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FOR UPSC CIVIL SERVICE EXAMINATION

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Table of Contents

1. Government Mandate on Smartphone Source Code Access.....	2
2. Groundwater Contamination Crisis in Andhra Pradesh (CGWB Report 2025).....	3
3. Inter-State Linguistic Row: Kerala's Malayalam Language Bill, 2025	5
4. Impact of the 2026 Global Oil "Super-Glut" on India.....	6
5. Sweeping Reforms in India's Insolvency Regime: IBC (Amendment) Bill, 2025	8
6. Global Energy Leadership: India and China to Steer Post-US Transition	10
7. Revolutionizing Indian Agriculture: Digital Agriculture Mission (DAM) Expansion.....	11
8. ISRO PSLV-C62 Mission: Launch of Anvesha (EOS-N1) and Global Payloads	13
9. Strengthening Maritime Security: India's Deepening Engagement with ReCAAP.....	15
10. Fiscal Resilience: India's Path to the FY26 Deficit Target.....	16
11. Satellite Refueling: India's Leap Toward a Circular Space Economy	18
12. The Age of Consent Debate: Navigating POCSO and Adolescent Autonomy.....	20



1. Government Mandate on Smartphone Source Code Access

The Ministry of Electronics and Information Technology (MeitY) is currently deliberating on the **Indian Telecom Security Assurance Requirements (ITSAR)**. This draft framework proposes stringent security protocols for smartphone manufacturers (Original Equipment Manufacturers or OEMs) to ensure national cyber resilience. However, the move has faced significant pushback from global tech giants over concerns regarding Intellectual Property (IP) and data privacy.

Core Summary of the Proposal

- **Source Code Disclosure:** The Centre seeks access to the underlying source code of smartphones for "vulnerability analysis" to be conducted at designated Indian laboratories.
- **Mandatory Malware Scanning:** OEMs may be required to implement automatic, periodic malware scanning on all devices sold within the Indian market.
- **Data Logging Requirements:** The proposal mandates storing a device's activity logs locally for at least one year to facilitate forensic audits if required.
- **Vulnerability Testing:** Smartphones must undergo rigorous testing against a set of "security assurance" standards before being cleared for mass retail.
- **Industry Opposition:** Tech majors like Apple and Samsung argue that sharing source code compromises proprietary secrets and creates new security backdoors.
- **National Security Rationale:** The government cites the rising threat of pre-installed spyware and state-sponsored hardware trojans as the primary drivers for these measures.

Key Definitions

- **Source Code:** The fundamental set of computer instructions written in a human-readable programming language that dictates how a software or operating system functions.
- **Vulnerability Analysis:** A systematic review of security weaknesses in an information system to determine if the system is susceptible to any known attacks.
- **Hardware Trojan:** A malicious modification of an integrated circuit, typically during the manufacturing process, designed to disable or spy on the device.

Constitutional & Legal Framework

- **Article 19(2):** Provides the State with the power to impose reasonable restrictions on freedom of speech and expression in the interests of the sovereignty and integrity of India and the security of the State.
- **Information Technology Act, 2000 (Section 69):** Empowers the government to intercept, monitor, or decrypt information through any computer resource for national security.
- **National Cyber Security Policy (2013):** Aims to build a secure and resilient cyberspace for citizens, businesses, and the Government.

Surveillance tools

The Indian Telecom Security Assurance Requirements propose 83 security standards including **source code disclosure** for smartphone manufacturers in Indian markets



Gray area: Tech companies say the proposal lacks any global precedent.

■ **Background permission restriction:** Apps cannot access cameras, microphones or location services in the background when phones are inactive

■ **One-year log retention:** Devices must store security audit logs for 12 months

■ **Informing govt. of major updates:** Phone makers must notify a govt. body before releasing any major updates or security patches



- **Digital Personal Data Protection (DPDP) Act, 2023:** While focused on privacy, it balances the rights of individuals with the need to process data for "lawful purposes" related to state security.

Additional Key Considerations

- **Global Precedents:** Most democratic nations rely on "sandboxing" or third-party certifications rather than direct source code access, making India's proposal uniquely stringent.
- **Supply Chain Security:** The move is part of a broader strategy to de-risk the electronics supply chain, particularly concerning components sourced from "non-trusted" geographies.
- **Impact on Innovation:** Critics suggest that such mandates might delay product launches in India and discourage high-tech R&D investments.

