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FOR UPSC EXAM

COMPREHENSIVE | ANALYTICAL
EXAM-FOCUSED

VIDHVATH **VIMARSHA**



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POLITY & CONSTITUTION

1. National Conference on Urban Local Bodies & Democratic Strengthening

Key Highlights of the Conference

- **Inauguration & Objective:**
 - Lok Sabha Speaker Om Birla inaugurated the *1st National Conference of Chairpersons of Urban Local Bodies (ULBs)* in Manesar, Gurugram.
 - Theme: “*Role of Urban Local Bodies in Strengthening Constitutional Democracy and Nation Building.*”
 - Aim: To enhance participatory governance and grassroots democracy through structured urban governance.
- **Enhanced Productivity in Parliament:**
 - Speaker highlighted the **reduction in disruptions** in the 18th Lok Sabha, leading to *more productive, late-night sessions and deeper debates.*
 - Urged that democracy flourishes through **dialogue, patience, and meaningful discussions**, not through protest or placard-waving.
- **Model Practices for Urban Local Bodies (ULBs):**
 - ULBs were advised to adopt **Parliamentary tools** like *Question Hour* and *Zero Hour* to enhance accountability.
 - Emphasis on building **standing committees**, regular sittings, public consultations, and shunning **ad hoc meetings** and disruptions.
 - Speaker urged ULBs to move beyond service delivery and act as **true institutions of self-governance.**
- **Urban Governance and Constitutional Relevance:**
 - Urban local governance is supported by **74th Constitutional Amendment Act, 1992**, which mandates:
 - Establishment of municipalities as institutions of self-government
 - Regular elections, devolution of powers, and formation of State Finance Commissions
 - Local self-governance reflects India’s **civilizational ethos** and democratic values rooted in *Panchayati Raj* traditions.
- **Women’s Representation & Viksit Bharat 2047 Vision:**
 - Nearly **50% representation of women** in ULBs was appreciated as a sign of inclusive progress.
 - Advocated for leadership development, capacity-building, and exposure for women municipal leaders.
 - ULBs seen as vital engines to achieve the vision of a **Developed India (Viksit Bharat) by 2047.**



Additional Important Points for UPSC

- **Definition:**
 - *Urban Local Bodies (ULBs)* are constitutionally recognized local-level governments in urban areas, including Municipal Corporations, Municipal Councils, and Nagar Panchayats.
 - Their roles include civic planning, sanitation, infrastructure, and service delivery.
- **Legal Provisions & Reforms Suggested:**
 - Institutionalize structured debates and standing committees within ULBs.

- Create mechanisms for regular citizen interaction, policy forecasting, and democratic decision-making.
- Strengthen ULB capacity for climate resilience, sustainability, and innovation.
- **Democratic Deepening and Institutional Learning:**
 - The conference encouraged knowledge sharing, transparency, and inclusive development across urban governance structures.
 - Emphasis was placed on building a cadre of *grassroots democratic leaders* with national influence.

Conclusion

The National Conference marked a crucial step toward **urban democratic renewal** and **constitutional empowerment** of ULBs. Lok Sabha Speaker Om Birla emphasized that **true democracy starts at the grassroots**, and empowered, accountable local bodies will be the foundation of India's journey toward **Viksit Bharat @2047**. The call for **structured governance**, **gender inclusion**, and **deliberative democracy** aligns with the constitutional ideals of **Article 40 (Directive Principle on Village Panchayats)** and the **74th Amendment**. Strengthening ULBs is not just an administrative necessity but a democratic imperative.

2. Supreme Court on Voter Verification: Aadhaar, EPIC, and Ration Card May Be Considered as Valid Proof

1. Supreme Court Intervention in Bihar's Electoral Roll Revision

- The **Supreme Court** is hearing petitions against the **Special Intensive Revision (SIR)** of the electoral rolls in **Bihar**.
- The Court stated that this issue “**goes to the very roots of democracy**”, as it pertains to the **fundamental right to vote**.
- The revision process has been questioned for its **lack of clarity** and for not fitting definitions under **Section 21 of the Representation of the People Act, 1950**, which differentiates between **summary** and **special** revisions.



2. Direction to Consider Additional Documents

- The Court noted that the **Election Commission's (EC)** list of 11 verification documents is **not exhaustive**.
- It directed the EC to also **consider Aadhaar, Elector Photo Identity Card (EPIC), and ration card** as valid proof for **voter registration**.
- These are widely used **identity documents** and should logically be accepted for establishing a voter's identity.

3. Aadhaar's Legal Limitation & EC's Objection

- The EC **objected to Aadhaar**, stating it is **not proof of citizenship**, and hence not suitable for voter registration.
- Under the **Aadhaar Act, 2016**, Aadhaar is a **proof of identity**, not **citizenship**. Even **non-citizens who are residents** may be issued Aadhaar cards.



- The EC argued that **voter eligibility** requires **proof of Indian citizenship**, which Aadhaar cannot legally ensure.

4. Judicial Scrutiny and Observations

- **Justice Dhulia** questioned why Aadhaar, which is required for many government services, is **not included** in the EC's document list.
- He emphasized that the **entire voter verification process is about identity**, and Aadhaar's exclusion raises logical concerns.
- The Court also flagged the **timing** of the SIR exercise, calling it "**very short**", and committed to reviewing its **legality, procedure, and scope**.

Key Legal and Constitutional Provisions:

- **Article 326:** Guarantees **universal adult suffrage** in elections to the Lok Sabha and State Legislative Assemblies.
- **Representation of the People Act, 1950 – Section 21:** Provides for **preparation and revision** of electoral rolls.
- **Aadhaar Act, 2016:** Clearly states that Aadhaar is **not a proof of citizenship**, only **identity and residence**.
- **Election Commission's Power (Article 324):** EC has authority over **superintendence, direction, and control** of elections.

Definitions for UPSC:

- **EPIC (Elector Photo Identity Card):** A photo ID issued by the Election Commission of India to all eligible voters.
- **SIR (Special Intensive Revision):** An extensive process to revise electoral rolls, usually conducted under specific circumstances.
- **Aadhaar:** A 12-digit unique identity number issued by UIDAI based on biometric and demographic data.

Conclusion & UPSC Relevance:

The Supreme Court's direction to **include Aadhaar, EPIC, and ration card** as acceptable identity proofs during voter verification reflects a push toward **inclusive electoral practices** while upholding legal boundaries. This case highlights the tension between **identity verification** and **citizenship proof**, and raises crucial questions on **electoral integrity, administrative discretion, and constitutional rights**.

3. Zonal Councils as Engines of Cooperative Federalism: Transformation under Union Home Ministry

1. Zonal Councils Evolve into Cooperative Engines

- Union Home Minister **Amit Shah** stated that **Zonal Councils**, once limited to being **discussion forums**, have now become "**engines of cooperation**" between the Centre and States.
- At the **27th Eastern Zonal Council meeting** (involving Bihar, Jharkhand, Odisha, and West Bengal), he highlighted that **83% of issues** raised in Council meetings have been **successfully resolved**, showcasing their effectiveness in dispute resolution and inter-state coordination.

2. Resolution of Long-Standing Inter-State Issues

- The meeting addressed **complex and long-pending issues** such as:

- **Masanjore Dam, Taiyabpur Barrage, and Indrapuri Reservoir.**
- **Division of assets and liabilities** of PSUs between Bihar and Jharkhand (pending since the **2000 bifurcation**).
- These issues were resolved through **mutual consent**, reflecting the cooperative spirit fostered by the Zonal Council mechanism.

3. Increase in Zonal Council Engagement Since 2014

- The number of Zonal Council meetings **increased significantly from 25 (2004–2014) to 63 (2014–2025)**.
- This reflects a strategic push by the Union government to strengthen **cooperative federalism** and improve **Centre–State relations**, particularly on **security, infrastructure, and administrative coordination**.

4. Naxalism Declining in Eastern States

- Mr. Shah noted that States like **Bihar, Jharkhand, and Odisha** have largely become **free from Naxalism**, due to **coordinated security efforts**, better governance, and increased development outreach.
- This reduction supports improved law and order and enhances investor confidence in these regions.



5. Constitutional & Legal Framework

- **Article 263 of the Constitution** provides for **Inter-State Councils** to resolve disputes between States and with the Union.
- **Zonal Councils** were established under the **States Reorganisation Act, 1956**:
 - **Five Zonal Councils**: Northern, Southern, Eastern, Western, Central (North Eastern Council is separate under NE Council Act, 1971).
 - Headed by the **Union Home Minister**, they include Chief Ministers, Governors, and senior officials.

Key Definitions for UPSC

- **Zonal Councils**: Statutory advisory bodies under the Ministry of Home Affairs for promoting interstate cooperation.
- **Cooperative Federalism**: A governance approach where the Centre and States **work together harmoniously** to address national challenges.
- **Naxalism**: A form of left-wing extremism marked by armed rebellion against the Indian State, primarily in central and eastern India.

Conclusion & UPSC Relevance

Zonal Councils are no longer symbolic—they now drive **collaborative problem-solving and regional development**. Their growing frequency and effectiveness demonstrate **India’s evolving model of cooperative federalism**, especially in **post-conflict and resource-sharing contexts**. Their success also reinforces the need for **institutional mechanisms** that promote **dialogue, trust, and consensus-building**.

4. Maharashtra Special Public Security Bill, 2024

What is the Maharashtra Special Public Security Bill, 2024?

- **Definition:** A new state-level legislation aimed at the **prevention of activities by unlawful organisations**, especially those with alleged **Left-Wing Extremist (LWE)** affiliations or similar threats.
- Seeks to **empower the state government** to declare organisations unlawful, **seize their funds**, and **impose strict punishments**.

Key Provisions of the Bill

- Punishments of **2 to 7 years** for association with unlawful organisations.
- Offences under this Bill will be **cognisable and non-bailable**.
- Grants the state power to **seize and forfeit financial assets** linked to banned groups.
- Targets extremist groups but also leaves room for **broad interpretation**, which is raising concerns.

Political and Legal Controversy

- Passed in the **Legislative Assembly and Council**, but **Congress and Shiv Sena (UBT)** staged a **walkout** during Council proceedings.
- These parties submitted an **eight-page dissent note** calling the Bill's structure "**repressive and ambiguous**."
- Opposition demanded it be **sent back to the joint committee** for further scrutiny and **public consultations**.
- Questioned the **necessity** of the Bill when **existing national laws** like UAPA, MCOCA, and PMLA already address such issues.

Legal and Constitutional Context

- The Bill touches on **Public Order** and **Criminal Law**, which fall under:
 - **State List (Entry 1)** – Public order (State's legislative domain).
 - **Concurrent List (Entry 1 & 2)** – Criminal law and criminal procedure.
- However, its scope could overlap with central laws like:
 - **Unlawful Activities (Prevention) Act (UAPA), 1967**
 - **Maharashtra Control of Organised Crime Act (MCOCA), 1999**
 - **Prevention of Money Laundering Act (PMLA), 2002**
- Raises constitutional concerns of **federal balance**, **due process**, and **potential misuse of power**.



Issues and Implications

- Critics fear **vague definitions** may allow targeting of dissenters or civil society groups.

- Could **duplicate existing national laws**, leading to **legal redundancy**.
- Concerns over **lack of safeguards, no provision for judicial oversight**, and **potential for political misuse**.
- No **long-term data or urgent security justification** provided to warrant such a law, especially as Union Home Ministry has claimed **Naxalism is on the decline**.

Conclusion & UPSC Relevance

Conclusion:

The Maharashtra Special Public Security Bill, 2024 has sparked a legal and political debate over the **necessity, proportionality, and clarity** of state-level anti-terror laws. While it claims to enhance public safety, critics highlight its **vague provisions, overlap with central legislation**, and **threats to civil liberties**. Its passage marks a key moment in **India's evolving internal security legal framework**.

5. Who is an 'Ordinarily Resident'? Electoral Inclusion, Migrant Rights & the RP Act

Key Summary Points

1. Definition of 'Ordinarily Resident' under the Representation of the People Act, 1950

Section 19 of the **Representation of the People Act (RPA), 1950** mandates that only an 'ordinarily resident' individual can be enrolled in the electoral roll of a constituency.

- Section 20 clarifies that mere **ownership or possession** of a house does **not qualify** a person as 'ordinarily resident'.
- A person temporarily away from their permanent residence (due to job, service, etc.) is still considered 'ordinarily resident'.
- Special provisions exist for:
 - Armed forces,
 - Armed police deployed outside state,
 - Government employees posted abroad,
 - Constitutional office holders.

2. Extension of Voting Rights to NRIs

- **Section 20A (added in 2010)** allows **Non-Resident Indians (NRIs)** to be enrolled based on their **passport address**, even if they reside outside India long-term.
- **NRIs can vote**, but must be physically present in their constituency to cast their ballot; the system of postal ballot for NRIs has not been fully operationalized.



3. Registration of Electors Rules (RER), 1960

- These rules, framed under the RPA and notified by the **Central Government in consultation with the Election Commission**, govern the **inclusion, deletion, and revision of names** in electoral rolls.



- Used during **Special Intensive Revisions (SIRs)** like the one recently conducted in Bihar.

4. Vulnerabilities of Migrant Workers

- As per the **Periodic Labour Force Survey (2020-21)**, **11% of India's population** are work-related migrants—**over 15 crore potential voters**.
- Many migrants live in temporary shelters near workplaces and move frequently. While their **families and roots remain in their home states**, their **mobility hinders enrollment** or participation at either location.
- Rigid interpretation of "ordinarily resident" may lead to **mass disenfranchisement** of these vulnerable groups, who often do not wish to register at their temporary residence.

5. Judicial Interpretation and Precedent

- The **Gauhati High Court in the Manmohan Singh Case (1999)** defined 'ordinarily resident' as someone **habitually residing** with an **intent to permanently dwell** at a place — not temporary or casual.
- This definition accommodates the case of migrants who continue to maintain social and economic ties with their home constituency.

6. Proposed Way Forward and Reform Suggestions

- Amendments to the **RP Act, 1950** and **RER, 1960** are needed to **formally recognize migrant workers' right** to vote in their home constituencies.
- Solutions like **Aadhaar-linked voter ID**, **remote voting technologies**, and **postal ballots** for migrant labourers can prevent **duplicate enrollment** and ensure their electoral participation.
- Precedents already exist in the RP Act for service voters and NRIs, which can serve as templates for accommodating migrant workers' needs.

Key Definitions for UPSC

- **Ordinarily Resident:** A person habitually residing at a place with the intention to live there permanently. Critical for inclusion in a constituency's electoral roll.
- **Special Intensive Revision (SIR):** A detailed, periodic process by the Election Commission to update electoral rolls.
- **Service Voter:** A person who is part of the armed forces or government services, posted away from their original constituency but retains voting rights there.
- **Electoral Roll:** The list of eligible voters in a given constituency, prepared and maintained as per the RP Act and RER.

Constitutional and Legal Provisions

- **Article 326** – Elections to the Lok Sabha and State Assemblies shall be based on adult suffrage.
- **Article 325** – No person shall be ineligible for inclusion in the electoral roll on grounds of religion, race, caste, or sex.
- **Representation of the People Act, 1950** – Deals with **preparation and revision of electoral rolls**, qualification of voters.
- **Representation of the People Act, 1951** – Deals with **conduct of elections** and disputes.

Conclusion

The evolving demographics and **mass internal migration** in India demand an **inclusive interpretation of 'ordinary residence'** under electoral laws. While protecting against voter fraud remains important, **the fundamental right to vote must not be denied to the working poor and mobile populations**. The Election Commission and Parliament must take progressive steps to align the spirit of electoral democracy with the realities of migration.

6. Supreme Court Flags Abuse of Free Speech on Social Media

Key Highlights of the Issue

1. **Supreme Court Observes Rising Misuse of Free Speech**
 - A Bench of Justices B.V. Nagarathna and K.V. Viswanathan noted that **freedom of speech and expression** under Article 19(1)(a) is increasingly being **abused on social media**.
 - The Court emphasized that **free speech must be exercised with self-restraint**, and posts that **instigate divisiveness or target dignity** of individuals must be curbed.
2. **Reasonable Restrictions are Inherent**
 - The right to free speech is **not absolute**. As per Article 19(2), the Constitution permits **reasonable restrictions** on speech in the interests of:
 - **Sovereignty and integrity of India,**
 - **Security of the state,**
 - **Public order,**
 - **Decency or morality,**
 - **Contempt of court, and**
 - **Defamation or incitement to an offence.**
 - The Court's concern relates specifically to **abusive, hate-driven, or defamatory speech** spread online, often under the garb of 'opinion' or 'freedom'.
3. **Social Media's Role in Spreading Divisiveness**
 - The Court stated that **social media lacks internal checks**, and users often incite **communal, sectarian, or personal hatred**.
 - The unchecked spread of such content threatens **secularism, fraternity, and individual dignity** — core values of the Constitution as stated in the **Preamble**.
4. **Court Mulls Regulatory Framework (Not Censorship)**
 - The Court clarified it does **not advocate censorship**, but is exploring the creation of **judicially approved guidelines or framework** to regulate online content.
 - This stems from a **petition by Wazahat Khan**, who is facing multiple FIRs in various states for his posts following his complaint against a social media influencer.
5. **Legal Vacuum and Need for Reform**
 - India currently lacks a **dedicated legal framework to regulate harmful social media content**.
 - The **Information Technology Act, 2000** and **IT Rules, 2021** provide limited remedies and focus more on intermediaries (platforms) than on individual users' conduct.



- Section 66A of IT Act (which earlier dealt with offensive messages) was struck down by the Supreme Court in **Shreya Singhal v. Union of India (2015)** as unconstitutional, leaving a gap in law enforcement.

Definitions of Key Terms

- **Freedom of Speech and Expression (Article 19(1)(a))**: A Fundamental Right under the Indian Constitution that allows individuals to express opinions freely.
- **Reasonable Restrictions (Article 19(2))**: Constitutional constraints on free speech in the interest of national and public welfare.
- **Censorship**: The official suppression or prohibition of content considered objectionable by authorities.
- **Fraternity (Preamble)**: Promotes a sense of brotherhood and unity among citizens.

Conclusion

The Supreme Court's concern reflects a growing need to **balance individual rights with societal harmony** in the digital age. While **free speech is a cornerstone of democracy**, its abuse to promote hate, misinformation, or personal defamation **violates the spirit of constitutional morality**. Judicial oversight, self-regulation by platforms, and updated legislation are essential to preserve the **sanctity of rights** without enabling **digital lawlessness**.

7. 97% 'Untouchability' Cases Pending in Courts – PCR Act, 1955 Implementation Report

Key Summary Points

1. Sharp Decline in Cases Registered under PCR Act, 1955

- As per the **2022 Annual Report** released by the **Ministry of Social Justice and Empowerment**, only **13 cases** were registered under the **Protection of Civil Rights (PCR) Act, 1955**, a decline from **24 in 2021** and **25 in 2020**.
- These few cases came from just **four states/UTs**: Jammu & Kashmir (5), Karnataka (5), Maharashtra (2), and Himachal Pradesh (1).

2. High Pendency and Acquittals in Courts

- **1,242 cases** were pending trial under the PCR Act in 2022.
- Out of **31 cases disposed of** that year, **only one resulted in conviction**, while **30 ended in acquittals**.
- From 2019–2021, **all 37 disposed cases** ended in **acquittals**, indicating a **near-zero conviction rate**.

3. Lack of Identification of 'Untouchability-Prone' Areas

- No State or Union Territory declared any area as **"untouchability prone"**, reflecting either underreporting, lack of awareness, or administrative inaction despite continued caste-based discrimination in many parts of India.

4. Comparison with SC/ST (PoA) Act, 1989

- In contrast to the PCR Act, the **number of cases under the SC/ST (Prevention of Atrocities) Act, 1989 is increasing**, showing that more severe caste-based violence is being recorded, while day-to-day 'untouchability' practices remain largely **invisible in formal legal systems**.



Important Legal Provisions & Definitions

Term / Provision	Explanation
PCR Act, 1955	Prohibits “untouchability” in any form and provides for punishment for acts of caste-based discrimination in social and religious spheres.
SC/ST PoA Act, 1989	A stronger law meant to prevent atrocities against Scheduled Castes and Scheduled Tribes and ensure speedy justice and relief.
Article 17 of the Constitution	Abolishes untouchability and forbids its practice in any form; enforcement provided through the PCR Act.
Article 15(2)	Prohibits discrimination on grounds of religion, race, caste, sex or place of birth in public spaces such as shops, restaurants, tanks, and wells.
Special Courts under PCR Act	States are empowered to establish exclusive courts and appoint special public prosecutors to handle these cases, but implementation remains poor.

Conclusion

The dismal conviction rate and high pendency under the **PCR Act, 1955**, reveal **systemic failures**—from poor investigation to judicial inertia and social apathy. The **absence of reporting** from most states, non-declaration of untouchability-prone areas, and **complete lack of convictions over several years** reflect **under-enforcement** of Article 17 of the Constitution. Strengthening the **institutional machinery**, **awareness programs**, **legal literacy**, and **accountability of law enforcement** is essential to uphold **India’s constitutional commitment to equality and dignity**.

8. Indian Aircraft Rules 2025

1. Why New Rules Are Needed

- The **draft Indian Aircraft Rules, 2025**, aim to **modernize India's aviation regulatory framework** by replacing **two colonial-era rules**:
 - Aircraft Rules, 1920
 - Aircraft Rules, 1937
- These reforms are in line with **International Civil Aviation Organization (ICAO)** standards.
- India is the **world’s 3rd largest domestic aviation market**, with over **1,500 aircraft on order** — necessitating regulatory modernization.

2. Key Reforms Proposed

- Pilot Licensing Reforms:**
 - Earlier, only students with science background (Physics + Math) could apply.
 - Now, even **Class 10 pass students**, including those from **arts and commerce**, can apply for **student pilot and private pilot licences**.
 - Relaxation of educational qualification for **commercial and transport pilot licences**—Class 12 is now enough.
- Training & Oversight:**



- Focus on easing entry into pilot training and reducing regulatory bottlenecks.

3. Enhanced Focus on Safety

- A dedicated section introduced for **Fatigue Management**, absent in earlier rules:
 - Weekly rest for pilots to be **increased from 36 to 48 hours**.
 - **Night flying restrictions** from November.
- DGCA to establish an **enhanced Safety Reporting System** to gather real-time safety and risk data.
- Applies to **pilots, aircrew, and air traffic controllers** for ensuring operational safety.

4. Impact on Aviation Sector

- Boosts **India's pilot workforce** — critical as India faces a **shortage of 10,000 pilots by 2030** (CAPA India estimate).
- Eases **foreign lessors' concerns** by aligning India's norms with international standards.
- Encourages **investment, innovation, and employment** in the fast-growing aviation industry.

5. Public Feedback and Next Steps

- Draft rules open for **public and industry consultation till 14 August 2025**.
- Final rules to be notified via **Gazette Notification** after stakeholder inputs.

Definitions & Key Concepts

- **Fatigue Management**: Scientific approach to monitor and limit fatigue among aviation staff to ensure safety and reduce accidents.
- **ICAO**: A UN agency that sets global aviation standards and regulations for member countries.
- **Licensing**: Legal permission granted to individuals to operate aircraft after fulfilling technical and physical standards.

Constitutional & Legal Provisions

- **Article 256**: Union directives to states for compliance with Union laws — important for aviation safety.
- **Article 73**: Empowers the Union Government to legislate on **Union List subjects**, including **Civil Aviation** (Entry 29, List I).
- **Aircraft Act, 1934**: The principal Act governing aviation, to be gradually phased out or amended as per new rules.

Conclusion

The **Indian Aircraft Rules, 2025**, mark a **progressive step** toward making India's aviation laws **modern, inclusive, and globally compliant**. They aim to democratize pilot training, enhance aviation safety, and prepare the sector for **explosive growth** over the coming decade. This reform is timely and critical for **India's strategic ambitions in civil aviation**.

9. Lok Sabha Panel Supports GAAR Tweaks in Review of Income Tax Bill, 2025

Key Summary Points

1. **Lok Sabha Panel Recommends GAAR Modifications**

- A **Parliamentary Standing Committee** reviewing the **Income Tax Bill, 2025** is likely to suggest **more taxpayer-friendly changes** to the **General Anti-Avoidance Rules (GAAR)**.
- The proposal aims to **balance revenue protection with taxpayer convenience**, preventing misuse of GAAR for arbitrary taxation.

2. What is GAAR?

- **General Anti-Avoidance Rules (GAAR)** are a set of legal provisions introduced to **prevent aggressive tax avoidance arrangements**.
- GAAR empowers tax authorities to **deny tax benefits** to entities that structure transactions **primarily for tax evasion purposes**, even if technically legal.
- Introduced in **Income Tax Act via Finance Act 2012**, and implemented from **April 2017 onwards**.

3. Concerns Over GAAR Implementation

- Critics argue that **GAAR's broad discretionary powers** create uncertainty among taxpayers and foreign investors.
- The panel has reportedly recommended **clearer definitions, thresholds for applicability, and better safeguards** to prevent **tax terrorism** or harassment of genuine taxpayers.

4. Proposed Changes in Income Tax Bill, 2025

- The revised Bill, likely to be tabled soon, will incorporate:
 - **Higher thresholds for triggering GAAR.**
 - **Exemptions for small or standard commercial transactions.**
 - **Strengthening of dispute resolution and appellate mechanisms.**
 - **Ensuring greater transparency and objectivity** in GAAR application.



5. Constitutional and Legal Framework

- **Article 265:** *"No tax shall be levied or collected except by authority of law"*. This mandates fair taxation processes.
- **Income Tax Act, 1961** (soon to be replaced by Income Tax Act, 2025): Provides comprehensive rules on income, exemptions, deductions, and penalties.
- **Finance Acts (Annual):** Used to update tax laws and introduce new schemes, including GAAR and retrospective amendments.
- **Judicial Oversight:** Courts have upheld the need to curb **fictitious tax avoidance**, but have also stressed **natural justice and transparency** in enforcement.

Definitions & Key Concepts

- **GAAR (General Anti-Avoidance Rules):** Legal tools that allow tax authorities to invalidate transactions structured primarily to avoid taxes.

- **Tax Avoidance vs Tax Evasion:**

- *Avoidance* = Use of legal loopholes to reduce tax liability.
- *Evasion* = Illegal means to hide or underreport income to avoid tax.

- **Tax Terrorism:** Arbitrary or overly aggressive tax enforcement that discourages investment and damages business confidence.

Conclusion

The move to **revise GAAR provisions in a taxpayer-friendly manner** reflects India's evolving approach to **tax justice and economic ease of doing business**. While **curbing aggressive tax avoidance remains crucial**, ensuring **predictability and fairness in tax enforcement** is equally important to foster investor confidence and legal certainty.

10. Legal Status of the Right to Vote in India

Key Summary Points:

1. Nature of the Right to Vote in India:

- Currently, the *right to vote* is classified as a **statutory right**, not a fundamental or constitutional right.
- It is granted under **Section 62 of the Representation of the People Act (RPA), 1951**, which states that only those whose names are in the electoral roll can vote, with exceptions like disqualification or imprisonment.

2. Constitutional Provisions Related to Voting:

- **Article 326** of the Constitution provides for **universal adult franchise**, allowing every citizen aged 18 and above to vote, subject to disqualifications by law.
- **Section 19 of RPA, 1950** mandates that a voter must be *ordinarily resident* in a constituency and aged 18+.
- **Section 16 of RPA, 1950** disqualifies non-citizens from voter registration.

3. Different Categories of Rights:

- **Natural Rights:** Inherent and inalienable (e.g., life, liberty); not directly enforceable unless part of fundamental rights.
- **Fundamental Rights (Part III):** Directly enforceable through **Article 32** (e.g., freedom of speech).
- **Constitutional Rights:** Derived from the Constitution but outside Part III (e.g., property rights); enforceable through **Article 226**.
- **Statutory Rights:** Created by ordinary legislation (e.g., voting rights, MGNREGA); enforceable as per specific statutes.



4. Judicial Interpretations – Evolution of Status:

- **N.P. Ponnuswami (1952)** and **Jyoti Basu (1982)**: Voting is a *statutory right*.

- **PUCL case (2003):** Observed that voting is at least a *constitutional right*.
- **Kuldip Nayar (2006):** Reiterated voting is *statutory*, not constitutional.
- **Raj Bala case (2015):** Termed voting as a *constitutional right* based on PUCL.
- **Anoop Baranwal case (2023):** Majority reaffirmed voting as a *statutory right*.

5. Justice Ajay Rastogi's Dissent in Anoop Baranwal (2023):

- Argued that **right to vote reflects freedom of expression under Article 19(1)(a)**.
- Linked it to the **basic structure** doctrine – free and fair elections.
- Emphasized that even if not fundamental, it stems from **Article 326**, and hence may be considered a **constitutional right**.

Important Legal and Constitutional Provisions:

- **Article 326:** Basis of universal adult franchise.
- **Article 19(1)(a):** Freedom of speech and expression (used to support voting as expression).
- **Article 32:** Right to constitutional remedies for fundamental rights.
- **Article 226:** High Courts' power to enforce constitutional/statutory rights.
- **Section 62, RPA 1951:** Voting rights based on name in electoral roll.
- **Section 16 & 19, RPA 1950:** Conditions for voter registration and disqualification.

Definitions for Clarity:

- **Statutory Right:** A legal right granted and governed by legislative statute.
- **Constitutional Right:** A right rooted in the Constitution (but not necessarily fundamental).
- **Fundamental Right:** A basic human right guaranteed by the Constitution (Part III) and enforceable by the Supreme Court.
- **Basic Structure Doctrine:** Judicial principle that certain features (like democracy, rule of law) cannot be amended by Parliament.

Conclusion and UPSC Relevance:

While the right to vote is foundational to Indian democracy, **it is legally a statutory right** governed by the Representation of the People Acts. However, **judicial interpretations vary**, and **there is a growing argument to elevate this right to constitutional or even fundamental status**, given its crucial link to **free and fair elections**, a basic feature of the Constitution.

11. Parliament Initiates Impeachment Proceedings Against Justice Yashwant Varma

Key Highlights of the Case

- **Initiation of Removal Process:** Parliament has begun proceedings for the removal of **Justice Yashwant Varma** of the Allahabad High Court under **Article 217 read with Article 124(4)** of the Indian Constitution and the **Judges (Inquiry) Act, 1968**.
- **Bipartisan Support in Lok Sabha:** A total of **152 Lok Sabha members**, including both ruling and opposition MPs (e.g., Ravi Shankar Prasad, Rahul Gandhi, Anurag Thakur), signed the notice, exceeding the minimum requirement of 100.

- **Rajya Sabha Notice by Opposition:** 63 Rajya Sabha MPs from opposition parties also signed the motion—exceeding the required 50-member threshold.
- **Trigger for Action:** The move came after **burnt currency notes** were allegedly found at Justice Varma's official residence in Delhi, leading to his **transfer from Delhi High Court to Allahabad High Court**.
- **Committee to Investigate Charges:** Upon motion acceptance in both Houses, a 3-member committee will be formed (as per Judges Inquiry Act) comprising:
 - A senior Supreme Court judge,
 - A Chief Justice of a High Court,
 - A distinguished jurist.This committee must submit its report within **three months**.

Constitutional & Legal Provisions Involved

- **Article 124(4):** A judge of the Supreme Court (applicable mutatis mutandis to High Courts under Article 217) can be removed only by an order of the President after an address by both Houses of Parliament supported by a **special majority**, on grounds of *proved misbehaviour or incapacity*.
- **Judges (Inquiry) Act, 1968:** Provides for the detailed **procedure** for investigation, including the formation of an inquiry committee and tabling of its report in Parliament.
- **Motion Requirements:** Minimum of **100 Lok Sabha** or **50 Rajya Sabha** MPs must sign a removal motion to initiate the process.

Important Definitions

- **Impeachment (in Indian context):** The process of removing a judge of the higher judiciary through a parliamentary process; not used for President alone in India.
- **Distinguished Jurist:** A legal expert of national reputation; part of the inquiry committee.
- **Proved Misbehaviour:** A legal standard requiring detailed inquiry and evidence before Parliament can act on misconduct allegations.

Additional Observations

- **Cross-party Support:** Signatories included BJP, Congress, DMK, IUML, RSP, and NCP(SP), reflecting bipartisan concern over the issue.
- **Ongoing Precedents:** A **similar motion** against Justice Shekhar Yadav (Allahabad HC) was submitted in Dec 2024 but is under verification due to discrepancies in signatures.

Conclusion & UPSC Relevance

The impeachment motion against Justice Yashwant Varma is a **rare and serious constitutional process**, highlighting the **checks and balances** within Indian democracy. It reflects **judicial accountability**, procedural rigor under **Article 124(4)**, and the functioning of the **Judges Inquiry Act, 1968**.

12. Parliamentary Panel Flags Slow Progress in SVAMITVA Scheme

SVAMITVA Scheme: Bridging Rural Land Rights with Technology Implementation Challenges

The Standing Committee on Rural Development and Panchayati Raj has flagged concerns over delays in the implementation of the SVAMITVA scheme. Despite its ambitious mandate, the scheme has not progressed as expected, with many villages still awaiting surveys and property cards.

Objective and Scope

Launched in April 2020 by the Ministry of Panchayati Raj, SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) seeks to provide legal ownership of residential properties in rural India. By issuing '**Property Cards**', the scheme empowers villagers to use their property as a financial asset for loans, business, and other economic opportunities.

Delay in Survey and Coverage Targets

The Committee noted that surveys in nearly **30,000 villages** remain pending across states and union territories. This backlog threatens the scheme's goal of achieving **100% coverage by 2025**. Without timely surveys, villagers remain deprived of formal ownership rights and the benefits of secure property documentation.

Importance of Land Rights and Digital Mapping

Legal ownership of land in rural areas has far-reaching socio-economic benefits:

- Reduces disputes and litigation over property.
- Enhances credit access by enabling mortgages and loans.
- Improves ease of doing business and economic participation.
- Creates **accurate, tamper-proof land records** through drone-based mapping, GIS technology, and **CORS (Continuously Operating Reference Stations)**.



Legal and Constitutional Framework

Land governance falls under the **State List** in the Seventh Schedule of the Constitution. However, the Union Government provides financial and technological support for digital reforms. The scheme also aligns with:

- **Article 243G**: Empowering Gram Panchayats in governance.
- **Article 243ZD**: Strengthening District Planning Committees in decentralized development.

Parliamentary Panel Recommendations

To accelerate progress, the Committee has advised:

- Expediting drone-based surveys and resolving technological bottlenecks.
- Strengthening coordination between Centre and States.
- Addressing manpower shortages and training requirements.
- Conducting awareness campaigns so rural communities actively engage in property validation.

Key Concepts

- **Property Card**: A legal document granting ownership rights over residential land in rural areas.
- **CORS**: Continuously Operating Reference Stations for precise geospatial mapping.
- **GIS**: Geographic Information System for collecting and analyzing spatial data.

Conclusion

The **SVAMITVA scheme** represents a transformative reform in rural India, combining **technology, governance, and legal empowerment**. By formalizing property rights, it has the potential to reduce land disputes, strengthen credit access, and integrate rural households into the formal economy. However, its success depends on timely execution, coordination, and community participation.

13. Supreme Court Ruling on Delimitation and Constitutional Constraints

Delimitation in J&K Not a Benchmark for States

Supreme Court's Ruling

The Supreme Court recently clarified that States like Andhra Pradesh and Telangana cannot cite the example of Jammu & Kashmir to demand delimitation. The Court highlighted that J&K, being a Union Territory, operates under a different constitutional framework. Its delimitation was carried out on the basis of the **2011 Census**, whereas States remain bound by the constitutional freeze.

Constitutional Embargo under Article 170

Article 170(3) of the Constitution places a **freeze on delimitation of State Legislative Assemblies** until after the first Census post-2026. This embargo was introduced by the **84th Constitutional Amendment Act, 2001** and later extended through the **87th Amendment Act, 2003**. The purpose

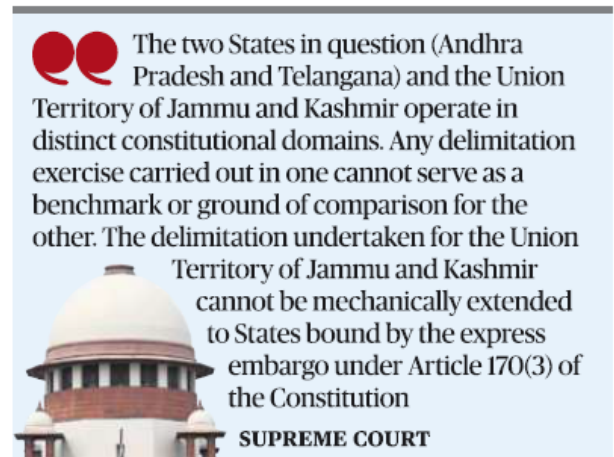
was to maintain uniformity in representation and prevent political manipulation in boundary redrawing.

Union Territory vs State: Separate Constitutional Domains

The Court underlined that Jammu & Kashmir, after its reorganization through the **Jammu and Kashmir Reorganisation Act, 2019**, is governed by special statutory provisions. Unlike States, it is not covered by the restrictions of Article 170. Hence, equating the delimitation process of UTs with States would be legally untenable and constitutionally impermissible.

Judicial Intervention and Electoral Uniformity

The plea for directing delimitation in Andhra Pradesh and Telangana was firmly rejected. The Court reasoned that judicial intervention could cause discontent among other States—particularly in the **North-East**, which was expressly excluded from delimitation through a **2021 Central notification**. Such selective interventions risk undermining **electoral parity** and disturbing the federal balance.



Delimitation: Definition and Legal Framework

- **Definition:** Delimitation is the process of redrawing electoral constituency boundaries to reflect population shifts.
- **Legal Framework:**
 - **Article 82:** Provides for parliamentary delimitation after each Census.
 - **Article 170:** Governs delimitation for State Assemblies, subject to constitutional freezes.
 - **Union Territories:** Guided by special legislations and Presidential Orders.
- **Delimitation Commission Acts** provide the institutional basis for carrying out the exercise.

Key Terms

- **Delimitation:** Redrawing of electoral boundaries based on population data.
- **Article 170(3):** Constitutional bar on State Assembly delimitation until post-2026 Census.
- **Union Territory (UT):** An administrative unit governed directly by the Centre, distinct from States in powers and governance.

Conclusion

The SC judgment reaffirms the principle that **constitutional provisions prevail over political demands**. By maintaining a clear distinction between Union Territories and States, the Court has safeguarded the sanctity of India's **federal electoral framework** and prevented unequal treatment that could weaken electoral uniformity.

ECONOMY

1. China's Economic Recovery

1. Current Economic Performance

- Despite global challenges—**trade war with the US**, **sluggish domestic demand**, **property crisis**, and **deflation risks**—China's economy shows resilience.
- **Merchandise exports** rose by **6%** in the first five months of 2025, even though exports to the US fell by **35%**.

- **Retail sales** grew by **4.8%**, and the **Purchasing Managers Index (PMI)** in May showed marginal manufacturing improvement.

2. Government Measures Supporting Growth

- China **diversified its exports** toward non-US markets like India, Brazil, East Asia, and Europe.
- **Fiscal and monetary stimulus** worth **1.6% of GDP** was announced to boost domestic consumption.
- Policies included **housing loan cuts**, **consumer goods subsidies**, and **increased public infrastructure investment** (+11.6% YoY till April).
- Consumption of household items like **appliances and furniture** saw **double-digit growth**.

3. Key Risk Factors and Vulnerabilities

- The **fragile US-China trade deal** and global defensive measures against **cheap Chinese exports** pose risks.
- **Consumer confidence** remains low due to **slower income growth**, **uncertain job prospects**, and **property sector instability**.
- Persistent **deflationary pressures** and **falling home prices** are eroding household spending confidence.

4. Required Structural Reforms

- Economists suggest structural reforms to address:
 - **Slowing productivity**
 - **Rising public and private debt**
 - **Rapid population ageing**



- Improving the **social safety net**, especially **healthcare and retirement coverage**, can reduce savings hoarding and boost consumption.
- A **long-term resolution of the real estate crisis** is essential to restore consumer sentiment and financial sector health.

5. Revised Growth Outlook

- **Citigroup** revised China's 2025 growth forecast from **4.2% to 5%**.
- **World Bank** reports 2024 growth at **5%**, and Q1 2025 growth at **5.4%**, though future projections rest on sustainability and policy effectiveness.

Key Definitions & UPSC Relevance

- **Purchasing Managers' Index (PMI)**: An indicator of economic health in the manufacturing and service sectors.
- **Deflation**: A sustained drop in the general price level of goods and services—can lead to reduced consumer spending.
- **Fiscal Stimulus**: Government policy to increase public spending or cut taxes to boost economic activity.

Constitutional & Legal Angle (India relevance)



- While China is a one-party state, India follows **Article 19(1)(g)** – Right to trade and business, and **Article 301** ensures freedom of trade within the country.
- India's **trade policy frameworks** and **anti-dumping provisions** under **WTO rules** are used to shield against cheap imports from countries like China.

Conclusion

Despite external shocks and domestic challenges, China has managed moderate economic growth through export diversification, targeted stimulus, and infrastructure push. However, for long-term resilience, structural reforms in productivity, debt management, and social protection are vital.

2. Impact of Indo-Pak Conflict on Aviation and West Asia Tourism

1. Indo-Pak Conflict and Its Immediate Trigger

- The **conflict was triggered** by a terror attack in **Pahalgam on 22 April 2025**, leading to **India's Operation Sindoor**, involving precision strikes on terrorist targets in **Pakistan and PoJK** on 7 May.
- This led to **drone strikes and counterattacks** by Pakistan, causing a **four-day military standoff**.
- A **ceasefire understanding** was reached after four days, but it had already disrupted air traffic and regional peace.

2. Disruption in Airline Operations

- **32 airports in northern and western India** were shut; over **50 flights were cancelled** on the first day alone.
- **Domestic passenger air traffic** growth fell sharply to **1.9% in May**, from **8.4% in April**, the lowest since **March 2022**.
- Airline cancellation rates rose:
 - **Air India**: 3.4% (from 0.27% in April)
 - **SpiceJet**: 2.62%
 - **IndiGo**: 2.03%
 - **Akasa Air**: 0.34% (from 0.02%)
- **Northern region** saw the highest decline in airport footfall: **-8.7% YoY**, while the **western region** grew marginally at **1.5% YoY**.

3. Tourism Boycott of Azerbaijan and Turkey

- **Public backlash** emerged against **Azerbaijan and Turkey** due to their perceived support for Pakistan. Turkey was also accused of supplying **drones** to Pakistan.
- Travel website **Ixigo suspended bookings**, and anecdotal reports showed mass cancellations of trips to both countries.
- **Tourist data confirms the decline**:
 - Indian visitors to **Azerbaijan** fell to **23,326** (from 29,691 YoY) – a **21.4% fall**, first since 2018 (excluding pandemic years).
 - Indian visitors to **Turkey** dropped to **31,659** (from 41,544 YoY), continuing a **three-month decline trend**.

4. Strategic and Economic Implications

- The episode reflects how **geopolitical events impact economic sectors**, especially **civil aviation** and **international tourism**.
- Despite being a **minor share of global tourist inflow**, India remains a key market:
 - India ranks 3rd** among source countries for Azerbaijan tourism.
 - For Turkey, although India contributes only **0.7%**, its outbound tourism potential is growing.

5. Constitutional, Legal & Policy Relevance

- Article 19(1)(g)** of the Indian Constitution guarantees freedom of movement and trade, which includes the **freedom to travel and operate airlines**.
- India's **Civil Aviation Policy**, managed by the **Ministry of Civil Aviation** and **DGCA**, governs flight safety and cancellations.
- Foreign policy fallout** affects bilateral air agreements, **visa policies**, and tourism-dependent economies.
- Under **Article 51(c)**, India strives to foster respect for international law and peaceful relations, which becomes strained during such military episodes.

