Science Missions** and partnerships in **international fossil research** promote scientific collaboration and public engagement.

#### **Conclusion**

The discovery of *Khankhuuluu mongoliensis* reshapes our understanding of **dinosaur evolution and intercontinental migration**, showing how mid-sized Asian predators evolved into giants like **T. rex** in North America. This is a significant advancement in **evolutionary biology and paleontology**, and is relevant for **GS Paper III (Science and Technology – Evolutionary Science)** and **GS Paper I (World Physical Geography – Biogeography & Earth History)** in the UPSC Civil Services Exam.

## **8. CRISPR-Based Smart Molecular Tool for Plant Resilience**

### **1. What is the Innovation?**

- Scientists at **Bose Institute (under DST)** have developed a **novel CRISPR-based molecular switch** using a modified **dCas9 system** (a non-cutting variant of CRISPR).
- This **gene activation tool** enhances plant defense only during **stressful conditions** like **heat waves or microbial attacks**, thereby **conserving plant energy** during normal conditions.

### **2. How Does it Work?**

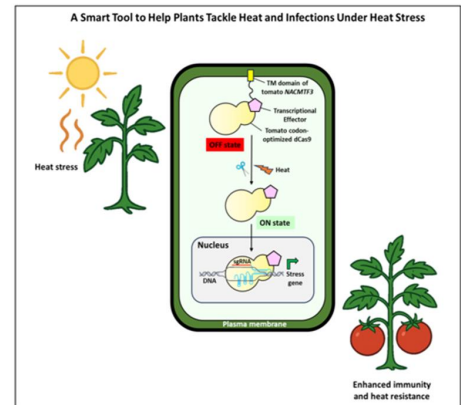
- A **natural tomato protein fragment** (TM domain of NACMTF3) keeps the dCas9 switch inactive outside the nucleus under normal conditions.
- When **temperature rises or pathogens attack**, the tether is released, allowing the **dCas9 to enter the nucleus** and **activate defense or heat-resistance genes**.



- Key genes activated:
  - **CBP60g and SARD1** for pathogen resistance.
  - **NAC2 and HSFA6b** for heat tolerance.

### 3. Crops Tested and Results

- The tool was successfully tested in **tomato, potato, and tobacco**.
- In tomatoes infected by *Pseudomonas syringae*, which becomes more virulent in heat, the tool significantly improved resistance.
- The plants retained **greenness, moisture, and health** during heat stress, demonstrating **climate-resilient outcomes**.



### 4. Significance for Agriculture and Food Security

- The **smart switch mechanism** is energy-efficient, working only when needed—thus avoiding constant stress-response that hampers plant growth.
- Applicable to **other solanaceous crops** such as **eggplant and chili**, widely consumed across India and globally.
- Supports the goals of **precision agriculture, climate resilience, and reduction of pesticide use**.

### 5. Constitutional & Policy Relevance

- Aligns with **Article 48A** (Protection and improvement of environment).
- Supports **SDG-2 (Zero Hunger)** and **SDG-13 (Climate Action)**.
- Advances the objectives of **National Mission for Sustainable Agriculture (NMSA)** under the National Action Plan on Climate Change (NAPCC).

### Definition for UPSC

- **CRISPR**: A genome-editing tool that allows for precise, targeted changes to DNA.
- **dCas9**: A “dead” version of Cas9 that **binds to DNA without cutting**, used here for **gene regulation** rather than mutation.

### Conclusion

This smart CRISPR innovation represents a **next-generation tool for climate-smart agriculture**. It empowers crops to respond efficiently to threats without compromising energy or growth, offering a sustainable path to **agricultural resilience, productivity, and food security** in an era of **climate change and extreme weather**. UPSC aspirants must understand its technological, ecological, and policy relevance.



**VIDHVATH ACADEMY**  
**FOR COMPETITIVE EXAMS**

—“We help you reach for the star”—



# HISTORY & CULTURE

## 1. India's Cultural Renaissance at Osaka World Expo

### 1. Overview of Osaka World Expo 2025

- Held in Japan from April 13 to October 13, the Expo's theme is “**Designing future society for our lives**”.
- It focuses on global innovation, cultural exchange, and collaborative solutions to world challenges, including the **United Nations Sustainable Development Goals (SDGs)**.
- The Expo functions as a “Living Lab” where nations showcase their contributions toward building a sustainable and inclusive future.

### 2. India's Unique Approach: Soft Power and Cultural Renaissance

- Unlike many countries focusing on technological displays, India emphasized its **soft power** by showcasing its **civilizational heritage and cultural renaissance**.
- The Indian pavilion is curated by the **Indira Gandhi National Centre for the Arts (IGNCA)** and offers an immersive experience that highlights India's **ancient wisdom, compassion, and spirituality**.
- This approach projects India's global identity rooted in **values of inclusivity, sustainability, and progress**.



### 3. Symbolism and Design of the Indian Pavilion

- The pavilion design pays tribute to **Bodhisattva Padmapani** from the Ajanta Caves, symbolizing **compassion, enlightenment, and knowledge**—core aspects of Indian philosophy.
- The pavilion connects India's **spiritual heritage with contemporary ambitions**, aligning with the Expo's theme of “**Connecting Lives**”.
- It also highlights India's advancements in science, including its **space program**, blending tradition with modern achievements.

### 4. Soft Power and Cultural Diplomacy in International Relations

- India's showcase is an example of **cultural diplomacy**, using culture and heritage to enhance its international image and influence.
- Soft power, a term coined by Joseph Nye, refers to the ability of a country to attract and co-opt rather than coerce, and India's pavilion is a reflection of this strategy.
- Such efforts strengthen India's global standing and contribute to its **strategic diplomacy**.



## 5. Relevant Constitutional & Legal Provisions

- India's cultural heritage and promotion abroad align with **Article 51A(f)** of the Constitution which mandates citizens to value and preserve the rich heritage of the country.
- The government, through bodies like the **Ministry of Culture** and institutions such as IGNCA, plays a key role in cultural promotion, supported by laws like the **Ancient Monuments and Archaeological Sites and Remains Act, 1958** to protect cultural sites.

## 6. Importance for UPSC Aspirants

- Understanding India's soft power initiatives is crucial for topics related to **International Relations, Diplomacy, and Culture**.
- The Expo reflects India's strategy of harmonizing tradition with modernity, a recurring theme in UPSC General Studies papers and Essay writing.

### Key Definitions

- **Soft Power:** The ability to influence others through cultural or ideological means rather than coercion or payment.
- **Bodhisattva Padmapani:** A symbolic figure from Buddhist art representing compassion and wisdom, featured in the Ajanta Caves.
- **Sustainable Development Goals (SDGs):** A set of 17 global goals set by the UN to address global challenges like poverty, inequality, climate change, and peace.

### Conclusion

India's presentation at the Osaka World Expo exemplifies its emphasis on **cultural diplomacy and soft power** as key tools in shaping its global narrative. By blending its ancient spiritual values with modern aspirations such as space technology and sustainability, India projects a holistic and inclusive image to the world. This strategy not only boosts India's international influence but also aligns with constitutional mandates on cultural preservation, making it a vital topic for the UPSC Civil Services Examination.

## 2. Neolithic Habitation Site with Early Metallurgy Unearthed in Assam

### 1. Discovery and Location

- Archaeological site found in **Daojali Hading, Dima Hasao district, Assam**, dating back over **2,700 years**.
- Initially discovered in the 1960s during construction of **Lumding-Haflong Road (National Highway 27)**, but large parts were damaged due to road building.