Conclusion

The debate over source code access represents the classic "Security vs. Privacy" dilemma in the digital age. While the government's intent to safeguard citizens from sophisticated cyber warfare is legitimate, the methodology must ensure that India remains a competitive destination for global tech innovation. A middle ground, such as utilizing "Clean Rooms" for code inspection without physical transfer of IP, may be necessary to resolve the deadlock between the state and the industry.

UPSC Relevance

- **GS Paper II:** Government policies and interventions for development in various sectors; Issues arising out of their design and implementation.
- **GS Paper III:** Internal Security; Basics of cyber security; Role of media and social networking sites in internal security challenges.
- **Prelims:** IT Act 2000, MeitY initiatives, definitions of cyber-security terminology, and constitutional provisions regarding state security.

2. Groundwater Contamination Crisis in Andhra Pradesh (CGWB Report 2025)

The Central Ground Water Board (CGWB) Annual Ground Water Quality Report (2025) has raised a red flag regarding the alarming levels of chemical and heavy metal pollutants in Andhra Pradesh's aquifers, identifying it as one of the most affected states in India.

- **Multi-Pollutant Prevalence:** Groundwater in AP exceeds Bureau of Indian Standards (BIS) limits for a spectrum of contaminants including **Nitrate, Iron, Fluoride**, and toxic heavy metals like **Arsenic, Lead, and Cadmium**.
- **Uranium and Arsenic Hotspots:** Elevated Uranium levels (>30 ppb) were detected sporadically, specifically in 16 villages of **Sri Sathya Sai** district and 3 in **Tirupati**; additionally, five villages were identified as Arsenic hotspots (>10 ppb).
- **Salinity and Seawater Intrusion:** High **Electrical Conductivity (EC)** indicates significant seawater intrusion in coastal aquifers, further compounded by a high incidence of **Residual Sodium Carbonate (RSC)** in 26.87% of analyzed samples.
- **Fluoride and Hard Rock Aquifers:** Fluoride contamination exceeding 1.5 mg/l remains a systemic issue, particularly within the state's hard rock geological formations, leading to long-term health risks like fluorosis.



- **Seasonal Dilution Effect:** The report notes a marginal improvement in water quality following the monsoon, suggesting that recharge cycles temporarily dilute concentrations of Fluoride and EC-related salts.
- **Industrial and Trace Metal Alerts:** Specific alerts were issued for the presence of **Chromium, Cobalt, Manganese, Nickel, and Zinc**, indicating a complex mix of geogenic (natural) and anthropogenic (man-made) pollution sources.

Key Definitions

- **Electrical Conductivity (EC):** A measure of water's ability to conduct electricity, which serves as a proxy for the total dissolved solids (TDS) and salinity levels.
- **Residual Sodium Carbonate (RSC):** An index used to determine the bicarbonate hazard of irrigation water; high RSC levels can lead to soil alkalinity and reduced permeability.
- **Parts Per Billion (ppb):** A unit of concentration representing one microgram of a substance per liter of water ($\mu\text{g/L}$).
- **Aquifer:** A body of permeable rock or sediment that contains or transmits groundwater.



Constitutional and Legal Framework

- **Article 21:** The Right to Life includes the right to clean drinking water as interpreted by the Judiciary.
- **Article 48A:** The State shall endeavor to protect and improve the environment.
- **Article 51A(g):** It is the fundamental duty of citizens to protect and improve the natural environment including lakes and rivers.
- **The Environment (Protection) Act, 1986:** Provides the overarching legal framework for managing hazardous substances and groundwater quality.
- **Model Groundwater (Control and Regulation) Bill:** Circulated by the Center to states to ensure planned development and management of groundwater.

Additional Key Points

- **Geogenic vs. Anthropogenic:** While Uranium and Fluoride are often geogenic (leaching from rocks), high Nitrate levels are typically linked to excessive fertilizer use and poor sanitation.
- **Health Implications:** Prolonged exposure to Uranium can cause nephrotoxicity (kidney damage), while Arsenic is a known carcinogen linked to skin lesions and cardiovascular diseases.

Conclusion

The CGWB Report 2025 underscores a looming public health crisis in Andhra Pradesh driven by deteriorating groundwater chemistry. Addressing this requires a shift from mere "water extraction" to "aquifer management," integrating rainwater harvesting to dilute contaminants and deploying advanced filtration technologies (like Ion Exchange or Reverse Osmosis) in identified hotspots to ensure "Har Ghar Jal" is not just about quantity, but also quality.