Key Definitions

- Operation Sindoor**: India's retaliatory strike operation targeting cross-border terrorist infrastructure.
- Air Traffic Growth Rate**: The percentage change in the number of air passengers over a period.
- Boycott**: A form of protest involving the refusal to engage economically or socially with certain countries or entities.

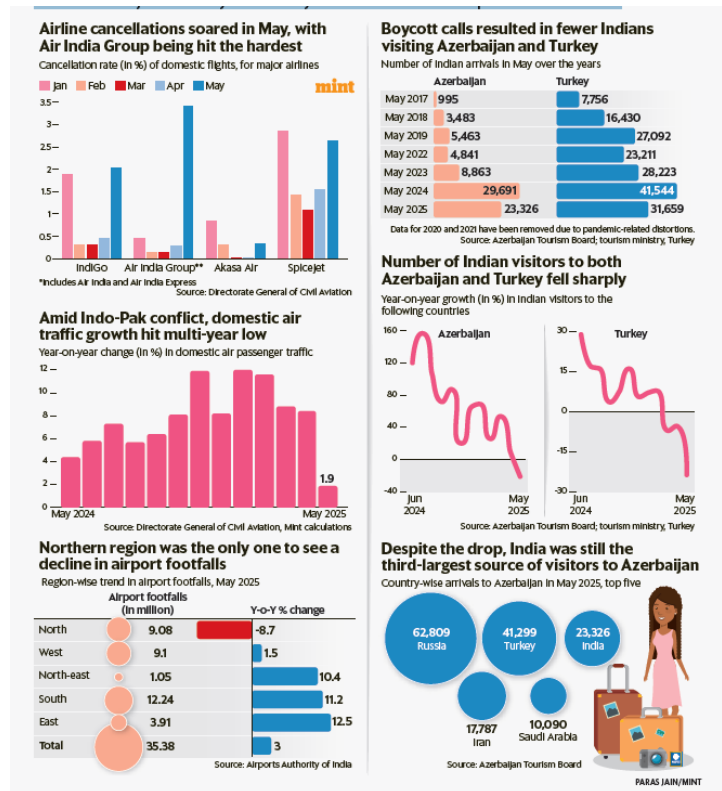
Conclusion

The Indo-Pak conflict, though brief, had **significant but short-term consequences** on India's civil aviation and international tourism, especially with countries seen as supporting Pakistan. It underscores how **military tensions ripple into economic sectors** like airlines and travel.

3. Union Cabinet Approves ₹1 Trillion Each for Employment and R&D Promotion

1. Employment-Linked Incentive (ELI) Scheme

- The **ELI scheme** aims to generate **3.5 crore jobs** over **two years** by offering **direct financial benefits** (up to ₹15,000) to **first-time employees** (those newly registered under **EPFO**) with **annual salaries up to ₹1 lakh**.
- Eligibility for employers**:



- Must be **EPFO-registered**.
- Must hire **at least 2 new employees** (for firms with <50 employees) or **5 employees** (for firms with ≥50), on a **sustained basis for 6 months**.
- **Incentive slabs:**
 - ₹1,000 for EPF base wage ≤ ₹10,000
 - ₹2,000 for wages ₹10,000–₹20,000
 - ₹3,000 for wages ₹20,000–₹1 lakh
- Benefits period: **Aug 1, 2025 – July 31, 2027** (extended to 4 years for manufacturing sector).
- A firm hiring 100 employees could receive **up to ₹72 lakh** (non-manufacturing) or **₹1.44 crore** (manufacturing) in incentives.



2. Impact and Criticism of ELI

- Encourages **formal wage employment** over **gig/informal jobs**, and may **increase youth participation** in the formal labour market.
- Aligns with other measures like **entry-level tax cuts** and **lower interest rates**, increasing disposable income.
- Critics argue that the **₹1 lakh salary ceiling** (₹8,000/month) **may not match minimum wage expectations**, especially in the **skilled job market**, limiting its practical impact.

3. Research, Development, and Innovation (RDI) Scheme

- Aims to boost **long-term R&D funding** in **sunrise sectors**, **strategic domains**, and **deep-tech** through **low-interest or zero-interest loans**.
- Part of a \$4 billion programme to improve **patents**, **design innovation**, and **commercialization** of Indian tech.
- India's **Gross Expenditure on R&D (GERD)**:
 - Increased in absolute terms: ₹60,196 crore (FY11) → ₹1.27 lakh crore (FY21).
 - But declined as % of GDP: **0.83% (FY10) → 0.64% (FY21)**, far below **US, Japan, China (2–5%)**.
- RDI focus areas: **semiconductors**, **electronics systems**, **embedded technologies**, aiming to build robust **innovation pipelines** and **venture capital ecosystems**.

4. New National Sports Policy

- Target: Bring **India into top 5 sporting nations** globally.
- Focus on:
 - **Talent scouting and training**,
 - Hosting **international events**,
 - Promoting **domestic sports manufacturing**,
 - Integrating **sports into NEP (National Education Policy)** framework.

Constitutional & Legal Relevance

- **Article 41 (DPSP):** Right to work, education, and public assistance in case of unemployment.
- **Article 43:** State to ensure **living wage** and decent conditions for workers.
- EPFO's legal framework falls under **Employees' Provident Funds and Miscellaneous Provisions Act, 1952**.
- Promoting R&D aligns with **Atmanirbhar Bharat Abhiyan, Startup India, and National Policy on Electronics**.
- **Sports promotion** under concurrent list; **education and sports integration** aligns with **Article 21A** (Right to Education).

Key Definitions

- **First-time Employee:** An individual registering with EPFO for the first time and earning $\leq ₹1$ lakh annually.
- **GERD (Gross Expenditure on R&D):** Total national investment on research as a share of GDP—used to assess innovation capability.
- **Sunrise Sector:** A rapidly growing industry expected to be critical for future economic growth (e.g., semiconductors, AI, biotech).

Conclusion

The approval of ₹1 trillion each for **employment generation** and **R&D promotion** marks a significant step toward formalizing the labour market, reducing youth unemployment, and fostering long-term self-reliance through innovation. While the ELI scheme boosts formal sector hiring, the RDI push aims to correct India's lagging innovation index. The **multi-sectoral approach**, including the **sports policy**, reflects a broader vision of inclusive growth and global competitiveness.

4. RBI Relief and NBFC Credit Slowdown

1. Bank Credit to NBFCs Falling Despite RBI Relief

- **Bank credit to NBFCs** (Non-Banking Financial Companies) fell **0.3% year-on-year in May 2025**, marking a sharp decline from **16% growth in May 2024**.
- This happened **despite the RBI reducing risk weights** on bank loans to NBFCs from **125% to 100%** (effective April 1, 2025), which was aimed at easing bank lending restrictions.
- The drop is most visible in **non-housing and non-public finance NBFCs**, where loan growth slowed to **3.6%**.

2. NBFCs Prefer Bond Market Over Bank Loans

- NBFCs are increasingly **turning to bond markets** due to:
 - **Faster fundraising**
 - **Lower yields** (commercial paper yields fell over **100 basis points** from March to April)
- **Corporate bond issuances** hit an all-time high of **₹3 trillion** in Q1 FY26, signalling a shift from bank credit.

3. Bank Caution Due to Stress in Microfinance and Unsecured Lending

- Banks are **hesitant to lend** due to rising **delinquencies** in:





- **Microfinance Institutions (MFIs)**
- **Unsecured business loans**
- **Fintech lending**
- Even though **delinquencies may have peaked**, recovery may take **two more quarters**, especially in roll-over loan segments.

4. RBI's Role and Monetary Transmission Lag

- RBI had **increased risk weights by 25% in Nov 2023** to prevent stress in unsecured lending.
- This caused a **sharp credit growth fall from 28.7% (Sept 2021–Sept 2023) to 8.8% (Sept 2023–Mar 2025)**.
- The **repo rate was cut by 50 bps in April 2025**, but **monetary transmission has been delayed**:
 - **PSU banks** have not passed on benefits via **MCLR cuts**.
 - Only **few private banks** have reduced lending rates to NBFCs.

5. Outlook and Structural Issues

- According to **ICRA**, credit growth for banks in FY26 is expected at **10.4–11.3%**, though Q1 may remain muted.
- Challenges include:
 - **Deposit mobilisation issues**
 - **Stress in unsecured lending**
 - **Dependence of lower-rated NBFCs (A-, BBB) on bank funding**
- Only selective NBFC segments, like **gold loans**, are witnessing growth.

Key Definitions for UPSC

- **NBFC (Non-Banking Financial Company)**: A financial institution that offers loans and financial services but does not hold a banking license.
- **Risk Weight**: A regulatory tool used to determine the capital banks must hold against credit exposure; higher weight = more risk.
- **MCLR (Marginal Cost of Funds-Based Lending Rate)**: The minimum rate at which a bank can lend, influenced by cost of funds.
- **Delinquency**: Failure to repay loan installments on time, often a precursor to default.
- **Commercial Paper**: Short-term unsecured debt instrument issued by corporations to meet liquidity needs.

Constitutional & Regulatory Relevance

- **RBI's regulatory authority** over NBFCs and banks stems from the **RBI Act, 1934** and the **Banking Regulation Act, 1949**.
- **Prudential norms** like capital adequacy and risk weights ensure financial stability and are part of **Basel III guidelines**.
- Promoting NBFC growth while ensuring risk containment aligns with **Directive Principles (Article 39)** that advocate securing livelihoods and preventing concentration of wealth.

Conclusion

The continued fall in bank credit to NBFCs—despite regulatory easing—highlights underlying stress in India’s financial ecosystem, especially in **microfinance and unsecured lending**. NBFCs are now relying more on **capital markets** for funding. Going forward, **improved monetary transmission, stabilized asset quality, and inclusive credit policy** are essential to restore credit momentum.

5. India’s Performance in Sustainable Development Goals (SDGs): A Decadal Review (2016–2025)

1. India Breaks into Top 100 in SDG Index (2025)

- In 2025, India **ranked 99th out of 167 countries** in the United Nations’ **Sustainable Development Goals (SDG) Index**, marking its **first-ever entry into the top 100**.
- This milestone reflects **gradual progress over the past decade**, especially in areas like poverty reduction, health, education, and gender equality.

2. Understanding the SDG Index

- The **SDG Index** ranks countries based on their performance on the **17 Sustainable Development Goals**, part of the UN’s **2030 Agenda for Sustainable Development**.
- Goals include: No Poverty, Zero Hunger, Good Health, Quality Education, Gender Equality, Clean Energy, Climate Action, and more.
- Each country is **scored out of 100** based on national data and progress indicators.

3. India’s Ranking and Score Trend (2016–2025)

Year	Rank	Score (/100)
2016	110/149	61.1
2017	116/157	61.9
2018	112/156	64.1
2019	115/162	65.7
2020	117/166	66.7
2021	120/165	62.8
2022	121/167	64.7
2023	112/166	66.5
2024	109/167	64.0
2025	99/167	67.0

- After a **brief stagnation and dip during 2021–2022**, India saw **accelerated progress post-2023**.

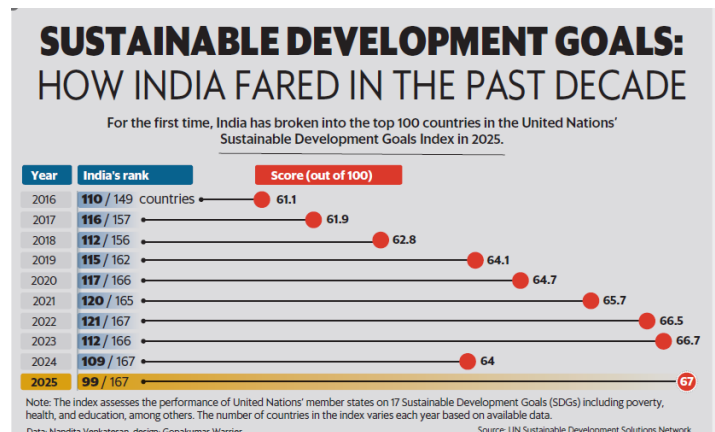
4. Drivers of Improvement

- **Reduction in extreme poverty**, improved **maternal and child health indicators**, and **better sanitation coverage** (e.g., Swachh Bharat Mission).
- Major schemes: **Jal Jeevan Mission, Ujjwala Yojana, Ayushman Bharat, National Education Policy**, and focus on **renewables (Solar Mission)**.

- Digitization of welfare services and **direct benefit transfer (DBT)** systems helped improve SDG metrics.

5. Constitutional and Policy Frameworks Supporting SDGs

- Article 21:** Right to life includes the right to health, clean environment, and dignity.
- Directive Principles of State Policy** (Articles 39, 41, 47, 48A): Stress on health, education, environment, and welfare of the people.
- India's **National Indicator Framework (NIF)** developed by NITI Aayog helps monitor SDG progress.
- The **Localisation of SDGs (LSDGs)** aims to align **Panchayati Raj Institutions** with global goals.



Key Definitions

- Sustainable Development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- SDG Index:** A composite score and ranking system created by the UN and SDG partners to assess country-wise progress towards achieving the 2030 goals.

Conclusion

India's entry into the **top 100 countries in the SDG Index in 2025** marks a **significant step** in aligning national development with **global sustainability goals**. While substantial progress has been made in areas like health, education, and poverty alleviation, challenges remain in **climate action, gender equity, and reducing inequalities**. Achieving the 2030 Agenda will require **sustained investment, grassroots implementation, and robust monitoring mechanisms**.

6. CBDT Revises Cost Inflation Index (CII): Implications for Capital Gains Taxation

1. What is the Cost Inflation Index (CII)?

- The **Cost Inflation Index (CII)** is a **taxation metric** used to **adjust the purchase price of long-term assets for inflation**, thereby reducing the taxable portion of **long-term capital gains (LTCG)**.
- Capital Gain = Sale Price – (Indexed Purchase Price + Improvement Costs).**
- The **CBDT has increased the CII from 363 to 376 for FY26 (AY 2026–27)**, offering greater **tax relief** by lowering capital gains on sale of certain assets.

2. Scope of the Revised CII and Changes Post Finance Act 2024

- Under the **Finance Act 2024**, capital gains tax was restructured.
- Indexation benefits are **limited to assets acquired before 23 July 2024**.
 - Resident individuals and **Hindu Undivided Families (HUFs)** can choose between:
 - 20% LTCG tax with indexation**, or
 - 12.5% flat tax without indexation**.

- **Non-resident Indians, LLPs, and companies** are **not eligible** for this option.
- This “**grandfathering clause**” aims to protect earlier asset holders from abrupt tax changes.

3. Assets Eligible for Indexation

- Prior to July 23, 2024, **indexation applied to LTCG on land, buildings, gold, securities, patents, etc.**
- Post-reform, **only land and buildings acquired before 23 July 2024** remain eligible under the **20% with indexation option**.
- This year’s CII revision (376) benefits **only those transactions** falling under this limited scope.

4. Impact on Tax Planning and Compliance

- A **modest 3.3% rise** in CII offers **partial inflation relief** amid rising asset prices.
- Delay in issuing CII notification and ITR forms for FY25 reflects **slower tax calendar**, potentially affecting:
 - **Advance tax estimation,**
 - **Audit schedules,**
 - **Investor planning and compliance.**
- Experts have urged for **greater administrative consistency**.

5. Constitutional and Legal Provisions Relevant to the Topic

- **Article 265 of the Constitution:** "No tax shall be levied or collected except by authority of law" — ensures taxation transparency and legal basis.
- **Income Tax Act, 1961:** Sections 48 and 55 deal with **computation of capital gains** and **application of indexation benefits**.
- The **Finance Act 2024** is the legislative tool through which **capital gains taxation was simplified**, aiming for **clarity, equity, and ease of compliance**.



Key Definitions for UPSC

- **Long-Term Capital Gain (LTCG):** Profit from the sale of capital assets held for more than 24 or 36 months (depending on asset type).
- **Indexation:** Adjustment of asset cost using the CII to neutralize inflation’s effect on gains.
- **Grandfathering Clause:** A provision that allows old rules to continue for pre-existing cases despite a change in law.

Conclusion

The **revision of the Cost Inflation Index (CII) to 376** by the CBDT offers **partial tax relief to asset holders**, especially for land and buildings purchased before July 2024. However, with indexation benefits now **significantly narrowed** under the Finance Act 2024, the change underscores the government’s move toward **simplified, lower-rate taxation over inflation-adjusted exemptions**. The development reflects a broader shift in India’s **capital gains tax regime**, balancing **administrative efficiency with fairness**.

7. Rephrasing Global Development Finance: India's Role and Emerging Modalities

1. India's Growing Development Cooperation with the Global South

- India's development aid has nearly **doubled from \$3 billion (2010–11) to \$7 billion (2023–24)**, primarily through **Lines of Credit (LoCs)** under the **Indian Development and Economic Assistance Scheme (IDEAS)**.
- India's cooperation includes **capacity building, technology transfer, market access, grants, and concessional finance**, forming a comprehensive five-pronged engagement framework.
- The **Global Development Compact (GDC)**, introduced during the **3rd Voice of Global South Summit (2024)** by PM Modi, emphasizes a **balanced use of all five modalities** for effective cooperation.

2. Challenges from Sovereign Debt and Shrinking Global Aid

- Rising **sovereign debt levels** in the Global South and **liquidity challenges** have reduced the viability of concessional loans and LoCs.
- Traditional **Official Development Assistance (ODA)** is shrinking—from **\$214 billion (2023)** to a proposed **\$97 billion**, a nearly **45% drop**.
- Western aid agencies like **USAID** and **FCDO (UK)** are facing internal budget cuts, weakening traditional aid mechanisms.

3. Shift Towards Triangular Cooperation (TrC)

- Triangular Cooperation (TrC)** brings together a traditional donor (Global North), a pivotal actor (e.g., India or Brazil), and a beneficiary (Global South) to jointly fund and execute development projects.
- Examples include **India-Germany cooperation** in Africa and **Japan-Indonesia projects** in ASEAN.
- Preliminary data suggests TrC is valued between **\$670 million to \$1.1 billion**, with India's role increasing post **2022 Joint Declaration** with Germany.

4. Strategic Outcomes and Sectoral Gains

- TrC efforts are improving **physical infrastructure, digital connectivity, health, and education** in countries like **Ghana, Malawi, Cameroon, and Peru**.
- Under India's **G20 Presidency**, TrC partnerships expanded to include **France, U.K., EU, and USA**, with initiatives like the **Global Innovation Partnership (GIP)**.



5. India's Policy Leverage and Diplomatic Soft Power

- India's south-south cooperation helps enhance **strategic autonomy, diplomatic outreach**, and builds **India's soft power** as a development partner, especially in Africa and Latin America.
- India's approach stands in contrast to **OECD-DAC's conditional model** and aims for **demand-driven, mutually respectful collaboration**.

Key Definitions and Concepts for UPSC



- **Official Development Assistance (ODA):** Government aid designed to promote the economic development and welfare of developing countries.
- **Line of Credit (LoC):** A concessional financial arrangement extended to partner countries for development projects.
- **Triangular Cooperation (TrC):** A development partnership model involving a donor from the Global North, a pivotal country from the Global South, and a beneficiary nation.
- **Indian Development and Economic Assistance Scheme (IDEAS):** Government of India scheme for development cooperation through LoCs, grants, and technical support.

Constitutional & Legal Linkage (India)

- While foreign aid is an executive function, India's **foreign policy** and development partnerships align with **Article 51 of the Constitution** (promotion of international peace and security).
- Budgetary allocations for LoCs and aid are approved via **Annual Financial Statement** under Article 112.

Conclusion

India must **restructure its development finance strategy** in light of **global financial constraints and rising debt**. The shift from concessional finance to **diversified modalities** and **Triangular Cooperation** marks a sustainable, inclusive, and effective path forward. This approach aligns with India's aspiration to become a **leading voice of the Global South**, balancing geopolitical interests with developmental responsibilities.

8. NITI Aayog Launches Report on Chemical Industry – Roadmap to Global Leadership

Key Highlights of the Report

- **Ambitious Industrial Vision for Viksit Bharat @2047:**
 - NITI Aayog released a comprehensive report titled "**Chemical Industry: Powering India's Participation in Global Value Chains**" on 3rd July 2025.
 - The report aims to **transform India into a \$1 trillion chemical manufacturing hub by 2040**, increasing its **share in Global Value Chains (GVCs)** from **3.5% (2023)** to **5–6% by 2040**.
 - Targets creation of **7 lakh additional skilled jobs** and **\$35–40 billion** in incremental exports by 2030.
- **Current Challenges Identified:**
 - **Trade Deficit:** India had a **chemical trade deficit of USD 31 billion** in 2023 due to import dependence on feedstock and specialty chemicals.
 - **Infrastructure Gaps:** Outdated clusters, poor port infrastructure, and high logistics costs increase production costs.
 - **R&D Deficit:** India's chemical sector invests **only 0.7% in R&D**, below the global average of **2.3%**, hindering innovation in high-value and green chemicals.
 - **Regulatory Delays:** Complex environmental clearances and **30% shortfall in skilled professionals**, especially in green chemistry and process safety, limit industrial agility.
- **Proposed Strategic Interventions:**
 - **Chemical Hubs:** Development of **8 high-potential clusters** with shared infrastructure and special committees under a **Chemical Fund**.
 - **Port Infrastructure:** Strengthening chemical handling capacity at ports through **dedicated chemical committees**.

- **Opex Subsidies:** New scheme to **incentivize incremental production**, especially for chemicals critical to reducing import dependence.
- **Tech & R&D Boost:**
 - Creation of an **interface agency (DCPC–DST)** for industry-academia collaboration.
 - Partnership with MNCs for access to global technologies.
- **Environmental Clearances:** Fast-tracking approvals by empowering the **Expert Appraisal Committee (EAC)** and setting up **audit mechanisms** under DPIIT.
- **Free Trade Agreements (FTAs):**
 - Sector-specific FTA provisions including **tariff quotas and duty exemptions**.
 - Promotion of FTA awareness and simplification of **Rules of Origin**.
- **Skill Development:**
 - Expand **ITIs and training institutes** in chemical-related fields.
 - Strengthen **faculty development and industry-academia partnerships** for curriculum alignment.



Niti Aayog
नीति आयोग
National Institution for Transforming India

Legal & Policy Framework

- **Constitutional Backing:**
 - **Entry 24, List II (State List): Industries;** **Entry 52, List I (Union List): Regulation of industrial undertakings in public interest.**
 - Aligns with **Article 39(c) and 41** (Directive Principles of State Policy) promoting equitable economic growth and skill development.
- **Institutional Support:**
 - Interventions coordinated through **Department of Chemicals and Petrochemicals (DCPC)** and **Department for Promotion of Industry and Internal Trade (DPIIT)**.
 - Environment regulation under **MoEFCC and EIA Notification 2006**—to be streamlined.

Definitions for UPSC

- **Global Value Chain (GVC):** Sequence of production stages across countries adding value to a product.
- **Opex Subsidy:** Operational Expenditure-based subsidy to incentivize production expansion, different from capital subsidies.
- **Chemical Clusters:** Geographically concentrated zones with shared facilities and regulatory support for chemical manufacturing.
- **FTA (Free Trade Agreement):** Pact between two or more countries to reduce barriers for trade in goods and services.

Conclusion

NITI Aayog's strategic roadmap is a **transformative blueprint** for India to become a **global chemical manufacturing powerhouse**. By **revamping industrial infrastructure, enhancing R&D, fast-tracking environmental clearances, and strengthening FTAs and skill training**, the vision aligns with *Viksit Bharat @2047*. These reforms will **reduce the trade deficit**, boost **exports**, generate **large-scale employment**, and elevate India's **competitiveness in global markets**, thereby supporting **inclusive and sustainable economic growth**.

9. New Drug Transit Rules to Ensure Safer Medicines: Key Points

- **Background and Objective**

- India is drafting new rules to ensure that medicines retain their safety and efficacy during transit from manufacturing units to retail pharmacies.
- This move is spearheaded by the Central Drugs Standard Control Organization (CDSCO) and aims to prevent **substandard and spurious drugs** from entering the supply chain.

- **Key Provisions in Draft Rules**

- Introduction of **Good Storage and Distribution Practices (GSDP)** to make proper storage and transit conditions legally mandatory.
- Mandatory **2D barcodes and clear labeling** at each packaging stage, containing details such as unique product code, batch number, expiry date, manufacturing date, and serial number for full traceability.
- Requirement for all entities (transporters, wholesalers, retailers) to maintain detailed records of product movement, sender/receiver details, and transaction timestamps.

- **Rationale and Need**

- Existing guidelines on drug storage during transit are not mandatory, leading to possible exposure to extreme temperatures, mishandling, and quality degradation.
- Cases have been reported of expired, damaged, and "not for retail sale" hospital medicines mixing with regular pharmacy stocks.
- The new rules aim to align with **World Health Organization (WHO) standards** to ensure global quality benchmarks.



- **Legal and Regulatory Context**

- The **Drugs and Cosmetics Act, 1940** and **Drugs Rules, 1945** currently lack mandatory provisions on transit storage and distribution practices.
- By incorporating GSDP into the Drugs Rules, compliance will become a legal requirement for all stakeholders — manufacturers, distributors, and retailers.
- CDSCO, under the Ministry of Health and Family Welfare, is the apex body overseeing drug safety and quality in India.

- **Significance for Pharmaceutical Sector**

- India's pharmaceutical market is valued at **\$50 billion**, ranking 3rd globally by volume and 14th by value.
- India supplies 20% of global generic medicines and manufactures over 60,000 generics across 60 therapeutic categories.
- Strengthening supply chain integrity is vital to maintain global trust and safeguard public health.

Definitions

- **Substandard drugs:** Authorized medicines that fail to meet quality specifications or standards.
- **Spurious drugs:** Fraudulent medicines deliberately mislabeled to deceive about their identity or source.
- **Good Storage and Distribution Practices (GSDP):** Guidelines ensuring proper storage, handling, and transportation to maintain product quality.

Conclusion and UPSC Relevance

- The proposed rules reflect India's proactive approach to ensure **drug safety and supply chain transparency**, enhancing both domestic public health and international credibility as a pharma leader.
- **UPSC Relevance:**
 - Important for **GS Paper 2 (Governance, Health Policy)** and **GS Paper 3 (Science & Technology, Economy – Pharmaceuticals)**.
 - Highlights regulatory mechanisms, legal reforms, and India's role in global health supply chains.
 - Useful for understanding challenges in drug regulation and the importance of quality standards in public health policy.

10. India's Drone Industry Growth and Rare-Earth Challenge: Key Points

- **Rise of Domestic Drone Manufacturing**
 - India's drone sector is expanding rapidly, driven by increased **defence and civilian demand**, policy support, and a growing base of 515 drone-related companies (with 263 focused on components).
 - Significant investments include \$108 million raised in 2024 and \$39 million already in 2025, showing strong investor confidence.
- **Dependence on Critical Imports**
 - While India has developed local capability in airframes, batteries, and software, it remains **highly dependent on imports** for critical components like motors, sensors, and flight controllers.
 - The most critical bottleneck is the reliance on **rare earth magnets**, which are essential for high-performance permanent magnet motors used in drones.
- **Supply Risks Due to Chinese Export Controls**
 - China's tightening export restrictions, particularly on rare-earth magnets used in defence applications, pose a severe risk to India's goal of self-reliant drone manufacturing.
 - There are no domestic producers of drone-grade rare earth magnets in India, nor feasible substitutes like ferrite magnets, which lack required strength and efficiency.
- **Government Policy Push and Incentives**

- India has introduced various initiatives to promote drone manufacturing, including the **Production Linked Incentive (PLI) scheme**, the Ministry of Defence's **iDEX (Innovations for Defence Excellence)** program, and the **Technology Development Fund (TDF)**.
- A new \$234 million incentive scheme aims to boost indigenous production further, signaling strong policy commitment.

• Technological and Operational Challenges

- The lack of domestic machining capability for critical modules (e.g., motors and controllers) and dependence on just-in-time manufacturing makes supply chains vulnerable.
- Without a domestic source or viable recycling mechanisms for rare earth materials, achieving full indigenization remains challenging.

Definitions

- **Rare Earth Magnets:** High-strength magnets made using rare earth elements like neodymium; essential for compact, efficient motors in drones, EVs, and defense systems.
- **Permanent Magnet Motors:** Electric motors that use permanent magnets instead of electromagnetic windings to generate motion; valued for high efficiency and power-to-weight ratio.



Legal and Constitutional Context

- **Mines and Minerals (Development and Regulation) Act, 1957:** Governs mining activities in India, including potential future domestic mining of rare earth elements.
- **Defence Procurement Policy (DPP) and Defence Acquisition Procedure (DAP):** Promote indigenization and self-reliance in defense manufacturing, which includes drone technology.
- **Article 73 & Article 246:** Empower the Union Government to regulate defense production and external trade, including strategic minerals.

Conclusion and UPSC Relevance

- India's growing drone sector demonstrates strong innovation and industrial capacity, but dependence on critical imports, especially rare earth magnets, remains a strategic vulnerability.
- There is an urgent need for developing domestic sources of rare earths and high-tech component manufacturing to achieve true self-reliance, particularly in defense applications.
- **UPSC Relevance:**
 - Relevant for **GS Paper 3 (Science & Technology, Economy – Industrial Policy, Security)** and **GS Paper 2 (Governance, International Relations, Strategic Technologies)**.
 - Useful for essays on Atmanirbhar Bharat, technological sovereignty, and supply chain resilience.
 - Highlights the intersection of technology, national security, and resource diplomacy, key themes in contemporary policy debates.

11. China's Deflation and Its Economic Implications

Key Points for UPSC Preparation

1. Deflation in China:

- **Definition:** *Deflation* is a sustained decrease in the general price level of goods and services.
- China's **Producer Price Index (PPI)** dropped **3.6% in June**, the steepest fall in nearly two years.
- **Consumer Price Index (CPI)** rose marginally by **0.1%**, indicating the economy is on the verge of **retail-level deflation**.

2. Domestic Demand Weakness:

- Despite Beijing injecting **state funds** to support domestic demand, consumer spending and investment remain **subdued**.
- This weakness extends **beyond the real estate sector**, which had earlier seen a **major bubble burst**.

3. Impact of Global Trade Reversals:

- As many countries adopt **protectionist or inward-looking trade policies**, China faces **reduced external demand**, especially from traditional partners like the **United States**.
- Although China has diversified its export markets, the **overall trade slowdown** and **tariff barriers** are taking a toll.

China in deflation

China's consumer prices fell into deflation in July for the first time since February 2021, while factory gate prices extended their declines, as the world's second-largest economy struggled to revive demand.



4. Risk of Economic Stagnation – Japan Comparison:

- Analysts draw parallels between current China and **Japan of the 1990s**, where deflation led to **decades-long stagnation**.
- However, China differs due to its **strategic policy autonomy** and the **lessons learned** from global economic history.

5. India's Strategic Takeaway:

- As a **strategic and economic rival**, India must **closely monitor** China's economic trajectory.
- This situation also presents **opportunities for India** in global trade, manufacturing relocation, and geopolitical influence.

Constitutional and Legal Relevance for India

- **Article 301–307 (Part XIII):** Deal with **Freedom of Trade, Commerce and Intercourse** within India, relevant in the context of maintaining **domestic market stability** amid global deflationary pressures.
- **Foreign Trade (Development and Regulation) Act, 1992:** Governs India's **international trade policies**, crucial in times of **global trade disruptions**.
- **Fiscal Responsibility and Budget Management (FRBM) Act:** Ensures fiscal discipline, particularly relevant when **deflationary risks** impact tax revenues and government expenditure.

Conclusion:

China's deflation signals a **broader structural slowdown** influenced by both **domestic weaknesses** and **external trade disruptions**. While Beijing may have better tools than Japan did in the 1990s, the ripple effects of its stagnation could influence global supply chains and regional geopolitics.

12. 16th Finance Commission and Centre-State Tax Devolution

1. Context: Finance Commission's Role & Mandate

- **Definition:** The *Finance Commission* is a **constitutional body** (Article 280) tasked with recommending the distribution of **net proceeds of taxes** between the Centre and states (*vertical devolution*), and among states (*horizontal devolution*).
- The **16th Finance Commission** (2026–31), chaired by **Arvind Panagariya**, is currently analyzing state submissions to decide tax devolution formulas and expenditure forecasts.

2. Call to Look Beyond Traditional Parameters

- Member **Manoj Panda** suggests the Commission may need to go **beyond the standard parameters** used by the 15th Finance Commission (e.g., population, area, forest cover, income distance, fiscal effort, demographic performance).
- The reason: *Developed states* (mainly from the **south and west**) argue that they contribute **more to national GDP and tax revenue**, yet receive **less in return**.

3. Horizontal Devolution Debate: Fairness vs Equity

- **Richer states** are demanding that **economic performance and tax contribution** be recognized in the devolution formula.
- These states feel "**penalized**" for their efficiency and performance, while continuing to support **poorer states** indefinitely without returns.
- Panda acknowledges that any federal arrangement requires "**give and take**", but also suggests room for **new parameters** to address these concerns.

4. State-Level Tax Challenges

- Most Indian states have **low tax-to-GSDP ratios** (~6–7%), showing **limited revenue generation capacity**.
- Due to the **GST regime**, states have **limited autonomy over indirect tax rates**, restricting their ability to raise independent revenue.

5. Legal and Institutional Framework

- **Article 280** of the Indian Constitution: Provides for the setting up of the Finance Commission every five years.

Fiscal division

Weightages for each criterion used by the 15th Finance Commission to determine states' share in central tax pool.

mint	Weight (In %)
Population	15
Area	15
Forest and ecology	10
Income distance*	45
Tax and fiscal efforts	2.5
Demographic performance (fertility rate)	12.5

*Gap between each state's per capita GDP and that of the top-ranked state.

Source: Fifteenth Finance Commission

- **Finance Commission (Miscellaneous Provisions) Act, 1951:** Lays down procedural provisions.
- **GST Council (Article 279A):** Controls state-level indirect taxation, affecting states' fiscal maneuverability.

6. Process and Timeline

- The Commission has completed **state visits and consultations**, and is reviewing **memorandums** from states and ministries.
- The **final recommendations** are expected to be submitted by **31 October 2025**, and will apply for the period **1 April 2026 – 31 March 2031**.

Conclusion:

The evolving debate around **tax devolution** reflects the growing tensions between **equity** (supporting weaker states) and **efficiency** (rewarding high-performing states). As India's federal fiscal system matures, there is a pressing need to recalibrate the **devolution formula** to strike a balance between **redistributive justice and performance incentives**. The 16th Finance Commission's approach may mark a shift towards **more nuanced, data-driven resource sharing**.

13. Mandatory Disclosure of Fraudulent Trades in Insolvency Sales

1. What Are Avoidance Transactions?

- **Definition:** *Avoidance transactions* refer to **fraudulent, preferential, undervalued, or wrongful transactions** carried out by a company's management before it enters the insolvency process.
- Examples include **siphoning off funds, related-party dealings, or fraudulent trades** intended to strip asset value and avoid creditor claims.

2. IBBI's New Amendment for Greater Transparency

- The **Insolvency and Bankruptcy Board of India (IBBI)** has amended rules under the **Insolvency Resolution Process for Corporate Persons**.
- **Resolution professionals (RPs)** must **mandatorily list all fraudulent and questionable transactions** in the **Information Memorandum (IM)** – a document forming the basis of corporate asset sale bids.

3. Objective: Fair Resolution and Price Discovery

- The reform aims to ensure that **resolution plans** only include recovery values from **disclosed fraudulent trades**.
- Ensures **informed decision-making** by the **Committee of Creditors (CoC)** and prospective **Resolution Applicants (RAs)**.
- Prevents **undisclosed assets or liabilities** from distorting bids and obstructing fair valuation.

4. Legal and Institutional Framework

- Guided by the **Insolvency and Bankruptcy Code (IBC), 2016** – a comprehensive law for insolvency resolution in a time-bound manner.

- The **IBBI** is the statutory regulator under **Section 188 of IBC**.
- The amendment ensures compliance with **Sections 43–51 of the IBC**, which empower tribunals to **reverse avoidance transactions** and recover value for creditors.



5. Benefits and Implications

- Promotes **transparency, accountability, and asset value maximization**.
- Helps create robust **corporate rescue plans** based on accurate and complete financial disclosures.
- Enhances investor confidence, reducing litigation risks and delays in insolvency proceedings.

6. Periodic Updating of Information Memorandum

- The RP must **keep the IM updated** and share it **periodically with the CoC**, ensuring real-time information flow.
- Any recovery from avoidance transactions **not disclosed in the IM** cannot be included in the resolution plan and would directly go to **creditors** post-resolution.

Conclusion:

IBBI's regulatory amendment mandating the disclosure of fraudulent trades and avoidance transactions in the insolvency resolution process is a critical step in **improving transparency, investor trust, and value recovery**. It ensures that only properly vetted and disclosed financial irregularities are factored into resolution plans, aligning with the IBC's goal of fair and efficient debt resolution.

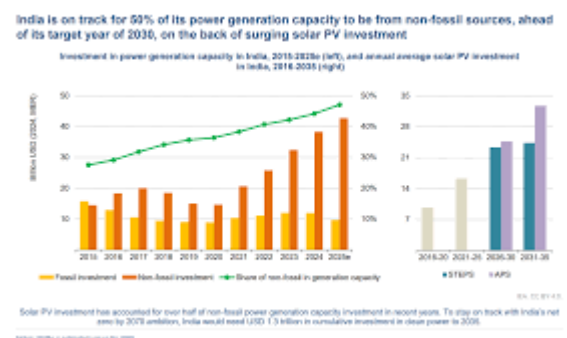
14. India's early progress toward achieving 50% non-fossil fuel power capacity

1. India's Renewable Energy Milestone

- India's **non-fossil fuel-based installed power capacity** (including solar, wind, hydro, and nuclear) has reached **nearly 50%** of the total power capacity.
- Union Power Minister Manohar Lal announced that **India may achieve the 50% target by the end of 2025**, well ahead of the **2030 deadline** set under its **climate commitments**.

2. India's Climate Commitment under Paris Agreement & NDCs

- As part of its **Nationally Determined Contributions (NDCs)** under the **Paris Agreement**, India pledged to:
 - Achieve **50% cumulative electric power capacity from non-fossil fuel-based energy resources by 2030**.
 - Reduce **emissions intensity of GDP by 45%** by 2030 from 2005 levels.



- This progress supports India's larger vision of achieving **net-zero carbon emissions by 2070**.

3. Non-Fossil Fuel Sources in India's Energy Mix

- Non-fossil energy sources include:
 - **Solar power** (highest share among renewables)
 - **Wind energy**
 - **Large & small hydroelectric power**
 - **Nuclear power**
 - **Bioenergy**
- India is currently among the **top five countries** globally in terms of **renewable energy capacity**.

4. Policy and Institutional Support

- Key schemes and institutions driving progress include:
 - **National Solar Mission**
 - **Green Energy Corridor**
 - **Production Linked Incentive (PLI) Scheme** for solar module manufacturing
 - **International Solar Alliance (ISA)**
 - Regulatory oversight by the **Ministry of New and Renewable Energy (MNRE)** and **Central Electricity Authority (CEA)**

5. Constitutional & Legal Provisions Related to Environment

- **Article 48A (DPSP)**: Directs the state to protect and improve the environment.
- **Article 51A(g)**: Fundamental duty of citizens to protect the natural environment.
- **Environment (Protection) Act, 1986**: Umbrella legislation for environmental regulation.
- **Electricity Act, 2003**: Facilitates renewable energy grid integration and policy formulation.

6. Challenges and Way Forward

- Issues include **intermittency of renewables, energy storage, grid integration, and land acquisition** for renewable projects.
- Focus on **battery storage, green hydrogen, decentralized solar, and hybrid RE systems** is essential to ensure energy security while meeting climate goals.

Conclusion:

India's early progress toward achieving 50% non-fossil fuel power capacity signals a **paradigm shift in energy policy** towards sustainability and self-reliance. It enhances India's global climate leadership and sets the stage for a **cleaner, greener economy**, while addressing energy access and economic growth.

15. Switzerland Greenlights India-EFTA Trade Pact

What is the India-EFTA Trade Pact?

- **Definition:** A trade agreement between India and the **European Free Trade Association (EFTA)**, which comprises **Switzerland, Norway, Iceland, and Liechtenstein**.
- The pact aims to **reduce tariffs, boost trade in goods and services**, and promote **investment flows** between the two regions.

Key Highlights of the Development

- **Switzerland becomes the last EFTA member** to ratify the agreement; Iceland, Norway, and Liechtenstein had already ratified it.
- The trade deal is **expected to come into force by October 2025**.
- Swiss Ambassador to India, **Maya Tissafi**, called it a "significant milestone" in bilateral relations.

Strategic and Economic Importance

- The agreement will **open up the Indian market** to Swiss and other EFTA country exports, especially in **pharmaceuticals, watches, machinery, and precision instruments**.
- In return, India is likely to gain **market access for IT services, generic medicines, and skilled labour mobility**.
- May facilitate **investment and technology transfers**, especially in high-tech and innovation sectors.

Legal & Institutional Provisions

- Trade agreements like this are signed under **Article 246 & 253 of the Indian Constitution**, empowering the Union government to enter into international treaties.
- **Bilateral and multilateral treaties** must align with WTO norms and India's **Foreign Trade Policy (FTP)**.



Additional Key Points

- **EFTA vs. EU:** EFTA is separate from the EU and focuses on free trade without a customs union.
- The deal is part of India's "**FTA revival strategy**" to counterbalance China and diversify trade partnerships.
- Helps India strengthen its **non-EU European ties** amid slow progress in India-EU FTA talks.

Conclusion & UPSC Relevance

Conclusion:

The ratification of the India-EFTA trade pact by Switzerland marks the final step before its implementation. It strengthens India's ties with non-EU European economies, promises improved trade flows, technology access, and investment opportunities, and reflects India's proactive trade diplomacy.

16. India's Global Gender Gap Report (2025)

What is the Global Gender Gap Report?

- **Definition:** Published annually by the **World Economic Forum**, this report benchmarks countries on **gender parity** across four dimensions:
 1. **Economic Participation and Opportunity**
 2. **Educational Attainment**
 3. **Health and Survival**
 4. **Political Empowerment**
- **India's Rank (2025):** 131 out of 148 countries, reflecting significant gaps, particularly in **economic participation** and **health outcomes** for women.

Major Findings: India's Gender Inequality Crisis

- **Economic participation** remains dismal:
 - India ranks **143rd** on this subindex.
 - **Female labour force participation** is low and stagnant.
 - Women earn **less than one-third** of male incomes.
- **Health and survival** indicators are troubling:
 - **Skewed sex ratio at birth**, revealing persistent **son preference**.
 - **Female life expectancy** has declined relative to men.
 - **57% of women (15–49 age group)** are anaemic (NFHS-5).
- **Care burden** is invisible:
 - Indian women do **7 times more unpaid domestic work** than men (Time Use Survey).
 - This care work remains **unrecognized in GDP calculations and underfunded in policy**.

Structural and Policy Failures

- **Chronic neglect** of women's health, especially in **rural and poor populations**, with limited investment in **primary health and nutrition**.
- **Lack of care infrastructure** (e.g., crèches, eldercare) restricts women's ability to join the formal workforce.
- **Policy design excludes women's lived experiences**, as they are under-represented in leadership roles and decision-making bodies.
- **McKinsey (2015)** estimated that **closing the gender gap could add \$770 billion** to India's GDP by 2025 — a missed opportunity.

Constitutional & Legal Framework

- **Article 14:** Equality before law.

