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April 2026

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2027, 2028 & 2029

DELHI: 30 APRIL, 11 AM | 8 MAY, 11 AM | 14 MAY, 8 AM
22 MAY, 5 PM | 27 MAY, 2 PM | 29 MAY, 11 AM

GTB NAGAR : 28 APRIL, 11 AM | 22 MAY, 11 AM

AHMEDABAD: 15 JUNE | BENGALURU: 18 JUNE | BHOPAL: 2 JUNE | HYDERABAD: 20 MAY
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Starts : 10 JUNE

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1. POLITY AND GOVERNANCE

1.1. TRUST-BASED GOVERNANCE

Why in the news?

Recently, Lok Sabha has passed the Jan Vishwas (Amendment of Provisions) Bill, 2026.

About Jan Vishwas (Amendment of Provisions) Bill, 2026

- It seeks to shift **India's regulatory approach from a punitive model to "trust-based governance."**
  - It builds on the earlier **Jan Vishwas (Amendment of Provisions) Act, 2023**, which decriminalised 183 provisions across 42 Central laws.
  - It proposes the amendment of **784 provisions of 79 Central Acts administered by 23 Ministries.**
- **Key Provisions**
  - **Decriminalising offences**: Replaces imprisonment with **civil penalties for over 1,000 minor offences**. E.g. up to Rs. 1 crore penalty for making national highway impassable instead of imprisonment.
  - **Omission of offences**: E.g. Giving false fire alarm under Delhi Police Act, 1978; failure to give information of births and deaths under Delhi Municipal Corporation Act, 1957 etc.
  - **Revision of fines and penalties**: Increase by **10% of respective minimum amount every three years**.
  - **Graduated response**: Provide **advisories on first** and **warnings on second instances of offences**. A civil penalty will be imposed for subsequent contraventions.

About Trust-Based Governance

- Trust-based governance is a **governance approach** in which public institutions are expected to be reliable, responsive, fair, transparent, and integrity-driven, encouraging cooperation and voluntary compliance rather than excessive control and coercion.
- At its core, it implies that trust forms the basis for initiating an inter-organizational relationship.
  - **OECD defines trust as** "a person's belief that another person or institution will act consistently with their expectation of positive behaviour."

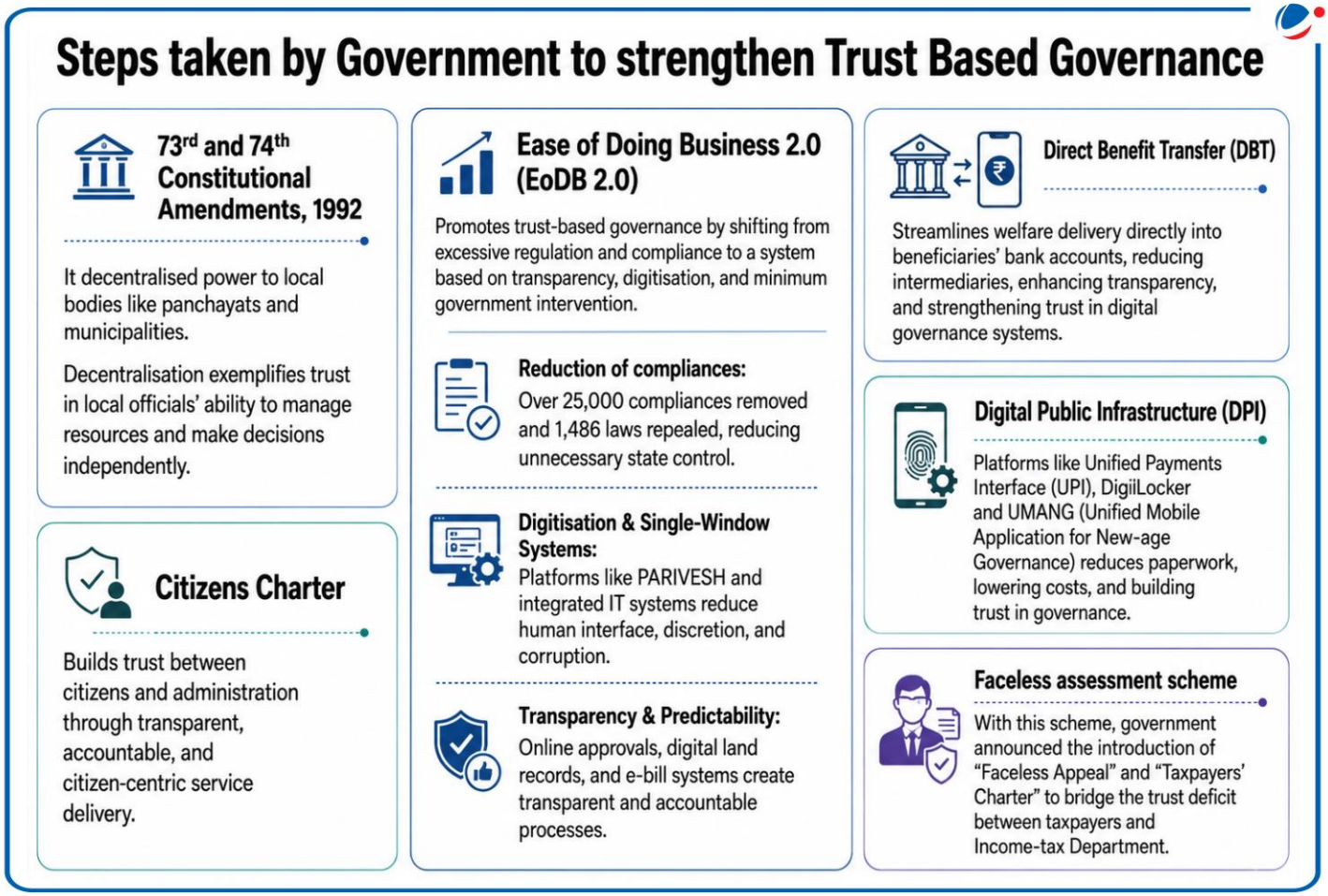
Need for Trust-Based Governance

- **Regulatory Reform**: India's governance framework has been marked by **excessive compliances**, **overregulation** leading to increased transaction costs, rigid bureaucratic control.
  - India's regulatory framework encompasses 1,536 laws with 69,233 compliances across various levels of government
- **Economic Growth**: Trust-based governance **improves ease of doing business by reducing unnecessary approvals,** fear of criminal charges due to non-compliance, and **ensures greater policy certainty.**
  - As **Francis Fukuyama** argues, societies with higher levels of trust tend to be more economically advanced than those with lower levels.
- **Voluntary Compliance**: It promotes voluntary compliance through **transparency, digital systems, and self-certification mechanisms,** instead of punitive enforcement.
  - In 2014, **self-certification of documents** in place of affidavits has eliminated the need of **attestations by Gazetted officers or notaries,** making life easier for common man and building trust.
  - The self-certification mechanism aligns with **Rousseau's social contract approach**.
- **Pendency in courts:** More than 5 crores cases are pending across all court levels. Subordinate district courts account for the vast majority (nearly 85% to 87%) of these pending cases.

- **Administrative Efficiency**: By reducing diversion of resources towards monitoring minor procedural violations, a trust-based approach **enables administration to concentrate on governance outcomes**.
- **Citizen-centricity**: It **improves accessibility and responsiveness** in public administration, making governance more participatory and citizen-friendly.

Challenges associated with Trust Based governance

- **Enforcement**: Excessive deregulation and **overreliance on self-compliance** may **weaken deterrence against serious violations**, such as environmental protection, labour welfare, and financial regulation.
- **Institutional Constraints**: Effective trust-based governance requires strong institutions, skilled personnel, and robust digital infrastructure; however, **shortages in manpower, technological capacity** can hinder efficient implementation.
  - E.g. As per the parliamentary report there is a 15% vacancy in CBI.
- **Digital Divide**: Heavy **reliance on digital governance may disadvantage rural populations**, small businesses, and digitally illiterate citizens who lack internet access, further leading to inequities and exclusion.
  - As per, NSSO (National Sample Survey Office) data only 24% of rural households have internet access, compared to 66% in cities.
- **Cyber-security**: Rapid digitisation of governance **increases the risk of data breaches, cyber-attacks**, and misuse of personal information, undermining public trust in digital governance mechanisms.
  - E.g. Cybersecurity incidents rose from 10.29 lakh in 2022 to 22.68 lakh in 2024.
- **Colonial Legacy of Distrust:** India's colonial bureaucracy created a culture of suspicion and excessive control, making trust-based governance difficult.



Way ahead

- **Encourage Cooperative Federalism**: Centre and States should work together to **harmonise regulations**, simplify compliance systems, and **share best governance practices** to ensure uniform implementation.
- **Enhance Citizen Participation**: Institutionalising stakeholder consultations, grievance redressal systems, and public feedback mechanisms can strengthen transparency, accountability, and participatory governance.
- **Strengthen Institutional Capacity**: Administrative reforms should be accompanied by capacity building of civil servants, filling up vacancies, investment in digital infrastructure, and **adoption of outcome-oriented governance practices** to ensure effective implementation.
- **Embrace technology-based governance**: Digital transactions **create an audit trail that discourages unethical behaviour and allows real-time identification** of misconduct.
  - **Digital Inclusion**: Improving internet connectivity, digital literacy, and accessibility of e-governance services is necessary to ensure that the benefits of trust-based governance reach rural and vulnerable populations.
- **Comprehensive compliance reforms**: Strengthen trust-based governance through **digitisation, AI-enabled compliance systems, removal of redundant regulations, reduced inspections**, lower compliance costs, and transparent enforcement mechanisms.

1.2. CENSUS 2027

Why in the News?

The Union Government recently rolled out the first phase of India's Census 2027, launching the world's largest administrative and statistical exercise.

More on the news

- The census, which was originally due in 2021 but suffered delay due to the COVID-19 pandemic, is moving forward.
- **It will be India's first fully digital census and will feature a comprehensive caste enumeration for the first time since 1931**.

Census in India

- **Constitutional mandate**: Article 246 of the Constitution (7th schedule Union List entry 69).
- **Legal provisions**: India's census is conducted under the provisions of the Census Act, 1948 and the Census Rules, 1990.
- Conducted by: **Office of the Registrar General and Census Commissioner of India under Ministry of Home Affairs**.

Brief Overall History of Census in India

- **Ancient and Medieval Era:** *Rig Veda* (800-600 BC), Kautilya's *Arthashastra* (which used it for taxation purposes), and the Mughal administrative report *Ain-e-Akbari* under Emperor Akbar.
- **British Era:** The first systematic, non-synchronous, population census was conducted between 1865 and 1872.
  - The **first synchronous nationwide census was conducted in 1881** under Census Commissioner W.C. Plowden.
  - Since then, the exercise has been conducted decennially without interruption until the recent pandemic.
- **Post-Independence:** The census was given a statutory mandate via the **Census Act of 1948**, making it a Union subject.
  - The upcoming 2027 Census will mark the 16th census in the country's history and the 8th since independence.

What is New in the 2027 Census?

- **First Digital Enumeration:** For the first time, data collection will rely on mobile applications rather than paper.
  - The government has introduced a **Census Management & Monitoring System (CMMS) portal for near real-time tracking**, alongside a **Houselisting and Housing Census (HLO) Mobile App** and a web mapping tool called Houselisting Block Creator (HLBC).
- **Self-Enumeration:** A new web-based portal will allow the public the option to self-enumerate in 16 different languages.
- **Caste Enumeration:** Moving beyond the standard Scheduled Caste (SC) and Scheduled Tribe (ST) counts of past decades, the government has approved a comprehensive caste enumeration to take place during the second phase of the census.
- **Two-Phase Timeline:** Phase I (Houselisting and Housing Census) running from April to September 2026, and Phase II (Population Enumeration) in February 2027.

Significance of the Census

- **Re-anchoring Welfare and Policy:** Over the last 15 years, India's welfare architecture has heavily relied on partial sample surveys.
  - The new census will provide an updated, comprehensive socio-economic map vital for accurately targeting subsidies, identifying deprivation, and aligning public infrastructure with modern population realities.
- **Delimitation and Political Representation:** The data will act as the foundation for the upcoming delimitation exercise.
  - It is also necessary for implementing the recently passed women's reservation bill for legislative assemblies.
- **Understanding New Demographics:** India's demography has changed dramatically since 2011. The census will capture vital shifts, such as declining fertility rates and a rapidly aging population, which is crucial for restructuring India's care economy, health systems, and elder-care services.
- **Urbanization and Migration Tracking:** With rapid peri-urban growth and informal settlements expanding, GPS tagging and digital asset mapping will help urban planners design better transport, housing, and climate-resilient infrastructure.

Challenges That It Faces

- **Digital Exclusion and Privacy:** Self-enumeration relies on mobile ownership and digital literacy which can be a major concern in areas where women and marginalized communities often lag.
  - Furthermore, despite legal safeguards under the Census Act of 1948, shifting to a digital architecture raises concerns over cybersecurity, potential data breaches, and public trust regarding how sensitive information will be handled.
- **Methodological Complexities of Caste:** Capturing caste data is fraught with difficulty because caste in India is deeply localized, heterogeneous, and often shaped by sub-caste identities.
  - Translating millions of self-identifications into analytically meaningful categories poses a massive bureaucratic challenge that may spark deep political divisions.
- **North-South Tensions:** Southern states, which have successfully curbed population growth, fear that a population-based delimitation exercise will severely dilute their political representation in Parliament compared to northern states.

Conclusion

Census 2027 is far more than a statistical headcount; it is a structural reset of India's developmental and political architecture. Coming at a crucial inflection point on the path to "Viksit Bharat 2047," this digitally empowered census

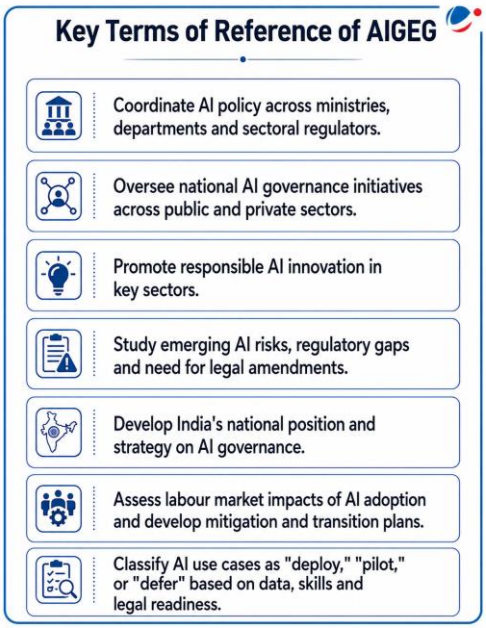
offers an unprecedented mirror to reflect India's modern realities. If executed with transparency and robust safeguards, it has the power to recalibrate democratic representation, enhance the precision of welfare delivery, and uncover the true socio-economic fabric of the nation for the decade to come.

1.3. NEWS IN SHORTS

1.3.1. AI GOVERNANCE AND ECONOMIC GROUP (AIGEG)

Ministry of Electronics and Information Technology (MeitY) has constituted the AI Governance and Economic Group (AIGEG) as a high-level inter-ministerial body.

- It will serve as India's central institutional mechanism for AI governance policy development and coordination.
- Constitution of the AIGEG gives formal effect to institutional recommendations made in India's AI Governance Guidelines and the Economic Survey.
- The Guidelines emphasized a **"whole-of-government" approach to AI governance**.
- **Economic Survey** highlighted the need for a **central authority to align AI deployment** with India's unique labor market realities and social stability.



About AIGEG

- **Composition (10-member body)**
  - **Chairperson**: Minister of Electronics & IT
  - **Vice-Chairperson**: Minister of State for Electronics & IT
  - **Other Members**: Stakeholders across policy development, science and technology, security and economic affairs. E.g. Principal Scientific Advisor, Chief Economic Advisor (CEA), CEO (NITI Aayog) etc.
- **Expert Support:** By a **Technology and Policy Expert Committee (TPEC)**, which provides technical advice on global trends, emerging risks, and regulatory gaps.

India's AI Governance Strategy

- **National Strategy for AI by NITI Aayog (2018): 'AI for All' vision,** focus on inclusive development and **democratisation** of the AI ecosystem through initiatives like **IndiaAI Mission.**
- **Seven Principles or Sutras:** Trust, people-centricity, responsible innovation, equity, accountability, understandability, and safety, resilience and sustainability.
- Integration with Digital Public Infrastructure (DPI), building Institutional architecture like AI Governance Group etc.

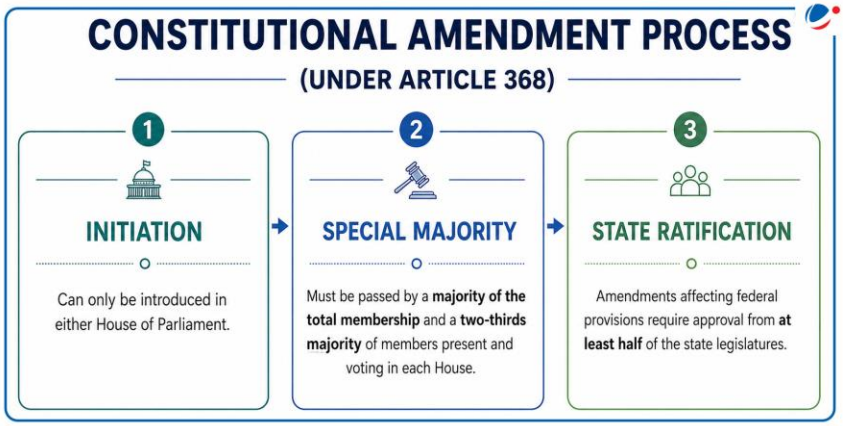
1.3.2. CONSTITUTION (131ST) AMENDMENT BILL 2026 DEFEATED IN LOK SABHA

The bill failed to secure the **2/3rd majority** required to pass a **constitutional amendment bill**.

- Following the defeat of the Constitution Amendment Bill, the government withdrew the **Delimitation Bill 2026** and the **Union Territories Laws (Amendment) Bill 2026**.
- The bill was opposed as it will disproportionately reduce the representation of the southern and north-eastern states on the basis of the 2011 Census.

About the 131st Amendment Bill

- **Increases the strength of the Lok Sabha**: From the existing 543 members to 850 members (815 from states and 35 from UTs).
- **Amend Article 334A:** Allow implementation of one-third women's reservation in Lok Sabha and State Assemblies immediately after delimitation.
  - It was introduced through **106th Constitution (Amendment) Act, 2023 (Nari Shakti Vandan Adhiniyam)**.
- **Amend Article 82**: Bill proposes to delete the third provision of Article 82, which mandates that the **next delimitation** exercise shall be undertaken based on the first Census conducted after the year 2026.
  - This will enable delimitation to be carried out using Census data available before the 2026–27 Census.



About Delimitation Bill 2026

- It aimed to repeal and replace the **Delimitation Act, 2002.**
- **Delimitation Commission (DC):** Union Government to constitute the DC, which will be chaired by a person who is or has been a Judge of the Supreme Court.
- It specified that the delimitation would be based on the latest published census at the time of the Commission's formation, meaning the 2011 census would be used.

The **Union Territories Laws (Amendment) Bill, 2026** extends similar changes to Delhi, Puducherry and Jammu and Kashmir.

1.3.3. 'PROMOTION AND REGULATION OF ONLINE GAMING RULES, 2026' NOTIFIED

The Rules, prepared by the **Ministry of Electronics and Information Technology (MeitY),** provide for the operational architecture of the **Promotion and Regulation of Online Gaming (PROG) Act, 2025.**

Key Highlights of Rules

- **Online Gaming Authority of India:** Constituted as an **attached office of MeitY**.
  - **Head office:** NCT of Delhi
  - Composition: six members, chaired by the Additional Secretary of MeitY.
  - Functions: inquiring into complaints, issuing compliance orders, and publishing a list of determined online money games.
- **Determination of an Online Game:** Rules prescribe a **determination test** to classify whether an online game constitutes an online money game. **E.g.** whether game involves **payment of fees, expectation of winning monetary enrichment,** etc.
- **Registration of Online Games:** Not universally required; **mandatory only for notified online games** based on risk, scale, transactions, origin **and for all e-sports offerings**.
- **User Safety Features:** technical, procedural, operational, behavioural or system-related safeguards introduced **to protect vulnerable users** (especially children).
- **Two-Tier Grievance Redressal Mechanism:** Aggrieved users can appeal to the **internal grievance redressal systems** (est. by service providers).

Digital Current Affairs
Read our previous coverage on PROG Act, 2025

- And further to the **Appellate Authority (Secretary, MeitY),** with each level aiming to resolve the matter within 30 days.

- **Penalties and Enforcement:** Proceedings are conducted digitally (unless physical presence is needed) and must be **completed within 90 days** of receiving a complaint.

About PROG Act, 2025

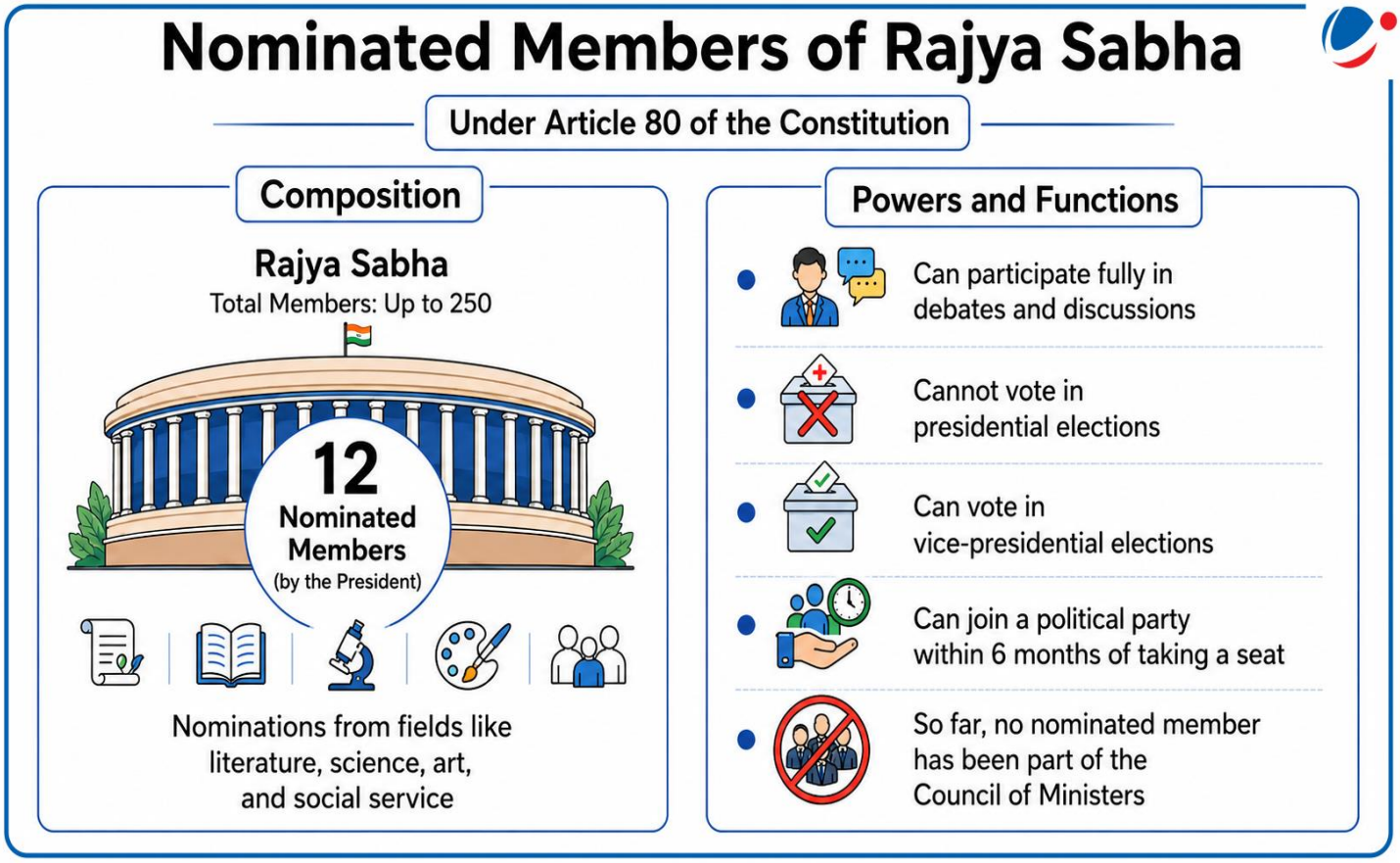
- Establishes a strong **legal framework to curb harmful online money gaming** and protect users from the financial, psychological, and social distress caused by predatory gaming platforms.
- Promotes a **regulated, growth-oriented ecosystem** for **e-sports and online social games**.
- Aligns with India's vision to become a **global gaming and innovation hub** while safeguarding society from financial and psychological risks.

1.3.4. NOMINATED MEMBERS

For the first time, a **nominated member** was elected as **Deputy Chairman of the Rajya Sabha** for the **third consecutive term.**

About Deputy Chairman

- Under **Article 89** of the Constitution **deputy chairman** is elected by the **Rajya Sabha** itself from **amongst its members.**
- The Deputy Chairman performs the duty of the Chairman's office when **it is vacant or when the Vice-President acts as a President.**



1.3.5. REMOVAL OF JUDGES

Justice Yashwant Varma **submitted his resignation to the President,** withdrawing from the proceedings of impeachment process instituted against him.

- **No judge** has been impeached till now.

Removal of Judges

- **Article 124 and Article 218** provides for the removal of supreme court judge and high court judge through impeachment.
  - Removal process is regulated by the **Judges Enquiry Act (1968).**
- **Impeachment Process:**
  - **Initiation:** Removal motion requires signature of 100 members (for Lok Sabha) or 50 members (For Rajya Sabha) to be submitted to Speaker/Chairman.
  - **Investigation:** On admission of motion, a 3-member committee investigates the charges.
    - If committee finds the judge guilty, both the Houses pass the removal motion with special majority.
    - The President then passes an order for removal.

1.3.6. RECUSAL OF JUDGES

Former Delhi Chief Minister sought Recusal of Delhi High Court Justice in a matter.

About Recusal of Judges

- **Meaning**: It is a **judge's withdrawal from a case** due to a potential conflict of interest or perceived bias.
- **Purpose:** Promote a **fair process, public confidence in administration o**f justice, **Judicial impartiality**, etc.
- **Underlying Principle: Rule Against Bias** (No person should be a judge on a case in which they have interest).
- **Regulation:** India has **no codified rules** governing it.
- **Legal Precedents:** Ranjit Thakur v Union of India (1987), Chandraprabha v. Union of India (2025) etc.

1.3.7. COMMONWEALTH PARLIAMENTARY ASSOCIATION (CPA)

Recently, the first Conference of CPA India Region (Zone – VII) concluded.

About CPA (HQ: **London**)

- **Founded in 1911,** it is an **international inter-parliamentary organization** within the Commonwealth.
- **Objective:** advancement of parliamentary democracy and good governance
- **Membership**: 180 national, state or provincial legislatures divided up between 9 geographic regions of the Commonwealth.
- **Key publication**: The Parliamentarian journal.

1.3.8. NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING (NCERT)

Government declared NCERT as a **deemed to be university.**

- Institutions that are **'deemed-to-be-university'** enjoy **academic status and privileges of a university.**
- Can be declared by Central Government on **advice of UGC.**

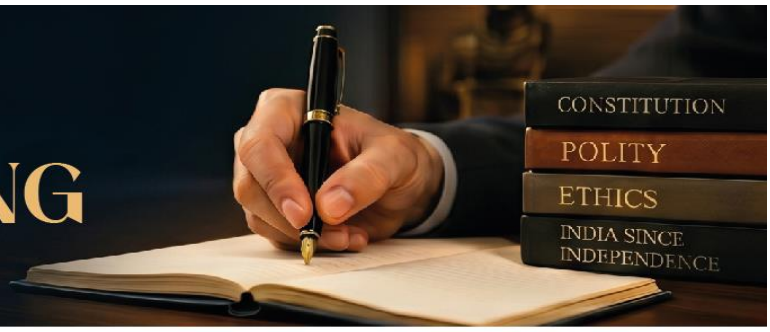
About NCERT (Hq: New Delhi)

- **Genesis:** Autonomous organisation set up in **1961.**
- **Ministry:** Ministry of Education

- As per National Education Policy 2020, it is **nodal agency** to develop **National Curriculum Frameworks (NCFs)** for **Early Childhood Care and Education (ECCE), School Education,** and **Adult Education.**

VISIONIAS INSPIRING INNOVATION

MASTER THE ART of ESSAY WRITING for UPSC CSE MAINS



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Begin Powerfully — The introduction is your first impression. Anchor it with a compelling quote, anecdote, or thought-provoking contrast that immediately draws the examiner in.

Cracking the Philosophical Essay — Abstract and idea-based topics, increasingly dominant in recent UPSC papers, demand more than facts. They require a clear point of view, conceptual clarity, and the ability to interpret the topic from a broader philosophical, ethical, or human perspective & not merely through social, economic, or political lenses alone.

Build with Depth — The body must weave social, political, economic, ethical, historical, and contemporary perspectives into a coherent, flowing argument. Each paragraph should connect logically to the next, substantiated with facts, data, or relevant examples.

Conclude with Vision — Summarise your central argument, offer a forward-looking insight, and leave a lasting impression. An optimistic, prescriptive close tied back to your introduction creates a complete, coherent essay.

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2. INTERNATIONAL RELATIONS

2.1. INDIA-NEPAL RELATIONS

Why in the news?

New government was recently elected in Nepal.

Overview of India-Nepal relations	
Border • **1,751 km** long border across 5 Indian states • **Open border** that allows citizens of both countries to travel freely without visas or passports. • **Integrated Check Posts (ICP)** at Birgunj (Nepal's first-ever ICP); Biratnagar; Nepalgunj, and Bhairahawa.	**Pillars of the Relationship** • **India Nepal Treaty of Peace** and **Friendship, 1950.** • **Common Regional groupings**: SAARC (South Asian Association for Regional Cooperation), BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and BBIN (Bangladesh, Bhutan, India, and Nepal), International Solar Alliance (ISA) etc.
Economy & Trade • India is Nepal's largest export destination**.** • Nepal's exports mainly constitute **edible oil, coffee, tea and jute**. • Nepal's main imports from India are **petroleum products, Iron & Steel, Cereals, Vehicles and Parts, Machinery parts**.	**Defence cooperation** • **Gorkha Regiment** of the Indian Army comprises around 32,000 Gorkha soldiers from Nepal**.** • **Joint military exercise:** Surya Kiran
Connectivity projects • **Rail links between Jayanagar** – Bijalpura - Bardibas (Nepal's first ever broad-gauge line); Jogbani -Biratnagar; and Raxaul – Kathmandu. • **First cross-border petroleum pipeline** in South Asia connecting Motihari in India to **Amlekhgunj** in Nepal completed in **2019.**	**Emerging areas of partnership** • **Power trade agreement (2024):** Nepal to export 10,000 megawatts (MW) of hydroelectricity to India over **next 10 years.** • **Cross-border QR payment**: Nepal started accepting UPI payments since March 2024 through interoperability with FonePay QR of Nepal.
Other Key areas of cooperation: • **Water cooperation**: Agreements signed on major rivers like the Kosi (1954) and Gandak (1959) with Karnali and Mahakali (1996). • **Humanitarian and Disaster Relief (HADR):** India was the first responder (2015 earthquake in Nepal, Covid-19 pandemic). • **Culture:** Buddhist and Ramayana circuits of **Swadesh Darshan scheme** connect with Lumbini and Janakpur.	

Key Challenges in India-Nepal relations

- **Political volatility:** The changing government in Nepal often leads to inconsistent long-term domestic policy plans and foreign relations, particularly with neighbouring countries.
  - **Nepal's political** instability since the **2008 abolition** of the monarchy is primarily driven by fragile coalition politics, deep-rooted factionalism, and a series of corruption scandals.
  - **Since 2014,** there have been **17 exchanges** at the level of Head of State/ Head of Government between India and Nepal.
- **Issues related to Customs and border trade**: **E.g.,** Recently, newly elected Nepal government's enforced customs duties on goods valued above NRS (Nepalese Rupee) 100 brought from India (although Nepal's Supreme Court issued an interim stay on Balen Shah-led government decision).
- **Border dispute**: In 2020, Nepal released a **new political map** claiming Kalapani, Limpiyadhura and Lipulekh as part of its territory.
  - Nepal argues that these areas, located east of the Mahakali River, belong to it under the **1816 Treaty of Sugauli.**
  - The **border dispute resurfaced** in **2025** when India and China moved to resume the Kailash Mansarovar Yatra through the Lipulekh Pass.
- **China Competition**: E.g., After the 2015 trade blockade by India, Nepal diversified its trade by deepening ties with China and in 2017, joined China's Belt and Road Initiative (BRI).
- **Economic Disruptions:** Major joint initiatives like the **Pancheshwar Multipurpose Project**, **Arun III, Upper Karnali, etc.** delayed due to political deadlocks and a growing trust deficit.
- **Security issues**: As per some reports, open border with Nepal is being misused by terror groups/Organized Crimes groups for **supplying trained operatives**, circulation of fake Indian currency, smuggling etc.
- **Gurkha Recruitment Issue:** India's Agnipath Scheme, which alters the terms of military recruitment, including that of Gurkhas, has led Nepal to suspend recruitment under the new framework.

Conclusion

The transition led by the **Gen-Z movement in Nepal** offers an opportunity to achieve political stability, eliminating uncertainty, addressing existing gaps and promoting a more inclusive and representative political environment.
India's foreign policy towards Nepal operates under its **"Neighbourhood First"** framework, shifting from political management to "quiet diplomacy". It is focused on delivering **High-Impact Community Development Projects (HICDPs)** in priority sectors such as health, education, drinking water, sanitation, drainage, rural electrification, hydropower, etc. to improve the overall quality of life of Nepalese citizens at the local level.

2.2. INDIAN OCEAN REGION

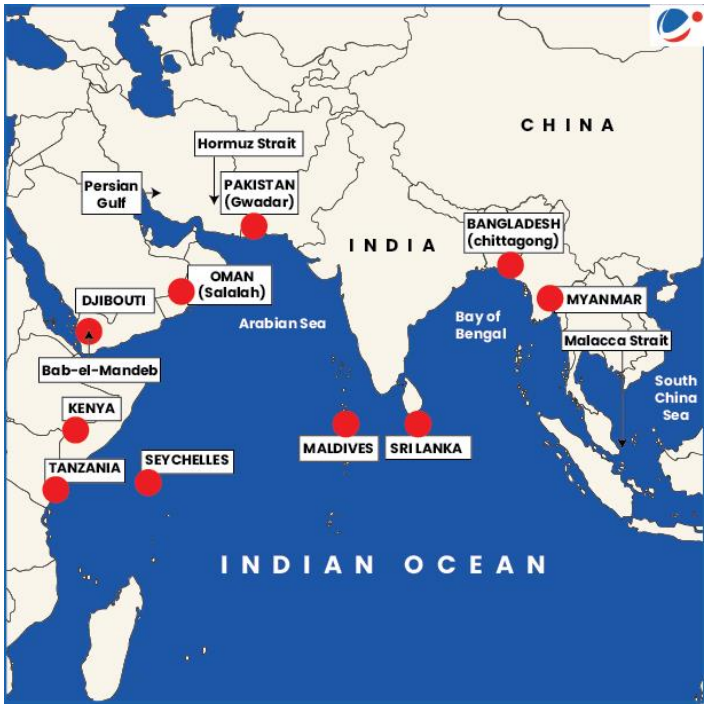
Why in the News?

At the **9th Indian Ocean Conference**, India's External Affairs Minister emphasized the need for greater regional cooperation in the Indian Ocean Region amid growing global uncertainty and the ongoing West Asia conflict.

About Indian Ocean Conference (IOC)

- It was started in **2016** by **India Foundation** in association with **think tanks and institutions** from the region, with participation from **30 countries.**
  - India Foundation is an independent research centre focussed on the **issues**, **challenges** and **opportunities** of the Indian polity.
- **IOC 2026** was held in **Mauritius** centered on the theme, "**Collective Stewardship for Indian Ocean Governance**".
- The Conference brings together principal maritime partners on a common platform to deliberate upon regional cooperation for **Security and Growth for All in the Region (SAGAR).**

About Indian Ocean Region (IOR)



- IOR is bordered by Africa to the west, the Straits of Malacca and Australia to the east, India to the north, and Antarctica to the south.
- It comprises ~36 countries and accounts for **35% of the global population** and **40% of the world's coastline**.
- **Significance of the region:**
  - **Economic & Trade Importance**: Currently, nearly **95%** of India's trade by volume and **68%** by value moves via Sea (Ministry of Ports, Shipping and Waterways).
  - **Blue Economy Potential**: India has a **2.4 million sq. km Exclusive Economic Zone (EEZ)** in the IOR which offers opportunities in sustainable fisheries, renewable ocean energy, eco-tourism, and marine biodiversity conservation.
  - **Strategic & Geopolitical Value:** Vital due to critical sea lanes and chokepoints (e.g., Strait of Hormuz) and central to India's security architecture with its 11,098.81 Kms coastline.

Changing geopolitical dynamics of Indian Ocean Region

- **Vulnerability of Critical Chokepoints:** Conflicts in West Asia (E.g., escalation of violence in the Red Sea during Israel and Hamas war, Hormuz blockade during U.S.-Iran war etc.) have increased tensions around key chokepoints like the **Strait of Hormuz and Bab-el-Mandeb**, threatening global oil shipments and maritime trade.
  - **IOR** accounts for **~30%** of worldwide container traffic and transports **42%** of crude oil, petroleum products.
- **Militarisation of the IOR:** E.g., United States uses Diego Garcia as a key military hub; France's presence through Réunion and Mayotte; China expanding its footprint via port infrastructure and access agreements; Australia developing the Cocos (Keeling) Islands to enhance its strategic role etc.
- **Vulnerability of Critical Infrastructure:** E.g., In the digital age, a critical new vulnerability is the threat to undersea communication cables, which transmit **over 95%** of global data.
  - Disruptions to these cables could impact **military communications, financial transactions, cloud computing**, and digital services like e-commerce, social media etc.
- **Non-Traditional Security threats**: Emerging threats like piracy, maritime terrorism, illegal fishing, cyber threats, and climate change have added further complexity.

India's approach in the IOR

- **Unified Indian Ocean strategy:** SAGAR focuses on countering threats such as terrorism, piracy, and other illegal activities and **MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions) expands the scope of SAGAR, by also focusing on security, growth, and development goals beyond the region.
- **Maritime Domain Awareness (MDA):** Information Fusion Centre-Indian Ocean Region (IFC-IOR) enables real-time maritime information sharing, enhancing domain awareness and operational coordination among partner countries.
- **Bilateral and multilateral diplomacy**: India actively participates in regional platforms such as the Indian Ocean Rim Association (IORA), the Indo-Pacific Oceans Initiative (IPOI), BIMSTEC, Colombo Security Conclave, and the Indian

Ocean Naval Symposium (IONS), all provides structured avenues for dialogue, for cooperation, and for capacity building.

- **'First Responder'**: Whether in humanitarian crises or natural disasters, India have stepped forward with speed and with reliability. **E.g., 'Operation Sagarbandhu'** in Sri Lanka after the devastating **Cyclone Ditwah.**
- **Joint exercise** like **AIKEYME (Africa India Key Maritime Engagement), Dosti or MILAN**, India builds interoperability and trust to combat threats collectively for a safer and more prosperous Indian Ocean region.
- **Integration with the Indo-Pacific:** E.g., through engagement with Quad partners (Australia, India, Japan and the United States) in areas like Logistics Network, infrastructure, Maritime Domain Awareness etc.

Way Forward for India amid New Geopolitics in IOR

- **Capability Development:** The Indian Navy's Maritime Security Strategy, released in April 2026, focuses on multi-domain integration (land, sea, air, cyber, space) and on preparing for grey-zone warfare.
  - **Grey zone warfare** refers to hostile actions that fall between peaceful competition and direct conventional war.
- **Island Development:** India must prioritise the integrated development of the Andaman and Nicobar Islands, with the **Andaman and Nicobar Command (ANC)** serving as a vital forward operating base to enhance surveillance and maintain control over critical maritime chokepoints, particularly the approaches to the **Malacca Strait.**
- **Maritime Governance:** It should actively promote freedom of navigation and ensure adherence to international law, particularly the United Nations Convention on the Law of the Sea (UNCLOS).
- **Diversify Energy Sources:** Reduce excessive dependence on **West Asian oil** by expanding energy imports from alternative suppliers' countries such as Brazil, Norway, Canada, Malaysia, and Indonesia.

Conclusion

The convergence of economic, technological, and strategic interests has made the Indian Ocean a zone of growing vulnerability and competition. Major powers are increasingly seeking to secure influence over critical maritime routes, ports, and infrastructure. As a result, the Indian Ocean has shifted from a passive transit corridor to an active strategic domain where economic and military interests closely intersect**.**

2.3. NEWS IN SHORTS

2.3.1. RELEVANCE OF ASEAN'S PARTNERSHIP MODEL FOR GLOBAL COOPERATION

Mounting volatility of global system has underscored the growing importance of regional cooperation and integration, with ASEAN leading as an example.