UPSC Relevance

- **General Studies II:** Governance, Government Policies, and Interventions for Development in various sectors.
- **General Studies III:** Environmental Pollution and Degradation; Conservation of Resources (Water Security).
- **Prelims:** Reports by CGWB, BIS standards for drinking water, and properties of chemical pollutants (Arsenic, Uranium, Fluoride).

3. Inter-State Linguistic Row: Kerala's Malayalam Language Bill, 2025

The Malayalam Language Bill, 2025, passed by the Kerala Legislative Assembly, has triggered a significant federal dispute between Karnataka and Kerala. The primary point of contention is the mandatory requirement for Malayalam as the first language in schools, which Karnataka argues infringes upon the rights of Kannada-speaking minorities in border districts like Kasaragod.

- **Mandatory First Language:** The Bill stipulates that **Malayalam shall be the compulsory first language** from Classes 1 to 10 in all government, aided, and private schools across Kerala, aiming to institutionalize the language in the education system and administration.
- **Minority Areas Conflict:** The Karnataka Border Area Development Authority (KBADA) and the Karnataka government have flagged that this will adversely affect **Kannada-medium schools** in the Kasaragod region, where Kannada has traditionally been the first language and medium of instruction.
- **Contradictory Clauses:** While Clause 7 of the Bill provides certain safeguards for linguistic minorities, critics point out a contradiction in **Clause 7(3)**, which only grants exemptions from writing Malayalam exams to students from other states or foreign countries in Classes 9 and 10, leaving primary and middle school students vulnerable.
- **Federal Tensions:** Karnataka Chief Minister Siddaramaiah has termed the move "unconstitutional," citing that the Bill lacks explicit exemptions for linguistic minority zones, potentially forcing a "coercive" language policy on a population that is emotionally and culturally linked to Karnataka.
- **Past Precedent:** A similar attempt by the Kerala government was made via the **Malayalam Language (Promotion and Enrichment) Bill of 2015**, which was reportedly returned by the President of India following objections regarding minority rights.
- **Administrative Impact:** Beyond education, the Bill mandates Malayalam for all official correspondence, signage, and government websites, though it allows Tamil and Kannada speakers in notified areas to use their mother tongues for official communication.



Key Definitions

- **Linguistic Minority:** A group of people whose mother tongue is different from that of the majority in the State or a part of a State. In Kerala, Kannada and Tamil speakers are the primary notified linguistic minorities.



- **First Language:** The primary language taught in schools, often used as the medium of instruction or the highest-priority subject in the language curriculum.
- **Cooperative Federalism:** A concept where the Central and State governments work together to solve common problems, which Karnataka argues is being undermined by this unilateral language policy.

Constitutional & Legal Provisions

- **Article 29(1):** Grants any section of citizens residing in India having a distinct language, script, or culture the right to **conserve the same**.
- **Article 30(1):** Gives all minorities, whether based on religion or language, the right to **establish and administer educational institutions** of their choice.
- **Article 350A:** Directs every State and local authority to endeavor to provide adequate facilities for **instruction in the mother tongue at the primary stage** of education for children belonging to linguistic minority groups.
- **Article 350B:** Provides for a **Special Officer for Linguistic Minorities** (appointed by the President) to investigate all matters relating to safeguards provided for them.
- **Official Languages Act, 1963:** While this governs the use of languages at the Union level, it sets the precedent for how States can adopt regional languages for official purposes under Article 345.

Conclusion

The dispute highlights the delicate balance between a State's right to promote its regional identity and its constitutional obligation to protect minority rights. While Kerala's objective is to ensure administrative and educational uniformity through Malayalam, the absence of clear, permanent exemptions for border populations risks creating an educational barrier. A resolution likely requires a formal amendment to the Bill or a clear executive notification that preserves the "status quo" for Kannada and Tamil medium institutions, ensuring that linguistic pride does not lead to linguistic imposition.

UPSC Relevance

- **GS Paper II:** Issues relating to the development and management of Social Sector/Services relating to Education; Functions and responsibilities of the Union and the States; Protection of interests of Minorities.
- **GS Paper I:** Regionalism and Diversity of India.
- **Prelims:** Constitutional Articles (29, 30, 347, 350A, 350B), Seventh Amendment Act (1956), and the role of the Commissioner for Linguistic Minorities.