Southern Asia			
Economy	Rank		Score
	Regional	Global	
Bangladesh	1	24	0.775
Bhutan	2	119	0.663
Nepal	3	125	0.648
Sri Lanka	4	130	0.645
India	5	131	0.644
Maldives	6	138	0.626
Pakistan	7	148	0.567

The Global Gender Gap Index 2025, results by region (Credit | World Economic Forum)

- **Article 15(1):** Prohibition of discrimination on the grounds of sex.
- **Article 39(a) & (d):** Directive Principles — equal right to livelihood and equal pay for equal work.
- **Article 42:** Provision for just and humane conditions of work and maternity relief.
- **Maternity Benefit Act, 1961, and Equal Remuneration Act, 1976,** provide legal safeguards but lack full implementation.

Demographic and Economic Implications

- **Demographic shift:** By 2050, **20% of the population will be senior citizens**, mostly women (widows) with higher dependency.
- **Falling fertility and rising dependency ratio** threaten economic stability.
- Women's continued **exclusion from the workforce** will further burden the working-age population and weaken fiscal resilience.
- Investment in **gender equality, care economy, and women's health** is now an **economic necessity**, not just a rights-based imperative.

Conclusion & UPSC Relevance

Conclusion:

India's poor ranking in the Global Gender Gap Report (2025) is a **red flag** for its **social, economic, and demographic future**. While legal frameworks and policy slogans exist, there is an urgent need for **real investment in public health, care services, and gender-responsive policy-making**. Treating women not as passive beneficiaries but as **active economic agents** is critical for achieving sustainable growth.

17. PM Dhan-Dhaanya Krishi Yojana (PMDDKY)

1. Objective and Vision

- **Aim:** Enhance agricultural productivity and promote sustainable farming practices across India.
- **Announced in:** Union Budget 2025–26.
- **Annual Outlay:** ₹24,000 crore for 6 years starting 2025–26.
- **Beneficiaries:** Targeted to benefit 1.7 crore farmers, especially in low-performing districts.

2. Merger of 36 Schemes

- **Integrated Approach:** A convergence of 36 existing schemes from 11 Union Ministries/Departments into one unified farm programme.
- Ensures synergy, coordination, and reduced duplication in agriculture and allied sectors.
- Encourages inter-sectoral collaboration, including State government schemes and private partnerships.



3. Focus Areas

- **Key Components:**
 - Improvement of post-harvest storage at panchayat and block levels.

- Upgrading irrigation facilities.
- Enhancing credit availability – both long-term and short-term.
- Aims at increasing cropping intensity, better credit disbursement, and resource optimization.

4. District-Level Targeting

- 100 backward districts will be selected using indicators like:
 - Low agricultural productivity,
 - Low cropping intensity,
 - Poor credit flow.
- Based on Net Cropped Area and operational holdings, at least one district will be selected from every State/UT.
- Inspired by the Aspirational Districts Programme to ensure focused intervention.

5. Implementation & Monitoring

- Collaborative Implementation: Through Centre-State coordination, private sector involvement, and local governance (panchayats).
- Expected to streamline service delivery, reduce administrative burden, and improve accountability and outcomes.

Additional Key Concepts

- **Cropping Intensity:** Ratio of gross cropped area to net sown area – an indicator of land use efficiency.
- **Convergence:** Administrative and programmatic integration of schemes for better governance.
- **Sustainable Agriculture:** Farming methods that conserve resources, reduce environmental harm, and ensure long-term productivity.

Constitutional & Legal Provisions

- **Article 48 (Directive Principles):** Promotes modern, scientific agriculture.
- **Seventh Schedule:** Agriculture is a State subject, but Union can intervene via funding and support schemes.
- **Article 39(b):** State must ensure distribution of resources to best serve the common good.

Conclusion

The PM Dhan-Dhaanya Krishi Yojana marks a major step towards transforming India's agriculture by streamlining fragmented schemes, improving credit access, and encouraging data-driven, district-based interventions. With a focus on sustainability and inclusivity, it aims to address structural challenges in Indian agriculture.

Greener fields

The PMDDKY aims at enhancing **agricultural productivity**, increasing adoption of **crop diversification** and **sustainable agricultural practices**, and augmenting **post-harvest storage**

₹ 24,000 cr.
to be allocated yearly for six years for the scheme

■ States and private sector to partner with the Centre to implement the scheme

100 districts to come under the scheme which will begin this financial year

■ Districts to be identified based on 3 key indicators: low productivity, low cropping intensity, less credit disbursement

Helping hand: Nearly 1.7 crore farmers will benefit from the scheme. PTI



18. CSR Norms Tightened for Non-Profits

Key Highlights

- Stricter CSR Disclosure Norms**
 The Ministry of Corporate Affairs (MCA) has revised **Form CSR-1**, mandating **enhanced disclosures** by non-profits (trusts, societies, Section 8 companies) that implement CSR projects on behalf of companies. The goal is to eliminate shell entities and ensure CSR funds are directed to **genuine, tax-compliant bodies**.
- Mandatory Income Tax Registrations (80G & 12A)**
 CSR-implementing agencies must now **submit proof of Income Tax registrations** under **Sections 80G and 12A**. This move aligns CSR eligibility with income tax rules and ensures only tax-exempt, credible institutions receive corporate donations.
- Expansion of Eligible Institutions**
 Entities registered under **Section 10(23C)** (like universities and hospitals) are now allowed to implement CSR activities, increasing the **scope of participation** in CSR execution.
- Objective: Transparency and Financial Oversight**
 The update reflects the government's push for **greater transparency, regulatory governance, and financial scrutiny** in the deployment of CSR funds. It curbs misuse and aligns corporate giving with national financial regulations.
- Detailed Compliance Mechanism**
 The **revised Form CSR-1** includes more elaborate fields, requiring detailed disclosures about legal structure, tax registration, governance, and operational history, helping assess credibility.



Important Definitions and Legal Provisions

- Corporate Social Responsibility (CSR):**
 As per **Section 135 of the Companies Act, 2013**, companies with a net worth of ₹500 crore+, turnover of ₹1,000 crore+, or net profit of ₹5 crore+ must spend at least **2% of average net profit of past 3 years on CSR activities**.
- Section 80G of Income Tax Act:**
 Provides **tax deduction** for donations made to certain charitable institutions.
- Section 12A of Income Tax Act:**
 Registration under this section certifies an organization as a **genuine charitable institution** eligible for income tax exemption.
- Section 10(23C):**
 Grants **income tax exemption** to certain funds, universities, hospitals, and educational institutions.

Conclusion

The tightening of CSR norms represents a **progressive regulatory reform**. It ensures that **corporate social funds** are channelled through **authentic and mission-aligned entities**, thereby **reducing misuse**, increasing **stakeholder confidence**, and enhancing the **effectiveness of CSR initiatives**.

19. India's Proposed Mining Reform for Critical Minerals

Key Highlights

1. Unlocking Legacy Mines for Strategic Minerals:

- India is planning to amend the **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)** to allow mining leaseholders to extract **any newly-discovered critical or strategic minerals**, beyond the originally licensed one.
- This reform targets over **2,500 pre-2015 mining leases** (allocated before the auction-based regime began), many of which are currently idle.

2. Focus on Critical Minerals for Strategic Sectors:

- The move focuses on **critical minerals** such as **lithium, cobalt, and rare earth elements (REEs)**.
- These minerals are **vital for clean energy, electric vehicles, electronics, and defence sectors**, making the reform essential to India's **Atmanirbhar Bharat (self-reliant India)** and energy transition goals.

3. Simplified Licensing with Deemed Approval:

- The amended framework proposes that miners will get a **separate licence** for the newly found mineral via a **deemed approval process** — without fresh auctions or extra premiums.
- This removes bureaucratic delays and encourages commercial exploitation of minerals discovered during bulk mining operations.

4. Legal and Policy Context:

- The **MMDR Act, 1957** governs the development and regulation of mines and minerals in India.
- The **2015 amendment** to the Act introduced **auction-based allocation** of mineral blocks.
- The current reform proposal aims to **liberalize and modernize** the mining ecosystem by tapping into **unutilized or underutilized legacy leases**.



5. Economic & Geostrategic Implications:

- India seeks to reduce import dependency and enhance domestic capacity for **energy security and manufacturing competitiveness**.
- The reform aligns with global trends where countries are securing supply chains for **critical minerals**, often influenced by geopolitical considerations (e.g., China's dominance in REE supply).

Important Definitions

- Critical Minerals:** Minerals that are essential for the economy but have high supply risk. In India, these include lithium, graphite, nickel, cobalt, REEs, etc.
- Legacy Leases:** Mining leases granted before 2015 under discretionary allotment, not auction-based.
- Deemed Approval:** A regulatory mechanism where approval is considered granted after a stipulated period if no objection is raised.

Conclusion & UPSC Relevance

India's move to amend the MMDR Act marks a **transformative shift in mining policy** aimed at unlocking dormant mineral wealth crucial for the future economy. By enabling commercial extraction of critical minerals from legacy mines without red tape, the reform could **revive old leases**, boost **economic growth**, **reduce import dependency**, and support India's climate commitments and energy goals.

20. UK–India FTA and the Promise of Global Capability Centres (GCCs)

Key Highlights:

1. India as a GCC Powerhouse:

- India hosts over **1,500 Global Capability Centres (GCCs)**, employing 1.9 million+ people.
- GCCs provide strategic functions like **R&D, cybersecurity, analytics, and digital transformation** for global MNCs.
- British companies are increasingly choosing India not just for cost efficiency but as an **innovation and technology hub**.

2. Role of India–UK Free Trade Agreement (FTA):

- The proposed FTA aims to **ease regulations, promote data governance harmonization, and enable smoother professional mobility**.
- A successful FTA would foster **cross-border collaboration**, reduce **double taxation**, and remove **data localization mandates**—key challenges currently limiting GCC growth.

3. Strategic Alignment of Interests:

- For the **UK**, the FTA helps expand its post-Brexit digital economy footprint and ensures service sector access.
- For **India**, the FTA aligns with:
 - Digital India Mission*
 - High-value service sector growth*
 - Employment generation through skill development*



4. Policy Support & State-Level Push:

- MeitY is formulating a **national GCC framework** with NASSCOM, KPMG, Zinnov, etc., as announced in **Budget 2025**.
- States like **Uttar Pradesh** are also pushing aggressively (e.g., hosting its first **GCC Conclave** with firms like Microsoft, TCS).
- However, concerns remain whether **fragmented state-level policies** can hinder national integration of GCC growth.

5. Challenges & Recommendations:

- Key legal/infrastructure issues: **double taxation, IP protection, fragmented standards**.
- Experts have recommended:

- Framing a **dedicated National GCC Policy**.
- Promoting **talent diversity** and easing **cross-border professional mobility**.
- Leveraging the FTA to help Indian GCCs **climb the global value chain**.

6. Towards a UK–India Knowledge Corridor:

- The FTA is positioned to create a **resilient, knowledge-based commerce corridor** between the two nations.
- GCCs are central to this, combining **services, skills, and technology**—the pillars of the future global economy.

Definitions & Key Terms for UPSC:

- **GCC (Global Capability Centre):**
A dedicated offshore unit of an MNC (Multinational Corporation) in another country that handles IT, operations, engineering, R&D, and digital transformation tasks.
- **FTA (Free Trade Agreement):**
A pact between two or more countries to reduce trade barriers (tariffs, quotas, legal hurdles) and increase trade and investment flow.
- **Data Localization:**
The requirement that data on a nation's citizens or residents be collected, processed, and stored inside the country.

Legal and Constitutional Relevance:

- **Article 246 & 7th Schedule:** Foreign trade and foreign affairs fall under the Union List — hence, the central government drives FTA negotiations.
- **Section 4, IT Act 2000 & Draft Digital Personal Data Protection Bill, 2023** (relevant for data governance).
- **Industrial Policies & Budget 2025 Provisions** – specifically targeting skilling, AI, and digital economy.

Conclusion:

The UK–India FTA has immense potential to **redefine bilateral economic cooperation** beyond traditional trade in goods. **GCCs represent a futuristic economic zone** where India's digital strengths and the UK's innovation ecosystem can be synergized. If executed well, the FTA could unlock **high-value service sector employment**, strengthen India's **position in global digital trade**, and help India emerge as a **global knowledge and innovation hub**.

21. FY26 Capex Loan Outlay under SASCE Scheme: Key Summary

Key Points from the Update

- **Mid-Year Review May Increase FY26 Outlay**
The Centre is likely to revise the FY26 outlay for the **Special Assistance to States for Capital Expenditure (SASCE)** scheme after the **September–October 2025 mid-year review**, in response to faster-than-expected utilization in FY25.
- **SASCE Scheme: Interest-Free 50-Year Loan**
Launched in **FY21** to promote post-pandemic economic recovery, the SASCE scheme provides

interest-free loans for 50 years to states, aimed at long-term capital expenditure and infrastructure creation.

- **High Utilization and Front-Loading in FY25**

Over ₹50,000 crore (1/3rd of ₹1.5 trillion) has already been sanctioned between April–July 2025, reflecting early project rollout and high state-level demand. This proactive front-loading departs from the earlier trend of backloaded disbursements.

- **Allocation Trends and Adjustments**

- ₹1.1 trillion in FY24
- Increased to ₹1.5 trillion for both FY25 and FY26
- However, FY25 was revised to ₹1.25 trillion due to election-related delays in the first half
- FY26 may now see a hike again if the current momentum continues

- **Reform-Linked Conditions for Disbursal**

FY26 funds are partly conditional on reforms, including:

- Enhancing municipal staffing
- Integrated property tax platforms
- Urban land and planning reforms
- Demonstrated state-level capex growth and urban-rural infra development

- **States' Role in Infrastructure Development**

States contribute around 20–25% of total infrastructure spending in India, making their capital investment push vital for achieving national growth targets.

Key Terms & Definitions:

- **Capital Expenditure (Capex):** Spending on the creation or acquisition of long-term assets such as roads, bridges, schools, etc., which leads to capacity building and economic productivity.
- **Front-Loading:** Advancing disbursements or activities to the initial months of a fiscal year to build early momentum.
- **Interest-Free Loan:** A loan with no periodic interest payments, only requiring repayment of the principal (in this case, after 50 years, and possibly waivable).

Constitutional & Legal Context:

- **Article 282:** Allows both Union and State governments to make grants for any public purpose, forming the legal basis for schemes like SASCE.
- **Article 275:** Provides for grants-in-aid from the Centre to States, relevant for targeted infrastructure support.
- **FRBM Act (2003):** Sets fiscal discipline limits that the SASCE scheme circumvents strategically by offering capital support outside state borrowing limits.

Conclusion:

The SASCE scheme has emerged as a critical fiscal tool in India's infrastructure-led growth strategy, enabling state-driven capex with central support. The anticipated hike in FY26 outlay underscores the government's focus on long-term asset creation, economic stimulus, and urban reform.

22. RBI's Financial Inclusion Index Rises by 4.3% in FY25

Key Highlights

- **FI-Index Value and Growth**

The **Reserve Bank of India (RBI)** announced that the **Financial Inclusion Index (FI-Index)** rose from **64.2 in March 2024 to 67 in March 2025**, reflecting a **4.3% increase**. This indicates measurable progress in inclusive financial access across the country.

- **Improvement Across All Sub-Indices**

Growth was reported across **three core sub-indices** of the FI-Index:

- **Access** (availability of financial services)
- **Usage** (extent of active use of services)
- **Quality** (customer satisfaction, grievance redressal, transparency)



- **Definition of Financial Inclusion**

Financial Inclusion refers to the **delivery of affordable financial services**—such as savings, credit, insurance, and remittance—to **all individuals and businesses**, particularly vulnerable and underserved sections of society.

- **About RBI's FI-Index**

- Launched in **2021**, the index is published annually in **July**.
- It ranges between **0 and 100**, where **0 denotes complete exclusion** and **100 indicates full inclusion**.
- It is a **composite index** developed by RBI without relying on any base year, ensuring a dynamic and evolving measurement.

- **Policy Relevance and Broader Context**

The rise in FI-Index reflects the impact of initiatives like **PM Jan Dhan Yojana, Digital Payment Mission, Financial Literacy Campaigns, Banking Correspondents, and UPI proliferation**. It highlights the deepening of digital and physical banking infrastructure in rural and semi-urban areas.

- **Challenges Ahead**

Despite progress, **financial exclusion persists** in certain areas such as the Northeast, tribal belts, and among informal sector workers. Focus is now required on improving **last-mile connectivity, digital security, and financial literacy**.

Constitutional & Legal Provisions

- **Article 38:** Directs the State to promote welfare by securing a social order including **equitable distribution of material resources**.
- **Article 39(c):** Calls for policies ensuring **that the operation of the economic system does not result in the concentration of wealth**.
- **Banking Regulation Act, 1949 and RBI Act, 1934:** Empower RBI to supervise and guide banking operations to ensure inclusive practices.

Key Terms and Definitions

- **FI-Index (Financial Inclusion Index):** A composite index created by the RBI to capture the extent of financial inclusion based on access, usage, and quality.
- **Access:** Availability of financial services (e.g., bank branches, ATMs, mobile banking).
- **Usage:** Frequency and volume of transactions or services availed.
- **Quality:** Measures transparency, ease of use, grievance redressal, and customer experience.

Conclusion

The increase in RBI's Financial Inclusion Index signifies **positive strides toward inclusive growth**, reflecting the success of government and RBI-led financial empowerment initiatives. However, **regional disparities and digital exclusion** still need policy attention for truly universal financial access.

23. Draft National Telecom Policy 2025: Boosting Indigenous Telecom Manufacturing

A policy shift toward self-reliance, secure networks, and domestic innovation in telecom infrastructure

1. Promotion of Indigenous Telecom Equipment

- The draft National Telecom Policy (NTP) 2025 proposes incentives to telecom operators for using **indigenously designed and manufactured telecom equipment**.
- Aims to reduce reliance on foreign Original Equipment Manufacturers (OEMs) such as Nokia, Ericsson, Samsung, and Cisco.
- Indian companies like **Tejas Networks, HFCL, STL**, and telecom startups are expected to benefit.

Definition – Indigenisation: Developing and producing goods and services within the country to reduce import dependency and enhance domestic capabilities.

2. Ambitious Targets for Domestic Manufacturing

- The government targets a **150% increase in domestic telecom manufacturing output** over the next five years.
- Aims for **50% import substitution** in telecom equipment through locally designed, developed, and manufactured products.
- Key products include routers, transmission gear, switches, and set-top boxes.

Definition – Import Substitution: Economic strategy to replace imported goods with domestically produced ones to encourage self-sufficiency.

3. Past Policy Execution Gaps

- The 2018 National Digital Communications Policy included similar incentives but lacked effective implementation.
- Under the **Telecom PLI Scheme (2021)**, out of ₹12,195 crore approved over five years, only ₹1,162 crore was disbursed by FY25.
- Only half of the 42 shortlisted companies received benefits, raising concerns over slow disbursements and procedural inefficiencies.

4. Strategic Goals of NTP 2025

The draft policy outlines six strategic missions:

- Universal, meaningful, and affordable connectivity
- Promotion of innovation and R&D
- Growth in domestic telecom manufacturing

- Creation of a secure and trusted telecom network
- Ease of doing business in the telecom sector
- Development of a sustainable and green telecom ecosystem

Definition – Ease of Doing Business: The simplification of regulations and procedures to encourage private investment and entrepreneurship.

5. Industry Feedback and Implementation Challenges

- Experts highlighted the need for:
 - Clear demand visibility
 - Streamlined public procurement
 - Timely incentive disbursements
 - Stronger R&D support and global competitiveness
- Concerns remain about whether the policy will move beyond paper and into effective practice.

Conclusion and UPSC Relevance

The Draft National Telecom Policy 2025 represents a critical step toward strengthening India's telecom sovereignty, ensuring secure digital infrastructure, and boosting the Make in India mission. However, the success of this policy hinges on effective execution, stakeholder alignment, and capacity-building.

24. New Norms for 27% Ethanol Blending in Petrol to be Announced Soon

Summary:

- **New Ethanol Blending Norms Expected by August 2025**
The Government of India plans to announce guidelines for achieving 27% ethanol blending in petrol by the end of August, as per Union Minister Nitin Gadkari. This move aims to reduce fossil fuel dependence and promote cleaner energy alternatives.
- **Current Status: 20% Ethanol Blending Achieved**
India had earlier targeted 20% ethanol blending (E20) in petrol by 2025 and has already met this milestone ahead of schedule. The new push toward a 27% blend aligns with global standards, especially Brazil, where the ethanol blend is already at 27%.
- **Definition – Ethanol Blending**
Ethanol blending refers to mixing ethanol (a biofuel usually derived from sugarcane or maize) with petrol to reduce carbon emissions, boost farmers' income, and decrease import dependence on crude oil.
- **Policy and Economic Benefits**
Higher ethanol blending supports the National Bio-Energy Policy and the Ethanol Blending Programme (EBP). It reduces the oil import bill, supports rural agriculture through demand for sugarcane and grains, and improves environmental sustainability.
- **Environmental and Energy Security Angle**
Ethanol-blended petrol burns cleaner, helping reduce air pollution and greenhouse gas emissions. It also strengthens India's energy security by reducing reliance on foreign oil.



• Constitutional & Legal Framework

- *Article 48A*: Directive Principle of State Policy, mandates protection and improvement of the environment.
- *National Policy on Biofuels (2018)*: Provides for phased implementation of ethanol blending targets.
- *Environment Protection Act, 1986*: Authorizes the regulation of fuel quality to control emissions.

Conclusion:

The shift to 27% ethanol blending reflects India's proactive approach in achieving sustainable energy goals, supporting Make in India through domestic ethanol production, and aligning with global environmental commitments under the Paris Agreement.

25. Revamped Mission Vatsalya Portal – Key Points

1. What is the Mission Vatsalya Portal?

- The **Revamped Mission Vatsalya Portal** is a **secure, integrated digital platform** launched by the **Ministry of Women and Child Development** on **25th July 2025**.
- It is designed to facilitate **child protection services** and unify earlier portals like **TrackChild** and **Khoya-Paya** into a **single-window platform**.

2. Key Features of the Portal

- Acts as a **single digital interface** for multiple stakeholders:
 - **State-level**: State Child Protection Society (SCPS), State Adoption Resource Agency (SARA)
 - **District-level**: District Child Protection Unit (DCPU), Child Welfare Committee (CWC), Juvenile Justice Board (JJB), Special Juvenile Police Unit (SJPU), Child Care Institutions (CCIs)
- **Avoids duplication of efforts** and promotes **real-time data-sharing**.
- Supports **Monitoring and Implementation** through **Management Information System (MIS) Dashboards**.
- Ensures **better planning and resource optimization**.

3. Emergency Services Integration

- **Child Helpline 1098** (24x7x365) is integrated into the portal.
 - Linked with:
 - **ERSS-112** (Ministry of Home Affairs)
 - **Women Helpline 181**
- The portal maintains digital records of **cases reported** via these helplines.



4. Training and Implementation Mechanism

- The Ministry, along with **Savitribai Phule National Institute of Women and Child Development (SPNIWCD)**, conducted **master trainer training** for effective rollout.
- **Login credentials** have been provided to all relevant stakeholders and NGOs at the State and UT levels.

5. Legal and Constitutional Provisions

- **Article 39(e) and 39(f)** – Directive Principles of State Policy (DPSP): Protection of children against abuse and ensuring opportunities for healthy development.
- **Juvenile Justice (Care and Protection of Children) Act, 2015**: Provides the legal framework for child protection, under which Mission Vatsalya operates.
- **IT Act, 2000** (amended): Facilitates use of digital platforms for secure data handling.

6. Definitions and Terminology

- **Mission Vatsalya**: A flagship child welfare scheme aimed at ensuring comprehensive development, protection, and rehabilitation of children in need of care and protection.
- **Child Care Institutions (CCIs)**: Institutions that provide residential care and support services to vulnerable children.
- **MIS Dashboard**: A digital monitoring system to track performance indicators and data in real time.

Conclusion

The revamped **Mission Vatsalya Portal** is a major step towards **digitizing and integrating child welfare services** in India. It strengthens **inter-agency coordination**, improves **transparency and efficiency**, and ensures **real-time responses** in cases of child distress.

26. PM Viksit Bharat Rozgar Yojana (PM-VBRY): Employment-Linked Incentive Scheme

PM Viksit Bharat Rozgar Yojana: Boosting Employment for a Developed India

Objective and Launch Timeline

The **PM Viksit Bharat Rozgar Yojana (PM-VBRY)**, an enhanced version of the Employment Linked Incentive (ELI) Scheme, will be launched on **1st August 2025**. With an allocation of **₹99,446 crore**, the scheme seeks to create over **3.5 crore jobs** within two years (August 2025 – July 2027). It forms a crucial part of the Government's broader vision of achieving **Viksit Bharat (Developed India) by 2047**.

Dual Structure: Support for Employees and Employers

PM-VBRY has a two-part framework:

- **Part A – Incentive to First-Time Employees:**
 - EPF wage support up to ₹15,000 in two installments (after 6 and 12 months).
 - Mandatory saving of a portion in deposit instruments to promote **financial literacy and savings**.
- **Part B – Support to Employers:**
 - Monthly incentive up to ₹3,000 per new employee for EPFO-registered establishments.
 - Employers must retain employees for at least six months.
 - Manufacturing sector employers can avail extended benefits up to **four years**.

Eligibility Criteria and Incentive Structure

- Minimum hiring conditions:
 - **2 employees** (for establishments with <50 workers).
 - **5 employees** (for establishments with ≥50 workers).
- Salary ceiling: Eligible employees must earn **up to ₹1,00,000/month**.

- Incentive slabs:
 - EPF wage up to ₹10,000 → **₹1,000/month**.
 - EPF wage ₹10,001–20,000 → **₹2,000/month**.
 - EPF wage ₹20,001–1,00,000 → **₹3,000/month**.

Payment Mechanism and Digital Transparency

- **Part A payments (employees):** Through **Direct Benefit Transfer (DBT)** using the **Aadhaar Bridge Payment System (ABPS)**.
- **Part B payments (employers):** Credited directly into **PAN-linked bank accounts**.
- The digital framework ensures **transparency, accountability, and compliance**.

Strategic Alignment with National Priorities

The scheme is designed to:

- Encourage **employment-led growth**.
- Promote **formalization of the workforce**.
- Strengthen the **manufacturing sector**.
- Complement flagship programmes such as:
 - **Atmanirbhar Bharat Rozgar Yojana (ABRY)**.
 - **Skill India Mission**.

Key Terms

- **EPFO (Employees' Provident Fund Organisation):** Statutory body under the Ministry of Labour providing social security to workers.
- **Direct Benefit Transfer (DBT):** Mechanism for direct transfer of government benefits/subsidies to bank accounts.
- **Financial Literacy Programme:** Training initiative to instill savings habits and improve financial decision-making among workers.

Conclusion

The **PM-VBRY** is a holistic intervention addressing both **demand-side challenges (job creation)** and **supply-side issues (employer support)**. By formalizing employment, incentivizing savings, and strengthening industry participation, the scheme is expected to boost productivity, enhance job quality, and accelerate India's journey towards a **Developed India by 2047**.

27. Discovery of Rare Earth Elements (REE) in Singrauli Coalfields

• Overview of the Discovery

- **Promising reserves of Rare Earth Elements (REE)** have been identified in the **Singrauli coalfields** located in **Madhya Pradesh**, as informed in the **Rajya Sabha** by the **Minister of Coal and Mines**.
- This finding is significant for India's resource security, as REEs are crucial for **advanced technologies, renewable energy, and defence applications**.
- **Coal India Ltd** is currently involved in **research and development (R&D)** projects to explore the commercial potential of **REE extraction from coal mine waste**.



• Definition and Importance of REEs

- **Rare Earth Elements (REEs)** are a group of 17 chemically similar metallic elements including **scandium, yttrium, and 15 lanthanides**.
- Despite the name, REEs are relatively abundant in the Earth's crust, but they are rarely found in economically exploitable concentrations.



- They are **strategic minerals** vital for **smartphones, electric vehicles, wind turbines, solar panels, missiles, and satellites**.
- **Strategic Significance for India**
 - India currently imports the majority of its REE needs, mainly from **China**, which dominates the global supply chain.
 - Domestic availability, like in Singrauli, could help reduce **import dependency**, strengthen **national security**, and boost the **Make in India** and **Atmanirbhar Bharat** initiatives.
 - This discovery could also enhance India's capability to develop **green and high-tech industries** indigenously.
- **Legal and Policy Framework**
 - REEs are listed under the category of "**Atomic Minerals**" governed by the **Atomic Energy Act, 1962**, and their mining is regulated accordingly.
 - The **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)** provides for the regulation of mining activities in India, including exploration licenses for strategic minerals.
 - The **National Mineral Policy, 2019** emphasizes the development of strategic and critical minerals like REEs, including private sector participation and use of advanced technology.
- **Challenges in Extraction and Utilization**
 - Extraction of REEs from **coal ash and waste material** is **technically complex and expensive**, requiring specialized technology and environmental safeguards.
 - Proper management is required to avoid **radioactive contamination**, especially in elements like thorium that often occur alongside REEs.
 - Efficient **public-private partnerships, international collaboration, and investment in R&D** will be critical to sustainable exploitation.
- **Constitutional Provisions**
 - **Article 39(b)** under the Directive Principles mandates that the ownership and control of material resources be distributed to best subserve the common good.
 - **Article 48A** directs the State to protect and improve the environment, which becomes relevant in context of **eco-sensitive mineral extraction**.

Conclusion & UPSC Relevance

The identification of rare earth elements in Singrauli coalfields is a strategic development for India's technological self-reliance and economic security. With proper regulation, investment, and environmental safeguards, it could contribute significantly to India's energy transition and high-tech manufacturing goals. For UPSC, this topic is relevant under **GS Paper 1 (Resources)**, **GS Paper 3 (Economic Development, Science & Tech, Environment)**, **Current Affairs**, and themes related to **strategic minerals, critical technology, and mineral policy frameworks**.

GEOGRAPHY & ENVIRONMENT

1. Kerala's Initiative to Make Munnar a 'Responsible Tourism Destination' by December 2025

1. Objective: Branding Munnar as a Responsible Tourism Destination

- The **Kerala Government** has launched a campaign to develop **Munnar** into a '**Responsible Tourism Destination**' by **December 2025**.
- ₹50 lakh has been sanctioned to implement **sustainable tourism** initiatives in the ecologically sensitive hill station.

2. Focus on Net-Zero & Ecological Sustainability

- Munnar will be developed as a **Net-Zero Tourist Destination**, aiming to **minimize the carbon footprint** of tourists.
- Activities will be aligned with **ecosystem protection**, preserving the **fragile biodiversity and natural resources** of the Western Ghats.



3. Promoting Gender-Inclusive and Safe Tourism

- The project emphasizes a **gender-inclusive tourism model** by:
 - Encouraging **women's participation** as hosts and entrepreneurs.
 - Promoting **safety for women tourists and workers**.
- Aligns with **SDG 5** (Gender Equality) and **SDG 8** (Decent Work and Economic Growth).

4. Capacity Building and Community Participation

- Local stakeholders such as **tourist guides, autorickshaw drivers, community leaders** are being trained.
- "**Village Life Experience**" packages are being created to encourage **community-based and immersive tourism**.

5. Plastic-Free Initiative and Awareness Campaign

- The hill station will be turned into a **plastic-free zone** with visible signage, waste segregation, and public sensitization.
- The move aligns with **Swachh Bharat Mission** and India's commitment to **plastic pollution reduction** under **SDG 12** (Responsible Consumption and Production).

Key Terms and Constitutional Linkages:

- **Responsible Tourism**: A tourism model that respects the environment, local communities, and culture while ensuring economic benefit.
- **Sustainable Development**: Implied under **Article 48A** (Directive Principles – Protection of Environment) and **Article 51A(g)** (Fundamental Duty to protect the environment).
- **Tourism and Culture**: Covered under the **State List** (Entry 31, Seventh Schedule), but coordinated with the Centre through initiatives like **Incredible India** and **Swadesh Darshan**.

Conclusion

The Munnar Responsible Tourism initiative is a **model for ecologically and socially sustainable tourism** in India. It enhances **local livelihoods, gender equity, and environmental responsibility**, contributing to the vision of **Eco-conscious and Inclusive Development**.

2. Tiger Deaths in Karnataka: A Wake-Up Call for Wildlife Protection and Environmental Governance

1. Recent Incident and Immediate Fallout

- In a tragic incident, a **tigress and four cubs** were **poisoned** in **MM Hills Wildlife Sanctuary, Karnataka**, triggering national outrage.
- Three individuals were arrested, and forest officials were suspended. Two separate investigations were initiated — one by the **Karnataka Forest Department** and another by the **National Tiger Conservation Authority (NTCA)**.

2. Systemic Issues in Wildlife Protection

- The incident reflects **larger governance lapses**, including:
 - **Shortage of forest manpower**
 - **Delayed wages and compensation**
 - **Lack of patrolling and intelligence on poaching networks**
- The **low conviction rate** in wildlife crime cases fails to act as a deterrent. Example: a 2023 tiger poisoning case in Bandipur remains unresolved.

3. Escalating Human-Wildlife Conflict in Karnataka

- Karnataka faces **rising cases of human-wildlife conflict**, especially crop damage by elephants and cattle loss due to tigers/leopards.
- As per Forest Department data (2024–25):
 - **35,580 conflict cases** reported
 - Compensation approved in only **20,147 cases**, with **14,245 pending** and **918 denied**
- Delayed and partial compensation worsens public resentment and retaliation against wildlife.



4. Contradictory Environmental Policies

- Despite being home to the **highest elephant (6,400)** and **second-largest tiger population (563)**, Karnataka's policy decisions raise concerns:
 - Reversal on **Goa-Tamnar power line** through **Kali Tiger Reserve**
 - Push for the **Sharavathi storage hydel project**, threatening Western Ghats biodiversity
 - Approvals to **linear infrastructure** in ecologically fragile zones, escalating habitat loss and conflict

5. Conservation vs Development: A Policy Dilemma

- Projects often lead to **habitat fragmentation, encroachments**, and force wildlife into human settlements, exacerbating conflicts.
- Conservation success cannot be based on **population numbers alone** if **environmental policies** undermine long-term habitat security.

Key Definitions & Constitutional Linkages

- **Wildlife Protection Act, 1972**: Provides for protection of wild animals and establishment of protected areas.
- **National Tiger Conservation Authority (NTCA)**: Statutory body under the Act ensuring tiger protection and habitat security.
- **Article 48A** (Directive Principles): Duty of the State to protect and improve environment and wildlife.
- **Article 51A(g)** (Fundamental Duty): Citizens must protect and improve the natural environment including wildlife.

Conclusion

The MM Hills tiger deaths expose the **fragility of wildlife protection mechanisms** and **administrative apathy** in Karnataka. While committee probes are ongoing, real reform lies in **strengthening forest governance**, ensuring **prompt compensation**, enhancing **legal deterrents**, and reconciling **development with ecological integrity**. **Wildlife conservation** must move beyond statistical success and focus on **sustainable, inclusive, and proactive environmental governance**.

3. India's First Weather Derivatives Planned: A Step Towards Climate-Resilient Agriculture

Key Highlights

- **MoU Signed**:
 - The **National Commodity and Derivatives Exchange (NCDEX)** and the **India Meteorological Department (IMD)** signed a **Memorandum of Understanding (MoU)** on **26 June 2025**.
 - The MoU will lay the **foundational framework** for launching **India's first weather derivatives**, a financial instrument designed to mitigate weather-related risks.
- **Purpose of Weather Derivatives**:
 - Aim to protect **farmers, agribusinesses, and allied sectors** from **climate-related uncertainties** like **erratic rainfall, heatwaves, and unseasonal weather** events.
 - Will offer **seasonal and location-specific derivative contracts**, allowing stakeholders to hedge risks effectively.



Definition and Relevance of Weather Derivatives

- **Weather Derivative**:
A financial contract that allows the holder to **hedge or speculate on the risk of weather fluctuations**. Unlike crop insurance, payouts are **based on a weather index (like temperature or rainfall)** rather than actual losses.
- Example: A farmer in Maharashtra can hedge against rainfall falling below a specified threshold during the Kharif season.



- **Global Practice:**

Already used in **developed countries** like the USA and EU to **protect businesses from weather volatility** in agriculture, energy, and transportation sectors.

Constitutional & Legal Provisions

- **Entry 33, Concurrent List – Seventh Schedule:** Empowers both Centre and States to legislate on trade and commerce in agricultural produce and commodities.
- **Forward Contracts (Regulation) Act, 1952** (now repealed, replaced under SEBI): Governs **commodity derivatives trading**, regulated now by **SEBI**.
- **IMD under Ministry of Earth Sciences** provides the **data backbone** necessary for weather-based financial products.

Significance for UPSC & Governance

- **Agricultural Risk Management:**
Weather derivatives will complement **existing crop insurance schemes** like PMFBY by offering **market-based climate risk hedging**.
- **Economic Impact:**
 - Will enhance **economic resilience** in rural India.
 - Potential to boost **investor confidence** in agri-derivatives markets.
- **Climate Adaptation Tool:**
 - Vital for **disaster risk reduction** and **climate change adaptation** strategies under India's **National Action Plan on Climate Change (NAPCC)**.

Conclusion

The launch of **India's first weather derivatives** signifies a transformative step in **climate-risk management**, particularly in the **agriculture and allied sectors**. By integrating **financial innovation with meteorological science**, it empowers farmers and agri-businesses to better cope with **climatic unpredictability**. Going forward, this initiative can play a crucial role in **enhancing economic security, stabilizing rural incomes, and supporting the government's vision of Atmanirbhar Bharat** in agriculture.

4. Climate Change and India's Narrowing Forecast Window

- **Impact on Weather Forecasting**
 - Climate change is making it increasingly difficult for the **India Meteorological Department (IMD)** to maintain the same lead time in weather predictions.
 - Earlier, heavy rainfall could be forecast three days in advance; now, it may only be predicted 1.5 days ahead. This shorter **forecast window** limits preparedness.
- **Increasing Extreme Weather Events**
 - India is witnessing a rise in frequency, intensity, and duration of **heatwaves**, especially in north and central "heat-core zones."
 - Heavy rainfall, lightning, and thunderstorms are more frequent in central, eastern, and northeastern regions.
 - The Arabian Sea has seen a marked increase in severe cyclonic storms since the 1990s, matching global climate models.

- Climate change is drastically shortening India's weather forecast window, increasing vulnerability to extreme events.
- It underscores the urgent need for integrated climate adaptation strategies, resilient agricultural planning, and robust early warning systems.

5. Disaster Risk Financing in India: Evolution and Emerging Approaches

• Historical Evolution of Disaster Financing in India

- India's disaster financing began modestly in the 1950s, with the Second Finance Commission recommending ₹6 crore annually under "Margin Money" to help states cope with natural calamities — initially symbolic.
- Over time, successive Finance Commissions (FCs) significantly increased allocations, with the **9th FC** introducing the **Calamity Relief Fund (CRF)**, empowering states with more autonomy.

• Shift from Reactive to Proactive Approaches

- The **Disaster Management Act, 2005** established a legal framework, institutionalizing the **National Disaster Response Fund (NDRF)** and **State Disaster Response Fund (SDRF)** under the **13th FC**, promoting rule-based, structured financing.
- The **15th FC (2020–2025)** made a major shift: ₹1.60 trillion allocated to states and ₹68,000 crore to the Centre, with ₹45,000 crore dedicated to mitigation, marking a shift from welfare to **resilience mindset** ("Build now or pay later").

• Challenges and Present Gaps

- Preparedness and mitigation activities, though critical, have historically remained underfunded.
- Rapid urbanization, climate change-induced extreme events, and increasing economic losses (₹50,000 crore annually) highlight the urgent need for pre-arranged, flexible disaster financing models rather than post-disaster borrowing or reactive measures.

• New Financing Models and Innovations

- Emerging tools include **contingency buffers**, **catastrophe risk pools**, and **parametric insurance models**, which ensure rapid fund release without bureaucratic delays.
- Proposed support for **household-level resilience**: encouraging personal risk coverage for crops, property, livelihoods, and lives to foster a culture of self-protection.
- Emphasis on urban resilience: dedicated climate-adaptive infrastructure funds and retrofitting critical assets.

• Legal and Constitutional Framework

- **Disaster Management Act, 2005**: Provides statutory backing for disaster prevention, preparedness, mitigation, and response.
- **Finance Commissions' recommendations**, though advisory, shape fiscal transfers for disaster management.

- **Article 21 (Right to Life) and Directive Principles (Article 39, 48A)** collectively oblige the state to protect lives and ensure environmental safety.

Definitions

- **Disaster Risk Financing (DRF):** Financial strategies and instruments designed to reduce the economic impact of disasters by providing timely funding for response, recovery, and resilience-building.
- **Parametric Insurance:** Insurance that pays out predetermined amounts based on the occurrence of a triggering event (e.g., certain rainfall or wind speed levels) rather than assessed actual losses.

Conclusion and UPSC Relevance

- India's disaster risk financing is evolving from a reactive, loss-compensating approach to a proactive, resilience-building strategy — shifting toward data-driven, pre-arranged financial instruments and community-level preparedness.
- A robust disaster risk financing framework is essential for safeguarding developmental gains, protecting livelihoods, and minimizing fiscal stress post-disaster.

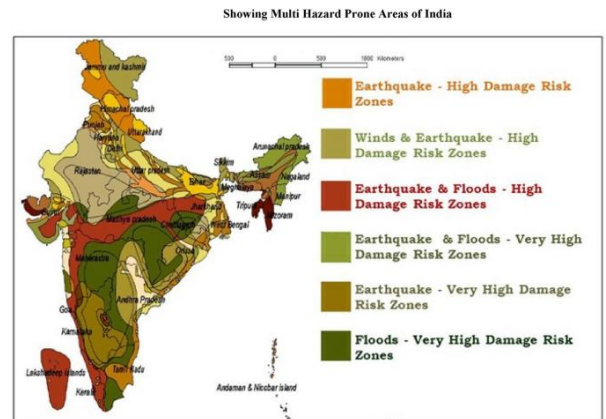
6. Genetic Analysis of Assam Rhino Horns

What is the Issue?

- A **genetic analysis** has been initiated on **2,573 rhino horn samples** retained from the **mass destruction of 2,479 horns in 2021** by the Assam Forest Department.
- The study is being carried out by the **Wildlife Institute of India (WII)** in Dehradun under the **RhoDIS India (Rhino DNA Index System)** to build a **DNA profile database** for better rhino conservation and monitoring.

Key Objectives and Process

- **Sample Verification & Collection:**
 - Samples were taken from horns stored in **Assam treasuries**, primarily Kaziranga, between **July 3 to 8**.
 - Horns implicated in **court cases (50 horns)** or having **unique biological value** were preserved.
- **Repackaging for Genetic Testing:**
 - Samples were repackaged under **independent expert supervision** for secure transfer to the WII lab.
- **Genetic Markers:**
 - Focus on **Short Tandem Repeats (STRs)** — specific DNA sequences used to track genetic variation in populations.





Purpose of Genetic Analysis

- **Establish Individual DNA Profiles:** For tracking poached horns and understanding population genetics.
- **Create a Forensic Database:** Under RhoDIS India, enabling identification of seized horns in poaching or smuggling cases.
- **Monitor Allele Frequency Shifts:** To detect any evolutionary or anthropogenic changes in the rhino population's gene pool.
- **Support Wildlife Law Enforcement:** Aids in evidence-based prosecution under wildlife protection laws.

Legal and Constitutional Context

- **Article 48A:** Directive Principle of State Policy – Protection and improvement of environment and safeguarding wildlife.
- **Wildlife Protection Act, 1972:**
 - **Schedule I** protection for the **Indian Rhinoceros (*Rhinoceros unicornis*)**.
 - Prohibits hunting, trade, and possession of wildlife derivatives.
- **Convention on International Trade in Endangered Species (CITES):**
 - India is a signatory; trade in rhino horns is **internationally banned** under Appendix I.