Digital Current Affairs
Read our previous coverage on ASEAN

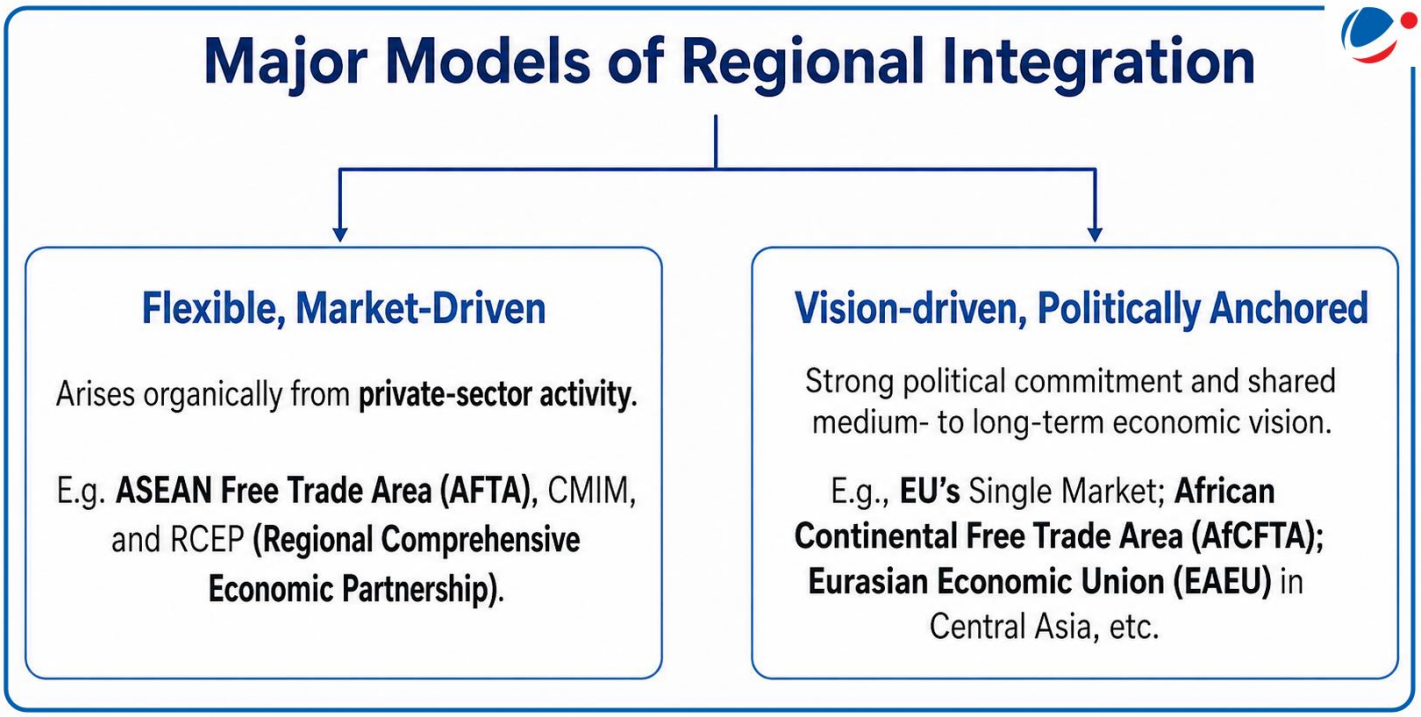
ASEAN's Key Achievements Re-enforcing Regional Cooperation

- **Commitment to Core Beliefs:** Despite significant differences in culture, political models and socio-economic indicators, ASEAN functioned as cohesive, viable economic and political bloc for almost 60 years.
- **Mutual Support and Trust: Accession of Timor Leste** to ASEAN in 2025 is an example how members (in this case Indonesia) can put aside years of enmity for mutual support and growth for entire bloc.
- **Wider Integration:** E.g., Digital Economy Framework Agreement (DEFA) represents an example of **"coalitions of smaller economies",** to accelerate digital transformation throughout the region.

Other Key Benefits of Regional Integration

- **Regional Financial Stability:** E.g., Chiang Mai Initiative Multilateralisation (CMIM), established due to Asian Financial Crisis, provided ASEAN+3 (China, Japan, and Republic of Korea (ROK)) economies with a crucial safety net.

- **Expands Markets and Input Sources:** Ensuring better allocation of resources and accelerating economic growth.
- **Reduce Inequality between countries:** Freer trade and factor mobility from integration allow less-developed members to grow faster.
- **Political Stability and Collective Bargaining:** Strengthens diplomatic relationships and Increases the influence of member states in global trade negotiations.



2.3.2. RECIPROCAL EXCHANGE OF LOGISTIC SUPPORT (RELOS) PACT

The RELOS pact signed between India and Russia has recently become operational.

About RELOS

- **Objective**: Enables reciprocal use of military bases, ports, and air facilities, including Arctic access for India.
- **Scope**: Covers logistics support, joint exercises, training, and humanitarian missions.
- **Deployment Provision**: Allows stationing of up to 3,000 troops, 5 warships, and 10 aircraft in each other's territory for 5 years.
- **Significance**: Strengthens defence cooperation, interoperability, and support for Russian-origin equipment amid global geopolitical tensions.

2.3.3. UNITED NATIONS DEVELOPMENT PARTNERSHIP FUND (UNDPF)

India and United Nations conducted review of UN Development Partnership Fund operations.

About UNDPF

- **Overview:** Launched in **2017** with **$150 million**, led by Government of India.
- **Objective:** Supports **Global South** in achi**eving Sustainable Development Goals** and shared prosperity.
- **Approach:** supports Southern-owned and led, demand-driven and country-led sustainable development projects.
- **Focus Areas:** Least Developed Countries (LDCs) and Small Island Developing States (SIDS).
- **Implementation:** managed by the **United Nations Office for South-South Cooperation (UNOSSC)** and executed by UN agencies with partner governments.

2.3.4. OPERATION URJA SURAKSHA

Indian Navy launched 'Operation Urja Suraksha'.

About Operation Urja Suraksha

- Launched to **escort, guide, and safeguard** India-bound energy shipments (e.g. LPG, crude oil, etc.) through the **Strait of Hormuz,** currently blockaded by Iran**.**

2.3.5. IMPACT OF IRAN WAR ON AGRICULTURE

War in the middle eastern region and resultant disruptions of supplies through Strait of Hormuz threatens Global Agriculture.

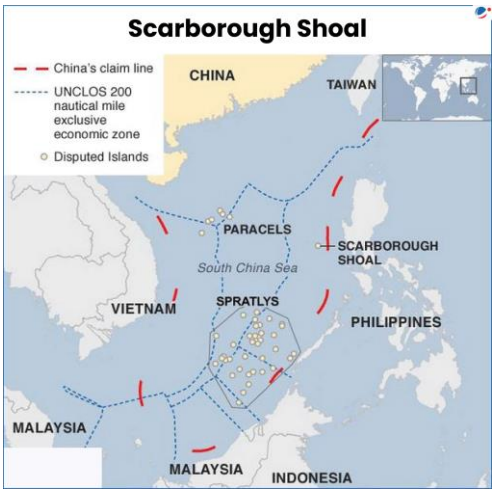
Impact of War on Agriculture

- **Disruption of Fertilizer Supply Chains:** Middle East is critical hub for the production and export of essential agricultural chemicals, including **ammonia, urea, phosphate, and sulphur**.
- **Surge in Agricultural Input Costs:** Increase in prices of key fertilizer products.
- **Global Food Price Inflation:** The combined **surge in energy and fertilizer prices directly drives** up the cost of food production, which ultimately leads to higher consumer food prices and raises serious concerns regarding global affordability.

Digital Current Affairs
Read our previous coverage on US-IRAN War

2.3.6. CONFLICT AREAS IN NEWS

- **Red Sea:** Iran's threatened to block trade through the Red Sea, if the US naval blockade continues around its ports.
  - It is a fiord type marginal sea.
  - It is connected to the Gulf of Aden via Strait of Bab El Mandeb and to the Mediterranean sea via Suez Canal.
  - **Bordering Nations:** Egypt ,Sudan and Eritrea (West), Israel & Jordan (North East) via the gulf of Aqaba and Saudi Arabia & Yemen (East).
  - It **receives very little precipitation and no water enters the Red Sea from rivers**.
- **Qeshm Island (Iran):** Iran's Qeshm Island desalination plant out of service since early March strike.
  - Largest island in the Persian Gulf.
  - Lies near Bandar Abbas, separated by Khuran (Clarence) Strait.
  - Close to Strait of Hormuz.
- **Ust-Luga Port (Russia):** Russia's Baltic Ust-Luga port was damaged by a Ukrainian drone attack.
  - **Located** in **Gulf of Finland.**
  - **Other ports in Russia:** Primorsk; Kaliningrad; Vladivostok; St. Petersburg; Murmansk (Arctic), etc.
- **Scarborough Shoal:** China deployed ships, barrier to block **disputed South China Sea (SCS) Scarborough Shoal.**
  - It is a disputed atoll in the SCS, claimed by **both China** and **the Philippines** as part of their territory.



- **Strategic importance**: Located along major sea lanes with rich fishing grounds and potential resources.
- **Other disputed islands in the SCS:** Paracel, Spratly Island, etc.

2.3.7. STRAIT OF MALACCA

Hormuz crisis throws spotlight on world's other largest chokepoint, the Malacca Strait.

About Strait of Malacca

- **Location:** Waterway connecting **Andaman Sea (Indian Ocean) and South China Sea (Pacific Ocean).**
- **Bounded by:** Indonesia, Thailand, Malaysia and Singapore,
- **Strategic Significance:**
  - Carries nearly **22% of world's maritime trade**,
  - considered largest **"oil transit chokepoint",**
  - **Shortest sea route** from East Asia to Middle East and Europe.
- **Concerns:**
  - **Narrowest point** (Phillips Channel of Singapore Strait) creates a natural bottleneck with concerns for collisions or oil spills.
  - Some parts are **relatively shallow** restricting largest vessels.
  - **Piracy and attack** on merchant vessels.

2.3.8. CANARY ISLANDS

INS Sudarshini makes maiden visit to **Las Palmas, Canary Islands, first by any Indian naval ship.**

- The visit is a strategic halt during its **transoceanic deployment, under Lokayan 26**, preceding a **trans-Atlantic voyage.**

About Canary Islands

- It is an **autonomous region of Spain**.
- **Location:** Situated in the **Atlantic Ocean,** about 100 km off the **northwest coast of Africa.**
- **Geography: A volcanic archipelago with islands like Tenerife and Gran Canaria.** It includes **Mount Teide (Spain's highest peak).**

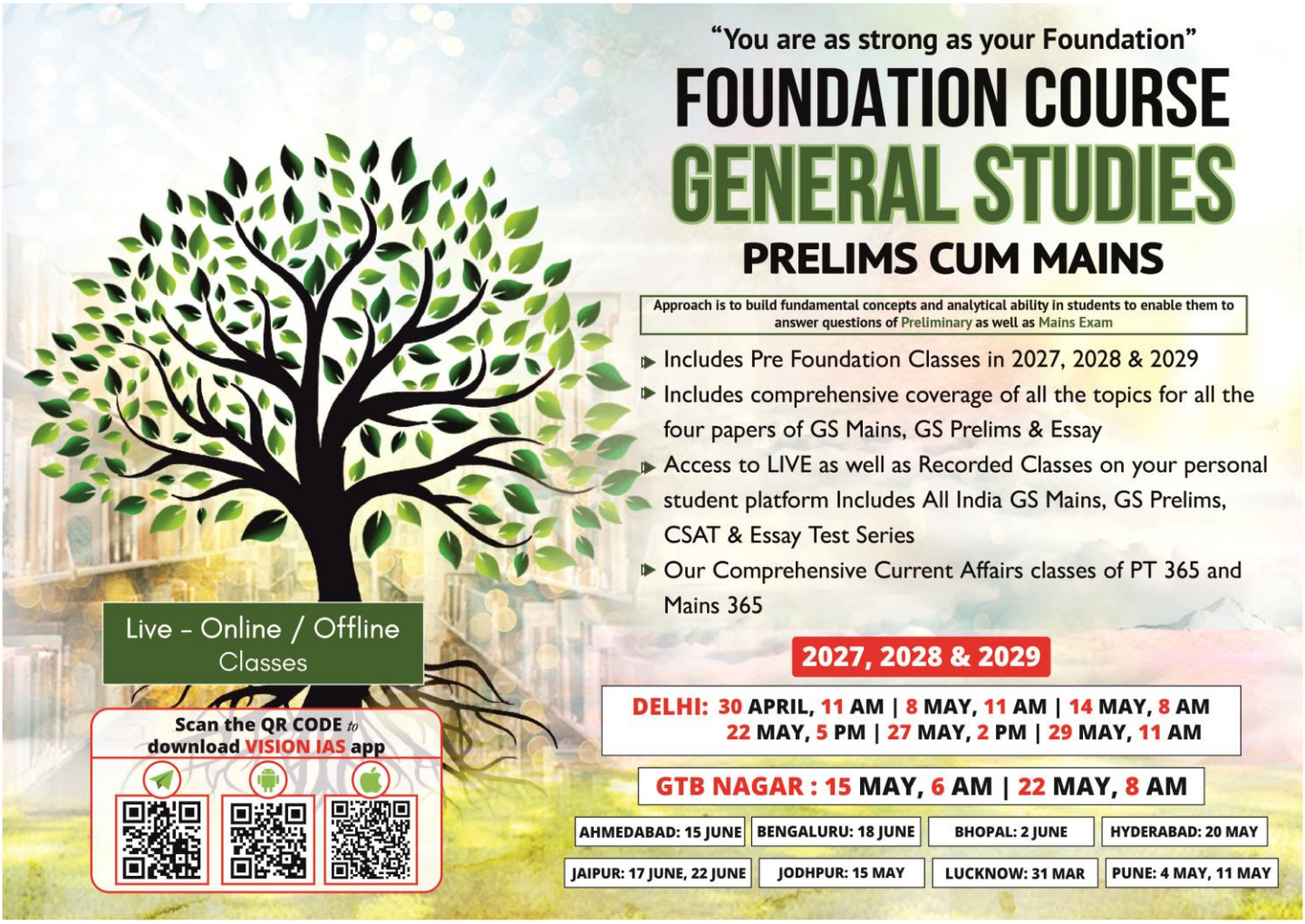
2.3.9. PUNATSANGCHHU-II HYDROELECTRIC PROJECT

India and Bhutan signed Tariff Protocol of Punatsangchhu-II Hydroelectric Project.

About Project

- 1020 MW **Run of the river** project on **Punatsangchhu river**.

- **Origin**: The rivers Phochhu and Mochhu confluence to form the Punatsangchhu river in Bhutan.
- It flows southerly to enter the Indian plains of **West Bengal** and is a **tributary of Brahmaputra river**.



3. ECONOMY

3.1. INDIA'S RESILIENT PRODUCTION SYSTEMS IN AGRICULTURE

Why in the News?

India recorded an unprecedented foodgrain output of **357.73 million metric tonnes (MMT)** in the year 2024-25.

Status of Agriculture in India	
• Agriculture and allied activities account for nearly **one-fifth** of the country's gross value added at current prices. • World's **second-largest agricultural land area**.	
Leading Producer (First Globally) • **Pulses, Millets** and **Rice** • **Spices** • **Dry Onions** (contributes nearly 25 % of the world's total) • **Coconuts**	**Second Globally** • **Wheat** • **Fruits and Vegetables** • **High₹-Value Cash Crops- Sugarcane, Cotton, Tea**
Steps taken to Support Resilient Production Systems • **Productivity and Input-Led Strategies**: E.g., **National Food Security and Nutrition Mission (NFSNM)**, the **Mission for Aatmanirbharta in Pulses (2025–31)**, **National Mission on Edible Oils (NMEO)**, etc. • **Credit, Mechanization, and Technology**: E.g., Kisan Credit Card, Custom Hiring Centres , etc. • **Price Support and Risk Management**: E.g., Minimum Support Price (MSP), Pradhan Mantri Fasal Bima Yojana (PMFBY), etc. • **Market Reforms, Infrastructure, and Collectivisationn:** E.g., e-National Agriculture Market (e-NAM), Agriculture Infrastructure Fund (AIF), Farmer-Producer Organisations (FPOs), etc. • **Extension Services**: E.g., Sub-Mission on Agricultural Extension under Krishonnati Yojana. • **Financial and Budgetary Support**: Budget allocation for the Department of Agriculture rose substantially to **Rs. 1,30,561.38 crore** in **2026-27**.	**Existing Challenges in Indian Agriculture** • **Climatic and Environmental Vulnerabilities:** E.g., crop loss due to natural disasters as well as outbreaks of pests and diseases. • **Import Dependency in essential commodities:** such as pulses and edible oils. • **Economic Insecurity of Smallholders:** Indian agriculture is dominated by **small and marginal farmers** with limited access to resources. • **Market Volatility and Trade Barriers:** Farmers face market-related risks and **price variability**. ○ In global markets, Indian agricultural products occasionally face hurdles, such as the global tariff and non-tariff barrier. E.g., Sanitary and Phytosanitary (SPS) standards of EU • **Supply Chain and Post-Harvest Inefficiencies:** E.g., Improper storage leads to loss of grains, fruits, and vegetables. • **Other:** Unbalanced use of fertilizer leading to soil degradation, etc.
Way Forward • **Digital Market Access:** Expanding electronic trading portals like the e-NAM integrates local mandis into a unified national platform. • **Promoting Collectivization:** Forming and promoting FPOs and modernizing Primary Agricultural Credit Societies (PACS) empowers farmers through collective bargaining, decentralized grain storage, and shared resources. • **Mechanization:** Increasing smallholder access to modern farm machinery through **Custom Hiring Centres (CHCs)** allows farmers to adopt advanced practices without prohibitive upfront costs	

- **Promoting climate-resilient agricultural practices**: It includes drip irrigation and sprinkler systems, as well as diversifying to high-yield climate resilient/drought resistant crops
- **Promoting adoption of digital technologies**: Including **precision agriculture tools** and **data analytics**, can significantly optimise farming operations and yield predictions.
- **Undertaking reforms in the fertiliser sector**: It will promote sustainability, restore soil carbon, and correct imbalanced nutrient promoting crop diversification.

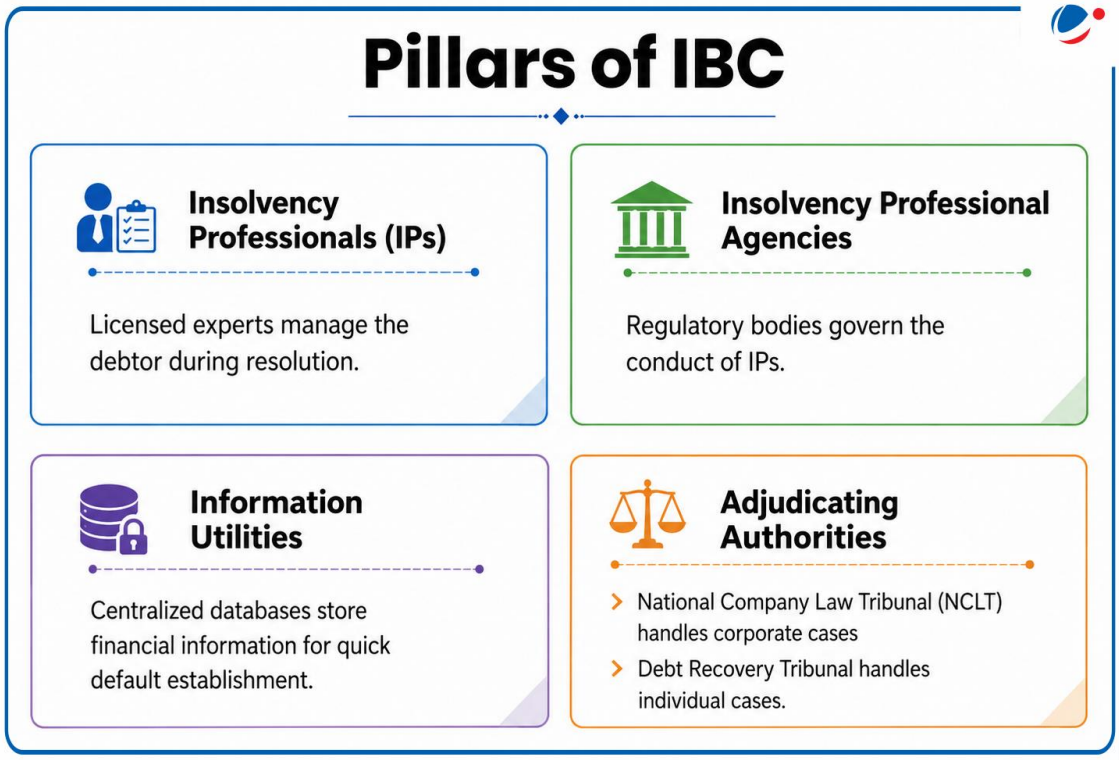
3.2. INSOLVENCY AND BANKRUPTCY CODE (AMENDMENT)ACT, 2026

Why in News?

Parliament passed **Insolvency and Bankruptcy Code (Amendment) Act, 2026.**

About Insolvency and Bankruptcy Code, 2016

- It was enacted to consolidate and amend the laws relating to **reorganisation and insolvency resolution** of corporate persons, partnership firms and individuals in a time bound manner.
  - Insolvency is a situation where individuals or companies are **unable to repay their outstanding debt.**



- **Aim**: Maximisation of value of assets, promote entrepreneurship, enhance availability of credit and balance the interests of all the stakeholders.
- It established the **Insolvency and Bankruptcy Board of India (Board)**.
- **Previous amendments to IBC, 2016**:
  - **IBC (Amendment) Act, 2019**: Set a 330-day limit for finishing the Corporate Insolvency Resolution Process (CIRP) and 14-day limit for NCLT to decide within if a company has failed to pay its debts; allowed insolvency cases for personal guarantors etc.
  - **IBC Second Amendment Act, 2020**: Provided critical relief to Indian businesses during the pandemic by temporarily suspending the initiation of Corporate Insolvency Resolution Processes (CIRP).
  - **IBC (Amendment) Act, 2021**: To provide an efficient alternative insolvency resolution framework for corporate persons classified as micro, small and medium enterprises (MSMEs).
- **Key achievements of IBC:**
  - **Facilitated the resolution of 1376 companies**: Enabling creditors to recover 4.11 lakh crore rupees.

  - Financial creditors have recovered more than 64% of their claims under the process.
  - **Reduction in NPAs:** E.g., Public Sector Banks gross NPAs was around 14.58% in 2016, which dropped to 2.3% in 2025.
  - **Improved recovery from stressed assets:** Improved significantly to 36.6% in 2024-25 (earlier 15 to 20%).

Key Provisions of IBC (Amendment) Act, 2026

- **New Creditor-Initiated Insolvency Resolution Process (CIIRP):** It is a novel out-of-court resolution mechanism introduced for select financial institutions.
- **Cross-Border and Group Insolvency:** It provides an enabling framework for cross-border insolvency and group insolvency, crucial for promoting international investor confidence and handling complex corporate structures.
- **Clean Slate Principle:** Explicitly reinforces the "clean-slate principle," stating that once a resolution plan is approved, claims against the corporate debtor are extinguished (unless specified otherwise).
- **Enhanced Role of the Committee of Creditors (CoC):** In relation to the power to appoint or remove the liquidator and supervise the liquidation process.
- **Strict timelines for Faster Resolution:**
  - **Liquidation Process:** Must be completed within 180 days (extendable by a maximum of 90 days).
  - **Application Admission:** The NCLT must admit insolvency applications within 14 days of default.
  - **Resolution Plan Decision:** The NCLT must approve or reject submitted resolution plans within 30 days.
  - **Appeals Handling:** The NCLAT must dispose of any appeals within 3 months to prevent delays.
- **Clarified Scope of "Secured Creditor"**: Government dues (taxes, statutory levies, etc.) are not to be treated as secured creditors for distribution priority.
- **Others:** Penalties for Frivolous Filings; New Definitions for terms like avoidance transaction and fraudulent or wrongful trading etc.

Significance of IBC (Amendment) Act, 2026

- **Faster Resolution:** Strict timelines for admission, approvals, and appeals reduce delays and ensure quicker decision-making.
- **Enhanced Creditor Role:** Empowering the Committee of Creditors (CoC) increases accountability and improves financial recovery outcomes.
- **Business Continuity:** The new CIIRP and debtor-in-possession models allow companies to keep operating during resolution, preserving their value.
- **Global Alignment:** Introducing group and cross-border insolvency provisions aligns India with international standards, boosting foreign investor confidence.

Concerns Related with IBC (Amendment) Act, 2026

- **CIIRP Related:**
  - **CIIRP may only be initiated by select financial institutions** specified by the central government, giving some financial institutions priority over others.
  - **Trigger for initiating CIIRP remains default**, when value erosion has already set in which undermines the Code's objective of achieving maximum value for assets.
- **Restricts out-of-court settlements:** It allows withdrawal of insolvency application only after the CoC has been constituted and before the first invitation for resolution plans is issued.
  - The consent of 90% of the CoC will be required for such withdrawals.
- **Liquidator's Powers:** Taking away the liquidator's adjudicatory powers over claims removes the necessary finality required during liquidation, where the rights of all parties are ultimately extinguished upon asset distribution.

Conclusion

The new amendments aim to address practical challenges, incorporate evolving global best practices, and reflect the experience gained since the law's implementation in 2016. They will help address procedural delays and interpretational issues among companies and individuals.

3.3. GIG ECONOMY

Why in the news?

Telangana Legislative Assembly has passed the **Telangana Platform-Based Gig Workers (Registration, Social Security and Welfare) Act, 2026,** becoming the **fifth state** to adopt such legislation, after Rajasthan, Karnataka, Jharkhand and Bihar.

Key Highlights of the Act

- **Aim**: Provide Social security, employment and service conditions, safety, health and welfare measures for platform-based gig workers.
- **Tripartite Social Security and Welfare Board**: Established to **register** gig workers, with representation of women and persons with disabilities.
- **Social Security and Welfare Fund:** To be financed through a **1-2% levy on platform** transaction values, borne by aggregators, complemented by State grants and CSR funds.
  - The corpus will support insurance, accident cover, pension and maternity benefits.
- **Universal Registration**: Every worker will receive a **unique identification number** enabling direct access to government schemes.
- **Grievance redressal system**: Platform-level committees and **district-level complaint mechanisms** to protect workers from sudden termination or payment stoppages.
  - Every aggregator platform with at least 100 workers must constitute an internal dispute resolution committee.
- **Transparency:** Companies required to maintain **full transparency** in order **allocation and payment** calculations; Arbitrary rate cuts will attract penalties.

About Gig Economy

- **The Code on Social Security, 2020,** defines a gig worker as a person who **works outside a traditional employer-employee relationship**.
- **Types**:
  - **Platform workers:** Those whose work is based on online apps or digital platforms. E.g., Ola, Uber, Zomato, Swiggy, Urban Company, etc.
  - **Non-platform gig workers:** Generally casual wage workers and own account workers in the conventional sectors, working part-time or full time.
- **Status of Gig Economy in India:**
  - **Increase in Gig Workers:** From 77 lakh in **FY21** to 120 lakh in **FY25.**
    - Projected to increase **235 lakh by 2029–30**
  - **Share of Total Workforce (FY25):** >2%
  - **India's Global Rank in Gig Workers: 5th largest** (**Projected** 3rd by 2030)
  - **Gig Economy Value**: **~**USD 20 billion with projected Growth of 17% annual growth till 2027

Significance of Gig Economy

- **Economic:**
  - **Employment and Economic Growth:** The platform economy has the potential to create up to 90 million jobs and add up to 1.25% to India's GDP in the long run. (BCG report)

    - It provides a transition pathway for those leaving agriculture or declining industries, supplementary income for those in unstable employment, and primary employment option for those unable to secure formal-sector positions.
  - **Supports Quick Commerce Ecosystem:** Platforms like Blinkit and Zepto are now a major consumption driver in urban India, depend largely on gig delivery networks.
  - **Economic Choice**: Gig economy provides **freedom for workers** to choose when and how much they work.
- **Social**:
  - **Financial Inclusion:** Provides income to **migrants, youth, and semi-skilled** workers, facilitating access to digital payments and credit.
  - **Women Empowerment:** The gig economy has potential for increasing women's economic participation due to-
    - **Flexible hours** allow women to balance household responsibilities with paid work
    - **Home-based and digital gig work** bypasses **mobility constraints and safety concerns** of traditional workplaces.
    - **Women** constitute **~28% of platform economy workers** as participation is rising across urban and semi-urban areas.
  - **Empowerment of PwDs**: Gig economy provides **employment opportunities** for PwDs due to flexible, location-independent jobs.
  - **Micro-Entrepreneurship**: Platforms like Airbnb and Urban Company let people **monetize their skills, assets, and time** while **lowering entry barriers** such as access to capital.
- **Technology & Innovation:** Drives digital adoption among low-income workers, bringing millions into the formal digital payments ecosystem.
- **Convenience for Consumers:** Gig economy enables personalised and cheaper services with doorstep access and increases consumer choice.

Challenges

- **Income Volatility:** Declining per-order payouts and lack of minimum wage guarantee cause unstable earnings.
- **Occupational Hazards:** Efficiency-boosting measures such as **aggressive delivery timelines** increase **accident risk and mental stress** among delivery workers.
  - E.g. Delivery workers of the platforms like Swiggy, Zomato, Blinkit, and Zepto went on strikes on New Year's Eve, calling for a **ban on 10-minute deliveries**.
- **Lack of Social Security:** No assured health insurance, accident cover, or pension under existing laws due to **classification** as 'independent contractors' and **not employees**.
- **Poor Work Conditions:** 60% of platform workers work 7 days a week, while 47% of the workers work for more than 12 hours a day (Tata Institute of Social Science).
  - They lack access to basic amenities like clean toilets, drinking water etc.
- **Algorithmic Management:** Opaque algorithms control order allocation, ratings, and sudden account suspension, compromising workers' collective bargaining power.
- **Coverage Gaps:** The **Code on Social Security, 2020's '90-day rule'** is criticised as too restrictive for short-term gig workers.
  - The workers are eligible for benefits only after 90 days on one platform or 120 days across multiple under the Code.
- **Gender & Safety Barriers:** Women face additional **constraints** such as **safety** concerns on late-night delivery routes, **social stigma**, and limited access to high-paying gig categories.
- **Implementation Deficit:** India's first Act for Gig workers by Rajasthan (2023) has seen slow rollout.

Initiatives for Gig workers

- **Code on Social Security, 2020:** Officially defined gig and platform workers for the first time, envisions a National Social Security Board to frame welfare schemes for them, universalizes social security coverage for gig workers, provides for a Social Security Fund.
- **e-Shram Portal**: National database of unorganized workers, including gig workers, facilitating the portability of social security benefits.
- **Pradhan Mantri Suraksha Bima Yojana (PMSBY):** Accidental insurance cover of ₹2 lakh per year for all eligible registered unorganised workers including gig workers.
- **Ayushman Bharat-Pradhan Mantri Jan ArogyaYojana (AB-PMJAY):** Health insurance up to ₹5 lakh per family; extended to gig workers registered on e-Shram for at least 90 days.

Conclusion

Gig and Platform economy is the present and future of work. Effective tripartite dialogue and cooperation between governments, employers/aggregators and workers is essential to strengthen the legal and institutional basis for sustainable growth. **NITI Aayog Report** recommended a **'Platform India Initiative'** on the lines of Startup India to accelerate platformisation and formalize worker protections. Having **a balanced humane** approach towards growth of the gig economy is essential to uphold social and economic welfare.

3.4. PAYMENTS VISION 2028

Why in the News?

Reserve Bank of India (RBI) has unveiled its **Payments Vision 2028**, outlining a comprehensive roadmap to strengthen and expand India's rapidly growing digital payments ecosystem.

More on the News

- Since 2001, RBI has articulated Payments Vision documents that have guided the transformation of India's payment and settlement ecosystem.
- Also, the **Unified Payments Interface (UPI)** celebrated the 10th anniversary of its launch.
  - UPI has emerged as the backbone of India's **digital payments ecosystem.**

Key Highlights of Payments Vision 2028

- **Switch on and switch off facility**: This will allow users to **enable or disable transactions** across all **digital payment modes.**
- **Shared Responsibility for Fraud:** This new approach would make both the customer's bank and the beneficiary's bank jointly liable**.**
- **Expanding Regulatory Oversight to important Entities:** E.g., e-commerce marketplaces, centralized platforms, and white-label Aadhaar Enabled Payment System (AePS) providers.
- **Streamlining Cross-Border Payments:** Plans to introduce a **single-window application process** for cross-border payment authorizations under the **Payment and Settlement Systems (PSS) Act, 2007**, and **Foreign Exchange Management Act, 1999**.
- **Interoperability for MSMEs:** To unlock growth for MSMEs, the vision aims to introduce **full interoperability across Trade Receivables Discounting System (TReDS) platforms.**
  - **TReDS** is an electronic platform regulated by the RBI that helps MSMEs unlock working capital.
    - It allows small businesses to auction their unpaid corporate/buyer invoices to multiple financiers, enabling them to receive cash immediately instead of waiting months for payment

India's Digital Payments Ecosystem

- **Status**: India processes nearly 50% of global real-time digital payments.
- **Governance Mechanism**
  - **Core Infrastructure**: Backed by Real-Time Gross Settlement (RTGS) in 2004, National Electronic Funds Transfer (NEFT), Electronic Clearing Services (ECS), and Cheque Truncation System (CTS) by RBI.
  - **Institutional Framework**: Creation of the Department of Payment and Settlement Systems (DPSS) within RBI in 2005, and the establishment of the **National Payments Corporation of India (NPCI)**.
  - **Regulatory Backing**: Enactment of the PSS Act, 2007, giving the RBI statutory authority to regulate payment systems.

Factors behind Growth of the Digital Payments and their significance

- **Transformative Platforms**: UPI, Bharat Bill Payment System (BBPS), and AePS enabling financial inclusion and transparency.
- **Market Expansion**: Licensing and expansion of Prepaid Payment Instruments (PPIs), TReDS for MSME payments, and Master Direction on Payment Aggregators.
- **JAM Trinity:** It includes Pradhan Mantri Jan-Dhan Yojana (Jan Dhan), Aadhaar, and mobile connectivity.
- **Rapid smartphone and internet penetration**: E.g., internet penetration is about 70 % which has led to empowerment of small businesses.
- **Growth of e-commerce and online services:** This increased the demand for seamless digital payment methods driving economic growth and innovation.
- **Innovation shaped around people**: Opened space for nonbanks and enabling third-party application providers to compete on user experience and innovation.

Challenges faced by India's Digital Payments Ecosystem

- **Imbalanced Fraud Liability**: Under the current Limiting Liability Framework, the responsibility and liability for unauthorized payment frauds fall exclusively on the issuer.
- **Systemic and Cybersecurity Risks**: Managing the cyber security posture and potential IT risks of non-bank Payment System Operators (PSOs) requires continuous, data-driven monitoring.
  - Cyber attackers are increasingly using sophisticated fraud techniques such as phishing, identity theft, and social engineering attacks to target digital payment users.
- **Complexities in Cross-Border Transactions:** International payments are inherently complex because they involve multiple participants, routing hops, varying time zones, different jurisdictions, and overlapping regulations**.**
- **App Duopoly:** A very high percentage of UPI transactions are processed by just two third-party applications. This duopoly creates a "too big to fail" scenario where platform downtimes could cripple everyday economic activity.
- **Financial Literacy**: A large portion of the elderly and rural populations still lack the digital literacy required to navigate payment apps securely, leaving them susceptible to exploitation.

Conclusion

India's digital payments ecosystem has emerged as a key driver of financial inclusion, transparency, and economic formalisation. Going forward, stronger cybersecurity, innovation, and inclusive digital access will be crucial for sustaining its rapid growth.

Unified Payments Interface (UPI)

- **Launched: April 2016** by **NPCI** under Regulatory Oversight of **RBI.**
- Powers multiple bank accounts i**nto a single mobile application** (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.

- UPI is an integral part of Payments layer of **India Stack**.
  - **India Stack** is a set of open APIs (Application Program Interface) and digital public goods that aim to unlock economic primitives of identity, data, and payments at population scale.
- **Different variants of UPI**: UPI Lite (process low value transactions), UPI 123PAY (instant payment system for feature phone users), etc.
- **Key Features:**
  - **Interoperability:** Connected banks and fintech apps through a **common platform; allowing transactions across different banks and apps.**
  - **Replaces Complex Inputs:** Like account numbers and IFSC codes with simple interface requiring mobile number, UPI ID.
  - **Security and Trust: Two-factor authentication** ensures every transaction is verified through multiple layers.

Key Achievements of UPI

- **Annual Transaction Volume:** From 2 crore in FY 2016-17 to **24,162 crore in FY 2025-26**.
  - In 2025, it processed approximately 22,000 crore transactions, with a **daily average of about 60 crore transactions.**
- **Banks Onboarded on UPI:** Increased from **44 banks in FY 2016-17** to **703 banks by FY 2025-26** covering public sector, private, small finance, payments, cooperatives, etc.
- **Global Reach:** Operationalised in Countries including **UAE, Singapore, France, Bhutan, Nepal, Sri Lanka, Mauritius, Qatar.**

National Payments Corporation of India (NPCI)

- **About:** Umbrella organisation for **operating retail payments and settlement systems** in India.
- **Initiative of: Reserve Bank of India (RBI)** and **Indian Banks' Association (IBA)**
- **Legal Framework:** Payment and Settlement Systems Act, 2007.
- **Nature: "Not for Profit" Company** under Section 8 of Companies Act 2013.
- **Key Products offered by NPCI:** Immediate Payment Service (IMPS); National Automated Clearing House (NACH); RuPay; AePS; etc.
- **NPCI International Payments Limited (NIPL)** is a wholly owned subsidiary of NPCI, incorporated in 2020, for deployment of RuPay and UPI outside of India.

3.4.1. DIGITAL PAYMENT FRAUDS

RBI has released a Discussion Paper on "**Exploring Safeguards in Digital Payments to Curb Frauds**".

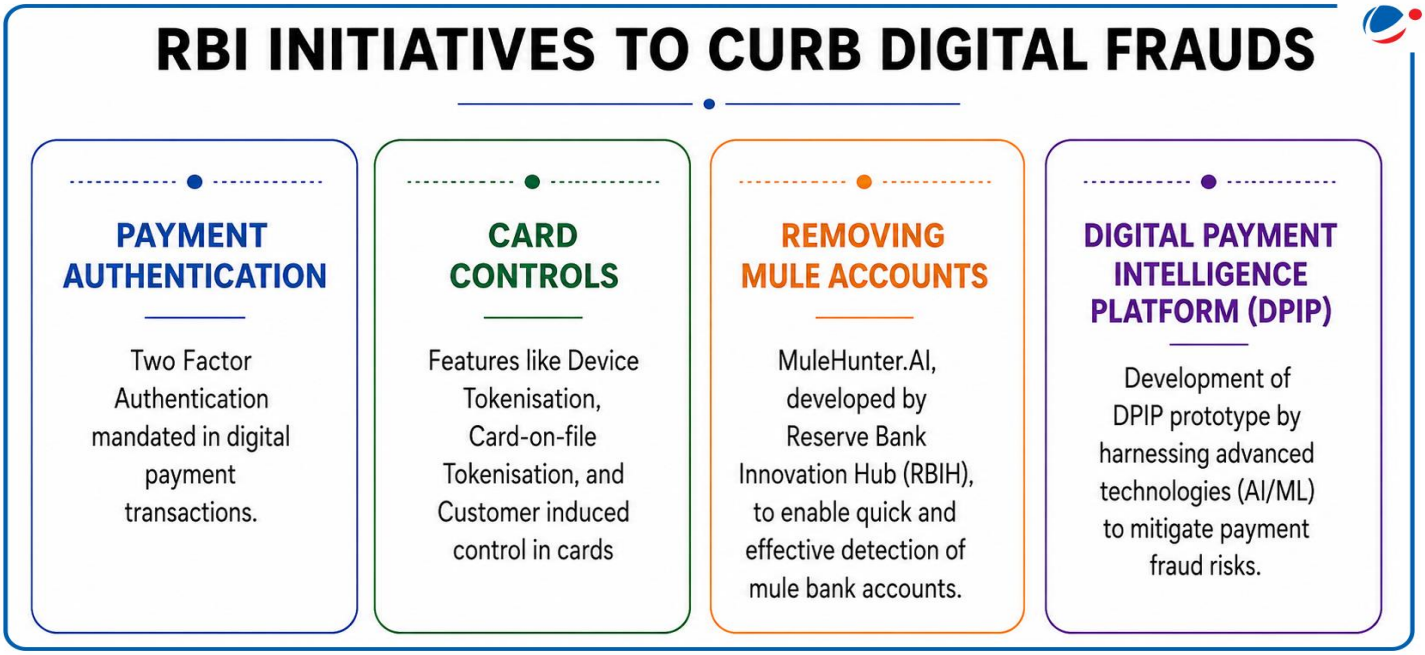
Status of Digital Frauds

- **Rising digital frauds:** According to National Cyber Crime Reporting Portal Data, cyber fraud cases have risen from 2.6 lakh in 2021 to around **28 lakhs in 2025** - amounting to **22,931 crore rupees.**
- **Fraud Techniques:** Use of bogus call centres, deepfake-driven impersonation scams, social engineering and mule account networks.
  - Victims are manipulated using social engineering and they themselves initiate and authenticate transactions, leading to **'Authorised' Push-Payment (APP) frauds**.
- **Victim Profile:** Disproportionate impact on **vulnerable groups, especially senior citizens.**

RBI's Suggested Measures

- **Time lag:** 1-hour delay for transfers above ₹10,000 and payer can cancel payment within this window.
  - A whitelisting mechanism will ensure that such time lag is bypassed for authentic transactions.

- **Additional authentication for vulnerable users:** High-value payments by senior citizens/divyang need approval from a trusted person.
- **User control features:** Option to switch on/off payment modes and set transaction limits.
- **Curb mule accounts:** Large credits allowed only after additional scrutiny of accounts.



3.5. PRODUCTION LINKED INCENTIVE (PLI) SCHEME

Why in the News?

Strong performance of **Production Linked Incentive Scheme for Food Processing Industry** (PLISFPI), with cumulative investment surpassing ₹9,000 crore, exceeding the initially committed ₹7,000 crore brought focus on **PLI Schemes.**

About PLI Scheme

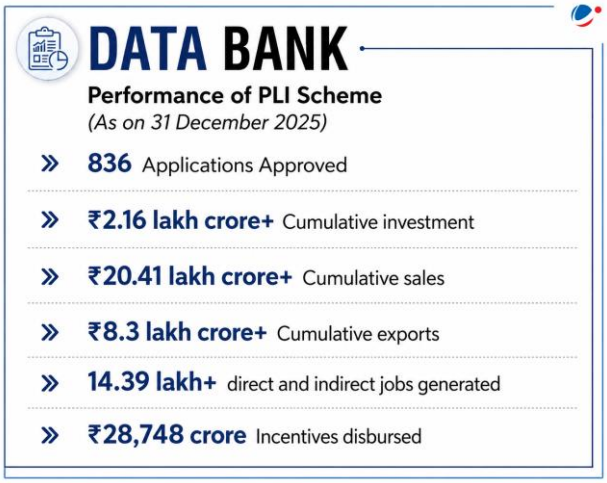
- **Launched year**: 2020
- **Aim**: To boost **domestic manufacturing capabilities** by offering **financial incentives** to eligible companies based on their **incremental sales**.
- **Objective:** To introduce cutting-edge technology, achieve economies of scale, ensure cost efficiency, and enhance India's macroeconomic manufacturing competitiveness globally.
  - Aligned with the vision of **Atmanirbhar Bharat** and **Make in India** initiative.
- **Scale & Outlay:** Covers **14 strategic sectors** (see infographic) with a total financial outlay of **₹1.97 lakh crore**.