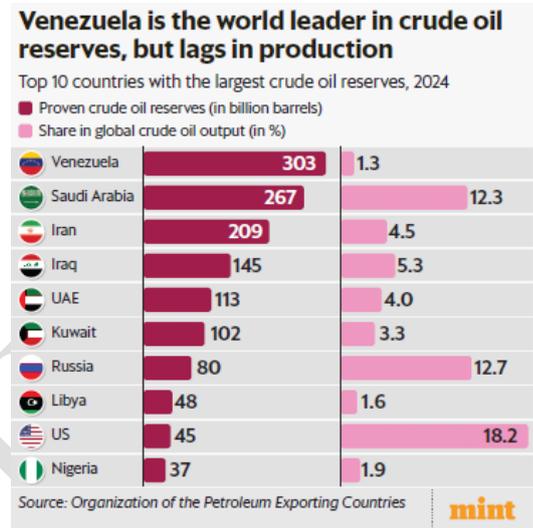
4. Impact of the 2026 Global Oil "Super-Glut" on India

The global oil market is transitioning from a period of supply constraints to a projected "super-glut" by 2026. This shift is driven by a surge in production, particularly the potential reintegration of Venezuelan reserves, coupled with slowing demand in major economies like China due to Electric Vehicle (EV) adoption.

- **Projected Supply Surplus:** The International Energy Agency (IEA) forecasts a massive global oil surplus of 3.8 million barrels per day in 2026, surpassing even the levels seen during the 2020 pandemic.



- **Venezuela's Strategic Role:** Despite holding the world's largest proven reserves (approx. 303 billion barrels), Venezuela currently accounts for only 1.3% of global output; lifting US sanctions could significantly "open the tap," further depressing global prices.
- **Demand Shift in China:** China's oil demand is expected to be restrained by the rapid transition to hybrid and electric vehicles, whereas India is projected to become the primary driver of global oil demand growth through 2030.
- **Price Projections:** Brent crude prices, which averaged \$80.7/barrel in 2024, are expected to slide into the low \$60s or even as low as \$52 by 2026, benefiting large net importers.
- **India's Consumption Pattern:** India's demand growth is specifically led by Petrol, Naphtha, and Diesel, with the country expected to account for a significant portion of the incremental 40% global consumption share held by India and China combined.
- **Economic Gains for India:** Lower crude prices directly reduce India's trade deficit and cooling inflationary pressures; a 10% change in crude prices historically impacts India's headline inflation by approximately 0.2%.



Key Definitions

- **Oil Glut:** A situation where the supply of crude oil far exceeds the market demand, leading to a rapid accumulation of inventories and a sharp decline in prices.
- **Proven Reserves:** The estimated quantity of crude oil which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs.
- **Upstream Investment:** Operations in the oil and gas industry involving exploration and production (finding and extracting the raw material).
- **Naphtha:** A flammable liquid hydrocarbon mixture used primarily as a feedstock for producing high-octane gasoline and in the petrochemical industry.

Constitutional & Legal Provisions

- **Article 297:** Specifies that all lands, minerals, and other things of value underlying the ocean within the territorial waters, continental shelf, or exclusive economic zone of India vest in the Union.
- **The Oilfields (Regulation and Development) Act, 1948:** Provides the basic legal framework for the regulation of oilfields and the development of mineral oil resources in India.
- **Petroleum and Natural Gas Rules, 1959:** Governs the grant of exploration licenses and mining leases.
- **Strategic Petroleum Reserves (SPR) Program:** A statutory initiative under the Ministry of Petroleum and Natural Gas to ensure energy security by maintaining emergency fuel buffers.

Additional Key Points

- **Internal Challenges:** Despite lower global prices, India faces stagnant domestic production due to a lack of new major discoveries, increasing its import reliance (currently over 85%).



- **Geopolitical Risks:** While a glut is forecast, escalating conflicts in the Middle East or Ukraine remain "wildcards" that could disrupt supply chains and spike prices above consensus forecasts.

Conclusion

The anticipated 2026 "super-glut" presents a dual scenario: a fiscal windfall for oil-importing nations like India and a period of instability for oil-producing economies. For India, the lower import bill offers a strategic window to strengthen fiscal health and invest in green energy transitions. However, the long-term challenge remains the country's high vulnerability to external supply shocks and the urgent need to revitalize domestic exploration and production (E&P) activities.