### 2. Significance of Findings

- The site has yielded artefacts such as **polished double-shouldered celts, cordmarked pottery, mortars, pestles, jadeite stone**, confirming its **Neolithic cultural affiliation**.
- Discovery of a **furnace and iron slag** indicates **early metallurgy**, suggesting the site was a major prehistoric settlement and a center for early iron-working in Northeast India.

### 3. Cultural and Historical Context

- Daojali Hading links to the broader **Eastern and Southeastern Asian Neolithic cultural complex**, highlighting cultural exchanges and technological developments in prehistoric times.



- The artefacts reflect the **subsistence and craft life** of prehistoric communities in the region.

#### 4. Research and Excavations

- Initial excavations by Gauhati University in the 1960s, followed by further reconnaissance in 1985 and recent surveys by North Cachar Hills Autonomous Council's Department of Archaeology.
- Multidisciplinary teams from IIT Guwahati and NEHU Shillong contributed expert guidance.
- Ongoing studies involve **radiocarbon dating** and geological analysis to better understand chronology and technology.

#### 5. Definitions and Key Terms

- **Neolithic Period:** The late Stone Age when humans developed agriculture, domestication, polished stone tools, and settled communities.
- **Metallurgy:** The science and technology of metals, involving extraction and processing of metal from ores, including early iron smelting evidenced here.
- **Celts:** Polished stone tools or axes used during the Neolithic.



#### 6. Constitutional and Legal Relevance

- Protection of archaeological sites is supported by the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
- Preservation of cultural heritage aligns with **Article 51A(f)** (Fundamental Duties), which mandates the preservation of rich heritage and history.

#### Conclusion

The Daojali Hading site in Assam is a crucial prehistoric archaeological site showcasing early human settlement and metallurgical activity in Northeast India. It enriches understanding of the Neolithic cultural complex in the region and highlights the need for preservation and further research. Such discoveries provide valuable insights into India's ancient past, making it a key topic in archaeology and cultural heritage for the UPSC Civil Services Examination.

### 3. 800-Year-Old Shiva Temple Unearthed in Madurai: Key Highlights

#### 1. Significant Archaeological Discovery from the Later Pandya Period

- An **800-year-old Shiva temple**, dating back to **1217–1218 CE**, was unearthed in **Udampatti village (formerly Attur)** in **Melur taluk, Madurai district, Tamil Nadu**.
- The temple remains were found accidentally by children and later investigated by researchers and the Village Administrative Officer (VAO).
- The temple, identified using **Silpa Shastram** and inscriptions, is known as **Thennavanisvaram**, a name associated with the Pandya royal title "Thennavan."

## 2. Evidence from Inscriptions: Socio-Economic and Cultural Insights

- Two **Tamil inscriptions** on the temple foundation provide insights into **land ownership, taxation, and temple autonomy**.
- A **sale deed** from a local chieftain, Alagaperumal of Kalavalinadu, describes the sale of a **waterbody (Nagankudi)** and adjacent lands for **64 kasu (ancient coins)** to another local figure.
- The deed states that **taxes from this land were to be given to the temple deity**, indicating the temple's **financial independence and endowment system**.

## 3. Architectural and Historical Significance

- The remaining **stone base structure** on the northern and southern sides shows typical Pandya period architecture, confirming the **temple's design principles** as per **Silpa Sastras**.
- Although much of the temple is now in ruins, its **cultural continuity, religious patronage**, and administrative systems are evident from the engravings.

## 4. Context of Pandya Rule and Cultural Heritage

- The temple dates back to the reign of **Maravarman Sundara Pandya**, a significant ruler of the **Later Pandya dynasty**, known for **temple patronage, agrarian economy**, and inscriptions.
- The discovery highlights the **rich temple-building tradition** of the Pandyas and how temples acted as **centers of religion, economy, and local governance**.



## 5. Importance of Village and Panchayat-level Discoveries

- This discovery, initiated by villagers and supported by the local **VAO and researchers**, underscores the role of **community engagement in heritage preservation**.
- The site was also referred to in earlier documents by the **Tamil Nadu State Department of Archaeology (1974–75)**, confirming the historical presence of temples in this region.

## 6. Legal and Institutional Framework for Heritage Protection

- Such sites fall under the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**, which mandates their protection and possible **declaration as monuments of national importance**.
- The **Archaeological Survey of India (ASI)** and **State Departments of Archaeology** are empowered to conserve and document such findings.

### Conclusion:

The unearthing of the **Thennavanisvaram Shiva temple** in Madurai district is a testament to India's deep-rooted **temple culture, local economic networks, and historical continuity**. It sheds light on the **autonomy of temple institutions**, use of **Tamil inscriptions for legal and economic transactions**, and the **socio-political fabric of the Later Pandya period**. For UPSC aspirants, it serves as an important example of how archaeological discoveries enhance our understanding of **regional history, heritage conservation**, and the **interaction between religion and economy** in medieval India.

## EDITORIALS & OPINION

### 1. President's Rule under Article 356

- **Definition and Constitutional Provision**

- *President's Rule* refers to the direct rule of the Central Government over a State, imposed under **Article 356 of the Indian Constitution**.
- Article 356 allows the President to assume control of a State if the government cannot be carried out according to constitutional provisions, typically due to failure of constitutional machinery.
- The President can act based on a report from the Governor or otherwise (per **Article 365** which mandates States to comply with Union directions).

- **Procedure and Duration**

- The proclamation of President's Rule must be approved by both Houses of Parliament within two months by a **simple majority**.
- Initially valid for six months, it can be extended every six months, but cannot continue beyond three years in total (exceptions exist under certain conditions, like breakdown due to war or disaster).
- The Legislative Assembly is usually either kept under *suspended animation* or dissolved after imposition.



- **Historical Misuse and Judicial Intervention**

- Dr. B.R. Ambedkar hoped Article 356 would remain a *dead letter*, but it was frequently misused post-independence to dismiss elected state governments for political reasons, undermining federalism.
- Different Governors have taken varying approaches in dissolving Assemblies after President's Rule; some accepted Chief Minister's advice even when majority was doubtful, others refused.
- The Supreme Court's landmark **S. R. Bommai vs Union of India (1994)** judgment put curbs on misuse, stating:
  - President's Rule should only be imposed on **constitutional machinery breakdown**, not mere law and order issues.
  - The imposition is subject to **judicial review**.
  - Assembly dissolution should wait until Parliament approves the proclamation, otherwise the Assembly remains under suspended animation.

- **Subsequent Judicial Checks**

- Courts struck down wrongful impositions of President's Rule in cases like **Bihar (2005)**, **Uttarakhand (2016)**, and **Arunachal Pradesh (2016)**.



- These interventions reinforce judiciary's role as a guardian of federalism and democratic governance.

- **Revocation and Political Context**

- President's Rule is revoked once a stable government with assembly majority is formed or fresh elections are held.
- Example: *Manipur* was under President's Rule from February 2025 due to security and political instability; with the Assembly under suspended animation, calls for formation of a viable government persist.
- Imposition of President's Rule is a **temporary measure** meant to restore constitutional governance, not to replace democracy permanently.

- **Key Definitions for UPSC**

- *Suspended Animation*: Temporary freezing of a State Legislative Assembly without dissolution.
- *Breakdown of Constitutional Machinery*: Failure of constitutional provisions to operate effectively, justifying central intervention under Article 356.