Significance of PLI Scheme

India's manufacturing sector has historically been constrained by **limited technological infrastructure,** a **fragmented supply chain,** and **heavy import dependence for key**

components, pushing up production costs and reducing global competitiveness. The PLI Scheme addresses these structural weaknesses by:

- **Attracting Investment:** Incentivises companies to invest in Indian manufacturing at scale, reducing cost disadvantages in comparison to competitors like China and Southeast Asia.
  - PLI framework acts as an **"entrepreneurial catalyst"** designed to absorb early capital risks, build public goods, and systematically crowd-in high-value private sector investment.
  - E.g., India attracted over **USD 4 billion in FDI in electronics manufacturing since 2020-21.**



- **Global Value Chain (GVC) Integration:** From a net importer of intermediate goods, India is progressively becoming an active participant in GVCs.
  - E.g., 57 high-end products of medical devices are now being manufactured domestically.
- **Achieving Economies of Scale:** Enabling Indian firms to compete on cost and quality at scale.
  - E.g. Mobile phone manufacturing like Apple scaled to make India a global hub.
- **Import Substitution:** Targeted reduction of import dependence in strategic sectors.
  - E.g., India achieved **60% import substitution in telecom products**; Penicillin G Potassium now produced domestically.
- **Export Promotion:** Aids in building an export-oriented manufacturing base.
  - E.g., **Mobile phones** manufacturing has transformed India from a net importer to a **net exporter**.
- **Employment Generation:** Generates direct and indirect jobs across manufacturing clusters.
- **Promoting MSMEs: E.g.,** Out of the **165** approved applications under **PLISFPI**, **69 applicants are MSMEs** (as of February 2026).
- **Strengthening Atmanirbhar Bharat:** Reduces strategic vulnerabilities in sectors like defence electronics, Active Pharmaceutical Ingredients (APIs), and ACC batteries.

Case Study: Telecom Sector (Economic Survey 2025-26)

- **Trade Balance Reversal:** Exports rose by **1.5%** Average Annual Growth Rate (AAGR) while Imports concurrently declined by **18.5%** AAGR.
- **Import Substitution:** Achieved early milestone in substituting foreign goods with domestic alternatives, fulfilling a core objective of the PLI framework.
- **Value Chain Integration:** Scaled up production capacity by leveraging imported intermediate goods to **manufacture and facilitate higher-value exports,** demonstrating market maturation.

Constraints related to PLI schemes

- **Sectoral Variation:** Sectors like **electronics, solar PV, speciality steel** etc. recorded high export growth whereas sectors like **automobiles, textiles** showed moderate export growth with continued **reliance on imported inputs** and technology. (Economic Survey 2025-26)
- **Limited SME Participation:** High investment thresholds effectively exclude Small and Medium Enterprises (SMEs), concentrating benefits among large companies.
  - E.g., A recent report said that PLI scheme distorted the 2-wheeler EV market, potentially sidelining the innovation-led manufacturers.

- **Inadequate Employment Generation:** Capital-intensive and automated manufacturing facilities generate fewer direct jobs than projected.
  - Many PLI sectors **prioritise supply-chain resilience** and import substitution over labour intensity.
- **Scheme Complexity:** Multiple year-wise targets, product-wise thresholds, and growth benchmarks increases **compliance burden.**
  - E.g., Extensive documentation for audits, certifications, and repeated clarifications.
- **Governance Gaps:** Lack of uniform criteria, ambiguity in the reward system and timelines, and absence of a centralised database reduce transparency.
- **Structural Limitations:** PLI scheme is yet to catalyse a shift towards **high-complexity exports** (advanced machinery, precision engineering goods) as the export basket remains concentrated in low- and mid-complexity goods (refined petroleum, diamonds, rice).
  - India ranks 44th on the Economic Complexity Index (ECI), unchanged since 2019.

Way Forward

- **Strengthen Implementation Mechanisms: Fast-Track Clearances** through dedicated PLI project clearance cells; Single-window systems to reduce bureaucratic delays and provide investor certainty.
- **Simplify Scheme Framework:** Optimize targets, prioritize automatic verification using GST and customs data to ensure predictable, rules-based disbursement of incentives to investors.
- **Expand SME Access:** Tiered investment thresholds can be introduced to open PLI benefits to MSMEs in select sectors for broader industrial development and supply-chain deepening.
- **Expand to Labour-intensive Sectors**: Parliamentary Standing Committee on Commerce recommended extending PLI to labour-intensive sectors like **chemicals, leather, apparel, and handicrafts.**
- **Ensure Geographical Spread:** Offer differential incentives to attract manufacturing to less-industrialised states, to support balanced regional development.
- **Boost R&D and Innovation Linkages:** Link PLI-supported production with domestic innovation ecosystems. E.g. Anusandhan National Research Foundation (ANRF) and Research, Development & Innovation Fund (RDIF)
  - This will promote manufacturing and export of **high-complexity goods** like advanced electronics, chemicals, etc.

Conclusion

The PLI Scheme is one of the major industrial policy interventions in the direction of making India a **5 trillion-dollar economy** while promoting **self-reliance**. In the present context of **disruptions in global value chains,** PLI scheme **strengthens India's position** in the **global economy** by leveraging investments (including FDI) and a vibrant domestic market.

3.6. PERIODIC LABOUR FORCE SURVEY (PLFS) ANNUAL REPORT, 2025

Why in the news?

Recently, the findings of **PLFS 2025 covering January, 2025 – December, 2025** were released.

Key Highlights of PLFS, Annual Report 2025

- **Stable Labour Force Participation Rate (LFPR):** In usual status (ps+ss) for persons of age 15 years and above stood at **59.3%** and remained stable compared to 2024.
  - 79.1% for Male and 40.0% for female.
  - 62.8% for Rural areas and 52.2% for Urban areas.

Read our previous coverage on changes in PLFS 2025

- **Worker Population Ratio (WPR):** In usual status (ps+ss) for persons of age 15 years and above estimated as **57.4%.**
  - 76.6% for Male and for 38.8% female.
  - 61.2% for Rural areas and 49.7% for Urban areas.
- **Unemployment Rates (UR):** In usual status (ps+ss) for persons aged 15 years and above was **3.1% overall.**
  - 3.1% for both male (marginal decline from 3.3% in 2024) and female.
  - 2.4% for Rural areas and 4.8% for Urban areas.
- **Main Reason for not being in labour force**: Male- **69.8% reported want to continue studies**; Female- **44.4%** cited **childcare/personal commitments in home-making** as main reason.
- **Youth unemployment (age 15-29 years):** Decline in UR in usual status (ps+ss)- 9.9% in 2025 from 10.3% in 2024.
- **Unpaid Work Gap**: Urban self-employed male worked about **17.5 hours more per week** than their female counterpart (12.3 hours per week in rural areas).
  - In regular wage/salaried employment and casual labour, male worked approximately 7.9 hours and 6.9 hours more per week, respectively, than female.
- **Composition of Employment:** The percentage distribution of workers (in usual status) by status in employment indicates a **modest shift** in 2025.
  - Share of self-employment **declined from 57.5% in 2024 to 56.2% in 2025**.
  - Share of **regular wage/salaried employment increased** from 22.4% to 23.6%.
  - The share of **workers engaged in casual labour** remained broadly stable at around one-fifth of total employment
- **Sectoral Contribution: Agriculture** accounts for largest share of employment, though **decreased from 44.8% in 2024 to 43.0% in 2025**.
  - **Construction** saw **marginal decrease** (12.3% to 12.0%).
  - **Manufacturing** saw an **improvement from 11.6% to 12.1%.**
  - **Other services** have also recorded an **increase (12.2% to 13.1%).**
- **Improved Earnings:** Average earnings in regular wage/salaried employment for male increased 5.8% growth (2024-2025) (7.2% growth for females).
- **Education:**
  - **Average number of years in formal education: 10 years** for persons aged 15 years and above (male at 10.2 years and female at 9.9 years); **9.8 years** for persons 25 years and above.
  - **Persons with at least secondary education**: 67.8% in age group 15 years and above.
  - **Formal vocational/ technical training**: 4.2% among persons aged 15-59 years, 5% in group 15-29 years.
- **Percentage of persons not in employment, education or training (NEET):** In usual status (ps+ss) 24.9% for age group 15-59 years and 21.0% persons in the age group 15-24 years.

About PLFS

- **Origin:** 2017
- **Conducted by: National Statistics Office (NSO),** Ministry of Statistics and Programme Implementation (MoSPI).
- **Significance:** Primary source of statistics on labour force, activity participation of population and structure of employment and unemployment in country.
- **Revamped Methodology:** It was revamped from **January 2025,** with key changes like- **shifting survey period of PLFS from July-June cycle** (agricultural year) to **January-December cycle (calendar year)** and **changes in Sample Design**
  - Hence, Annual Report, PLFS 2025, is **the first comprehensive report based on calendar year (January 2025-December 2025)** as survey period.
- **Purpose of Revamping:**
  - Estimate **key employment and unemployment indicators** (viz. LFPR, WPR, UR) on a monthly basis for rural and urban areas in **Current Weekly Status (CWS) at all-India level.**

- Extend coverage of **Quarterly results of PLFS to rural areas** and producing quarterly estimates **covering both rural and urban areas in CWS.**
- Estimate important employment and unemployment indicators in both usual status (ps+ss) and CWS for r**ural and urban areas annually.**

Definition of Key Terms in PLFS

- **Labour Force Participation Rate (LFPR):** Percentage of **persons in labour force** (i.e. working or seeking or available for work) in the population.

$$LFPR = \frac{Employed\ Individuals + Unemployed\ Job\ Seekers}{Total\ Population} \times 100$$

- **Worker Population Ratio (WPR):** Percentage of **employed persons** in the population.

$$WPR = \frac{Employed\ Population}{Total\ Population} \times 100$$

- **Unemployment Rate (UR):** Percentage of **persons unemployed** among persons in labour force.

$$UR = \frac{Unemployed\ Population}{Total\ Population} \times 100$$

- **Activity Status - Usual Status:** Determined on basis of **activities pursued** by person during specified reference period.
  - When activity status is determined based on **reference period of last 365 days** preceding the date of survey, it is known as usual activity status.
- **Principal activity status (ps):** Activity status on which a **person spent relatively long time (major time criterion) during 365 days preceding** the date of survey.
- **Subsidiary economic activity status (ss):** The activity status in which a person in addition to his/her usual principal status, **performs some economic activity for 30 days or more** for the reference period of 365 days preceding the date of survey.
- **Activity Status - Current Weekly Status (CWS):** Determined based on a **reference period of last 7 days preceding** the date of survey.

Conclusion

The PLFS Annual Report 2025 highlights a resilient Indian labor market, marked by a gradual shift toward formal, salaried positions and a healthy reduction in absolute agricultural dependence. However, moving past headline metrics reveals persistent structural imbalances, including a high youth NEET rate, significant vocational skill deficits, etc.

3.7. WORKERS PROTESTS

Why in the News?

Recent spontaneous and sometimes violent Protests by factory Workers across Key Industrial Hubs such as in Barauni (Bihar), Surat (Gujarat), Manesar (Haryana), and Noida (Uttar Pradesh) have created concerns.

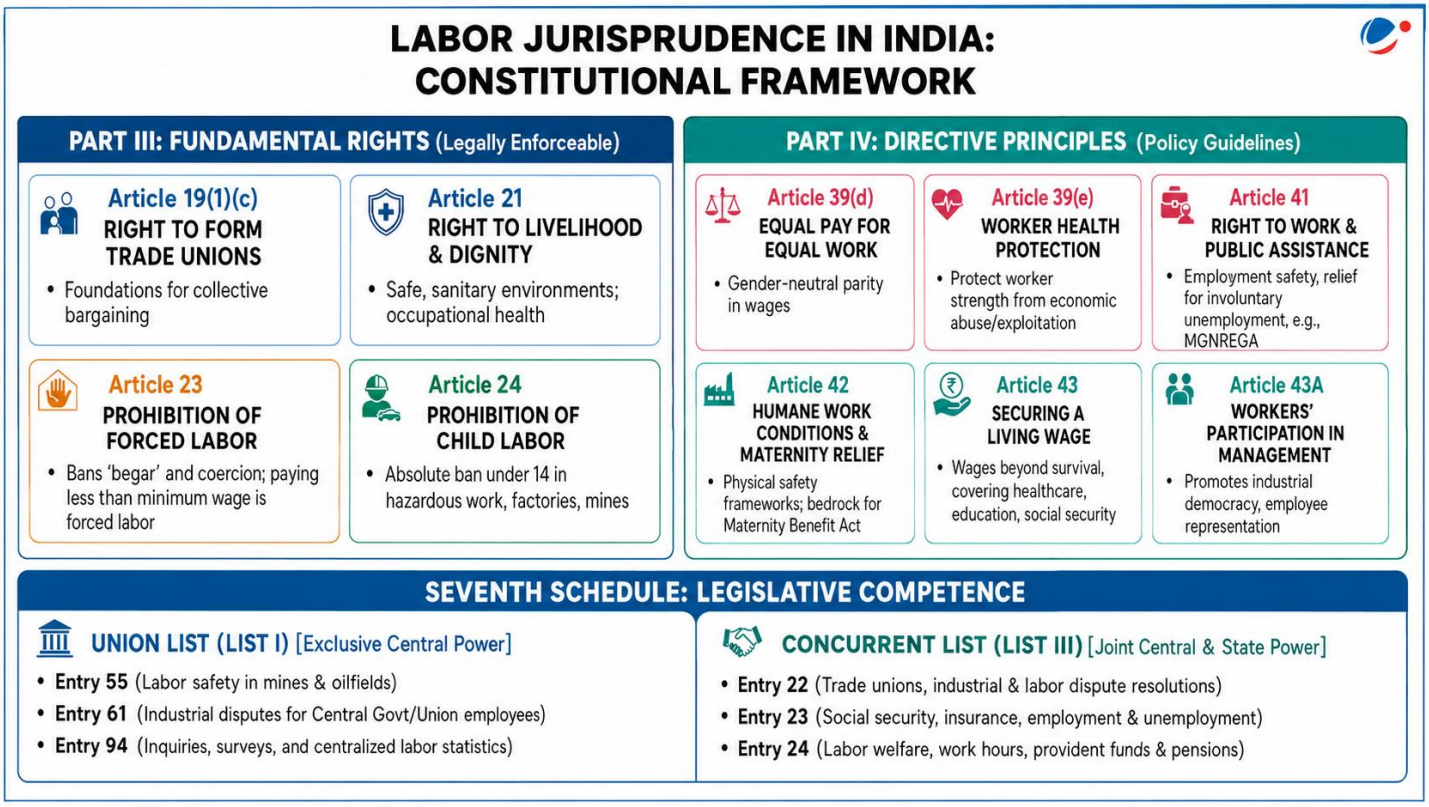
Key Reasons for Workers' Protests in India

- **Unchecked Contractualization:** To slash operational costs, employers have embraced third-party labour, pushing the share of contractual workers in manufacturing to 42% in **2023–24 (Annual Survey of Industries)**
- **Scale of informality:** over 90 per cent of workers are employed in the informal sector, mostly in tiny, unregistered enterprises with virtually no social protection.

Digital Current Affairs
Read our previous coverage on Labour Codes

- The e-Shram Survey illustrates that **the informal non-agricultural sector alone employs over 150 million workers** and continues to expand post-pandemic.

- **Issues concerning Labour Laws:** Code on Wages creates a National Floor Wage and National Minimum Wage, but offers no clear methodology for setting either.
- Regulatory failure: According to an analysis of the **Periodic Labour Force Survey (PLFS) data for 2023–24,** nearly 64 per cent of Indian workers earn less than the minimum wage, even mandated by law.
- **Issues with Trade Unions:** The existence of multiple trade unions in the same industry creates conflict amongst them.



Key Reforms taken by the government for labour welfare

- **Simplification of labour laws:** The government consolidated 29 labour laws into four comprehensive Labour Codes.
  - **Social Security: Code on Social Security, 2020** covers Gig and Platform Workers **with aggregators contributing 1- 2%** of annual turnover (capped at 5% of payments to such workers).
  - **Conditions of employment: Industrial Relations Code, 2020** offers Fixed Term Employment (FTE) to reduce excessive contractualization; recognises Trade Unions with **51% membership** as Negotiating Union.
  - **Worker Rights and Safe Working Conditions: Occupational Safety, Health and Working Conditions Code 2020** provide National Database for Unorganised Workers along with victim compensation in case of injury or death.
  - **Universal Minimum Wages: The Code of Wages, 2019,** establishes a statutory right to minimum wages for both organized and unorganized sectors.
    - Earlier, the Minimum Wages Act applied only to scheduled employments covering ~30% of workers.
- **e-Shram Portal:** A centralized database enabling registration and access to welfare schemes for workers in the unorganized sector.
- "**One Nation One Ration Card" (ONORC) Scheme:** It enables migrant workers and their family members to access PDS benefits from any Fair Price Shop anywhere in the country, thus ensuring food security.

- **The Maternity Benefit (Amendment) Act, 2017:** It extended paid maternity leave in India from 12 weeks to 26 weeks for working mothers with up to two surviving children.
- **She-Box Portal:** Centralized platform for registering and monitoring complaints of sexual harassment of women at workplace.

Issues with recent labour reforms

- **Failure to Deliver Promised Wage Hikes:** Although the Code on Wages aims to reduce wage inequality, through national floor wage but anticipated upward **revisions to minimum wages** have not materialized in practice yet.
- **Delayed operationalisation of provisions:** Such as for gig and platform workers, **including the establishment of a functional Social Security Fund,** notification of contribution rates, and design of a tangible benefit scheme under the Code on Social Security (2020).
- **Higher layoff threshold:** The threshold for government approval before layoffs/retrenchment increased from **100 to 300 workers,** making it easier for companies to fire employees.
- **Stringent Strike Conditions:** The new framework makes executing a legal strike exceptionally difficult, **mandating a 14-day notice period** for all industrial establishments before striking.
- **Uneven State-Level Notification:** As labour is a subject on the **Concurrent List**; both the central and state governments must notify their respective rules for the codes to fully come into effect.

Way forward

- **Re-establishing Robust Tripartite Dialogue:** On the line of The ILO's Tripartite Consultation Convention (No. 144), adopted in 1976, revive and formalize the Indian Labour Conference (ILC), which has not met regularly (last met in 2015) to promote dialogue with Central Trade Unions, employers, and government.
- **Careful Calibration of Wage Policy:** To address real wage erosion, authorities must establish a binding yet sustainable national floor wage that accounts for regional variations in the cost of living and sectoral productivity differences.
  - **Anoop Satpathy Committee's methodology** of 2018, which recommended a national minimum wage can be implemented with some modifications by taking inflation into consideration.
- **Participation of workers in governance:** The German **model of Co-determination & works council** can be promoted to institutionalize worker participation in corporate governance.
- **Effective data collection**: Developing integrated national labour databases, real-time compliance monitoring, and making workplace safety data publicly available will increase accountability and aid evidence-based policymaking
- **Robust Enforcement and Digital Integration:** Authorities must invest heavily in **digital compliance systems, including mandatory digital wage payments and electronic employment records.**
- **Improving conditions for workers:** Strict adherence to the **8-hour workday, double pay for overtime, equal pay for equal work**, and better working conditions can be implemented.
- **Address increased Contractualization: India can adopt the "Flexicurity" Model** of Denmark. It combines high labour market flexibility for employers (easy hiring and firing to stay competitive) with deep social security cushions for workers (high unemployment benefits).

3.8. SELF-SUFFICIENCY IN EDIBLE OILS

Why in News?

Parliamentary Standing Committee's report on **"Production and Availability of Oilseeds and Pulses in the Country"** highlighted high import dependency of edible oil, straining foreign exchange reserves.

Key Findings of the report

- **High import share**: India imports 56% of its edible oil needs (15.66 MMT in 2023-24)
  - **Palm oil contributes 60%,** Soyabean oil 20% and Sunflower oil contributes 20%.
- **Rising consumption outpacing production**: Domestic consumption of Oilseeds has always outpaced their domestic availability during every year from 2013-14 to 2022-23.
  - Per capita consumption of edible oils has **more than doubled** from 2000-01 to 2020-21, due to population growth, changing consumption patterns, and increasing urbanization.

Reasons for Import Dependency of Edible Oils

- **Reliance on Rainfed Agriculture:** Over 70% of Oilseeds are grown under rainfed conditions which makes the sector highly vulnerable to erratic weather patterns, heat-waves and potential El-Nino events.
- **Yield Gaps:** Almost all Indian edible oil crops exhibit lower yields compared to major global producers, partly due to the **lack of genetically modified (GM) and herbicide-tolerant varieties** used in other countries.
  - E.g. India's groundnut productivity at 2,067 kg/ha vs. Uzbekistan's 15,519 kg/ha.
- **Processing Inefficiencies:** The Indian vegetable oil sector is hindered by small-scale, low-technology plants.
  - The industry currently utilizes only about **30% of its edible oil refining capacity**.
- **Low Seed Replacement Rate (SRR):** The SRR ranges from just 25% for groundnut to 62% for rapeseed-mustard, falling far short of the government target of 80-85%.
- **Biotic and Abiotic Stresses:** Weeds, pests, and diseases consistently plague oilseed crops in traditional farming systems, reducing yields by 20% or more.

Know the term

Seed Replacement Rate (SRR)

It is a metric in agriculture that indicates the percentage of total cropped area sown with **certified or quality seeds** instead of farm-saved seeds.

Government Efforts for ensuring Self Sufficiency in Edible Oils

- **National Mission on Edible Oils – Oilseeds (NMEO-OS):** Aimed at improving productivity, seed quality, processing, and market linkages for traditional oilseed crops.
- **National Mission on Edible Oils - Oil Palm (NMEO-OP):** Focused on expanding oil palm cultivation and increasing domestic crude palm oil output.
- **Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA):** Enables procurement of oilseeds at MSP by the Central Nodal Agencies like National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) under Price Support Scheme component.
- **Raised the effective customs duty:** On crude edible oils like palm, sunflower and soybean from 5.5% to 16.5% to discourage the import of cheap edible oils.
- **Farmer Producer Organizations (FPOs):** Under the 10,000 FPO Scheme, 1,341 FPOs have been specifically formed for oilseeds to empower small and marginal farmers with better input access and market linkages.
- **Others:** Seed Authentication, Traceability and Holistic Inventory (SATHI) portal; National Pest Surveillance
- System etc.

Way Ahead: Recommendations of the Committee

- **Expanded Procurement:** Expanding MSP procurement under Price Support Scheme of PM-AASHA to 100% of national oilseeds production (from 25% at present).
- **Incentivize production of Palm oil:** Through Viability Gap Payments (VGP) adequately for Fresh Fruit Bunches (FFBs) and subsidizing planting material costs upto 80%.

- **Improve irrigation practices**: Improve coverage of Per Drop More Crop (PDMC) Scheme should be implemented in rainfed Oilseeds areas; increase subsidies for Small/Marginal farmers for purchasing drip and sprinkler systems; train Farmers on micro-irrigation maintenance etc.
- **Import Safeguards:** Dynamically adjusting import duties based on domestic production and imposing a 20% safeguard duty on palm oil imports if global prices fall below $800/tonne.
- **Launch of a 'Bharat Oil' Brand:** To protect lower and middle-income households from market fluctuations.
- **Seed Pricing and Regulation:** A **National Commission** should be set up to fix the upper price ceiling for seeds to prevent exploitation by private companies.
  - Furthermore, a new **Seeds Bill** must be enacted urgently to regulate modern biotechnology, track quality, and protect seed sovereignty.
- **Technological Integration:** Adequate investments in biotechnology (like CRISPR-Cas9), Marker-Assisted selection (MAS) etc. to develop climate-resilient high-yielding, and pest resistant varieties.

Conclusion

India's growing dependence on edible oil imports highlights the urgent need to strengthen domestic oilseed production through technological innovation, improved irrigation, better seed quality, and stronger procurement support.

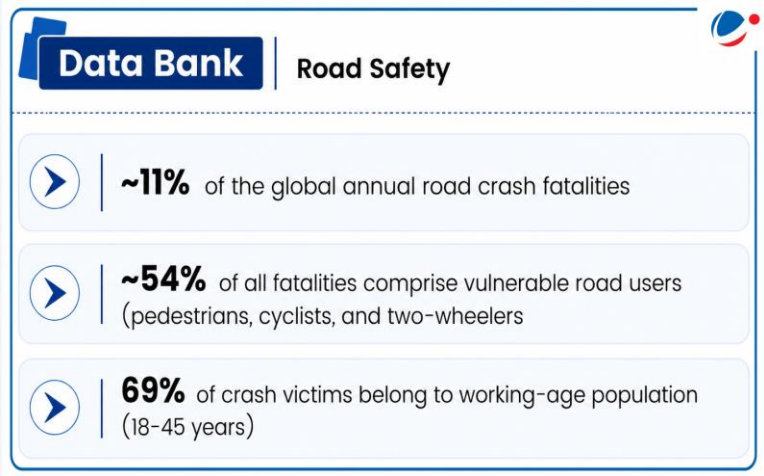
3.9. ROAD SAFETY IN INDIA

Why in the News?

In case of Re: Phalodi Accident, the Supreme Court passed **comprehensive guidelines** to enhance road safety on expressways and national highways (NH).

Key observations of Supreme Court

- **Expansion of Article 21:** SC recognized "**right to a safe commuting environment and the safety of a commuter"** as integral to the "**Right to Life**" with dignity under Article 21.
- **Human Life over Constraints:** The Bench reiterated that no financial or administrative constraint can outweigh the sanctity of human life.
  - Invoked extraordinary powers under **Article 142** to issue enforceable nationwide directions overcoming administrative and monetary constraints.



- **Disproportionate Fatalities:** The SC flagged alarming statistics, noting that NHs account for merely 2% of India's total road length, yet they contribute to nearly 30% of all road fatalities.

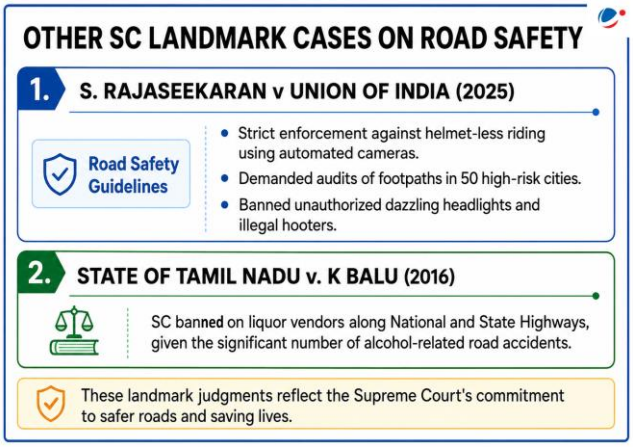
Major Directions Issued by the Supreme Court

- **Removal of Highway Encroachments:** The construction of any new dhabas, eateries, or commercial structures within the Right of Way (ROW) is banned immediately.
- **Advanced Traffic Management Systems (ATMS) Mandatory:** Cameras, speed detectors, and incident detection systems on all National Highways.
- **Heavy vehicle Parking:** Restricted to designated areas only.

- **District Highway Safety Task Force (DHSTF):** Integrate district administration, police, and highway authorities for unified enforcement.
- **Deployment of Emergency Services:** NHAI must deploy Basic Life Support (BLS) ambulances and recovery cranes within 60 days at intervals not exceeding 75 km across all NH stretches, to ensure prompt medical response.
- **Enhanced Surveillance & Patrolling:** Dedicated Highway Surveillance Teams must be formed within 30 days to supplement NHAI's 24x7 patrolling vehicles at intervals not exceeding 50 km.
- **Accident Blackspots Identification:** Mandatory identification and correction of all accident-prone locations.
- **Citizen Grievance:** NHAI must operationalize the *Rajmargyatra* encroachment complaint module and the 1033 toll-free number.
- **Other:** Conduct biannual drone surveys, States must restrict land-use changes near NH, Truck lay-bye facilities and creation of an Inter-State Highway Safety Coordination Committee.

Reasons for low road safety in India

- **Infrastructure Deficits:** Rapidly expanding high-speed networks often lack safe access or crossings for non-motorized traffic.
  - Poor engineering creates dangerous accident "blackspots".
- **Weak Enforcement and Compliance:** "No concept of lane driving," incredibly low compliance with seat belt (25%) especially rear seats (4%) and helmet laws (50% people wear helmet), and an estimated 30% prevalence of fake driving licenses hamper basic safety.
- **Institutional & Governance Gaps:** Existing bodies like the National Road Safety Council (NRSC) lack adequate statutory backing, technical capacity, and budgetary resources to execute plans effectively.



- **Other:** Fake driver's licenses, unregulated local modifications, overloading, post-crash care deficiencies, etc.

Government Initiatives:

- **Multi-pronged 4Es Strategy:** Interventions based on Education, Engineering (road & vehicle), Enforcement, and Emergency Care.
- **Motor Vehicles (Amendment) Act, 2019 (MVAA):** A paradigm shift holding road contractors accountable for bad design, enhancing penalties, and proposing the cashless treatment of victims during the 'golden hour'.
- **Vehicle Safety Enhancement:** Bharat NCAP/ Global New Car Assessment Program (GNCAP) mandates, requirement of Airbags, Anti-lock Braking Systems (ABS), and pedestrian protection designs for vehicles.
- **State Road Safety Incentives Program:** A massive proposed US$2 billion funding scheme to financially reward states for continuous road safety performance improvements.
- Other: **National Road Safety Strategy (2018–2030),** to develop **Integrated Road Accident Database (IRAD)** for tracking crashes nationwide, establishment of the National Injury Surveillance Trauma Registry, etc.

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Read our previous coverage on National Road Safety Board

Way Forward:

- **Modernizing Enforcement:** Shifting to un-manned, automated technology (cameras, ATMS, drones) to reduce human intervention and ensure round-the-clock compliance and objective penalization.

- **Institutionalization:** Immediately operationalize the fully empowered **National Road Safety Board (NRSB)** and counterpart state road safety authorities as mandated by the MVAA to ensure strict accountability and coordination.
- **Strengthening Post-Crash Care:** Fully implement the Good Samaritan guidelines to protect bystanders, integrate trauma care networks along highways.
- **SDG 3.6 Roadmap:** Publish a **state-wise binding target framework** for halving road deaths by 2030, with annual performance reviews tied to central highway funding allocations.
- **Other:** Ensure mandatory safety audits for all road projects, establish automated driver testing tracks to eliminate fake licenses and modern automated vehicle inspection centers in every state to objectively test vehicle fitness.

Conclusion

Road safety in India is not merely a transport issue but a critical public health, economic, and governance priority. Strengthening road safety aligns with the Sustainable Development Goals, particularly **SDG 3.6** and **11.2 (universal access to safe transport)**, while fulfilling India's commitments under international road safety conventions (**1968 Vienna Convention on Road Signs and Signals** and **1998 Agreement on Global Technical Regulations for Wheeled Vehicles**).

3.10. NEWS IN SHORT

3.10.1. ANNUAL SURVEY OF INCORPORATED SERVICES SECTOR ENTERPRISES (ASISSE)

National Statistics Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI), launched **Annual Survey of Incorporated Services Sector Enterprises (ASISSE).**

About ASISSE

- **First** annual survey covering **incorporated service enterprises** across all States/UTs (FY 2024-25 reference).
- **Coverage**: Incorporated service sector enterprises registered under the Companies Act, 1956, or Companies Act, 2013, or Limited Liability Partnership Act, 2008.
  - Covers sectors like **trade, transport, IT, health, education, hospitality.**
- **Aim: T**o build a **reliable database** for policymaking and economic analysis.
- Uses Goods and Services Tax Network **(GSTN) database; ~**1.21 lakh enterprises surveyed.
- Complements **ASI (Annual Survey of Industries)** and **ASUSE (Annual Survey of Unincorporated Sector Enterprises)** for holistic non-agricultural economy data.

3.10.2. NEW INCOME TAX ACT 2025 COMES INTO EFFECT

Income Tax Act, 2025 replaces the six-decades-old Income Tax Act, 1961 with objective to enhance predictability, transparency, reduce compliance burden, and offer taxpayers a streamlined and simplified tax filing process.

Key provisions of the Act

- **Simpler language and Framework:** Act has been condensed from 819 to 536 Sections, and 390 to 190 Forms.
  - Provisions of **Minimum Alternate Tax (MAT)** and **Alternate Minimum Tax (AMT)** have been separated into two sub-sections.
    - **MAT** bring into the tax net "zero tax companies" which in spite of having earned substantial book profits and having paid handsome dividends, do not pay any tax due to various tax concessions and incentives provided under the Income-tax Law.

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Read our previous coverage on Income Tax Act 2025

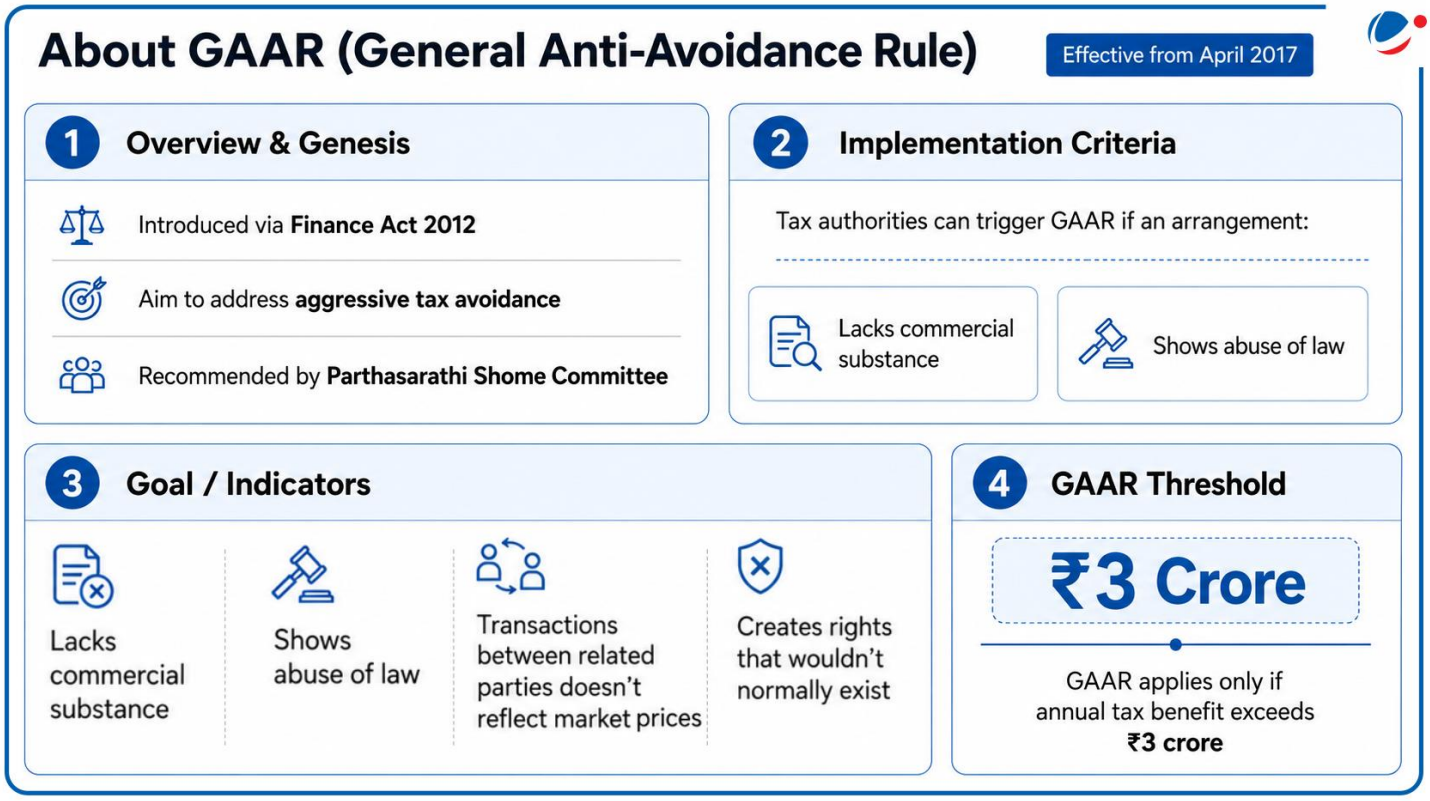
> **AMT** has similar provisions as MAT which is applicable to non-corporate tax payers.
  - ✓ The provisions of MAT are applicable to a corporate taxpayer only.

- **"Tax Year" Concept:** The traditionally separate concepts of Financial Year (FY) and Assessment Year (AY) have been merged into a single, unified term: "Tax Year".
- **Stability in Core Tax Elements**
  - Tax rates and regimes for **individuals and corporations remain unchanged**.
  - There are no changes in offences and penalties.
  - Most definitions have also been retained.
  - Faceless collection of information and assessment of tax cases.
- **Undisclosed Income:** The definition of undisclosed income for assessing search cases, which previously included money, bullion, jewellery, or other valuable articles, is expanded to include **virtual digital assets.**
- **Virtual Digital Space Access:** Income tax authorities are now allowed to gain access to a virtual digital space during search and seizure proceedings.
  - A "virtual digital space" is **defined broadly to include email servers, social media accounts**, online investment and trading accounts, and websites for storing details of asset ownership.

3.10.3. GENERAL ANTI-AVOIDANCE RULES (GAAR).

India amended Income Tax Rules, 2026, under Income Tax Act, 2025, to exclude investments made before 1 April 2017,from GAAR

- This removed ambiguity around grandfathering.
  - **Grandfathering lets investments made before a specified date enjoy old tax rules** despite later changes.



3.10.4. PAYMENTS BANK

Reserve Bank of India (RBI) canceled Banking Licence of Paytm Payments Bank.

- According to the RBI, Paytm Payments Bank failed to adhere to the **Guidelines for Licensing of Payments Banks** under the **Banking Regulation Act, 1949**.

About Payment Banks

- **Recommended by** the **Nachiket Mor Committee** in 2014.
- **Definition**: A Payment Bank is a **financial institution** set up to operate on a **smaller scale** with minimal credit risk under **Differentiated banking licenses (DBL)**
  - DBL are **specialized licenses** designed to serve **specific customer segments.**
    - Other Financial Institution under DBL: **Small Finance Banks.**
- **Objectives:** To promote **financial inclusion** through serving **unbanked and underbanked populations (E.g.** Migrant workers, low-income households).
  - **Advantages:** Boost digital payments, offer a safe alternative for small transactions, and reduce cash dependency.
- **Regulatory Framework:**
  - **Registration:** Companies Act, 2013.
  - **Governance**: Banking Regulation Act, 1949; RBI Act, 1934; Foreign Exchange Management Act, 1999; Payment and Settlement Systems Act, 2007.
- **Capital Requirement:** They must have a **minimum paid-up capital of ₹100 crore** (promoters' share to be ≥40% for the first five years).
  - **75% funds** in SLR securities, **25%** with banks.

3.10.5. NON DELIVERABLE DERIVATIVES (NDD)

Reserve Bank of India (RBI) has directed to bar banks from NDD contracts in rupee.

About NDD

- **Derivative contract** where two parties agree on future exchange rate for rupee, but settle the difference in **cash**, usually in US dollars.

- These trades **take place offshore, outside the control** of **RBI.**
- They were developed in **response to restrictions that constrained access to onshore markets** and are widely used by foreign investors, hedge funds and global banks who cannot freely access the Indian rupee market.

3.10.6. AT-1 BONDS

Recently, a private bank took action against individuals for alleged involvement in **mis-selling of Additional Tier-1 (AT-1) bonds.**

About AT-1 Bonds

- Type of **debt instrument** issued by banks to **strengthen their capital base.**
- **Key Features:**
  - **Perpetual:** Unlike regular bonds (government, corporate, etc) with a fixed maturity date, AT-1 bonds have **no maturity date**.
  - **Convertible to Equity:** In a financial distress situation.
  - **High Risk, High Reward:** Due to their risk profile, they **offer higher interest rates** than traditional bonds.
- **Issued by**: Banks at the direction of the RBI.

3.10.7. NET OPEN POSITION (NOP)

RBI has introduced a cap on banks' NOP in Indian rupee, limiting it to $100 million at the end of each business day.

- This is far lower than earlier limit of 25% of bank's total capital.

About NOP

- It represents the difference between a bank's foreign currency assets and liabilities.
  - It reflects the extent of a bank's exposure to currency fluctuations and a higher NOP indicates a larger exposure on the currency.

3.10.8 CREDIT DEFAULT SWAPS (CDS)

The **Reserve Bank of India** notified limits for investment in debt and sale of **Credit Default Swaps** by Foreign Portfolio Investors (FPIs) for FY 2026-27.

- The limits for FPI investment in Government Securities (G-Secs), State Government Securities (SGSs) and corporate bonds remain unchanged.

About Credit Default Swaps

- **Definition:** It is a **financial derivative** instrument that allows an investor to **swap or offset their credit risk** with that of another investor.
- **Working Mechanism:** It works like an **insurance** on bonds, where the buyer pays regular premiums and the seller pays if a default or restructuring occurs.
- **Uses:** Used for **hedging, speculation, and arbitrage**, credit risk management.
- **Risks:** Counterparty risk, complexity.

3.10.9. IND AS (INDIAN ACCOUNTING STANDARDS)

IRDAI (Insurance Regulatory and Development Authority of India) has introduced **Ind AS (Indian Accounting Standards)** based Financial Reporting Framework for the Insurance Sector.

- It aims to align the Indian insurance sector with globally accepted standards.
- It applies to all categories including life, general, standalone health insurers, and reinsurers.

About Ind AS Framework

- **Overview:** They are a set of financial reporting standards implemented in India to harmonize local accounting practices with the **International Financial Reporting Standards (IFRS).**
- **Primary Goal:** To enhance the global accessibility, transparency, and reliability of financial statements produced by Indian companies.
- **Implemented by:** Ministry of Corporate Affairs (MCA).