Importance for Conservation

- The **Indian Rhino Vision 2020**, which aimed to increase the rhino population in Assam to 3,000, relies on scientific and genetic management.
- The **genetic database** will help:
 - Detect **inbreeding or bottlenecks**.
 - Identify **relocation candidates** to avoid genetic duplication.
 - Strengthen **anti-poaching frameworks** and **crime detection** capabilities.
- This also supports **community-based conservation**, as better scientific tools improve trust in protection systems.

Conclusion & UPSC Relevance

Conclusion:

The genetic analysis of Assam's rhino horns is a **critical conservation move** that blends **technology, science, and law enforcement**. It enables more targeted protection efforts, aids judicial processes, and enhances India's global standing in wildlife conservation.

7. Kaziranga Records High Diversity of Grassland Birds in First-Ever Survey

Key Highlights of the Grassland Bird Survey

- **First Grassland Bird Survey Conducted in Kaziranga**
 - Between **March 18 and May 25**, forest officials, scientists, bird experts, and conservationists documented **43 grassland bird species** across **Kaziranga's three wildlife divisions**.

• The survey marked the **first comprehensive documentation** of grassland-dependent bird species in the **Brahmaputra floodplains**.

• Significant Presence of Threatened Species

- Species recorded include:
 - **Critically Endangered:** *Bengal Florican*
 - **Endangered:** *Finn's Weaver*, *Swamp Grass Babbler*
 - **Vulnerable** (6 species): *Black-breasted Parrotbill*, *Marsh Babbler*, *Swamp Francolin*, *Jerdon's Babbler*, *Slender-billed Babbler*, *Bristled Grassbird*
 - Successful **breeding of Finn's Weaver**, a vital indicator of grassland ecosystem health, was a major highlight.

• Ecological Importance of Wet Grasslands

- Kaziranga's **1,174 sq. km landscape** includes **wet grasslands**, forests, and wetlands — a unique combination that supports diverse avian populations.
- The survey enhances **comparative understanding** with **dry grasslands** of Gujarat and Rajasthan, which are better studied.

• Use of Passive Acoustic Monitoring

- Researchers deployed **passive acoustic recorders**, enabling **non-invasive, 24x7 monitoring** in **remote and high-risk areas**.
- This method increased the detection of **shy, cryptic, and rare bird species**, significantly improving data quality.



Constitutional & Legal Provisions

- **Article 48A (DPSP):** Directs the State to protect and improve the environment and safeguard wildlife.
- **Wildlife Protection Act, 1972:** Provides legal protection to species listed under Schedules I–VI, including grassland birds like the Bengal Florican.
- **Environment Protection Act, 1986:** Empowers the government to take measures for environmental protection, including biodiversity monitoring.
- **Ramsar Convention (International):** Wetlands like Kaziranga are also vital for migratory birds under Ramsar obligations.

Key Definitions

- **Grassland Ecosystem:** Dominated by grasses, it supports species uniquely adapted to open habitats, often neglected in conservation focus.
- **Critically Endangered Species:** Faces an extremely high risk of extinction in the immediate future (IUCN Red List).
- **Passive Acoustic Monitoring:** A modern wildlife survey technique using sound-recording equipment to detect and study vocal species non-invasively.

Conclusion

The Kaziranga bird survey is a **landmark in India's biodiversity conservation efforts**, highlighting the

importance of wet grasslands—an often overlooked ecosystem. The presence of multiple **threatened species** and successful breeding of indicators like the *Finn's Weaver* demonstrate the ecological richness of the region and the **urgency of habitat preservation and management**.

8. Contesting the Future of Forest Governance – Challenges to Community Forest Resource Rights (CFRR) under FRA, 2006

Key Summary:

- **Conflict Between Forest Departments and Gram Sabhas:**
The Chhattisgarh Forest Department's attempt to designate itself as the nodal agency for **CFRR implementation** contradicts the **Forest Rights Act (FRA), 2006**, which **empowers gram sabhas** to manage community forest resources. Its directive to use a model plan from the Ministry of Tribal Affairs (MoTA) and prohibit NGO involvement was **legally invalid** and withdrawn after protests.
- **FRA's Transformative Framework:**
Section 3(1)(i) of FRA legally recognizes **Community Forest Resource Rights (CFRR)**, allowing **Gram Sabhas** to **protect, regenerate, and manage forests** traditionally used by them. This counters the **colonial forest governance model**, which prioritized **timber production over ecosystem and community needs**.
- **Flawed Dependence on the National Working Plan Code (NWPC):**
Imposing **NWPC guidelines** on CFR management violates the **spirit and letter of FRA**. The NWPC, rooted in **colonial scientific forestry**, prioritizes **timber yield and bureaucratic control**, while **CFR plans** are based on **local knowledge, adaptive needs, and livelihood priorities**.
- **Resistance from Forest Bureaucracy:**
Despite **over 10,000 gram sabhas** receiving **CFRR titles**, fewer than 1,000 have functional CFR plans due to **non-cooperation by forest departments**, including **denial of funds, delay in title verification, and procedural hurdles**. The departments seek to **retain colonial-era control under the guise of scientific management**.
- **Need for People-Centric Forest Management:**
The **Dharti Aaba Janjatiya Gram Utkarsh Abhiyan**, launched recently, provides a flexible framework for CFR planning. Experts recommend **rejecting rigid NWPC compliance, strengthening gram sabha autonomy, and redefining forest science to support ecological balance and local livelihoods**, especially under climate variability.

Key Terms & Constitutional Provisions

- **Forest Rights Act (FRA), 2006:**
A landmark law that **recognizes the rights of forest-dwelling Scheduled Tribes and Other Traditional Forest Dwellers (OTFDs)**, including **individual rights, community rights, and CFRR**.
- **Gram Sabha:**
Defined under **Panchayats (Extension to Scheduled Areas) Act (PESA), 1996**, it is the **statutory authority for decision-making and governance** in Scheduled Areas, especially relevant in forest and land rights.



Forest Rights Act

Enacted in 2006, the Forest Rights Act came into effect in 2008. Considered a landmark piece of legislation as it attempts to correct historical injustices against forest dwellers in the colonial era and in independent India, it recognises forest dwellers' individual rights over their land and a village's rights to manage and conserve the forest.

Individual Forest Rights: Any person belonging to a scheduled tribe can claim rights to live in and cultivate up to 4 ha if he occupied it and depended on it as of December 13, 2005. A non-tribal, in addition, will have to prove his family's residence in the vicinity of the forest for 75 years prior to December 2005.

Community Forest Rights: The Act recognises the rights of a gram sabha over forest land within the village boundaries or seasonal use of landscape for pastoral communities. This allows the villagers to own and collect, use and dispose of minor forest produce besides timber, including the right to use grazing land and water bodies and the right to protect and regenerate any community resource, among others.

- **National Working Plan Code (NWPC):**
A **technical document guiding forest working plans**; however, it retains focus on **timber-centric objectives**, not suited for **community-driven, livelihood-oriented forest management**.
- **PESA Act, 1996 & Schedule V of Constitution:**
Grants **self-governance to tribal communities** in Scheduled Areas, reinforcing the **authority of gram sabhas** in managing natural resources.

Conclusion

India's forest governance stands at a crossroads. The **Forest Rights Act** was designed to **democratize forest management**, reverse **colonial injustices**, and **empower local communities**. However, **bureaucratic inertia**, **timber-centric paradigms**, and **institutional resistance** continue to **undermine gram sabha autonomy**. A genuine shift towards **community-led ecological stewardship** requires **strengthening grassroots institutions**, **flexible planning**, and **state support**—not imposition. Protecting **CFRR** is not just a legal obligation, but **essential for sustainable and inclusive forest governance in India**.

9. India's Plan to Fully Exploit Indus Basin Rivers' Potential

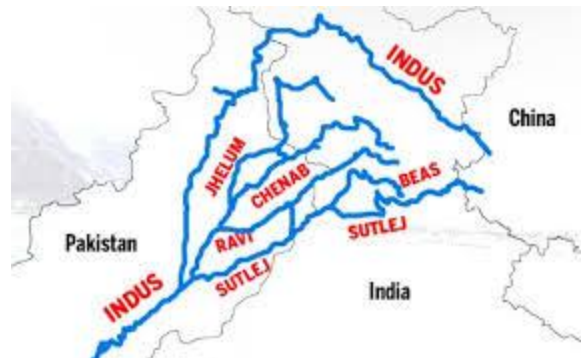
Key Highlights & Summary Points

1. Strategic Water Diversion Plan Post-IWT Suspension

- India is planning to **link Indus and Chenab rivers** in Jammu & Kashmir (J&K) to utilize more water from the Indus system.
- This follows **India's suspension of participation in the Indus Waters Treaty (IWT)** with Pakistan after recent geopolitical tensions (e.g., Pahalgam attack, April 2025).
- The goal is to **divert more water for Indian use** in Delhi, Haryana, Punjab, and Rajasthan.

2. Indus River System and Indus Waters Treaty (1960)

- **Indus Water Treaty (IWT):** Brokered by the World Bank between India and Pakistan.
 - **India's Rights:** Unrestricted use of *Ravi, Beas, and Sutlej* waters.
 - **Pakistan's Rights:** Control over *Indus, Chenab, and Jhelum*.
- Rivers originate in Tibet and flow through India into Pakistan, giving India potential **upstream advantage**.
- Legal provision under **Article 51 (Promotion of international peace and security)** might be impacted due to withdrawal from IWT.



3. Proposed River Linking & Infrastructure Plan

- **Phase 1:** Link Indus to Chenab via tunnels and canals.
- **Phase 2:** Connect Chenab to Ravi-Beas-Sutlej system.
- **Phase 3:** Link Ravi-Beas-Sutlej to **Sutlej-Yamuna Link (SYL)** canal to supply water to the Yamuna and Delhi.

- SYL canal (214 km) is a critical but **unfinished project** since the 1960s due to interstate disputes.

4. Additional Key Projects

- Fast-tracking the **Ujh Multipurpose Project** on Ujh River (tributary of Ravi) in J&K's Kathua district.
- The government is conducting a **pre-feasibility study** for a 113-km canal to divert **18–24 BCM water** from J&K to the northwestern plains.

5. Institutional and Technical Backing

- Public sector units like **NHPC Ltd** and **SJVN Ltd** to develop associated dams and hydropower infrastructure.
- **Regulatory challenges:** Requires environmental, forest, and wildlife clearances, land acquisition, and displacement management.
- Possible requirement of a **Narmada Main Canal-type** structure (500+ km) for successful linkage.

Constitutional & Legal Provisions Involved

- **Article 262** – Parliament's power to adjudicate water disputes.
- **Inter-State River Water Disputes Act, 1956** – To handle inter-state conflicts over river water.
- **Article 51** – Promotes respect for international law and treaty obligations.
- **Environmental and Forest Clearances** – Required under **Environment Protection Act, 1986** and **Forest Conservation Act, 1980**.

Key Terms for UPSC

- **Indus Waters Treaty (1960):** A transboundary water-sharing treaty between India and Pakistan brokered by the World Bank.
- **River Interlinking:** Connecting rivers through canals to transfer water from surplus to deficit areas.
- **Ujh Project:** Multipurpose project for irrigation, drinking water, and hydroelectricity on the Ujh River.
- **SYL Canal:** Sutlej-Yamuna Link aimed to divert excess Sutlej water to the Yamuna basin.

Conclusion

India's plan to fully utilize the Indus basin represents a **strategic reorientation of water resources management**—aiming to boost water security in Delhi and irrigation in agricultural states like Punjab, Haryana, and Rajasthan. The project is also a **diplomatic countermeasure** to rising tensions with Pakistan and signals a shift towards **domestic prioritization over treaty obligations**.

10. Discovery of a New Lichen Species in the Western Ghats

Key Highlights:

1. New Species Discovery: *Allographa effusosoredica*

- Discovered in the **Western Ghats**, a UNESCO World Heritage Site and one of India's eight hottest biodiversity hotspots.

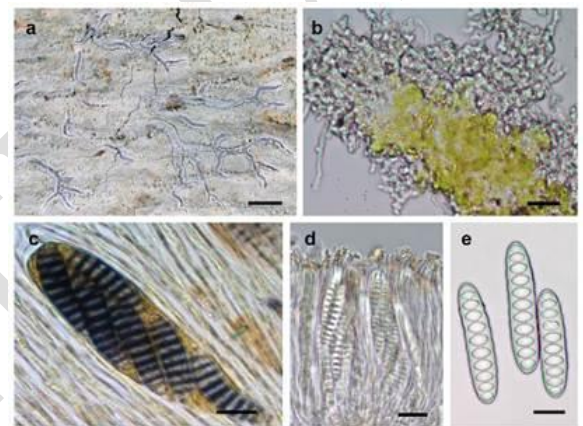
- Belongs to **Graphidaceae family**; the species is **crustose in form** with **effuse soredia** and rare chemical traits like **norstictic acid**.
- First species of **Allographa** in India to be **validated by molecular data**.

2. What Are Lichens? – A Symbiotic Organism

- **Definition:** Lichens are composite organisms consisting of a **fungus (mycobiont)** and a **photosynthetic partner (photobiont)**—usually a **green alga or cyanobacterium**.
- They represent **mutualism**, where both partners benefit—fungus gets food; photobiont gets shelter and water.
- Serve as **bioindicators**, indicators of air quality and ecosystem health, and help in **soil formation**.

3. Scientific Significance and Tools Used

- The species was identified using **polyphasic taxonomy**—integrating:
 - **Morphological** (physical features),
 - **Chemical** (presence of norstictic acid),
 - **Molecular techniques** (DNA sequencing: mtSSU, LSU, RPB2, ITS).
- **Trentepohlia** identified as algal symbiont, revealing diversity of photobionts in tropical regions.



4. Conservation & Ecological Relevance

- Lichens are **sensitive to pollution and habitat destruction**, thus key to monitoring ecosystem changes.
- Western Ghats face **anthropogenic pressure**—highlighting the need to conserve lesser-known organisms like lichens.
- Only **22 Allographa species** known from Western Ghats till date—this being the 23rd—indicating under-explored fungal biodiversity.

5. Institutional & Policy Context

- Research led by **MACS-Agharkar Research Institute, Pune** (autonomous institute under **DST**).
- Funded by **Anusandhan National Research Foundation (ANRF)** (formerly **SERB**), under a project focused on **lichen symbiosis and taxonomy**.
- Aligns with India's **National Biodiversity Action Plan (NBAP)** and global biodiversity commitments under the **CBD (Convention on Biological Diversity)**.

Constitutional & Legal Provisions:

- **Article 48A:** Directive to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g):** Fundamental Duty of every citizen to protect and improve the natural environment.

- **Biological Diversity Act, 2002:** Legal framework for conservation of biodiversity, sustainable use, and equitable sharing of benefits.

Conclusion:

The discovery of *Allographa effusosoredica* is a milestone in India's lichen taxonomy and biodiversity documentation. It highlights the power of integrative research and the importance of preserving ecosystem integrity in biodiversity hotspots like the Western Ghats. Moreover, it draws attention to the ancient, invisible world of symbiotic life and the need for deeper molecular studies to understand ecological networks.

11. Indian Cities Need Urgent Climate Action – World Bank Report

Key Highlights:

- **Urban Population Surge**
India's urban population is expected to **nearly double from 480 million in 2020 to 951 million by 2050**, creating massive pressure on urban infrastructure, services, and climate resilience capacity.
- **Call for Climate-Smart Urban Planning**
The **World Bank report titled “Towards Resilient and Prosperous Cities in India”** emphasizes the need for **forward-looking, climate-resilient urban development**, stating that over half of India's future urban infrastructure is yet to be built.
- **High Costs of Inaction**
Without timely action, **stormwater flooding and climate-related urban damages** may cause losses up to **5% of India's GDP under a high-emission scenario**, significantly impacting economic growth and urban livelihoods.
- **Need for Resilience in Urban Growth**
Embedding **climate resilience** into future urban planning is cheaper and more effective than retrofitting later. The report warns that continued growth without resilience will lead to **compounded economic and social losses**.
- **Institutional Support and Recommendations**
The report is backed by the **World Bank Group** and the **Global Facility for Disaster Reduction and Recovery (GFDRR)**. It urges Indian cities to utilize this transitional period for **resilient investments**, supported by multi-stakeholder programs like the **City Resilience Program**.



Key Concepts and Definitions:

- **Climate-Resilient Urban Development:** A planning approach that integrates climate risk management into the design, construction, and operation of urban systems to minimize vulnerability and enhance sustainability.
- **Pluvial Flooding:** Urban flooding caused by intense rainfall overwhelming drainage systems, independent of river or coastal flooding.
- **Retrofitting:** Modifying existing structures to improve their resilience to climate or disaster impacts, often more costly than incorporating resilience from the start.

Constitutional & Legal Provisions:

- **Article 243W** of the Constitution empowers municipalities to plan for economic development and social justice, including **urban planning and regulation of land use**.

- The **Environment (Protection) Act, 1986** provides a legal framework for developing climate-adaptive policies.
- The **Disaster Management Act, 2005** mandates integration of disaster risk reduction in urban development planning.
- India's commitments under the **Nationally Determined Contributions (NDCs)** and **National Action Plan on Climate Change (NAPCC)** also call for climate-resilient infrastructure.

Conclusion:

The World Bank's report serves as a wake-up call for India to prioritize **climate-resilient urban development**. With massive infrastructure expansion ahead, India has a rare opportunity to embed resilience in its cities, enhance economic growth, and protect vulnerable populations from escalating climate risks.

12. Coral Cover Decline in Lakshadweep: 24-Year Survey Highlights Climate Impact

Key Points for UPSC Civil Services Exam:

1. 50% Decline in Coral Cover in Lakshadweep:

- A **24-year-long coral reef monitoring programme** (1998–2022) in the Lakshadweep archipelago revealed a **50% reduction in coral cover**, from **37.24% in 1998 to 19.6%**.
- This decline is attributed to **repeated marine heatwaves**, primarily driven by **climate change** and **ENSO (El Niño Southern Oscillation)** events in 1998, 2010, and 2016.

2. Role of Local Environmental Conditions:

- Despite the broad trend, the study found that **local factors** like **wave exposure** and **depth of reef locations** influence coral resilience and recovery.
- The research highlights '**local environmental filtering**' — a concept that suggests local conditions can determine the degree of damage and speed of coral recovery.

3. Bleaching and Recovery Dynamics:

- Coral **mortality has decreased** in successive events, but **recovery rates have also slowed**, indicating cumulative stress on coral ecosystems.
- The study notes that **at least six consecutive bleaching-free years** are necessary for meaningful coral recovery.

4. Scientific Methodology and Predictive Framework:

- The findings, published in *Diversity and Distributions* journal, propose a **predictive framework** to identify **vulnerable vs. resilient reefs**.
- Researchers from the **Nature Conservation Foundation (NCF)** monitored coral reefs at **Agatti, Kadmat, and Kavaratti atolls**.



5. Broader Environmental Implications:

- Coral reefs are critical to **marine biodiversity**, **fisheries**, and **coastal protection**. Their decline affects **food security**, **livelihoods**, and **climate regulation** in coastal areas.
- Coral bleaching is a **visible marker of oceanic ecosystem stress** due to **rising sea surface temperatures** linked with **global warming**.

6. Relevant Legal and Constitutional Provisions:

- **Article 48A**: Directs the State to protect and improve the environment.
- **Article 51A(g)**: Fundamental duty of every citizen to protect natural environment.
- **Environment (Protection) Act, 1986**: Enables central government to take measures to protect and improve environmental quality.
- India is a party to the **Convention on Biological Diversity (CBD)** and the **UNFCCC**, both of which obligate coral reef protection.

Definitions:

- **Coral Bleaching**: A stress response where corals expel the symbiotic algae (zooxanthellae) due to high water temperatures, causing the coral to turn white and potentially die.
- **Marine Heatwaves**: Periods of abnormally high sea surface temperatures that can lead to mass coral bleaching.
- **ENSO (El Niño Southern Oscillation)**: A climate pattern involving temperature fluctuations in the Pacific Ocean, with global climatic effects including marine stress.

Conclusion and UPSC Relevance:

This study is a crucial warning about the **long-term impact of climate change on fragile marine ecosystems**, such as coral reefs. It emphasizes the need for **climate-resilient conservation strategies**, **restoration of degraded reefs**, and **localized environmental monitoring**.

13. Preparing India Against Glacial Lake Outburst Floods (GLOFs)

- **Recent GLOF Events and Impact in Nepal**
Nepal has witnessed multiple catastrophic GLOF events recently, including the July 2025 flood along the Lende River caused by a burst supra-glacial lake in Tibet. These events damaged infrastructure, including hydro-power plants and critical bridges, highlighting the trans-boundary nature of GLOF risks and the urgent need for cross-border early warning systems.
- **Types of Glacial Lakes in Indian Himalayan Region (IHR)**
The IHR has approximately 28,000 glacial lakes, mainly of two types: (1) Supra-glacial lakes formed on glacier surfaces from meltwater, prone to summer melting, and (2) Moraine-dammed lakes formed behind natural debris dams at glacier snouts, susceptible to sudden dam failure.
- **Nature and Causes of GLOFs**
About two-thirds of GLOF events are triggered by ice avalanches or landslides, while the rest occur due to meltwater pressure on weak moraine dams or earthquakes. Rising global temperatures and glacial melt, combined with the high altitude and remote location of lakes, increase GLOF risks in the Himalayas.

- **India's Vulnerability and Monitoring Challenges**

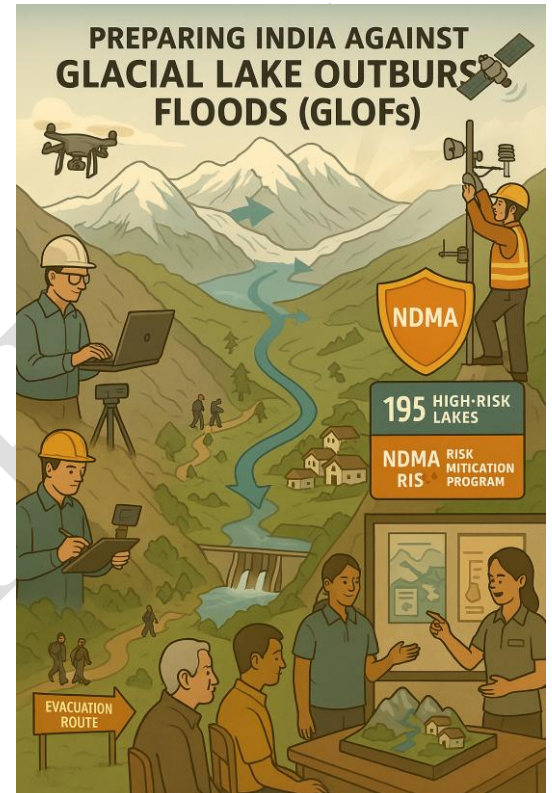
India hosts around 7,500 glacial lakes above 4,500 meters, mostly inaccessible for year-round monitoring. Lack of weather stations and limited real-time data collection impede early warning. Remote sensing and surface area monitoring are post-facto measures and insufficient for risk prediction.

- **NDMA's Proactive Mitigation Measures**

The National Disaster Management Authority (NDMA) has shifted focus from disaster response to risk reduction through the Committee on Disaster Risk Reduction (CoDRR). NDMA's \$20 million national programme targets 195 high-risk glacial lakes for hazard assessment, Automated Weather and Water Stations (AWWS) installation, early warning systems, risk mitigation (water drawdown, retention structures), and community engagement.

- **Use of Advanced Technology and Community Engagement**

Innovative Indian scientific methods such as SAR interferometry (detecting micro-changes in slopes via satellite imagery) and Electrical Resistivity Tomography (to detect ice cores in moraine dams) are being deployed to improve risk assessment. Local community involvement is critical to ensure successful monitoring and mitigation in the culturally sensitive Himalayan region.



Key Definitions

- *Glacial Lake Outburst Flood (GLOF)*: A sudden release of water from a glacial lake due to dam failure.
- *Supra-glacial lake*: Meltwater lake formed on the surface of glaciers.
- *Moraine-dammed lake*: Lake formed behind a natural dam of glacial debris or ice.
- *SAR Interferometry*: Satellite-based remote sensing technique to detect tiny ground movements.

Conclusion and UPSC Relevance

With climate change accelerating glacier melt, the threat of GLOFs poses serious challenges for India's Himalayan region, impacting lives, infrastructure, and hydro-power projects. NDMA's proactive, technology-driven risk reduction strategy marks a paradigm shift essential for disaster preparedness and sustainable development. This topic is crucial for UPSC preparation under **Environment and Ecology (GS Paper 3)**, **Disaster Management**, and **Geography**, especially in understanding climate change impacts and trans-boundary disaster risk cooperation.

INTERNATIONAL RELATIONS

1. Iran's Nuclear Program: Delay, Diplomacy, and Deterrence

1. Strategic Delay in Nuclear Capability

- The U.S. and Israeli airstrikes have **delayed but not eliminated** Iran's nuclear capability.
- While operational setbacks may last **only a few months**, even a short delay is strategically significant as it increases the window for detection and international response, potentially **dissuading Iran from initiating a nuclear breakout**.

2. Political Calculations Behind Iran's Nuclear Decisions

- Iran's decision to develop a nuclear weapon is influenced not just by technical capacity but also by **political risk and deterrence logic**.
- Any breakout would involve betting that the country can complete its program **before facing further military or diplomatic retaliation** from the U.S. or Israel.



3. Nuclear Deal and Current Status

- The **2015 Joint Comprehensive Plan of Action (JCPOA)** aimed to keep Iran a **year away** from weapon capability, but the U.S. **withdrew in 2018**, leading to Iran **scaling up enrichment**.
- By 2025, Iran was reportedly **producing enough fissile material for a bomb every month**, though actual weaponization (miniaturization + missile integration) still requires **1–3 years**.

4. IAEA Concerns and Covert Capabilities

- The **International Atomic Energy Agency (IAEA)** has lost access to several Iranian sites since June 2025 strikes, raising alarm about **covert facilities** and the fate of **enriched uranium and centrifuges**.
- Iran may still possess hidden **equipment and expertise** to restart its nuclear program rapidly, although physical destruction of key sites (Fordow, Natanz, Isfahan) complicates that.

5. Policy Dilemmas and Global Security Implications

- Iran now faces **three paths**:
 1. Rapid covert weaponization,
 2. Return to diplomacy (cease uranium enrichment),
 3. Hybrid strategy (talks + covert advancement).
- Experts warn that airstrikes might **harden Iran's resolve** to develop nuclear weapons as a **deterrence strategy**.
- The **U.S. Intelligence Community** maintains that **Ayatollah Khamenei** has not reauthorized weaponization since suspending it in 2003, but his future decisions will be decisive.

Key Definitions and Constitutional Relevance

- **Nuclear Breakout Time**: The time required to produce enough weapons-grade uranium for one nuclear bomb.

- **Fissile Material:** Nuclear material capable of sustaining a chain reaction (e.g., Uranium-235, Plutonium-239).
- **IAEA:** An international organization under the **UN Charter**, responsible for promoting peaceful use of nuclear energy and preventing nuclear proliferation.
- **India's Position:** As a non-signatory of the **NPT (Non-Proliferation Treaty)** but a responsible nuclear power, India emphasizes global non-proliferation while safeguarding national interests.
- **UNSC Resolutions (e.g., 2231):** Govern Iran's nuclear commitments post-JCPOA.

Conclusion

The Iranian nuclear issue is **not merely a technical problem**, but a **strategic and political challenge** with implications for **global security and regional stability**. While the recent military strikes have **delayed Iran's progress**, they may have inadvertently pushed Tehran toward a more **determined nuclear pursuit**.

2. Quad Critical Minerals Initiative: Strategic Response to China's Dominance

1. Quad Launches Critical Minerals Initiative to Counter China

- The **Quad countries** — India, US, Japan, and Australia — have launched the **Quad Critical Minerals Initiative** to ensure **secure, diversified, and resilient supply chains** for critical minerals.
- This move comes amid **China's increasing weaponization of its dominance in rare earth elements and critical minerals**, which are vital for defense, clean energy, telecom, EVs, and electronics.

2. China's Dominance and Strategic Use of Critical Minerals

- China controls a **major share of global rare earth reserves and processing capacity**.
- It has used its control over supply chains as a **geo-economic tool** — imposing export restrictions, causing **price manipulations, supply disruptions**, and threatening **global industrial and national security**.
- China's monopoly includes midstream processes like **refining and derivative production**, which most nations lack.



3. India's Bilateral and Multilateral Push for Mineral Security

- India has already secured concessions in **Argentina** via its PSU **Khanij Bidesh India Ltd (KABIL)** for **lithium and rare earths**.
- PM Modi's visit to **Ghana, Trinidad & Tobago, Argentina, Brazil, and Namibia** focuses on expanding access to **critical mineral reserves**.
- India, Japan, and Australia are also holding separate **bilateral trade talks with the US** to deepen cooperation in the mineral value chain.

4. Quad Strategy: Division of Roles and Industrial Synergy

- Under the emerging Quad framework:
 - **Australia** will act as the **raw material supplier** (e.g., lithium, cobalt, rare earths).
 - **US and Japan** will provide **technology, refining, and processing know-how**.

- **India** is expected to serve as a **manufacturing and demand hub**.
- The initiative seeks to **reduce global dependence on China**, especially for clean energy transitions and industrial growth.

5. Constitutional and Legal Context in India

- **Article 39(b)** (DPSP): Calls for distribution of community resources for the common good — supports diversification of critical mineral access.
- **National Mineral Policy, 2019**: Emphasizes securing access to strategic minerals and boosting exploration through international cooperation.
- **Mines and Minerals (Development and Regulation) Act, 1957 (amended)**: Empowers India to form **joint ventures abroad** for mineral acquisition.

Key Definitions for UPSC

- **Critical Minerals**: Minerals essential for the economy and national security but with vulnerable supply chains — e.g., lithium, cobalt, rare earths.
- **Rare Earth Elements (REEs)**: A group of 17 metals used in electronics, defense, renewable energy technologies, and batteries.
- **Goeconomics**: Use of economic tools for geopolitical influence — e.g., trade barriers, investment restrictions, or commodity control.

Conclusion

The Quad's Critical Minerals Initiative is a **strategic signal to China**, reflecting the growing geopolitical importance of **resource security and supply chain resilience**. For India, the partnership offers a chance to secure mineral inputs crucial for **energy transition, industrial expansion, and technological autonomy**. Implementation success will depend on **coordinated action, investment in domestic capacity, and robust international partnerships**, making this initiative vital for India's national security and economic future.

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4. Iran Suspends Cooperation with IAEA: Implications for Global Nuclear Governance

1. Iran Formally Halts Cooperation with IAEA

- On **26 June 2025**, Iran officially **suspended its cooperation** with the **International Atomic Energy Agency (IAEA)** following **Israeli and US military strikes** on its nuclear facilities.
- The decision was made after **Iran's Parliament** passed legislation by a large majority, aiming to safeguard the country's **sovereign nuclear rights**.

2. Trigger: Iran-Israel Conflict and Nuclear Escalation

- The move came in the aftermath of a **12-day conflict between Iran and Israel (13–25 June)**.
- The **conflict disrupted ongoing nuclear negotiations** and increased distrust between Iran and Western nations regarding **uranium enrichment and weaponization concerns**.

3. Iran's Justification and Treaty References

- The Iranian law refers to **Article IV of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)**, which affirms a country's **right to peaceful use of nuclear energy**.
- Iran insists its **uranium enrichment** is for **civilian energy purposes** and denies pursuing nuclear weapons, a claim contested by **Israel and some Western powers**.

4. Implications for Global Non-Proliferation Norms

- Iran's suspension of IAEA cooperation **undermines the global nuclear inspection regime** and raises concerns over potential **nuclear weapon development**.
- The IAEA's ability to monitor nuclear sites is **central to transparency** under international nuclear law, especially under the **NPT Safeguards Agreement**.

5. India's Position and Strategic Implications

- India, as a **responsible nuclear power and NPT non-signatory**, supports **non-proliferation without discrimination** and calls for peaceful resolution of disputes.
- The Iran issue affects regional stability in **West Asia**, impacting **India's energy security, diaspora safety, and Chabahar port strategic interests**.

Key Definitions for UPSC

- IAEA (International Atomic Energy Agency):** A UN body that promotes peaceful use of nuclear energy and ensures nuclear non-proliferation through inspections.
- NPT (Non-Proliferation Treaty):** A multilateral treaty aimed at preventing the spread of nuclear weapons while promoting peaceful nuclear energy use.
- Uranium Enrichment:** A process of increasing the percentage of uranium-235 isotope to be used in nuclear reactors or potentially in weapons.



Constitutional & Legal Angle (India Context)

- India is **not a signatory to the NPT** but adheres to **civilian nuclear safeguards under IAEA** post the **Indo-US Civil Nuclear Deal (2008)**.
- India's nuclear doctrine emphasizes **"No First Use"** and **credible minimum deterrence**.

Conclusion

Iran's withdrawal from cooperation with the IAEA marks a **serious setback to global non-proliferation efforts**. It escalates geopolitical tensions in **West Asia** and complicates diplomatic efforts to revive nuclear agreements. For India, this crisis underscores the importance of **strategic autonomy, regional engagement, and energy diplomacy** in maintaining regional stability and safeguarding national interests.

5. Israel and the 'Persian Puzzle': Geopolitical Implications of the 2025 Israel-Iran Conflict

1. Background: Israel's Strategic Objectives and the Red Wedding Analogy

- **Israel's June 2025 air strikes on Iran** targeted nuclear facilities, top scientists, and military leadership in a swift, aggressive strategy likened to the "Red Wedding" from *Game of Thrones*—a reference to the attempt at complete decapitation of adversary leadership.
- The attack was modeled on Israel's past success during the **1967 Six-Day War**, when a surprise airstrike crippled Arab air forces, but **this time, the results were not strategic victories**.

2. Tactical vs Strategic Outcomes

- **Operational success:** Israel did damage Iran's Natanz and Isfahan nuclear sites, killed several key scientists and commanders.
- **Strategic failure:** Iran's **nuclear infrastructure survived** largely intact; ballistic missile capabilities were not crippled; Iran retaliated with drone and missile attacks exposing **vulnerabilities in Israel's U.S.-backed defence system**.

3. Role of the U.S. and Global Reactions

- **U.S. President Donald Trump** joined the conflict with strikes on three Iranian nuclear sites, but **avoided a prolonged war**, declaring victory and forcing a ceasefire.
- This highlights **Israel's growing dependency on U.S. military support**, contrasting with its independent victory in 1967.
- Intelligence reports suggest Iran had **pre-emptively dispersed enriched uranium**, allowing it to quickly resume nuclear activities.

4. Iran's Resilience and Strategic Position

- Despite sanctions and internal challenges, **Iran maintains strategic depth** through:
 - A network of **non-state actors** (e.g., Hezbollah, militias in Iraq, Syria, Yemen).
 - A **ballistic missile programme** and continued **nuclear ambition**.
- Iran views this conflict as another "**Mosaddegh moment**", recalling the 1953 CIA coup, reinforcing **mistrust of U.S. diplomacy**.



5. Legal, Strategic, and International Frameworks

- **International Atomic Energy Agency (IAEA):** Plays a central role in monitoring Iran's nuclear activities.
- **Nuclear Non-Proliferation Treaty (NPT):** Iran is a signatory; Israel is not.



- **UN Charter Articles 2(4) and 51:** Prohibit aggression; self-defense permitted—raising questions on legality of pre-emptive strikes by Israel.
- **JCPOA (Iran Nuclear Deal):** U.S. withdrawal in 2018 under Trump undermined diplomatic engagement; Iran became more resolute about nuclear deterrence.

Key Definitions for UPSC

- **Deterrence:** The military strategy where potential adversaries are discouraged from taking hostile actions due to the threat of retaliation.
- **Ballistic Missiles:** Long-range, guided weapons capable of delivering warheads across continents.
- **Pre-emptive Strike:** A military attack launched to neutralize a perceived imminent threat.
- **Strategic Depth:** The extent to which a state can absorb attacks and continue effective operations.

Conclusion

Despite executing a well-planned offensive, **Israel failed to achieve its strategic aim** of regime change or destruction of Iran's nuclear program. Iran's **resilience, regional alliances, and ballistic capabilities** remain intact. The conflict has **intensified the arms race** and deepened distrust, especially regarding nuclear diplomacy. The so-called "Persian puzzle" remains unsolved, and **West Asia's strategic equilibrium is more fragile than ever.**

UPSC Relevance

- **GS Paper II:** *India and its neighborhood, Effect of policies and politics of developed and developing countries, International Institutions (IAEA, UN), Nuclear Diplomacy*
- **GS Paper III:** *Security challenges and their management in border areas, Role of external state and non-state actors*
- **Prelims:** JCPOA, NPT, Six-Day War (1967), Iran-Israel conflict, IAEA
- **Essay/Ethics:** *Moral Dilemmas in Use of Force, Preventive vs Reactive Diplomacy, Sovereignty vs Global Security*

6. India–Japan Strategic Partnership: Dholera SIR Visit and Semiconductor Collaboration

1. Japan's High-Level Visit to Dholera SIR Signals Strategic Economic Partnership

- Japanese Ambassador **Mr. Keiichi Ono** led a delegation of major Japanese companies to **Dholera Special Investment Region (SIR)** in Gujarat.
- This visit, a milestone in India–Japan bilateral ties, showcased Dholera SIR as a key node of **industrial, smart city, and semiconductor** development under the **Delhi-Mumbai Industrial Corridor (DMIC)**.

2. Semiconductor Investment and the Semicon India Programme

- Delegation reviewed the **Tata Electronics–PSMC (Taiwan)** semiconductor fabrication unit, part of India's **₹1.54 lakh crore investment** push under the **Semicon India Programme**.
- Semiconductors are vital to **Atmanirbhar Bharat (Self-reliant India)**, with Dholera emerging as a **fab-ready** region for electronics and chip manufacturing.

3. Smart City Infrastructure and Plug-and-Play Industrial Planning

- Dholera SIR offers **real-time governance** through the Integrated Command & Control Centre (ICCC), advanced utility infrastructure, and **'plug-and-play' industrial zones**.

- Planned social infrastructure includes hospitals, schools, fire stations, hospitality hubs, and commercial complexes — aiming to create a **livable and investor-friendly urban ecosystem**.

4. Multimodal Connectivity & Strategic Location

- Dholera is connected via the **Ahmedabad–Dholera Expressway** and an upcoming **Greenfield International Airport**.
- Modeled after Japan's **Tokyo–Osaka corridor**, Dholera is a flagship project under the DMIC, benefiting from Japanese expertise and financial collaboration through **JBIC** and **JETRO**.

5. Vision 2047 & Global Investment Hub

- The visit aligns with **India@2047 vision** to become a **developed, innovation-driven economy**.
- Japan reaffirmed its commitment to India's economic transformation, highlighting Dholera's potential as a **global hub for advanced manufacturing**, sustainability, and smart governance.

Key Definitions for UPSC:

- Dholera SIR (Special Investment Region)**: A greenfield industrial city developed under the DMIC to attract global investment and advanced manufacturing.
- Semicon India Programme**: A Government of India initiative to establish a sustainable semiconductor and display manufacturing ecosystem.
- Plug-and-Play Infrastructure**: Ready-to-use industrial infrastructure where investors can immediately set up operations without waiting for basic utilities.

Constitutional & Legal Provisions:

- Article 301–307**: Ensures freedom of trade, commerce, and intercourse throughout India.
- Make in India & National Policy on Electronics (NPE) 2019**: Facilitate investment in electronics manufacturing, including semiconductors.
- Special Economic Zones Act, 2005**: Though Dholera is not an SEZ yet, similar investment-friendly provisions are being followed.



Conclusion & UPSC Relevance:

The Japanese delegation's visit to Dholera SIR reinforces India's push for **technological self-reliance**, **foreign investment**, and **next-gen infrastructure development**. It symbolizes the growing India–Japan synergy in strategic sectors like **semiconductors**, **smart cities**, and **advanced manufacturing**. Dholera SIR exemplifies integrated planning, international cooperation, and futuristic vision aligned with **India@2047**.

UPSC Relevance:

- GS Paper II**: India–Japan bilateral relations, international cooperation.
- GS Paper III**: Infrastructure, economy, investment, manufacturing, and science & tech.
- Prelims**: Semicon India, DMIC, Dholera SIR, plug-and-play industrial model.

7. Illegal Immigration via 'Donkey Route' and ED Crackdown

What is the 'Donkey Route' (Dunki)?

- Definition**: The term '*Donkey Route*' (also known as '*Dunki*') refers to **illegal human trafficking networks** that smuggle people across international borders using **land-based, unofficial, and dangerous routes** (often through forests, deserts, or rivers).

- Individuals using this route often **travel through multiple countries** to reach destinations like the **United States**, facing **physical risk, exploitation, and financial fraud**.

Key Developments in the Case

- The **Enforcement Directorate (ED)** has launched fresh **search operations in Punjab and Haryana**, following money laundering leads linked to **illegal immigration networks**.
- Raids were conducted in **Mansa (Punjab), Kurukshetra, and Karnal (Haryana)** on the basis of findings from earlier searches in **Amritsar, Patiala, Sangrur, Moga, and Ambala**.
- The ED's probe is based on **17 FIRs** filed against **travel agents, visa agents, and middlemen** who charged **₹45–50 lakh per person** promising legal travel, but routed victims through illegal means.
- Deportees from the U.S. revealed **organized extortion, trauma, and threats** from traffickers once abroad.

Money Laundering and Trafficking Nexus

- The **Prevention of Money Laundering Act (PMLA), 2002** is being invoked to investigate the **financial trail** behind these crimes.
- Accused agents and traffickers laundered money received through illegal immigration services and created **fake travel documents**, evading both immigration and financial laws.
- ED uncovered that **donkers (trafficking operatives)** had **international networks**, collaborating with second-level agents abroad to arrange routes across multiple borders.

Legal and Constitutional Provisions

- **Article 21**: Protects right to life and personal liberty; includes right against human trafficking and exploitation.
- **Article 23**: Explicitly prohibits **human trafficking and forced labour**.
- Relevant Laws:
 - **Immoral Traffic (Prevention) Act, 1956**
 - **Foreigners Act, 1946**
 - **Passport Act, 1967**
 - **PMLA, 2002** – invoked by ED to trace proceeds of crime.
 - **Indian Penal Code (IPC) Sections 370 & 370A** – trafficking and exploitation.



National and International Implications

- The case has diplomatic and security ramifications due to **mass deportation of Indian immigrants from the U.S.**, including one incident involving **military aircraft repatriation**.
- The **National Investigation Agency (NIA)** has also taken action — including the arrest of traffickers linked to **infamous routes and organized crime syndicates**.
- Raises concerns about **India's global image**, and the **vulnerability of aspirants from rural regions** who fall prey to such rackets.

Conclusion & UPSC Relevance

Conclusion:

The ED's intensified crackdown on the *donkey route* human trafficking network reveals a **deep-rooted nexus between illegal immigration, organized crime, and financial fraud**. While legal provisions exist, there is a growing need for **inter-agency coordination, international cooperation, and awareness generation** to protect vulnerable populations from exploitation.

8. France to Recognize Palestine as a State

1. France to Officially Recognize Palestine in September 2025:

French President **Emmanuel Macron** announced that **France will recognize the State of Palestine** during the **UN General Assembly session in September 2025**, marking a significant diplomatic step in the Israel-Palestine conflict.

2. Context: Ongoing War and Humanitarian Crisis in Gaza:

The move comes amid global outrage over the **humanitarian crisis and starvation in Gaza**, with Macron stressing that **ending the war and protecting civilians** is the most urgent priority. Recognition is seen as part of broader efforts to pressure Israel and advocate peace.

3. Israel's Denouncement and Diplomatic Fallout:

Israel has **strongly condemned France's decision**, calling it one-sided. The move is expected to further strain **Israel-Europe relations**, especially as several EU nations begin re-evaluating their stance on the Palestine issue amid growing civilian casualties.