### **Conclusion**

Article 356 is a crucial yet sensitive constitutional provision designed to maintain the integrity of State governance. While intended as a safeguard against breakdown of constitutional machinery, its historical misuse necessitated judicial scrutiny. The **S. R. Bommai case** has been pivotal in protecting federalism and democracy by imposing checks on arbitrary imposition of President's Rule. For UPSC, understanding Article 356 highlights the balance between Centre-State relations, constitutional safeguards, judicial activism, and the evolving nature of Indian federalism. The recent Manipur example underscores the contemporary relevance of these constitutional provisions in maintaining democratic governance.

## **2. India-Australia Defence Ties Beyond American Shadows**

### **1. Strategic Realignment in Indo-Pacific Amidst Uncertainty in U.S. Commitments**

- With Donald Trump's possible return and U.S. security guarantees becoming more transactional, middle powers like **India and Australia** are recalibrating regional defence cooperation.
- The evolving **Indo-Pacific architecture** is prompting deeper bilateral ties independent of the U.S. strategic umbrella.
- Both countries share mutual concerns over **China's assertiveness** and a vision for **sovereign resilience and regional stability**.

### **2. Institutional Foundations of India-Australia Defence Partnership**

- **Comprehensive Strategic Partnership (CSP) – 2020** and **2+2 Ministerial Dialogue – 2021** institutionalise defence and strategic engagement.
- Key agreements:
  - **Mutual Logistics Support Agreement (MLSA)**: Enables sharing of defence logistics.
  - **Air-to-Air Refuelling Arrangement (2024)**: Enhances operational reach of Indian aircraft.





- Joint military exercises: **AUSTRAHIND (Army)**, **AUSINDEX (Navy)**, and participation in **Malabar** and **Pitch Black** exercises.

### 3. Emerging Areas of Strategic and Operational Cooperation

- Rebalancing military cooperation beyond naval silos towards tri-services synergy and **joint staff-level operations**.
- Need to upgrade **Defence Adviser post** in Canberra to a senior rank (one-star) and involve Army and Air Force representatives.
- Proposal for **joint military exercises** and regular **war-gaming** and **staff college fellowships** for deeper operational understanding.

### 4. Defence Industrial and Technological Collaboration

- India and Australia to explore cooperation in **Maintenance, Repair & Overhaul (MRO)** of naval vessels.
- Joint production of **patrol boats** for Indian Ocean and Pacific Island states as a symbol of collaborative security architecture.
- India's proven MRO capacity (with UK and U.S. navies) could be extended to Australian platforms.

### 5. MSME and Defence Start-up Collaboration Potential

- Major defence collaboration has bypassed **MSME sectors** despite strong indigenous innovation.
- Opportunity for **defence tech startups and dual-use technologies** to collaborate via a model similar to **INDUS-X** (U.S.-India Defence Innovation Bridge).
- Both countries share a focus on **indigenisation of defence industries**, which opens the door for deeper technological synergy.



### Key Definitions & Legal Provisions

- **Comprehensive Strategic Partnership (CSP)**: A high-level diplomatic framework to expand cooperation across defence, economic, and strategic spheres.
- **2+2 Dialogue**: Ministerial-level talks involving Foreign and Defence Ministers to enhance strategic coordination.
- **Logistics Exchange**: Mutual use of each other's military facilities for refuelling and maintenance, improving interoperability.
- **Article 73 of Indian Constitution**: Empowers the Union government to conduct international relations including defence treaties.
- **Article 253**: Allows Parliament to make laws to implement international treaties and agreements.

### Conclusion

India and Australia, as middle powers, are poised to take leadership in ensuring regional stability and maritime security amid the shifting sands of global power equations. Their defence cooperation, rooted in shared democratic values and strategic interests, has evolved into a robust and autonomous partnership. Moving beyond dependency on American guarantees, this relationship is vital for shaping a multipolar Indo-Pacific and advancing India's **Act East** and **Security and Growth for All in the Region (SAGAR)** doctrines.



### 3. Freedom of Speech in Universities vs Constitutional Protections — Key Points

#### 1. The Core Issue: Expression in Universities vs. Freedom of Speech

- The article discusses the **constitutional tension** between **academic freedom** in universities and **freedom of speech** under **Article 19(1)(a)** of the Indian Constitution.
- Raises questions about whether **university faculty** must seek prior permission for expressing views, and whether dissenting opinion equals activism.

#### 2. Constitutional and Legal Framework

- **Article 19(1)(a)** guarantees **freedom of speech and expression**.
- **Article 19(2)** allows for **reasonable restrictions** on specific grounds: *sovereignty and integrity of India, public order, morality, defamation, etc.*
- **First Constitutional Amendment (1951)** introduced “reasonable restrictions”.
- **Sixteenth Amendment (1963)** added “sovereignty and integrity of India” as a ground.
- In **Anuradha Bhasin vs Union of India (2020)**, the **Supreme Court** emphasized the **doctrine of proportionality** in restrictions and upheld that **Internet is part of free speech**.
- **Dr. Janet Jeyapaul vs SRM University (2015)**: Held private universities are ‘state’ under **Article 12**, and cannot violate **Article 14** (equality before law).

#### 3. Role of Academia in Democratic Discourse

- The article argues that faculty members, like all citizens, have the right to express **personal views**.
- Merely expressing an opinion should **not be equated to activism**, unless it violates legal boundaries.
- Universities should encourage **open debate**, not suppress diverse viewpoints, as that diminishes **academic excellence and critical thinking**.

#### 4. Global and Historical Perspectives on Free Speech

- Refers to **John Milton's "Areopagitica" (1644)** and his opposition to prior government licensing for publications.
- **John Stuart Mill**: Silencing dissent, even if from one person, is unjust.
- **U.S. Supreme Court (Texas v. Johnson, 1989)** recognized even **flag burning** as protected speech—emphasizing the extent of protection in democratic societies.
- The **First Amendment to the U.S. Constitution (1791)** strongly protects freedom of speech and press.

#### 5. Importance of Free Speech for Individual Fulfilment and Knowledge Creation

- Freedom of expression is linked to **individual self-fulfilment, autonomy, and truth-seeking**.
- A **regulated and suppressed academic environment** cannot produce great thinkers or scientists.
- Ancient Indian scholars thrived in an education system that was **free from state control**, encouraging **intellectual independence**.

#### 6. Press Freedom and India's Global Image



- India ranks **151 out of 180** in the **World Press Freedom Index**, undermining its claim to be a global thought leader or "Vishwaguru".
- Excessive suppression of speech can contradict India's democratic ideals and global aspirations.

### Conclusion

The balance between **national interest** and **freedom of speech** must be **constitutionally guided, not institutionally imposed**. Universities must function as **free spaces of thought**, encouraging **dialogue, dissent, and diversity**. The right to free speech—within constitutional limits—is essential for both **democratic governance** and **academic excellence**. Courts and institutions alike must safeguard this right to uphold **India's constitutional morality** and ensure a vibrant democratic future.

## 4. Water Management in India Needs a New Course

### Key Highlights:

#### 1. World Water Day 2025 & Global Cryosphere Action:

- Theme: *Glacier Preservation*.
- UN declared 2025 as the *International Year of Glaciers' Preservation* and launched the *Decade of Action on Cryospheric Science (2025–34)*.
- The UN World Water Development Report 2025 emphasized the critical role of glaciers and mountain ecosystems in downstream water security and sustainable development.
- The cryosphere refers to Earth's frozen water parts like glaciers, snow, and permafrost.