3.10.10. AD VALOREM DUTY

The US announced a 100% **ad valorem duty** on the import of **patented pharmaceuticals** and associated ingredients.

- This will not include **generic drugs** "at this time," having a limited impact on India.
- The US is India's largest market for pharmaceutical exports, accounting for an almost 40% share.

About Ad Valorem Duty

- An ad valorem tariff is a customs duty calculated as a **percentage of the total value of imported goods**.
- Unlike fixed-fee tariffs, which are based on weight or quantity, these tariffs fluctuate **depending on the declared value** of the product.
- These tariffs are widely **used to** regulate trade, protect domestic industries, and generate government revenue.

3.10.11. STARTUP INDIA FUND OF FUNDS 2.0 (FOF 2.0) SCHEME NOTIFIED

FoF2.0 builds upon FoF for Startups (FFS 1.0) launched in 2016 under **Startup India Action Plan** enabling access to **venture capital** for startups across stages and sectors.

- **Venture Capital** (VC) is an early-stage equity funding that comes with active guidance for startups with high growth expectations.

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Read our previous coverage on Startups

Key Highlights of the Scheme

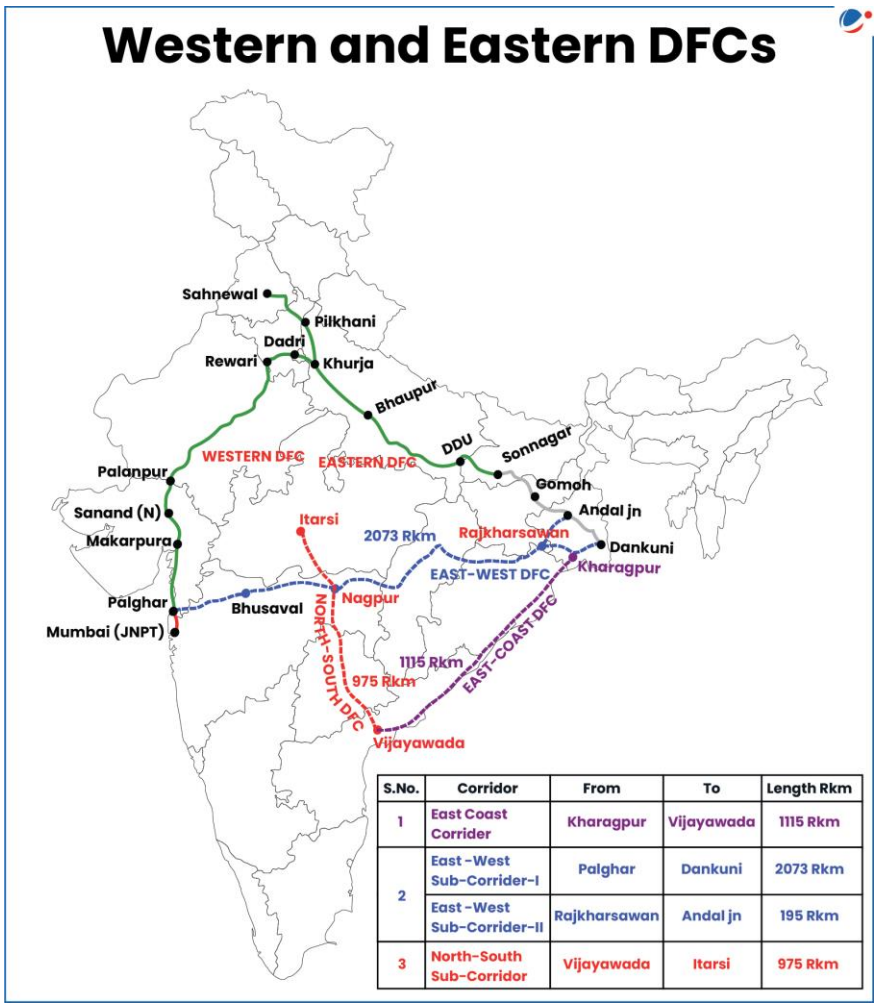
- **Total corpus:** ₹10,000 crore
- **Ministry**: Ministry of Commerce and Industry.
- **Eligibility: Alternative Investment Funds (AIFs)** spread across 16th and 17th Finance Commission cycles.
  - AIF refers to **privately pooled investment vehicle** which collects funds from sophisticated investors (Indian/foreign) for investing as per defined investment policy.
- **Structure:** Scheme will contribute to corpus of **SEBI-registered AIFs** for investing in equity and equity-linked instruments of **'startups'**.
- **Selection process for AIFs:** Involves screening by **Venture Capital Investment Committee (VCIC)** comprising of veterans from startup ecosystem.
- **Monitoring and Governance: 'Empowered Committee (EC)'** chaired by Secretary, DPIIT (Department for Promotion of Industry and Internal Trade).
- **Implementation: Small Industries Development Bank of India (SIDBI)** [also the implementing agency of FFS 1.0]
  - In addition, another domestic IA(s) will be selected for implementation.
- **Segmented approach:**
  - **AIFs supporting deep tech:** Startups engaged in **developing novel solutions** addressing complex problems involving longer R&D cycles, higher costs.
  - **Smaller AIFs (Micro VCs):** Supporting early growth stage startups.
  - **AIFs supporting tech-driven innovative manufacturing startups:** Manufacturing-oriented champion sectors under "Make in India".
  - AIFs supporting **sector/stage agnostic startups.**

3.10.12. WESTERN DEDICATED FREIGHT CORRIDOR (DFC) COMPLETED

Western DFC is a **1,506-km project** stretching from Dadri in **Uttar Pradesh** to Jawaharlal Nehru Port Terminal (JNPT) in **Maharashtra.**

About Dedicated Freight Corridor (DFC)

- **Genesis:** DFC Project was **conceived in 2005** and aims at building **dedicated freight-only railway lines**.
- **Two DFCs: Eastern DFC (EDFC) and Western DFC (WDFC**) were approved in 2008.
  - **EDFC** runs from **Ludhiana (Punjab) to Sonnagar (Bihar)** with a length of **1337 Km.**
    - Along with these two, Ministry of Railways has undertaken work towards Detailed Project Reports (DPR) for three new DFCs (currently under examination):
- **East-Coast Corridor:** Kharagpur to Vijayawada.
- **East-West corridor:**
  - Palghar-Bhusawal-Nagpur-Kharagpur-Dankuni.
  - Rajkharsawan - Kalipahari – Andal.
    - **North-South Sub-corridor:** Vijayawada-Nagpur–Itarsi.
- **DFCCIL:** Established in **2006, Dedicated Freight Corridor Corporation of India (DFCCIL)** is a **Special Purpose Vehicle set** under administrative control of **Ministry of Railways.**
  - It undertakes planning & development, mobilization of financial resources and construction, maintenance and operation of DFCs.



S.No.	Corridor	From	To	Length Rkm
1	East Coast Corrider	Kharagpur	Vijayawada	1115 Rkm
2	East-West Sub-Corrider-I	Palghar	Dankuni	2073 Rkm
	East-West Sub-Corrider-II	Rajkharsawan	Andal jn	195 Rkm
3	North-South Sub-Corridor	Vijayawada	Itarsi	975 Rkm

Importance of DFCs

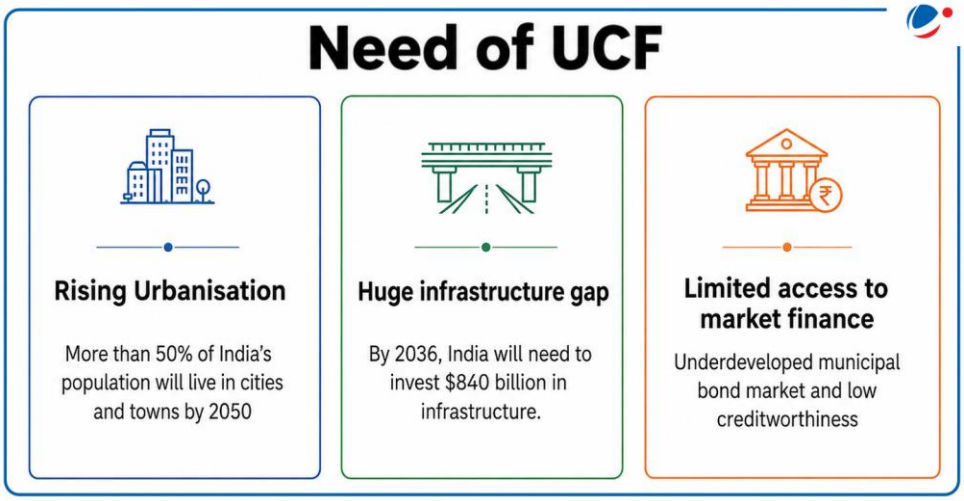
- **Ease Congestion:** Mixed passenger and freight traffic limits operational flexibility.
- **Enhanced Train Speed and Freight Productivity:** Designed to handle high-capacity freight trains traveling at **speeds of up to 100 km/h.**
- **Reduce Logistics Cost:** Congestion, delays, and uncertain transit times increases costs for industries.
- **Cleaner & Safer Transport:** Entire DFC network is fully electrified and hence shifting freight movement from road to rail would reduce emissions.
- **Alignment with National Infrastructure Goals:** DFC is a crucial component of National Rail Plan for creating future-ready rail network by 2030.

3.10.13. URBAN CHALLENGE FUND (UCF)

Ministry of Housing and Urban Affairs (MoHUA) launched operational guidelines of Urban Challenge Fund (UCF).

- Along with the guidelines for the UCF, the guidelines for the **Credit Repayment Guarantee Sub-Scheme** have also been launched.
- UCF will leverage market finance, private participation and citizen- centric reforms for delivery of high-quality urban infrastructure.

About Urban Challenge Fund



- **Scheme Type**: Centrally Sponsored Scheme
- **Fund Allocation**: 1 Lakh crore (this will facilitates a total investment of ₹4 lakh crore in next five years)
- **Funding pattern**:
  - 25% of the project cost will be provided through the fund.
  - At least 50% must be mobilised from market sources, ensuring private participation.
  - The remaining 25% can be contributed by States/UTs/ULBs or raised from the market.
- **Focus areas**: Creative development of cities', Cities as growth hubs', and Water and sanitation'.
- **Eligible Cities**:
  - All cities with a population of 10 lakh or more (2025 estimates);
  - All State and Union Territory capitals not covered above; and
  - Major industrial cities with a population of 1 lakh or more.
- **Implementation period**: FY 2025–26 to 2030–31 (with scope for extension)
- Projects already funded under AMRUT 2.0/ SBM 2.0/ other CSS are not eligible under UCF.

Guiding Principles of UCF Implementation

- **Market-linked financing**: Requires substantial funding from market sources, with limited central support to ensure fiscal discipline.
- **Challenge-based selection**: Projects chosen through a competitive process focusing on impact and reforms.
- **Reform-linked disbursement**: Funds released only when governance, financial and planning reforms are undertaken.
- **Outcome-based approach**: Funding tied to performance, milestones and measurable results.

About Credit Repayment Guarantee Sub-Scheme(CRGSS)

- It enables **Urban Local Bodies (ULBs)**, especially smaller cities, to access market-based financing through credit guarantees
- **Target beneficiaries**: Tier-II, Tier-III cities, and cities in North-Eastern and hilly regions
- It will provide a Central guarantee of up to ₹7 crore or 70 per cent of the loan amount (whichever is lower) for first-time loans.

3.10.14. PRADHAN MANTRI GRAM SADAK YOJANA-III (PMGSY-III)

Union Cabinet approved extension of Pradhan Mantri Gram Sadak Yojana-III (PMGSY-III) till March 2028.

Key Features of PMGSY

- Launched: on December 25, 2000, as a flagship centrally sponsored scheme under the **Ministry of Rural Development.**
- Objective: to alleviate poverty by providing all-weather road connectivity to previously unconnected rural habitations with a population of
  - 500 or more in plain areas,
  - 250 or more in special category regions, such as the North-Eastern states, Himalayan states, desert areas, and select backward districts.
- **Key Phases**:
  - **Phase I (2000):** focused on providing **initial all-weather connections** to eligible unconnected habitations.
  - **Phase II (2013):** Shifted focus to **upgrading 50,000 km of the existing rural road network** to improve transportation efficiency and support economic hubs.
    - > **For Left Wing Extremism Affected Areas (2016):** targeted 44 severely affected districts across nine states to improve both **socio-economic developme**nt and the **mobility of security forces**.
  - **Phase III (2019):** Aimed at **upgrading 1,25,000 km of Through Routes and Major Rural Links** to connect villages directly to **Gramin Agricultural Markets, higher secondary schools, and hospitals**.
    - > This phase has now been **extended beyond March 2025 up to March 2028.**
  - **Phase IV (2024–25 to 2028–29):** Set to construct an **additional 62,500 km of roads** to connect 25,000 previously unconnected habitations.

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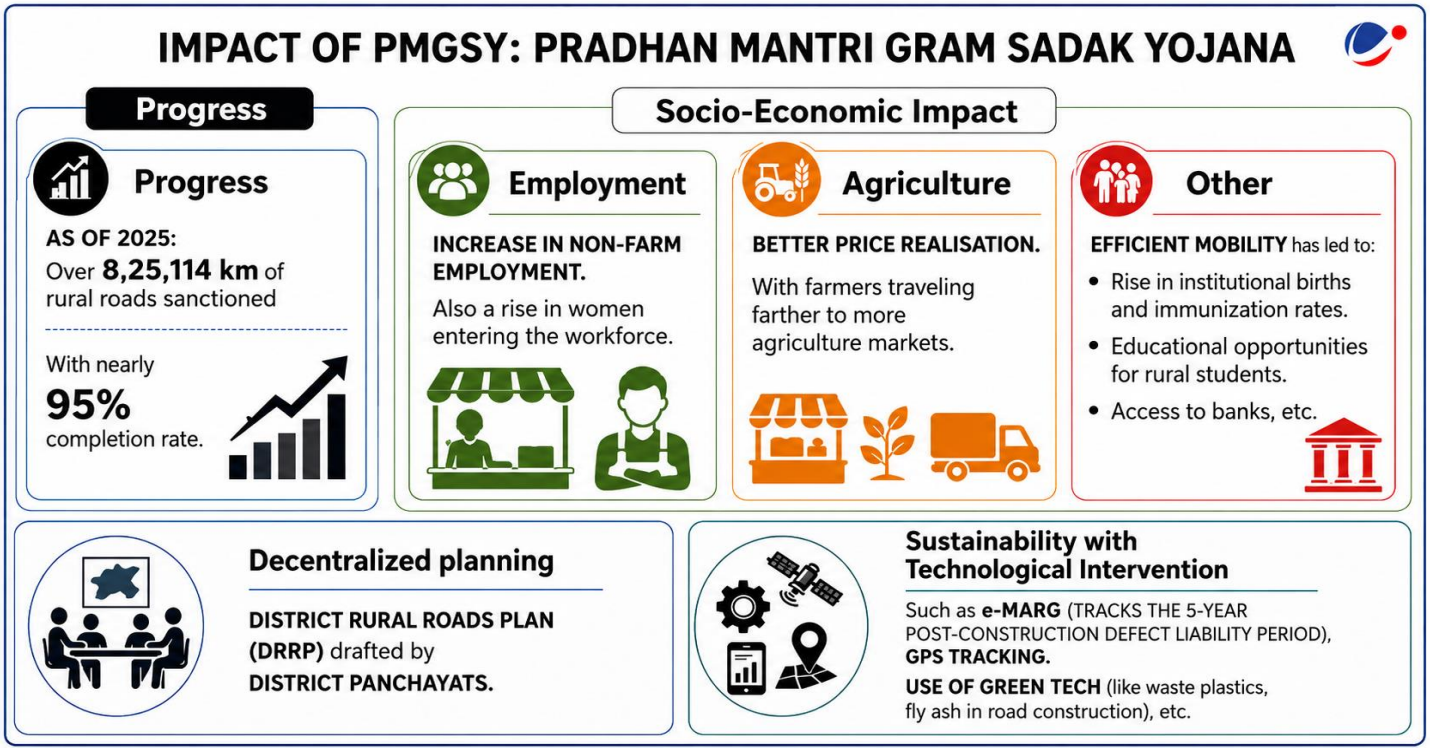
Read our previous coverage on PMGSY



3.10.15. WORLD INEQUALITY LAB REPORT ON LAND INEQUALITY IN INDIA

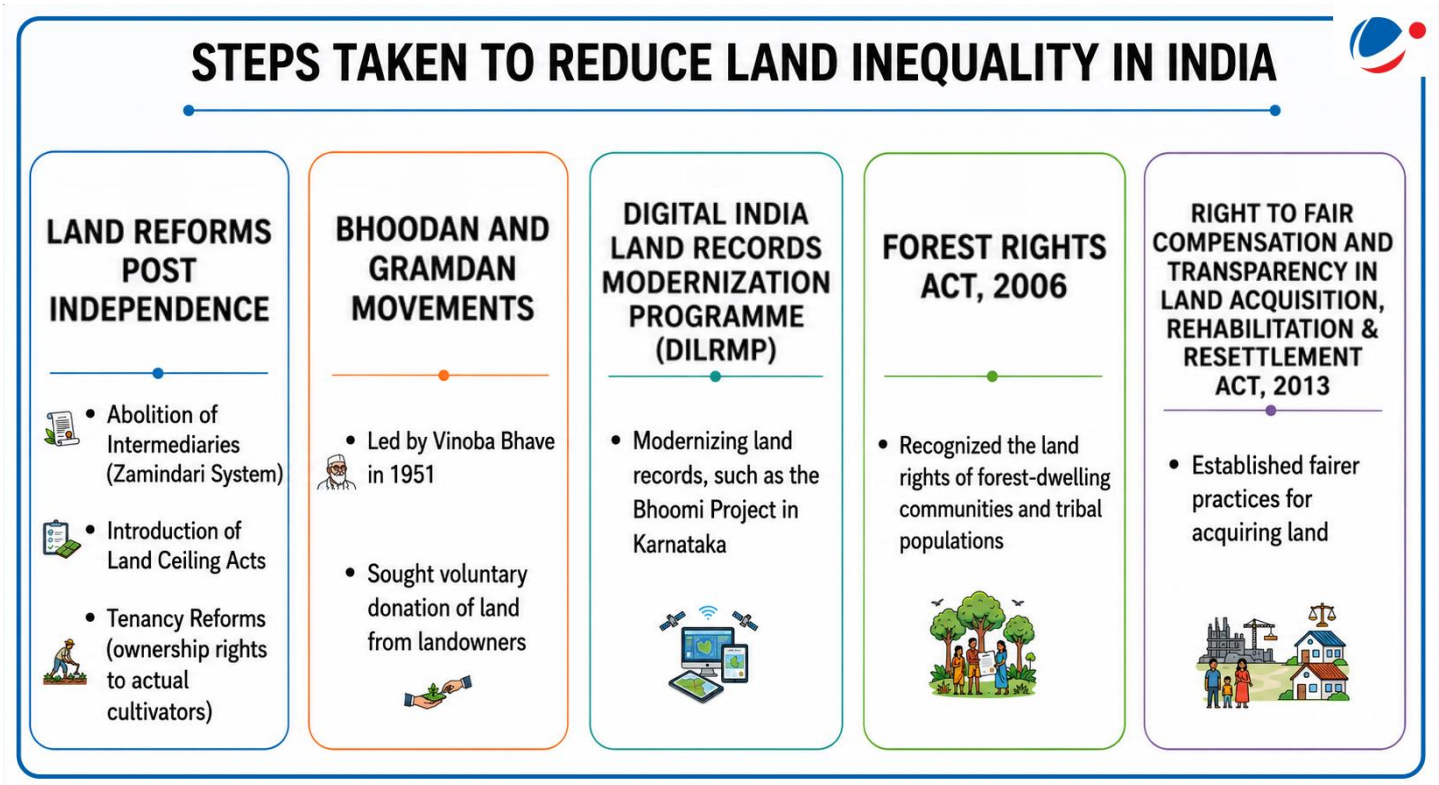
Report titled **"Land inequality in India: Nature, history, and markets,"** encompasses data from ten major Indian states (~ 75% of rural population).

Key Findings of the Report

- **Extreme Wealth Concentration: Top 10% of rural households own 44%** of the total land area.
- **Widespread Landlessness: Nearly 46%** of rural Indian households are entirely landless.
- **Village-level land Gini Coefficients:** extremely high at **71.1.**
- **Dominant Landlords:** In an average village, the **single largest landholder** controls roughly **12.4% of the land.**
- **Regional Disparities**:
  - **Highest Inequality: Kerala** (Land Gini coefficient at 90).
  - **Lowest Inequality: Karnataka** and **Rajasthan** (Land Gini coefficients below 65).
  - **Rates of Landlessness: Punjab** highest at 73%.

Key Drivers of Land Inequality in India

- **Nature: High productivity facilitates** the expansion of large landholdings and drives up landlessness.
- **History:**
  - **Colonial Tenure:** Regions formerly under the **British zamindari (landlord) system exhibit higher inequality**, **vis-à-vis** "princely states".
  - **Social Stratification:** Villages with a higher proportion of **Scheduled Caste (SC) populations face higher inequality**, due to historical landlessness.
- **Markets (Economic Integration):** Proximity to economic hubs, such as **towns, major highways, railways, banks, and agricultural markets (mandis)** is associated with higher land inequality.
  - Economic integration **alters the profitability of farming** relative to non-agricultural activities, **incentivizing smallholders to sell their non-viable plots to larger landowners**.



3.10.16. BORROWERS' PLATFORM

Developing nations recently launched the **first-ever Borrowers' Platform** at the IMF-World Bank Spring Meetings 2026.

About the Borrowers' Platform

- **Objective:** A dedicated forum for peer learning, debt management capacity-building, and strengthening borrower voices in **sovereign debt negotiations.**
  - **It is not a debt restructuring forum.**
- **Members: 30 founding members (including India);** Chair-**Egypt**
- **Secretariat: UN Trade and Development (UNCTAD).**
- **Significance: Provides borrowers** who have **external debt reaching $11.7 trillion in 2024,** a formal coordination mechanism.
  - Sovereign debt coordination was long dominated by creditor-led mechanisms like the **Paris Club.**

3.10.17. WTO MINISTERIAL CONFERENCE (MC14)

WTO Ministerial Conference (MC14) concluded in Yaoundé, Cameroon.
Ministerial Conference is the **highest decision-making body of the WTO,** which meets **biennially** to take decisions on global trade rules.

Key Decisions Adopted at MC14

- **Integration of Small Economies**: Ministers agreed to improve **integration of small economies into the global trading system.**
- **Strengthening Special & Differential Treatment (S&DT):** Enhance implementation of S&DT provisions in the Agreements on Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT).
  - **Agreement on SPS** lays out the **basic rules on food safety and animal and plant health standards**.
    - Sanitary (human and animal health) and phytosanitary (plant health) measures apply to domestically produced food or local animal and plant diseases, as well as to products coming from other countries.
  - **TBT Agreement** aims to ensure that technical regulations, standards, and conformity assessment procedures are non-discriminatory and do not create unnecessary obstacles to trade.
- **Fisheries Subsidies Negotiations**: Ministers agreed to **continue negotiations** on fisheries subsidies to **develop comprehensive disciplines by the MC15.**

Key Outstanding Issues at MC14

- **E-Commerce Moratorium:** Debate is on extending the **moratorium on customs duties** on electronic transmissions.
  - India opposed it **due to revenue loss (~$1 billion annually) and bias** favouring developed countries.
- **Investment Facilitation for Development (IFD):** The proposal aims to **integrate IFD into** WTO framework as an **Annex 4 Agreement** (Annex 4 contains plurilateral trade agreements that are binding only on WTO members that have accepted them).
  - IFD, based on Most-Favoured-Nation (MFN) treatment, is aimed at facilitating flow of FDI between parties, and is open to all WTO members to join.
  - **India opposed incorporation of IFD** as it may **erode WTO's functional limits** and consensus-based decision-making.

3.10.18. UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

Economic and Social Survey of Asia and the Pacific 2026 report released by UN ESCAP.

Key highlights

- **Projections:** India's economy is projected to grow at 6.4% (following 7.4% in 2025) this year and 6.6% in 2027

About UN ESCAP (**HQ**: Bangkok, Thailand).

- It is an **intergovernmental platform** in the Asia-Pacific region.
- **Origin :** established in **1947** as Economic Commission for Asia and Far East (ECAFE)
- **Parent Body**: One of the 5 regional commissions of the United Nations and reports to Economic and Social Council (**ECOSOC**)
- **Membership:** 53 Member States and 9 Associate Members.
  - Includes **countries from outside the Asia-Pacific** region, such as, UK, France, etc.
  - **India** is a **founding member**

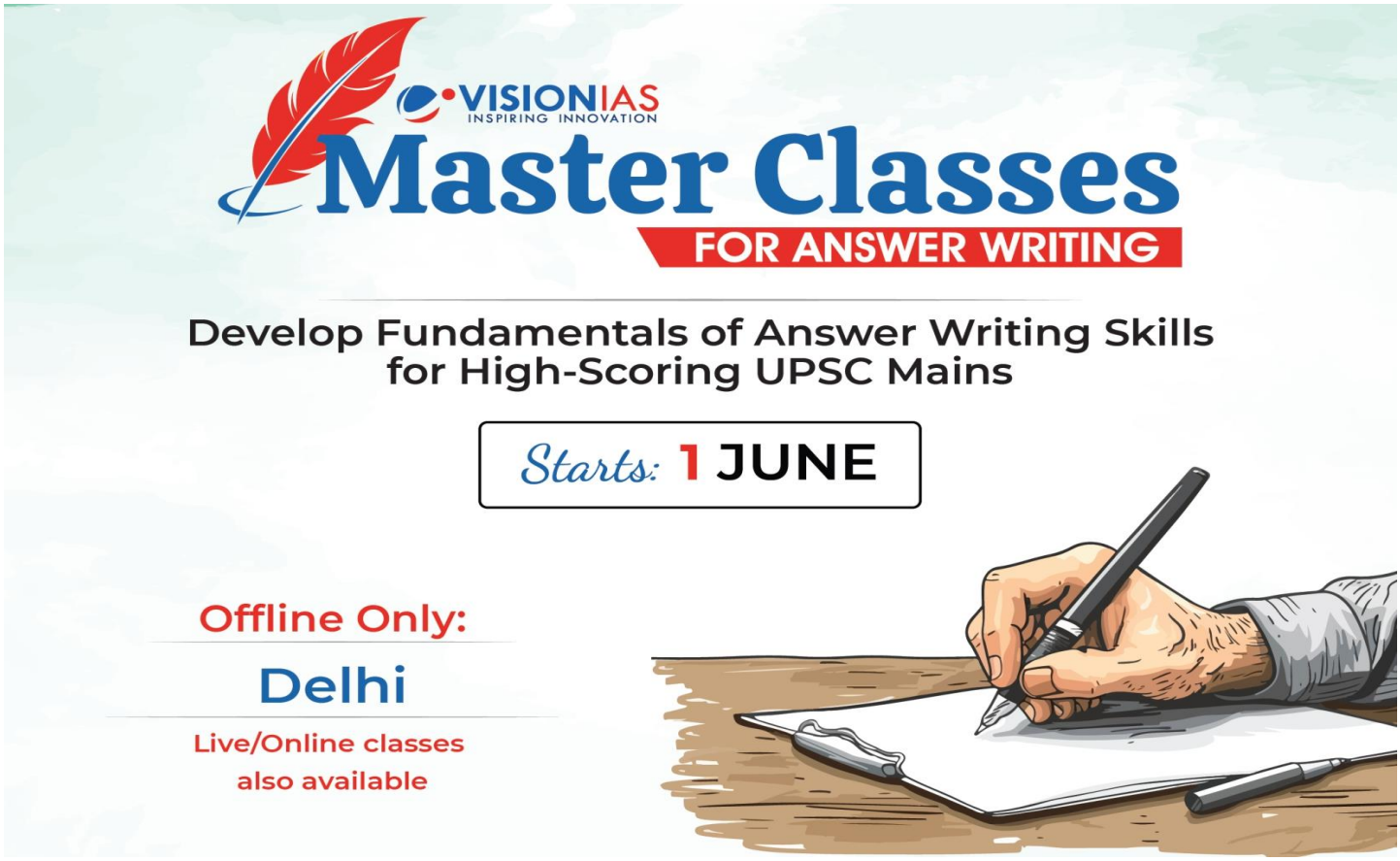
3.10.19. WORLD ECONOMIC OUTLOOK (WEO)

International Monetary Fund (IMF) slightly upgraded India's GDP growth forecast for **FY27 to 6.5% in its latest WEO Report.**

- **Global growth** is projected to **slow to 3.1% in 2026 and 3.2% in 2027.**
- Also India slipped out of world's top five economies in nominal GDP terms to be **6th largest economy** preceded by USA, China, Germany, Japan, and UK.

About WEO

- It presents **analyses and projections** of the world economy in the near and medium term.
- Published **twice a year** with **updates in between.**
- **Other Reports by IMF**: Global Financial Stability Report, Fiscal Monitor.



3.10.20. FAO FOOD PRICE INDEX

Food and Agriculture Organization (FAO) Food Price Index rose to 128.5 points in March 2026, driven by higher energy costs amid Middle East tensions.

FAO Food Price Index

- A measure published by the Food and Agriculture Organisation (FAO) **tracking monthly changes in international prices** of a basket of food commodities.
- **Base year**: 2014–16.
- **Composition**: Includes **five major commodity groups**—cereals, vegetable oils, dairy, meat and sugar.

3.10.21. KHANIJ BIDESH INDIA LTD. (KABIL)

KABIL secures environmental clearance for deep exploration of five lithium blocks in Argentina.

- Lithium is a **soft, silvery-white alkali metal** and has the lowest density of all metals.
- **Argentina, Bolivia and Chile (Lithium Triangle)** hold **more than 75 percent** of the world's lithium supply.

About KABIL

- **Overview:** Established in **2019** as a **Joint Venture Company** of the National Aluminium Company Ltd. (NALCO), Hindustan Copper Ltd. (HCL) and Mineral Exploration and Consultancy Ltd.
- Operates under the aegis of **Ministry of Mines.**
- **Objective:** It identifies, acquire, develop, process and make commercial use of **strategic minerals including Lithium** in overseas locations for supply in India.

3.10.22. SCHEME FOR SPECIAL ASSISTANCE TO STATES FOR CAPITAL INVESTMENT (SASCI)

The Mines Ministry **instituted ₹5,000 crore incentive scheme** incorporated under the **Scheme for Special Assistance to States for Capital Investment (SASCI)** for FY 2026-27.

- Incentive scheme **aims to facilitate and expedite mine operationalization**, **increase mineral production**, enhance revenue collection by States, and improve overall governance of the mining sector.
- Scheme incentive to states and UTs under **three reform areas** – Implementation of mining reforms, Mine operationalization, and State Mining Readiness Index (SMRI) based reforms.

About SASCI

- **Type:** Central Sector.
- **Ministry:** Ministry of Finance.
- **Aim:** Financial assistance provided to the State Governments in the form of a **50-year interest free loan for capital expenditure**.

3.10.23. TECHNOLOGY DEVELOPMENT AND INVESTMENT PROMOTION (TDIP) SCHEME

Union Minister of Communications released **revised guidelines for the Technology Development and Investment Promotion (TDIP) Scheme** for 2026-31.

- **Revised guidelines** expanded the scope of the scheme to include startups, MSMEs, academia, research institutions, telecom service providers.

About TDIP Scheme

- **Objective**: designed as a **comprehensive support framework** to enable Indian telecom entities to actively contribute to promote innovation, and enhance India's competitiveness in **next-generation** telecommunications technologies, including **5G Advanced and 6G.**
- **Implementation Agency:** Telecommunications Standards Development Society, India (TSDSI), Telecom Centres of Excellence, India (TCoE) and Telecommunications Consultants India Limited (TCIL).

3.10.24. RESILIENCE & LOGISTICS INTERVENTION FOR EXPORT FACILITATION (RELIEF)

Government expanded **coverage** of **RELIEF Scheme** amid **West Asia crisis.**

About RELIEF Scheme

- It is **a time-bound intervention** under the **Export Promotion Mission (EPM).**
- **Objective:** Help Indian exporters deal with high **freight costs, rising insurance premiums and war related export risks.**
- **Nodal and Implementing Agency:** ECGC Ltd. (Formerly Export Credit Guarantee Corporation of India Ltd.), wholly owned by Government of India (Ministry of Commerce & Industry).
- **Key Features**
  - **MSME-Focused Assistance**: Ensuring **reimbursement support** for High logistics costs and surcharges.
  - **Export Cycle Coverage**: For **End-to-end support for shipment planning**, Insurance etc.

3.10.25. REBATE OF STATE AND CENTRAL TAXES AND LEVIES (ROSCTL) SCHEME

Government notifies extension of RoSCTL Scheme up to 30th September 2026.

About the scheme

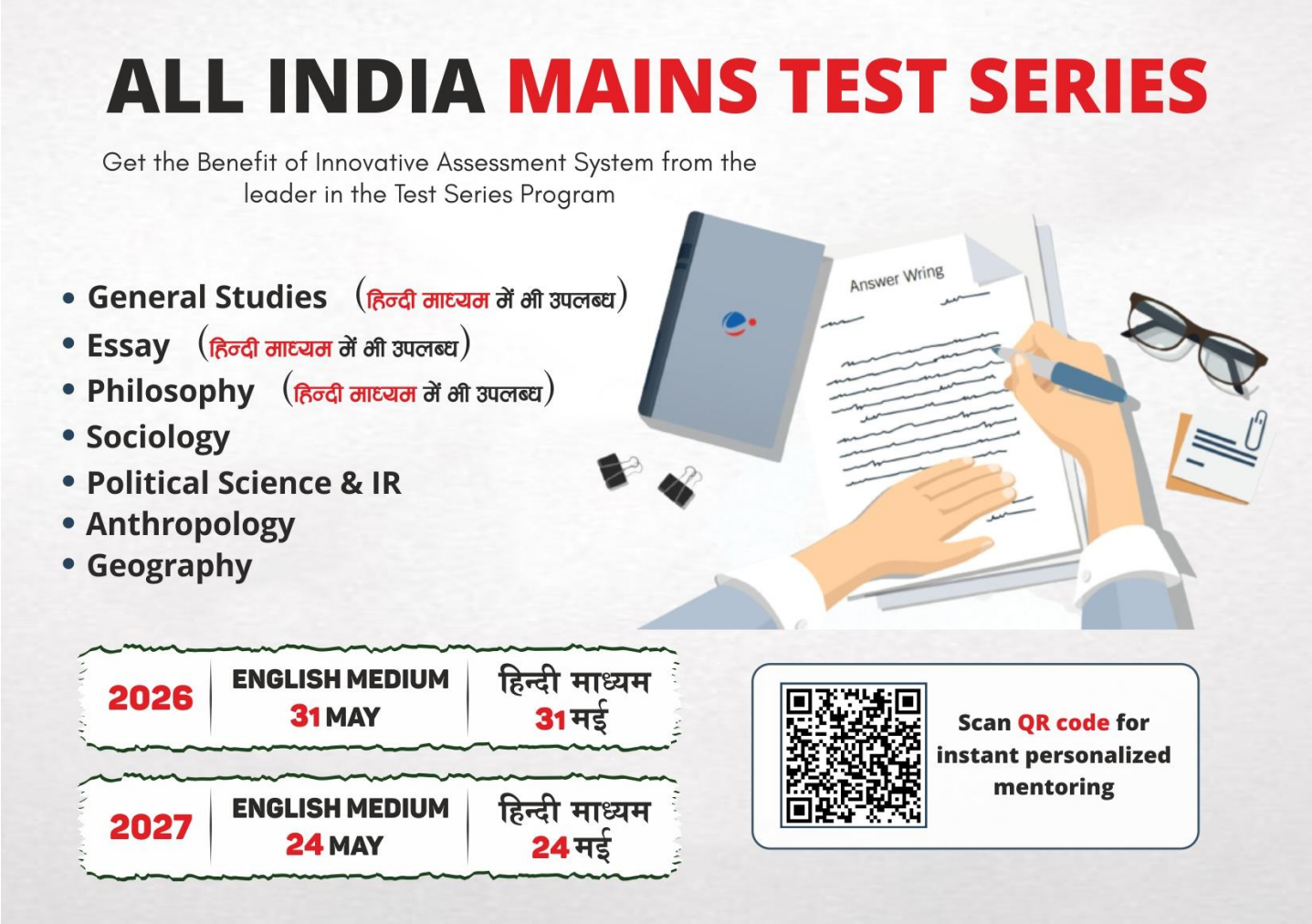
- **Launched:** In 2019 by the **Ministry of Textiles.**
- **Aim:** to **zero-rate textile exports** by **rebating all embedded State and Central taxes and levies,** not covered under any other scheme.
- **Mechanism**: Rebates are issued as **Duty Credit Scrips** which can be sold or used to pay custom duty.
- **Benefits**: Flexibility, enhanced export competitiveness, cost reduction etc.

3.10.26. VISHWA SUTRA

The **Ministry of Textiles** has launched an initiative called 'Vishwa Sutra – Weaves of India for the World'.

About Vishwa Sutra

- Initiated by the Office of the Development Commissioner (Handlooms) in collaboration with the **National Institute of Fashion Technology**.
- **Aim**: To present Indian handlooms in a contemporary global design framework.



4. SECURITY

4.1. INDIA'S DEFENCE EXPORTS

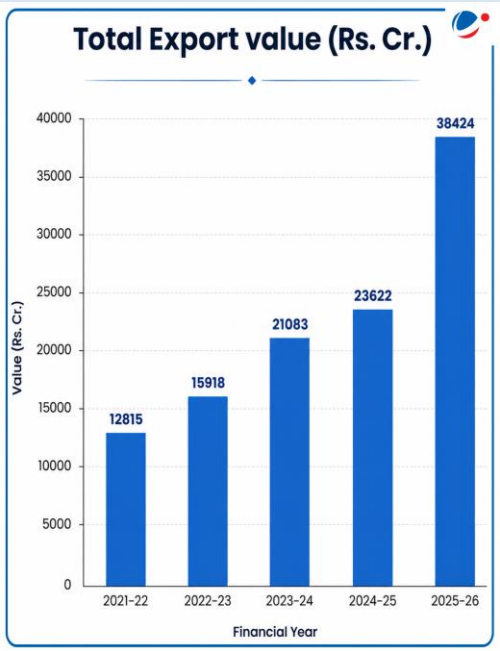
Why in the News?

India's defence exports have touched an **all-time high of Rs 38,424 crore** in the FY 2025-26.

More on the News

- This is a **62.66% increase** from the previous year.
- **Defence Public Sector Undertakings** (DPSUs) and the **private sector** contributed **55% and 45% respectively**.

Overview of India's Defence Sector



- **Production:** FY 2024-25 saw **record production at Rs 1.54 lakh crore**, up 174% from 2014-15.
  - DPSUs contributed **77%**, while the **private sector added 23%.**
  - **65% of military equipment** is now **made domestically.**
- **Exports:** Over the past decade, defence exports have grown exponentially, marking a **34-fold increase since 2013-14.**
  - The MoD aims for **Rs 50,000 crore in annual exports by 2029.**
  - **Key Markets:** India now supplies **over 100 countries**.
    - **Top three destination markets (**In 2023-24): United States, France, and Armenia.
    - India has also secured **major strategic partnerships in Southeast Asia,** such as supplying the **BrahMos missile system to the Philippines,** alongside exporting to friendly South Asian nations like Sri Lanka, Nepal, and Bhutan.
  - **Key Export Products: Missiles and Air Defence (**BrahMos supersonic cruise missiles, Akash SAMs); **Aviation and Drones (**Dornier-228 aircraft, Chetak helicopters); **Artillery and Munitions (**Howitzers); **Naval and Infantry Gear (**Fast interceptor boats, offshore patrol vessels, radars, thermal imagers, and bulletproof jackets).

Key factors behind rise in India's defence exports

- **Policy and Procurement Frameworks**
  - **Draft Defence Acquisition Procedure (DAP) 2026:** Raises **Indigenous Content from 50 to 60%** for prioritized categories.
  - **Defence Production and Export Promotion Policy (DPEPP) 2020:** Aims for a **₹1,75,000 crore turnover by 2025** by strengthening the manufacturing ecosystem.
- **Restricting Imports**
  - **Positive Indigenisation Lists:** Five lists **banning the import of over 5,000 items** to **mandate local sourcing** by specified deadlines.
  - **SRIJAN Indigenisation Portal:** Launched in 2020, this platform invites domestic industry and startups to locally develop previously imported defence items.
- **Budgetary and Financial Reform**: The government reserved **75% of the defence capital budget for the domestic industry** in FY 2024-25 to secure local market demand.

- **Liberalised FDI:** FDI limits were raised to **74% under the automatic route** and **100% via government approval** for advanced technologies.
- **Innovation and R&D**
  - **iDEX:** Provides funding for startups and MSMEs. The armed forces have **procured over Rs 2,400 crore** from iDEX-supported firms.
  - **Technology Development Fund (TDF):** DRDO offers **grants up to Rs 50 crore to startups/MSMEs** for advanced aerospace and defence capabilities.
  - **Dedicated R&D Budgets: 25% of the defence R&D budget** is reserved for the **private sector and academia** to democratize research.
    - **DRDO** has also shared **testing facilities and patents with Indian industry** at zero fees.
- **Institutional and Infrastructure Reforms**
  - **Corporatisation of Ordnance Factory Boards (OFBs):** 41 ordnance factories were **converted into seven corporate DPSUs** to enhance efficiency and autonomy.
  - **Defence Industrial Corridors (DICs):** In **UP and Tamil Nadu,** optimize logistics and attract investment.

Significance of Atmanirbharata in defence

- **Strategic Autonomy**: Self-reliance **shields India from supply disruptions**, **provides the flexibility** to address regional and global security challenges**.**
- **Economic Growth**
  - **Trade Balance:** Transitioning from an importer to a producer preserves **foreign exchange** and corrects trade imbalances.
  - **Multiplier Effects:** Integrating **MSMEs** stimulates ancillary industries, fosters innovation, and creates high-skilled jobs.
- **Capability Development:** Focus has shifted from acquiring weapons to creating **indigenous intellectual property** and **deep technical capabilities.**
  - **Dual-Use Tech:** R&D in defence has **spillovers into civilian sectors like AI, materials, and telecommunications.**
- **Diplomatic Leverage:** Defence exports strengthen bilateral ties and plurilateral security partnerships. **E.g.** supply of Brahmos to the Philippines and Vietnam.