4. Strategic and Legal Implications of Recognition:

Recognition of a state refers to the **formal acceptance of a political entity's sovereignty and legitimacy** under **international law**. France's move could bolster Palestine's claim to **statehood under the 1933 Montevideo Convention**, which defines the legal criteria for state recognition.

5. Broader International Trends and European Positioning:

France joins a list of over **140 UN member states** that have recognized Palestine. The move could trigger similar recognition from **other Western European countries**, altering the diplomatic landscape in the Middle East and potentially pushing for a **two-state solution**.

6. UN and International Law Framework:

Under the **UN Charter and resolutions (especially UNGA Res. 181 & UNSC Res. 242)**, the recognition of Palestine has been debated as a path to lasting peace. France's support gives momentum to multilateralism and **diplomatic conflict resolution**.

Additional Key Concepts & Definitions:

- **State Recognition:** A sovereign act whereby a state acknowledges the existence of another entity as a state in the international system.
- **Two-State Solution:** A proposed solution to the Israeli-Palestinian conflict advocating an independent State of Palestine alongside Israel.
- **UN General Assembly:** A principal organ of the UN where global diplomatic recognitions and statements are often formalized.



Conclusion:

France's decision to recognize Palestine signals a pivotal shift in global diplomacy, especially among Western nations. It reflects increasing urgency to address humanitarian issues in Gaza and reaffirms support for a peaceful, negotiated settlement based on statehood and international law.

UPSC Relevance:

- **GS Paper II:** International Relations – India and Global Affairs, Israel-Palestine issue, UN mechanisms
- **GS Paper I (World History):** Post-WWII Middle East conflict

- **Essay & Interview:** Topics on global diplomacy, recognition of states, humanitarian interventions, and peace-building efforts

SOCIAL

1. National Sports Policy 2025

1. A New Vision for India's Sports Ecosystem

- The **Union Cabinet approved the National Sports Policy (NSP) 2025**, replacing the **earlier NSP 2001**, aiming to establish India as a **global sporting powerhouse** and prepare for the **2036 Olympic Games**.
- It is based on a **whole-of-government approach** and the **principles of inclusivity, excellence, and innovation**, developed after consultation with NITI Aayog, States, National Sports Federations (NSFs), and stakeholders.

2. Key Pillars of NSP 2025

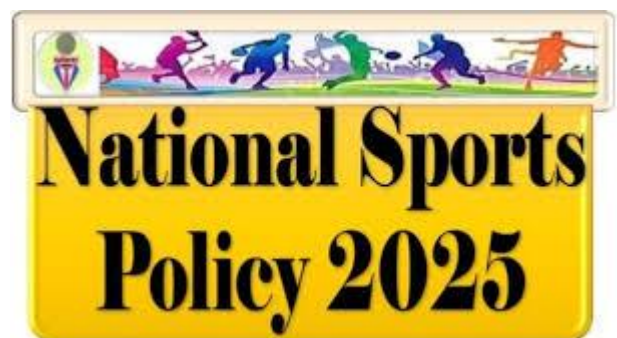
- **Excellence on the Global Stage:** Grassroots talent identification, advanced training, development of coaches, leagues, and adoption of sports science and technology.
- **Economic Development through Sports:** Promotion of **sports tourism, sports manufacturing, CSR, and PPP** models for funding and infrastructure.
- **Social Development:** Inclusion of **women, tribals, EWS, PwDs**, and promotion of **traditional games**.
- **People's Movement:** Campaigns to build a **fitness culture**, improve access to facilities, and create **school/college fitness indices**.
- **Integration with Education:** Aligned with **National Education Policy (NEP) 2020**, promotes sports in curricula and capacity building of educators.

3. Strategic Implementation Framework

- Establishment of a **National Monitoring Framework** with **Key Performance Indicators (KPIs)** and time-bound targets.
- Promotion of **innovation and technology** (AI, data analytics) in coaching and athlete monitoring.
- Acts as a **model policy for States and UTs**, encouraging them to adapt similar frameworks.
- Integration of sports development across **ministries and departments**.

4. Legal and Institutional Framework

- The NSP 2025 advocates for a **robust regulatory structure** for **sports governance**, ensuring accountability and transparency in NSFs.
- Encourages **legal provisions** to mainstream sports and physical fitness across public institutions, aligning with **Directive Principles of State Policy** under **Article 39(f)** – promoting the development of children and youth.



5. Key Terms for UPSC

- **Public-Private Partnership (PPP):** A cooperative arrangement between public and private sectors for infrastructure and service delivery.
- **CSR (Corporate Social Responsibility):** A statutory obligation under the **Companies Act, 2013**, to promote social good including promotion of sports.
- **National Education Policy 2020:** Focuses on holistic and multidisciplinary learning, including sports as a vital component.

Conclusion

The **National Sports Policy 2025** marks a paradigm shift in India's approach to sports—from **medal pursuit to nation-building**. By promoting **inclusivity, economic opportunity, fitness culture, and international competitiveness**, it positions sports as a tool for **holistic national development**. It holds significant relevance for **GS Paper 2 (Governance & Welfare Schemes)** and **GS Paper 3 (Infrastructure & Economic Development)** in the UPSC Civil Services Exam.

2. Cabinet Approves ₹1 Lakh Crore RDI Scheme

1. Introduction to the RDI Scheme

- On **1 July 2025**, the Union Cabinet approved the **Research, Development and Innovation (RDI) Scheme** with a **corpus of ₹1 lakh crore**, aiming to **boost innovation in strategic and sunrise sectors**.
- The scheme is a transformative measure to **scale up private sector involvement in R&D**, with a focus on **economic security, strategic technologies, and self-reliance** under the **Atmanirbhar Bharat** vision.

2. Key Objectives of the RDI Scheme

- **Promote RDI** in *sunrise domains* such as semiconductors, AI, quantum tech, and biotech.
- **Finance high-TRL projects** (Technology Readiness Levels), especially those closer to commercialization.
- **Support technology acquisition** of critical and strategic importance to national interest.
- **Create a Deep-Tech Fund of Funds (FoF)** to support long-term high-risk tech ventures and startups.

3. Governance and Institutional Framework

- The **Anusandhan National Research Foundation (ANRF)** chaired by the Prime Minister will oversee the scheme.
- **Department of Science & Technology (DST)** will be the **nodal implementing agency**.
- An **Empowered Group of Secretaries (EGoS)** led by the Cabinet Secretary will monitor performance and approve changes.
- Funding will flow through a **Special Purpose Fund (SPF)** under ANRF to **second-level fund managers** via **long-tenure, concessional loans or equity**, particularly in the case of startups.



4. Definition & Relevance of Key Terms

- **Sunrise sectors:** Emerging industries with high growth potential, e.g., AI, robotics, green hydrogen.
- **Deep Tech:** Advanced technologies based on scientific breakthroughs (e.g., quantum computing, semiconductors).
- **Fund of Funds (FoF):** A pooled investment fund that invests in other funds rather than directly in startups or projects.
- **Technology Readiness Levels (TRLs):** A system used to assess the maturity level of a particular technology, from basic research to deployment.

5. Constitutional & Legal Relevance

- Aligns with **Directive Principles of State Policy** (Article 38 & 39) to promote *scientific development* and *technological progress*.
- Boosts India's compliance with the **National Innovation and Startup Policy** and **Science, Technology and Innovation Policy (STIP)**.
- Encourages **public-private partnership (PPP)** as per **Company Act, 2013 CSR norms** and FDI-linked innovation policies.

Conclusion

The **RDI Scheme** is a visionary initiative for making India a **global innovation hub** by 2047, ensuring **self-reliance (Atmanirbharta)**, nurturing **deep-tech entrepreneurship**, and enhancing India's **economic and strategic sovereignty**.

3. Vacancy of Reserved Faculty Posts in Higher Education Institutions: A Challenge to Social Justice

1. Constitutional Mandate for Social Justice in Education

- **Articles 15(4), 15(5), and 16(4)** of the Indian Constitution empower the State to make special provisions for the advancement of socially and educationally backward classes (including SCs, STs, and OBCs) in education and public employment.
- Current reservation norms mandate: **15% for SCs, 7.5% for STs, 27% for OBCs, and 10% for EWS** in faculty recruitment at central government institutions.

2. Widespread Vacancies Despite Legal Framework

- As per 2021 data: **2,389 SC, 1,199 ST, and 4,251 OBC** faculty posts remain unfilled across 45 Central Universities.
- **UGC 2023 report** shows about **30% of reserved teaching posts remain vacant**, particularly at **senior academic levels** (Associate Professors and Professors).
- **Institutions of national importance** like IITs, IIMs, and AIIMS also reflect this disparity, despite central policy mandates.



3. Systemic Barriers to Inclusive Hiring

- **Autonomy of institutions** shields them from rigorous compliance with reservation norms.



- The **13-point roster system** (2018), which considers departments individually instead of the whole institution, significantly reduces chances of reserved category hiring—especially in small departments.
- **Vague rejection criteria** like “candidate not found suitable” have disproportionately affected marginalized candidates. Over **60% rejections** reportedly stem from such subjective assessments.

4. Biases and Structural Exclusion

- **Dominance of unreserved groups** in selection committees and leadership roles perpetuates elite control in academic spaces.
- Political or ideological biases in appointments, and the lack of **transparent, merit-based, and inclusive evaluation mechanisms**, further alienate deserving candidates from SC, ST, and OBC backgrounds.

5. Policy Recommendations and Legal Remedies

- **Reform of the 13-point roster** is being heard in the **Supreme Court** and needs urgent resolution.
- **Enforcement of UGC guidelines**, mandatory **social audit reports**, and **diversified selection committees** can address the implementation gap.
- **Sensitization programs**, better outreach, and **inclusive leadership training** can promote long-term reform.
- The **National Education Policy (NEP) 2020**, with its emphasis on equity and access, must be effectively aligned with faculty recruitment norms.

Key Definitions and Constitutional Provisions:

- **Reservation**: Affirmative action policy to ensure representation of historically disadvantaged communities.
- **Social Justice**: A constitutional ideal under the **Preamble**, ensuring equality and opportunity for all, especially weaker sections.
- **13-Point Roster vs. 200-Point Roster**: The 13-point system calculates reservation department-wise (restrictive), while the 200-point treats the university as a whole (more inclusive).
- **UGC**: A statutory body under the **UGC Act, 1956**, responsible for coordination and maintenance of standards in higher education.

Conclusion

The persistent **underrepresentation of marginalized communities** in faculty roles contradicts the constitutional promise of **social justice**. Central universities must function as **spaces of equity and diversity**, not exclusion. Bridging the gap requires a **strong political will, transparent institutional practices, and legal enforcement** to make India’s higher education system truly inclusive and representative of its social fabric.

4. Global Poverty & Development Finance Crisis – Insights from 4th UN Conference on Financing for Development

Key Highlights of the Seville UN Conference

- **Massive Development Financing Gap Identified**:
 - The **4th International Conference on Financing for Development** held in Seville brought together **100+ countries**, businesses, and NGOs.
 - Developing countries are facing an estimated **\$4 trillion/year shortfall** to achieve the UN

Sustainable Development Goals (SDGs) by 2030.

- This includes crucial areas like **poverty eradication, education, healthcare, gender equality, and climate action.**
- **Decline in Global Aid & Donor Commitment:**
 - In **2024, Official Development Assistance (ODA)** by **OECD countries** fell by **7.1%**, reaching **\$212.1 billion.**
 - This sharp decline comes amid rising **US isolationism** and a shift in donor priorities towards domestic challenges, undermining global development efforts.
 - The poorest nations, particularly **heavily indebted low-income countries**, are disproportionately affected.
- **Ballooning Debt Crisis in the Global South:**
 - Many developing and Least Developed Countries (LDCs) are trapped in a **debt-service crisis**, spending more on repaying loans than on health or education.
 - The conference saw renewed calls to **restructure sovereign debt**, ensure **debt sustainability**, and **reform global financial institutions** like the IMF and World Bank.
- **India's Role and South-South Cooperation:**
 - As a **leading voice of the Global South**, India can play a crucial role by:
 - Promoting **South-South cooperation** and **development partnerships** via institutions like **EXIM Bank** and **Development Partnership Administration (DPA).**
 - Sharing **best practices in digital public infrastructure**, low-cost innovations, and inclusive welfare models.
 - Supporting multilateral reforms that enhance the **voice and agency of developing countries** in global governance structures.



Constitutional & Legal Context (India)

- **Article 51 (Directive Principles of State Policy):**
 - Promotes international peace, justice, and cooperation—aligning with India's participation in global poverty eradication initiatives.
- **SDGs and NITI Aayog:**
 - India has institutionalized SDG monitoring through **NITI Aayog**, linking it to national planning and budgeting frameworks.
- **EXIM Bank Act, 1981:**
 - Governs India's financial assistance and credit support to foreign countries, particularly developing nations.

Definitions for UPSC

- **Official Development Assistance (ODA):**
Financial flows provided by donor countries to promote economic development and welfare in developing countries, typically concessional in nature.
- **SDGs (Sustainable Development Goals):**
A set of **17 global goals** adopted by the UN in **2015** under the **2030 Agenda**, aiming to end poverty, protect the planet, and ensure prosperity for all.

- **South-South Cooperation:**

Collaborative efforts among developing countries to share knowledge, skills, and resources without dependency on traditional Western donors.

Conclusion

The **Seville Financing for Development Conference** has highlighted an urgent and growing gap between **developmental needs and available funding**, especially as donor countries retreat and debt burdens mount. The **global pursuit of SDGs is at risk** unless bold, cooperative, and inclusive financial reforms are adopted. **India**, with its emerging leadership in the Global South, has both an opportunity and responsibility to champion new **development finance architectures**, foster **solidarity-based partnerships**, and advocate for a **rebalanced, just, and equitable global order**.

5. Work-Life Balance and Leisure Patterns in India

Key Highlights from Time Use Survey 2024

1. Gender Disparity in Workload and Leisure Time:

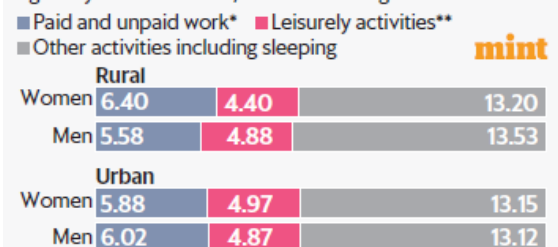
- **Definition:** *Work-life balance* refers to the equilibrium between time spent on work (paid/unpaid) and leisure/social activities.
- Women carry a **heavier burden of unpaid work**, resulting in **less leisure time** than men.
- On average, **women get 274 minutes**, while **men get 293 minutes** for leisure activities daily.
- **Rural women** work the most (6.40 hours/day), and therefore have **less time to unwind** compared to urban men and women.

2. Leisure Activities by Group and Geography:

- **Top leisure activities** include watching TV, conversing, and relaxing.
- **Urban women watch the most TV** (101 minutes/day), while rural women prefer **conversing** as relaxation.
- Time spent on relaxing is **least among urban men** (31 mins), compared to rural women (50 mins).

Work vs leisure: Rural women toil more; urban women have more free time

Average time spent (in hours) in a day per person, aged 6 years and above, on the following activities



*Includes employment and related activities, production of goods for own final use, and unpaid household and caregiving work. **Includes communication, community participation, religious practice, culture, mass media and sports practices. The survey covered over 283,000 rural and 167,000 urban respondents.

Source: Time Use in India, 2024 by statistics ministry

3. Religious and Spiritual Engagement:

- Women, especially **older urban women**, participate more in **prayers and spiritual practices**.
- Participation in religious activities **increases with age** across both rural and urban groups.
- **Urban elderly women** spend the most time on spiritual practices (41 minutes/day).

4. Early Gender Gap in Leisure:

- **Girls aged 6–14 years** spend more time on **unpaid work** (27 mins) compared to boys (11 mins).
- This leads to a leisure gap, especially in **playing games and pastime activities** (boys: 133 mins, girls: 113 mins).

- This **formative inequality** perpetuates the **workload imbalance** into adulthood.

5. Low Participation in Leisure Reading:

- **Reading for leisure is uncommon**—average daily time spent is just **5 minutes**.
- Elderly urban men show the **highest reading participation rate** (31.4%).
- The gap between **older men and women** in leisure reading is due to **continued workload** among women, even in old age.

6. Inequality by Socio-Economic Status:

- Watching TV is more common among the **top 20% income group** (102 mins) than the bottom 20% (62 mins).
- Leisure is shaped by access, education, and **social class**, adding another dimension to the work-life divide.

Constitutional and Legal Provisions Relevant to the Issue

- **Article 14:** Right to Equality – Addresses gender-based discrimination in workload and leisure.
- **Article 15(3):** Permits the State to make special provisions for women and children.
- **Directive Principles (Article 39, 42):** Mandate the State to ensure **equal pay for equal work** and humane working conditions.
- **Maternity Benefit Act, 1961** and **Equal Remuneration Act, 1976:** Aim to reduce the **gender burden of unpaid care work** by institutional support.
- **Right to Education (Article 21A):** Indirectly supports balanced childhood development, including time for leisure and play.

Conclusion:

The **Time Use Survey 2024** reveals deep-rooted **gender, rural-urban, and socio-economic disparities** in leisure and work distribution. Women, especially in rural India, are burdened with a **double shift** of paid and unpaid work, leading to **inequitable leisure access**. Leisure, though intangible, is essential for **mental health, social bonding, and productivity**. Addressing this imbalance is key to achieving **inclusive and gender-just development**.

6. Portable Cube Hospitals and India's Disaster Preparedness

1. What Are Cube Hospitals?

- **Definition:** *Cube Hospitals* are **portable, modular advanced trauma care units** that can be quickly deployed in conflict zones, disaster-hit areas, or during health emergencies.
- These are part of the **Bharat Health Initiative for Sahyog, Hita, and Maitri (BHISHM)** cubes, designed for **rapid deployment and self-sustained operation** in remote or conflict-affected areas.

2. Recent Deployment and Future Plans

- Two BHISHM cube hospitals were **successfully deployed during the recent conflict with Pakistan**, showcasing their utility in emergency medical response.
- Following this, the **Union Health Ministry plans to procure 50 more** such units from **HLL Lifecare Ltd**, a public sector healthcare company.

3. Strategic and Humanitarian Importance

- These mobile hospitals significantly **enhance India's disaster and war-time medical response capacity**.
- The initiative supports **quick trauma management, surgical intervention, and life-saving treatment** during **natural disasters, terrorist attacks, or military operations**.

4. Make in India and Technological Innovation

- BHISHM cubes are **indigenously developed**, aligning with the **Make in India** and **Atmanirbhar Bharat** vision.
- Their modular, scalable design ensures **high mobility, easy transportation, and minimal setup time**, making them a game-changer in public health logistics.

5. Legal and Institutional Framework

- Falls under the ambit of the **Disaster Management Act, 2005**, which mandates proactive health infrastructure planning.
- Related to functions of the **National Disaster Management Authority (NDMA)** and **Ministry of Health and Family Welfare** under **Entry 29 (Concurrent List – Prevention of communicable diseases)**.



6. Public Health and National Security Linkage

- Public health infrastructure is increasingly being seen as a component of **national security**.
- Rapid-response medical units can act as **force multipliers** in both military and humanitarian crises, supporting **India's neighbourhood-first and humanitarian diplomacy**.

Conclusion:

The procurement of 50 cube hospitals marks a significant step in strengthening **India's medical readiness and disaster response architecture**. These portable units, tested in real conflict conditions, represent a convergence of **healthcare, technology, and national resilience** strategies. As India faces diverse threats—from climate disasters to military conflicts—such innovations offer vital support in emergency response.

7. Centre Launches Portal for Disability Welfare Scheme Proposals

1. What Are DDRS and DDRC?

- **Deendayal Divyangjan Rehabilitation Scheme (DDRS)**: A centrally sponsored scheme aimed at providing comprehensive services to **Persons with Disabilities (PwDs)** through NGOs for education, vocational training, therapeutic and support services.
- **District Disability Rehabilitation Centres (DDRCs)**: Set up to provide **accessible, affordable, and decentralized rehabilitation services** at the district level under the same objective.



WELFARE SCHEMES FOR PERSONS WITH DISABILITIES

1. Caregiver Allowance/ Maintenance Grant Under CMST (Chief Minister's Social Assistance/Teengong)
2. Scholarship under CMST
3. Free Travel Card under CMST
4. Unemployment Allowance
5. Marriage Incentive Award

- The schemes are implemented under the **Department of Empowerment of Persons with Disabilities (DEPwD)**, Ministry of Social Justice and Empowerment.

2. Launch of Online Portal for Proposal Processing

- The **new portal** enables **online submission and tracking** of proposals for funding and assistance under DDRS and DDRC schemes.
- It supports **both fresh applications and access to old submissions**, thereby enhancing transparency, efficiency, and timely disbursement of resources.

3. Digital Governance and Administrative Efficiency

- The portal is a step toward **e-governance in social welfare delivery**, aligning with the vision of **Digital India** and **Minimum Government, Maximum Governance**.
- It aims to eliminate bureaucratic delays and improve coordination between **implementing agencies, government departments, and monitoring bodies**.

4. Constitutional and Legal Framework

- **Article 41** (Directive Principles): Obligates the state to provide public assistance to disabled persons.
- **Rights of Persons with Disabilities (RPwD) Act, 2016**: Guarantees **equality, dignity, and full participation** of persons with disabilities in society.
- The Act mandates access to **inclusive education, employment, healthcare, and rehabilitation** services.
- India is also a signatory to the **UN Convention on the Rights of Persons with Disabilities (UNCPRD)**.

5. Significance for Social Inclusion and Equity

- Streamlining disability-related welfare services strengthens **inclusive development**, bridging **access and awareness gaps** for marginalized populations.
- Promotes **community-based rehabilitation**, local empowerment, and **social justice** for differently-abled citizens.

6. Scope for Collaboration and Capacity Building

- NGOs, CSOs, and local institutions will benefit from **simplified funding procedures**, encouraging wider participation.
- The portal can serve as a **central database** for tracking progress, evaluating impact, and formulating evidence-based policies.

Conclusion:

The new online portal for DDRS and DDRC schemes reflects the government's commitment to **digitally empowered social welfare delivery** for persons with disabilities. By making the application and tracking process seamless, it ensures **faster and more inclusive service delivery**, aligning with the **constitutional goal of equity and empowerment**.

8. Recognising and Respecting the Jarawa Tribe: Census, Care and Conservation in Andaman & Nicobar Islands

Key Summary Points

1. The Jarawa Tribe and the 2027 Census

- The upcoming **16th Census** will include **Particularly Vulnerable Tribal Groups (PVTGs)** of the Andaman and Nicobar Islands, such as the **Jarawas, Shompen, Onges, and Sentinelese** (excluding Nicobarese).
- Dr. Ratan Chandra Kar, a physician closely associated with Jarawa welfare, confirms that **sustained contact and trust** have been established, making **census enumeration feasible** for the 2027 exercise.

2. Demographic Trajectory and Trust-Building

- From an estimated **260 Jarawas in 1998**, the population has grown to **647 by 2025**, due to **proactive healthcare, non-intrusive engagement, and community trust**.
- Earlier estimations were speculative, but **recent counts using satellite imagery and field engagement** are considered more accurate.

3. Healthcare Without Cultural Disruption

- The government has provided **preventive and responsive healthcare** without interfering with **tribal medicinal practices**, preserving indigenous systems while countering outbreaks of **measles, malaria, mumps, hepatitis, etc.**
- This **hybrid approach** has led to **reduced mortality and improved longevity**, with Jarawas generally free from **lifestyle diseases**.



4. Policy Framework and Welfare Schemes

- The Jarawas are classified as a **PVTG**, a category defined by the Ministry of Tribal Affairs to receive **focused developmental assistance** due to **social isolation, low literacy, and subsistence economy**.
- The **PM-JANMAN Scheme** (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) is being implemented to target such communities, though **accurate enumeration is critical** for effective delivery.

5. Land Use, Access, and Ethical Engagement

- The **Andaman Trunk Road (ATR)** has facilitated access to tribal areas but also poses threats of **cultural intrusion and ecological disruption**.
- Dr. Kar advocates a **minimal intervention approach**, allowing tribes to **thrive naturally**, supporting **co-existence without over-dependence** on modern systems.

Key Concepts and Legal Provisions

- **PVTGs:** A sub-category of Scheduled Tribes (STs) identified by the Government of India with **primitive traits, geographical isolation, and stagnant population**.

- **Article 342:** Empowers the President to specify the Scheduled Tribes in states and union territories.
- **Forest Rights Act, 2006:** Recognises rights of forest-dwelling tribal communities, though its implementation in A&N is highly cautious given the fragile tribal ecologies.
- **Census Act, 1948:** Provides legal framework for conducting census operations in India.

Conclusion

The case of the Jarawa tribe illustrates a **model of culturally respectful and health-sensitive engagement** with indigenous communities. The 2027 Census presents an opportunity not only to **accurately enumerate** such groups but also to **strengthen welfare delivery**, while upholding their **autonomy and traditional lifestyle**. The success lies in **trust-building, minimal intrusion, and adaptive governance** that respects ecological and cultural boundaries.

9. India Among Countries with Highest Migration of Ultra-Rich

1. Key Findings from Henley Private Wealth Migration Report 2025

- **India ranks among the top countries experiencing net outflow of dollar millionaires.**
- Estimated **net outflow** from India in 2025: **3,500 millionaires**.
- Other major outflow countries: **China (-7,800)** and **UK (-16,500)**.
- Main destinations (net inflow): **UAE (3,600)**, **US (3,000)**, **Italy**, **Switzerland**, and **Saudi Arabia**.

2. Who Are 'Millionaires'?

- Defined as individuals with **liquid investable wealth of \$1 million or more** (\approx ₹8.3 crore).
- Does **not necessarily include fixed assets** (e.g., land or jewelry), only moveable and investable wealth.
- Migration of these individuals is often linked with seeking better **tax regimes, business opportunities, quality of life, and political stability**.

3. Impact on Indian Economy & Policy

- **Loss of high-net-worth individuals (HNWIs)** leads to:
 - Potential **capital flight** and lower **domestic investment**.
 - Erosion of **wealth tax base** and **philanthropic contributions**.
 - **Brain drain in entrepreneurship** and innovation.
- Indicates growing **concerns around regulatory environment, social stability, and wealth protection**.

4. Legal & Constitutional Dimensions

- **Article 19(1)(e):** Grants citizens the **freedom to reside and settle** in any part of the country but does not restrict foreign migration.
- **FEMA (Foreign Exchange Management Act) and Income Tax Act** regulate asset movement and residency-based taxation.

'INDIA AMONG COUNTRIES WITH HIGHEST MIGRATION OF ULTRA-RICH'					
Projected net migration of dollar millionaires in 2025					
Highest net inflow			Highest net outflow		
	Number of millionaires (net change)	Estimated total wealth of migrating millionaires** (in \$ billion)	10-year growth in millionaire count# (%)		
UAE	9,800	63	98	UK	-16,500
US	7,500	43.7	78	China	-7,800
Italy	3,600	20.7	20	India	-3,500
Switzerland	3,000	16.8	28	S. Korea	-2,400
Saudi Arabia	2,400	18.4	55	Russia	-1,500

- India does not currently have a **wealth tax**, which may make high taxation less of a push factor compared to **social or political concerns**.

5. Global Wealth Migration Trends

- The **UAE and US** attract the most ultra-rich due to:
 - Investor visa regimes**, favourable **tax policies**, and **business-friendly ecosystems**.
- Countries like **Italy and Switzerland** are using "Golden Visa" and **citizenship-by-investment** schemes to attract global wealth.

Definitions & Key Concepts

- Ultra-high-net-worth individual (UHNWI)**: Person with \$30 million or more in investable assets.
- Capital Flight**: Large-scale exit of financial assets or capital from a country due to instability.
- Wealth Migration**: The relocation of individuals with significant financial assets to another country, often to optimize tax and investment benefits.

Conclusion

India's position as one of the top countries witnessing an **exodus of millionaires** raises red flags regarding **wealth security, governance quality, and investor confidence**. While the migration may be limited in absolute numbers, the **loss of capital, talent, and entrepreneurial spirit** could have far-reaching consequences unless policy measures address their root causes.

10. Adoption in India – The Widening Gap Between Children and Waiting Parents

Key Summary:

1. Alarming Gap: 13 Parents for Every 1 Child Legally Free for Adoption (2025)

- As of July 2025, **36,381 prospective adoptive parents** are registered with **CARA** (Central Adoption Resource Authority), but only **2,652 children** are legally free for adoption — a **13:1 ratio**.
- The average wait time for adoptive parents has increased from **1 year in 2017 to 3.5 years in 2025**.
- This growing mismatch has prompted concerns from the **Supreme Court** and **Parliamentary Committees** over delays and inefficiencies in the system.

2. Millions of Orphans, but Only Thousands Available for Adoption

- India had **3.1 crore orphans** (World Orphan Report, 2020), but only a small fraction are in the legal adoption pool.
- In 2025, over **22,000 children** live in **Child Care Institutions (CCIs)**, yet just **12%** are declared **legally free for adoption**.

The adoption paradox

The data for the charts were sourced from an RTI reply received from the Ministry of Women and Child Development, the 2020 Orphan Report (INSAMER), and "Review of Guardianship and Adoption Laws", by the Parliamentary Standing Committee on Personnel, Public Grievances and Law

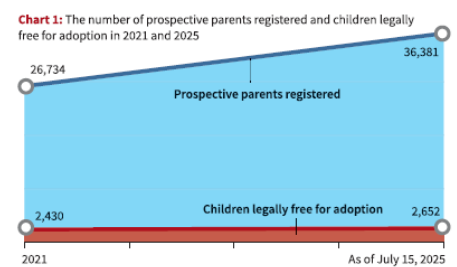


Chart 2: Statewise number of prospective parents registered in 2025*

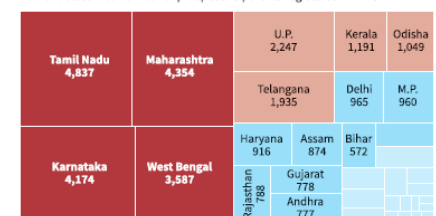
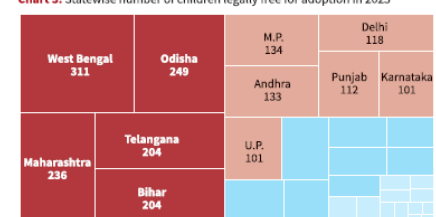


Chart 3: Statewise number of children legally free for adoption in 2025*



*Data for Chart 2 and 3 is as on April 30, 2025

Wimshel - 1

- Legal and procedural hurdles, unclear guardianship, and lack of inter-agency coordination contribute to this bottleneck.

3. Legal Framework: Strong in Law, Weak in Implementation

- **Juvenile Justice (Care and Protection of Children) Act, 2015 & Amendment Act 2021** mandate a **time-bound process** for declaring children legally free for adoption.
- However, **delays, lack of accountability, undertrained staff**, and poor monitoring have rendered the process ineffective.
- Children with unfit or absent guardians often remain in limbo due to legal ambiguities and poor follow-up by authorities.

4. Disparities Between States Reflect Deeper Governance Issues

- Example: In **Himachal Pradesh**, only **1 child** is legally free for adoption in 2025, despite **829 children in CCIs**.
- In **Maharashtra**, only **236 out of 5,284 children** are declared free — highlighting systemic underperformance and potential rights violations.
- Some states like Tamil Nadu and Karnataka have higher adoption registration but still face a scarcity of adoptable children.

5. Older Children & Special Needs – Least Preferred, Most Neglected

- **34% of children** in the adoption pool are aged **14–18 years**, a group **least preferred** by adoptive parents.
- Delays in legal clearance reduce a child's adaptability and adoption chances.
- Indian parents predominantly prefer children aged **0–2**, and long wait times cause many to shift age preferences out of frustration.

6. Risk of Illegal Adoption & Urgent Need for Reform

- The **Parliamentary Committee** warned of rising illegal adoptions due to systemic delays.
- Without **streamlining the legal process**, increasing institutional capacity, and improving inter-agency coordination, the adoption crisis will deepen.

Key Definitions

- **CARA (Central Adoption Resource Authority)**: The statutory body under the **Ministry of Women and Child Development**, responsible for regulating in-country and inter-country adoptions in India.
- **Legally Free for Adoption**: A child is declared legally free when biological parents are deceased, untraceable, or have surrendered custody, and the legal procedure is complete under the **JJ Act**.
- **Child Care Institution (CCI)**: Homes that provide care, protection, and rehabilitation for children in need. Not all children in CCIs are adoptable.

Constitutional & Legal Provisions

- **Article 39(e) & (f)** (Directive Principles): Mandates the State to ensure children are protected against neglect and given opportunities for healthy development.

- **Juvenile Justice Act, 2015** (amended in 2021): Provides legal grounds and timelines for declaring a child adoptable and outlines the role of **Child Welfare Committees (CWCs)** and **Specialised Adoption Agencies (SAAs)**.
- **Hague Convention on Inter-country Adoption** (ratified by India in 2003): Aims to prevent trafficking and ensure ethical adoption practices.

Conclusion

Despite strong laws, India's adoption ecosystem suffers from a **crisis of execution**, leaving thousands of children in limbo and forcing parents into **years-long waiting periods**. The legal pathway to adoption is **slow, fragmented, and bureaucratic**, while the emotional, psychological, and developmental well-being of both children and adoptive parents is at stake. Reforms must **prioritize speedy legal processing, accountability at the institutional level, and training of welfare officials** to bridge this critical gap.

11. Swachh Survekshan Awards 2025

1. Swachh Survekshan as a Cleanliness Movement

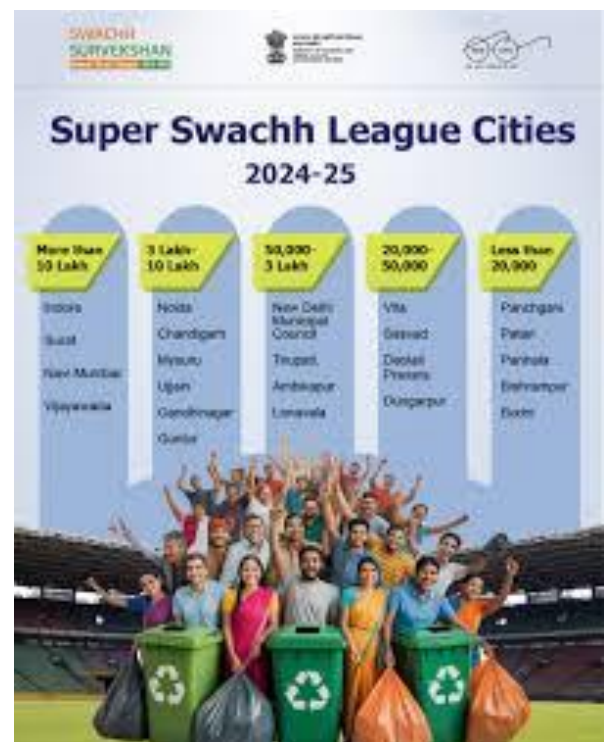
- The **President of India**, Smt. Droupadi Murmu, presented the **Swachh Survekshan Awards 2025** in New Delhi.
- Described the initiative as the **world's largest urban cleanliness survey**, involving 14 crore citizens.
- Organized by the **Ministry of Housing and Urban Affairs**, it has become an effective tool for **competitive and performance-based sanitation monitoring**.

2. Cleanliness as a Cultural and Spiritual Value

- Cleanliness has always been integral to Indian tradition—reflected in homes, temples, and community life.
- **Mahatma Gandhi** emphasized: *"Cleanliness is next to Godliness."*
- President Murmu recalled her own grassroots cleanliness work as Vice President of a Notified Area Council.

3. Promotion of Circular Economy through Traditional Lifestyles

- India's **tribal and rural communities** follow lifestyles aligned with **Reduce-Reuse-Recycle (RRR)** principles.
- Traditional systems avoid wastage and use minimal resources, aligning with the **modern circular economy**.
- Emphasis on **learning from indigenous environmental consciousness** to reinforce modern waste management systems.



4. Key Interventions for Sustainable Waste Management

- **Source segregation** of waste at the household level is the **first critical step** in the waste value chain.
- **Zero-waste colonies** are emerging as exemplary models.



- School-level assessments aim to inculcate **cleanliness as a life-long value** among students.

5. Combating Plastic and E-Waste Pollution

- President highlighted the urgency to control **plastic and electronic waste**, major urban pollutants.
- Recalled the **2022 ban on single-use plastic** and the **Extended Producer Responsibility (EPR)** framework.
 - EPR mandates **producers, importers, and brand owners** to manage post-consumer plastic waste.

6. Vision for a Clean and Developed India by 2047

- Cleanliness efforts have **economic, cultural, and ecological significance**.
- The President expressed confidence in collective action leading India to become **one of the cleanest nations by 2047**, aligning with the goal of a *Developed India @100*.

Definitions & Legal Framework

- **Swachh Bharat Mission (SBM)**: Launched in 2014, a flagship scheme under the Ministry of Housing and Urban Affairs and the Ministry of Jal Shakti for urban and rural sanitation.
- **Circular Economy**: An economic model aimed at eliminating waste through continuous use of resources.
- **EPR (Extended Producer Responsibility)**: Defined under the **Plastic Waste Management Rules, 2016**, amended in 2022.

Constitutional & Legal Provisions

- **Article 48A** (Directive Principles): Mandates the State to protect and improve the environment.
- **Article 51A(g)**: Fundamental Duty of citizens to protect and improve the natural environment.
- **Environment Protection Act, 1986**: Provides legal backing to waste management regulations.

Conclusion & UPSC Relevance

- The awards underscore India's strategic push towards **urban sanitation, sustainable waste management, and citizen engagement**.
- It reflects a confluence of **Gandhian principles, constitutional values, and global best practices** in environmental governance.

SECURITY & RELATED EVENTS

1. PROJECT 17A – Indigenous Stealth Frigate ‘Udaygiri’ Delivered to Indian Navy

1. Overview of Project 17A and Udaygiri

- **Udaygiri**, the second stealth frigate under **Project 17A**, was delivered to the Indian Navy on **1st July 2025**.
- Built by **Mazagon Dock Shipbuilders Ltd. (MDL), Mumbai**, it is a successor of the earlier **INS Udaygiri (decommissioned in 2007)**.
- **Project 17A** is an advanced version of **Project 17 (Shivalik-class)** and includes **7 multi-role frigates** being constructed at **MDL, Mumbai and GRSE, Kolkata**.

2. Key Features of Udaygiri and P17A Class Ships

- Equipped to operate in **Blue Water** naval environments against **conventional and non-conventional threats**.
- Designed with **enhanced stealth features**, **geo-symmetrical hulls**, and **‘State-of-the-Art’ weapons and sensors**.
- Propelled by a **Combined Diesel or Gas (CODOG)** system, with **Controllable Pitch Propellers (CPP)** and an **Integrated Platform Management System (IPMS)**.
- Weapon suite includes:
 - **Supersonic Surface-to-Surface Missiles**
 - **Medium-Range Surface-to-Air Missiles**
 - **76 mm Gun**
 - **30 mm and 12.7 mm Rapid-Fire Close-In Weapon Systems**



3. Significance for National Security and Naval Power

- Represents a **quantum leap in indigenous warship design and construction** led by the **Warship Design Bureau**.
- Enhances India’s **deterrence capability** in the Indian Ocean Region (IOR), critical for ensuring **maritime security and energy route protection**.
- Strengthens India’s position as a **net security provider** in the Indo-Pacific.

4. Boost to Aatmanirbhar Bharat and MSME Ecosystem

- Over **200 indigenous OEMs and MSMEs** contributed to components and systems of Udaygiri.
- Supported **direct employment for ~4,000** and **indirect jobs for ~10,000**, contributing to **local economic development**.
- Aligns with **Aatmanirbhar Bharat** and **Make in India in Defence** initiatives for **self-reliance** and **strategic autonomy**.

5. Key Constitutional and Strategic Dimensions

- Supports **Directive Principles of State Policy** (Article 39B, 49) related to national security and promotion of scientific development.
- Enhances India’s **maritime strategic footprint**, in line with doctrines like **SAGAR** (Security and Growth for All in the Region) and **Maritime India Vision 2030**.

Conclusion

The delivery of INS Udaygiri marks a significant step in **India’s indigenous defence manufacturing journey**, enhancing **combat capability**, promoting **self-reliance**, and supporting **employment and economic growth**. With five more stealth frigates to be delivered by **end of 2026**, Project 17A reinforces India’s ambition to become a **global naval power** and a **defence export hub**.

2. OPCW Asia Regional Meeting in New Delhi (1st–3rd July 2025)

Key Highlights of the Event

- **Event Overview:**
 - India hosted the **23rd Regional Meeting of National Authorities of States Parties in Asia** under the **Organisation for the Prohibition of Chemical Weapons (OPCW)** from **1st to 3rd July 2025** in **New Delhi**.
 - Organised jointly by OPCW and **National Authority Chemical Weapons Convention (NACWC)**, Government of India.
 - Attended by **38 delegates from 24 Asian countries**, officials from **UNRCPD, MEA, and Cabinet Secretariat**.
- **OPCW and CWC Context:**
 - The **Chemical Weapons Convention (CWC)** came into force in **1997** to eliminate chemical weapons globally.
 - **OPCW**, with **193 member states**, implements the CWC and won the **Nobel Peace Prize (2013)** for its disarmament efforts.
 - India is an **original signatory**, and its nodal agency is **NACWC** under the Cabinet Secretariat.
- **India's Contributions and Recognition:**
 - In **2024**, NACWC mentored Kenya's National Authority under OPCW's **Mentorship/Partnership Programme**.
 - **Indian Chemical Council (ICC)** co-won the prestigious **OPCW–The Hague Award 2024**—first time globally for a chemical industry body—for promoting safety and CWC compliance.
 - Highlights India's **leadership role in chemical safety and international disarmament frameworks**.
- **Discussion Themes at the Meeting:**
 - Focus areas included:
 - National legislative frameworks
 - Chemical safety and security
 - Role of industry and stakeholders
 - Use of **Artificial Intelligence** for compliance and safety
 - Synergies with **UNSC Resolution 1540** (which aims to prevent WMD proliferation to non-state actors)
- **Legal & Institutional Framework (Important for Mains):**
 - The **CWC is a multilateral treaty** prohibiting the development, production, stockpiling and use of chemical weapons and their precursors.
 - Article VI of the CWC mandates *international cooperation for peaceful uses of chemicals*.
 - **UNSC Resolution 1540 (2004)**: Obligates States to prevent non-state actors from acquiring WMDs.



Definitions (for Prelims & Mains clarity):

- **OPCW:** An international organisation based in The Hague, Netherlands, responsible for implementing the CWC and conducting inspections of chemical facilities worldwide.
- **NACWC (India):** The **National Authority for the Chemical Weapons Convention**, responsible for fulfilling India's obligations under the CWC and ensuring compliance domestically.
- **UNSCR 1540:** United Nations Security Council Resolution aimed at preventing the proliferation of Weapons of Mass Destruction (WMDs), especially to terrorist groups.

Conclusion

The 23rd OPCW Asia Regional Meeting in New Delhi reinforces India's **commitment to global chemical disarmament, capacity-building in the region, and safe industrial practices**. As host and mentor, India has demonstrated diplomatic leadership and technical expertise, furthering cooperation under **multilateral treaties like the CWC**. The emphasis on **AI, stakeholder involvement, and legal harmonization** indicates evolving strategies to strengthen **non-proliferation regimes**. For India's strategic and diplomatic positioning, such platforms enhance its image as a **responsible, peace-oriented, and technologically advanced state** in global disarmament efforts.