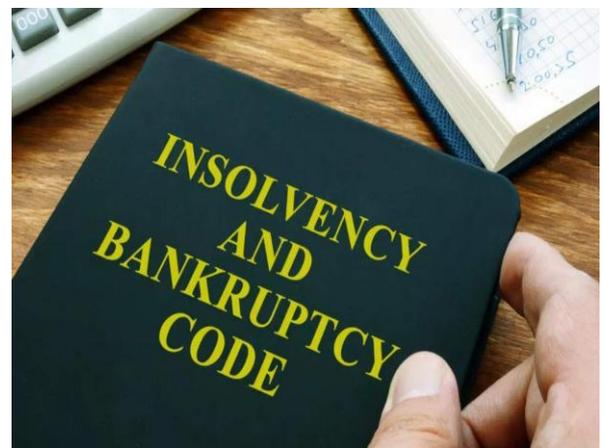
UPSC Relevance

- **GS Paper III:** Indian Economy (Energy sector, Import-Export, Trade Deficit), Infrastructure (Energy), and Economic Development.
- **GS Paper II:** International Relations (Impact of US-Venezuela relations on India, Geopolitics of Oil).
- **Prelims:** IEA and World Bank reports, OPEC membership/reserves, and basic concepts of inflation and trade balance.

5. Sweeping Reforms in India's Insolvency Regime: IBC (Amendment) Bill, 2025

The Union Government is set to introduce the Insolvency and Bankruptcy Code (Amendment) Bill, 2025, during the upcoming Budget Session. Based on the recommendations of a Lok Sabha Select Committee, the Bill aims to overhaul the current framework by prioritizing efficiency, reducing litigation, and institutionalizing the "Clean Slate" principle to attract better resolution applicants.

- **Clean Slate Principle:** The Bill formalizes the doctrine that a successful bidder (Resolution Applicant) takes over the distressed company with a fresh start, ensuring all past undisclosed or government liabilities are extinguished upon the approval of the resolution plan.
- **Prospective Application:** Contrary to committee suggestions for retrospective effect from 2016, the government proposes a prospective application to avoid disrupting hundreds of ongoing cases currently under judicial scrutiny, thereby ensuring legal certainty.
- **Speeding Up Resolutions:** To address systemic delays, the Bill introduces mandatory timelines for the National Company Law Appellate Tribunal (NCLAT) to dispose of appeals within three months and seeks to expedite the admission of cases.
- **Decriminalization and Governance:** The reforms include the decriminalization of technical or good-faith lapses—replacing them with civil penalties—and empowering the Insolvency and Bankruptcy Board of India (IBBI) to specify a strict Code of Conduct for the Committee of Creditors (CoC).
- **Cross-Border and Group Insolvency:** For the first time, a robust legislative framework for cross-border insolvency (involving foreign assets/debtors) and "group insolvency" (simultaneous resolution of related companies) is being integrated into the Code.





- **Liquidation Reforms:** To eliminate conflicts of interest, the Bill proposes that a Resolution Professional (RP) who conducted the initial insolvency process shall be ineligible to act as the Liquidator for the same firm.

Key Definitions

- **Clean Slate Doctrine:** A legal theory ensuring that a new owner of an insolvent company is not "haunted" by previous debts, penalties, or legal claims not explicitly included in the approved resolution plan.
- **Committee of Creditors (CoC):** The decision-making body in the insolvency process, primarily composed of financial creditors who vote on the viability of resolution plans.
- **Moratorium:** A legal period under Section 14 of the IBC during which all judicial proceedings, recovery of security interest, or sale of assets against the corporate debtor are suspended.
- **Haircut:** The percentage reduction in the total claim value that creditors agree to accept during a debt resolution process.

Constitutional & Legal Provisions

- **Article 19(1)(g):** The right to practice any profession or carry on any occupation, trade, or business; IBC balances this with the need for efficient market exit.
- **Article 300A:** Right to property; the IBC provides a legal procedure to deprive a person of property (shares/assets) for the purpose of debt recovery and economic revival.
- **Section 31 (IBC, 2016):** The core provision governing the approval of resolution plans; the 2025 amendment seeks to clarify the binding nature of these plans on Central/State governments and local authorities.
- **Doctrine of Finality:** A judicial principle reinforced by the Supreme Court (e.g., *Ghanashyam Mishra case*) stating that once a resolution plan is approved, it cannot be reopened for undecided past claims.

Additional Key Points

- **Role of Technology:** The Bill envisions an integrated "e-platform" for the insolvency ecosystem to minimize physical touchpoints and enhance transparency in asset bidding.
- **Pre-Packaged Insolvency (PPIRP):** The voting threshold for initiating pre-packs (currently for MSMEs) is proposed to be reduced from 66% to 51% to encourage out-of-court settlements.

Conclusion

The 2025 amendments signify a shift from a "process-oriented" to a "result-oriented" insolvency regime. By providing a statutory "clean slate" and addressing the "perverse incentives" in liquidation, the government aims to restore investor confidence. However, the refusal to apply the clean slate retrospectively remains a point of contention that might leave some legacy cases vulnerable to "hydra-headed" litigation from state and tax authorities.