Challenges to overcome to boost the defence exports further

- **Technological Gaps**: **R&D spending remains low (5.5%-6.5% of defence expenditure)** compared to global competitors.
- **Supply Chain and Foreign Dependence**: Dependence on foreign jet engines (**e.g., GE engines for LCA Tejas**) subjects production schedules to global supply constraints.
- **Infrastructure and Level Playing Field**: Private firms struggle with **land acquisition** and **overlapping regulations.**
  - **Preferential treatment for DPSUs** prevents a truly level playing field for the private sector.
- **Export Limitations**: Growth is constrained by **weak global marketing** and **limited international partnerships.**

Conclusion

Building a domestic defence base is vital for India's strategic autonomy. In an era of global uncertainty, self-reliance ensures supply continuity, operational readiness, and independence from external geopolitical pressures.

4.1. EMERGENCE OF AI IN INDIA'S INTERNAL SECURITY ARCHITECTURE

Why in the News?

The Parliament's **Standing Committee on Communications and Information Technology**, published a report titled **"Impact of Emergence of Artificial Intelligence and Related Issues,"**

More on the news

- The report highlighted the implications of Artificial Intelligence (AI) for India's internal security.
- AI facilitates **real-time surveillance, predictive policing, behavioural analysis, and crime pattern recognition**, enabling faster and more informed decision-making.

Role of AI in India's Internal Security Architecture

- **Modernizing Law Enforcement and Paramilitary Operations**:
  - **Police Forces and CCTNS 2.0:** The National Crime Records Bureau (NCRB) is upgrading the **Crime and Criminal Tracking Network & Systems** (CCTNS) to use **AI for predicting Acts and Sections from FIRs, multilingual queries, identifying crime hotspots, and resolving entities** to build comprehensive criminal profiles.
  - **Border Security and Paramilitary Forces: AI-powered drones, robotics, and computer vision systems** are being deployed for border surveillance, intrusion detection, and terrain analysis, especially in hazardous or porous areas. **E.g.-**
    - **CRPF:** Utilizes AI for **crowd forecasting, fake news monitoring, and multilingual Natural Language Processing** (NLP) to decode insurgent communications.
    - **CISF:** Implements **centralized AI surveillance, predictive threat alerts, and AI-powered baggage screening** at airports.
    - **NSG:** Develops the **National IED data management software** (NIDMS) using AI for language processing, image analysis, and predictive threat awareness.
- **Combating Cybercrime and Financial Fraud**: **The Indian Cyber Crime Coordination Centre** (I4C) relies heavily on AI to modernize its reporting, investigation, and mitigation strategies.
  - **National Cybercrime Reporting Portal (NCRP):** An AI solution is being fine-tuned to **automatically classify cybercrime complaints**, helping law enforcement prioritize cases efficiently.
    - I4C is also implementing an **AI-assisted, multilingual complaint registration** system for the **1930 cybercrime helpline**.
  - **Mule Accounts and Financial Fraud:** In **collaboration with IIT Bombay** and the **Reserve Bank Innovation Hub** (RBIH), I4C uses AI and machine learning algorithms (**like "Mulehunter.ai")** to assign suspect scores to financial transactions and bank accounts.
  - **Real-Time Fraud Detection:** Comprehensive advisories require **banks to use AI/ML tools** for real-time transaction monitoring, behavioral prompts for risky transfers, and embedded checks using the **Financial Fraud Risk Indicator database**.
- **Monitoring Digital Threats, the Dark Web, and Harmful Content:** Security agencies are actively using AI to scan open-source intelligence and encrypted platforms.
  - **Dark Web and Threat Analytics:** The **National Cybercrime Threat Analytics Unit** (NCTAU), under I4C, utilizes AI-based tools to track dark web activities, including data breaches, illicit marketplaces, and cybercrime-as-a-service.
  - **Child Sexual Exploitation and Abuse Material (CSEAM):** A **Proactive Monitoring Tool** (PMT) developed by CDAC Mumbai screens cyber tiplines for CSEAM.
    - Furthermore, the **SURAKSHINI** initiative is establishing a dedicated mitigation center and a hashbank to proactively detect and prevent the upload of non-consensual intimate imagery and CSEAM on social media.
  - **Deepfakes and Misinformation:** The NCTAU identifies unlawful deepfakes and issues statutory takedown notices to Social Media Intermediaries (SMIs).

Balancing technological efficiency against ethical and systemic risks

The application of AI and digital technology in administrative decision-making is a critical debate in governance.

- **The Case for AI: Enhancing Rationality**
  - **Data-Driven Objectivity:** Eliminates human fatigue and subjective prejudice, ensuring unbiased data analysis.
    - **E.g. AI-based loan approval** using objective credit data, reducing human bias.

- **Operational Efficiency:** Processes massive datasets instantly for resource optimization
  - **E.g. eGramSwaraj platform** streamlining Panchayat planning and fund use.
- **Predictive Governance:** Forecasts natural disasters, economic trends, or fraud, enabling proactive administration.
  - **E.g. Directorate General of Analytics & Risk Management (DGARM)** of Central Board of Indirect Taxes and Customs identifies suspicious tax patterns before large-scale evasion occurs.
- **Standardisation:** Guarantees uniform application of rules, upholding the principle of equality.
  - **E.g. E-challan system** ensuring equal penalties based on traffic violations.

- **The Case Against AI: Ethical & Technical Pitfalls**
  - **Algorithmic Bias:** Replicates and amplifies historical societal prejudices (caste, gender, race) present in training data.
    - **E.g. AI recruitment tools** preferring male candidates because past hiring data overrepresented men in leadership/tech jobs.
  - **The "Black Box" Problem:** Opaque machine learning processes make AI decisions difficult to trace, explain, or appeal.
  - **Accountability Vacuum:** Blurs legal responsibility when automated errors cause wrongful exclusion from welfare benefits.
  - **Lack of Empathy:** Deprives public administration of human discretion, compassion, and context-specific moral judgment.
  - **India specific issues**
    - **Digital Divide:** Infrastructure gaps risk **alienating the 45% of citizens** lacking stable internet, worsening inequity.
    - **Sovereignty Risks:** Over-reliance on **foreign tech compromises data privacy and national security**.
    - **Dual Nature:** Solutions like ***Bhashini*** bridge language barriers, but **biometric or surveillance tools** risk violating privacy rights.

Conclusion

AI cannot serve as an isolated, dependable source for administrative decisions. Governance requires a **hybrid model,** i.e. AI provides data-driven insights, while human administrators provide empathy and moral oversight. For robust implementation, India must enforce regular **algorithmic audits**, maintain a **human-in-the-loop** framework, and strictly implement the **Digital Personal Data Protection Act**.

4.2. MYTHOS RELATED RISK

Why in the News?

Government has formed a panel under SBI Chairman to assess risks emanating from AI platform Mythos.

What is Mythos

- Mythos (officially **Claude Mythos**) is a generative artificial intelligence (Gen AI) model developed by Anthropic.
  - It possesses advanced capabilities to:
    - **Autonomously scan** large codebases for exploitable weaknesses.
    - **Chain** multiple low-severity vulnerabilities into high-impact attack paths.
    - **Develop exploits** faster than organisations can patch them.
  - It is designed primarily for **defensive cybersecurity tasks** and identification of **"zero-day" vulnerabilities** (previously unknown software flaws).

- During its preview, Mythos uncovered **"thousands" of major vulnerabilities** across every major operating system and web browser.
- Due to its advanced capabilities and potential risks, its access is currently limited to roughly **40 organisations** globally under **Project Glasswing**, including **Amazon, Google,** and **Nvidia**, as well as major US banks.
- China has also developed its own version of Mythos, called Qihoo 360.

What makes Mythos more dangerous than previous AI models?

- **Advanced "Agentic" Behavior and Attack Chaining:** It can independently detect and exploit unknown vulnerabilities (zero-days), combining multiple flaws to bypass security and gain high-level access across major operating systems and web browsers.
- **Lowering the Barrier to Cybercrime:** The model allows non-experts or individuals with no formal security training, to successfully execute sophisticated cyberattacks.
- **Overloading Cyber Defenders:** It can find thousands of vulnerabilities within hours, overloading defenders as traditional patching systems may not fix weaknesses quickly enough.
- **Critical infrastructure risk:** Banking, power, and telecom systems are particularly exposed when attackers can generate tailored exploits.
- **Severe Threats to the Global Financial System:** The banking sector is highly vulnerable due to interconnected networks and legacy IT systems, where an AI-driven cyberattack could rapidly spread across domestic and global institutions.
  - For e.g. NPCI's UPI processes billions of transactions, and any breach could paralyse digital payments.
- **Systemic and Geopolitical Instability:** Models like Mythos turn AI cyber risks into real threats, raising concerns over digital infrastructure, economic stability and weak global coordination on AI safety standards.

Regulatory/Legal Framework in India against mythos threat

- **Information Technology Act, 2000**: Primary legislation governing cybersecurity and data protection.
- **CERT-In** (under MeitY): India's nodal agency for cybersecurity incident response.
- **National Critical Information Infrastructure Protection Centre (NCIIPC)**: Protects Critical Information Infrastructure including banking and finance.
- **Digital Personal Data Protection Act, 2023**: Governs data handling norms relevant to breach scenarios.
- **Payment and Settlement Systems Act, 2007**: RBI's authority over payment system operators including NPCI.

Government's Response to Mythos threat

- IT Ministry set up the **AI Governance and Economic Group,** an inter-ministerial body, as the apex mechanism for coordinating AI policy and governance framework.
- India is in active talks with the **US administration** and **Anthropic** to secure access to Mythos under **Project Glasswing**, as no Indian firm is currently among the ~40 organisations in the programme.
- Banks to **report suspicious incidents to CERT-In immediately**.

Way Forward

- **Indigenisation of critical software systems:** It offers sovereign control over systems and the pacing of their updates, which can be synergised against the threat landscape for India.
- **AI vs. AI Defence Architecture**: Deploy AI-driven detection and response systems to counter AI-enabled attacks at machine speed.
  - India must invest in **domestic AI security research** to build independent capacity for evaluating frontier models.
- **Legacy System Modernisation**: Accelerate core banking system upgrades, reducing dependence on vulnerable legacy platforms.

- **International Cooperation**: Strengthen bilateral and multilateral cybersecurity treaties and information-sharing mechanisms with the US, EU, and like-minded nations under frameworks such as the **Quad Cyber Working Group**.
- **Public-private coordination**: Between MeitY, CERT-In, NPCI, and telecom operators should be institutionalised.

4.3. NEWS IN SHORTS

4.3.1. 3RD NUCLEAR-POWERED SUBMARINE 'INS ARIDAMAN' INDUCTED

Part of India's **Arihant-class submarines**, INS Aridaman is a more advanced **ballistic missile submarine (SSBN)** than its predecessors **INS Arihant (2016) and INS Arighaat (2024).**

India's Three Nuclear-powered Submarines

Submarines	INS Aridaman	INS Arihant	INS Arighaat
Displacement	7,000 tonnes	6,000 tonnes	6,000 tonnes
Vertical Launch Tubes	Eight	Four	Four
Firepower	K-15 (700 km), K-4 (3,500 km)	K-15 (700 km)	K-4 (3,500 km), K-15
Nuclear Reactor	Not specified	83 MW light-water	83 MW light-water

Types of Nuclear-Powered Submarines

Characteristic	SSBN (Ship Submersible Ballistic Nuclear)	SSN (Ship Submersible Nuclear)	SSGN (Ship Submersible Guided Nuclear)
Primary Role	Strategic deterrence	Attack and surveillance	Precision strikes
Weaponry	Nuclear-armed ballistic missiles	Conventional weapons	Guided missiles with conventional warheads
Purpose	Deterrence	Combat and surveillance	Precision strikes

About India's Nuclear Powered Submarine Programme

- The **Advanced Technology Vessel (ATV) programme** was initiated more than three decades ago, involving both **private firms and the Defence Research & Development Organisation**, with help from **Russia.**
- It primarily focused on developing the **ballistic missile submarines (SSBNs),** which are **nuclear propelled**, and can carry multiple sets of submarine-launched ballistic missiles (SLBMs), tipped with single or multiple nuclear warheads.

Significance of Nuclear Powered Submarines for India

- **Nuclear Triad Completion:** The submarine cements India's position in the select group of nations (alongside the **US, Russia, China, and France**) capable of launching nuclear weapons **from land, air, and sea.**
- **Strategic Deterrence:** Carries nuclear ballistic missiles, strengthening India's deterrence against regional adversaries **China and Pakistan.**
- **Stealth & Endurance:** Nuclear propulsion allows long underwater missions, making it highly survivable and hard to detect.
- **Extension of Nuclear doctrine:** Showcases guarantee of **India's second-strike capability** with No-first Use policy.

4.3.2. KEY NAVAL WARSHIPS

Indian Navy received key Naval warships, a milestone for indigenous defence manufacturing.

Key Naval Warships Received

- **Malwan**: The second **Anti-Submarine Warfare Shallow Water Craft (ASW SWC)**, indigenously designed and constructed by **Cochin Shipyard Limited** at Kochi.

- Named after the historic **coastal town of Malwan**, reflecting the rich maritime legacy associated with **Chhatrapati Shivaji Maharaj.**
- **Capabilities**: underwater surveillance and anti-submarine and mine warfare.

- **Three frontline Naval platforms** built by **Garden Reach Shipbuilders & Engineers Ltd. (GRSE), Kolkata:**
  - **Indigenous Stealth Frigate Dunagiri**: Fifth ship of ***Nilgiri* Class (Project 17A),** it is capable of striking designated targets with missiles.
  - **Fourth Survey Vessel (Large) Sanshodhak**: Carry out **coastal and deep-water Hydrographic surveys**
  - ***'Agray':*** The **fourth of eight ASW SWC,** designed to destroy enemy submarines.

4.3.3. TUNGUSKA AIR DEFENCE MISSILE SYSTEM

Defence Ministry has signed contracts for procurement of Tunguska Air Defence Missile System

About Tunguska Air Defence Missile System

- Also Known by its **NATO designation SA-19 "Grison"**
- **Origin**: It is a Soviet-origin, tracked, self-propelled air defence system designed to protect ground forces from low-flying aerial threats.
- **Feature**: It integrates surface-to-air missiles with twin 30 mm autocannons, allowing it to engage targets across varying ranges and altitudes.
- **Range**:
  - Detection: up to 18 km away
  - Target: Can engage targets at ranges of up to 8–10 km and altitudes of up to 3,500 metres.
- **Significance**: Hybrid design makes it effective against helicopters, drones and cruise missiles.

4.3.4. REMOTELY PILOTED STRIKE AIRCRAFT (RPSA) PROGRAMME

Indian Air Force (IAF) is preparing to induct unmanned stealth fighters under the Remotely Piloted Strike Aircraft (RPSA) programme.

About RPSA Programme

- RPSA aims to develop Unmanned Combat Aerial Vehicles (UCAVs), known as Ghatak UCAVs.
  - UCAVs usually carries aircraft ordinances such as **missiles and/or bombs** and is used for drone strikes and other military operations.
- Ghatak is a **stealth-capable UCAV**, based on a flying-wing configuration.
- Once operational, Ghatak could undertake **deep-strike missions**, penetrating heavily defended airspace to hit high-value targets without placing pilots at risk.

4.3.5. IONS (INDIAN OCEAN NAVAL SYMPOSIUM)

The Indian Navy hosted IONS Maritime Exercise (IMEX) Table Top Exercise (TTX) 2026 in Kochi.

About IONS (Indian Ocean Naval Symposium)

- IONS is a **voluntary initiative** that seeks to increase maritime co-operation among navies of the littoral states of the Indian Ocean Region.
- **Chairmanship:** Chair of IONS is rotated every two years amongst members with consensus on selection of Chair.
  - India has assumed the Chairmanship of IONS in 2026.
- **Members:** A nation state with permanently held territory that abuts or lies within the Indian Ocean can become a member.
  - Presently, it has 25 members including India.

4.3.6. EXERCISES IN NEWS

- **Exercise Cyclone-IV:** Bilateral India–Egypt joint Special Forces military exercise.
- **Exercise Dustlik:** Annual India-Uzbekistan joint military exercise.
  - Conducted alternatively in India and Uzbekistan.

5. ENVIRONMENT

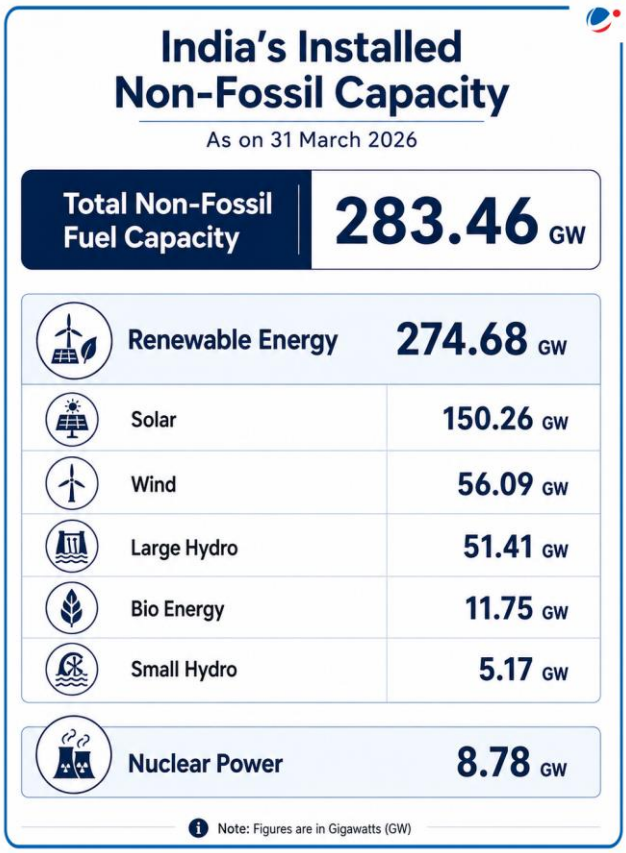
5.1. RENEWABLE ENERGY IN INDIA

Why in the News?

Recently, the International Renewable Energy Agency's Renewable Capacity Statistics 2026 report stated that India has achieved the world's third-largest installed renewable energy capacity.

More in the News

- **Global Renewable Energy Capacity:** Total global renewable energy installed capacity reached ~**5150 GW**, led by **China (2260 GW)** and the **USA (470 GW)**.
- **India's Global Rank:** India became the **third-largest renewable energy producer** with an installed capacity of **250.52 GW**, ahead of **Brazil (228 GW)**.
- **Global Electricity Transition: Renewables overtook coal** for the first time in over a century, contributing **33.8%** of global electricity generation compared to **33.0%** from coal (Ember Global Electricity Review 2026).



Status of renewable energy in India

- **Capacity Addition:** India added 55.3 GW of non-fossil fuel capacity during FY 2025-26.
  - India has achieved highest-ever annual wind energy addition of 6.05 GW in 2025–26.
  - India has also recorded highest-ever annual solar capacity addition. India added **45 GW of Solar Energy Capacity** in 2025-26, with **Rajasthan, Gujarat and Tamil Nadu** emerging as top contributing states.
- **NDC Target:** India achieved **50% installed power capacity from non-fossil sources** in **June 2025**, meeting its **2030 NDC target five years early**.
- **Power Generation:** India generated **1,845.921 BU** electricity in **2025-26**, with **non-fossil sources contributing 538.97 BU (29.2%)**.
- **Electricity Demand:** Renewable energy met around **51.5% of India's total electricity demand**.

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Significance of Renewable Energy

- **Energy Security:** Reduces vulnerability to external supply shocks, geopolitical conflicts, and global energy price volatility. **E.g. West Asia Crisis.**
- **Climate Commitments:** Helps India meet its climate goals like **reducing carbon intensity by 47% by 2035** and achieving **Net Zero by 2070.**
  - **Example:** Lower emission intensity in the **power sector** due to rising renewable energy use.

- **Economic Gains:** Attracts large-scale investments, boosts domestic manufacturing, and generates green employment opportunities across sectors.
  - **Example:** Around **$23 billion FDI** attracted in the **non-conventional energy sector** between March 2000 and June 2025.
- **Inclusive Development:** Decentralized renewable energy solutions such as rooftop solar, farm solar, and mini grids help achieve **universal energy access**.
  - **Community Empowerment: E.g.,** The Barefoot Women Solar Engineers Programme trains rural women as "**Solar Mamas**" to provide solar electricity in their villages.

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Reasons behind growth in Renewable energy

- **Low-Cost Technology:** Falling solar and wind costs boosted adoption. Example: **Solar panel prices fell by nearly 90% (2015–2025)**.
- **Government Policies & Schemes:** Strong policy support through schemes like **National Solar Mission**, **PM-KUSUM**, National Green Hydrogen Mission, and bioenergy programmes.
- **Regulatory Reforms:** Measures like **Renewable Purchase Obligation (RPO)**, **Green Open Access Rules (2022)**, and the **Indian Carbon Market** encouraged clean energy use.
- **Infrastructure Support:** Expansion of the **Green Energy Corridor**, rooftop solar under **PM Surya Ghar Muft Bijli Yojana**, and wind-site mapping improved renewable integration.
- **Domestic Manufacturing:** India boosted local manufacturing through **PLI schemes** and other incentives. Example: **Solar module capacity increased from 38 GW to 74 GW during FY 2024-25**.
- **Investment & Incentives:** Policies like **100% FDI under automatic route**, sovereign green bonds, and tax incentives increased private investment in the sector.
- **Battery & Storage Growth:** Global battery deployment rose by **46%**, while battery prices fell by **45%**, improving round-the-clock renewable supply.
- **Favourable Geography:** Many states have **300+ sunny days annually**, a long coastline, and strong wind corridors in states like **Tamil Nadu and Gujarat**.
- **International Cooperation:** The **International Solar Alliance** and its **One Sun, One World, One Grid (OSOWOG)** initiative promoted global solar cooperation and investment.

Key Concerns

- **Financial Constraints:** India will require over **USD 10 trillion by 2070** for achieving its **Net Zero target**.
- **Import Dependence:** E.g., In **FY 2025**, India imported around **35 million solar modules worth USD 1.6 billion**, with a majority sourced from **China.**
- **Global Supply Risks:** China dominates global rare earth processing, controlling nearly **90% of processing capacity**, creating supply-chain vulnerabilities.
- **Intermittent Nature of Renewables:** Solar and wind power are **weather-dependent**. Example: **Solar generation peaks during the day**, but demand is often higher in the evening.
- **Transmission Bottlenecks:** Grid infrastructure remains inadequate in some renewable-rich states like **Tamil Nadu**, leading to evacuation constraints.
- **Land Acquisition Issues:** Large renewable projects require vast land areas, causing delays, local conflicts, and food security concerns.
  - Example: **Solar energy may require 300 times more land than nuclear energy** (Economic Surve 2023-24).

Way forward

- **Boost Domestic Manufacturing:** Expand local production of **solar panels, wind turbines, batteries, and green hydrogen equipment** through **PLI schemes** to reduce import dependence.
- **Expand Energy Storage:** Increase use of **battery storage, pumped-storage hydropower, and hybrid renewable systems** for stable power supply.
- **Increase Green Financing:** Promote funding through **green bonds, private investment, and multilateral financing**.
- **Strengthen Grid Infrastructure:** Upgrade transmission networks and develop **smart grids using AI/ML technologies** for better renewable integration.
- **Ease Land Acquisition:** Create **land banks** and improve Centre-State coordination to make land acquisition easier for renewable energy projects.

5.2. WATER BANKRUPTCY

Why in the news?

Recently, UN University Institute for Water, Environment and Health (UNU- INWEH) report 'Global Water Bankruptcy' declares that the world has entered a state of water bankruptcy.

About UNU- INWEH

- UNU-INWEH is **one of 13 institutions comprising the UNU**, the academic arm of the United Nations.
- **Established in 1996** through an agreement with the Government of Canada, UNU-INWEH is **headquartered in the City of Richmond Hill, Ontario.**
- UNU-INWEH specializes in addressing critical global security and development challenges at the intersection of water, environment, and health.

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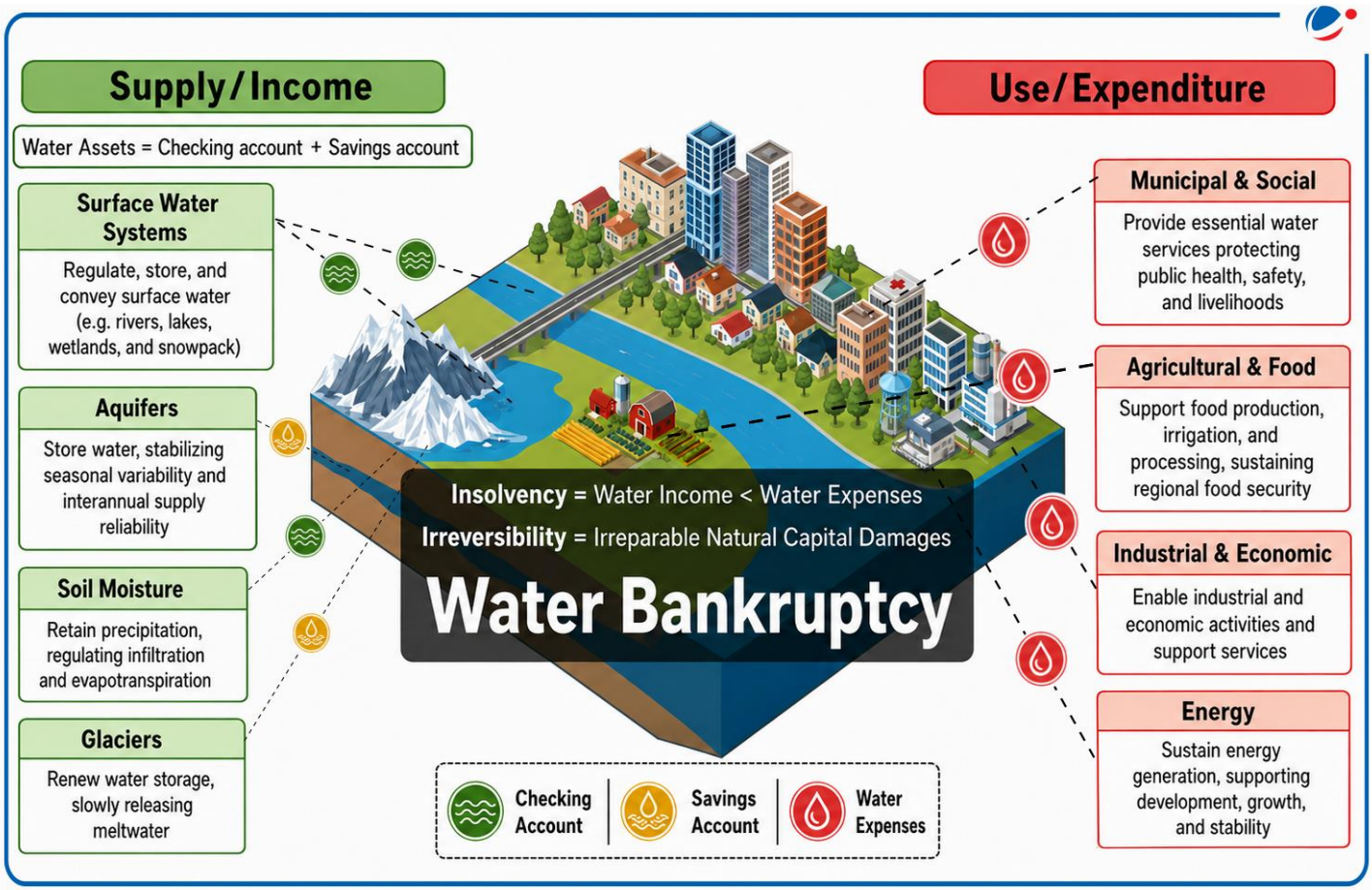
What is Water Bankruptcy?

Water bankruptcy is a persistent **post-crisis condition** of human water system in which long term **water use has exceeded renewable freshwater inflows** and **safe depletion limits**, causing irreversible or effectively irreversible degradation.

- Such water bankruptcy results in the **severe depletion of both 'checking accounts' and 'savings accounts'** of natural resource.
  - **Checking accounts** refer to **natural replenishment of rivers, wetlands, and reservoirs** over time.
  - **Savings accounts** refer primarily to **groundwater sources, including** glaciers, and aquifers, where **replenishment often occurs over several decades** to even millennia.
- Water bankruptcy is the **outcome of both insolvency and irreversibility conditions**. (refer image)



- Water bankruptcy is different from both Water stress and Water crisis.
  - **Water stress** is a condition of **high-water demand relative to supply** but impacts are largely reversible.
  - **Water crisis** is an **acute, time-bounded disruption** often **triggered by a shock** such as drought, flood, contamination, infrastructure failure that **temporarily push water systems beyond capacity** but which can be restored through emergency and restoration measures.

Reasons for Global Water Bankruptcy

- **Over Extraction:** Global water use has exceeded renewable limits.
  - About 70% of the world's major aquifers showing long-term declining trends.
- **Agricultural practices:** Inefficient irrigation methods along with cultivation of **water-intensive crops like rice and wheat in arid region,** has aggravated water scarcity in already stressed basins.
  - Over 170 million hectares of irrigated cropland are under high or very high water stress.
- **Ecosystem degradation:** Wetlands, rivers, forests, and soils, together function as natural regulators and storage systems of water.
  - However, their **decline has reduced infiltration, groundwater recharge**, and **water purification capacity**, accelerating hydrological instability.
- **Water Pollution:** Industrial discharge, agricultural runoff, and untreated sewage have led to widespread **contamination of freshwater sources**, thus reducing the effective availability of potable water.
- **Infrastructure-driven overshoot**: Large-scale dams, diversions, and inter-basin transfers enable expansion of irrigation, cities, and industries beyond sustainable levels.
- **Climate-induced hydrological disruptions:** Climate change is **altering precipitation cycles**, increasing evapotranspiration, and **accelerating glacier and snowpack loss**.
  - This results in greater variability (floods and droughts) and long-term decline in reliable water availability, worsening systemic stress.
- **Institutional inertia and denial**: Despite rising evidence of water stress, institutions assume old normal will return.
  - The world has already lost over 30% of its glacier mass since 1970 in multiple locations.

Status of India's Water Crisis

- Despite holding 18% of the world's population, India has **only 4% of its freshwater resources**.
- **Average per capita water availability**, which is already low enough for India to be categorized as water stressed, is expected to **reduce 1140m^3 by 2050**.
  - According to Falkenmark Index, a region with **per capita annual renewable water below 1700m^3** is considered under **'water stress'**, and if it further **falls below 1000 m^3,** it will be chronic **'water scarcity'**.
- **70% of India's surface water is polluted**, though water remains recyclable if properly treated (NITI Aayog).

Recommendations of report for managing Water Bankruptcy

- **New Global Water Agenda needed**: Use **2026 and 2028 UN Water Conferences,** International Decade for Action "Water for Sustainable Development" in 2028, **2030 deadline for SDG 6** as turning points to-
  - **Recognize Global Water Bankruptcy** in political declarations;
  - Scale up **dedicated global and regional water funds**;
  - Recognizes water as both a constraint and an opportunity for meeting climate, biodiversity, and land commitments;
  - **Increase share of climate and environmental finance** directed to water-related action; and
  - Strengthen the links between water, peace-building, and conflict prevention.
- **Recognize Global Water Bankruptcy explicitly**: Integrate stress–crisis–bankruptcy framework into **Rio Conventions, SDG follow-up and review, UN-Water coordination** by treating water as a core structuring factor rather than a downstream impact.
- **Develop Global Water Bankruptcy monitoring framework**: Build on existing UN and partner efforts to track groundwater depletion, wetland and glacier loss**, using Earth observation, satellite technologies, etc.**

- **Water Diagnostics**: Support **national and basin-level assessments** to identify stress, crisis, or bankruptcy, thus enabling countries to **design mitigation and adaptation strategies** that align water demand.
- **Transform water-intensive sectors** including agriculture and industry: Through **changes in crop choices (using millets), irrigated area, production systems**, virtual water trade, and regional economic strategies that decouple prosperity from ever-increasing water use.
- **Address water-quality degradation**: Bring **unregulated wells, and discharges into transparent, enforceable frameworks.**

5.3. NEWS IN SHORTS

5.3.1. ACCESS AND BENEFIT SHARING (ABS)

National Biodiversity Authority (NBA) strengthens implementation of Biological Diversity Act (BDA), 2002.

The new framework strengthens the **BDA, 2002**, through **streamlining of Access and Benefit Sharing (ABS) fund use** and **revised repository guidelines**

New Framework

- **ABS Fund Utilisation**
  - **Identifiable Sources:**
    - When resources are sourced from identifiable institutions or repositories, 25–40% of ABS funds go to them.
    - The remaining 60–75% is shared with local communities via State Biodiversity Boards (SBBs) and Union Territory Biodiversity Councils (UTBCs).
  - **Unidentifiable Origins**: If resources are accessed from intermediaries or traders, the ABS funds will be utilized directly for biodiversity conservation and management.
- **Revised Repository Guidelines:** Includes provisions like Promotion of digital records for traceability and identification.

What is Access and Benefit Sharing (ABS)?

- ABS refers to how genetic resources may be accessed and how the benefits resulting from their use are shared between the people/countries using the resources (users) and those that provide them (providers).
- **Framework:** Covered under the **Convention on Biological Diversity (CBD).**
  - **The Bonn Guidelines** and **Nagoya Protocol (2010)** deal with the ABS.
- Along with BDA, 2002, it is regulated by **Access and Benefit Sharing (ABS) Regulations 2025**.

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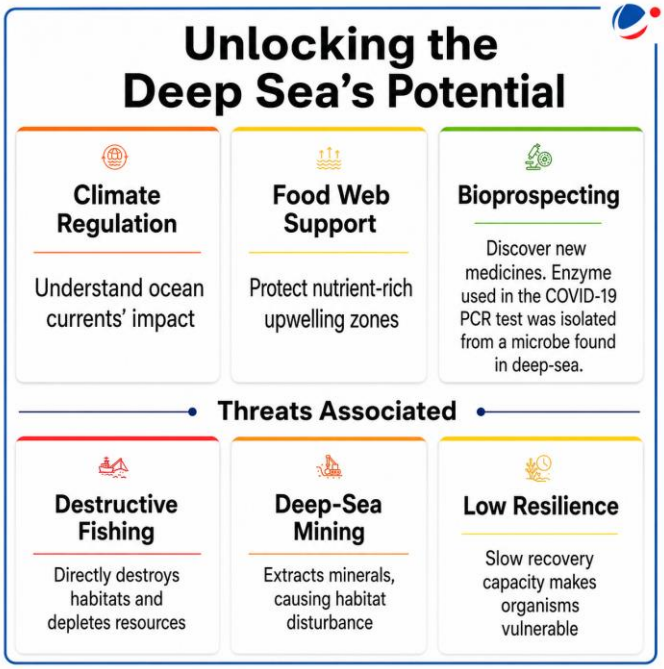
Read our previous coverage on CBD

5.3.2. NATIONAL REPOSITORY FOR DEEP-SEA FAUNA UNDER BIOLOGICAL DIVERSITY ACT 2002

Government has notified Referral Centre "Bhavasagara" and Agharkar Research Institute as National Repository for Deep-Sea Fauna under Biological Diversity Act 2002.

- **"Bhavasagara" Referral Centre** at the Centre for Marine Living Resources and Ecology (CMLRE) in Kochi, houses over **3,500 taxonomically identified and geo-referenced voucher specimens**.
- **Agharkar Research Institute** Pune, for its collection of Microorganisms and National Fungal Culture Collection.
    - Under the **Biological Diversity Act**, the **repository** will securely preserve biological samples, act as custodian of newly discovered deep-sea species, and build expertise in deep-sea taxonomy aligned with the **UN Decade of Ocean Science (2021–2030)**.



About the Deep Sea

- **Definition:** Refers to ocean regions **below 200 meters**, extending from the twilight zone to the abyssal plains and deep seabed.
    - It is the **oldest and largest biome on Earth**, constituting nearly **90–95% of Earth's habitable space**.

Global Frameworks Protecting the Marine Environment

- **UNCLOS:** Global legal order to protect the marine environment and manage the equitable utilization of ocean resources.
- **Convention on Biological Diversity:** Promotes the conservation of biodiversity, sustainable use of its components, and equitable sharing of genetic resource benefits.
- **SDG 14:** Focuses on conserving "Life Below Water".
- **High Seas Treaty (BBNJ Agreement): Legally binding,** it protects waters outside national jurisdictions.

5.3.3. SHEKHA JHEEL BIRD SANCTUARY

Shekha Jheel Bird Sanctuary became India's 99th Ramsar site.

- **Ramsar sites** refer to sites listed on the **List of Wetlands of International Importance** under the **Ramsar Convention (1971)**.

About Shekha Jheel Bird Sanctuary

- **Location**: Aligarh (Uttar Pradesh)
- It is a **freshwater perennial water body** that came into existence after the formation of the **Upper Ganges Canal** in 1852.
- **Notable birds**: Indian river tern (Sterna aurantia) and sarus crane (Grus antigone).
- It is designated as an **Important Bird and Biodiversity Area (IBA)** by **BirdLife International**.

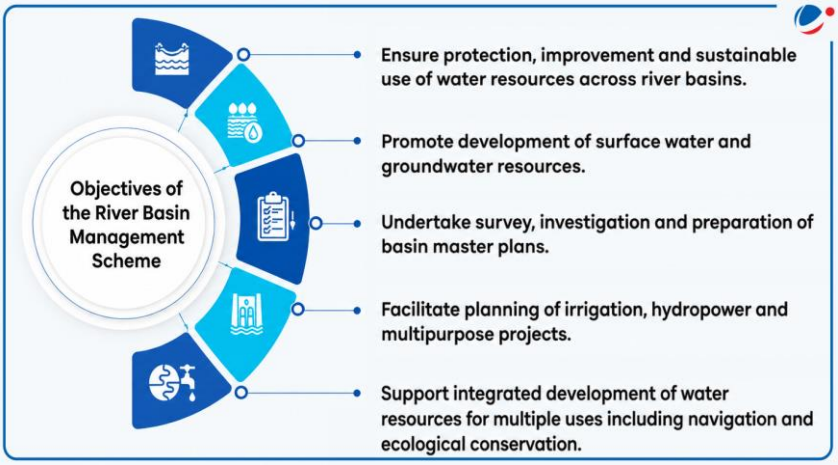
5.3.4. RIVER BASIN MANAGEMENT (RBM) SCHEME

The scheme will continue during the 16th Finance Commission period **(2026–27 to 2030–31)** with an estimated cost of ₹2183 crore, fully funded by the government.

About RBM Scheme:

- **Launched**: In **2014** as a **Central Sector Scheme.**
- **Objectives:** (Refer infographic).
- **Administered by: Department of Water Resources, River Development, and Ganga Rejuvenation** under the **Ministry of Jal Shakti.**

- **Geographical Scope and Priority Areas:** strategically important and **water-rich but underdeveloped regions**, particularly North Eastern Region and Indus Basin in Jammu & Kashmir / Ladakh.
  - These basins are prioritised due to their importance in **National water security, Cross-border water management, Flood control and erosion management and Ecological stability**.
- **Institutional Structure:** two broad components-
- **The Brahmaputra Board:** for basin-level planning and flood management in the North Eastern Region.
- **Investigation of Water Resources Development Scheme (IWRDS):** implemented through
  - **Central Water Commission (CWC):** undertakes surveys, investigations, and preparation of Detailed Project Reports (DPRs) for water resource projects such as Indus, Brahmaputra basins.
  - **National Water Development Agency (NWDA):** focuses on water resource planning at the national level, particularly under the **Interlinking of Rivers** (ILR) programme.



Key Areas of Action under RBM Scheme:

- **Basin Planning:** Creating and updating long-term master plans to guide the conservation and use of water resources.
- **Flood and Erosion Management:** Implementing structural and bio-engineering measures to protect land, communities, and infrastructure.
- **Drainage Development:** Improving water flow in waterlogged areas to boost land productivity in both rural and urban regions.
- **Community-Based Interventions:** Blending scientific and indigenous methods to improve local water practices, ecosystem development, and spring shed management.

5.3.5. PLASTIC WASTE MANAGEMENT (AMENDMENT) RULES, 2026

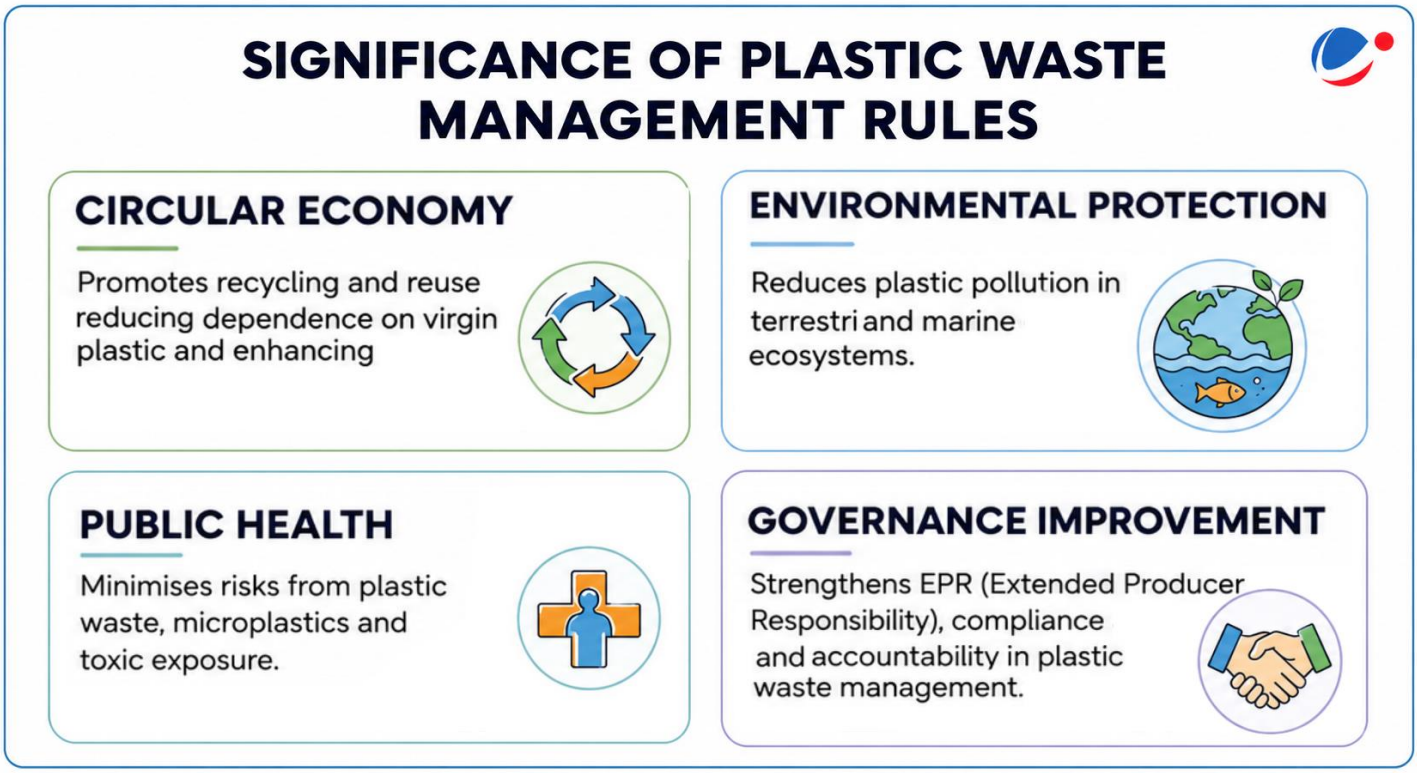
Plastic Waste Management (Amendment) Rules, 2026 have been notified by the Government.