3. DAC Approves ₹1.05 Lakh Crore Capital Defence Acquisition Under 'Buy (Indian-IDDMM)' Category

Key Highlights of the Acquisition Approval

- **Massive Indigenous Defence Push:**
 - On **July 3, 2025**, the **Defence Acquisition Council (DAC)** chaired by Defence Minister **Rajnath Singh**, granted **Acceptance of Necessity (AoN)** for **10 capital acquisition proposals** worth approx. **₹1.05 lakh crore**.
 - All acquisitions will be done under the **'Buy (Indian-IDDMM)' category**, prioritizing domestic design, development, and manufacturing.
- **Equipment Approved for Procurement:**
 - Major platforms and systems cleared include:
 - **Armoured Recovery Vehicles** – for increased mobility and operational recovery
 - **Electronic Warfare (EW) Systems** – to strengthen electronic and cyber resilience
 - **Integrated Common Inventory Management System (ICIMS)** – enhancing logistics and supply chain efficiency across the Tri-Services
 - **Surface-to-Air Missiles (SAMs)** – to bolster India's **air defence architecture**
 - For the Navy, clearances include:
 - **Moored Mines, Mine Counter Measure Vessels** – for undersea threat mitigation
 - **Super Rapid Gun Mounts, Submersible Autonomous Vessels** – improving maritime firepower and surveillance capabilities
- **Category Definition – Buy (Indian-IDDMM):**
 - This refers to the **procurement of equipment designed, developed, and manufactured in India**, under the **Defence Acquisition Procedure (DAP) 2020**.
 - It is the **top priority category** under the **Defence Procurement hierarchy**, aimed at reducing dependence on foreign OEMs and promoting **self-reliance in defence**.
- **Legal and Strategic Framework:**
 - Defence acquisitions are governed by the **Defence Acquisition Procedure (DAP) 2020**, replacing the earlier DPP.
 - The AoN process is part of the **multi-tier procurement cycle**, which includes SQR formulation, RFP issuance, and contract negotiation.
 - Supports the **Make in India** and **Atmanirbhar Bharat Abhiyan** initiatives as per **Article 73 (Union's executive power on defence matters)** and **Entry 1, List I (Union List)** of the Constitution.
- **Strategic & Economic Significance:**
 - Enhances **operational preparedness** of Army, Navy, and Air Force through **next-gen indigenous**



technology.

- Promotes **defence MSMEs, startups, and DPSUs** by creating demand for domestically developed subsystems and components.
- Strengthens India's global positioning as a **defence manufacturing hub** and supports export potential.

Definitions for UPSC

- **Defence Acquisition Council (DAC):** Apex body under Ministry of Defence for capital procurement decisions in defence; chaired by the Raksha Mantri.
- **Acceptance of Necessity (AoN):** First formal step in the defence procurement process, signifying government approval to initiate acquisition.
- **Buy (Indian-IDDm):** Category under which products must have a minimum of 50% indigenous content and be designed & developed in India.

Conclusion

The DAC's clearance of ₹1.05 lakh crore worth of proposals under the **Buy (Indian-IDDm)** category reflects India's **strategic shift towards defence self-reliance**. It marks a significant step toward **reducing import dependency, modernising the armed forces, and promoting indigenous defence technology ecosystems**. This aligns with India's long-term vision of becoming a **net security provider in the Indo-Pacific** and achieving the goals under **Viksit Bharat @2047** through a strong and self-sufficient defence sector.

4. India–US to Sign 10-Year Defence Framework – Strategic Cooperation Deepens

Key Developments in India–US Defence Partnership

- **10-Year Defence Framework Agreement Finalized:**
 - India and the United States have agreed to formalize a **new 10-year Defence Framework**, aimed at deepening strategic and military ties.
 - This will replace the earlier 2015 agreement and is expected to be signed **later in 2025** during a ministerial-level meeting.
- **Pentagon Statement Highlights Strategic Importance:**
 - US Defence Secretary **Pete Hegseth** and Indian Defence Minister **Rajnath Singh** reaffirmed mutual commitment to advancing defence cooperation.
 - The Pentagon termed **India as a “key defence partner in South Asia”**, reflecting Washington's strategic pivot towards the Indo-Pacific.
- **Defence Industrial Cooperation and Defence Sales:**
 - Both sides discussed **pending major defence sales**, including supply of **GE F404 engines** and proposed **joint production of GE F414 engines** for Tejas Mark 1A fighter jets.
 - Singh urged for **expedited delivery of engines** to avoid further delays in HAL's production schedule for Indian Air Force.
- **Joint Production and ‘Make in India’ Defence Manufacturing:**
 - The proposed deal between **HAL and GE Aerospace** for **co-producing F414 engines** in India aligns with the ‘**Atmanirbhar Bharat**’ defence manufacturing goals.



- This initiative will boost India's indigenous capacity to produce advanced jet engine technologies and reduce reliance on imports.

Legal, Strategic & Constitutional Context

- **Article 73 (Union Executive Power)** allows the Central Government to enter into international defence agreements.
- **Strategic Partnership Agreements (SPAs):**
 - India is designated as a “**Major Defense Partner**” by the US under the **2016 NDAA**, enabling high-end tech transfer.
- **COMCASA, LEMOA, BECA:**
 - India and US have signed foundational defence agreements enabling **interoperability, secure communication, logistics, and geo-spatial intelligence sharing**.
- **Atmanirbhar Bharat (Self-Reliant India Mission):**
 - Aims to indigenize defence production, reduce arms imports, and foster joint ventures under **Buy & Make (Indian)** and **IDDM** categories.

Definitions for UPSC

- **Defence Framework Agreement:**

A long-term strategic pact that outlines goals for bilateral military cooperation including joint production, R&D, logistics, and technology transfer.
- **GE F404 & F414 Jet Engines:**
 - **F404** powers the earlier Tejas variants; **F414** is a more powerful engine proposed for **Tejas Mk 2**, enhancing India's fighter capabilities.
- **Tejas LCA (Light Combat Aircraft):**

An indigenously developed fighter aircraft by HAL, designed for multi-role capabilities and light air combat.

Conclusion

The decision to ink a **10-year Defence Framework Agreement** signifies a **strategic deepening of India–US defence relations**, reflecting mutual interests in **Indo-Pacific security, indigenous defence manufacturing, and advanced tech cooperation**. Timely delivery and joint production of critical defence equipment like jet engines will not only address India's immediate operational requirements but also enhance long-term self-reliance in aerospace technologies. The agreement positions India as a **critical security and economic partner** in the evolving global order, especially amid rising geopolitical tensions.

5. FATF Flags Misuse of E-commerce and Online Payments for Terror Financing: Key Points

- **Misuse of Digital Platforms for Terror Financing**
 - The Financial Action Task Force (FATF), the global watchdog on money laundering and terror financing, has highlighted that **e-commerce platforms and online payment services are being increasingly misused to fund terrorism**.
 - The February 2019 Pulwama attack (killing 40 CRPF personnel) and the 2022 Gorakhnath Temple attack in India were cited as cases illustrating this misuse.
- **State Sponsorship of Terrorism**

- FATF's report noted ongoing **state sponsorship of terrorism**, where certain national governments provide financial and logistical support to terrorist organizations.
- This support may be used as a **fundraising technique** or as part of broader financial strategies to sustain terrorist networks.



• **Emerging Risk Trends**

- The expansion of **digital payment ecosystems**, including mobile wallets, prepaid cards, cryptocurrencies, and crowdfunding platforms, has created new vulnerabilities for terror financing.
- Increased anonymity and lack of stringent regulatory oversight in some jurisdictions allow terrorist groups to move and hide funds more easily.

• **Indian Context and Vulnerabilities**

- India has been a frequent target of cross-border terrorism, often funded through informal and digital channels.
- The cited incidents underline the need for tighter monitoring of digital financial flows and stricter **Know Your Customer (KYC)** and **Anti-Money Laundering (AML)** measures.

• **Legal and Constitutional Framework**

- India's **Unlawful Activities (Prevention) Act (UAPA), 1967**, empowers authorities to curb terror financing and designate individuals or groups as terrorists.
- **Prevention of Money Laundering Act (PMLA), 2002**, and rules under the Reserve Bank of India Act ensure compliance with global AML/CFT (Combating the Financing of Terrorism) standards.
- Constitutionally, **Article 21 (Right to Life and Liberty)** underpins the state's duty to protect citizens from terrorism and maintain national security.

Definitions

- **FATF (Financial Action Task Force)**: An inter-governmental body established in 1989 to set standards and promote effective implementation of legal and regulatory measures to combat money laundering, terrorist financing, and other threats to the international financial system.
- **Terror Financing**: The process of providing financial support to individuals or groups engaged in terrorist activities.

Conclusion and UPSC Relevance

- FATF's warnings emphasize the evolving nature of terror financing and the urgent need for robust cyber and financial surveillance systems globally and in India.
- Strengthening international cooperation, tightening digital payment regulations, and enhancing domestic legal mechanisms are vital to counter this threat.

6. INS Nistar: India's First Indigenous Diving Support Vessel Strengthens Undersea Capabilities

1. Indigenous Maritime Capability Boost

- The Indian Navy will **commission the first indigenously built Diving Support Vessel (DSV), INS Nistar**, on **18 July 2025** at Visakhapatnam.
- Designed and constructed by **Hindustan Shipyard Ltd.**, the ship marks a milestone in **Atmanirbhar Bharat** and **Make in India** in the defence sector, with **80% indigenous content** and the involvement of over **120 MSMEs**.

2. Strategic Role and Advanced Capabilities

- Nistar will serve under the **Eastern Naval Command** for **deep-sea diving and submarine rescue operations**.
- The vessel features:
 - Dynamic Positioning System (DPS)** for precision movement,
 - Air and Saturation Diving Systems**,
 - Remotely Operated Vehicles (ROVs)**,
 - Side Scan SONAR** and acts as a **'Mother Ship' for Deep Submergence Rescue Vehicles (DSRVs)**.
- It offers **hospital-grade onboard medical facilities** including an ICU, Operation Theatre, and Hyperbaric Chamber.



3. Historical Legacy and Symbolism

- The new vessel **carries forward the legacy** of the original **ex-Nistar**, acquired from the USSR in 1969.
- Her motto **'Surakshita Yatharthta Shauryam'** (Deliverance with Precision and Bravery) reflects her mission of underwater safety and rescue.

4. Operational Versatility and Endurance

- The vessel is approx. **120 meters in length**, **displaces over 10,000 tonnes**, and has **endurance of 60+ days at sea**.
- It includes a **15-ton subsea crane**, **helicopter operations capability**, and enhanced underwater and surface surveillance potential—making it one of the **most versatile maritime assets**.

5. Strategic Significance in the Indian Ocean Region

- Enhances **submarine rescue readiness** and bolsters **India's undersea warfare capabilities**.
- Strengthens **India's maritime posture** and deterrence in the **Indian Ocean Region (IOR)** amid increasing strategic competition.
- Reinforces India's status as a **regional net security provider** and aligns with its **SAGAR (Security and Growth for All in the Region)** doctrine.

Key Definitions for UPSC:

- DSV (Diving Support Vessel):** A specialized ship equipped for underwater diving operations, including rescue and repair tasks.

- **Dynamic Positioning System (DPS):** A computer-controlled system that automatically maintains a vessel's position and heading using its own propellers and thrusters.
- **DSRV (Deep Submergence Rescue Vehicle):** A small submarine used for rescuing the crew of disabled submarines at great depths.

Constitutional & Legal Framework:

- **Article 73 & 246:** Empower the Union to legislate and administer matters related to **defence and naval forces**.
- **Defence Acquisition Procedure (DAP):** Framework for promoting **indigenous defence manufacturing**.
- **Public Procurement (Preference to Make in India) Order, 2017:** Supports indigenous sourcing in defence production.

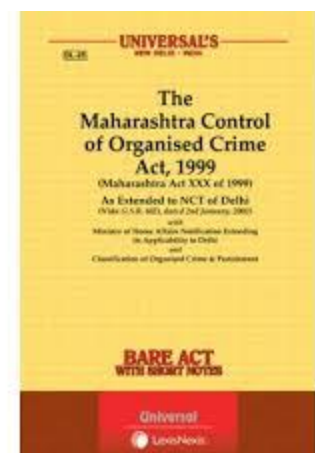
Conclusion & UPSC Relevance:

The commissioning of **INS Nistar** symbolizes India's growing **indigenous defence capabilities**, enhancing its **strategic readiness in undersea domains** and **rescue operations**. It reflects the synergy between national security goals, technological self-reliance, and public-private sector collaboration in defence manufacturing.

7. Maharashtra Brings Drug Peddling under Organised Crime Law (MCOCA Amendment)

Key Highlights of the MCOCA Amendment

- **Drug Peddling Now Under MCOCA**
 - Maharashtra Legislative Council passed a Bill amending the **Maharashtra Control of Organised Crime Act (MCOCA)** to include **drug peddling and narcotics-related offences** as *organised crime*.
 - The Assembly had passed the Bill on **July 9, 2025**, and it now awaits the **Governor's assent**.
- **Harsher Provisions Against Offenders**
 - Drug peddlers will face **stricter bail conditions** and **extended detention**.
 - **Confessions made to police officers** become admissible in court – a unique feature of MCOCA not present in the **NDPS Act, 1985**.
 - Police will get **180 days** to file a chargesheet (vs. 90 days under Bharatiya Nyaya Sanhita).
- **NDPS Act vs. MCOCA – A Tougher Regime**
 - The **NDPS Act, 1985**, already punishes narcotics trade but doesn't categorize it as *organised crime*.
 - The amended MCOCA raises the legal seriousness of drug offences and empowers enforcement with enhanced tools.
- **Juvenile Law Reform Under Consideration**
 - State is exploring **lowering the age of juvenility to 16** in drug-related crimes, similar to exceptions in **heinous sexual assault cases** under the **Juvenile Justice Act (JJ Act)**.
 - Provisions may also include prosecuting adults who **induce or involve minors** in the drug trade.



- **Crackdown on Foreign Nationals in Drug Trade**
 - Maharashtra government is working on **Standard Operating Procedures (SOPs)** for **deporting foreign nationals** found involved in narcotics offences.
 - This includes cross-border and networked cartel control strategies.

Constitutional and Legal Provisions

- **Article 47 (DPSP):** Obliges the State to **prohibit drugs injurious to health**, strengthening the case for such amendments.
- **NDPS Act, 1985:** Governs all aspects of narcotic and psychotropic substances in India.
- **MCOCA, 1999 (Maharashtra):** Originally designed to fight **organised crime, underworld networks, and terrorism**, now extended to narcotics.
- **Juvenile Justice (Care and Protection of Children) Act, 2015:** Allows trying juveniles aged 16–18 as adults in heinous crimes.

Important Definitions

- **Organised Crime:** Systematic illegal activity carried out by structured criminal groups for profit or power.
- **MCOCA:** A stringent state law to deal with organised crime, terrorism, and syndicated criminal operations.
- **Drug Peddling:** The illegal trade or sale of narcotic or psychotropic substances.
- **Juvenile:** A person below the age of 18, but the law allows flexibility in heinous crimes.

Conclusion

The Maharashtra government's move to **expand the ambit of MCOCA to include drug peddling** reflects a proactive approach to address the growing menace of narcotics and its links with organised crime. By introducing **stricter bail norms, longer detention, and stronger prosecutorial tools**, the State aims to send a strong deterrent message. The proposed changes in juvenile drug cases and targeting foreign nationals involved mark a holistic strategy to tackle drug networks.

8. Akash Prime & Strategic Missile Tests

Key Highlights

1. Successful High-Altitude Trial of Akash Prime by Indian Army

- The Indian Army conducted successful trials of **Akash Prime**, an indigenously developed **medium-range surface-to-air missile (SAM)**.
- The test was conducted in **eastern Ladakh at over 15,000 ft**, validating its performance in high-altitude, low-oxygen environments.
- It scored **direct hits on fast-moving aerial targets**, demonstrating high accuracy.

2. Collaboration with DRDO

- The trials were conducted by the **Army Air Defence Corps** in coordination with the **Defence Research and Development Organisation (DRDO)**.
- DRDO is the primary R&D body under the **Ministry of Defence**, responsible for developing strategic and tactical weapons.

3. Deployment Plan and Strategic Utility

- Akash Prime is expected to equip the **3rd and 4th regiments** of the Army's Akash Air Defence System.
- It enhances India's **air defence capabilities** against fighter jets, cruise missiles, and UAVs in difficult terrains like the **LAC with China**.



4. Definition & Features of Akash Prime

- Akash Prime is an **upgraded version** of the Akash missile, with improved **seeker technology, high-altitude operability, and better reaction time**.
- It is a **fully indigenous system** with a range of **25–30 km** and capable of neutralizing multiple aerial threats simultaneously.

5. Strategic Missile Tests: Prithvi-II and Agni-I

- The **Strategic Forces Command (SFC)** successfully test-fired the **Prithvi-II** (short-range) and **Agni-I** (intermediate-range) missiles from **Chandipur, Odisha**.
- These tests validated **operational readiness** and **technical reliability**, crucial for India's **nuclear deterrence strategy**.

Important Constitutional & Legal Provisions

- **Article 51A (g)** – Duty of every citizen to defend the country and develop scientific temper.
- **Defence Procurement Procedure (DPP) & Make in India** – Promote indigenisation in defence manufacturing.
- **Strategic Forces Command (SFC)** – Established under the **Nuclear Command Authority (NCA)** to handle nuclear-armed missiles like Agni and Prithvi.

Important Definitions

- **Surface-to-Air Missile (SAM):** A missile designed to be launched from the ground to destroy airborne targets.
- **Strategic Missile:** A long-range missile designed to deliver nuclear warheads.
- **Indigenous Defence System:** Weaponry or platforms developed and manufactured within the country using domestic resources.

Conclusion

The successful trial of **Akash Prime** and strategic missile systems (Agni-I and Prithvi-II) underlines India's growing **self-reliance in defence technology** and **combat readiness** in both conventional and nuclear domains. These developments are particularly relevant amidst **geopolitical tensions along the LAC and LOC**.

SCIENCE & TECHNOLOGY

1. China Challenges U.S. Dominance in Global AI Race

1. Rise of Chinese AI Models in Global Market

- Chinese firms like **DeepSeek, Alibaba, Tencent, and Baidu** are rapidly gaining market share in the **global artificial intelligence ecosystem**, providing cheaper and competitive alternatives to U.S. models like **ChatGPT**.
- Even **American firms like AWS, Microsoft, and Google** are offering access to Chinese models like DeepSeek, despite security concerns from the U.S. government.

2. Strategic Implications: AI as a Geopolitical Tool

- AI is increasingly viewed as a critical strategic asset**, central to **defence, telecommunications, surveillance, and industrial competitiveness**.
- The **U.S.-China tech rivalry** in AI has been compared to a new form of **technological Cold War**, where countries are being forced to **align with either the U.S. or China's AI ecosystems**.



3. China's Strength: Open-Source Models, Cost, and Accessibility

- Chinese AI companies are gaining traction by releasing **open-source models** (e.g., Qwen by Alibaba) and offering them at significantly **lower prices** (e.g., DeepSeek is said to be **17 times cheaper** than ChatGPT).
- Open-source flexibility is especially attractive to **developing nations** in **Africa, Latin America, and Southeast Asia**.

4. U.S. Response: Export Controls, Data Concerns, and Policy Push

- The U.S. has **restricted chip exports** (like Nvidia's H20) and banned use of Chinese AI apps on government devices, citing **data security and surveillance risks**.
- A **bipartisan U.S. bill** seeks to ban federal agencies from using **Chinese-developed AI**, reflecting rising techno-nationalism.

5. Lost Opportunities and Global Standard-Setting Power

- The **fracturing of the global AI ecosystem** is reducing collaboration, causing **U.S. companies to lose billions in sales** and weakening America's ability to **set global AI norms and standards**.
- Experts warn of the risk of **AI-powered misinformation, propaganda**, and lack of **international governance** on AI safety.

Key Definitions for UPSC

- Artificial Intelligence (AI)**: The simulation of human intelligence in machines that are programmed to think, learn, and act autonomously.
- Open-Source AI**: AI models whose underlying code is freely available to developers, allowing for customization and innovation.
- Technological Cold War**: A geopolitical rivalry where countries compete to dominate emerging technologies like AI, semiconductors, and quantum computing.
- AI Superintelligence**: A hypothetical form of AI that surpasses human intelligence in all respects.

Constitutional & Legal Relevance (India-specific angle)

- While not directly covered in Indian law yet, India's **Draft Digital India Act and Data Protection Act, 2023** may influence AI governance.

- **NITI Aayog's National Strategy for AI (2018)** promotes **AI for All**, but India is yet to establish a regulatory framework for AI.

Conclusion

The **U.S.-China race in AI development** represents not just an economic competition but a **battle over values, standards, and strategic supremacy** in a digital world. China's open-source, cost-effective approach is gaining traction globally, especially in the Global South. For India, this rivalry offers both **opportunities for partnerships** and a **cautionary tale** about technological dependence. It underscores the urgency to develop a robust **national AI strategy**, balance innovation with ethics, and secure a **sovereign AI ecosystem** aligned with **democratic values and global cooperation**.

2. New ISRO Satellites to Enhance IMD Forecasting Accuracy

Key Developments: Advanced INSAT Satellites for Weather Forecasting

- **Launch of INSAT-4 Generation Satellites by 2028–29:**
 - The **Indian Meteorological Department (IMD)** has proposed that **ISRO** build and launch **two advanced 4th-generation INSAT satellites** to replace the aging 3rd-generation satellites.
 - These satellites, with an estimated cost of **₹1,800 crore**, will be funded by the **Ministry of Earth Sciences** and are expected to significantly boost IMD's short- and medium-range weather forecasting accuracy.
- **Enhanced Capabilities of the New Satellites:**
 - Equipped with **state-of-the-art sensors** for **lightning prediction, cloudbursts, humidity, and wind mapping**, the satellites will enable **3D atmospheric observation** over land and ocean.
 - Their **higher spatial and temporal resolution** will fill gaps in current forecasting—especially in **remote areas** like oceans, the Himalayas, and polar regions.
- **Limitations of Current Technology & Need for Upgrade:**
 - Current satellites provide images every 15 minutes at **1 km resolution (visible)** and **4 km resolution (infrared)**, limiting small-scale event detection.
 - **Radars**, while accurate, are limited to 500 km coverage and cannot be deployed in remote terrains or over oceans, making **satellites essential** for all-weather, wide-area observation.
- **IMD's International Satellite Data Integration:**
 - In addition to Indian satellites, the IMD uses data from **European, Japanese, and Korean satellites**.
 - Despite this, the **absence of high-resolution domestic satellites** restricts the forecasting of **cloudbursts, thunderstorms, and extreme events**.



Constitutional, Legal & Scientific Relevance

- **Constitutional Provision:**
 - **Article 51A(h):** It is the duty of every citizen to develop scientific temper, which includes the application of scientific technologies like satellites in public services such as weather forecasting.
- **Institutional Frameworks Involved:**
 - **ISRO (Indian Space Research Organisation):** National space agency responsible for satellite development.

- **IMD (India Meteorological Department):** Premier agency under the Ministry of Earth Sciences for meteorological observations, forecasting, and disaster warning.

- **Definition – Geostationary Satellite:**

A satellite in orbit over the equator with a 24-hour period, appearing stationary relative to the Earth. Useful for **continuous weather monitoring** of the same region.

Importance for Disaster Preparedness and Climate Resilience

- **Disaster Mitigation:**

- With increasing **extreme weather events** (e.g., lightning, cyclones, cloudbursts), better satellite-based forecasting can help **reduce fatalities** and **enable timely warnings**.

- In **March-April 2025**, **162 deaths** were reported due to lightning, underlining the urgency of improved weather tools.

- **Climate Adaptation and Governance:**

- Improved forecasting aligns with India's **Sendai Framework** commitments for disaster risk reduction.

- Also supports goals under **SDG 13 (Climate Action)** and **SDG 11 (Sustainable Cities and Communities)**.

Conclusion

The development of **next-gen INSAT-4 satellites** marks a crucial step in **strengthening India's meteorological infrastructure**, ensuring **better disaster preparedness**, **climate resilience**, and **scientific decision-making**. Leveraging **indigenous space technology** through ISRO and **data assimilation** by IMD, India can enhance its forecasting capabilities, especially for **remote and high-risk areas**, contributing to the broader vision of **Digital India and Atmanirbhar Bharat**.

3. Indian Genetic Research: A Global Hope for Rare Diseases

- **Unique Opportunity from India's Genetic Diversity**

- India has over **350 endogamous (closed) communities** and a high rate of **consanguinity**, leading to a higher prevalence of recessive genetic mutations.
- This provides a valuable patient base and disease models to study rare genetic disorders that are difficult to research in the genetically homogeneous populations of the Global North.

- **Advances in Affordable Genetic Therapies**

- The cost of genomic sequencing has dropped dramatically since the **Human Genome Project** (2003), from ~\$2.7 billion to under \$100 today, enabling affordable genetic research and therapies.
- Indian research centers like the **Centre for Stem Cell Research, CMC Vellore**, have developed frugal innovations (e.g., lentiviral vectors for Hemophilia-A and India's first CRISPR-based therapy for sickle cell disease).
- India's CRISPR therapy for sickle cell disease costs \$25,000–\$100,000 per patient, significantly cheaper than ~\$2.2 million in the West.

- **Strong Policy and Regulatory Support**

- The **National Policy for Rare Diseases (2021)** provides financial support and establishes Centers of Excellence for rare disease treatment.

- The **Indian Council of Medical Research (ICMR)** has issued clear guidelines for cell and gene therapy research, encouraging ethical and rapid innovation.
- Subsidies and support for manufacturing critical components (e.g., delivery vectors, stem cells) help keep costs low.

• Global Collaboration Potential

- India can drive a **North-South scientific partnership** by leveraging its genetic diversity and innovation capacity.
- Proposed platforms can integrate **AI-powered analytics**, clinical and genomic data, and bio-samples to match patients for trials and optimize gene-editing therapies.
- This creates a pathway for India to become an equal global partner in developing personalized and precise therapies for rare diseases.



• Definitions and Key Concepts

- **Rare diseases:** Medical conditions affecting a small fraction of the population; over 400 million people globally suffer from more than 7,000 rare diseases.
- **Orphan drugs:** Drugs developed to treat rare diseases, often neglected due to lack of commercial viability.
- **CRISPR:** A genome-editing tool allowing precise modifications of DNA sequences to correct genetic defects.

Constitutional and Legal Provisions

- **Article 21 (Right to Life):** Encompasses the right to health and access to affordable healthcare, including rare disease treatments.
- **Directive Principles (Article 47):** Directs the State to improve public health as a primary duty.
- **ICMR guidelines and National Health Policies:** Provide legal and ethical frameworks for research and application of advanced therapies like gene editing.

Conclusion and UPSC Relevance

- India's genetic innovation capabilities, supported by policy and regulatory frameworks, can transform rare disease treatment, not only domestically but globally.
- The country can reposition its genetic vulnerabilities as scientific assets, making its endogamous communities potential co-creators of new cures.

4. Kalaa Setu: Promoting AI-Driven Multilingual Governance Communication

• Objective of Kalaa Setu

- The Ministry of Information & Broadcasting, through its startup accelerator WaveX, has launched the **"Kalaa Setu" challenge** to invite AI startups to build real-time, scalable solutions for **multimedia content generation from text inputs** in multiple Indian languages.

- The initiative aims to bridge the **digital language divide**, enabling effective, inclusive, and regionally resonant communication from government to citizens.

• Core Focus Areas of Technology

- **Text-to-video generation:** Automating the creation of video explainers tailored to diverse contexts.
- **Text-to-graphics generation:** Producing infographics and illustrative visuals to simplify complex data.
- **Text-to-audio generation:** Creating emotionally expressive, accurate audio content sensitive to regional accents.
- Together, these technologies support dynamic, citizen-centric outreach in local languages, improving the accessibility of official information.



• Citizen-Centric Applications

- Information can be customized for various groups — for example, farmers receiving weather updates, students accessing educational notices, or elderly citizens learning about welfare schemes — all in their **own languages and dialects**.
- The initiative emphasizes real-time content delivery for timely and impactful communication, enhancing trust and inclusivity in governance.

• Supporting Startup Innovation and Indigenous Technology

- Startups are required to submit a **Minimum Viable Concept (MVC)** by July 30, 2025, showcasing a video demo.
- Selected teams will receive incubation, support from national broadcasters (AIR, DD, PIB), and further development opportunities through MoUs.
- The parallel **Bhasha Setu challenge**, focused on real-time language translation, remains open till July 22, 2025.

• Definitions and Constitutional Context

- **AI (Artificial Intelligence):** Technology enabling machines to mimic human intelligence for tasks like language translation, content generation, and decision-making.
- **Digital governance:** The use of technology to improve public service delivery, enhance transparency, and engage citizens.
- **Article 19(1)(a) of the Constitution:** Guarantees freedom of speech and expression, which also includes the right to receive information.
- **Article 350A:** Directs states to provide facilities for instruction in the mother tongue at the primary stage of education; reflects India's commitment to linguistic diversity.

• Legal and Policy Framework

- Supported under **Digital India**, which promotes technology-driven inclusive governance.

- Aligned with **National Language Translation Mission (Bhashini)** to promote access to digital content in Indian languages.
- Advances the objectives of the **Startup India initiative**, fostering indigenous R&D and innovation.

Conclusion and UPSC Relevance

• Conclusion

- Kalaa Setu and Bhasha Setu are transformative steps toward a future-ready, digitally empowered India. They aim to build a **technologically inclusive governance framework**, reflecting India's linguistic and cultural richness.
- The initiatives also strengthen India's indigenous AI capabilities and promote self-reliance (Atmanirbhar Bharat).

5. Nipah Virus Surveillance in Kerala: Central Teams Assess Situation in Palakkad and Malappuram

1. Central Scientific Teams Mobilised for Nipah Control

- A central team led by the **National Centre for Disease Control (NCDC)** visited **Palakkad and Malappuram** districts of Kerala to assess the **Nipah virus outbreak**.
- Another team from the **National Institute of Virology (NIV), Pune**, headed by Dr. Dileep Patil, is scheduled to conduct **disease mapping and bat surveillance** in the affected areas.

2. Disease Surveillance and Containment Measures

- The NCDC team reviewed medical protocols and held talks with **District Medical Officers**, expressing satisfaction with the **containment and preventive strategies**.

- As of now, **499 people are under observation**, with:

- **203 in Malappuram**
- **178 in Palakkad**
- **116 in Kozhikode**
- **2 in Ernakulam**

- **14 people are under treatment**, and **56 quarantined individuals in Malappuram** tested negative.



3. Containment Zone Updates

- **Restrictions lifted in 20 wards** of Malappuram district after no new cases were detected; **no containment zones remain** in the district.
- In contrast, **6 wards in Palakkad** continue as containment zones, with **strict enforcement** by district authorities.

4. What is Nipah Virus? (Definition for UPSC)

- **Nipah Virus (NiV)** is a zoonotic virus transmitted from **animals (primarily fruit bats)** to humans, and also via **contaminated food or human-to-human contact**.
- It causes **severe respiratory illness and encephalitis**, with a high fatality rate.



- **No specific treatment or vaccine exists**, and management involves **supportive care, early detection, isolation, and contact tracing**.

5. Constitutional and Legal Provisions

- Under **Entry 29 & 30 of the Concurrent List**, both Centre and States can legislate on **prevention of infectious diseases**.
- **The Epidemic Diseases Act, 1897** and **Disaster Management Act, 2005** empower governments to take measures during outbreaks.
- Central agencies like **NCDC, ICMR, and NIV** play key roles in disease surveillance and response coordination.

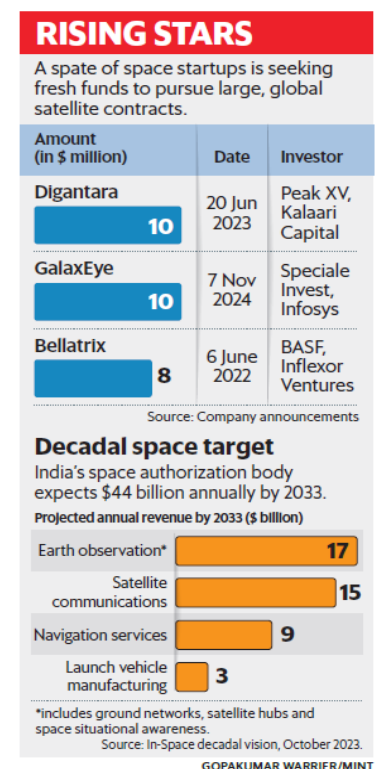
Conclusion & UPSC Relevance

The Nipah surveillance in Kerala reflects India's **strengthened disease surveillance mechanisms** and **Centre-State coordination** in public health emergencies. Kerala's swift containment measures and scientific disease mapping underline the importance of **community health infrastructure, zoonotic surveillance, and early warning systems**. Continuous investment in **One Health frameworks**, involving animal, human, and environmental health, is critical to address emerging infectious diseases.

6. India's Space Startups Rise as Global Defence Players

Key Highlights

- **Emergence of Space-Based Defence Startups:**
Once a nascent sector, **Indian space startups** such as **Digantara, GalaxEye, Bellatrix Aerospace, Pixxel, and Ananth Technologies** are now **poised to win international contracts** for satellite manufacturing and **space-based surveillance services**, amid growing global demand for sovereign space infrastructure.
- **Geopolitical Tailwinds Boosting India's Opportunity:**
Geopolitical shifts post-**Russia-Ukraine war**, rising instability in **West Asia**, and **India's strategic neutrality** have created an ideal opportunity for Indian firms to become **trusted space-tech suppliers**, as **traditional partners like Russia, France, and the US** become less accessible.
- **Growing Global Demand for Surveillance Satellites:**
Nations increasingly seek **high-resolution imaging satellites** for purposes such as **border surveillance, weather forecasting, disaster management, and urban planning**. Indian startups offer cost-effective, **data-as-a-service models**, making them globally competitive.
- **Private Sector & Tech Partnerships Fueling Growth:**
Strategic alliances like **JSW Defence-Shield AI** and investments by **Amazon Web Services and Google** are catalyzing **capital, technology transfer, and scaling** of India's space ecosystem. These initiatives are also enhancing India's **geospatial defence infrastructure**.
- **Revenue Potential & Economic Impact:**
The **space surveillance market** is highly lucrative, with **contracts ranging from \$1 million to over**





\$1 billion annually. India aims to achieve **\$44 billion annual space industry revenue by 2033**, with **space surveillance services alone potentially contributing 50%.**

Important Definitions

- **Space Surveillance:** Monitoring of artificial satellites and space debris to ensure secure and uninterrupted operations in orbit.
- **Geospatial Intelligence:** Information derived from satellite imagery and spatial data used in defence, planning, and disaster response.
- **Data-as-a-Service (DaaS):** A business model where satellite data is sold on-demand, rather than selling satellites themselves.

Constitutional & Legal Provisions

- **Article 51:** Promotes international peace and cooperation—India's peaceful space cooperation aligns with this spirit.
- **Space Activities Bill (Draft):** Aims to regulate commercial space activities and provide legal clarity for private sector participation.
- **Make in India & Atmanirbhar Bharat:** These policies promote indigenous capabilities in critical technology areas like space and defence.

Additional Key Points

- **Soft Power & Strategic Autonomy:**
India's rise in space tech enhances its **geopolitical soft power**, helping countries in the Global South with secure satellite infrastructure, and reducing dependence on Western or Chinese tech.
- **Capacity Building & Innovation:**
Startups are not only scaling satellite assembly but also innovating on **image resolution, latency, and mission cost**. Indigenous manufacturing reduces costs and builds national self-reliance in defence.
- **Dual-Use Technology Risks:**
The defence orientation of private space companies raises questions about **ethical use, regulation, and cybersecurity**, requiring robust governance and policy oversight.

Conclusion

India's space startup ecosystem is undergoing a **strategic transformation**, driven by **geopolitical shifts, private investment, and rising global demand** for surveillance infrastructure. With increasing capabilities in **satellite manufacturing, data analytics, and defence applications**, India is well-placed to become a **global leader in space-based defence services**. However, this requires **strong regulation, sustained investment, and policy support** to ensure long-term security and economic benefits.

7. New Study Shows Cysteine Withdrawal Causes Rapid Weight Loss in Mice

Key Highlights of the Study

1. **Cysteine Restriction Causes Rapid Weight Loss in Genetically Modified Mice**
 - A **Nature (2024)** study found that **removing cysteine**, a non-essential sulphur-containing amino acid, **caused a 30.6% weight loss** in mice within a week.
 - Cysteine restriction was **more effective** than withdrawal of any **essential amino acid** or even methionine in inducing fat loss.

- However, this effect was seen **only in genetically engineered mice** who could not produce cysteine endogenously — in normal mice, cysteine restriction had no effect.

2. Historical Context and Nutritional Significance

- The concept of **essential amino acids** was established by William Rose in 1937 — these are amino acids that the body **cannot synthesize** and must be obtained via diet.
- Cysteine is **non-essential** (normally synthesized from methionine), but has a **key metabolic role**, including being a precursor to **glutathione**, a major antioxidant.

3. Mechanism and Metabolic Implications

- Cysteine restriction simulates a **low-nutrition state**, prompting **fat burning and conversion of white fat into brown fat**, which has higher metabolic activity.
- The study highlighted **increased oxidative stress** due to loss of glutathione production — suggesting **health trade-offs** of amino acid restriction diets.
- The weight loss was **reversible** when cysteine was reintroduced, confirming its role in regulating body metabolism.

4. Broader Scientific and Health Implications

- Although **methionine-cysteine restricted diets** are already under study for lifespan extension and metabolic health, **translating mouse findings to humans** remains difficult due to **different physiologies**.
- A **2023 human trial** with low methionine-cysteine intake showed promising results for weight loss **without side effects**, but much more research is needed.
- Experts caution against prematurely applying such findings in humans due to **potential disruptions in antioxidant systems** and unknown long-term effects.

5. Ethical and Research Cautions

- Dr. Jayashree Gopal emphasized that **tampering with essential cellular systems**, like the antioxidant network, may have unintended consequences.
- The study demonstrates the value of **genetic modification for nutrition research**, but also reflects the **limitations of animal models**.
- Scientific progress in nutrition and weight loss **must proceed cautiously**, guided by robust evidence and long-term human trials.

Definitions and Concepts

- **Essential Amino Acids:** Amino acids that the body **cannot synthesize** and must be obtained from diet. (e.g., leucine, lysine).
- **Non-Essential Amino Acids:** Amino acids that the body can produce internally (e.g., cysteine, glutamine).
- **Glutathione:** A critical **antioxidant** in cells that protects against **oxidative stress**, synthesized from cysteine.
- **Brown Fat:** A type of adipose tissue that **burns energy** to generate heat, unlike white fat which stores energy.
- **Oxidative Stress:** A harmful condition where **reactive oxygen species (ROS)** accumulate in cells, causing damage to proteins, DNA, and lipids.



Constitutional and Legal Relevance

While this study is scientific in nature, it links to broader constitutional provisions regarding **health, nutrition, and scientific advancement**:

- **Article 21**: Right to life includes right to **health and nutrition**.
- **Article 47 (DPSP)**: Duty of the State to **raise nutrition levels and improve public health**.
- **National Nutrition Policy & Poshan Abhiyan**: May integrate future breakthroughs from such research into public health goals.

Conclusion

The study presents a **groundbreaking insight** into how restricting a single non-essential amino acid like **cysteine** can induce rapid fat loss, potentially transforming our understanding of **nutritional biochemistry** and **weight management**. However, its translation into **clinical or dietary practice** must be **gradual and evidence-based**, due to the complex role of amino acids in human physiology. The findings highlight the **potential of genetic and metabolic research**, while also reaffirming the **caution needed in applying lab-based results to human health systems**.

8. Gujarat Launches India's First Tribal Genome Project

1. First-of-its-Kind Tribal Health Initiative

- Gujarat becomes the **first Indian State** to launch a **genome sequencing project** exclusively for **tribal communities**.
- Aimed at **identifying genetic health risks** and enabling **precision healthcare** for vulnerable tribal populations.

2. Project Highlights

- Title: "**Creation of Reference Genome Database for Tribal Population in Gujarat**".
- Implementing Agency: **Gujarat Biotechnology Research Centre (GBRC)**.
- Coverage: **2,000 individuals** from **tribal communities across 17 districts** of Gujarat.

3. Objective & Benefits

- **Identify hereditary disorders**, rare diseases, and population-specific risk factors among tribal groups.
- Helps in **customized treatments**, **early diagnosis**, and **targeted interventions** through **personalized medicine**.
- Long-term benefit: Helps bridge **health disparity gaps** in Scheduled Tribe (ST) populations.

4. Constitutional & Legal Backing

- **Article 46**: Directive Principle of State Policy mandates the promotion of **educational and economic interests** of Scheduled Tribes.
- **Fifth Schedule**: Provides for the administration and control of tribal areas.
- **Forest Rights Act, 2006**: Recognizes rights of forest-dwelling tribal communities.
- **SC/ST (Prevention of Atrocities) Act**: Provides safeguards against discrimination.

5. Definitions & Concepts



- **Genome Sequencing:** Process of determining the complete DNA sequence of an organism's genome. It helps in understanding genetic variations and disease predispositions.
- **Precision Medicine:** Medical care designed to optimize efficiency by customizing treatment to the individual genetic profile.

Additional Key Points

- Tribal populations often face **neglect in national health research**.
- This initiative aligns with **One Health** approach and India's **digital health mission**.
- Will contribute to building a **diverse Indian genomic database** – essential for **national health security** and scientific equity.

Conclusion

The **Tribal Genome Sequencing Project** marks a historic step in integrating India's marginalized communities into the future of **genomic medicine**. By focusing on the specific needs of tribal populations, Gujarat sets a model for **inclusive and data-driven healthcare reforms** in India.

9. Bharat NCX 2025: Strengthening India's Cybersecurity Architecture

Key Highlights

1. Strategic Launch of Bharat NCX 2025

- Officially inaugurated by **Deputy National Security Advisor**, in collaboration with **Rashtriya Raksha University** and **National Security Council Secretariat (NSCS)**.
- Theme: **"Enhancing the Operational Preparedness of Indian Cyberspace"**.
- Focuses on **real-world simulations of cyber incidents**, such as:
 - Attacks on critical infrastructure
 - Deepfake manipulation
 - API security breaches
 - Autonomous malware attacks



2. Capacity Building through Live Simulations and Collaboration

- The **two-week exercise (July 21 – August 1, 2025)** offers **immersive training** in **IT and Operational Technology (OT)** system vulnerabilities.
- Encourages joint participation from **government, defence, private sector, and academia**, boosting **inter-sectoral cooperation** on cyber resilience.

3. Use of Artificial Intelligence and Emerging Technologies

- Emphasis on the role of **AI in cyber defence**: threat detection, automated response, and behavioral analytics.
- Aims to **lower susceptibility to cyberattacks**, **accelerate incident recovery**, and improve **decision-making during cyber crises**.

4. Strategic Policy Engagement and Stakeholder Involvement

- **STRATEX (Strategic Decision-Making Exercise)** brings together top decision-makers to simulate **national cyber crisis response**.
- **CISO Conclave** unites government and industry leaders to discuss AI integration, OT security, and evolving regulatory needs.
- A **Cybersecurity Startup Exhibition** showcases **Indian tech solutions**, aligning with **Atmanirbhar Bharat** goals.

5. Legal and Institutional Context

- **Information Technology Act, 2000**: Legal foundation for cybersecurity, data protection, and cybercrime prevention.
- **National Cyber Security Policy, 2013** (due for revision): Envisions building **secure and resilient cyberspace**.
- Institutional mechanisms: **CERT-In**, **NSCS**, and **National Critical Information Infrastructure Protection Centre (NCIIPC)**.

6. Cybersecurity as a National Security Imperative

- Deputy NSA emphasized cybersecurity as the **bedrock of national security**, covering sectors like **healthcare, energy, transport, defence, and digital governance**.
- Cyber-attacks are no longer isolated tech issues but **strategic tools used by state and non-state actors**.