UPSC Relevance

- **GS Paper III:** Indian Economy (Insolvency and Bankruptcy, NPA management, Ease of Doing Business), Statutory Bodies (IBBI).
- **GS Paper II:** Government Policies and Interventions; Judicial interpretation of economic laws.



- **Prelims:** Key sections of IBC, roles of NCLT/NCLAT, and specific landmark judgments like *Essar Steel* and *Ghanashyam Mishra*.

6. Global Energy Leadership: India and China to Steer Post-US Transition

Following the recent announcement of the United States' withdrawal from 66 multilateral organizations—including the UNFCCC and the International Solar Alliance (ISA)—the global energy roadmap is witnessing a historic pivot. Senior UN officials, including Damilola Ogunbiyi (CEO of SEforALL), have asserted that while the US exit poses challenges, the clean energy transition has become "unstoppable" due to economic fundamentals, with India and China now poised to lead global climate diplomacy.

- **US Strategic Retreat:** In January 2026, the US administration officially initiated withdrawal from foundational climate treaties (UNFCCC, IPCC) and specialized agencies like UN Energy and IRENA, citing them as "misaligned with national interests."
- **Indo-Chinese Leadership:** India and China are expected to redraw the global energy roadmap, leveraging their massive market scales to drive down the cost of green technologies such as solar PV, wind turbines, and batteries, making them affordable for the Global South.
- **Resilience of Multilateralism:** Despite the US exit, the International Solar Alliance (ISA), headquartered in Gurugram, remains operationally robust; experts note that the US financial contribution was marginal (approx. 1% of total funds), though its strategic counsel will be missed.
- **Economic Inevitability:** The transition is increasingly driven by "strategic necessity" rather than just idealism; global investment in clean energy is now nearly double that of fossil fuels, as renewables have become the cheapest source of new electricity generation.
- **Focus on LDCs and Energy Access:** UN Energy and SEforALL emphasize that India's leadership is critical for Least Developed Countries (LDCs) to leapfrog traditional carbon-intensive development through localized manufacturing and south-south collaboration.
- **India's Domestic Shield:** India's robust domestic manufacturing ecosystem (approaching 144 GW in solar module capacity) serves as a strategic buffer against global policy volatility, ensuring self-reliance in the clean energy supply chain.

Key Definitions

- **Multilateralism:** The practice of organizing national policies in groups of three or more states through institutionalized arrangements or international organizations.
- **Energy Transition:** A significant structural change in an energy system regarding supply and consumption, typically moving from fossil-fuel-based to zero-carbon energy sources.
- **LDCs (Least Developed Countries):** A group of countries that, according to the UN, exhibit the lowest indicators of socioeconomic development, for whom energy access is a primary developmental hurdle.
- **South-South Collaboration:** The exchange of resources, technology, and knowledge between developing countries (the Global South) to achieve shared developmental goals.

Constitutional & Legal Provisions

- **Article 51(c):** Directive Principle of State Policy (DPSP) that mandates the State to foster respect for international law and treaty obligations.



- **Article 253:** Empowers Parliament to make any law for the whole or any part of the territory of India for implementing any treaty, agreement, or convention with any other country.
- **Section 3 of Environment (Protection) Act, 1986:** Provides the Union government the power to take measures to protect and improve the environment, which includes implementing international climate commitments.
- **International Solar Alliance (ISA) Framework Agreement:** A treaty-based intergovernmental organization that provides the legal basis for India's global leadership in solar energy.

Additional Key Points

- **Technological Edge:** India's focus on AI-based tools for grid management and urban cooling demand mapping is being highlighted as a replicable model for other developing nations.
- **Strategic Petroleum Reserves (SPR):** While the transition is ongoing, India continues to maintain SPRs to safeguard against the immediate volatility in oil markets potentially caused by shifting US foreign policy.

Conclusion

The US withdrawal from global climate governance marks a "strategic blunder" that creates a leadership vacuum in the \$trillion-dollar green economy. For India, this represents both a challenge and a monumental opportunity to cement its status as a "Vishwa Bandhu" (Global Friend) by spearheading inclusive, affordable, and sustainable energy solutions. The future of the Paris Agreement now rests largely on the "Asian Pivot," where India and China's ability to sustain clean growth will determine the planet's climate trajectory.