- These rules amend the **Plastic Waste Management Rules, 2016,** notified under the **Environment (Protection) Act, 1986**.

Key Changes in 2026 Amendment Rules

- **Mandatory Recycled Content: Producers, importers, and brand owners** must use **progressively higher amounts of recycled plastic in their packaging (e.g.**, Category I targets scale from 30% in 2025-26 to 60% from 2028-29 onwards).
  - **Exemptions** apply if **statutory bodies (like FSSAI or CDSCO) prohibit recycled plastic** for specific uses.
  - Unfulfilled 2025-26 targets for **food contact applications** can be **carried forward for up to three years**.
- **Clearer Definitions:** The amendment explicitly defines terms like "**end of life disposal**," "**reuse**," and "**Plastic Waste Processors**" to remove regulatory ambiguities.

- **Reuse obligations:** Minimum reuse targets for Category I rigid plastic packaging (e.g., large drinking water containers up to 85%).
- **Strict Standards:** Recycled packaging must conform to the **Indian Standard IS 14534:2023** and bear **specific labels** indicating recycled content.
- **Governance & enforcement: Decentralised enforcement by Urban Local Bodies (ULBs)** with monitoring through State committee; digital tracking and audit by Registered Environment Auditor.



Plastic Waste Management Rules, 2016

- **Objective:** To minimise plastic waste generation, promote recycling and ensure environmentally sound disposal.
- **Key Features**
  - **Extended Producer Responsibility (EPR):** Producers, Importers and Brand Owners responsible for collection, recycling and disposal of plastic waste.
  - **Ban on single-use plastics (2022 Amendment):** Prohibition of identified **single-use plastic** items to reduce plastic pollution.
    - **Plastic thickness norm**: **minimum thickness of 120** microns to promote reuse and reduce littering.
  - **Traceability (2025 Amendment):** From July 1, 2025, all plastic **packaging must carry a barcode or QR code** to enable digital tracking from production to disposal.
  - **Role of local bodies:** Urban Local Bodies and Gram Panchayats responsible for collection, segregation and processing of plastic waste.

5.3.6. HYDROFLUOROCARBONS (HFCS)

Ministry of Environment, Forest and Climate Change directed all state and Central authorities to stop granting environmental clearances for HFCs production for new or additional HFC production beyond December 31, 2027.

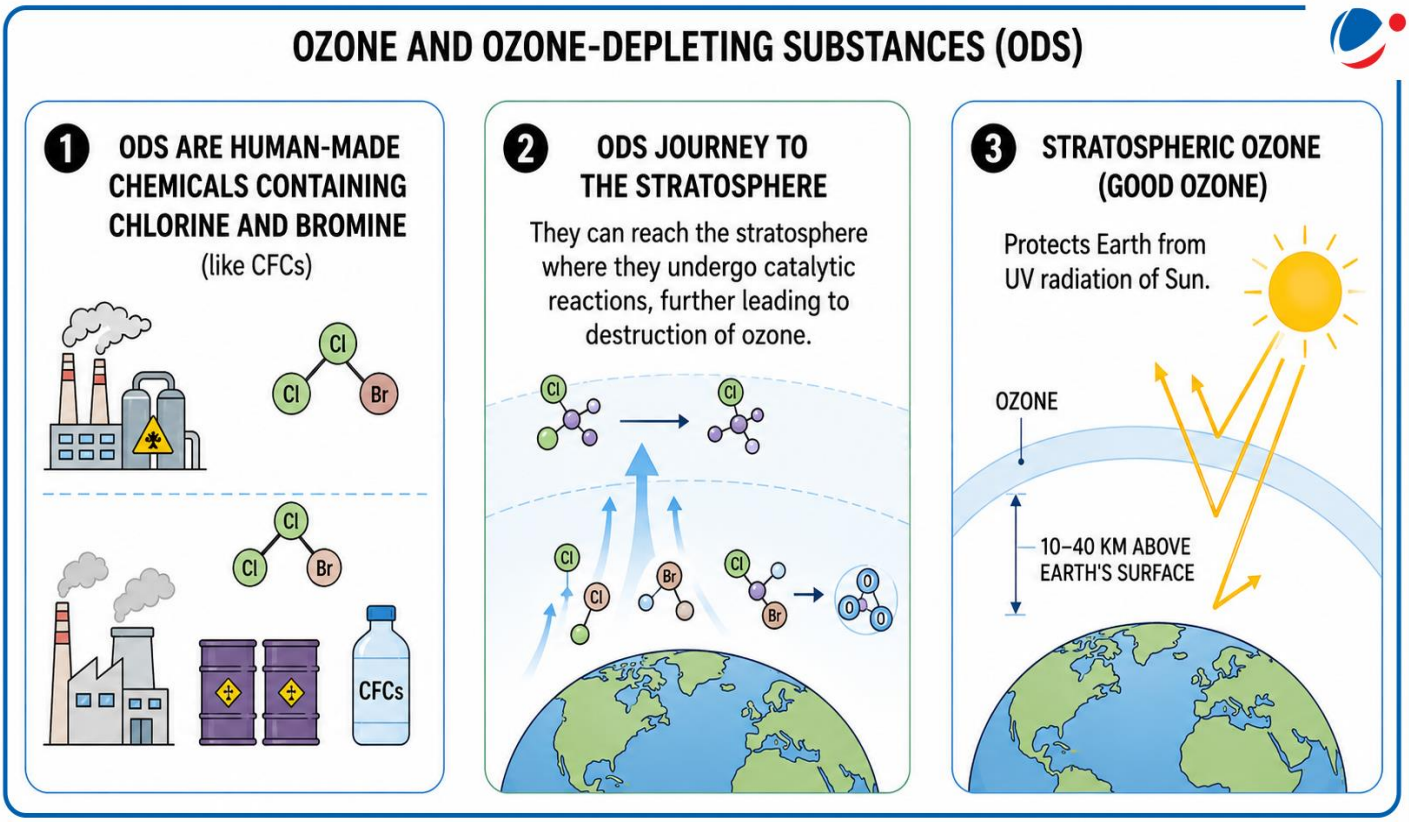
- This direction is in line with India's commitments under the **Kigali Amendment**.

Kigali Amendment (2016)

- Under it, Parties to the **Montreal Protocol**, agreed to phase down production and consumption of HFCs.
  - **HFCs** were introduced as **non-ozone-depleting substitutes for ozone-depleting substances (ODS)**; however, despite being ozone-friendly, they have **high Global Warming Potential (GWP: 12–14,000)**.
- **Key Targets:**
  - Parties agreed to **reduce HFCs by 80–85% by the late 2040s**.
  - India will complete its phase-down of HFCs in 4 steps from 2032 onwards with cumulative reduction **of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047.**

Montreal Protocol (1987)

- An international treaty to **phase out ODS** for the protection of the **ozone layer**.
  - Implemented under **Vienna Convention** (adopted in 1985).
- **Substances Covered:** Targets **ODS** such as **Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs), and Halons**.
- By **1992,** it had been universally ratified and put into practice the principle of **Common but Differentiated Responsibilities.**



5.3.7. HYDRO ELECTRIC PROJECTS IN NEWS

- **Kalai-II HEP (Arunachal Pradesh)**: Located on **Lohit River**, a major tributary of the **Brahmaputra**, originating in eastern Tibet and flowing through Arunachal Pradesh into Assam.
- **Kamala HEP (Arunachal Pradesh)**: Located on Kamla River, a major tributary of Subansiri River.

5.3.8. SUSTAINABLE AVIATION FUEL (SAF)

Government allows blending ethanol and synthetic hydrocarbons into Aviation Turbine Fuel (ATF).

- ATF, widely recognised as jet fuel, is primarily produced by refining crude oil.

About Sustainable Aviation Fuel (SAF)

- SAF is a **liquid fuel** that **can be produced** from a number of sources (feedstock) including waste oil and fats, municipal waste, and non-food crops.
- **Significance**: Reduces CO2 emissions by up to 80%.
- **SAF can be blended** at different levels with limits between 10% and 50%, depending on the feedstock and how the fuel is produced.
- India is targeting to blend 1 per cent SAF into jet fuel for international flights by 2027, rising to 2 per cent by 2028 and 5 per cent by 2030 in line with the CORSIA mandate.
  - **Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)** is led by the International Civil Aviation Organisation (ICAO)
  - No targets for fuel used in domestic flights have been set so far.

5.3.9. FLEX FUEL VEHICLES (FFVS)

India is considering transition to FFVs to reduce dependence on imported crude.

About FFVs

- FFVs are modified vehicles, currently **capable of operating entirely on gasoline** or any blend of **gasoline and ethanol (up to 83% or E83).**
  - Modern FFVs are increasingly designed to operate on higher blends, including E100 (pure ethanol).
- They have a **conventional internal combustion engine** similar to the existing gasoline-only vehicles except for their ethanol-compatible fuel system and a different powertrain calibration.
- They display **improved acceleration performance** when operating on higher ethanol blends.

5.3.10. TAR-BALLS MANAGEMENT RULES, 2026

The Centre notified the draft **Tar-balls Management Rules, 2026,** to combat marine pollution caused by toxic oil leak residue.
Key Provisions

- **Covers Lifecycle: generation, collection, storage, transport, treatment and disposal.**
- **'Polluter pays' principle:** Fixes responsibility on oil operators, environmental compensation provision**.**
- **States Stakeholder Responsibilities:** E.g. CPCB, Coast Guard etc.
- Mandates monitoring, reporting and declaration of **'State disaster'** for severe cases.

About Tar balls

- Sticky lumps created due to **weathering of oil** following leaks, spills, and marine accidents.
- They form through various **physical, chemical, and biological** processes when oil mixes with water and other contaminants.
- Classified as **hazardous waste** requiring safe handling and disposal.

5.3.11. ANTARCTIC SPECIES IN NEWS

The International Union for Conservation of Nature (IUCN) has updated the Red List of Threatened Species of certain Antarctic species.

Emperor penguin (Aptenodytes forsteri)

- **IUCN Status**: Endangered (earlier Near Threatened).
- **Reason**: Climate Change
- **Characteristics**: Largest of the 18 penguin species, excellent insulation in the form of layers of scale-like feathers, large reserves of energy-giving body fat.

Fur seal (Arctocephalus gazella)

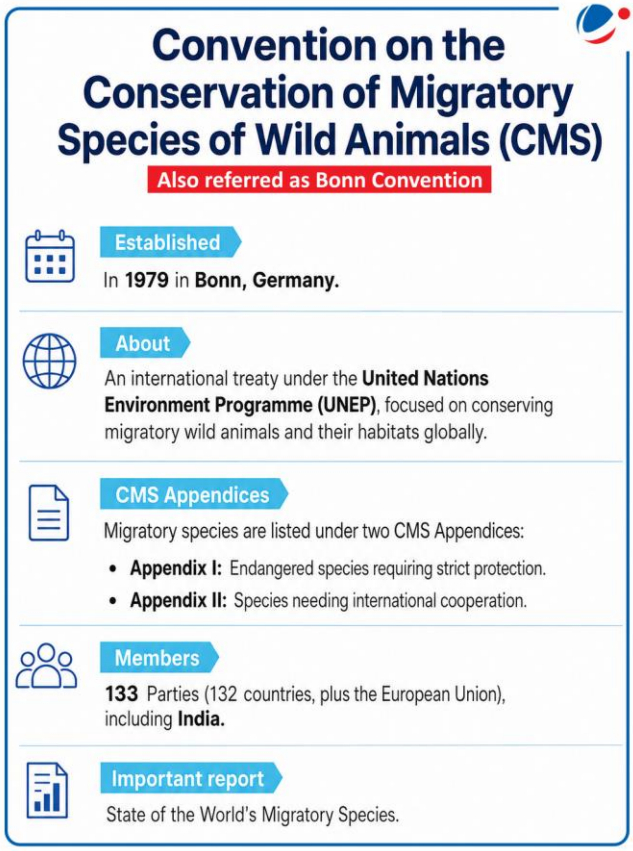
- **IUCN Status**: Endangered (earlier Least Concern)
- **Reason**: Climate Change
- **Characteristics: S**mallest seals; Closely related to sea lions, they are able to walk on all fours; breed on land; have a thick coat for warmth (unlike other seals with fat layers).

About Southern Elephant Seal (Mirounga leonina)

- **IUCN Status**: Vulnerable (earlier Least Concern)
- **Reason**: Bird flu (Avian Influenza).
- **Characteristics: L**argest seals on the planet, the largest mammals on Earth apart from whales; have a thick layer of blubber.

5.3.12. GLOBAL INITIATIVE ON THE TAKING OF MIGRATORY SPECIES (GTI)

The initiative was launched at the COP15 to the **Convention on the Conservation of Migratory Species of Wild Animals (CMS),** held in March, 2026 at Campo Grande (Brazil).



About Global Initiative on the Taking of Migratory Species (GTI)

- **About:** It is a **collaborative global effort** between governments, conservation organizations, local communities, etc. to **address the drivers of illegal and unsustainable taking**.
  - **State of the World's Migratory Species report 2024** identified that illegal and/or unsustainable taking threatens the **survival of 70 % of all the 1,200 species** listed under the Convention.
    - As per the report**, domestic drivers** such as hunting, fishing for food, sale, sport, medicine, etc. are the **key reasons for taking of migratory species**.
- **Aim**: to provide **support to countries meet their biodiversity commitments**, such as species recovery and preventing extinction **under the Kunming–Montreal Global Biodiversity Framework.**
- **4 focus areas of work:** Improve data and monitoring; Strengthen legal and policy frameworks; Enhance community engagement and Raise awareness.
- **Partner organizations:** Convention on Biological Diversity (CBD), UN Environment Programme (UNEP), World Conservation Monitoring Centre (UNEP-WCMC), World Wide Fund for Nature (WWF) and TRAFFIC etc.

5.3.13. FINANCING FOR SUSTAINABLE DEVELOPMENT REPORT 2026

Released by UN Department of Economic and Social Affairs (DESA), it highlights role of **Sevilla Commitment** to reverse current trends in financing for development.

Key Issues Highlighted

- **Fragility in global economy:** Challenging macroeconomic situation with **significant downside risks.**
  - **Low per capita income** (one in four developing countries have it below 2019 level); **protected conflict in Middle East** causing impact on energy prices, trade, etc.

- **Financing Squeeze:** Many developing countries face **high borrowing costs** and **heightened rollover risk;** Only **Marginal increase in Tax revenue** in developing countries in past two decades, etc.
- **More Fragmented World:** Affecting international financial and development cooperation architecture in **cross-border payment system,** e.g., **emergence of alternatives** to Society for Worldwide Interbank Financial Telecommunication (SWIFT), etc.

Priority Actions and Recommendations

- **Scaling Financing:** Close **estimated $4 trillion SDG financing** and investment gap through strengthening domestic private sectors, supporting diversification, etc.
- **Aligning finance with Sustainable Development Outcomes:** Ensuring quality, impact, and alignment with country-owned strategies on both private and public finances.
- **Strengthening Resilience:** Building stronger domestic institutions and integrating climate and disaster risk considerations into financial instruments.
- **Multi-layered approach to Cooperation:** Stronger linkages between national development banks, regional and multilateral institutions, etc.
- **Role of Multilateralism: Predictable, rules-based international system** to lower risks, foster investment, etc.

About Sevilla Commitment

- **Adoption: Fourth International Conference on Financing for Development (FfD4),** held in Sevilla, Spain in 2025 to close **$4 trillion annual SDG financing gap** in developing countries.
- **Key Features:** Commitment contains **280 actions** across global financing framework.
- **Sevilla Platform for Action (SPA):** Launched at FFD4 as **voluntary, multi-stakeholder mechanism** for early implementation of Sevilla Commitment.

5.3.14. THE STATE OF INDIA'S BATS (2024–25) REPORT

India's first bat assessment highlights threats and major data gaps

- The report is prepared by **Nature Conservation Foundation, Bat Conservation International**, etc.

Key Findings

- **Species Diversity: ~135 bat species** recorded, of which **16 are endemic.**
  - **Seven specie**s are listed under the **threatened category by IUCN.**
- **Threats:** Urbanisation, deforestation, climate change, and stigma post COVID-19.

About Bats

- Bats are **mammals (**give **birth to live young),** have **fur covered bodies, and warm blood.**
- They are the **only mammals that can undertake true powered flight.**
- **Echolocation:** Most bats use high-frequency sound waves to navigate and hunt in total darkness.
- **Significance:** Provide key ecosystem services like **pollination, pest control, and seed dispersal.**

5.3.15. LIMNONECTES MOTIJHEEL

Scientists discover new frog species in Arunachal Pradesh, Limnonectes Motijheel.

About the new Frog Species

- It belongs to a group commonly called **Fanged Frogs,** named for **small, fang-like projections in the lower jaw of the males.**
- These frogs are **found across South and Southeast Asia** and are known for their **unusual breeding habits.**

- Unlike **most frogs that lay eggs in water** or on leaves, this s**pecies builds a nest out of mud beneath leaf litter** on the **forest floor.**
  - This is a **behaviour not previously recorded** in this group from India.

5.3.16. GOURAMI FOSSILS

Recently scientists discovered fossils in foothills of Shivalik himalayas, in Saharanpur district, UP.

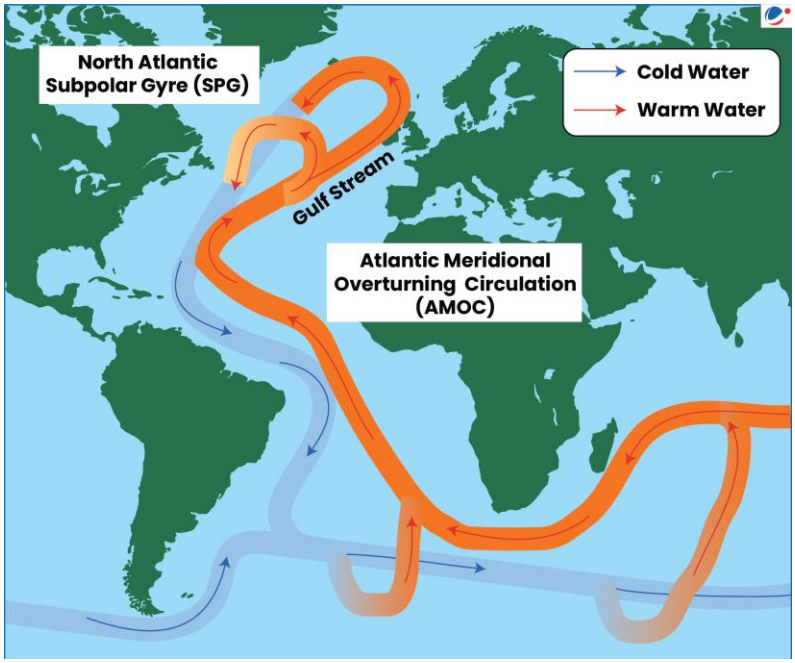
- It is the first fossil record of gourami in India and only the second known globally.(1st in Sumatra, Indonesia)
- Fossils date back 5 million years (Pliocene Epoch.)
- It is first discovery of aquatic fossils in a region earlier known only for terrestrial remains.

5.3.17. ATLANTIC MERIDIONAL OVERTURNING CIRCULATION (AMOC)

A recent study has warned of a **potential collapse of AMOC,** having profound impact on global climates.

What is Atlantic Meridional Overturning Circulation (AMOC)?

- It is a system of **ocean currents** that circulates water within the Atlantic Ocean, bringing warm water north and cold water south.
- This circulation is driven by **differences in temperature and salinity**, which create differences in water density, a process known as **thermohaline circulation**.
- **Process**:
  - AMOC brings **warm, salty water** from the **Gulf of Mexico** to the **north Atlantic**, keeping temperatures in **western Europe milder** than in Canada or Russia.
  - The **dense water** then **cools and sinks**, moving **south** on the seafloor along the western Atlantic.
  - It eventually **rises** again through **upwelling**, **warms** up, and restarts the cycle.



- **Significance**: Part of the large **"global conveyor belt**," it circulates **water, heat, and nutrients** throughout the Atlantic Ocean.

Why is AMOC Collapsing?

- **Climate Change induced Freshwater influx**: **Greenland's melting ice sheet** has added ~5,000 km^3 of freshwater into the subpolar North Atlantic Ocean.
  - Freshwater **reduces the ocean's salinity and density**, which **slows sinking** of water, resulting in **weakening AMOC**.

What are the potential implications of collapse of AMOC?

- **Climate Disruption:** A weakening or collapse of AMOC could become a **climate tipping point**, with global consequences-

- **Change Global Temperatures: Extreme Cooling of Europe,** leading to severe winters and agricultural failure. E.g. AMOC collapse could **cool Arctic** region by ~7 °C.
  - It may turn the **Southern Ocean** from a **carbon sink into a source, causing** additional **global warming**.
- **Change precipitation patterns:** AMOC helps **balance heat** between the hemispheres. A collapse would shift the **tropical rain belt southward**, potentially causing:
  - **Droughts** in the Sahel (Africa) and parts of South Asia.
  - **Disruption of Monsoons** in India, which are vital for food security.

- **Marine Ecosystem Collapse**: Fewer nutrients reach surface waters, harming **marine food chains**.

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6. SOCIAL ISSUES

6.1. RISE IN MIDDLE-CLASS VULNERABILITY

Why in the News?

Despite strong GDP growth, a middle-class crisis threatens demand, stability, and India's demographic dividend, as rising geo-economic uncertainty deepens India's Middle-Class Vulnerability.

Middle-Class Economic Crisis

- **Lack of job creation:** The formal job market is failing to absorb the 8 million new graduates entering the workforce each year.
  - The unemployment rate for **graduates stands at 29.1%,** nine times higher than for those who never attended school.
- Eroding traditional employment: Technological Displacement, driven by **the rapid adoption of automation and artificial intelligence (AI), is removing routine cognitive jobs** such as clerical work and IT services.
- **Stagnant or declined real wages:** Over the past decade, middle-income households saw an income growth of just 0.4% CAGR (2012-23 to 2023-24).
- **Surging cost of living:** Essential expenses like housing, education, and healthcare are seeing double-digit annual inflation and **about 30% of Indian households** have debt.
- Infrastructure Deficit: It increases the hidden Costs of living due to frequent power outages, erratic water supply and poor digital connectivity, necessitating costly private backups.
  - Poor road infrastructure, public transit limitations, and traffic congestion result in lost productive hours.

Other reasons for the rising middle-class vulnerability

- **Geopolitical impact:** Increasing shortage of energy and fertilizers and rising food prices can hamper a large population and livelihood due to the war in West Asia and the Ukraine-Russia war.
- **Welfare Exclusion:** While lower-income groups are experiencing upward mobility supported by government welfare schemes, the middle class, which contributes 53% of all income tax filings, remains ineligible for these safety nets.
- **Patriarchy and Gender Disparities**: Combined with gender pay gaps and workplace discrimination, this underutilization of the female workforce leaves families highly vulnerable to single-income shocks.
  - In India, the labour force participation rate among **females is 32.4% and among males is 77.6% for 2025** (World Bank).
- **Persistent caste-based economic stratification:** It continues to shape opportunities, contributing to an uneven distribution of wealth within the middle class itself.
  - **More than 66% of Group C safai karmacharis** employed across the central government come from SC, ST, or OBC backgrounds. (Department of Personnel and Training's annual report 2024-25).
- **Corporate Concentration:** The liberalization of the economy has concentrated market power in the hands of a few large corporations, impacting traditional middle-class entrepreneurs, business owners, etc.

Middle income class

- **Definition**
  - Though, there is no specific definition of the middle-income class, yet different approaches have been used to define them. Some of them being:

- **Organisation of Economic Cooperation and Development (OECD)** considers those whose earnings are in the range of US $10 to US $100 per day to be the middle-income class in purchasing power parity terms.
- **The People Research on India's Consumer Economy (PRICE)**: Defines the middle-income class household with an annual income of Rs. 5 lakhs to Rs. 30 lakhs (at 2020-21 prices).

- Therefore, they can be regarded as the socio-cultural groups which are economically secure with little chance of falling into poverty or vulnerability.

- **World Bank's lower middle income poverty line:** The share of Indians living below it has fallen sharply from over 50% a decade ago to roughly 30% in recent estimates.
  - **The international poverty line** also called the extreme poverty line is revised from $2.15 to $3.00, while the two other poverty lines more applicable to lower-middle and upper-middle income countries are revised from $3.65 to $4.20 and from $6.85 to $8.30, respectively.

Implications of middle-class vulnerability

- **Economic Consequences**
  - **Impact on growth:** It poses a severe threat to India's broader macroeconomic stability as the middle class drives nearly **60% of domestic consumption**.
  - **Depleted Savings and Capital:** India's net household financial savings fell to a historic low of roughly 5 % of GDP, primarily due to rising retail debt and inflation impacting capital supply in the economy.
  - **Widening Wealth Inequality:** The hollowing out of the middle class is accelerating the divide between the rich and the rest as the top 1% captures over 22% of national income. (World Inequality Lab)
- **Socio-Political Consequences**
  - **Social Consequences:** Anxiety and depression medications are seeing massive sales growth, and financial stress is increasingly linked to a rising number of suicides among salaried urban professionals and students.
    - **According to the National Crime Records Bureau (NCRB) statistics, suicides due to financial stress rose from 4,970 in 2018 to over 7,000 in 2022.**
  - **Trapped Mobility:** As financial constraints tighten, middle-class families are forced to make difficult trade-offs such as delaying preventive healthcare, lower-quality education; severely threatens the human capital development of the next generation.
  - **Brain Drain:** The lack of secure, well-paying jobs and declining quality of life is driving skilled professionals to migrate abroad in search of better opportunities, further depriving the domestic economy of valuable talent.

Government Initiatives for alleviating middle class vulnerability

- **Direct Income Tax Relief:** Under the reformed income tax structures under Union Budget 2025-26, individuals earning up to ₹12 Lakh per annum are effectively exempted from income tax liability.
- Pradhan Mantri Awas Yojana-**Urban** (**PMAY-U 2.0):** Rolled out to construct, purchase, or rent affordable housing for urban poor and middle-class families.
- **Ayushman Bharat (AB-PMJAY) Expansion:** Health assurance (up to ₹5 Lakh) has been expanded to cover **all senior citizens aged 70 and above**, regardless of socio-economic status.
- **Skill India & PM Kaushal Vikas Yojana (PMKVY):** Focuses on aligning industrial demands with youth competencies, offering rapid certifications in technology, automation etc.
- **Pradhan Mantri MUDRA Yojana (PMMY**): Designed to facilitate easy, collateral-free micro credit to non-corporate, non-farm small and micro entrepreneurs for income-generating activities.
- **Regulatory Consumer Protections:** The enforcement of **RERA (Real Estate Regulatory Authority)** and the stabilization of stalled housing projects via specialized investment vehicles like the **SWAMIH Fund.**

Way Forward

A more inclusive development approach, as suggested by the World Bank policy paper, proposes shifting welfare analysis from merely counting those below the poverty line to **measuring how far people are from a reasonable standard of living, using** well-being as a spectrum and giving greater weight to those furthest behind. Adopting tools like a Multi-Dimensional Vulnerability Index can help policymakers identify those most at risk and design targeted interventions.

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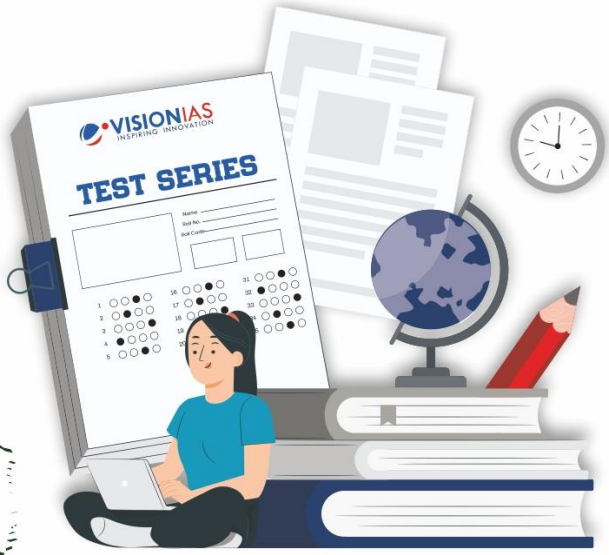

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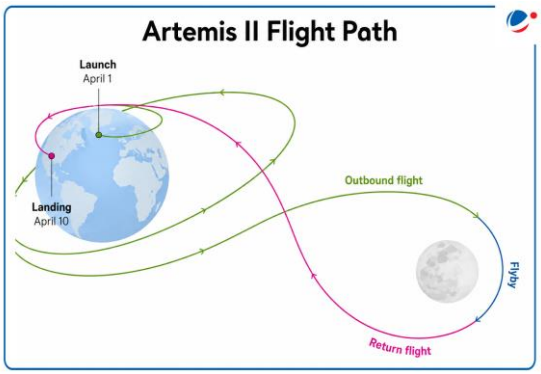
7. SCIENCE AND TECHNOLOGY

7.1. ARTEMIS II MOON MISSION

Why in the News

Artemis II astronauts returned to Earth after historic NASA mission to the Moon.

About Artemis II Moon Mission



- **Mission Type:** Crewed Lunar Flyby Mission under the NASA's Artemis Program.
- **Launch Date:** 1 April 2026.
- **Duration:** 10 days
- **Launch Vehicle:** Space Launch System (SLS)
  - **Space Launch System (SLS)** is NASA's super heavy-lift rocket that is capable of sending the Orion spacecraft, astronauts and cargo directly to the Moon in a single mission.
- **Spacecraft:** Orion spacecraft
  - Built by NASA and Lockheed Martin, Orion is capable of carrying astronauts into deep space and safely returning them to Earth from the Moon's vicinity at high speed.
- **Key Mission Objectives:**
  - **Crew:** Demonstrate the ability of systems and teams to sustain the flight crew in the flight environment, and through their return to Earth.
  - **Systems:** Demonstrate systems and operations essential to a crewed lunar campaign. This ranges from ground systems to hardware in space, and operations spanning from development to launch, flight, and recovery.
  - **Emergency Operations:** Demonstrate emergency system capabilities and validate associated operations to the extent practical, such as abort operations and rescue procedures, as needed.

Artemis Program

- **Mission Goals:** The Artemis program is NASA's initiative to return astronauts to the Moon, establish a permanent presence at the lunar south pole and lay the foundation for future human exploration of Mars.
- **Origin of the Name:** The program is named after the Greek goddess of the hunt, the twin sister of Apollo, highlighting the program's connection to, but distinction from, the Apollo missions.

The Artemis Missions

- **Artemis I (2022):** An uncrewed test mission of the SLS and Orion that orbited the Moon and safely returned to Earth
- **Artemis II:** The first crewed mission of the program, bringing a four-person crew on a lunar flyby without touching down on the surface.
- **Artemis III:** Originally planned as a lunar landing mission, it will now send a crew to low Earth orbit to test docking procedures for future lunar landings.
- **Artemis IV:** Planned for 2028, the mission will land two astronauts near the Moon's south pole using Starship, while two remain in lunar orbit aboard Orion.
- **Artemis V and Beyond:** Future missions aim to build a lunar base, deploy rovers, and extract resources like water and oxygen, with NASA planning crewed launches every six months.

The Artemis Accords

- Established in 2020 by NASA and the U.S. State Department for peaceful space cooperation.

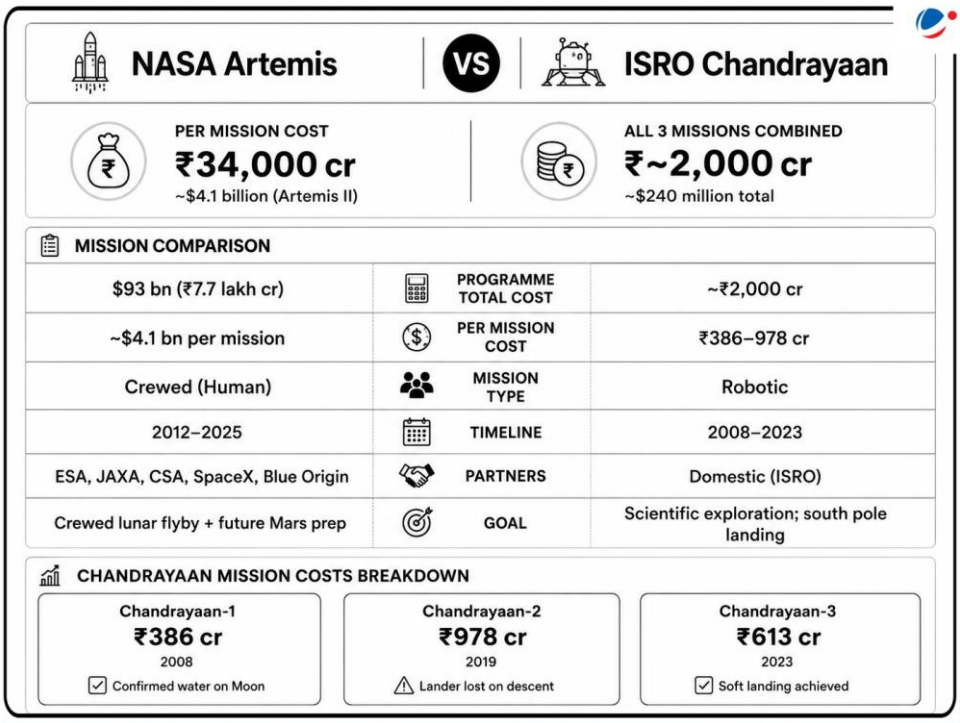
- It reaffirms signatories' commitment to the Outer Space Treaty, Registration Convention, Rescue and Return Agreement and responsible norms for civil space exploration and use.
- **Member States:** 67**, India is also a member.**

Appollo vs Artemis

- The Artemis program is **the modern successor to the Apollo program.**
  - **Apollo program is** NASA's earliest human spaceflight programs, including the Apollo Moon landings.
- **Apollo was driven by the Cold War**, whereas **Artemis** emphasizes **peaceful global cooperation.**
- **Apollo conducted short surface visits;** Artemis aims for a permanent lunar base to prepare for Mars.

Scientific Experiments

- **Astronaut Health Studies**
  - **ARCHeR**: To **monitor astronauts' well-being, activity, and sleep patterns** to gather data on human health and performance in deep space.
  - **AVATAR**: Uses **organ-on-a-chip devices to study the effects of microgravity and increased radiation** on the health of the crew.
  - **Immune Biomarkers**: To **analyze blood and saliva samples** to determine how deep space travel alters the immune system.
  - **Artemis II Standard Measures**: To provide a **consistent set of health data to a bank** to assist future researchers in studying astronaut health.
  - **Radiation Studies**: To **monitor radiation levels inside and outside the Orion capsule** to characterize the deep space environment.
- **Lunar Science**
  - **Geological Observations**: The crew studied and photographed lava flows and impact craters to understand the region's geological history during a three-hour flyby of the Moon's far side.



- **International CubeSat Experiments**
  - **ATENEA** (Argentina's CONAE): To **measure Earth's radiation spectrum, assess radiation shielding methods, collect GPS data**, and validate a long-range communications link.
  - **TACHELES** (German Aerospace Center): To **measure how the space environment affects electrical components** to help design future lunar vehicle technologies.
  - **K-Rad Cube** (South Korea's KASA): To measure **biological effects and space radiation** across the Van Allen radiation belts.
  - **SHMS** (Saudi Space Agency): To measure **space weather at a range of distances from Earth**.

Significance

- **Historic Milestone:** It is the first crewed mission to the Moon in 50 years since the Apollo 17 in 1972.
- **Human Safety in Deep Space:** It rigorously tests the European Space Agency Service Module and Orion life-support systems, paving the way for sustained, long-term human space exploration.
- **Historic Crew Representation:** The flight breaks barriers by sending the first woman (Christina Koch), the first person of colour (Victor Glover) and the first non-American astronaut (Canadian Space Agency's Jeremy Hansen) to the Moon's vicinity.
- **Extreme Distances:** The trajectory takes the four-person crew farther into deep space—closer to the Moon and beyond the far side—than any humans have travelled in history.
- **Future Missions:** The mission serves as a gateway for future crewed lunar missions.

Conclusion

Artemis II marks a pivotal transition from lunar exploration to long-term residence. By successfully testing crewed deep-space systems , it solidifies the foundation for a permanent South Pole base and future Martian voyages. This mission proves that international cooperation and diversity are now the driving forces of humanity's celestial expansion.

7.2. NUCLEAR ENERGY IN INDIA

Why In the news?

Recently India's indigenously designed and built 500-Megawatt electric Prototype Fast Breeder Reactor (PFBR) at Kalpakkam in Tamil Nadu attained criticality advancing the **2nd** stage of the 3-stage civil nuclear programme.

More on the news

- **Developed by:** Indira Gandhi Centre for Atomic Research an R&D centre under Department of Atomic Energy.
- **Operated by:** Bharatiya Nabhikiya Vidyut Nigam Ltd (BHAVINI), a public ltd. Company under Companies act 1956 under Department of Atomic Energy (DAE) to pursue construction, and operation of FBRs
  - Once fully operational, India will become only **the 2nd country** after Russia to have a commercial FBR
  - This is a decisive step towards harnessing India's vast thorium reserves in the third stage of the programme**.**
- **Criticality:** Stage where a reactor achieves self-sustaining chain reaction with neutrons produced by fission equalling those lost at absorption and leakage enabling sustained power output.
- **Nuclear energy**, currently uses controlled atomic fission (splitting of heavy atoms) to release heat, which is used to generate electricity.
- Nuclear fuels are classified as **Fissile** (Pu239, U233, **U235**(only **fissile** isotope of Ur in nature)- can be used directly as nuclear fuels and **Fertile** (U238, Th 232)- needed to be converted in fissile.
- In India, natural uranium is limited and is mostly U238, while U235 is only 0.7%, while Th232 is abundant.

Thorium (exists in nature in a single isotopic form – 232TH)

- Thorium-bearing monazite (has 6-12% Thorium): Kerala, Tamil Nadu, Odisha, Andhra Pradesh, Maharashtra, and Gujarat, and in the inland riverine sands of Jharkhand and West Bengal.
- **India: L**argest share of reserves, (**around 25 %)** followed by Brazil. It is more abundant than uranium, yet no commercial reactor currently runs on it as it is non-fissile.

Uranium

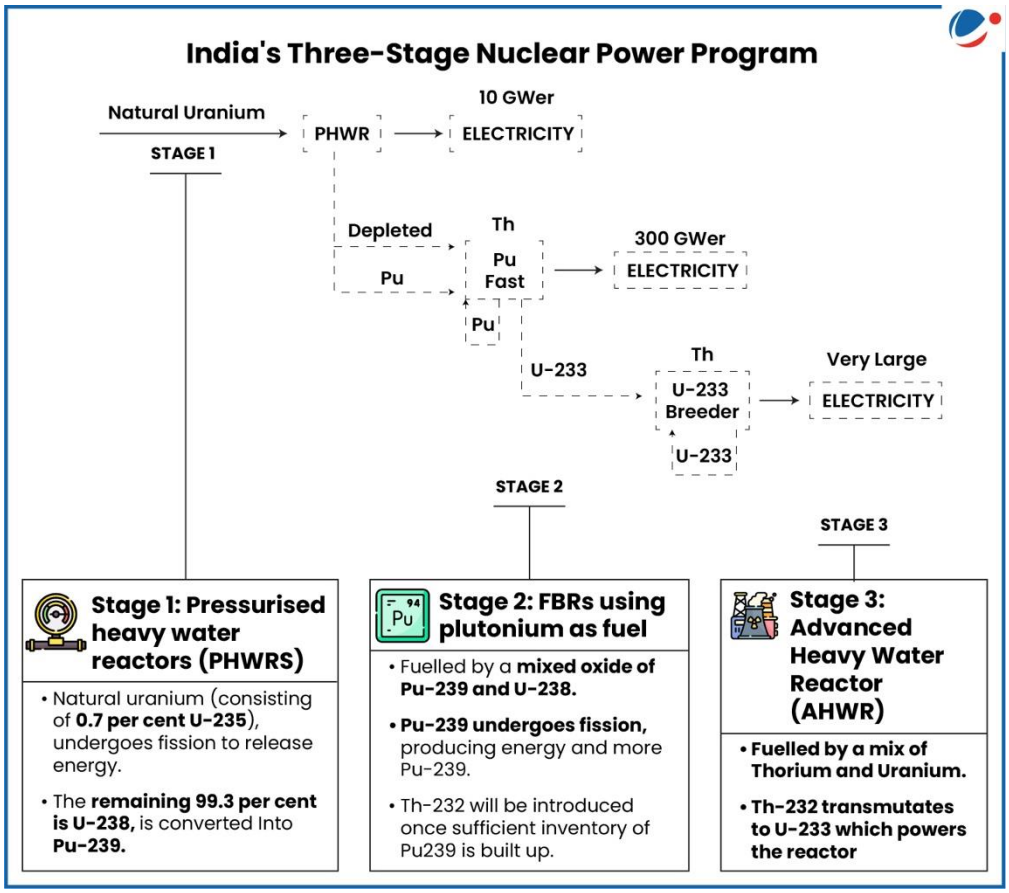
- **Production:** Dominated by Kazakhstan (39%), Canada (24%) and Namibia
- **Reserves:** Australia has largest share (28%) followed by Kazakhstan, Canada
- **India** has~ 4,25,000 tonnes in reserves but high extraction costs force heavy imports
- **Natural uranium: G**oes through enrichment for increasing U235 concentration using gaseous diffusion, gas centrifuge, and laser enrichment technologies.