#### 2. Source-to-Sea (S2S) Approach:

- Recognizes that freshwater and marine water systems are interconnected in a single continuum.
- Emphasizes integrated water management "from ridge to reef".
- Originated in the **Manila Declaration 2012** and promoted by the **Stockholm International Water Institute (SIWI)**.
- Supported by the *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities*.
- Hosted since 2025 by the *International Union for Conservation of Nature (IUCN)*.



#### 3. Challenges in India's Water Management:

- **Spatial inequality**, groundwater overuse (60.5% average, >100% in Punjab, Haryana, Rajasthan), and declining water quality.
- CPCB (2022) identified **311 polluted river stretches** across 30 states/UTs.
- **NITI Aayog (2018)**: Water stress threatens 600 million Indians; potential GDP loss of 6%.
- Fragmented governance—across local, state, national, and global levels—creates jurisdictional challenges.



#### 4. Policy Landscape and Gaps:

- India's **first National Water Policy (1987)**; subsequent updates yet limited integration of S2S.
- Attempts for reform include 2015 proposal for **National Water Commission**, and 2019 expert committee for new national policy.
- Despite state-level water policies and reforms, integrated S2S thinking remains marginal.

#### 5. Need for Integrated & Social-Ecological Governance:

- India must link **SDG-6 (Clean Water and Sanitation)** and **SDG-14 (Life Below Water)** through integrated planning.
- Emphasize **stakeholder inclusion**, science-policy coherence, and innovative water governance.
- Projects in Delhi and Indo-Gangetic plains are being piloted using the S2S lens.

#### 6. Constitutional & Legal Backing:

- **Article 21**: Right to clean drinking water as part of the right to life.
- **Article 48A**: Duty of the state to protect the environment.
- **Article 51A(g)**: Duty of citizens to protect natural resources.
- **Water** is a State subject under **Entry 17** of the State List (Schedule VII) but also overlaps with environmental matters under Concurrent List (Entry 17A, 17B).

#### Conclusion:

India stands at a critical juncture in managing its water crisis. With increasing pollution, over-extraction, and climate impacts on the cryosphere, there is an urgent need for a paradigm shift from fragmented and sectoral approaches to **holistic, science-driven and socially inclusive frameworks** like **Source-to-Sea (S2S)**.

Institutional reforms, coordination across federal levels, stakeholder engagement, and policy alignment with international best practices are essential to safeguard India's freshwater and marine resources for the future.

## 5. Judicial Sensitivity to Sentiments is a Sign of Regression

### 1. Judiciary's Evolving Role: From Defender of Free Speech to Arbiter of Sentiments

- Indian judiciary is shifting from being a **counter-majoritarian institution** to acting as an **arbiter of public decorum**, focusing on managing rather than defending free speech.
- Courts increasingly expect citizens to **apologize for lawful speech**, citing "national pride," "civility," or "sentiments," **diluting Article 19(1)(a)** which guarantees **freedom of speech and expression**.

### 2. Legal Misinterpretation and Subjective Censorship

- The judiciary is **misreading Article 19(2)** by treating offensive or tasteless speech as grounds for **legal harm**, rather than requiring evidence of **incitement to violence, defamation, or public disorder**.
- Recent cases (e.g., criticism of PM Modi, Kamal Haasan's linguistic comment, use of explicit language in podcasts) show **courts reacting to outrage** rather than upholding constitutional liberties.

### 3. Impact on Democratic Discourse and Rule of Law

- Judicial behavior is fostering a "**market of offence**", where **greater outrage leads to more litigation**.





- The **process becomes the punishment**, as **FIRs, investigations, and summonses** are used to harass individuals, thereby **chilling dissent and critical speech**, especially in political or military matters.

#### 4. Violation of Constitutional Doctrine and Precedents

- **Constitutional morality**, as envisaged by **Dr. B.R. Ambedkar**, is being undermined when **courts protect sentiments** rather than **individual liberties**.
- The **doctrine of “chilling effect”**—recognized in global jurisprudence—is acknowledged in India but seldom enforced robustly to protect freedom of speech.

#### 5. Key Legal and Constitutional Concepts

- **Article 19(1)(a)**: Guarantees all citizens the right to freedom of speech and expression.
- **Article 19(2)**: Permits reasonable restrictions on free speech in the interest of sovereignty, public order, morality, etc.—**not to protect sentiments**.
- **Defamation (civil or criminal)** must meet a clear threshold; **offending sentiments is not defamation**.
- **Judicial Review**: Courts must assess laws and state action for constitutionality, not public popularity.



#### 6. Recommendations and Way Forward

- Judiciary must return to a **principle-based model of free speech protection** and not reduce courts to “**confession chambers**” for public apologies.
- There should be **structural protection for dissent**, not mere narrative correction.
- **Vague laws** like sedition and public order clauses must be **interpreted narrowly** to favor liberty.

#### Conclusion

India’s democratic health depends on how well it **tolerates dissent, not politeness**. Judicial sensitivity to public sentiment risks replacing **constitutional liberty with cultural control**. Courts must act as **guardians of freedom**, not gatekeepers of taste or nationalism. Free speech, even if unsettling or provocative, is **the bedrock of democracy**, and safeguarding it ensures that **the Republic does not regress into conformity or fear**. As Ambedkar emphasized, **rebellion and dissent** are essential for progress—not submission or silence.

## 6. Subordinate Judiciary: An Economic Pillar India Must Strengthen

#### 1. Subordinate Judiciary and Its Economic Impact

- The **subordinate judiciary (district courts)** handles **87.5% of India’s total cases**, making it the **foundation of India’s justice system**.
- Judicial delays in district courts are **estimated to cost India ~0.5% of GDP annually** (₹1.5 trillion) due to hampered investment, stalled business decisions, and loss of economic momentum.
- **45 million cases** are pending across India’s lower courts, severely affecting small entrepreneurs and the ease of doing business.



## 2. Vacancy Crisis and Need for Institutional Reform

- **4,859 of 22,750 posts** in subordinate courts are vacant, causing judges to handle **746 cases annually** (against global best practices of 200–300).
- The **All India Judicial Service (AIJS)**, similar to IAS/IPS, is proposed to ensure **merit-based, timely, and standardized recruitment** while upholding **Articles 233–237** of the Constitution (which deal with district judge appointments).
- Filling judicial vacancies is crucial for reducing pendency and **boosting investor confidence**—as shown by Kenya’s judiciary reforms that increased FDI.

## 3. Need for Holistic Infrastructure and Digital Investment

- While the government has invested ₹8,000 crore in **building court infrastructure**, **only 6.7% of district courts are women-friendly**—excluding a large demographic.
- The **e-Courts Mission Mode Project**, supported by **AI and digital tools**, aims to predict litigation trends and reduce pendency. But India’s fragmented digitization efforts reduce its effectiveness.
- Lessons can be drawn from **Estonia, Malaysia, Thailand**, where tech-enabled courts have improved efficiency by 40–60%.

## 4. Barriers to Inclusion and Innovation in Judicial Appointments

- The current **three-year practice requirement** for district judge recruitment limits **diverse participation**, especially women (only 15% of practising lawyers).
- Countries like the **UK and South Africa** use **competency and scenario-based assessments** to ensure quality and diversity, which India can emulate.
- **Estonia’s digital-savvy judiciary** shows how merit-based reforms improve service delivery and innovation in justice.

## 5. Improving Case Management Systems and Hybrid Models

- India’s **hybrid filing systems** often exclude small litigants due to complexity.
- Successful models like **Singapore’s Integrated Case Management**, **Brazil’s e-process**, and **Ghana’s double-shift courts** show how technology, extended timings, and centralized tracking systems can cut delays and increase throughput.
- **AI-based analytics** in Indian courts can also improve consistency, predict outcomes, and enhance judicial productivity.