UPSC Relevance

- **GS Paper II:** International Relations (Effect of policies of developed countries on India's interests), Important International institutions, agencies and fora.
- **GS Paper III:** Environment (Climate Change, Renewable Energy), Science and Technology (Energy security), Infrastructure.
- **Prelims:** ISA (Headquarters, founding members), UNFCCC vs Paris Agreement, IRENA, and SEforALL.

7. Revolutionizing Indian Agriculture: Digital Agriculture Mission (DAM) Expansion

The Union Government is set to significantly augment the Digital Agriculture Mission (DAM), with proposed budgetary outlays projected to reach ₹7,500 crore for the FY27–FY30 period. This 166% increase highlights a strategic shift from traditional, siloed e-governance to a unified, AI-driven Digital Public Infrastructure (DPI) aimed at boosting productivity for nearly half of India's workforce.

- **Digital Public Infrastructure (DPI):** The mission centers on creating a "Federated Architecture" through **Agri-Stack**, which provides every farmer with a unique "Farmer ID" (Kisan ki Pehchaan) linked to land records, crop data, and livestock.
- **AI-Powered Precision Farming:** Moving beyond static SMS advisories, the expanded mission leverages Artificial Intelligence for real-time decision-making in pest management, soil health monitoring, and local monsoon onset forecasting.





- **Economic Impact and Loss Mitigation:** With annual crop losses due to pests estimated at ₹2 trillion, the **National Pest Surveillance System (NPSS)** uses machine learning to allow farmers to diagnose 432 pests across 66 crops via simple smartphone images.
- **Unified Decision Support:** The **Krishi Decision Support System (Krishi-DSS)** integrates geospatial data from RISAT-1A and VEDAS, unifying satellite imagery, weather patterns, and soil maps into a single platform for evidence-based policy and insurance claims.
- **Data-Driven Financial Inclusion:** By creating a "Crop Sown Registry" through Digital Crop Surveys, the mission enables paperless MSP-based procurement and seamless, credit-linked Kisan Credit Card (KCC) loans via the JanSamarth platform.
- **Strategic Integration:** The mission aligns with the **IndiaAI Mission** (outlay of ₹10,372 crore), treating agriculture as a priority sector to build indigenous AI models that cater to India's unique agro-climatic zones and regional languages.

Key Definitions

- **Agri-Stack:** A collection of digital databases and entry points that allows various stakeholders to provide services to farmers, functioning as a digital foundation similar to the "Aadhaar" ecosystem.
- **Precision Agriculture:** A farming management concept based on observing, measuring, and responding to inter and intra-field variability in crops using technology like GPS and AI.
- **Geogenic vs. Anthropogenic:** While not directly in the farm text, in the context of soil health maps, it refers to whether soil characteristics are naturally occurring (geogenic) or man-made (anthropogenic, like fertilizer runoff).
- **Ground-Truthing:** The process of sending technicians or farmers to the field to verify that the information gathered from satellite imagery or AI models matches the reality on the ground.

Constitutional & Legal Provisions

- **Article 246 (Seventh Schedule):** Agriculture is primarily a **State List** subject (Entry 14), necessitating the "Federated" collaborative model between the Centre and States for Agri-Stack.
- **Article 350A:** Relates to the provision of facilities for instruction in mother tongue; reflected in the mission's push for AI chatbots (Kisan e-Mitra) supporting 11+ regional languages.
- **Article 38:** Directive Principle mandating the State to minimize inequalities in income and status; digital missions aim to bridge the "digital divide" between smallholders and large farmers.
- **National Geospatial Policy, 2022:** Provides the regulatory framework for the Krishi-DSS to use high-resolution satellite data for public and private agricultural innovation.
- **Digital Personal Data Protection (DPDP) Act, 2023:** Governs how the Farmer Registry data is collected, stored, and shared with third-party agritech service providers.

Additional Key Points

- **Targeting Smallholders:** The mission aims to create digital identities for 11 crore farmers by FY 2026-27, specifically focusing on ease of access for small and marginal farmers who currently face high barriers to formal credit.
- **Youth Employment:** The mission is expected to generate "Agri-entrepreneurship" opportunities for 2.5 lakh local youth and "Krishi Sakhis" to act as digital intermediaries.



Conclusion

The expansion of the Digital Agriculture Mission marks India's transition from "subsistence-based" to "data-driven" farming. By treating data as a sovereign public good, the government is building an ecosystem where AI acts as a "Force Multiplier" for the individual farmer. Success, however, will hinge on overcoming the last-mile digital literacy gap and ensuring that the "Clean Slate" of digital records accurately reflects the ground reality of fragmented land ownership.