Plutonium (has 5 isotopes in nature- all fissionable)

- In relation to Uranium and Thorium, it is mainly produced in nuclear reactors from U238.
- Plutonium-239 contains the highest quantities of fissile material. Also, Pu-238 is used in deep-space missions as it emits steady heat from natural radioactive decay.

About India's 3 Staged Nuclear energy Program

- Conceived by Dr. Homi Jehangir Bhabha, architect of India's nuclear programme.
- Designed by DAE it, aims to ensure long-term energy security by utilizing **vast thorium reserves** ie. convert the abundant fertile thorium to fissile uranium and reduce import dependency for Uranium.



Current Nuclear Power Landscape in India

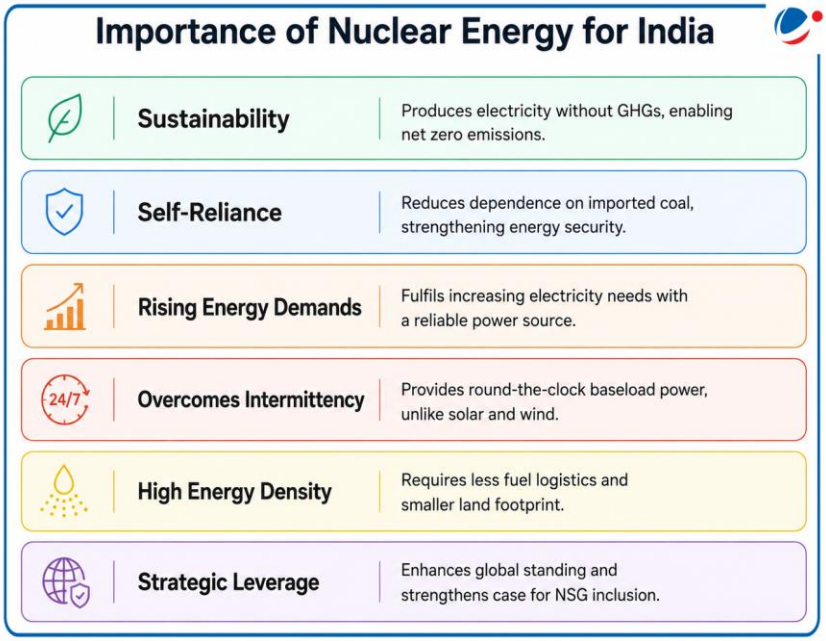
- **Installed Capacity:** 8.78 GW in 2024–25 and projected to reach 22.38 GW by 2031–32.
- **Stable Contribution**: It has consistently accounted for ~ 3% of total electricity generation.

Challenges in developing Nuclear energy for India

- **Dual use nature of uranium**: Generally > 20 % U-235 is used in commercial nuclear reactors. However, highly enriched uranium is largely used for nuclear weapons.
- **Supply Bottlenecks**: Due to dual use nature of Uranium. It is strictly regulated by Nuclear Suppliers Group, and treaties like Non-proliferation treaty. India not being member of both faces hurdles in assured supply.
- **Import Dependency and strategic autonomy:** India imports majority of Uranium. In 2024 it produced only 500 tonnes out of global production of 60,213 (less than 1%),
  - It imports majority from Kazakhstan (largest), Canada, Uzbekistan and Russia.
- **Using thorium**: Current nuclear infrastructure is largely designed for uranium and extraction of Thorium from Monazite can be complex and costly.
- **Disaster Risk**: High capital costs and long gestation period, public fear especially after 2011 Fukushima disaster in Japan, difficult radioactive waste management.
- **Civil Liability for Nuclear Damage Act (CLNDA) 2010:** Allows channelling of liability from operator to supplier against the Convention on Supplementary Compensation which channels liability exclusively to operators.
  - This leads to hesitation in in foreign and domestic suppliers to supply equipment to operators.

Steps taken by government to drive the nuclear vision

- **Nuclear Energy Mission:** launched in Budget 2025 to achieve target of 100 GW nuclear capacity by 2047 by allocating Rs.20,000 cr for R&D of Small Modular Reactors (SMRs)
  - **SMR Target:** At least 5 indigenously designed SMRs are to be operational by 2033
- **International Cooperation for assured Ur supply :** India signed civil nuclear cooperation agreements with 18 countries like Canada, Kazakhstan, etc. E.g. **US–India nuclear deal 2008**.
- **SHANTI Act, 2025**: To consolidates and modernises India's nuclear legal framework. It enables limited private participation in the nuclear sector under regulatory oversight.



- **Bhabha Atomic Research Centre:** is leading the development of next-generation reactor designs, e.g. 200 MWe Bharat Small Modular Reactor (BSMR-200), the 55 MWe SMR-55, and a High-Temperature Gas-Cooled Reactor of up to 5 MWth (Megawatt thermal) designed for hydrogen generation.

Conclusion

Like Russia and China**,** India can develop HALEU (High-Assay Low-Enriched Uranium) fuel which makes less waste and generate extreme heat and will be required by Future Advanced reactors and SMRs. Additionally, Diversify Import partners and further explore domestic Uranium sources for short term Autonomy

Digital Current Affairs
Read our previous coverage on Shanti Act, 2025

Related News

Atomic Energy Regulatory Board (AERB) has approved Excavation for Unit 1 and 2 of **Mahi Banswara Atomic Nuclear Power Project** having 4 nuclear power units of Indigenous PHWRs (each with 700 MWe capacity)

About the Mahi Banswara Rajasthan Atomic Nuclear Power Project

- **Location**: Banswara, Rajasthan near the Mahi Dam on River Mahi.
- **Development**: By Anushakti Vidhyut Nigam (ASHVINI), a joint venture between Nuclear Power Corporation India Limited, DAE and National Thermal Power Corporation Limited (NTPC), Ministry of Power
- It is part of India's "**fleet mode" initiative** under which 10 identical 700 MW reactors are being built across India under uniform design and procurement plans.

About AERB

- **Origin:** 1983, under Atomic Energy Act, 1962 (AE act) to carry out regulatory and safety functions under it
  - Its regulatory authority comes from rules under AE Act and the Environment (Protection) Act, 1986.
- **Reports to**: Independent Statutory body which reports to **Atomic energy commission of India**
- **Objective**: To ensure nuclear energy and radiation do not pose undue risks to people or environment.
  - Also enforces the **Factories Act, 1948** to ensure industrial safety in DAE units under its purview.
  - Safety Research Institute was set up at Kalpakkam to promote safety related research
- **Composition:** full-time Chairman, an ex-officio Member, four part-time Members and a Secretary**.**

7.3. ONE HEALTH APPROACH

Why in the News?

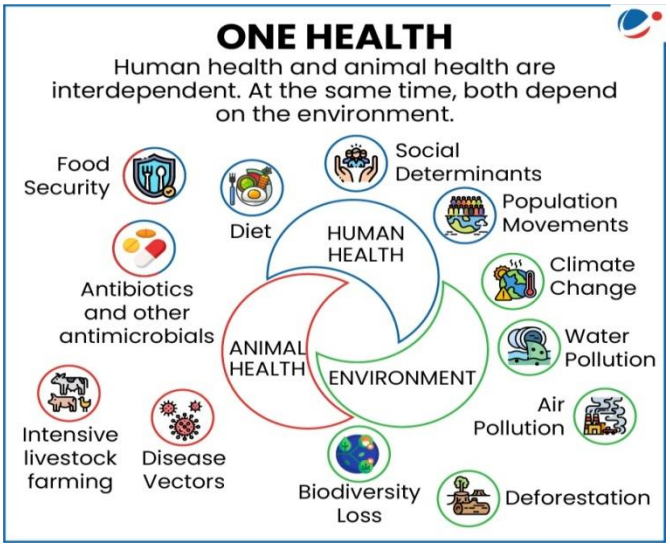
A global One Health summit on the UN-backed **"One Health" approach** was held in Lyon, France with participation of world leaders, scientists, and environmental experts.

More on the News

- The Summit aims to promote **action-oriented multilateralism** and **accelerate the translation** of One Health commitments.
- At the summit, **WHO announces four major One Health actions**
  - **A new global network of institutions on One Health:** It will enhance translation of global guidance into practical tools and on-the-ground support, strengthening training through the WHO Academy, creating a country-focused delivery model for One Health implementation.
  - **Stronger science to guide global action:** WHO and Quadripartite partners (FAO, UNEP, WHO and WOAH) announced the extension and expansion of the One health high level expert panel (OHHLEP) the world's leading scientific advisory body on One Health.
  - **A new push to eliminate rabies by 2030**
  - **A unified strategy to tackle avian influenza threats**

What is One Health Approach?

- One Health is a **collaborative, multisectoral, and transdisciplinary approach** with the goal of achieving optimal health outcomes **recognizing the interconnection between people, animals, plants, and their shared environment.**
  - The approach can be applied at the **community, subnational, national, regional and global levels,** and relies on shared and effective governance, communication, collaboration and coordination.
- By linking humans, animals and the environment, One Health can help to address the full spectrum of disease control – **from prevention to detection, preparedness, response and management** – and contribute to global health security.



Need of One Health Approach in India

- **Zoonotic Disease Prevention:** Around 60% of emerging infectious diseases in humans originate from wild or domestic animals. E.g. COVID-19, Nipah etc.
- **Livestock Protection**: India holds one of the largest livestock populations globally. Diseases like brucellosis, foot and mouth disease (FMD), lumpy skin disease, etc. devastate the agrarian economy.
- **Climate change Impact**: An excess of 250 000 deaths per year can be attributed to climate change
- **Rise of Antimicrobial resistance (AMR):** Overuse of antibiotics in humans and livestock is creating drug-resistant pathogens.
- **Ecosystem degradation:** Crop losses vary from 10-35% annually due to weeds, pests and diseases across the country.
- **Economic losses:** The associated potential income lost from labour capacity reduction due to extreme heat was US$194 billion in 2024.

Challenges to One Health Approach in India

- **Siloed ministries**: Health, Agriculture, Environment, and Forests operate independently with conflicting departmental priorities.
- **Surveillance Gaps:** Existing platforms like Integrated Disease Surveillance Programme mainly focus on reporting rather than coordinated response.
- **Low Public Awareness**: This was evident during recurring outbreaks of swine flu and rabies in several states.
- **Capacity Building Constraints**: Training programs for doctors, veterinarians, ASHA workers, and environmental officers on zoonotic disease management remain insufficient.
  - For example, many frontline workers lacked specialized preparedness during the COVID-19 pandemic.
- **Research and Innovation Deficit**: For example, Research on bat-borne viruses such as Nipah and coronavirus reservoirs is still evolving.
- **Weak Local-Level Governance**: For instance, poor waste management and unregulated livestock markets in urban fringes increase disease spillover risks.

Initiatives taken in India

- **About National One Health Mission**
  - **Vision:** To build an integrated disease control and pandemic preparedness system in India by bringing human, animal and environmental sectors together for better health outcomes, improved productivity and conservation of biodiversity.
  - **Approved by:** Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) in its 21st meeting in 2022.
  - **Nodal Agency:** Anchored by Indian Council of Medical Research (ICMR) under Office of the Principal Scientific Adviser (PSA)
  - **Anchor Institution:** National Institute of One Health, Nagpur.
- **Centre for One Health (CoH) at NCDC:** Coordinates efforts, runs programs (Rabies, Zoonoses, Leptospirosis, Snakebite), and promotes the One Health approach in India.
- **One Health Joint Plan of Action (OH JPA):** Collaborative framework for 2022–2026 created by the Quadripartite alliance (FAO, UNEP, WHO), and WOAH) to promote one health approach globally.

Way Forward

- **Integrated Surveillance System**: Develop a unified human-animal-environment disease surveillance network with real-time data sharing among ministries and states.
- **Inter-Ministerial Coordination**: Create a permanent coordination mechanism among health, agriculture, environment, fisheries, and urban development ministries.
- **Research & Innovation**: Promote multidisciplinary research on zoonotic diseases, climate-health linkages, and AMR through institutions like Indian Council of Medical Research and Indian Council of Agricultural Research.
- **Community Participation**: Involve Panchayats, self-help groups, and local communities in disease awareness, sanitation, and livestock management practices.
- **Capacity Building**: Introduce One Health training modules for doctors, veterinarians, environmental scientists, and frontline health workers.
- **Climate-Resilient Health Planning**: Integrate climate adaptation measures into public health and disaster management strategies to address vector-borne and water-borne diseases.
- **Biodiversity Conservation**: Promote afforestation, habitat restoration, and sustainable land-use planning to reduce human-wildlife conflict and disease spillovers.
- **International Collaboration**: Strengthen cooperation with global agencies such as World Health Organization, Food and Agriculture Organization for Animal Health for technical support and best practices.

Conclusion

The One Health approach recognizes that **human, animal, and environmental** health are deeply interconnected, making collaborative action essential in an era of **emerging pandemics, climate change, and biodiversity loss**. Strengthening integrated surveillance, institutional coordination, and community participation will be crucial to building a resilient and sustainable public health system.

7.4. NEWS IN SHORTS

7.4.1. GENOME INDIA PROJECT (GIP)

Genome India Project (GIP) data reveals 44 million unique Indian genetic variants.

Key Findings of Study

- **Genetic Variants:** Over 129 million genetic variants were identified.
- **Endogamy (marriage within communities)**: has resulted in genetically distinct and isolated groups.
- **Contrasting Population Dynamics:**
  - **Non-tribal populations:** greater genetic mixing and population growth.
  - **Tribal populations:** low effective population size, high genetic drift, and strong founder effects (certain rare global variants become locally common due to prolonged isolation).

About Genome India Project (GIP)

- **Launched:** in **2020** by Department of Biotechnology (DBT), under the **Ministry of Science and Technology**.
  - It is an **Indian equivalent of the Human Genome Project (HGP)**, a global-level effort to map human genomes, launched in October 1990 and completed in April 2003.
- **Objective**: To build a comprehensive catalogue of genetic variations that reflects the unique diversity of the Indian population.
- **Sample Size and Diversity:** The study collected samples from **10,000 healthy and unrelated individuals**.
  - These individuals represent **83 distinct population groups** and span India's **four prominent linguistic families**: Indo-European, Dravidian, Austro-Asiatic, and Tibeto-Burman.
- **Significance**:
  - **Healthcare: Disease prediction and early diagnosis** with better disease gene discovery**, population-specific diagnostics** (e.g. impact of endogamy on diseases), etc.
  - **Reduces Bias:** as global genetic databases remain dominated by European populations.
  - **R&D:** Boosts India's and global genomic research and innovation ecosystem.

Key Concepts

- **Genome** is entire set of genetic material i.e. **DNA/RNA** (DNA in most organisms) present in an individual or species.
- **Genome Sequencing** is the process of determining the complete genetic material sequence of an organism's genome.

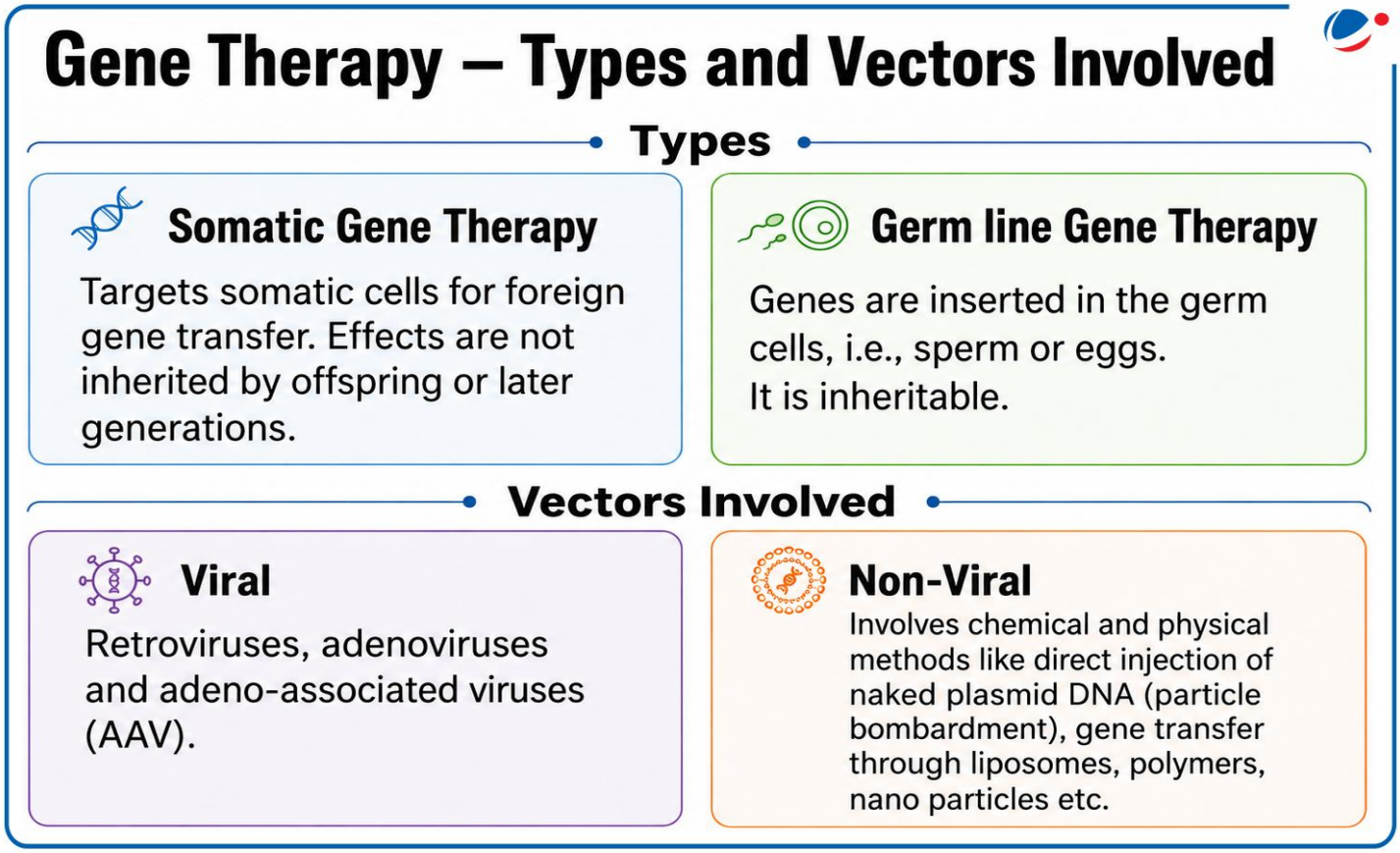
7.4.2. FIRST-EVER GENE THERAPY FOR TREATMENT OF GENETIC HEARING LOSS

The therapy, called **Otarmeni,** made by Regeneron Pharmaceuticals was approved by **United States Food and Drug Administration** under **National Priority Voucher Program**.

- Therapy is designed to treat hearing loss caused by **OTOF gene mutations.**
  - OTOF Gene codes for a **protein called otoferlin**, needed by inner ear cells to translate vibrations into signals interpreted by brain.
  - When people carry two defective copies of this gene (one from each parent), it causes **severe-to-profound hearing loss, accounting for 2%- 8% of inherited, non-syndromic cases.**

About Gene Therapy

- **Meaning:** Refers to a collection of methods that allows **correction of a gene defect.** It involves insertion of genes into a person's cells and tissues to treat a disease.
  - A vector is a carrier u**sed to deliver the therapeutic gene into target cells**.



7.4.3. NATIONAL ROADMAP FOR POST-QUANTUM CRYPTOGRAPHY (PQC) MIGRATION

Department of Science & Technology has released a national roadmap for Post-Quantum Cryptography (PQC) Migration.

It aims to develop **cryptography techniques that are secured** against attacks from advanced quantum computers for ensuring future cryptographic security and digital sovereignty.

- It was necessitated as **advancements in quantum computing have potential to break existing cryptography algorithms** which form the backbone of today's IT systems, online communications, financial transactions, and other sensitive digital information.
  - These algorithms include benchmark **RSA (Rivest–Shamir–Adleman) and ECC (Elliptic Curve Cryptography) public-key encryption.**

Risks of Quantum Computing to Cybersecurity

- **Breaking of Existing Encryption:** Quantum computers can break **public-key cryptography, compromising banking, emails, and government communications.**
- **Harvest Now, Decrypt Later:** Encrypted data collected today can **be decrypted in the future**, exposing long-term sensitive information.
- **Systemic Risk:** Breaking cryptography can disrupt **critical sectors like power, telecom, finance, and governance.**
- **Threat to National Security**: Exposure of **defence and intelligence data can weaken** national security and create strategic risks.

India's Efforts for Developing Secure Quantum Computing

- **National Quantum mission:** Aims to develop comprehensive indigenous quantum technology ecosystem with establishment of four thematic hubs.
- **DST's Quantum-Enabled Science and Technology (QuEST) program:** To groom young researchers in quantum technology.
- **State-Level Initiatives:** Amaravati Quantum Valley (AQV) Initiative (Andhra Pradesh), Quantum Mission (Karnataka), Telangana Quantum Strategy etc.

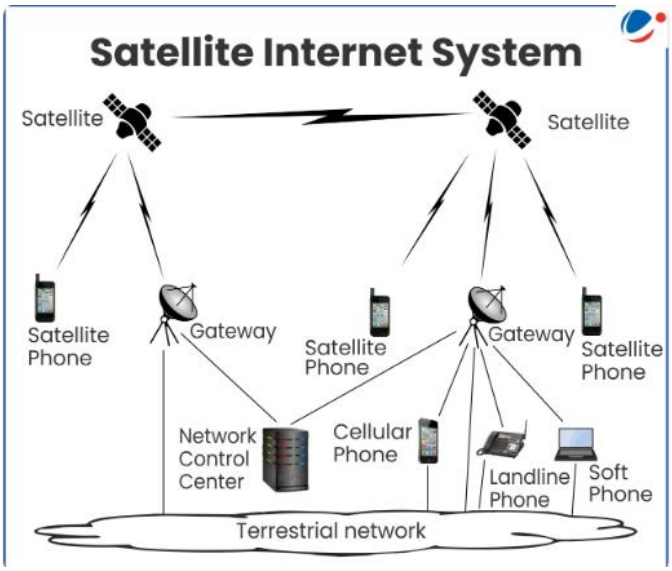
7.4.4. STARLINK SATELLITE INTERNET

Meghalaya becomes the third Indian state after Maharashtra and Gujarat to partner with Starlink formally.

- Starlink was launched in 2019 by **SpaceX** and plans to have 42,000 satellites in **Low Earth Orbit (LEO)**.

About Satellite Internet

- **Definition: Satellite internet** refers to the **internet service provided through satellites** placed in **Geostationary Orbits (GSO)** or **Non-Geostationary Orbits (NGSO)**.
  - LEO and MEO (Medium Earth Orbit) are NGSO.
- Unlike **land-based internet services** such as fiber, cable, etc., it **doesn't rely on wires** to **transmit data**. improving accessibility, deployment speed, and long-distance transmission.
- **Infrastructure**: It generally includes three segments:
  - **Space Segment:** Includes network of several communication satellites.
  - **Ground segment:** Includes satellite measurement and control networks, gateway stations, etc.



- **User segment:** Includes communication terminals used by users.

Advantages over existing land-based internet services:

- **Global reach:** Connects remote and underserved regions lacking fiber or cellular infrastructure.
- **Rapid deployment:** Requires **only power** and **clear sky**, avoiding costly and time-consuming civil works.
- **Disaster resilience:** Restores communication quickly and acts as **backup** when terrestrial networks fail.

Regulatory Landscape for Satellite Internet Services

- **Department of Telecommunications** grants licences and regulates under the Unified Licence Regime.
- **Telecom Regulatory Authority of India** recommends spectrum assignment terms for satellite services.
- **Indian National Space Promotion & Authorisation Centre** promotes, authorizes, and supervises private space activities.

7.4.5. PROJECT MAVEN

Project Maven, an AI program, is now central to US strikes against Iran.

About Project Maven

- **Objective**: To automate detection of objects and patterns in vast volumes of drone imagery, reducing manual analysis burden.
- **U**ses machine learning and computer vision to identify targets, movements and activities in real-time.

Digital Current Affairs
Read our previous coverage on Satellite Internet Services

7.4.6. MISSION MITRA

ISRO launched Mission MITRA to test Gaganyaan crew for mental, physical and crew operability strengths

About Mission MITRA (Mapping of Interoperable Traits and Response Assessment)

- It is a behavioural study by ISRO for human spaceflight missions, conducted in partnership with **Indian Air Force's (IAF) Institute of Aerospace Medicine (IAM).**
- **Objective:** To assess physiological, psychological and operational performance of Gaganyaan crew under stress.
  - It was conducted at Leh, Ladakh simulating extreme conditions such as **hypoxia, low temperature and isolation**

7.4.7. CERIUM-MAGNESIUM CHANGESITE

New mineral Cerium-Magnesium Changesite has been discovered in lunar meteorite named **Pakepake 005** found in **Taklamakan Desert, China.**

- The finding raises total known **lunar minerals to 11**.

About Cerium-Magnesium Changesite

- It is a **rare earth-bearing phosphate mineral** with distinctive physical and chemical characteristics.
- **Physical Properties: Colourless, transparent, with a glass-like lustre.**

- It is also **fragile** and shows **shell-like fracture,** and **glows under UV light.**

- **Scientific Significance:** Helps understand **volcanic processes on the Moon** and distribution of **rare earth elements.**
  - **Its fluorescence** makes it valuable in development of more efficient LEDs.

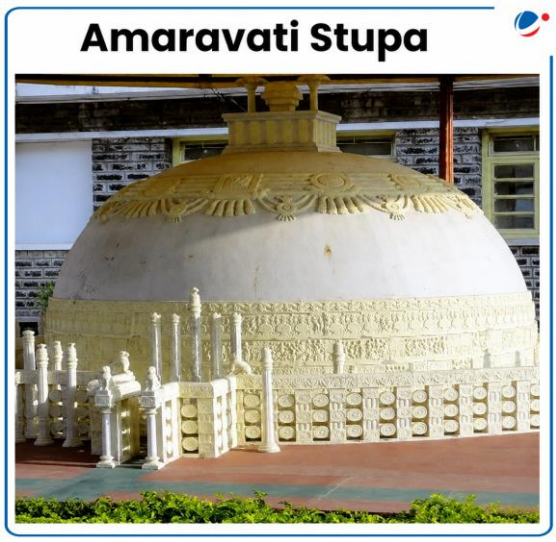
8. CULTURE

8.1. AMARAVATI

Why in the News?

Lok Sabha clears Bill to make Amaravati the sole capital of Andhra Pradesh

Amaravati and its Cultural Significance



- Amaravati is located in the **Guntur district** of Andhra Pradesh on the banks of the **Krishna River**.
- The Capital project began in **2014**, when Telangana was carved out of Andhra Pradesh.
- The term "Amaravati" literally means **"Abode/Place of Immortals"**.
  - **Udumbaravati** was the ancient name of Amravati. It was due to the presence of an ample number of **Audumber trees in the region.**
- **Historical Importance:**
  - Amaravati served as the **capital of the Satavahana dynasty** and has a historical legacy dating back to the **3rd century BCE.**
  - **Amaravati Stupa:**
    - The stupa was built with white marble.
    - Though the Stupa itself has completely disappeared, its sculptured panels have been preserved in Madras and British Museums.
    - Also known as the ***Mahachaitya* ("Great Stupa"),** was constructed around the **2nd century BCE** during the **Satavahana period** and is regarded as one of the **oldest Buddhist monuments** in India.
    - The stupa featured a **circular *pradakshinapatha***, intricately carved **vedika pillars depicting Jataka tales** and Buddha's life events, along with **toranas adorned with lion and lotus motifs.**
    - Early phases **represented Buddha symbolically**, while **anthropomorphic Buddha images** appeared from **the 1st century CE** onwards.
  - **Centre of Buddhism**
    - **Acharya Nagarjuna** is believed to have propounded the ***Madhyamika Philosophy*** in the Amaravati region, which later became the philosophical basis of Mahayana Buddhism.
      - **Madhyamaka Marga (Middle Path) advocates a "middle way"** between extreme views, specifically eternalism (existence) and annihilationism (non-existence)
    - Believed to be the place where Gautam Buddha first spread his teachings of **"Kalachakra".**
      - *Kalachakra* **("Wheel of Time") is a Vajrayana Buddhist** tradition centred on cosmology, time cycles and spiritual enlightenment.
    - **Xuanzang visited Amaravati** in the 7th century CE to collect Buddhist manuscripts and sacred texts.
  - **Amaravati School of Art**
    - Developed in the **Krishna–Godavari valley** under the patronage of the **Satavahana dynasty and Ikshvaku rulers.**
    - The main centres of this art were **Nagarjunakonda, Amaravati, Goli, Ghantasala, and Jaggayyapeta,** etc.
    - Emerged as **one of the three major schools** of Buddhist art in ancient India **along with Gandhara and Mathura** schools.
    - Known for **dynamic narrative art** depicting Jataka tales, scenes from **Buddha's life and Buddhist motifs.**
    - **Example:** Buddha statue at Nagarjunakonda in the Amaravathi style.
- **Other Historical Legacy of Amaravati**
  - Home to **Sri Amaralingeswara Swamy Temple**, an important Shaivite pilgrimage centre.
  - One of the revered **Pancharama Kshetras** of Andhra Pradesh.
  - The region is famous for traditional handicrafts such **as Kondapalli toys and Kalamkari textiles.**

Comparison of Three Major Schools of Indian Art

Feature	Gandhara School	Mathura School	Amaravati School
Region	North-West Frontier region (present Pakistan & Afghanistan)	Mathura region, Uttar Pradesh	Krishna-Godavari valley around Amaravati & Nagarjunakonda
Patronage	Kushana rulers	Kushana rulers	Satavahana rulers
Material used	Bluish-grey sandstone; later mud & stucco	Red sandstone	White limestone / white marble
Influence	Strong Greco-Roman influence	Indigenous Indian style	Indigenous Buddhist style
Religious influence	Mainly Buddhism	Buddhism, Hinduism & Jainism	Mainly Buddhism
Main feature	Realistic human figures; wavy hair; calm expression	Symbolism and spiritual expression; fleshy body	Dynamic narrative scenes; intricate carvings
Special feature	Greco-Indian art	Indigenous iconography	Extensive use of Tribhanga posture (three bends)

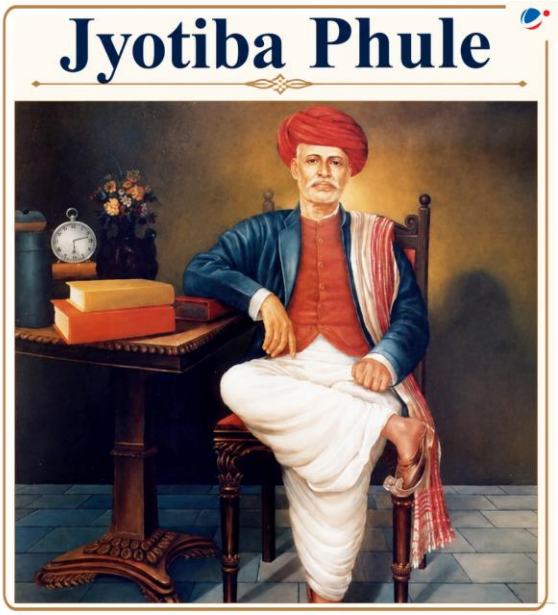
All three schools are important for understanding the development of Buddhist art in ancient India.

8.2. MAHATMA JYOTIBA PHULE

Why in the News?

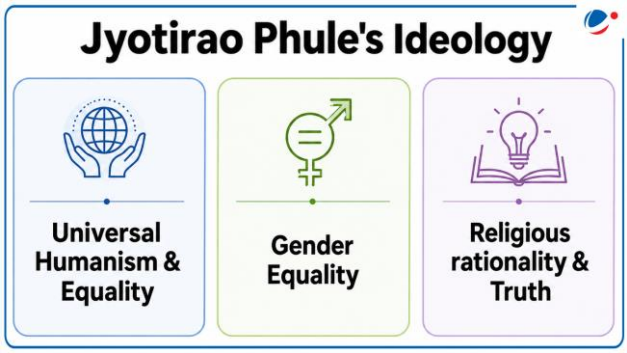
This year marks **200th birth anniversary** of Mahatma Jyotiba Phule.

Brief about the Life of Jyotiba Phule



- **Born: April 11,** 1827, in Maharashtra (in or near Pune/Satara district) into a **Mali (gardener) family**, which belonged to Shudra varna.
- **Education:** He initially dropped out of a Marathi school to work on his family's farm but was later admitted to the **Scottish Mission High School** in Pune in 1841, completing his secondary education in 1847.
  - He was deeply inspired by Thomas Paine's book *Rights of Man*.
- **Title:**
  - **Mahatma (Great Soul)** in 1888 by the people for the upliftment of the oppressed.
  - **Father of Indian Social Revolution**
  - **Guru by** Dr. B.R. Ambedkar.

- **Publications:**
  - **Gulamgiri (1873):** Provided a historical account of the slavery and exploitation of lower castes.
  - **Shetkaryacha Aasud (1883):** The "Cultivator's Whip-cord" analyzed the systemic exploitation of peasants.
  - **Brahmananche Kasab (1869):** Exposed the exploitative practices of Brahmin priests.
  - **Sarvajanik Satyadharma Pustak (1891):** Outlining his philosophical statement on a "True Religion for All".
  - **Other:** Tritiya Ratna (1855), Satsar Vol I & II (1885), Ishara (1885).



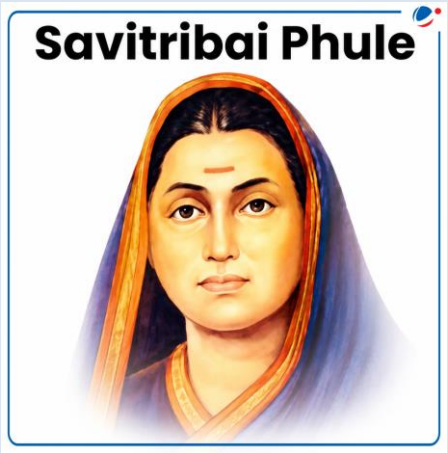
Key contributions

- **Educational Reforms:**
  - **Schools:** In **1848**, he opened first school for **lower-caste boys and girls in Pune**, where Savitribai Phule served as the **first Indian woman teacher**.
    - They subsequently opened multiple schools **for girls**, as well as a night school for **adult peasants and workers** in 1852.
  - **Hunter Commission (1882):** Jyotiba submitted a memorandum advocating for **free and compulsory primary education for all** and government to prioritize primary education for the masses over higher education.
  - **Utilitarian Curriculum:** Advocated for practical knowledge over bookish learning, suggesting that the curriculum include **agriculture, health, ethics, and grammar**, with a clear distinction between rural and urban syllabi.
  - **Focus on Teachers:** Demanded that primary teachers be **trained, well-paid, and drawn from lower castes** to provide them with employment opportunities.
- **Social reforms:**
  - **Satyashodhak Samaj (Society of Truth Seekers):** Founded on **September 24, 1873**, to organize lower castes against the Brahminical social order and promote social equality.
  - **Satyashodhak marriage practice**: Conducted without Brahmin priests and dowry.
  - **Women's Rights:** Supported the **widow remarriage movement in 1860** and established a **Home for the prevention of infanticide in 1863** to protect children of widows and rape victims.
    - He and Savitribai adopted Yashwant Rao, the son of a Brahmin widow.
  - **Eradication of Untouchability:** They opened their personal **water well to untouchables in 1868**.
- **Political reforms:**
  - **Poona Municipality:** Served it as a member **from 1876 to 1882**, fighting for the cause of the oppressed.
  - **Indian National Congress:** Advised lower castes to **stay away** from INC, warning that it primarily represented the interests of elite high castes and did not truly represent the masses.
  - **Attitude towards Colonial Government**
    - **Initially:** Phule welcomed British rule because it ended the tyranny of the Peshwa regime and introduced the principle of equality before the law, opening up educational and occupational opportunities for lower castes.
    - **Later:** Criticized government for neglect of primary education, exploitative taxation and anti-peasant policies.
- **Religious and Philosophical reforms:**
  - **Critique of Varna System:** Challenged the divine origin of the Varna system and argued that Brahmins were Aryan conquerors who subjugated indigenous Shudras and Atishudras.
  - **He rejected** Idolatry, ritualism, fatalism, and the need for a priestly intermediary between God and devotees.

- **Advocated Sarvajanik Satya Dharma (Public True Religion):** As universal religion based on truth-seeking, liberty, and equality to replace traditional Hinduism.
- **Tritiya Ratna:** Education was viewed as the **"third eye"** that enabled the masses to think critically, exercise independent reasoning, and dismantle the oppressive ideologies of Brahminism.

- **Economic Reforms**
  - **Drain of Wealth:** Phule highlighted drain of wealth from the peasant/rural economy to the urban/Brahmin domain.
  - **Proposed Solutions:** Demanded construction of bunds, tanks, and dams for irrigation, schemes for soil conservation and animal breeding, introduction of modern farming techniques, and reduction in tax burden on farmers.

Savitribai Phule



- **Birth:** January 3, 1831, in Naigaon, Maharashtra.
- **Education:** By Mahatma Jyotirao Phule after marriage and later received formal teacher training.
- **Contribution to Education & Social Reform**
  - **Modern India's first woman teacher**: Worked alongside Jyotirao Phule to educate girls and marginalized communities, despite facing severe social discrimination like attacks with stones and dung.
  - **Savitribai's 4-Pillar Framework:** Education must be **universally available, child-sensitive, intellectually critical, and socially reforming**.
  - **Innovative Pedagogy:** Savitribai introduced **stipends to prevent dropouts** and initiated **parent-teacher meetings** to engage parents in their children's education.
  - **Mahila Seva Mandal (1852):** Founded to promote women's civil rights and financial empowerment.
  - **Crisis Relief:** Savitribai organized 52 food centers for **famine relief in 1877**.
- **Literary Contributions:**
  - **Kavyaphule (1854):** Poetry collection (**first modern poetess of Marathi language)**.
  - **Bavan Kashi Subodh Ratnakar (1892).**
- **Role in Satyashodhak Samaj:** Led Samaj after Jyotirao Phule's death in 1890.
- **Death:** Died in 1897 after contracting bubonic plague while serving infected patients in a clinic she helped establish.

Conclusion

Mahatma Jyotirao Phule was a visionary and the "Father of the Indian Social Revolution," whose pragmatic yet profoundly philosophical approach laid the foundation for the Backward Class Movement in India. Recognizing education as the ultimate harbinger of social justice, his framework deeply inspired future leaders like Dr. B.R. Ambedkar, who considered Phule his Guru.

8.3. NEWS IN SHORTS

8.3.1. SAMRAT SAMPRATI

The PM inaugurated the Samrat Samprati Museum in Koba, Gandhinagar, Gujarat on Mahavir Jayanti.

About Samrat Samprati

- A **Mauryan emperor** and the **grandson of Emperor Ashok**, born to father Kunal and mother Kanchanmala.
- Known as **Indrapalit, Sangat and Vigatashok;** his life is described in Jain scripture like **'Sampratikatha', 'Parishistaparva', and 'Prabhavakcharita'.**
- Pivotal role in **spreading Jainism** (also referred to as **'Jain Ashoka'**) and the **principle of ahimsa (non-violence)** across the subcontinent.
- He is known to have **built and repaired many Jain temples**.

8.3.2. PETROGLYPHS

The foundation stone was laid for India's first Petroglyph Conservation Park on the banks of the Indus River in Ladakh.

- **The park aims** to serve as a dedicated conservation space for centuries-old rock carvings (petroglyphs) that are increasingly under threat due to unregulated tourism, rapid infrastructure development, and a lack of awareness.

About Petroglyphs

- **Petroglyphs** are prehistoric images, symbols, or carvings etched, pecked, or engraved directly onto rock surfaces.
- These are **"open-air museums"** and **"civilisations carved on stone,"** and represent a continuous record of human history from the Palaeolithic Age to later historic periods.
- These carvings **depict ancient** trade routes, migration patterns, belief systems, and ecological histories.
- **Major Petroglyphs in India:** Bhimbetka (Madhya Pradesh), Ratnagiri (Maharashtra), Gawilgarh hills (Odisha), etc.