## Conclusion

Subordinate courts are not merely dispensers of justice—they are **engines of economic and social transformation**. With **backing from Articles 233–237 of the Constitution**, and guided by the Prime Minister’s “**Citizen First, Justice First**” vision, reforms in judicial recruitment, digitization, case management, and infrastructure are essential. A modernized, inclusive, and efficient subordinate judiciary can **unlock India’s economic potential**, enhance **ease of doing business**, and restore **citizen trust** in the justice system. **Sunita’s five-year wait is not just a personal grievance—it is symbolic of the economic drag caused by judicial inefficiency**. The call now is for **political will, judicial collaboration, and stakeholder synergy** to ensure justice not only delayed is not justice denied—but also not growth denied.

## 7. Why India Must Address Its Propulsion Gap: A Strategic Defence Imperative



### 1. Persistent Dependence on Foreign Engine Technology

- India continues to rely heavily on imported propulsion systems for its air, land, and naval platforms.
- The *Advanced Medium Combat Aircraft (AMCA)*, India's flagship 5th-gen fighter project, remains hostage to foreign engine supplies (e.g., GE F414).
- Earlier projects like the *HF-24 Marut* (India's first indigenous fighter jet) failed to realise full potential due to underpowered foreign engines (British Orpheus 703).

**Key Term: Propulsion Gap** refers to a country's inability to develop its own reliable, high-performance engines for military platforms, resulting in dependence on external suppliers.

### 2. The Kaveri Engine Setback and Technological Challenges

- The *Kaveri Engine Project*, launched in 1989 by DRDO's GTRE, failed to meet thrust and reliability benchmarks after decades of work and over ₹2,000 crore expenditure.
- Attempts to revive it through collaborations (e.g., with Snecma and Safran) failed due to either institutional rigidity or denial of core technology by foreign partners.
- This failure forced ADA to adopt *U.S.-made GE F404* engines for the Tejas LCA, restricting combat performance and delaying full operational clearance.

### 3. Operational Consequences and Military Readiness Risks

- Recent delays in the delivery of 99 GE-F404 engines for LCA Mk1A have pushed back commissioning and affected IAF's combat preparedness (squadron strength dropped from 42.5 to ~30).
- HAL's ongoing struggle to negotiate full technology transfer of GE F414 engines for Tejas Mk2 and AMCA Mk1 reflects continued vulnerability.
- Similar dependency exists across services: Army's *Arjun tanks* use German engines; Navy's indigenously designed vessels rely on Russian, Ukrainian, and Western propulsion systems.



### 4. Strategic Risks: Delays, Export Restrictions, and Diplomatic Vulnerability

- Delays in engine supplies from abroad (like those from GE) not only slow down production but also affect India's ability to export defence equipment.
- Exporting systems powered by foreign engines often requires *third-party export approvals*, limiting India's sovereign defence trade.
- In a volatile geopolitical environment, this external dependency increases India's strategic and operational vulnerability.



### 5. Need for Comprehensive Reform and Long-Term Vision

- Experts argue that the propulsion gap is more *political and structural* than merely technical.
- India lacks a **cohesive innovation ecosystem**: research remains fragmented across institutions, with limited integration between academia, private industry, and government R&D.
- Achieving indigenous propulsion capability will require:



- Strategic and sustained funding.
- Long-term vision beyond political cycles.
- Access to core technologies like *single-crystal turbine blades*, *thermal coatings*, and *advanced cooling systems*.

*Constitutional Provision:*

- **Article 51 (Directive Principles):** Promotes development of scientific temper, innovation, and international peace, indirectly encouraging indigenous strategic capabilities.

*Policy Frameworks:*

- **Defence Production Policy (2020)** and **Atmanirbhar Bharat Abhiyan** aim to reduce import dependency and promote self-reliance in defence manufacturing.

**Conclusion: Propulsion Independence is Strategic Sovereignty**

India's inability to develop its own engine technology jeopardises the future of flagship programmes like the AMCA, LCA Mk2, and others across land and sea.

Real **strategic autonomy** requires overcoming the propulsion gap through:

- Political commitment,
- Institutional reform,
- Deep private-public-academic collaboration.

Without indigenous propulsion, India's dream of becoming a global defence manufacturing hub and a self-reliant military power may remain aspirational.

## 8. Practising Equality in Constitutional Courts: Senior Advocate Designation and Its Constitutional Concerns

**Key Summary Points:**

- **Supreme Court Revisits Senior Advocate Designation Rules:**

In *Jitender @ Kalla vs State* (2025), the Supreme Court directed all High Courts to frame rules for designating Senior Advocates, revisiting earlier *Indira Jaising v. Supreme Court* rulings (2017 & 2023). However, it failed to address the **core issue of inherent inequality** in the classification system under **Section 16 of the Advocates Act, 1961**.

- **Legal Basis for Classification and Constitutional Dilemma:**

Section 16 allows constitutional courts to designate 'senior advocates' based on **standing, ability, and special knowledge**. Critics argue this creates **discrimination among equals**, violating **Article 14** (Right to Equality) and promotes **elitism in the legal system**—something antithetical to India's democratic and socialist ethos.

- **Court's Inconsistent Stand on Objectivity and Reforms:**

The Court recognized that the existing **point-based system is subjective**, yet continued with the **application and consent model**. Instead of striking down or referring **Section 16** for constitutional review, the Court allowed only **procedural refinements**, not addressing **systemic bias**.

- **Impact on Access to Justice and Representation:**





This classification has led to the rise of a **legal plutocracy**—a small elite of “star lawyers” dominate cases, sidelining **women, marginalised communities, and regional lawyers**. This results in **intellectual apartheid**, weakening the **diverse and representative nature** of the Bar, essential for a **vibrant judicial democracy**.

- **Comparative Constitutional Practices Misapplied:**

The Court’s reliance on global practices (e.g., Nigeria, Australia, Singapore) to justify senior advocate classification ignored India’s **unique constitutional vision of egalitarianism**, especially post the **42nd Amendment** that added "Socialist" in the **Preamble**.

**Constitutional and Legal Concepts:**

- **Article 14:** Guarantees *equality before the law and equal protection of the laws* within the territory of India. Any arbitrary classification is violative of this provision unless it satisfies *reasonable classification* criteria: **intelligible differentia** and **rational nexus**.
- **Section 16 of Advocates Act, 1961:** Legally enables courts to classify advocates as ‘senior’ based on subjective parameters, now being questioned as **arbitrary and elitist**.
- **Judicial Pluralism:** A judiciary that reflects social, regional, and professional diversity is vital for legitimacy and public trust. Lack of diversity contradicts the ideals of **constitutional morality**.

**Value-Added Points for UPSC:**

- **Ethics & Judiciary (GS-4):** The practice raises questions of **fairness, transparency, meritocracy, and bias** in legal institutions. It also illustrates **conflict between institutional tradition and democratic values**.
- **Legal Commentary:** F.S. Nariman called it a “*caste system among lawyers*”. Scholars label the bias in selection as **homo-social morphing**, where judges prefer lawyers who mirror their own identity and ideology.
- **Impact on Legal Profession:** Promotes **commercialisation of litigation**, and **barriers to entry for competent but underrepresented lawyers**. Undermines **public trust in the neutrality and accessibility** of the judiciary.