Key Definitions for UPSC

- **Cyber Resilience**: The ability of an organization or nation to prepare for, respond to, and recover from cyber threats with minimal disruption.
- **Operational Technology (OT)**: Hardware and software that detects or causes changes through direct monitoring and control of physical devices (e.g., power grids, factories).
- **CISO (Chief Information Security Officer)**: A senior-level executive responsible for developing and implementing an information security program.

Conclusion and UPSC Relevance

Bharat NCX 2025 reflects **India's evolving cybersecurity doctrine**—one that integrates **real-time preparedness, cross-sectoral collaboration, and indigenous tech innovation**. The inclusion of **AI, OT security, strategic decision-making, and start-up engagement** makes it a **model initiative** for tackling modern cyber threats in a digital-first era.

10. NISAR Satellite Launch: A Landmark in India–U.S. Space Cooperation

Key Highlights for UPSC Civil Services Exam

1. First Joint NASA–ISRO Earth Observation Mission

- **NISAR (NASA-ISRO Synthetic Aperture Radar)** is the **first collaborative satellite mission** between NASA and ISRO.
- Scheduled to be launched on **July 30 at 5:40 p.m.** from **Satish Dhawan Space Centre, Sriharikota** using **GSLV-F16**.

2. Unique Dual-Frequency SAR Technology

- NISAR will be the **first satellite to operate with dual-frequency Synthetic Aperture Radar (SAR)**:
 - **L-band radar** from NASA (penetrates vegetation and ice).
 - **S-band radar** from ISRO (suitable for soil, land cover, infrastructure).
- The satellite uses a **12-metre unfurlable mesh reflector antenna** by NASA and ISRO's modified **I-3K satellite bus**.

3. High-Resolution, All-Weather Earth Monitoring

- NISAR will orbit the Earth in a **sun-synchronous orbit at 743 km** with an inclination of **98.4°**.
- It will use **SweepSAR technology** to scan a **242 km-wide swath**, offering **high spatial resolution**.
- Capable of capturing data **day/night, all-weather**, with **12-day revisit cycles**.

4. Applications Across Climate, Disaster, and Ecosystems

- Tracks **land deformation, glacial/ice sheet movement, vegetation dynamics, and soil moisture**.
- Used in **disaster response, sea ice classification, storm intensity monitoring, flood mapping, surface water resources tracking, and coastal zone management**.



5. Strategic Technology Partnership

- Product of **over a decade of collaboration** between ISRO and NASA's **Jet Propulsion Laboratory (JPL)**.
- Demonstrates India's growing role in **global Earth observation**, technology innovation, and **bilateral space diplomacy**.

Important Definitions for UPSC

- **Synthetic Aperture Radar (SAR)**: A radar system used to create high-resolution images of Earth's surface by using motion of the radar antenna over a target region.
- **Sun-Synchronous Orbit (SSO)**: A near-polar orbit in which a satellite passes over the same part of the Earth at roughly the same local solar time, ideal for imaging applications.
- **SweepSAR**: A radar scanning technique allowing wide coverage with high resolution—used for global repeat imaging.

Legal/Policy Angle (GS-2 & GS-3)

- **Space Cooperation as a Tool of Foreign Policy**: Aligns with India's evolving space diplomacy and **Strategic Technology and Trade Cooperation (STTC)** with the USA.
- **Atmanirbhar Bharat in Space Sector**: ISRO's involvement in advanced technologies strengthens India's capabilities under the **Spacecom Policy 2020** and the upcoming **Space Activities Bill**.

- **Environment and Climate Monitoring:** Supports India's commitments under **Paris Climate Agreement**, **SDG 13 (Climate Action)**, and **Sendai Framework for Disaster Risk Reduction**.

Conclusion

NISAR is a **technological and diplomatic milestone** in Indo-U.S. relations and Earth observation science. With its dual-frequency SAR payload and wide-ranging applications, NISAR will **revolutionize how Earth systems are monitored**, especially in **climate change, agriculture, water, and disaster risk management**.

11. Launch of NISAR Satellite – Key Points

• Overview of NISAR Satellite

- The **NASA-ISRO Synthetic Aperture Radar (NISAR)** satellite is scheduled for launch on **30 July** using India's **GSLV S16** rocket, as confirmed by **ISRO Chairman V. Narayanan**.
- NISAR is a **joint Earth observation mission** between the **Indian Space Research Organisation (ISRO)** and the **National Aeronautics and Space Administration (NASA)**, making it a symbol of Indo-US space collaboration.
- The satellite aims to monitor **Earth's surface dynamics** with unmatched accuracy using **dual-frequency synthetic aperture radar (SAR)**.



• Key Features and Objectives of NISAR

- **Synthetic Aperture Radar (SAR)** technology allows high-resolution imaging regardless of **weather conditions or daylight**, crucial for consistent earth observation.
- NISAR will use **L-band (NASA)** and **S-band (ISRO)** radar systems, making it the **first dual-frequency SAR satellite**.
- It will study **land deformation, ice-sheet dynamics, forest biomass, agricultural changes**, and **natural disasters** such as earthquakes and landslides.

• Strategic and Environmental Significance

- NISAR will provide **critical data for climate change modeling**, natural resource monitoring, and disaster preparedness.
- It supports sustainable development through **evidence-based policymaking**, especially in areas such as **agriculture, urban planning, and water resource management**.
- It enhances India's capabilities in **space-based environmental monitoring**, which aligns with commitments under **SDG 13 (Climate Action)**.

• International Collaboration and Technology Sharing

- The collaboration reflects deepening **Indo-US strategic ties in space technology** and joint innovation.
- India contributed the **S-band radar, satellite integration, and launch support**, while NASA provided the **L-band radar and associated systems**.
- It strengthens India's reputation as a reliable **launch and satellite development partner** in the global space economy.

• Legal and Institutional Framework

- The satellite program aligns with India's **Space Activities Bill (draft)** and long-standing space policy emphasizing **peaceful use of outer space**.

- ISRO functions under the **Department of Space**, governed by **Articles 73 and 77** of the Constitution, which empower the Union government to enter into international agreements.
- The mission complements India's **National Space Policy 2023**, which promotes greater collaboration with foreign agencies and private sector participation.

Conclusion & UPSC Relevance

The launch of NISAR marks a major leap in Earth observation capability, serving critical scientific, environmental, and strategic objectives. It demonstrates India's growing stature in global space cooperation and technological advancement. This topic is highly relevant for **UPSC GS Paper 3 (Science and Technology, Environment, Disaster Management)**, **GS Paper 2 (India-USA relations)**, and **Current Affairs**, especially in themes of space diplomacy, climate monitoring, and innovation in public services.

12. Minimum Standards for Handling Diagnostic Samples: Key Highlights

• Need for Minimum Standards

The Ministry of Health and Family Welfare (MoHFW) has finalized draft minimum standards for the collection, handling, and transport of diagnostic samples, after consultations with subject experts. These are currently under legal vetting. Existing Indian Council of Medical Research (ICMR) guidelines are outdated and fragmented, lacking a unified and enforceable framework.

• Legal and Institutional Gaps

Current gaps include the persistence of unregulated standalone collection centres and the lack of uniform accountability for labs. Despite 2018 government notification to integrate collection centres with main labs, state-level enforcement remains weak. The National Accreditation Board for Testing and Calibration Laboratories (NABL) has raised concerns over inconsistencies in sample reporting and facility disclosures.

• Professional Oversight and Accountability Issues

Legal challenges, including a petition by Dr. Rohit Jain, highlight the absence of qualified signatories on diagnostic reports. The 2018 and 2020 amendments to the Clinical Establishment Rules allowed non-medical professionals (MSc/PhDs) to issue pathology reports without a qualified pathologist's countersignature—contravening a 2017 Supreme Court ruling. This has compromised report authenticity and patient safety.

• Notable Case and Policy Response

The 2021 RT-PCR scam during the Haridwar Kumbh Mela—where over 1 lakh fake tests were conducted—exposed the consequences of unregulated sample collection. The Delhi High Court directed the Centre to address the issue, prompting the creation of four expert subcommittees (pathology, biochemistry, hematology, microbiology) to develop Standard Operating Procedures (SOPs).

• Steps Toward Reform

The MoHFW has now assured the Delhi High Court of an impending policy notification. The policy aims to plug regulatory loopholes, standardize qualifications for sample handlers and report signatories, and enforce lab accountability. A final directive has been issued to complete the notification process within three months.

• Key Definitions and Legal Provisions

- *Good Laboratory Practices (GLP)*: Set of principles intended to ensure the quality, integrity, and reliability of non-clinical laboratory studies.
- *Clinical Establishments Act, 2010*: A central legislation to regulate all clinical establishments in India.
- *NABL Accreditation*: Certifies labs for compliance with ISO standards, including sample handling and reporting accuracy.



Conclusion and UPSC Relevance

Standardization of diagnostic procedures is essential to uphold public health integrity, ensure patient safety, and prevent medical fraud. This initiative aligns with the constitutional mandate under Article 47 (Duty of the State to raise the level of nutrition and the standard of living and to improve public health). For UPSC, this topic intersects GS Paper II (Governance, Polity), GS Paper III (Science & Tech, Health), and ethics in GS Paper IV (Medical Accountability). It also reflects the increasing role of legal oversight and institutional coordination in India's healthcare reforms.

HISTORY & CULTURE

1. Keeladi Excavations and ASI Report Approval

1. Permission Granted for Archaeological Report Preparation

- The **Archaeological Survey of India (ASI)** has allowed **retired archaeologist P.S. Sriraman** to prepare detailed reports on the **third phase of excavations** at **Keeladi** (Sivaganga district) and a season of excavation at **Kodumanal** (Erode district), Tamil Nadu.
- Sriraman had led these excavations before his retirement in **2019**, and sought ASI's permission to access and use excavation materials for report preparation.

2. Significance of Keeladi Excavations

- The **Keeladi site** is crucial as it has revealed evidence of a possible **urban civilization in Tamil Nadu during the Sangam Age (circa 3rd century BCE to 3rd century CE)**.
- Artefacts include **brick structures, pottery with Tamil-Brahmi inscriptions, beads, and industrial remnants**, suggesting literacy, trade, and urban settlement.

3. Academic Controversy Over Findings

- Earlier excavation phases (led by archaeologist **K. Amarnath Ramakrishna**) emphasized continuity and links to an urban Sangam-era culture.
- ASI asked Ramakrishna to revise his report due to "factual inconsistencies", but he **refused**, standing by his conclusions.
- Sriraman, who led the 3rd phase, **disagreed** with the theory of continuity in brick structures between different excavation phases.



4. Transition of Responsibility to State Government

- Since 2017, the **Tamil Nadu State Department of Archaeology** has been independently continuing the excavations from the **4th phase onwards**.
- As of **2024–25**, the project has entered its **10th phase**, uncovering **hundreds of antiquities** and garnering national and international interest.

5. Legal & Constitutional Provisions

- **Article 49** (Directive Principles of State Policy): Duty of the State to protect monuments and places of artistic or historic interest.

- **Ancient Monuments and Archaeological Sites and Remains Act, 1958 (AMASR Act):** Provides for protection, conservation, and regulation of archaeological sites.
- **Archaeological Survey of India (ASI):** A statutory body under the **Ministry of Culture**, responsible for archaeological research and conservation.

6. Importance of Kodumanal Site

- The Kodumanal site is an **early historic industrial settlement** known for **iron production**, **semi-precious bead making**, and its place on **ancient trade routes**.
- It complements Keeladi's findings and helps reconstruct the economic and cultural landscape of early South India.

Conclusion:

The ASI's approval to retired archaeologist Sriraman for preparing excavation reports reflects a move to **preserve, document, and disseminate** valuable insights into **India's ancient urban history**. The **Keeladi excavations challenge the North-centric narrative of early urbanism in India**, highlighting the cultural richness of early South Indian civilization.

2. Reviving India's Intellectual Legacy: Global Conference on Manuscript Heritage 2025

1. First-Ever Global Conference on Manuscript Heritage

- The **Ministry of Culture** will host the **International Conference on 'Reclaiming India's Knowledge Legacy Through Manuscript Heritage'** from **11–13 September 2025** at **Bharat Mandapam, New Delhi**, in **hybrid mode** (physical and virtual).
- This historic event aligns with **Guru Purnima** and commemorates **Swami Vivekananda's 1893 Chicago speech**, reinforcing India's role as a **global knowledge centre**.

2. India's Rich Manuscript Treasure: A Civilisational Continuum

- India possesses over **1 crore manuscripts**, spanning **philosophy, science, mathematics, medicine, literature, rituals, and arts**, forming the core of **Bharatiya Jñāna Paramparā** (Indian Knowledge Systems - IKS).
- Manuscripts are not just heritage artefacts but a **living repository of knowledge**, requiring conservation, study, and public dissemination.

3. Key Themes and Global Participation

- The 3-day event will witness over **500 delegates**, including **75 eminent scholars and cultural custodians** from India and abroad.
- Thematic sessions will focus on:
 - **Digitisation and AI integration**
 - **Palaeography and metadata standards**
 - **Ethical custodianship and legal frameworks**
 - **Curricular integration of manuscript knowledge**
 - **Technology and manuscript-focused startups**

4. Major Institutional and Policy Outcomes

- Conference aims to adopt the **New Delhi Declaration on Manuscript Heritage**.

- Formation of **expert working groups** on:
 - **Decipherment and conservation**
 - **Translation and metadata digitisation**
 - **International institutional collaborations**
- Launch of the **Manuscript Research Partner (MRP) Programme** for training youth in manuscript studies, script labs, and content development.

5. Cultural, Academic, and Diplomatic Significance

- Side events include exhibitions of **UNESCO-inscribed rare manuscripts, live conservation demos, cultural performances, and startup showcases.**
- Original research invited in **Hindi and English** on themes like codicology, education, AI, diplomacy, and heritage law.
- The event reinforces India's identity as a **civilisational state** and a **thought leader** in global heritage preservation and knowledge diplomacy.

Key Definitions for UPSC:

- **Manuscript:** A handwritten document, especially those from ancient times, containing literary, scientific, or philosophical knowledge.
- **Codicology:** The study of manuscripts as physical objects — their structure, materials, and historical significance.
- **Indian Knowledge Systems (IKS):** Traditional Indian intellectual traditions including Vedic texts, Ayurveda, astronomy, mathematics, and arts.



Constitutional & Legal Provisions:

- **Article 49:** Directs the State to protect monuments, places, and objects of artistic or historic interest.
- **Article 51A(f):** Fundamental Duty to value and preserve the rich heritage of our composite culture.
- **Ancient Monuments and Archaeological Sites and Remains Act, 1958:** Governs conservation and protection of historical records and sites.
- **Manuscript Conservation and Preservation Policy (proposed):** A national-level framework is under consideration.

Conclusion & UPSC Relevance:

The upcoming **Global Conference on Manuscript Heritage 2025** marks a paradigm shift in **reviving, digitising, and globalising India's ancient manuscript wealth**. By integrating **cultural diplomacy, technology, and education**, it enhances India's soft power, deepens civilisational pride, and positions India as a **global hub for traditional knowledge systems**.

3. UNESCO World Heritage Tag for Maratha Fort Systems

What is the News?

- The **"Maratha Military Landscapes"** have been **inscribed on the UNESCO World Heritage List** during the 47th session of the World Heritage Committee held in Paris.

- The inscription recognizes **12 forts** across **Maharashtra and Tamil Nadu** that showcase the **distinctive military strategies and architecture** developed by the Maratha Empire (17th–19th centuries).

Key Forts Included in the UNESCO Tag

- Maharashtra (11 Forts):**
Salher, Shivneri, Lohgad, Khanderi, Raigad, Rajgad, Pratapgad, Suvarnadurg, Panhala, Vijay Durg, Sindhudurg
- Tamil Nadu (1 Fort):**
Gingee Fort

These forts represent **hill forts, coastal forts, and island forts**, reflecting **adaptation to diverse terrains** and innovative Maratha fortification techniques.

Significance of the Maratha Military Landscapes

- Military Innovation:** These forts were part of an **integrated military architecture system** featuring **strategic location, layered defenses, water management, and supply chains**.
- Cultural and Historical Value:** The forts symbolize **Maratha resistance** against the Mughals and British, and stand as testimonies to **Shivaji Maharaj's vision of Swarajya**.
- Architectural Legacy:** Use of **locally available materials**, minimal ornamentation, and **terrain-conforming designs** reflect ecological and tactical brilliance.

Constitutional & Legal Provisions

- Article 49:** Directs the State to protect monuments and places of artistic or historic interest.
- Article 51A(f):** Fundamental Duty of every citizen to value and preserve the rich heritage of the country.
- The Ancient Monuments and Archaeological Sites and Remains Act, 1958:** Provides protection for historical and archaeological monuments.
- India is a signatory to the **1972 UNESCO World Heritage Convention**.

Importance of UNESCO World Heritage Status

- International recognition** leading to increased **tourism, funding, and conservation support**.
- Enhances **India's cultural diplomacy and soft power**.
- Brings global attention to **lesser-known regional heritage sites**.
- Promotes **sustainable heritage management**, especially in ecologically sensitive zones like the Western Ghats and Konkan coast.

Conclusion & UPSC Relevance

Conclusion:

The UNESCO recognition of Maratha Military Landscapes is a **milestone in heritage conservation** and a tribute to **India's indigenous military and architectural ingenuity**. It is not only a boost to cultural pride but also an opportunity for **sustainable tourism and regional development**.

Int'l support helps 12 Maratha forts scoop Unesco World Heritage label

By Vrinda Tulsian, New Delhi

Published on: Jul 12, 2025 03:09 AM IST



India secured a cultural victory as 12 Maratha forts were added to UNESCO's World Heritage List, recognising their military significance and heritage.



Pratapgad, one of the 12 forts, selected for the Unesco tag. (HT Photo)

India achieved a key cultural and diplomatic victory on Friday as twelve historic Maratha forts were inscribed on the Unesco World Heritage List, overcoming strong opposition

4. Aanayoottu Festival at Vadakkunnathan Temple – Cultural and Religious Significance

Key Summary Points:

- **Aanayoottu Ceremony – Definition & Occasion**
 - *Aanayoottu* literally means "feeding of elephants" in Malayalam.
 - It is a ritualistic and symbolic feeding ceremony of elephants held annually at **Vadakkunnathan Temple**, Thrissur, Kerala.
 - It takes place on the **first day of Karkkidakam**, the last month of the Malayalam calendar, also referred to as the '*Ramayana month*'.
- **Religious and Cultural Importance**
 - The ceremony is believed to please Lord Ganesha, the deity associated with removing obstacles.
 - Devotees believe that feeding elephants on this day brings prosperity, peace, and removes personal and societal hurdles.
 - The temple and elephants are both seen as sacred in Kerala's Hindu traditions.
- **Elephants in Kerala's Temple Culture**
 - Elephants hold deep symbolic and functional roles in Kerala's temple rituals – often considered the embodiment of Lord Ganesha.
 - They are central to festivals like **Thrissur Pooram** and **Guruvayur Anayottam (Elephant Race)**.
 - The *Aanayoottu* reflects the reverence and ritualistic bond between humans and animals in Indian culture.
- **Organisational and Ethical Aspects**
 - The elephants are paraded and offered special ayurvedic food items like sugarcane, ghee-rice, turmeric, coconut, and jaggery.
 - The practice is supervised by temple authorities and veterinarians to ensure the well-being of the animals.
 - However, animal rights activists have raised concerns over the **ethical treatment of temple elephants**, especially regarding captivity and use in religious processions.
- **Legal and Constitutional Provisions**
 - **Article 48A** (Directive Principles of State Policy): Protection and improvement of environment and safeguarding of forests and wildlife.
 - **Wild Life (Protection) Act, 1972**: Regulates the ownership and treatment of captive elephants in India.
 - **Prevention of Cruelty to Animals Act, 1960**: Ensures humane treatment of animals, including in religious rituals.

Additional Key Points:

- **Karkkidakam Month**
 - Also known as *Panjarapadam* or *Ramayana month*, it is a time of spiritual reflection, Ayurveda-based healing, and cultural observances in Kerala.
 - Many people recite the Ramayana and perform rituals for ancestral blessings during this month.
- **Vadakkunnathan Temple**
 - One of Kerala's most revered **Shaivite temples**, a UNESCO-recognized heritage monument located in Thrissur.
 - The temple complex is an architectural and spiritual landmark of Kerala's temple culture.



Conclusion and UPSC Relevance:

The Aanayooottu festival is not just a ceremonial spectacle but a deeply rooted cultural practice that blends ecology, religion, and traditional values. While it highlights India's rich intangible heritage and the temple-animal relationship, it also brings forth important debates on ethical treatment and wildlife protection in a modernizing society.

5. Preservation of Jain Manuscriptology under PMJVK – A Cultural Milestone

1. National Workshop on Jain Manuscriptology

- A **National Workshop on Jain Manuscriptology** was held at **Gujarat University, Ahmedabad** under the **Department for Validation of Indic Knowledge through Advanced Research**.
- It showcased the **intellectual, spiritual, and literary contributions** of Jain manuscripts to Indian civilization.
- The event was part of the government's larger initiative to revive and validate **Indic knowledge systems**.

2. Government's Role in Heritage Conservation

- The event was **funded under the Pradhan Mantri Jan Vikas Karyakram (PMJVK)**, a key scheme under the **Ministry of Minority Affairs**.
- Attended by noted scholars, Jain monks, and officials, including **Dr. Chandra Shekhar Kumar**, Secretary of the Ministry.
- The government affirmed its commitment to the **preservation and dissemination of traditional knowledge and minority cultural heritage**.

3. Jain Manuscripts and Cultural Legacy

- Jain Manuscriptology involves **critical study, interpretation, and conservation of ancient Jain texts**, mainly written in **Prakrit, Sanskrit**, and regional languages.
- Jain manuscripts preserve deep philosophical, linguistic, and ethical traditions of **Ahimsa (non-violence)**, **Aparigraha (non-possession)**, and **Syadvada (relativity of truth)**.
- This effort aligns with India's **civilizational commitment** to protecting **pluralism and diversity in knowledge systems**.

4. Constitutional and Legal Provisions

- **Article 29 & 30**: Protect the right of minorities to **conserve their language, script, and culture** and to establish educational institutions.
- **Article 51A(f)**: Fundamental duty of every citizen to **value and preserve the rich heritage of our composite culture**.
- Supported by initiatives like **PMJVK**, which integrates **infrastructure, education, and heritage conservation** for minority communities.

5. Inclusive Approach to Minority Heritage

- The event also links to **parallel initiatives** such as the preservation of **Avesta and Pahlavi languages** of the **Parsi Zoroastrian tradition** (in collaboration with Mumbai University).
- Promotes **academic research, community pride, and cultural continuity**.

- Encourages **collaboration between religious scholars and universities** to bridge **tradition and modernity**.

Definitions for UPSC

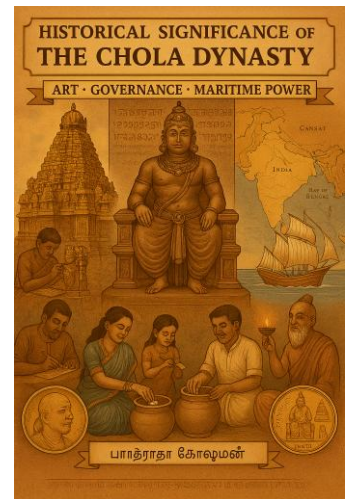
- **Manuscriptology**: The science of studying ancient manuscripts for textual and cultural interpretation.
- **Indic Knowledge Systems**: Traditional Indian systems of knowledge including **philosophy, medicine, arts, language, and spirituality**.
- **PMJVK**: A scheme aimed at providing **developmental infrastructure and support in minority-concentrated areas**, with a **focus on education, skill development, and heritage**.

Conclusion

This workshop on Jain Manuscriptology marks a **significant step in democratizing access to traditional wisdom** while fostering **inclusive cultural policies**. It reflects the government's **strategic vision of cultural preservation as a tool for empowerment, education, and national integration**.

6. Chola Dynasty's Legacy as a Roadmap for Modern India

- **Historical Significance of the Chola Dynasty**
 - The Cholas, especially **Rajaraja Chola I** and **Rajendra Chola I**, are remembered for their **military might, administrative acumen, naval strength, and cultural achievements**.
 - Rajendra Chola I built **Gangaikonda Cholapuram**, the **Brihadisvara Temple**, and the massive **Cholagangam Lake** after his successful northern expedition around 1,000 years ago.
 - The Chola Empire extended diplomatic and trade relations to **Sri Lanka, the Maldives, and Southeast Asia**, showcasing India's maritime power and global engagement.
- **Key Contributions of the Chola Administration**
 - **Strong Navy and Defence**: Rajaraja Chola developed a formidable navy, further strengthened by Rajendra Chola, ensuring maritime security and expansion.
 - **Local Governance**: Introduced efficient **village-level self-governance** institutions, a model often cited as a precursor to modern Panchayati Raj.
 - **Cultural and Economic Flourishing**: Promoted temple architecture, literature, and trade networks, enhancing India's cultural prestige and economic prosperity.
- **Modern Relevance Highlighted by PM Modi**
 - PM Modi described the Chola legacy as an **ancient roadmap for a developed India**, emphasizing unity, naval strength, national security, and safeguarding of core values.
 - He stressed the need to **strengthen defence forces, explore new opportunities, and ensure cultural continuity** in line with the Chola vision.



- A **commemorative coin** was released in honour of Rajendra Chola I, and the Centre announced plans to install **statues of Rajaraja and Rajendra Chola** in Tamil Nadu to enhance historical consciousness.
- **Link to National Security and Operation Sindoor**
 - Drawing a parallel, the PM noted that India's **decisive response during Operation Sindoor** reflected the Chola spirit of protecting sovereignty and maintaining maritime strength.
 - Reinforces India's commitment to strong military preparedness and strategic foresight.
- **Constitutional and Legal Framework**
 - **Article 51A(f)**: Citizens' duty to value and preserve the rich heritage of the composite culture of India.
 - **Seventh Schedule, Union List**: Defence, foreign affairs, and maritime security under the Union Government's domain.
 - **Directive Principles of State Policy (Articles 36–51)**: Promote cultural heritage, economic development, and national security.
- **Way Forward**
 - Learning from Chola-era naval and administrative models to strengthen **maritime security and local governance**.
 - Expanding **cultural diplomacy and trade ties** in the Indian Ocean and Indo-Pacific region.
 - Promoting heritage conservation as part of India's **soft power diplomacy**.

Conclusion and UPSC Relevance

The Chola dynasty's legacy offers timeless lessons in **strong defence, efficient administration, maritime trade, and cultural diplomacy**, aligning with India's modern aspirations of becoming a developed and secure nation. The PM's reference underscores its significance for **GS Paper 1 (History and Culture)**, **GS Paper 2 (Governance and International Relations)**, and **GS Paper 3 (Security and Maritime Strategy)**.

EDITORIALS & OPINION

1. India Ends Key Clean Energy Subsidy

1. Withdrawal of Inter-State Transmission Charge Waiver

- The Government of India has **ended a major subsidy** that previously exempted **inter-state transmission charges** for solar and wind power projects.
- Projects **commissioned after June 2025** will now have to pay **25% of the transmission cost**, with charges **increasing further** in subsequent years as per **Central Electricity Regulatory Commission (CERC)** guidelines.

2. Impact on Renewable Energy Sector

- This marks a **policy shift** that will likely **increase project costs** and deter **investment in future clean energy infrastructure**.
- Renewable developers argue that this move could **raise green energy tariffs** by **₹0.4/kWh**, a **16% increase** compared to the lowest tariffs discovered in **FY 2024–25 auctions**.

3. Industry Concerns

- According to the **National Solar Energy Federation of India**, the decision will make it **more difficult to sign Power Purchase Agreements (PPAs)**, especially for projects that have **already been auctioned but not commissioned**.
- It adds to the stress in the sector which is already dealing with **low demand and underutilization**.

4. Transmission Cost and Policy Background

- Previously, inter-state transmission charges were **waived as an incentive** to promote renewable energy investment across states.
- These subsidies played a crucial role in making **renewable energy competitive** with fossil-fuel-based sources.

5. Legal and Regulatory Framework

- The **Electricity Act, 2003** empowers the **Central Electricity Regulatory Commission (CERC)** to frame tariffs and regulate inter-state transmission.
- The move is in line with efforts to **rationalize tariffs** and **ensure cost recovery** for transmission utilities under the **National Tariff Policy**.

Key Definitions

- **Power Purchase Agreement (PPA)**: A contract between a power producer and buyer (like DISCOMs) specifying terms of electricity purchase.
- **CERC**: Central Electricity Regulatory Commission, a statutory body under the Electricity Act, 2003, regulating electricity tariffs for inter-state transactions.
- **Renewable Energy Tariff**: The per unit (kWh) cost at which solar/wind power is sold, determined often through competitive bidding.



Conclusion

The **withdrawal of inter-state transmission charge exemption** signals a shift towards **market-based pricing** in India's clean energy sector. While it aims at **financial sustainability** for transmission networks, the move may **slow renewable capacity additions**, impact **PPA signings**, and **raise consumer tariffs**.

2. China's Fertilizer Export Curbs and India's Import Dependency: A Strategic Challenge

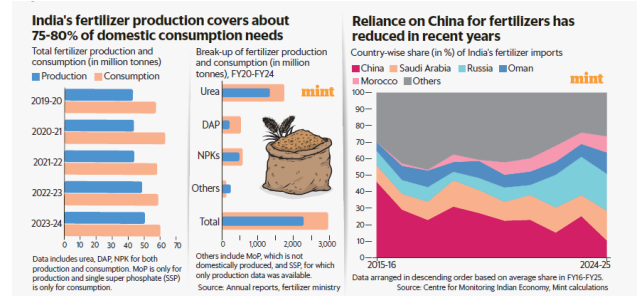
1. India's Fertilizer Dependency and China's Recent Curbs

- China has imposed **export restrictions on speciality fertilizers and DAP (diammonium phosphate)** to India, raising strategic concerns.
- Though **India now produces 75–80% of its total fertilizer requirement**, it is **still heavily import-dependent for certain types**:
 - Only **40% of DAP** is produced domestically.
 - **Muriate of Potash (MoP)** is **100% imported**.
 - Around **90% of rock phosphate**, a raw material for phosphatic fertilizers, is imported.

- China's reduced role in Indian imports has been **compensated by Russia, Oman, and Saudi Arabia**, but new curbs test this resilience.

2. Strategic Importance of Fertilizers to Indian Economy

- Fertilizers are critical for **India's agriculture**, which:
 - Employs **45% of the workforce**,
 - Contributes **14% to GDP**, and
 - Supports India's status as a **net exporter of food** (12% of total exports).



- India is the **second-largest consumer of fertilizers globally**, after China.

3. Impact of Geopolitical and Global Price Risks

- Fertilizer prices spiked during the **COVID-19 pandemic** and the **Russia-Ukraine war**, and are now rising again due to:
 - China's export curbs**,
 - Israel-Iran and Israel-Hamas conflicts**,
 - Tensions in the **MENA region**, which supplies **30% of nitrogen fertilizers globally**.
- This volatility threatens India's **food security** and **inflation control efforts**.

4. Fiscal Implications: Rising Fertilizer Subsidy Bill

- India **heavily subsidizes fertilizers** to shield farmers and consumers from global price shocks.
- Between FY21 and FY23, fertilizer subsidies saw steep increases:
 - +58% in FY21**,
 - +20% in FY22**,
 - +63% in FY23**.
- While FY24 and FY25 showed a decline, **recent global tensions and price spikes may disrupt subsidy targets for FY26**.

5. Structural Weakness: Import Dependence on Raw Materials

- Despite reduced urea import dependency, India lacks critical inputs for complex fertilizers:
 - Potash, phosphoric acid, ammonia, and rock phosphate** are largely imported.
- Experts emphasize that India must **secure raw material sources, diversify import markets, and invest in domestic mining and innovation**.

Key Definitions for UPSC

- Speciality Fertilizers:** Advanced fertilizers that provide targeted nutrients, often customized for specific crops or soil conditions.
- Muriate of Potash (MoP):** A potassium-rich fertilizer essential for crop growth, fully imported by India.

- **Subsidy:** A financial aid provided by the government to reduce the cost of essential commodities like fertilizers for consumers.

Constitutional and Legal Provisions

- **Article 39(b):** Directive Principle – Resources of the community should be distributed to subserve the common good.
- **Essential Commodities Act, 1955:** Fertilizers are notified under this Act to regulate supply and pricing.
- **National Policy on Fertilizers:** Encourages balanced use, subsidy reform, and self-reliance.

Conclusion

China's fertilizer export curbs have **exposed India's strategic vulnerability** in its agriculture-dependent economy. While diversification of sources and rising domestic production offer some buffer, India remains **exposed to price shocks, geopolitical disruptions, and raw material shortages**. Long-term resilience will depend on policies that enhance **domestic self-sufficiency**, ensure **raw material security**, and **rationalize subsidy burdens** without compromising on food security and farmer welfare.

3. Gig Workers and Labour Data in India: A Policy and Statistical Gap

1. Legal Recognition but Statistical Invisibility

- **Gig workers** were legally recognized under the **Code on Social Security, 2020**, which defines them as individuals earning from work arrangements outside traditional employer-employee relationships (Sec 2(35)).
- Despite this, India's **Periodic Labour Force Survey (PLFS) 2025** fails to specifically classify gig or platform workers, leading to their **statistical invisibility** in official datasets.

2. Inadequacies in PLFS Classification

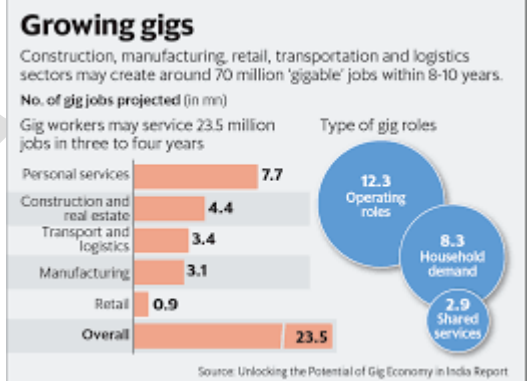
- PLFS continues to subsume gig workers under vague categories like **'self-employed'**, **'casual labour'**, or **'own-account workers'**.
- This **misrepresents their employment nature**, which is often **algorithm-driven, multi-platform, task-based**, and lacking formal contracts or job security.
- Hence, gig work's unique vulnerabilities — like **income volatility, lack of social protection**, and algorithmic control — go unrecorded.

3. Implications for Policy and Social Security Access

- **Clause 141** of the **Social Security Code, 2020** mandates creation of a **Social Security Fund** for gig workers.
- Yet, schemes like **e-Shram portal, digital ID cards**, and **Ayushman Bharat health cover** depend on PLFS data for targeting — which fails to isolate gig workers.
- This leads to **exclusion errors** and **uneven access to benefits**.

4. Discrepancy between Ground Reality and Survey Methodology

- A gig worker working on Swiggy and Zomato may be recorded as "self-employed" without capturing the **algorithmic control, absence of safety nets, and multi-app engagement**.





- The **2025 PLFS revision** improved sample size and rural coverage but **did not update the occupational classification system** to reflect digital labour's complexity.

5. Constitutional and Institutional Context

- **Article 43 of the Constitution (DPSP)** mandates the State to secure **a living wage and decent conditions of work** for all.
- The **National Social Security Board** under Section 6 of the 2020 Code is tasked with formulating schemes, but lacks robust data inputs due to PLFS's gaps.
- **NITI Aayog (2022)** projected **23.5 million gig workers by 2029-30**, indicating the need for timely statistical alignment.

Key Definitions

- **Gig Worker:** An individual engaged in income-earning activities outside of a traditional employment contract, often via online platforms.
- **Platform Work:** A subcategory of gig work involving digital intermediaries like apps/websites to connect service providers with consumers.

Conclusion

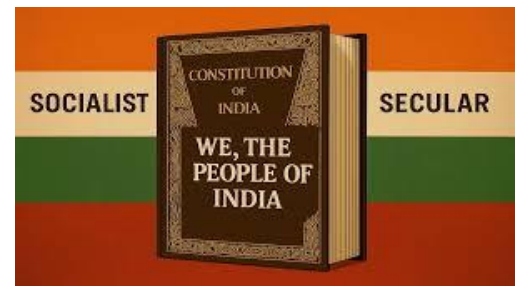
While **policy intent** exists to include gig and platform workers within the welfare and social security net, **absence of a clear statistical identity** in national labour surveys like PLFS **undermines inclusivity and evidence-based governance**. To ensure true representation and effective policy delivery, India must **revise labour classification codes** and **introduce dedicated modules on digital labour** in national surveys. Without **data-backed recognition**, formal welfare remains out of reach for India's growing gig economy.

4. Socialism and Secularism – The Spirit of the Indian Constitution

Core Highlights

- **Foundational Ideals – Socialism & Secularism:**
 - Though added to the **Preamble by the 42nd Amendment (1976)** during the Emergency, both values were **inherent in the Constitution** from inception.
 - These are deeply embedded in **Fundamental Rights (Part III)** and **Directive Principles of State Policy (Part IV)**, not just limited to words in the Preamble.
- **Definition and Constitutional Interpretation:**
 - **Socialism** in the Indian context refers to **social and economic justice, elimination of inequality**, and creation of a **welfare state**.
 - **Secularism** ensures that the State maintains **equidistance from all religions**, providing **equal treatment and protection** to all faiths. It is **not anti-religion**, but **non-theocratic and pluralistic**.
- **Key Constitutional Provisions:**
 - **Articles 14–16:** Equality before law, non-discrimination, and equal opportunity.
 - **Articles 25–28:** Right to freedom of religion.
 - **Articles 38–43:** Directive Principles reflecting socialist orientation (e.g., reducing inequalities, ensuring living wages).
 - **Article 25(2)(a)** (even before the 42nd Amendment): Allowed the state to regulate secular activities related to religion – indicating **pre-existing secular intent**.
- **Judicial Affirmation – Basic Structure Doctrine:**
 - In **Kesavananda Bharati v. State of Kerala (1973)**, the **Basic Structure Doctrine** was laid down.

- Later SC judgments reaffirmed that **secularism and socialism form part of this basic structure**, which Parliament **cannot amend or dilute**.
- **Objective Resolution & Freedom Struggle Roots:**
 - The **Objective Resolution (1946)** moved by Jawaharlal Nehru and debates in the **Constituent Assembly** show the **clear vision of a socialist and secular state** even before formal codification.
 - These values are products of India's **anti-colonial, inclusive, and democratic freedom struggle**.



Political and Ideological Context

- **RSS Controversy:**
 - Recent comments by **RSS leaders** to remove these words under the guise of opposing the Emergency period have **political and ideological undertones**.
 - Critics argue this is an attempt to **undermine the inclusive and pluralistic fabric** of the Constitution and **push for a majoritarian narrative**.
- **Historical Irony:**
 - The RSS was **not part of the freedom struggle**, and during the Emergency, it allegedly **compromised with the ruling regime** for survival.
 - Using that same period now to challenge constitutional principles is seen as **hypocritical** by many constitutional scholars and political observers.

Conclusion

Socialism and secularism are **not foreign insertions**, but **core ideals** of India's Constitution. They are essential to the **idea of India as a sovereign, democratic republic**, and form part of its **unchangeable basic structure**. Attempts to remove them are **not merely legal alterations**, but **existential threats** to India's **constitutional morality, democratic pluralism, and social justice ethos**. It is imperative for all institutions and citizens to defend these values in order to **preserve the soul of the Indian Republic**.

5. Is U.S. Imperialism a Threat to the World?

Core Issues and Geopolitical Relevance

- **U.S. Military Interventions & International Law Violation:**
 - The **U.S. attack on Iranian nuclear facilities** during the Israel-Iran conflict is a **violation of international law**, similar to its earlier unilateral military actions in **Iraq and Afghanistan**.
 - These acts are perceived as part of a **pattern of U.S. imperialism**, undermining global norms and the **UN Charter** which prohibits the use of force except in self-defense or with Security Council approval (Article 2(4), UN Charter).
- **Decline of U.S. Hegemony & Rise of China:**
 - U.S. power is in **structural decline**—economically, diplomatically, and ideologically—while **China's rise** in trade, renewables, and electronics is challenging U.S. global dominance.
 - The **trade war, Asia-Pacific pivot, and strategic containment** policies show the U.S.'s anxiety toward China's expanding influence.
- **India's Foreign Policy Dilemma – Autonomy vs Alignment:**
 - India's increasing alignment with the **U.S. (e.g., Quad, defence deals)** reduces its room for **strategic autonomy** in a multipolar world.
 - Refusal to condemn U.S. actions in Iran or distancing from **SCO and BRICS** positions risks **undermining India's claim to Global South leadership and non-aligned tradition**.



- **Multipolar vs Bipolar World Order:**
 - A **bipolar world (U.S.–China)** restricts agency for regional powers like **India, Brazil, and South Africa**.
 - A **multipolar global order** with strong multilateral institutions is ideal for balanced diplomacy, especially for **Global South** nations facing the brunt of imperial economic and military policies.

Constitutional & Legal Perspectives

- **India's Strategic Autonomy Principle:**
 - Rooted in **Panchsheel Principles** and the **Non-Aligned Movement**, India's foreign policy has historically been independent.
 - Alignments without legislative or parliamentary oversight may **contradict the spirit of democratic accountability** embedded in India's foreign relations approach (Article 75 – collective responsibility of the Council of Ministers).
- **Violation of International Law by Hegemons:**
 - **UN Charter, Geneva Conventions**, and principles of **sovereignty** and **non-intervention** are often ignored by hegemonic powers.
 - The U.S.'s selective application of international law undermines the **international rule-based order**, affecting global peace and security.

Role and Potential of Global South

- **Need for Collective Voice:**
 - The **Global South** must resist economic coercion, trade imbalances, and climate injustice aggravated by U.S.-led policies.
 - Forums like **BRICS, SCO, and G77** can be instrumental, but India's inconsistent stances limit its leadership potential.
- **Alternatives to Failed Multilateralism:**
 - With the weakening of global institutions like **WTO** and **UN**, the Global South must adopt **minilateral mechanisms** to promote shared interests and resist neocolonial agendas.

Definitions & Key Concepts for UPSC

- **Imperialism:** A policy of extending a country's power through military force or diplomacy over other territories.
- **Strategic Autonomy:** The ability of a state to pursue its national interests and make decisions independently in foreign policy.
- **Multipolarity:** A global system where multiple nations hold significant power, allowing for more balanced international relations.

Conclusion

U.S. imperialism poses a serious challenge to international law, sovereignty, and balanced global governance. For India, **strategic autonomy and principled non-alignment** are key to maintaining credibility as a **leader of the Global South**. Aligning too closely with hegemonic powers may restrict India's role in shaping a **just, multipolar world order**. The future lies in **coalition-building, diplomatic consistency**, and **norm-based multilateralism**, not in strategic opportunism.

6. Population Decline and the Myth of Demographic Doom

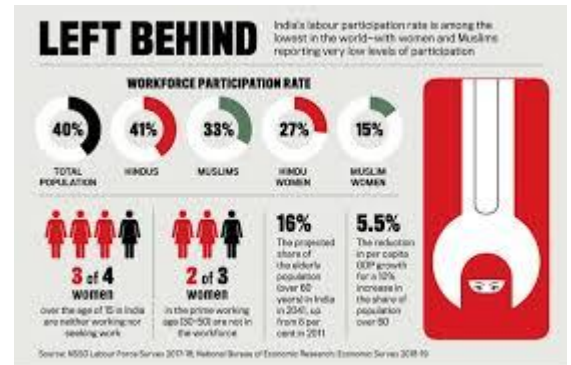
1. Changing Population Discourse: From Overpopulation to Underpopulation

- Earlier fears based on **Malthusian theory** emphasized **population explosion** and ecological strain; now the global concern is **falling fertility rates** and population decline.