8.3.3. KONYAK TRIBE

Recently, Researchers from Nagaland University, identified **traditional**

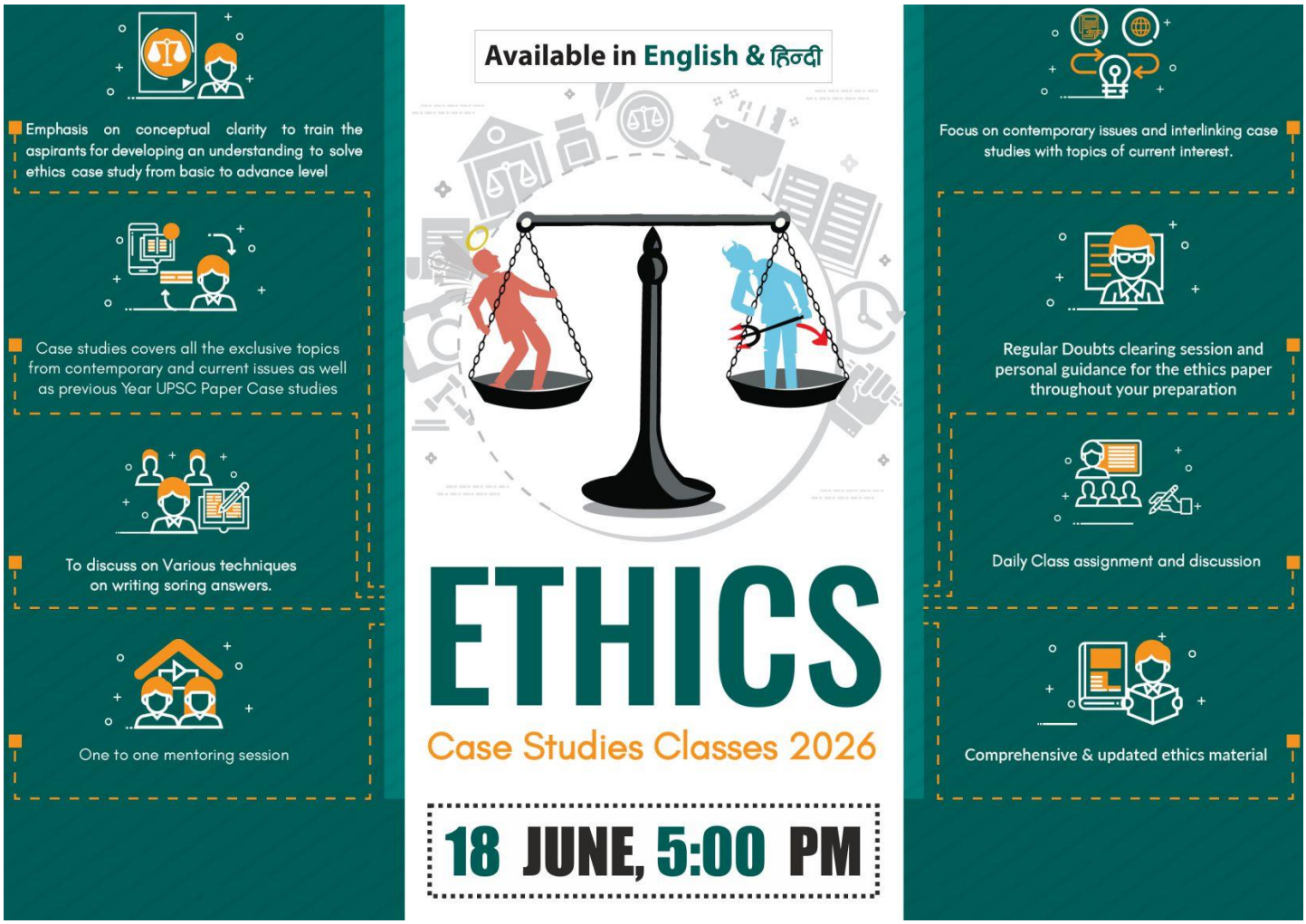
herbal formulation used by the **Konyak tribe** for its **anti-cancer potential.**

- It is a five-plant polyherbal formulation including-
  - Persicaria maculosa Gray (Redshank/Lady's Thumb)
  - Acorus calamus L. (Sweet Flag)
  - Erythrina variegata L. (Tiger's Claw/Indian Coral Tree)
  - Stereospermum chelonoides (L.f.) DC. (Padri Tree)
  - Oroxylum indicum (L.) Kurz (Indian Trumpet Flower)
- Its bioactive compounds can effectively target **VEGFR2**, a key protein responsible for tumour blood vessel growth.

About Konyak Tribe

- Tribe of **Mongoloid origin,** predominantly found in **Nagaland.**

- **Largest of all Naga tribes**
- **Key festival**: Aoleang Monyu
- Governed by powerful **hereditary chiefs called 'Anghs'**
- Their language belongs to the **Tibeto-Burman family.**
- They are known as **headhunters of North East India.**



9. ETHICS

9.1. ETHICS AND POLITICS: THE CRISIS OF DEMOCRATIC ETHICS

Introduction

A profound ethical deficit is hollowing out modern democracy and highlighting a growing disconnect between public morality and political power. From Western lobbying scandals and 45% of Indian MLAs facing criminal charges to dismissed humanitarian appeals such as the Pope-Trump episode and coldly rationalized mass civilian casualties in Gaza and Ukraine, realpolitik is driving a global crisis of conscience. Ultimately, this trend raises the urgent issue of accelerating moral erosion in contemporary democratic politics.

The Moral Decline

- **Criminalisation of Politics:** Defined by the nexus of criminals and politicians. The ADR 2025 report revealed 45% of Indian MLAs face criminal cases, with 29% involving serious charges.
  - Despite SC directions on disclosure and the Vohra Committee findings, parties continue to field tainted candidates based on the "winnability" factor.
- **Money Power and Electoral Ethics:** Obscene election expenditures, opaque party funding, and the quid pro quo between donors and policymakers distort competitive democratic equality.
  - The **SC** scrapped anonymous Electoral Bonds in 2024 to curb corporate-political nexus. Concurrently, the **ECI** seized a record ₹8,889 crores during 2024 General Election.
- **Erosion of Deliberative Democracy**: Evidenced by frequent parliamentary disruptions, passage of bills without debate, and the decline of the Question Hour. The strict application of party whips weakens the MP's conscience vote.
  - The 17th Lok Sabha had record-low sittings, and in 2023, criminal codes passed without debate after 146 opposition **MPs** were suspended.
- **Populism, Freebies & Moral Hazard:** The ethics of promising unaffordable freebies creates a tension between genuine welfare and fiscal responsibility. As observed by the SC in **S. Subramaniam Balaji v. Tamil Nadu**, there is a thin line between welfare entitlements and populist electoral bribes.
  - A 2022 **RBI** bulletin warned that stressed states burden future generations with unsustainable debt to fund subsidies for immediate electoral victories.
- **Institutional Capture:** The erosion of check-and-balance ethics occurs when regulatory bodies, investigative agencies, and the judiciary face political interference, compromising the neutrality of civil servants and institutions.
  - Agencies like the **ED** and **CBI** face autonomy concerns.

Root Causes - Why Ethics Erodes in Politics?	
Structural/Systemic Causes	**Cultural/Attitudinal Causes**
• **Winner-takes-all** electoral system rewarding power at any cost • **High cost** of elections incentivising corruption • **Weak party internal democracy**; candidates chosen by power, not merit • **Slow judicial processes** allowing tainted politicians to function for decades • **Opaque political finance** lacking real-time disclosure	• **Voter tolerance** of criminal candidates due to caste/community loyalty • **Normalisation** of unethical politics e.g., “Sab chor hain" (everyone is corrupt) • **Short political memory**; media cycle moving on from scandals • **Lack of civic education** on political rights and responsibilities • **Transactional voting** driven by inducements rather than values

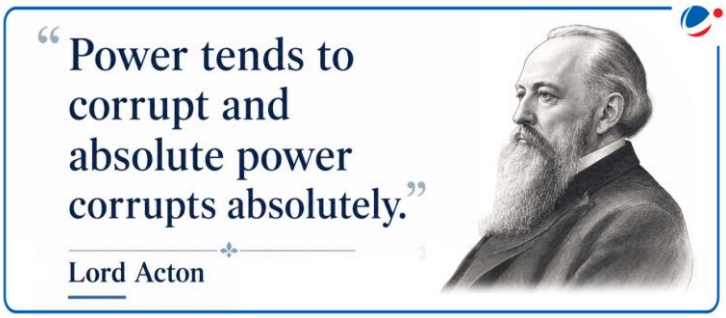
Ethical Failure & Systemic Impacts

- **Virtue Ethics (Aristotle):** Demands intrinsic virtues like justice and prudence.
  - **Impact of Ethical Failure:** Lawmakers acting with impunity signals that "power trumps principle," eroding societal morality and creating a chilling effect that deters honest candidates from entering politics.
- **Deontology (Kant):** Requires absolute adherence to truthfulness and electoral promises.
  - **Impact of Ethical Failure:** Abandoning these core duties for political convenience breeds deep public cynicism, plummeting civic participation and weakening democratic legitimacy.
- **Consequentialism (Mill):** Seeks the "greatest good for the greatest number."
  - **Impact of Ethical Failure:** Politicians weaponize this to rationalize unethical means for short-term electoral gains, replacing long-term structural reforms with fiscally ruinous populism.
- **Social Contract (Rousseau):** Views politicians as trustees of the sovereign public will.
  - **Impact of Ethical Failure:** Betraying this abstract trust leads to regulatory capture, where tainted legislators prioritize wealthy donors over public interest and degrade parliamentary debate.
- **Justice as Fairness (John Rawls):** Requires designing social principles from a "veil of ignorance," suspending personal or partisan advantage.
  - **Impact of Ethical Failure:** Politicians craft policies explicitly favoring themselves or their financial backers, deepening structural inequalities and replacing equitable governance with crony capitalism.

Different Stakeholders and associated ethical concerns

Stakeholder with Interest	Concerns
Lawmakers / Elected Politicians Act as trustees of the public will; enact legislation and maintain electoral viability.	Prone to conflicts of interest, impunity, and cronyism; may weaponize consequentialism for short-term gains (populism) and lack the moral incentive to reform a corrupt status quo.
The Electorate / Voters Participate in civic duties, hold leaders accountable, and benefit from the "greatest good."	Deepening cynicism and plummeting civic participation; voter complicity through the acceptance of transactional freebies and identity-based voting, reflecting an attitudinal deficit.
Wealthy Donors / Financial Backers Fund political campaigns and seek favorable policy environments.	Drive regulatory capture and crony capitalism; benefit from policies explicitly crafted to favor them over the public interest, deepening structural inequalities.
Judiciary Uphold the rule of law, dismantle impunity, and ensure swift accountability.	Severe understaffing and judicial delays breed a culture of impunity, neutralizing deterrence and eroding public trust in the justice system.
Political Parties Aggregate public interests, select candidates, and form governments.	Weak internal democracy fosters nepotism and opacity; prioritizing electoral "winnability" over integrity and violating foundational principles of transparency.
Civil Society & Independent Press Act as vigilant watchdogs and uphold Constitutional Morality.	Face challenges in demanding absolute integrity; must continuously drive grassroots civic education to shift voters away from transactional loyalty.
Civil Servants Administer governance and implement public policies fairly.	Vulnerable to political pressure; require strict safeguarding of their absolute impartiality to resist unethical populist agendas.

Way Forward



- **Institutionalizing Probity & Accountability**: Enforce a binding statutory code of ethics to resolve legislative conflicts of interest, mandate real-time digital financial disclosures to curb cronyism, and establish fast-track courts to dismantle impunity and ensure swift accountability for elected officials.
- **Fostering Public Service Values:** Cultivate moral leadership by prioritizing integrity over electoral "winnability," apply emotional intelligence to balance empathetic welfare with fiscal prudence against unethical populism, and strictly safeguard the absolute impartiality of civil servants and the judiciary.
- **Driving Attitudinal Change in Society:** Promote grassroots civic education to shift voter behavior away from transactional loyalty toward value-based voting, and empower civil society and an independent press to act as vigilant watchdogs upholding Constitutional Morality.
- **Reviving 'Trusteeship' and Ethical Leadership:** Fundamentally shift the political culture by embracing Mahatma Gandhi's philosophy of **Trusteeship**. Elected representatives must be reoriented to view their position not as an assertion of power, but as a sacred trust, demanding high **emotional intelligence**, empathy, and the **moral courage** to act solely as stewards of the public good.

Conclusion

Aristotle argued that man is a political animal, and the quality of political life reflects societal ethics. Its moral decline threatens democracy's core premise of the common good. Restoring political ethics demands institutional reform, strict accountability, and citizens demanding absolute integrity. Ultimately, realizing India's constitutional vision requires choosing politics as public trusteeship rather than personal extraction.

Test Your Learning

You are posted as the District Magistrate (DM) and District Election Officer (DEO) in a highly sensitive and politically vital district of a State going to the polls. The ruling party has fielded Mr. X, a local strongman with immense money power and several pending criminal cases, including charges of extortion.

To secure his victory, Mr. X's campaign is being heavily funded by a syndicate of local wealthy contractors who anticipate a quid pro quo. Furthermore, during his rallies, Mr. X is promising unaffordable freebies to the electorate. Rather than questioning his criminal background, a large section of the voters seems highly receptive to these promises and are aligning behind him based on caste identity.

Meanwhile, you receive unofficial, subtle instructions from senior officials in the State Government to go easy on enforcing the Model Code of Conduct (MCC) against Mr. X. You are aware that taking strict action might invite vindictive transfers or stall your career progression.

Questions

1. Identify the key stakeholders and their respective interests in this case.
2. What are the ethical dilemmas and systemic moral issues present in this scenario?
3. As the District Election Officer, what course of action will you take? Justify your steps based on the principles of Constitutional Morality and public trusteeship.

9.2. CONSCIOUS CAPITALISM

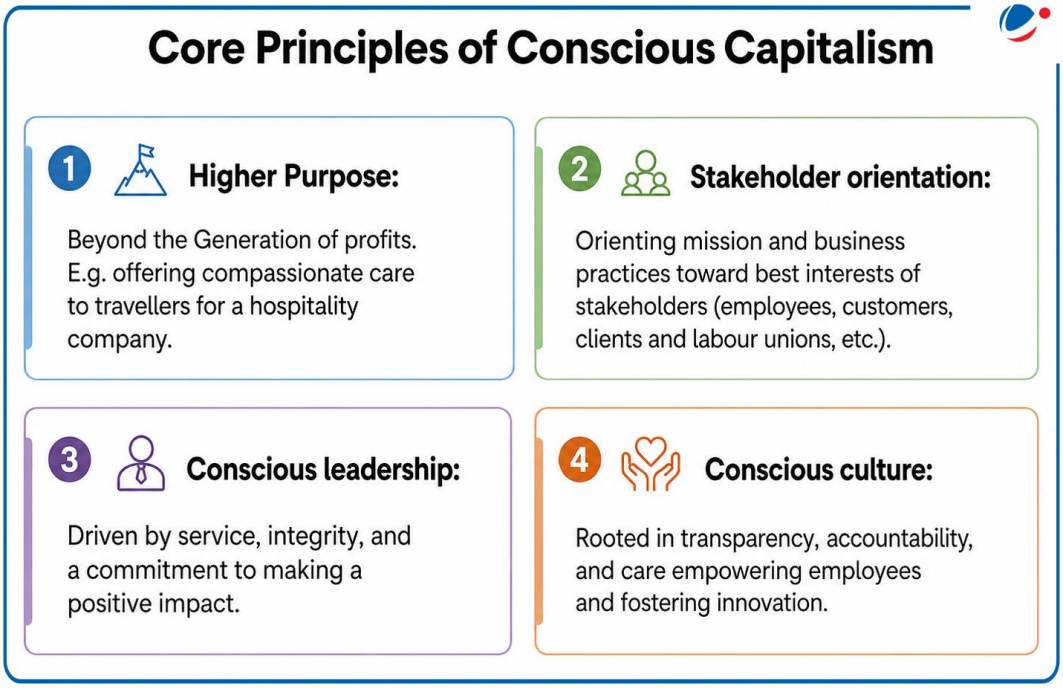
Introduction

The human civilisation has evolved from **mercantilism to financial capitalism** (rooted in irrational greed and profit maximization), to present day **emergence of powerful digital ecosystems** and **complex corporate structures**. Adoption of **conscious capitalism** has thus become crucial in the new age with futuristic revolution of Artificial Intelligence, renewable energy transitions, and the climate crisis, presenting varied risks, challenges, and opportunities.

To foster **global peace and sustainability,** there is a need to promote wealth-making along with fair, ethical, equity principles.

What is Conscious Capitalism?

- It is a **philosophy** that emphasizes **purpose, ethics, and stakeholder value** alongside financial success, with the aim to conduct business that creates value for all involved.
- **Values Associated: Universal welfare, Truth, Non-violence (ahimsa), Self-sacrifice, and Economic equality**, aiming to create a **Just society.**
- **Business Ethics** forms the **foundation of Conscious Capitalism.**
    - Business ethics Deals with moral principles to **corporate conduct, promoting fairness, transparency and long-term value creation**, prioritizing stakeholder rights, environmental sustainability and social responsibility.



- **Indian philosophical ideas aligning with Conscious capitalism**:
    - **Purushartha:** Pursuit of wealth and the accumulation of material assets (**Artha**) must always be guided by moral righteousness and duty (**Dharma**), ensuring that business practices support social harmony.
    - **Mahatma Gandhi's Doctrine of Trusteeship**: It views business owners not as absolute proprietors of capital, but as trustees responsible for managing wealth on behalf of the wider community.
    - **Inclusive development:** Indian governance models promote **Antyodaya** (welfare of the last person) and **Sarvodaya** (universal upliftment) principles.

What are the key differences between Traditional and Conscious Capitalism?

Parameters	Traditional Capitalism	Conscious Capitalism
Basic Tenet	• Individual and private property rights. • Free Trade. • Rule of law.	• Founded on basic tenet of capitalism. • Along with incorporating **social justice.**
Directive	• **Shareholder Primacy** • Maximizing short-term quarterly returns for equity owners.	• **Stakeholder Integration** • Creating sustainable intellectual, social, and ecological wealth
Profit Focus	• **Profit Maximisation** • Cost cutting, Reduced wages, Neglecting environment, etc.	• Considers **Broader impact** of actions. • Focuses on planet and people. • Sustainable Business Model.
Long-Term Sustainability	• Priority to **short term goals.** • **Exploiting resources** without considering **future consequences.**	• **Long-term viability** (integrating ethical practices into business). • Sustainable Resources and Community Welfare.
Economic Model	• **Linear Economic Model** of extracting resources.	• **Circular Model** considering impact of waste or larger impact.
Approach towards CSR (Corporate Social Responsibility)	• Acts as **satellite program.** • **Detached** from company's culture and roots.	• **Social justice** woven into **fibre of business.** • **Way of doing business.**

Why is Conscious Capitalism gaining momentum in present times?

- **Promotion of Ethical Business Practices:** Ethical capitalism is at heart of conscious capitalism.
  - It positions companies as a **force for good and instigators of positive change** and like all humans have ethical obligations to each other, businesses too have **ethical obligations to humanity and their environments.**
- **Realisation of True Nature of Capitalism:** Market efficiency, unnerving nature of finance, and pursuit of profits and wealth maximisation for benefit of few over others has created disparities with poor outcomes with respect to peace and sustainability.
- **Changing Consumer Preferences:** Consumers are increasingly **integrating ethical values** with their purchasing decisions and prefer to **support businesses** that align with their values.
- **Transparency Era:** In the age of digital media, corporate actions are constantly under **scrutiny and companies** must operate with **authenticity and accountability, or risk reputational damage.**
- **Long-Term Value Creation:** There is increased focused on purpose and stakeholders by building trust and loyalty, creating a **sustainable competitive advantages.**
- **Contemporary Developments:** Developments like rapid adoption of Artificial Intelligence, renewable energy transitions, etc. have raised concerns about their ethical and social impacts.

Key Challenges in applying Conscious Capitalism practices

- **Balancing Short-Term and Long-Term Goals:** Pressure to deliver immediate financial results come in conflict with **long-term, purpose-driven initiatives.**

- **Cultural Transformation:** Shifting organizational culture requires **time, effort, and commitment** from all levels of business.
- **Measuring Impact: Quantifying social and environmental impact** could be complex, making it difficult to assess progress.
- **Risk of Greenwashing and Woke-Washing:** Some businesses adopt conscious terminology purely as a marketing shield, using progressive branding to hide extractive, unchanged business-as-usual operations.
- **Resistance to Change:** Not all stakeholders may embrace shift, particularly in **traditional or profit-centric industries.**

Ways to apply Conscious Capitalism towards Business Ethics

- **Imbibing Principles of Ethical profit:** Ensuring that business activities create a **spectrum of positive externalities** like supporting local initiatives, environmental sustainability, economic development, etc.
- **Supportive Work Environment:** Through **fair wages, opportunities for growth** for employees to promote faster loyalty, increased productivity, and an inclusive culture.
- **Building Adaptable Model:** Focussing on **slow, sustainable growth** over quick gains and scaling at expense of ethical considerations like cutting corners, exploiting labour, etc.
- **Socially Responsible Investing (SRI):** Also referred to as **"values-based investing"** by not investing in companies with questionable practices.
- **Role of Leadership:** Shift from **traditional, command-and-control management** to more **empathetic and purpose-driven approach** focussing on ethical decision making.

Conscious Capitalism: Best Practices

- **Patagonia (outdoor clothing company):** Committed to maintaining an **environmentally-friendly supply chain.**
- **Starbucks:** Relies on **objective third-party evaluators** to ensure that all of its coffee is **ethically sourced** and that **farmers receive fair pay.**
- **Whole Foods:** Company builds stores that **use alternative energy, recycles rainwater and uses food scraps for energy.**
- **Reliance Industries Limited (RIL):** Committed to invest Rs 75,000 crore in three years towards the **"Green Vision" plan.**
- **Tata Group**: Embraced the concept of **businesses with a conscience, adopts** a set of **core values** that guide its decision-making and actions like respect for individuals, integrity, and excellence.

Conclusion

While new development in AI (Artificial Intelligence) age would **fundamentally change human relations, global partnerships, and international trade**, yet Indian initiatives like **Atmanirbhar Bharat, Viksit Bharat, Made in India, Start Up India, Net Zero 2070 vision** stand as a test of time and can be regarded as a torchbearer of conscious capitalism, to foster future peace and sustainability.

Check your Ethical Aptitude

You have been recently appointed as Chief Operating Officer (COO) of an leading textile company in North India. Your main task is to supervise the supply chain department dealing with procurement of raw materials and vendor management. Most of the raw material is sourced from a remote village in Eastern Africa and you recently came across reports about prevalence of extractive and oppressive policies adopted by most of big companies to source their raw

materials at a cheaper price. Further investigation leads to the conclusion that your representatives working in that region do indulge in such practices with a view to earn profit and increase personal prospects of promotion. You come from an humble background and have struggled hard to achieve your current professional position. Being made a part of such practices though indirectly has nudged your consciousness and have made you adamant about resolving the issue.

Against this backdrop, answer the following questions.

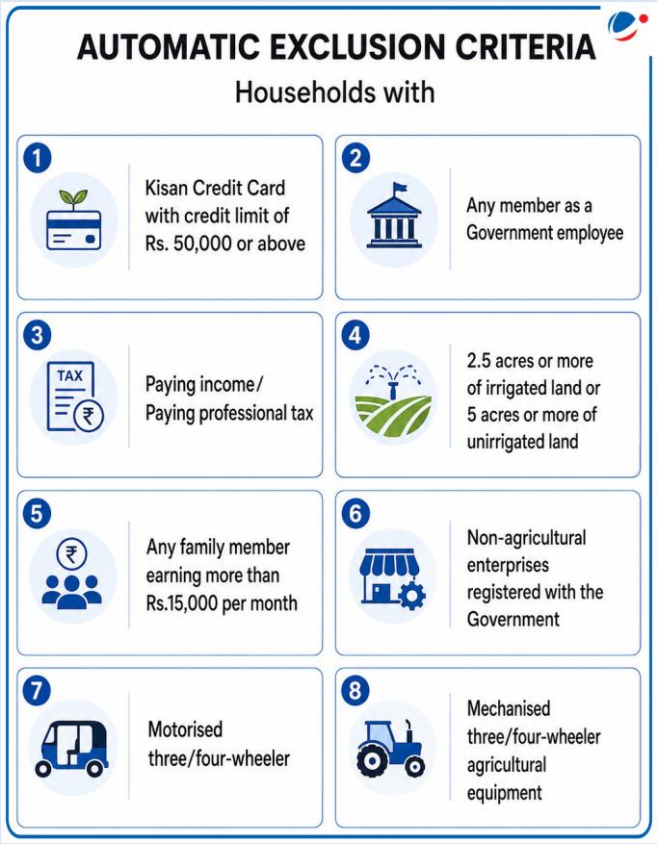
1. Mention the suitable course of action that you would take in this situation.
2. What measures are needed to ensure a company **become more conscious and ethical** towards its actions?
3. Discuss the key contrasts between **traditional capitalism and conscious capitalism.**

10. SCHEMES IN NEWS

10.1. PRADHAN MANTRI AWAAS YOJANA GRAMEEN (PMAY-G)

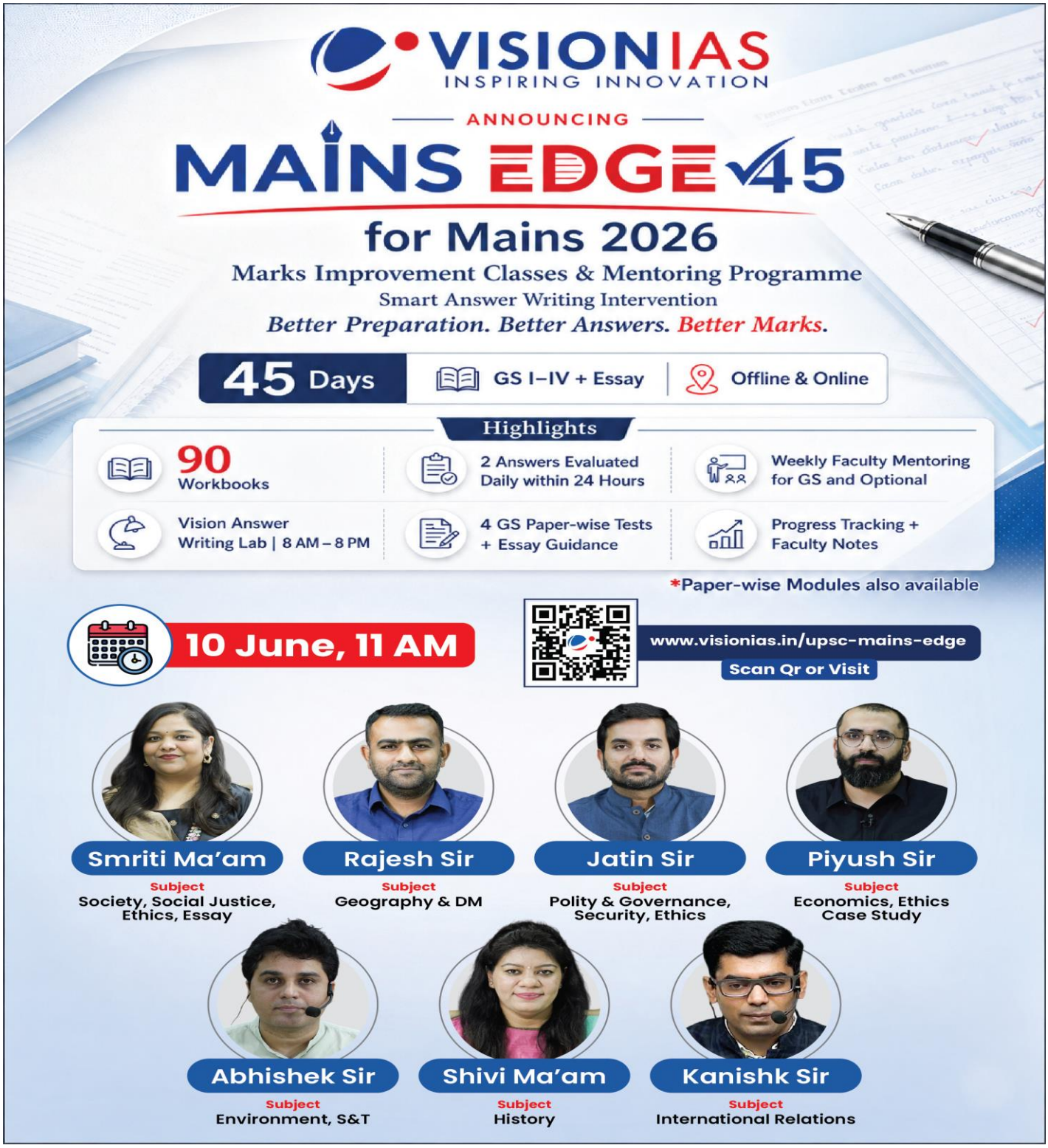
Why in the News?

Pradhan Mantri Awaas Yojana Grameen (PMAY-G) has completed 10 years.

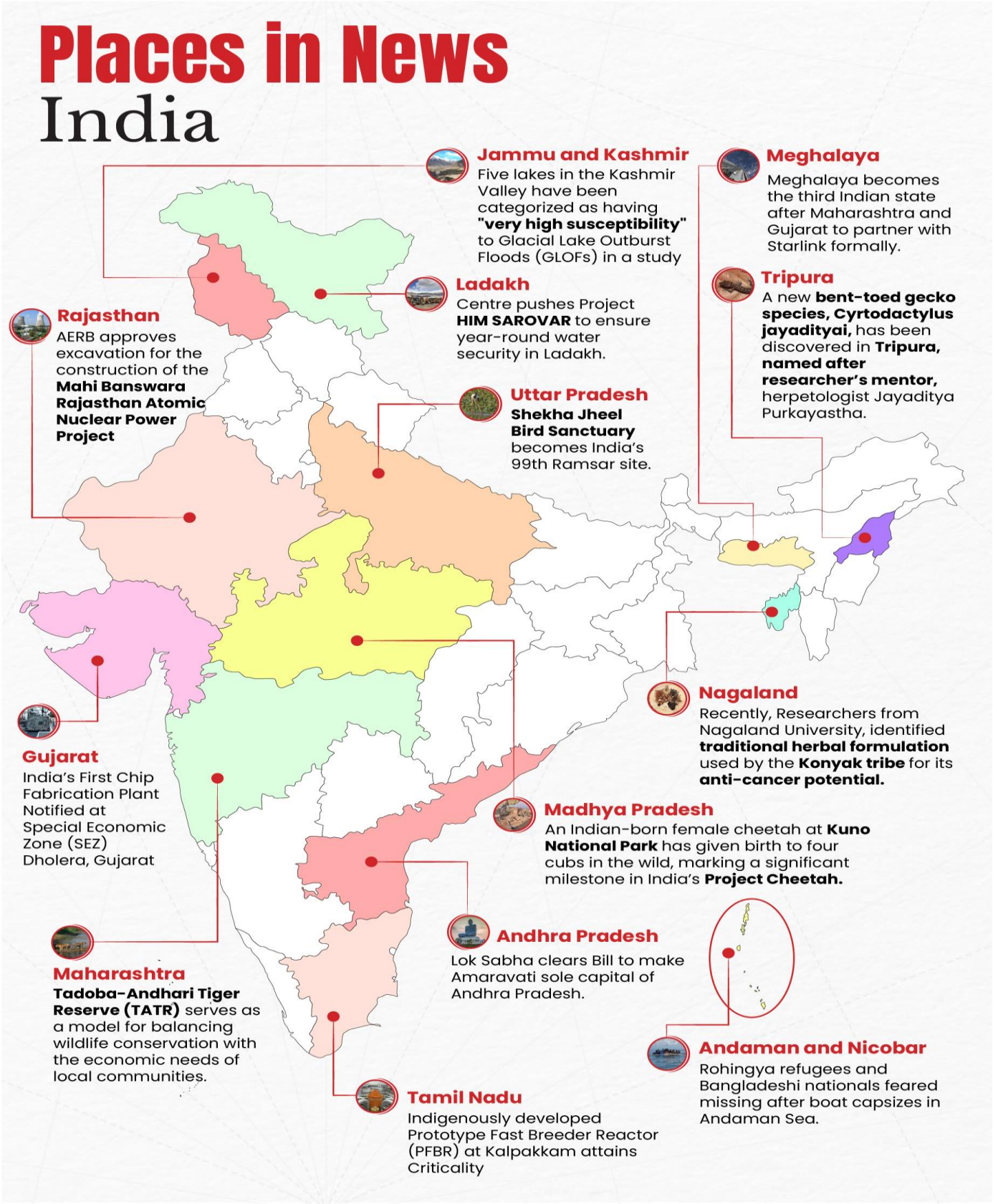
Core Objective of the Scheme	Salient Features of the Scheme
• Achieve **"Housing for All" in rural areas by providing pucca houses** with basic amenities to poor and houseless households. • Ensure **dignified, safe, and secure living** conditions for rural families. • Improve the **quality of life and promote inclusive rural development** through better housing infrastructure.	• **Launched in 2016**, PMAY-G was restructured from **Indira Awas Yojana**, which was started in 1996. • **Type:** Centrally Sponsored Scheme • **Ministry: Ministry of Rural Development**. • **Targets:** The government initially set a target of **2.95 crore houses for FY 2016– 17 to FY 2023–24** and approved continuation for another five years **(FY 2024–25 to FY 2028–29)** with an additional target of **2 crore** houses.  • **Beneficiary Selection:** Based on Socio Economic and Caste Census (**SECC) 2011 housing deprivation data**, verified through **Gram Sabha approval and geo-tagging under Awaas+** for transparent targeting. ○ **Eligible Beneficiaries:** Includes **houseless households** and families living in **0–2 room kutcha houses** (as per SECC data); **automatic/compulsory** inclusion for: ▪ Households without shelter, ▪ Destitute/living on alms,

	▪ Manual scavengers, ▪ Primitive Tribal Groups. ▪ Legally released bonded labourers. ○ **Exclusion of pucca houses:** All households living in houses with pucca roof and/or pucca wall and households living in houses with more than 2 rooms are filtered out. ○ **Automatic exclusion criteria (See infographic)** ○ **Beneficiary Prioritisation:** Based on housing deprivation criteria, with a minimum **60% targets earmarked for SC/ST households** and **15% funds for minorities**. ▪ Preference given to women and persons with benchmark disabilities **(minimum 5%, where possible),** verified by Gram Sabha/local self-government bodies. • **Financial Aid:** Minimum house size fixed at **25 sq. m,** with financial assistance of **₹1.2 lakh in plain areas and ₹1.3 lakh in hilly states**, North-Eastern states, and, difficult areas. ○ **Labour Assistance**: 90–95 person-days of unskilled labour under MGNREGA and • **Swachha Bharat Mission-** Grameen: Assistance of **₹12, 000** for toilets. • **Funding Pattern:** Cost shared between Centre and States in the ratio of **60:40** for most states, **90:10** for North-Eastern & Himalayan states, and **100% Central assistance** for Union Territories **without legislature**. ○ All payments to the beneficiary to be made through DBT mode to their Bank/Post office accounts that are linked to Adhaar with consent. • **Scheme Convergence**: For providing basic amenities like **LPG (Ujjwala), water (Jal Jeevan Mission),** electricity, etc. • **Monitoring & Accountability:** Grievances addressed within **15 days through CPGRAMS** and local bodies, alongside periodic evaluation by **NITI Aayog** for post-2026 continuation and policy review. • **Technical Support**: **National Technical Support Agency (NTSA)** to provide technical support. ○ Rural Mason Training (RMT) Program with **National Skill Development Corporation (NSDC)** to train masons in rural areas.

	• **Progress & Achievements:** As of March 2026, around **4.15 crore houses allocated**, **3.90 crore sanctioned**, and **2.99 crore completed**, with over **₹4.03 lakh crore transferred** to beneficiaries against the target of **4.95 crore houses by 2029**.



11. PLACES IN NEWS



Places in News
World

Turkiye (Capital: Istanbul)

India and Turkiye held 12th round of Foreign Office Consultations (FoC) to restore bilateral relations ruptured during the India-Pakistan conflict last year.

United Kingdom (Capital: London)

The United Kingdom passed a tobacco law that blocks cigarette sales to the post-2008 generation.

Egypt (Capital: Cairo)

Arab League held an emergency session in Cairo over Al-Aqsa closure and prisoner execution law.

Canary Island

INS Sudarshini makes maiden visit to **Las Palmas, Canary Islands, first by any Indian naval ship.**

Haiti (Capital: Port-au-Prince)

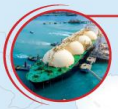
70 people killed and 30 injured in a brutal armed **gang attack** in the **Artibonite region of Haiti.**

Mali (Capital: Bamako)

India advises its nationals in **Mali to exercise caution due to security concerns.**

Nigeria (Capital: Abuja)

Investigation launched in Nigeria after civilians were reportedly killed in an airstrike.



Angola (Capital: Luanda)

India's is negotiating with Angola, an important alternative to West Asia for **gas supplies.**

Argentina (Capital: Buenos Aires)

ABIL secures environmental clearance for deep exploration of five lithium blocks in Argentina.

Sudan (Capital- Khartoum)

According to a report by UN Women, sexual violence against women 'quadruples' in three years during the ongoing conflict in Sudan.

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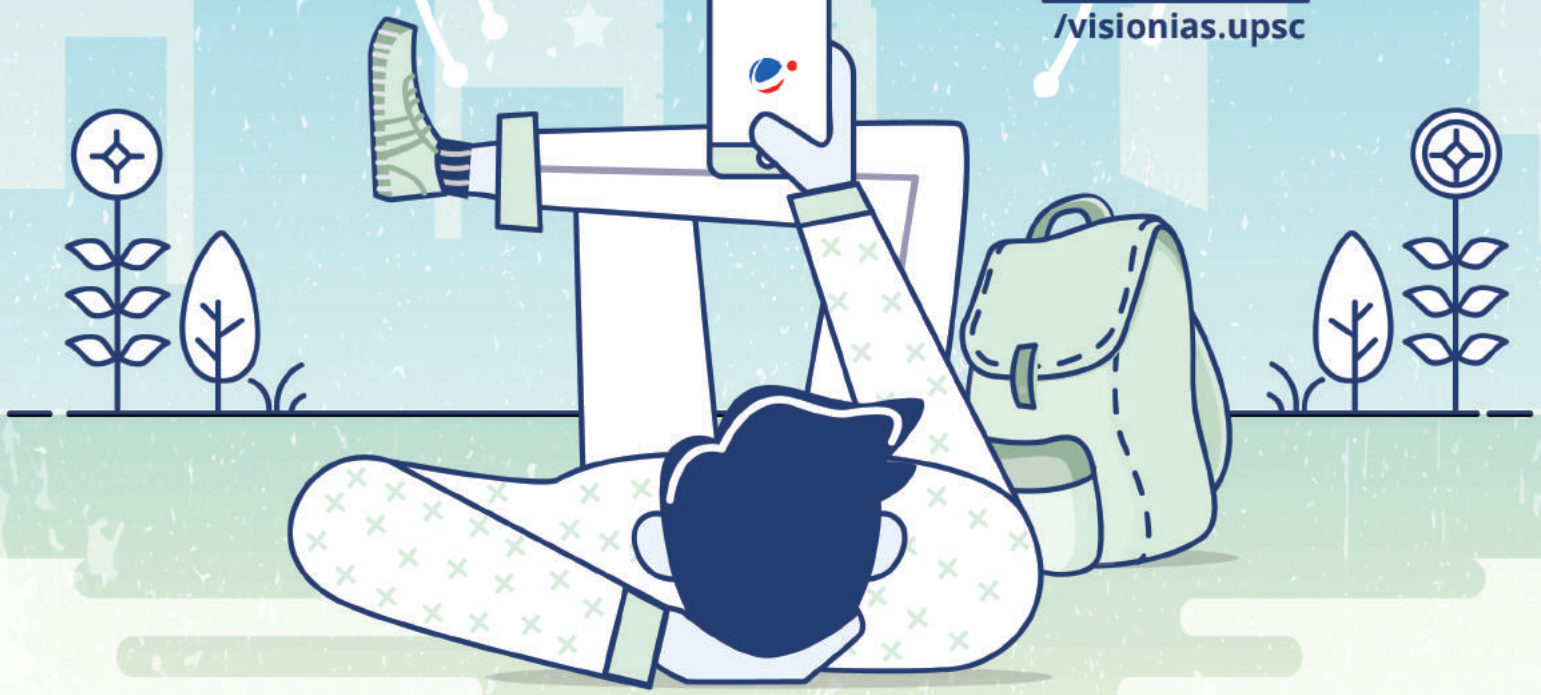

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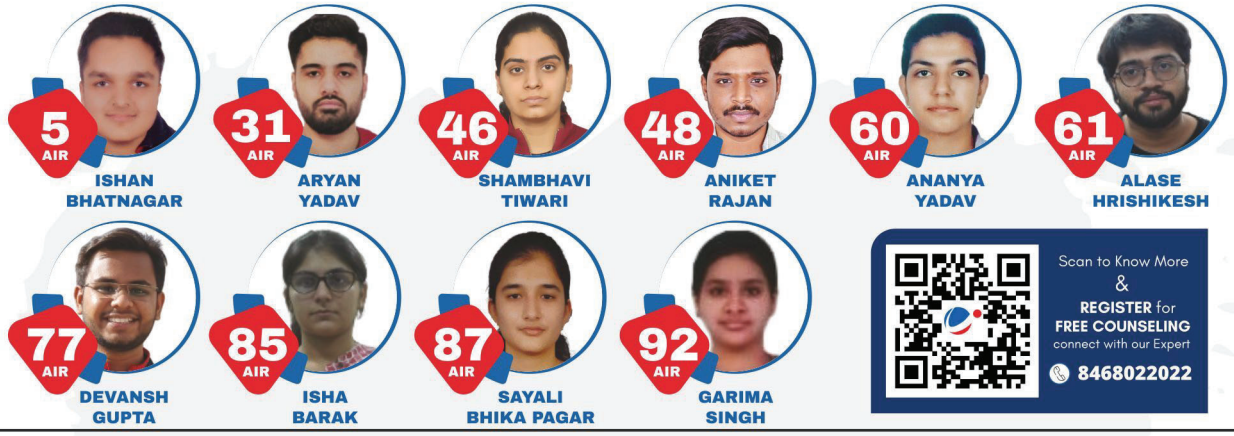

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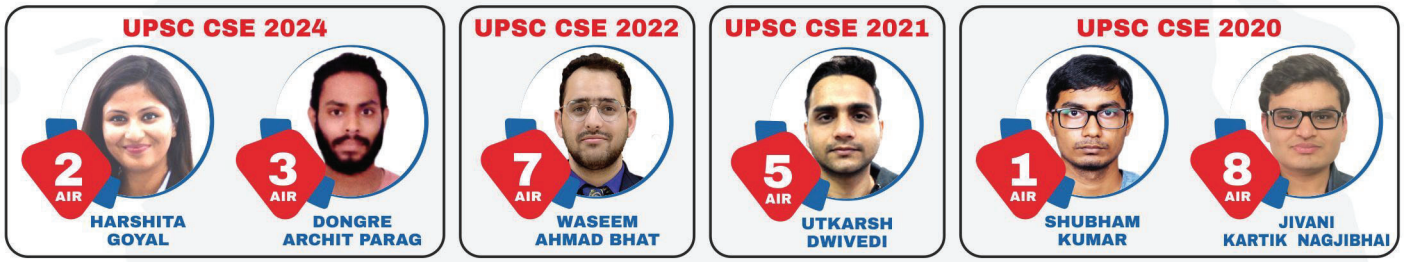

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