**Conclusion:**

The Supreme Court’s recent judgment reflects a missed opportunity to address **structural inequality** in the legal profession. While procedural guidelines were updated, the **constitutional validity of Section 16** and its alignment with **Article 14 and the Preamble** remains unresolved. As custodians of equality, constitutional courts must not just uphold the **form** of justice but also its **substance**. Genuine reform must aim to **democratise access**, ensure **diversity in representation**, and uphold the **egalitarian spirit of the Constitution** in both the Bench and the Bar.

## 9. One Year Since Implementation of New Criminal Laws



## Key Developments in Criminal Justice Reform

### 1. Colonial-era Criminal Laws Replaced

- Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), and Indian Evidence Act, 1872 were replaced in 2023 by:

- Bharatiya Nyaya Sanhita (BNS) – Replaces IPC
- Bharatiya Nagarik Suraksha Sanhita (BNSS) – Replaces CrPC
- Bharatiya Sakshya Adhiniyam (BSA) – Replaces Evidence Act



- Aimed to **indigenize criminal law**, improve procedural justice, and enhance **victim-centricity** and **technological integration** in investigations.

### 2. Use of Technology: e-Sakshya App and ICJS Integration

- 'e-Sakshya' app launched for real-time capture of **photo, video, and geolocation-based evidence** under key BNSS sections (e.g., 105, 173, 176, 180, 185, 497).
- Linked to **CCTNS** (Crime and Criminal Tracking Network & Systems) and **National Government Cloud (NGC)**, forming part of the **Interoperable Criminal Justice System (ICJS)**.
- Enhances **evidence integrity, transparency**, and limits unofficial delegation of investigation duties by Investigating Officers (IOs).

### 3. Key Legal and Constitutional Provisions Involved

- Article 21**: Ensures protection of life and personal liberty; relevant for fair trial and investigation.
- Article 39A**: Mandates equal justice and free legal aid; crucial for poor/vulnerable accused in the new criminal justice framework.
- Information Technology Act, 2000**: Governs use and authentication of digital evidence.
- New provisions under BNSS (e.g., **Section 530**) provide for **video-based trial procedures**, though under-implemented so far.

### 4. Operational Challenges and Gaps

- Infrastructure Gaps**: Many IOs use personal phones; devices must meet **Android 10+ with 1 GB+ storage**.
- Evidence Handling**: Courts still demand pen-drive submissions, though cloud access is available via ICJS.
- Forensic Support**: **Mandatory FSL visit** now part of crime scene protocol, but **cyber forensics labs remain under-notified** under the IT Act.
- Delayed Post-mortem Reports**: Despite 7-day limit for rape victim reports (BNSS Sec 184), post-mortem delays persist. **MedLEaPR system** under testing to address this.

### 5. Concerns in Criminal Law Classification and Definitions



- **Ambiguity in Provisions:** Petty thefts (<₹5000) often not registered; vaguely worded **Section 112 (petty organized crime)** causes confusion.
- **Witness and Accused Rights:** While capturing video evidence improves accountability, **accused often resist being recorded**, raising privacy concerns.

### Key Terms for UPSC

- **BNSS (Bharatiya Nagarik Suraksha Sanhita):** Replaces CrPC, focuses on procedural justice.
- **BNS (Bharatiya Nyaya Sanhita):** Replaces IPC; includes new offenses and stricter timelines.
- **e-Sakshya:** Mobile-based app for collecting electronic evidence with real-time authentication.
- **CCTNS (Crime and Criminal Tracking Network and Systems):** Digital platform for police case tracking.
- **ICJS (Inter-operable Criminal Justice System):** Integrates police, courts, jails, FSLs, and prosecution digitally.

### Conclusion

The **new criminal laws mark a major shift in India's criminal justice architecture**, modernizing outdated colonial-era statutes and emphasizing **technology-driven, transparent, and efficient policing**. Tools like **e-Sakshya** and integration via **ICJS** show promise but require **better infrastructure, training, and legal clarity**.

## ETHICS

### 1. Induction of IAS Officers from State Civil Services

#### 1. Context: 127th Induction Training Programme at LBSNAA

- Indian Administrative Service (IAS) officers inducted from State Civil Services and undergoing training at the **Lal Bahadur Shastri National Academy of Administration (LBSNAA)** met the **President of India, Smt. Droupadi Murmu** on **June 3, 2025**.



- The President emphasized their **expanded national role**, moving from state-specific to **all-India governance responsibilities**.

#### 2. Role Transformation & National Responsibility

- Previously focused on **local and state-level governance**, these officers now must operate under the broader **national governance framework**.

- Their duties must align with the national developmental vision of **“Viksit Bharat by 2047”**, a goal aimed at transforming India into a **developed nation**.

#### 3. Focus on Inclusive and Equitable Development



- The President stressed that real progress involves **uplifting the marginalized and weaker sections**.
- Inclusive governance must ensure that **poverty reduction, social justice**, and access to public goods reach the **last mile**, especially to **SCs, STs, minorities, and women**.

#### **4. Importance of Technology in Governance**

- Officers were encouraged to leverage **AI, e-governance, digital feedback**, and **data analytics** to enhance **transparency, efficiency, and citizen participation**.
- Emphasis was placed on building **citizen-centric governance systems**, promoting **real-time service delivery and accountability**.

#### **5. Ethics, Integrity & Empathetic Administration**

- President Murmu reminded officers of the **core values of the IAS: integrity, impartiality, empathy, and fairness**.
- **Ethical governance and responsible use of authority** are foundational to maintaining **citizen trust and good governance**.

#### **6. Constitutional and Legal Relevance**

- The IAS forms part of the **All India Services**, constituted under **Article 312 of the Indian Constitution**.
- They are crucial for implementing **central and state policies**, maintaining **law and order**, and ensuring **administrative continuity**.
- This event reinforces the importance of **federal cooperation** and **cadre integration**, where State Civil Service officers are promoted into the IAS.

#### **Conclusion**

The President's interaction with the newly inducted IAS officers underscores the need for a **responsive, inclusive, and tech-driven civil service** that can drive India's transformation into a developed nation by 2047. As part of the steel frame of India, these officers now shoulder expanded responsibilities, not just of administration but of **nation-building**, grounded in **constitutional values and ethical governance**.

## **2. Responsibility and Regulation in Maritime Accidents**

#### **Recent Shipping Accidents off Kerala Coast**

- **MV Wan Hai 503** (Singapore-flagged) caught fire off **Beypore coast** on **June 9, 2025**, carrying over **2,000 tonnes of fuel and hazardous containers**.
- **MSC ELSA 3**, a **Liberian container ship**, sank off **Kochi** on **May 25, 2025**, raising concerns over **ecological damage** due to hazardous cargo like **calcium carbide**.

#### **Global Maritime Regulation: Role of IMO & Conventions**

- The **International Maritime Organization (IMO)**, a **UN agency**, regulates **global merchant shipping** through conventions on **pollution, safety, accident response, and liabilities**.
- Key conventions:
  - **SOLAS (Safety of Life at Sea)**: Ensures safety features like **lifeboat capacity**.





- **MARPOL (International Convention for the Prevention of Pollution from Ships):** Enforces **polluter pays principle**.
- **Nairobi Wreck Removal Convention (2007):** Ship owners are responsible for **salvaging sunken ships** within **200 nautical miles**.
- **HNS Convention (2010):** Deals with **hazardous and noxious substances**, not yet ratified by India.
- In India, implementation is overseen by the **Directorate General of Shipping**, under the **Ministry of Ports, Shipping and Waterways**.