- Influential figures like **Elon Musk** have predicted "population collapse", but **UN World Population Prospects 2024** projects **global population peaking at 10.3 billion by 2085**, not immediate decline.
- **UN data debunks alarmism**—the population in 2100 is expected to be only 6% lower than previous projections, not catastrophic shrinkage.

2. Key Demographic Concepts

- **Total Fertility Rate (TFR)**: Average number of children a woman is expected to have during her lifetime. A TFR of **2.1** is considered **replacement level**.
- **Population Momentum**: Even when fertility falls below replacement level, population can **continue growing for decades** due to a large young population base.
- **Projections ≠ Predictions**: Demographic trends depend on assumptions and can change with policy, social, and economic shifts.



3. The Real Fertility Crisis: Barriers to Reproductive Autonomy

- **UNFPA Report 2025** found **one in five people** couldn't have the children they desired due to:
 - **Financial constraints (38%)**
 - **Housing issues (22%)**
 - **Unemployment (21%)**
 - **Lack of childcare (18%)**
 - **Infertility (13%)**
- The problem isn't low fertility by choice, but **lack of support** to realize **desired fertility goals**.

4. Misguided Policy Responses and Gender Impacts

- **Target-driven pronatalism** (e.g., baby bonuses) reinforces **traditional gender roles**, ignores men's role, and fails to address real obstacles.
- Some governments curb **abortion or contraceptive rights**, targeting **voluntarily childfree women**, instead of supporting those who want children.
- Focus should be on **societal change**—better jobs, housing, and **gender-equal workplaces**, not pressuring women into childbearing.

5. International Experiences and Evidence-Based Lessons

- **South Korea's fertility revival (7.3% rise in early 2025)** followed 20 years and \$200 billion investment, but financial and housing barriers remain primary concerns.
- Successful demographic policy must shift from coercion to **creating enabling environments**—education, employment, healthcare, childcare, and social security.

Conclusion and UPSC Relevance

The ongoing panic about population decline is **premature, analytically flawed, and ethically problematic**. The **real crisis is reproductive inequality**—barriers that prevent individuals from fulfilling their desired family goals. India must **prioritize rights-based reproductive policies**, enhance **socioeconomic infrastructure**, and ensure **gender justice** to respond to demographic changes meaningfully.

7. Can Banks Be Held Liable for Digital Arrest Scams?

Key Highlights

- NCDRC Case on Bank Liability in Digital Arrest Scams:**
 A landmark case at the **National Consumer Disputes Redressal Commission (NCDRC)** may determine if **banks can be held liable** for losses suffered by customers in *digital arrest* scams. Victims have alleged **bank negligence** in preventing or mitigating such frauds.
- Nature of Digital Arrest Scam:**
 In these cybercrimes, fraudsters **impersonate law enforcement officials** (e.g., from CBIC) and coerce individuals into transferring large sums under **threat of arrest or legal action**. Over ₹24 crore was lost by three complainants in one such case.
- Banks' Defense and Legal Standpoint:**
 Major private banks like **HDFC and ICICI** claim that since victims **voluntarily executed transactions**, they bear no responsibility. They argue that such incidents lie outside the **scope of consumer protection laws**, and **RBI's liability guidelines** do not apply when there's "active consent."
- Consumer Lawyer's Argument:**
 The complainants' counsel argues that such consent is given under **threat and coercion**, making the **banks responsible** under RBI's 2017 **Limited Liability Guidelines**, which protect customers from unauthorized electronic transactions.
- Wider Implications if Victims Win:**
 A verdict in favour of the victims could **set a precedent** making banks partially liable in digital frauds and force them to **proactively monitor, investigate, and refund** losses from such scams—raising the bar for **cyber vigilance** in India's banking sector.

Key Definitions

- Digital Arrest:** A cyber scam where fraudsters impersonate officials to **threaten, coerce, and extort** money from individuals under the guise of legal action or arrest.
- Limited Liability Guidelines (RBI, 2017):** These guidelines protect consumers against losses from **unauthorized transactions**, placing liability on banks in case of third-party fraud if reported in time.



Constitutional & Legal Provisions

- Article 21:** Ensures the right to life and personal liberty, including protection from coercion and exploitation.
- Consumer Protection Act, 2019:** Defines banks as service providers and customers as consumers, allowing for redressal under consumer courts.
- Bharatiya Nyay Sanhita, 2023 (New Criminal Code):** Provides legal basis for action against impersonation, extortion, and cyber fraud.

Additional Key Points

- Cross-border Cybercrime Concern:** Perpetrators are often based **outside India**, complicating **legal jurisdiction and enforcement**.



- **Banking Sector Preparedness:** Highlights the need for **strengthened internal monitoring**, **customer awareness**, and **regulatory reforms** to combat new-age cyber threats.
- **Policy Gaps:** Existing frameworks may not fully address **psychological coercion** and lack clarity on **platform responsibilities** in such complex financial frauds.

Conclusion

The NCDRC case could redefine the contours of **bank liability** in digital financial frauds. With rising cases of **coercion-based cyber scams**, the onus may shift from **individual vigilance** to **institutional responsibility**. A ruling favouring consumers would be a **progressive step in balancing digital innovation with consumer protection**.

8. Assessing India's Carbon Credit Trading Scheme (CCTS) Targets

Key Summary Points

1. Introduction of Sector-Wise Emission Targets under CCTS

The Government of India has released **greenhouse gas emissions intensity targets** for entities in eight key industrial sectors — aluminium, cement, pulp & paper, chlor-alkali, iron & steel, textiles, petrochemicals, and refineries — as part of the **compliance mechanism under the Carbon Credit Trading Scheme (CCTS)**. These targets aim to reduce emissions relative to production output rather than absolute emissions.

2. Aggregate Economy-Wide Lens Preferred Over Sectoral Focus

Drawing from India's earlier **Perform, Achieve and Trade (PAT)** scheme, it is argued that evaluating emission reduction ambition at the **aggregate economy level** is more relevant than at individual entity or sectoral levels. The market mechanism's success lies in achieving overall energy or emission intensity reduction, even if individual sectors perform unevenly.

3. Performance Under PAT Scheme Offers Critical Insight

Analysis of PAT Cycle I (2012–14) showed mixed trends—energy intensity rose in sectors like paper and chlor-alkali, but fell in aluminium and cement. However, **total economy-level energy efficiency improved**, proving that **market mechanisms can deliver aggregate improvements despite sectoral variations**.

4. Comparison with Future Emission Trajectories is Essential

Instead of comparing current CCTS targets with historical data, the focus should be on how these targets align with **India's climate goals**, such as:

- **Nationally Determined Contributions (NDCs)** under the Paris Agreement
- **India's Net-Zero target by 2070**

According to recent modelling, India's energy sector CO₂ emissions intensity should decline by **3.44% per year (2025–2030)**, while the manufacturing sector should achieve at least **2.53% annual reduction**. In contrast, CCTS targets imply only **1.68% per annum**, signaling insufficient ambition.

5. Concerns About Industrial Ambition and Inclusion

Though CCTS covers only a subset of India's manufacturing, it is the **most comprehensive benchmark available** presently. The relatively modest pace of emission intensity decline under

Assessing India's carbon credit trading scheme targets





CCTS indicates a **need for stronger, more forward-looking policy measures**, especially when low-cost mitigation options exist in sectors like power.

6. Way Forward: Aligning with India's Climate Commitments

India must **scale up its ambition** under CCTS by:

- Expanding sectoral coverage
- Tightening emission targets
- Ensuring data transparency and periodic review

A robust **economy-wide emissions trading system**, backed by policy clarity and regulatory strength, is crucial for achieving the climate goals under India's **Long-Term Low Emission Development Strategy (LT-LEDS)**.

Key Definitions

- **Carbon Credit Trading Scheme (CCTS):** A market-based instrument to incentivize reductions in greenhouse gas emissions by allowing trading of emission reduction credits.
- **Emissions Intensity of Value Added (EIVA):** The quantity of emissions per unit of economic output, useful in measuring decarbonization without compromising growth.
- **Perform, Achieve and Trade (PAT) Scheme:** A regulatory mechanism by the Bureau of Energy Efficiency (BEE) to improve energy efficiency in large industries.
- **Nationally Determined Contributions (NDCs):** Climate action plans submitted by countries under the Paris Agreement to reduce national emissions and adapt to climate change.

Legal and Policy Frameworks

- **Energy Conservation Act, 2001:** Provides legal backing for PAT and energy efficiency initiatives.
- **Paris Agreement, 2015 (UNFCCC):** India's commitment to reduce emissions intensity by 33-35% by 2030 (compared to 2005 levels).
- **National Action Plan on Climate Change (NAPCC):** Framework under which missions like PAT and Renewable Energy targets are implemented.

Conclusion

India's carbon market has the potential to play a transformative role in achieving climate goals. However, **current sector-specific targets under CCTS appear less ambitious** when compared to modeled economy-wide decarbonization pathways. A shift in focus toward **aggregate performance, expanded coverage**, and alignment with **India's NDCs and Net-Zero trajectory** is essential for ensuring the scheme's effectiveness and credibility.

9. The Need to Protect India's Linguistic Secularism

Key Summary Points

1. Linguistic Diversity and Secularism

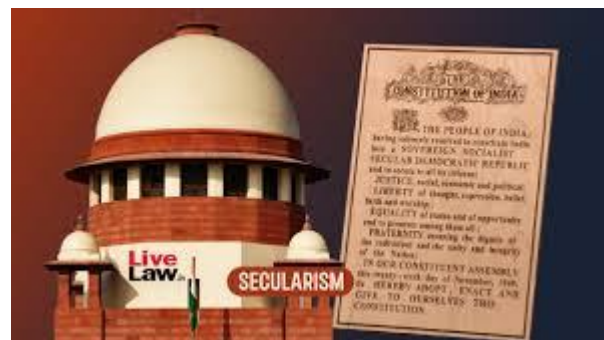
- **India's secularism** is unique — it includes **both religious and linguistic neutrality and tolerance**, unlike Western secularism which emphasizes complete separation of state and religion.
- According to the **2011 Census**, India has **121 languages** and **270 mother tongues**, with **22 Scheduled Languages** under the **Eighth Schedule** of the Constitution.

2. Constitutional Provisions Ensuring Linguistic Rights

- **Article 343:** Hindi in Devanagari script is the **official language of the Union**, not the *national* language.
- **States are free** to adopt their own official languages.
- **Article 29:** Protects the rights of minorities to **conserve their language, script, or culture**; prohibits discrimination based on language.
- **No national language:** This is a **deliberate constitutional safeguard** to promote linguistic harmony in a culturally diverse federal system.

3. Linguistic Identity and Federal Unity

- India's **unitary federal structure** does not allow any state to seek secession on linguistic grounds.
- **Linguistic secularism** prevents imposition of any one language and promotes **inclusive federalism**.
- Movements against **Hindi imposition** (e.g., in Tamil Nadu) show the importance of respecting **regional linguistic autonomy**.



4. Recent Challenges

- **Violence in Maharashtra** against non-Marathi speakers reflects **identity politics** masked as cultural preservation.
- True protection of language must be based on **tolerance and liberalism**, not **exclusion or chauvinism**.

5. Preserving Unity in Diversity

- India's history of accepting diverse **religions, languages, customs, and lifestyles** is rooted in its **tolerant ethos**.
- Any **narrow conservatism** in language or religion risks **fragmenting social unity** and harming the secular framework.
- **Political leadership** and **civil society** must promote **respect for linguistic diversity** to preserve national integration.

Important Constitutional & Legal Provisions

Article	Provision
Art. 343	Hindi as Official Language of the Union (not national)
Art. 29	Protection of linguistic and cultural rights of minorities
Eighth Schedule	Recognizes 22 scheduled languages
Directive Principles (Art. 51A(f))	Duty of citizens to value and preserve the rich heritage of our composite culture

Definition: Linguistic Secularism

Linguistic Secularism refers to a state's **equal respect and non-preferential treatment of all languages**, ensuring no linguistic group is privileged or discriminated against in governance or public life.

Conclusion

India's **linguistic secularism** is central to its **unity in diversity**. It upholds the **federal structure, cultural pluralism, and constitutional values**. Preserving and respecting all languages — whether scheduled or non-

scheduled — is not just a cultural necessity but a political imperative to strengthen India's secular, democratic framework.

10. India's Eastern States: Emerging Engines of National Growth

Key Summary Points

1. Eastern India as the New Growth Driver

- PM Narendra Modi emphasized that **Eastern States like Bihar, Jharkhand, Odisha, West Bengal, and the North-East** are poised to become **engines of India's economic growth**, mirroring the rise of **East Asian economies** globally.
- The focus is to **correct historical developmental imbalances** and harness the region's **demographic, agricultural, mineral, and cultural potential**.

2. Recent Investments & Infrastructure Push

- Over ₹7,000 crore worth of **development projects inaugurated in Bihar's Motihari**, focusing on **railways, roads, and public infrastructure**.
- These investments align with national programs like **PM Gati Shakti, Bharatmala, Sagarmala, and UDAN**, aiming at **multimodal connectivity and logistics improvement** in underdeveloped regions.

3. Strategic Importance of Eastern India

- Rich in **natural resources** (e.g., coal, iron, bauxite, fertile Gangetic plains).
- Dense population provides **demographic dividend** and labor force for manufacturing and service sectors.
- Acts as a **gateway to Southeast Asia** through the **Act East Policy**, especially via the **North-East and Bangladesh-Myanmar corridor**.

4. Historical Development Lag & Need for Balanced Regional Growth

- Post-independence, industrial and infrastructure development remained concentrated in western and southern India.
- Eastern India suffered from **lack of investment, poor connectivity, and frequent floods**.
- NITI Aayog and 15th Finance Commission** have emphasized **increased fund allocation and special schemes** for backward regions.

5. Constitutional & Legal Provisions

- Article 38(2)**: Directive for reducing regional inequalities.
- Article 39(b)**: Equitable distribution of material resources of the community.
- Special Category Status and Backward Region Grant Funds (BRGF)**: Financial instruments used to uplift underdeveloped states.



- **Inter-State Council (Article 263):** Platform to resolve regional issues collaboratively.

Definitions & Concepts

- **Engines of Growth:** Regions or sectors that contribute disproportionately to economic development and GDP expansion.
- **Act East Policy:** India's diplomatic and economic strategy to enhance relations with Southeast and East Asian nations via the North-Eastern states.
- **Demographic Dividend:** Economic benefit arising from a large working-age population relative to dependents.

Conclusion

The focus on Eastern India signifies a **paradigm shift in India's development model**, aiming to create **balanced regional development** and tap into the **untapped potential of Bharat's heartland**. Improved infrastructure, connectivity, and governance reforms are likely to make Eastern India a **critical pillar of India's \$5 trillion economy vision**.

ETHICS

1. Custodial Deaths and Police Accountability in Tamil Nadu and India

1. Alarming Rise in Custodial Deaths and Brutality

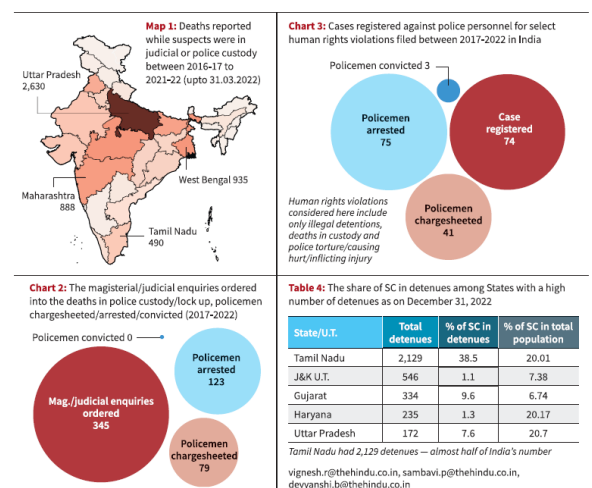
- The recent **custodial death of Ajith Kumar** in Sivaganga, Tamil Nadu, follows a disturbing pattern of **police brutality** in the state.
- Tamil Nadu has recorded **490 custodial deaths (2016–2022)** — the **highest in southern India**.
- Notable past incidents include the **Sathankulam father-son death (2020)** and **Ambasamudram torture case (2023)**.

2. Zero Convictions Despite Arrests

- Across India, **no police officer has been convicted for custodial deaths between 2017 and 2022**, including in Tamil Nadu.
- Out of **345 judicial/magisterial inquiries** into custodial deaths:
 - **123 arrests** made
 - **79 police personnel chargesheeted**
 - **0 convictions**

3. Broader Pattern of Impunity in Human Rights Violations

- From 2017–2022:
 - **74 human rights violation cases** (e.g., torture, illegal detention, custodial deaths) filed.
 - Only **3 convictions** despite 41 police personnel being chargesheeted.
- Reflects **institutional impunity**, poor investigation, and lack of judicial follow-through.





4. Caste-Based Disparities in Detention

- **Scheduled Castes (SCs)** bear the brunt of police excesses.
- In 2022, **38.5% of detainees** in Tamil Nadu were SCs, despite forming only **20% of the state population**.
- Tamil Nadu had **2,129 detainees** — almost **half of India's total**, indicating possible misuse of **preventive detention laws**.

5. Legal & Constitutional Provisions

- **Article 21:** Right to life includes protection from custodial torture.
- **Article 22:** Safeguards against arbitrary arrest and detention.
- **Section 176(1A) CrPC:** Mandates judicial inquiry in cases of custodial deaths.
- **SC Guidelines (DK Basu v. State of West Bengal, 1997):** Laid down preventive measures for custodial violence.
- **Prevention of Atrocities Act, 1989:** Special protections for SCs/STs, often violated in such incidents.

Key Definition

Custodial Death: Death of an individual while in police or judicial custody. These may arise from **natural causes, negligence, torture, or denial of medical care**.

Conclusion

The persistence of **zero convictions** despite rising custodial deaths highlights a **deep systemic failure** in **police accountability, legal enforcement, and human rights protection**. The **disproportionate targeting of Dalits** in Tamil Nadu points to **caste-based institutional bias**. Addressing these issues requires **police reforms, fast-track courts, independent oversight, and a strict enforcement** of constitutional protections. Justice cannot prevail unless the **State machinery is held accountable** for its excesses.

2. Strengthening Capacity Building of Civil Servants in Telangana under Mission Karmayogi

Key Highlights of the Meeting

- **High-Level Engagements in Telangana:**
 - On **2nd July 2025**, the **Mission Karmayogi** team met the **Governor of Telangana, Shri Jishnu Dev Varma**, and **Chief Secretary K. Ramakrishna Rao** in Hyderabad.
 - The team included officials from the **Capacity Building Commission (CBC)** and **Karmayogi Bharat**, who reviewed the implementation progress and sought feedback for future initiatives.
- **Mission Karmayogi's Vision Explained:**
 - Aimed at creating a **future-ready, digitally empowered, and citizen-centric civil service**.
 - The programme promotes **competency-based training**, moving away from rule-based and seniority-centric models.
 - It seeks to improve **efficiency, empathy, and accountability** in government service delivery.
- **Focus on iGOT Karmayogi Platform:**
 - The **iGOT Karmayogi digital platform** offers **anytime-anywhere** learning for government officials.
 - Facilitates **customized learning paths** aligned with department-specific governance goals.

- Telangana has decided to **onboard officials from multiple departments** to the platform, with support from the state's training institutions.
- **Institutional Mechanism & Support:**
 - Discussions highlighted the **role of state training institutions** in identifying local learning needs and facilitating digital onboarding.
 - The **Governor and Chief Secretary** expressed strong support, reflecting **inter-governmental collaboration** for civil services reform.
 - Emphasizes need for **dynamic and localized training modules** rooted in regional administrative priorities.



Definitions & Constitutional/Legal Framework

- **Mission Karmayogi:** A National Programme for Civil Services Capacity Building (NPCSCB) launched in **2020** to reform bureaucratic learning and performance frameworks.
- **Capacity Building Commission (CBC):** A statutory body to oversee, coordinate, and regulate the capacity-building ecosystem in civil services.
- **iGOT Karmayogi:** An **Integrated Government Online Training** platform enabling digital learning and training for civil servants across India.
- **Legal Provision:** Though Mission Karmayogi is an executive initiative, it aligns with **Article 309** of the Constitution (regulation of service conditions of civil servants) and **good governance principles under DPSPs**.

Conclusion

The implementation of **Mission Karmayogi in Telangana** marks a significant step in creating a **modern, responsive, and citizen-focused civil service**. Through tools like the **iGOT platform** and collaborative leadership from the Governor and Chief Secretary, the initiative aims to embed a **culture of continuous learning and competency-driven performance**. This aligns with the larger national goal of **transforming governance through digital, accountable, and ethical public administration** under the vision of *Viksit Bharat @2047*.

3. Spare Live Animals, Move to Biological Models

Key Highlights

- **Animal Testing and Ethical Issues:**
The article emphasizes the ethical concerns surrounding the use of animals in scientific research and toxicity testing. It highlights the emotional and physical suffering endured by animals and calls for more humane alternatives.
- **Historical Context of Testing:**
Initially, toxicity testing was performed on humans (e.g., U.S. food preservative tests in the early 1900s). Later, animals replaced humans due to better control in laboratory environments, but this shift also normalized moral indifference.
- **Limitations of Animal Testing:**
Scientific consensus increasingly recognizes that **animal-based research does not always predict**

human reactions accurately. Thus, many findings from animal testing are often non-translatable to human biology.

- **Advancements in Regenerative Medicine:**

Developments in **tissue engineering** have enabled the creation of **lab-grown biological structures** (e.g., artificial pancreas, bio-artificial skin, bladders, and blood vessels). These can now potentially replace animal testing in many experiments.

- **Proposed Legal and Policy Shift:**

The **Prevention of Cruelty to Animals Act, 1960** (especially **Chapter IV: Experimentation on Animals**) may be amended to mandate the **use of lab-grown biological models** wherever feasible. This would align science with ethics.

- **Education and Visual Models:**

The use of **2D and 3D digital anatomical models** in educational settings has already replaced animal dissections in classrooms. A similar paradigm shift is possible in experimental labs for ethical learning and testing.

Key Definitions for UPSC

- **Tissue Engineering:** A field of regenerative medicine that uses biological materials and engineering principles to develop functional substitutes for damaged tissues and organs.
- **Bioartificial Organs:** Laboratory-grown or engineered constructs that mimic the structure and function of natural organs using cells, biomaterials, or both.
- **Prevention of Cruelty to Animals Act, 1960:** An Indian legislation enacted to prevent the infliction of unnecessary pain or suffering on animals and to regulate their experimentation and treatment.



Constitutional & Legal Provisions

- **Article 48A** – Directive Principle of State Policy: Mandates the State to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g)** – Fundamental Duty: Imposes a duty on every citizen to have compassion for living creatures.
- **Prevention of Cruelty to Animals Act, 1960** – Governs animal welfare and regulates experimentation.

Conclusion

The article makes a strong ethical and scientific case for shifting from **live animal experimentation** to **lab-based, tissue-engineered biological models**. This shift is both technologically feasible and ethically necessary. It also aligns with India's constitutional values of compassion and environmental stewardship.

YOJANA & KURUKSHETRA

1. Freedom to Innovate

- **Definition of Innovation**

- *Innovation* means the process of creating new ideas, methods, or technologies to solve problems

and improve human life.

- It represents both **creativity** and **application**, making it central to civilisational progress.

• **Human Journey of Innovation**

- Early innovations: stone tools, fire mastery, settled agriculture.
- Agricultural revolution: irrigation, crop rotation, selective breeding – enabling urbanisation and trade.
- Industrial & technological revolutions: machines, mass production, digital economy, AI, space research.
- Global collaboration: different societies contributed unique knowledge streams to collective progress.

• **India's Civilisational Ethos of Innovation**

- Ancient scholars like **Aryabhata, Pingala, Brahmagupta, Bhaskara** advanced mathematics, astronomy, geometry.
- Knowledge centres – Nalanda, Vikramashila, Pushpagiri – nurtured medicine, metallurgy, architecture, Ayurveda.
- Despite invasions and colonial disruption, India's knowledge traditions remained resilient.



• **Freedom to Innovate & Constitutional Ethos**

- Freedom today means not just political liberty but the **capacity to create solutions and shape society** (linked to *Viksit Bharat@2047*).
- **Constitutional Provisions:**
 - *Article 14*: Equality before law – equal access to innovation.
 - *Article 21*: Right to life and dignity – implies access to scientific progress.
 - *Article 21A*: Right to education – foundation for innovation.
 - *Article 51A(h)*: Fundamental duty to develop scientific temper and spirit of reform.
- Platforms: Atal Tinkering Labs, startups, self-help groups, rural innovations.

• **Policy Support & Funding**

- *RDI Scheme 2025*: ₹1 lakh crore corpus for sunrise sectors with low-interest financing.
- *ANRF (Anusandhan National Research Foundation)* – strategic body replacing SERB for innovation funding.
- Union Budget 2025–26: ₹20,000 crore for AI, biotech, quantum computing, semiconductors, clean energy.
- *Deep-Tech Funds* and *PM Research Fellowships* to attract talent.

• **Grassroots & Decentralised Innovation**

- *National Innovation Foundation (NIF)* supports community-level innovations, has filed 1,400+ patents and enabled 120+ tech transfers.
- Recognition of indigenous agricultural practices, health traditions, and local engineering solutions.
- Programmes like *Unnat Bharat Abhiyan* connect institutions with rural needs.

• **Digital Public Infrastructure (DPI) as Innovation Platforms**

- Aadhaar, UPI, DigiLocker, ONDC – enabling large-scale entrepreneurship.
- India Energy Stack – digital integration for renewable energy & efficient distribution.
- Ayushman Bharat Digital Mission – 20 crore health accounts, improved telemedicine, AI diagnostics.

- **Sectoral Deepening of Innovation**
 - **Agriculture 4.0** – AI, drones, IoT-based soil & water management; schemes like Drone Didi, Agri-Tech hubs.
 - **Healthcare** – Digital-first, PRIP scheme (₹5,000 crore) for pharma & MedTech R&D.
 - **Technology Sovereignty** – Quantum mission, Atal Incubation Centres, Atal Tinkering Labs fostering frontier research.
- **Global Standing & Measurable Impact**
 - India ranked **39th in Global Innovation Index 2024**; 6th in patent filings (WIPO 2023).
 - Startup ecosystem: 1.57 lakh DPIIT-recognised startups, 100+ unicorns, 51% from Tier-II & III cities.
 - Digitalisation: India 3rd globally in digital economy; projected to form one-fifth of GDP by 2030.
 - Network Readiness Index improved from 89th (2015) to 49th (2024).
- **Civilisational Awakening & National Vision**
 - Innovation reflects *Atmashakti* (inner strength) and civilisational self-confidence.
 - A blend of grassroots creativity and high-tech research is guiding India towards *Aatmanirbharta* and *Viksit Bharat@2047*.

Conclusion

Innovation is not just a technological activity but a **civilisational imperative** rooted in India's past and linked with its constitutional ethos. With policy frameworks like the **RDI Scheme**, institutional support through **ANRF & NIF**, and platforms like **DPI & startups**, India is democratising innovation. This creates opportunities across all levels of society, positioning India as a global hub for sustainable, inclusive, and future-ready growth.

2. People's Padma

- **Definition & Concept**
 - *People's Padma* refers to the recognition of grassroots cultural icons and unsung heroes who have contributed immensely to preserving India's intangible cultural heritage but often remained outside mainstream visibility.
 - It reflects the principle of *Jan Bhagidari* (people's participation) in honouring cultural custodians.
- **Shri Pandi Ram Mandavi (Tribal Wood Carver & Instrument Maker)**
 - Origin: Narayanpur, Chhattisgarh (Bastar region).
 - Specialization: Gond & Muria wood art, bamboo musical instruments.
 - Iconic Creation: *Sulur* or Bastar flute.
 - Contribution: Trained youth, organised workshops, preserved Muria traditions through crafts.
 - Recognition: Padma Shri awardee, symbol of safeguarding tribal knowledge.
- **Dr. Venkappa Ambaji Sugatekar (Gondhal Folk Singer)**
 - Origin: Bagalkot, Karnataka.
 - Specialization: Gondhal folk music blending storytelling, mythology, and devotion.
 - Mastery: Memorised 1,000+ songs & 150 mythological narratives.
 - Contribution: Trained 1,000+ students free of cost, kept Gondhal traditions alive.
 - Recognition: Padma Shri awardee, called "Cultural Torch Bearer" by the Prime Minister.
- **Cultural Preservation & Intangible Heritage**
 - Both icons represent preservation of *intangible cultural heritage* – traditions, oral knowledge, folk

art, and indigenous skills passed across generations.

- Their work ensures inter-generational transfer of tribal and folk traditions to younger communities.

- **Constitutional & Legal Linkages**

- *Article 29*: Protection of interests of minorities, preserving distinct language, script, culture.
- *Article 51A(f)*: Fundamental duty to value and preserve India's rich heritage.
- *Article 51A(h)*: Duty to develop scientific temper and humanism – extends to cultural rationality.
- UNESCO Convention (2003) on Safeguarding Intangible Cultural Heritage – India is a signatory.



- **Significance of People's Padma**

- Democratization of recognition – moving beyond elite circles to grassroots talent.
- Creates pride and visibility for marginalised communities and local traditions.
- Strengthens cultural diplomacy by showcasing diverse Indian traditions globally.

- **Community Impact**

- Encourages youth engagement in traditional crafts and music.
- Generates livelihoods and sustains rural economies through cultural industries.
- Inspires grassroots innovators to carry forward tribal & folk heritage.

- **Recognition & Legacy**

- Shri Mandavi and Dr. Sugatekar exemplify cultural resilience amidst modernisation pressures.
- Their awards act as motivation for artisans, musicians, and local custodians to continue their craft.

- **Broader National Vision**

- The *People's Padma* embodies the idea of "Cultural Swaraj" – recognition of India's plural traditions from villages to global forums.
- Supports the vision of *Viksit Bharat@2047* by combining cultural pride with inclusive growth.

- **Conclusion**

- The *People's Padma* initiative honours unsung heroes like Mandavi and Sugatekar, who embody India's civilisational ethos.
- Their life work bridges past and future by preserving traditions while inspiring new generations.
- This recognition strengthens India's cultural identity, ensuring grassroots innovation and heritage preservation remain part of the development narrative.

3. Carbon Farming for Climate-Smart Agriculture

- **Definition & Concept**

- *Carbon farming* refers to agricultural practices that increase the sequestration of atmospheric carbon dioxide in soils and vegetation, thereby transforming agriculture from a net emitter to a net absorber of greenhouse gases (GHGs).
- Mechanism: Photosynthesis captures CO₂ → stored in soil organic matter and biomass → improves fertility, water retention, and climate resilience.

- **Background & Context**

- Agriculture is central to multiple SDGs: SDG 2 (Zero Hunger), SDG 12 (Sustainable Production), SDG 13 (Climate Action), and SDG 15 (Life on Land).

- Challenges: Crop yield loss due to erratic rainfall, droughts, temperature extremes; agriculture contributes nearly 20% of global GHG emissions (FAO, 2020).
- Need: Shift to *climate-smart systems* that ensure food security while reducing emissions.

• **Dual Role of Agriculture**

- Source of emissions: Methane from livestock and paddy, nitrous oxide from fertilisers, CO₂ from tillage and stubble burning.
- Potential as a carbon sink: With sustainable practices, farmlands can sequester billions of tonnes of CO₂ annually and generate farmer income through carbon credits (1 credit = 1 tonne CO₂ removed).



• **Core Carbon Farming Practices**

- Agroforestry, grassland conservation, reforestation.
- Reduced tillage, cover cropping, crop rotation, improved residue and water management.
- Biochar application, precision nutrient management (4Rs), elimination of bare fallows.
- Data-driven farming, rotational grazing, silvopasture for integrated carbon capture.

• **India-Specific Opportunities**

- 85% farmers are smallholders → large-scale mobilisation possible.
- Estimated potential: \$63 billion worth of carbon revenue across 170 million hectares.
- Soil capacity: 3–8 billion tonnes CO₂ equivalent storage per year for 20–30 years.

• **Carbon Markets & Legal Framework**

- *Carbon markets* allow buying/selling of credits, formalised under Kyoto Protocol and Paris Agreement.
- India's carbon trading framework established under *Energy Conservation Amendment Act, 2022*.
- India is the world's 2nd-largest holder of Clean Development Mechanism (CDM) projects after China.

• **Policy & Institutional Support**

- Need for a *National Carbon Farming Mission* integrated with Soil Health Card and National Mission for Sustainable Agriculture.
- Research under NICRA (National Innovations on Climate Resilient Agriculture).
- Role of Krishi Vigyan Kendras (KVKs) in farmer training and Carbon FPOs for pooling credits.

• **Constitutional & Legal Linkages**

- *Article 21*: Right to life includes right to a healthy environment.
- *Article 48A*: Directive Principle to protect and improve environment.
- *Article 51A(g)*: Fundamental duty of every citizen to protect natural environment.
- Energy Conservation Amendment Act, 2022 – legalises Indian Carbon Market.

• **Conclusion**

- Carbon farming is a transformative pathway to achieve climate-smart agriculture.
- It strengthens food security, provides additional income to farmers, reduces emissions, and supports India's Net Zero 2070 commitment.
- Success requires collective action by government, scientists, private sector, and farmers through policies, technology adoption, awareness, and robust market systems.

PIB & PARLIAMENTARY RESEARCH STUDIES (PRS)

1. RBI Nearing Finalization of Climate Risk Rules for Banks

Key Summary Points

1. RBI's Move Towards Climate Risk Regulation in Banking

- The **Reserve Bank of India (RBI)** is in the final stages of drafting **guidelines for banks and financial institutions to disclose, assess, and manage climate-related financial risks**.
- These rules are expected to be **mandatory**, bringing India in line with emerging global standards on **sustainable finance** and **green risk management**.

2. Global Context and India's Proactive Stance

- While several **global banks are retreating from climate commitments** amid economic and political pressures, India is moving in the opposite direction.
- RBI's guidelines will align with frameworks such as:
 - **Task Force on Climate-related Financial Disclosures (TCFD)**
 - **Network for Greening the Financial System (NGFS)**, of which RBI is a member.
- This reflects India's commitment to **climate-resilient financial systems**, despite global policy backtracking.

3. Need for Climate Risk Management in Banking Sector

- **Climate change** poses **physical risks** (e.g., floods, droughts) and **transition risks** (e.g., policy shifts, stranded assets) to the financial sector.
- Unregulated exposure can lead to **credit defaults, asset devaluation, and systemic risks** to financial stability.
- RBI aims to ensure banks integrate **Environmental, Social, and Governance (ESG)** risks into lending and investment practices.



4. Legal and Regulatory Framework

- **Banking Regulation Act, 1949**: RBI has powers to supervise banks and issue directions to ensure financial soundness.
- **Climate Change and Environment Protection Acts**: While not directly linked to banking, these support RBI's mandate to maintain macro-financial stability.
- RBI has previously issued **discussion papers and consultative documents** on climate risk, ESG reporting, and sustainable finance (2022–2024).

5. Key Institutional and Strategic Developments

- India's **Panchamrit commitments** (UNFCCC COP26, Glasgow):
 - Net-zero by 2070

- Reduce carbon intensity by 45% by 2030
- Aligning financial systems to **Nationally Determined Contributions (NDCs)** under the **Paris Agreement**.
- Encourages banks to adopt **green financing instruments** such as green bonds, carbon markets, and sustainability-linked loans.

Definitions & Key Concepts

- **Climate Risk:** Potential negative financial impact arising from climate change, including physical and transition risks.
- **Green Finance:** Financing of projects that support a transition to a low-carbon, sustainable economy.
- **Stranded Assets:** Investments that lose value due to the transition to a greener economy (e.g., coal power plants).
- **ESG:** Environmental, Social, and Governance criteria used to assess sustainability and ethical impact of investments.

Conclusion

RBI's initiative to finalize climate risk rules for banks demonstrates India's **financial sector readiness to confront climate change**. By pushing for **greater disclosure, climate risk assessment, and green lending**, the move will fortify India's banking system against long-term environmental threats and enhance **investor and depositor confidence**.

2. Consumer Price Index for Agricultural and Rural Labourers (June 2025)

1. Introduction to CPI-AL & CPI-RL and Base Year Revision

- **Consumer Price Index for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL)** measure retail inflation for the rural workforce in India.
- The **base year** for these indices has been revised from **1986–87 to 2019=100** to reflect more recent consumption patterns and price structures.
- The revised index is released by the **Labour Bureau**, Ministry of Labour & Employment.

2. Key Methodological Improvements in New Series (2019=100)

- **Revised Weighting Diagrams:** Reflect changing expenditure patterns of rural households.
- **Geometric Mean (GM)** used instead of Arithmetic Mean (AM) to reduce the impact of extreme price fluctuations.
- **COICOP-2018 Alignment:** Follows international classification standards for better comparability and analytical rigor.
- **Admissibility Concept for PDS:** Prices of subsidized goods under the Public Distribution System (PDS) are now calculated based on actual entitlement rather than availability.



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Ministry of Labour & Employment
भारत सरकार (Government of India)

3. Expanded Scope and Coverage

- **Geographical Spread Increased:** Coverage expanded from **20 States to 34 States/UTs**.
- **More Representative Sample:** Data now collected from **787 villages** (earlier 600).

- **Diverse Consumption Basket:** Coverage increased from ~65–106 items to ~150–200 items, providing a more accurate reflection of rural consumption.

4. June 2025 Inflation Data

- **CPI-AL and CPI-RL for June 2025:** Both stood at **134 points**.
- **Year-on-Year Inflation Rates:**
 - **CPI-AL:** 1.42%
 - **CPI-RL:** 1.73%
- These inflation rates are **moderate** compared to the older base year series, indicating better inflation control.

5. Constitutional & Legal Provisions

- **Directive Principles of State Policy (DPSP):** Article 43 (Living wage for workers), Article 39(a) (Adequate means of livelihood).
- **Labour Bureau's role:** Part of the **Ministry of Labour & Employment**, responsible for collecting, compiling, and analyzing labour statistics, including price indices affecting rural workers.
- **Legal Framework:** Though not defined under a single Act, CPI-AL & RL support policy-making for schemes like **MGNREGA**, **Minimum Wage Fixation**, and **Food Security**.

6. Definitions

- **Consumer Price Index (CPI):** Measures changes in the price level of a basket of consumer goods and services.
- **Agricultural Labourer:** A person whose main source of income is wage employment in agricultural activities.
- **Rural Labourer:** A broader category that includes both agricultural and non-agricultural wage earners in rural areas.

Conclusion

The revision of the CPI-AL and CPI-RL base year to 2019 marks a significant step in aligning rural inflation tracking with current consumption patterns and statistical standards. This helps policymakers design better-targeted rural development, wage revision, and poverty alleviation strategies.

3. Inauguration of 'Mahila Aarogyam Kaksh' – Promoting Women's Health in Government Workspaces

Key Highlights:

1. Launch of Mahila Aarogyam Kaksh:

- Union Minister Shri Arjun Ram Meghwal inaugurated *Mahila Aarogyam Kaksh*, a dedicated fitness and wellness facility for women employees in the Department of Legal Affairs, Ministry of Law and Justice, at Shastri Bhawan, New Delhi.
- First-of-its-kind initiative aimed at institutionalizing workplace wellness in Central Government offices.

2. Features of the Facility:

- Transformed from an unused garage into a vibrant wellness space.

- Equipped with gym equipment and a **private lactation room** for nursing mothers.
- Designed to promote **physical fitness, mental well-being, and work-life balance** among women staff.

3. Alignment with National Initiatives:

- Supports '**Fit India Movement**' launched in 2019 by PM Narendra Modi.
- Contributes to broader goals of **Viksit Bharat** (Developed India) by ensuring wellness and inclusion at the workplace.

4. Institutional Message & Gender Inclusion:

- Advocates for **holistic well-being of women**, recognizing that self-care is foundational to empowerment.
- Law Secretary emphasized challenges faced by women in prioritizing health amid dual responsibilities.

5. Broader Implications for Governance:

- Demonstrates shift in institutional culture—offices are seen not just as administrative units, but also as human-centric workspaces.
- Reinforces government's commitment to **gender-sensitive governance and inclusive workplace policies**.



Important Definitions & Provisions:

- **Fit India Movement:** A nationwide campaign launched in 2019 by the Ministry of Youth Affairs and Sports to encourage people to adopt healthier lifestyles.
- **Workplace Wellness:** Organizational policies and practices that support employee health, such as fitness facilities, mental health support, and lactation spaces.
- **Lactation Room:** A private, hygienic space where nursing mothers can express milk during work hours, ensuring dignity and child-care rights at work.
- **Gender Mainstreaming:** Integration of gender perspectives in all policies, programs, and activities to promote equality.

Constitutional & Legal Relevance:

- **Article 42** – Directive Principle of State Policy mandates the State to make provisions for securing just and humane conditions of work and maternity relief.
- **Maternity Benefit (Amendment) Act, 2017** – Provides for crèche facilities and emphasizes post-natal care for working women.
- **POSH Act, 2013** – Promotes safe working environments for women and can be extended to include wellness infrastructure.

Conclusion:

The *Mahila Aarogyam Kaksh* is a progressive step towards creating gender-inclusive, health-conscious work environments in government. It represents a cultural shift in administrative thinking—from productivity-centric to **employee-centric governance**.

4. National Standards for Civil Service Training Institutions 2.0

1. What is NSCSTI 2.0?

- NSCSTI stands for *National Standards for Civil Service Training Institutes*.
- The **2.0 version** is a revamped framework launched by the **Capacity Building Commission (CBC)** under the broader vision of **Mission Karmayogi**.
- It aims to **standardize, modernize, and outcome-orient** the training of civil servants across all levels of governance (Central, State, Urban Local Bodies).

2. Key Features of NSCSTI 2.0

- **Evaluation metrics reduced from 59 to 43**, ensuring sharper focus and simplicity.
- **Hybrid and AI-driven learning** models encouraged; aligns with future digital governance needs.
- Promotes **Indian Knowledge Systems (IKS)**, **Karmayogi Competency Model (KCM)**, and **Amrit Gyaan Kosh (AGK)**.
- Adaptable for both **technical and administrative training institutions**, thereby enhancing institutional excellence.



3. Institutional and Policy Significance

- Encourages **cooperative and competitive federalism**, similar to the **Aspirational Districts Programme**.
- Boosts **institutional self-evaluation, innovation, and peer learning**.
- Seen as a step toward building a **future-ready, citizen-centric** civil service.
- **Reactivation of the Accreditation Portal** ensures transparency and standardization of training institutions.

4. Mission Karmayogi – The Larger Umbrella

- Launched in 2020, **Mission Karmayogi** is a national program for **civil services capacity building**.
- NSCSTI 2.0 operates under this mission and reinforces the goal of a **performance-driven bureaucracy**.
- India's civil services reform model is now gaining **international recognition** (e.g. from Bangladesh, Maldives, South Africa).

5. Constitutional and Legal Dimensions

- Falls under **Article 309** of the Constitution – *recruitment and conditions of service of persons serving the Union or a State*.

- Aligns with **Good Governance principles** enshrined in the **Preamble** (Justice, Equality, Fraternity) and **Directive Principles** (Art. 38, 39).
- Promotes **ethical and responsive governance**, as mandated in **Second ARC** recommendations.

6. Definition of Key Terms

- **Capacity Building**: Systematic process of developing and strengthening the skills, instincts, abilities, and resources for better governance.
- **Indian Knowledge Systems (IKS)**: Indigenous knowledge traditions rooted in ancient and classical Indian texts and practices.
- **Accreditation**: A formal recognition granted to institutions meeting prescribed quality standards.

Conclusion

NSCSTI 2.0 represents a **paradigm shift** in the civil services training ecosystem—prioritizing **adaptability, innovation, outcome-orientation, and inclusiveness**. It is a reflection of India's aspiration to move towards a **citizen-centric, efficient, and accountable governance framework**.