#### **Ship Ownership, Flag of Convenience & Liability**

- Ships are often **owned by companies in one country** and **registered in another** (e.g., **Liberia, Marshall Islands**) to benefit from **lax regulation**—a practice called **Flag of Convenience (FOC)**.
- **Ship owners** are liable for **cargo loss, pollution, or loss of life**.
  - Covered by **Protection and Indemnity (P&I) Clubs**, which are **insurance pools** that share financial risks.
- No cap exists for environmental damage compensation (e.g., oil spills, hazardous cargo leaks).

#### **Legal & Contractual Instruments**

- **Bill of Lading:** A legal document issued by the ship owner to the exporter, establishing **ownership of cargo**, details of shipping, and obligations.
- **Letter of Credit:** Used by the importer to facilitate payment, linked with the transfer of the **bill of lading**.
- These documents ensure that **claims** in case of **cargo loss** can be settled with insurance.

#### **Causes of Ship Accidents & Learning Mechanisms**

- Accidents often result from **compound errors, human mistakes, or risky behaviors** (e.g., sailing close to shore for mobile signals).
- Example: The **Wakashio spill (2020)** off Mauritius occurred due to navigation near shore during COVID-19.
- **Titanic's sinking** led to the establishment of **SOLAS**, mandating **lifeboat capacity for all passengers**, even if only one side of the ship is accessible.
- The **IMO** regularly **updates safety protocols and design standards** based on accident investigations.

#### **Constitutional & Legal Provisions (India Context)**

- **Article 21:** Right to life includes the right to a **clean environment**, applicable in the case of marine pollution.
- **Environment (Protection) Act, 1986:** Empowers the government to control and prevent environmental hazards from maritime sources.
- **Merchant Shipping Act, 1958:** Domestic law that incorporates several IMO conventions into Indian legal framework.





- **Coastal Regulation Zone (CRZ) Notification:** Protects marine biodiversity and livelihoods near the coast.

### Conclusion

Maritime accidents such as those off Kerala highlight the **complex web of responsibilities, international conventions, and regulatory mechanisms** that govern shipping safety, environmental protection, and compensation. Understanding these frameworks is crucial for **UPSC GS Paper II** (Governance & International Institutions), **GS Paper III** (Disaster Management & Environmental Pollution), and **Ethics Paper (GS IV)** under **corporate accountability and human error ethics**. Strengthening India's legal commitment, including **ratifying pending conventions** like the **HNS Convention**, can improve maritime environmental governance.

## 3. Inclusive Pension System in India: Need for Reform and Universal Coverage

### 1. Need for Pension Reforms in India

- **Pensions ensure financial security and dignity post-retirement**, especially amidst rising healthcare costs and inflation.
- As per *Economic Survey 2025-26*, **India's pension assets are just 17% of GDP**, compared to 80% in developed countries.
- Only **12% of India's workforce** is covered by formal pension schemes, mostly from the organised public and private sectors.



### 2. Informal Sector Largely Excluded

- Over **85% of India's labour force is in the informal sector**, contributing more than half of GDP, yet largely excluded from pension coverage.
- Voluntary schemes like **Atal Pension Yojana (APY)** and **National Pension System (NPS)** cover just 5.3% of the population.
- This exclusion risks a **future financial crisis**, especially as India's **old-age dependency ratio** is expected to rise to **30% by 2050**.

### 3. Challenges: Fragmentation, Awareness, and Liquidity

- The pension system is **fragmented**, with overlapping schemes creating inefficiencies.
- Low **financial literacy** and limited awareness deter participation, especially in the gig and rural economy.
- **Sustainability of pension funds** is under pressure. The Mercer CFA Institute ranks India's pension adequacy at just 44%.
- Learning from countries like **Japan, New Zealand, Netherlands, and Nigeria**, India needs a **unified and digital-first system**.

### 4. Proposed Three-Tier Inclusive Pension Framework

- **Tier 1:** Mandatory flat-rate contributory pension for all individuals, irrespective of sector.
- **Tier 2:** Occupational pensions via employer-based, opt-out schemes with automatic enrolment and minimum standards.



- **Tier 3:** Voluntary pension savings with **tax benefits, flexible options, and market-linked returns**.
- Such a structure mirrors **global best practices** seen in countries like UK (auto-enrolment), Nigeria (digital pension infra), and Australia (school-level financial education).

#### 5. Complementary Measures for Effective Implementation

- Implement **financial literacy programs** at school and community levels, similar to Australia.
- Develop **user-friendly digital platforms** for pension enrolment and **mandatory annual disclosures** for transparency.
- Strengthen **investment regulations and fund oversight** to ensure liquidity and protect against long-term fund shortfalls.
- Encourage **private sector participation** to supplement the public system, as done in the Netherlands and the USA.

#### Key Definitions and Legal Context

- **Pension:** A fixed, regular payment made during retirement from an investment fund or public source.
- **Old-Age Dependency Ratio:** The ratio of elderly people to the working-age population, impacting economic productivity.
- **Article 41** (Directive Principles): Enjoins the state to provide public assistance in old age, sickness, and unemployment.
- **Social Security Code, 2020:** Seeks to universalize social security including pensions, especially for gig and informal workers.

#### Conclusion

Designing an **inclusive, scalable, and sustainable pension system** is imperative for India's goal of becoming a **developed economy by 2047**.

A **minimum pension guarantee**, integrated digital systems, and wide coverage including informal workers are necessary to **prevent old-age poverty**, foster **economic stability**, and fulfil the constitutional vision of **social justice and equity**.

The time to act is **now**, before demographic shifts transform today's oversight into tomorrow's crisis.

## 4. U.K. Lawmakers Approve Bill for Assisted Dying

### 1. Assisted Dying Bill Passed by U.K. House of Commons

- The **Terminally Ill Adults (End of Life) Bill**, also known as the **Assisted Dying Bill**, was passed **314 to 291** in the **U.K. House of Commons** and now moves to the **House of Lords** for further deliberation.
- The Bill **applies only to England and Wales** and permits **assisted death for terminally ill individuals** expected to live for less than **six months**.

### 2. Safeguards and Eligibility Conditions

- To opt for assisted dying, the patient must be:
  - **Terminally ill** with <6 months life expectancy
  - **Mentally competent**

- Have the decision reviewed and approved by **two doctors**, a **psychiatrist**, a **senior lawyer**, and a **social worker**

- The law attempts to balance **autonomy** with **ethical safeguards** against coercion.

### 3. Support and Opposition

- **U.K. Prime Minister Keir Starmer** supported the Bill, while **Opposition Leader Kemi Badenoch** voted against it.
- Supporters argue it is about the **right to die with dignity** for terminally ill patients.
- Opponents, including disability rights advocates, fear it may **pressurize vulnerable groups** and divert attention from **palliative care and social support systems**.

### 4. Ethical and Social Concerns

- Critics cite risks of **coercion**, **moral hazards**, and **mental distress** for those feeling like a **burden on families or healthcare systems**.
- Some MPs stressed the need to **fix the National Health Service (NHS)** and ensure **robust healthcare and counselling** before legislating end-of-life options.



### 5. Global Context & Relevance for India

- Assisted dying is legal in countries like **Switzerland (via Dignitas)**, **Canada**, **Belgium**, and some **U.S. states**.
- In India, **euthanasia and assisted suicide** remain **largely illegal**, although **passive euthanasia** was allowed by the Supreme Court in *Common Cause v. Union of India (2018)* under **Article 21 (Right to Life and Dignity)** with stringent guidelines.
- The Law Commission of India's 241st Report (2012) also recommended limited scope for passive euthanasia.

### Terms for UPSC

- **Assisted Dying**: The act of providing support (usually medical) to a person to end their life voluntarily, often in the context of terminal illness.
- **Euthanasia**: The practice of intentionally ending a life to relieve pain; **active euthanasia** is illegal in India, while **passive euthanasia** is permitted under strict conditions.
- **Article 21 of the Constitution**: Guarantees the right to life, which courts have interpreted to include the **right to die with dignity** (not suicide).

### Conclusion

The Assisted Dying Bill in the U.K. marks a major ethical, legal, and social milestone in **end-of-life care policy**. While it aims to protect **individual dignity and autonomy**, it raises profound questions about **health equity**, **coercion**, **disability rights**, and the **role of the state in personal decisions**. For India, such global developments can influence **future debates on euthanasia**, **palliative care policy**, and the **balance between personal liberty and state safeguards**.



## 5. Gender Equity in Urban Bureaucracy: A Critical Need for Inclusive Urban India

### 1. Urban Transformation and Gender Equity Mandate

- India is undergoing a **massive urban transformation**—by 2050, over **800 million** people will live in cities.
- The **74th Constitutional Amendment Act (1992)** mandates **33% reservation for women in Urban Local Bodies (ULBs)**; 17 States and 1 UT have extended this to **50%**.
- Despite the rising number of **women mayors and councillors (46%)**, the **urban bureaucratic and technical workforce** (planners, engineers, police) remains **largely male-dominated**.

### 2. Persistent Gender Gap in Urban Administration

- Women comprise only 20% of the IAS** and a much **lower percentage in municipal engineering, planning, and policing** (11.7% women in police forces; mostly in desk jobs).
- Gender imbalance **limits responsiveness to women's needs** in cities — like **safe transport, public lighting, and localized infrastructure** for caregiving.
- Studies show **women administrators prioritize health, water, and safety**, and improve **trust and empathy** in governance outcomes.

### 3. Gender Budgeting: Missed Potential in Urban Governance

- Gender-Responsive Budgeting (GRB)** — integrating gender equity in public finances — was **adopted in India in 2005–06**, but implementation is **weak and tokenistic**, especially in small towns.
- While **Delhi, Tamil Nadu, and Kerala** have made notable progress, most ULBs **lack institutional capacity**, monitoring, and integration of GRB into core planning.
- In contrast, countries like **Philippines, South Africa, Rwanda, and Mexico** have embedded **GRB through laws, mandates, and participatory planning**.



### 4. Global Best Practices and Lessons for India

- Rwanda:** Allocated GRB funds for maternal health and education.
- South Korea:** Used gender audits to reform transport and safety policies.
- Mexico & Uganda:** Link gender budgeting to **results-based planning and certification**.
- Philippines:** Allocates **5% of local budgets for gender programmes**, including shelters and child care.
- These models reflect that **gender-inclusive bureaucracies improve service delivery, safety, and public trust**.

### 5. Constitutional and Policy Frameworks for Gender Equity

- Article 15(3)** of the Indian Constitution allows the State to make **special provisions for women**.
- Articles 243D & 243T** under the 73rd and 74th Amendments provide **reservation in PRIs and ULBs**, respectively.



- India's National Policy for Women (2016 draft) calls for **gender mainstreaming** in urban planning and governance, but lacks formal implementation.

**Key Definitions for UPSC**

- **Urban Bureaucracy:** Administrative and technical machinery (officials, engineers, planners) that governs urban areas.
- **Gender-Responsive Budgeting (GRB):** A budgeting approach that ensures public spending is equitable and benefits women and men equally.
- **Glass Ceiling:** Invisible barriers that prevent women from rising beyond a certain level in professional hierarchies.

**Conclusion: Towards Gender-Inclusive Urban Futures**

India's journey to becoming a \$5 trillion economy must be accompanied by a **parallel transformation in urban governance** — one that **centres gender equity not just in politics, but in bureaucracy**. Equal representation must be institutionalized in administrative, planning, and enforcement roles. **Mandatory gender audits, affirmative action, capacity building, and a robust GRB framework** can ensure that urban development is **inclusive, responsive, and just**. For cities to work for women, they must be built **with** women — not merely for them.

## 6. 28th National Good Governance Webinar – Promoting District-Level Excellence

**National Webinar on Holistic Development of Districts**

- **Prime Minister-Directed Initiative on Governance Replication:** The **28th National Good Governance Webinar** was held on **26th June 2025**, under the theme '**Holistic Development of Districts**', as part of the **National Good Governance Webinar Series (2025–26)**. It is organized by the **Department of Administrative Reforms and Public Grievances (DARPG)** on the PM's directive to disseminate award-winning administrative innovations for wider replication across India.

- **Presentations by PM's Award-Winning Districts:**

The webinar featured presentations from:

◆ **Kupwara District, Jammu & Kashmir** by DM Ayushi Sudan

◆ **Tinsukia District, Assam** by DC Swapneel Paul

Both districts were recipients of the **2024 PM's Awards for Excellence in Public Administration**, focusing on **holistic and inclusive district development models**.

- **Wide Participation and Institutional Outreach:**

The session saw **participation from over 850 locations nationwide**, including **State and District Officers, District Collectors, Administrative Training Institutes, and Line Departments**, reflecting the **scale and inclusivity of administrative learning** at all levels of governance.

**Definitions and Governance Concepts**

- **Holistic Development of Districts:**



An approach that emphasizes **integrated progress across sectors** – including **health, education, livelihoods, digital governance, infrastructure, and inclusivity** – to ensure balanced regional development.

- **PM's Award for Excellence in Public Administration:**

A prestigious national award recognizing **innovative and impactful governance models** by civil servants, encouraging **replication and scalability** of best practices.

- **Good Governance:**

Defined by the principles of **transparency, accountability, participatory decision-making, equity, and efficiency** – all of which are central to these district-level initiatives.

### **Constitutional & Legal Relevance**

- **Article 38(2) – Directive Principles of State Policy:**

Calls upon the State to **reduce inequalities in income, status, facilities, and opportunities**, which aligns with the goal of **district-level holistic development**.

- **73rd and 74th Constitutional Amendments:**

Promote **decentralization** and empower **local governance institutions** to ensure district-specific planning, citizen engagement, and effective last-mile service delivery.

- **Digital Governance under National e-Governance Plan (NeGP):**

The dissemination of best practices using digital platforms reinforces the **use of ICT in governance**, enhancing transparency and decision-making efficiency.

### **Strategic and Administrative Importance**

- **Peer Learning and Replication Model:**

The webinar model fosters a **bottom-up governance improvement** mechanism by promoting **inter-district learning**, encouraging **customized adoption** of proven strategies.

- **Focus on Sustainability and Expansion:**

Each presentation includes an assessment of **institutionalisation, scalability, and sustainability**, enabling systemic integration of successful models into **long-term governance frameworks**.

- **Civil Services Capacity Building:**

These webinars function as part of a **non-formal training mechanism** complementing the **Mission Karmayogi**, promoting **continuous learning** for public servants.



### **Conclusion**

The **28th National Good Governance Webinar** reflects a **new paradigm in administrative learning and innovation dissemination**. By showcasing **district-level success stories**, it institutionalizes a **culture of knowledge sharing, transparency, and participatory governance**. The initiative supports India's long-term goal of achieving **equity-driven, inclusive, and technology-enabled development** across its districts — a vision that aligns with the **constitutional mandate for social justice and good governance**. For UPSC aspirants, it is a key example of how **policy meets practice** in modern Indian administration.