UPSC Relevance

- **GS Paper III:** Economics of Animal-Rearing; Information Technology in the aid of farmers; E-technology in the aid of farmers; Issues related to direct and indirect farm subsidies and MSP.
- **GS Paper II:** e-Governance- applications, models, successes, limitations, and potential; Government policies and interventions for development in various sectors.
- **Prelims:** Components of Agri-Stack, Nodal Ministry (MoA&FW), IndiaAI Mission pillars, and the role of organizations like ISRO (VEDAS) in Krishi-DSS.

8. ISRO PSLV-C62 Mission: Launch of Anvesha (EOS-N1) and Global Payloads

On January 12, 2026, the Indian Space Research Organisation (ISRO) conducted the launch of the PSLV-C62 mission from the Satish Dhawan Space Centre, Sriharikota. While the mission aimed to significantly boost India's surveillance capabilities through a high-end hyperspectral satellite, ISRO reported a technical anomaly during the final stages of the flight, specifically affecting the third stage.

- **Primary Payload - EOS-N1 (Anvesha):** The main satellite, developed by the **Defence Research and Development Organisation (DRDO)**, is a hyperspectral imaging satellite. It is designed for strategic reconnaissance, capable of "seeing" across hundreds of narrow spectral bands to detect hidden assets and monitor borders.
- **Commercial and Academic Scale:** Executed by **NewSpace India Limited (NSIL)**, the mission carried 15 co-passenger satellites. These included 14 commercial and academic payloads from domestic and international customers (Nepal, Spain, Brazil, etc.) and a dedicated technology demonstrator.
- **Technology Milestone - AayulSAT:** The mission featured AayulSAT by Bengaluru startup OrbitAID, marking India's first attempt at demonstrating **on-orbit satellite refueling** technology to address space debris and extend satellite lifespans.
- **Kestrel Initial Demonstrator (KID):** A significant secondary objective involved a re-entry experiment. After deploying other satellites, the rocket's fourth stage (PS4) was to be restarted to de-boost and release the KID capsule (Spain) for a controlled re-entry and splashdown in the South Pacific.
- **Vehicle Configuration:** The flight utilized the **PSLV-DL variant**, which features two solid strap-on motors. This was the 64th flight of the PSLV, known as ISRO's "workhorse," having previously powered missions like Chandrayaan-1 and Aditya-L1.
- **Mission Anomaly:** Post-launch, ISRO confirmed that the performance was normal until the third stage (PS3), after which a deviation in the flight path was observed. This follows a similar setback in May 2025 (PSLV-C61), highlighting the complexities of maintaining high reliability in the PSLV's third-stage operations.



Key Definitions

- **Hyperspectral Imaging:** A technique that collects and processes information from across the electromagnetic spectrum. It allows for material identification (like camouflaged equipment) that regular cameras cannot see.
- **Sun-Synchronous Orbit (SSO):** A polar orbit in which the satellite passes over any given point of the Earth's surface at the same local solar time.
- **Strap-on Motors:** Small solid propellant rockets attached to the first stage of a launch vehicle to provide additional thrust during initial lift-off.
- **On-Orbit Refueling:** The process of transferring propellant to a satellite while it is in space, extending its operational life beyond its initial fuel capacity.

Constitutional & Legal Provisions

- **Article 51A(h):** Part of the Fundamental Duties, it urges citizens to develop the scientific temper, humanism, and the spirit of inquiry and reform.
- **NewSpace Policy (2020):** Guided the involvement of NSIL and IN-SPACE to open the space sector for private participation, seen in this mission's diverse startup payloads.
- **The Space Activities Bill (Pending):** Aims to provide a legal framework for space activities in India, addressing issues of liability, commercial usage, and international treaty compliance.
- **Registration Convention (1975):** An international treaty requiring India to maintain a registry of objects launched into outer space, managed by the UN Office for Outer Space Affairs (UNOOSA).

Additional Key Points

- **Strategic Autonomy:** The development of Anvesha by DRDO underscores India's move toward self-reliance (Atmanirbharta) in high-resolution space-based intelligence.
- **Space Sustainability:** Demonstrations like AayulSAT are part of a global trend toward "Circular Space Economy" by reducing the rate at which satellites become "zombie" space debris.

Conclusion

The PSLV-C62 mission reflects the duality of modern space exploration: the ambitious push toward commercialization and advanced strategic technology vs. the inherent risks of rocket science. While the anomaly in the third stage represents a hurdle for ISRO's 2026 calendar, the sheer diversity of the payload—ranging from Spanish re-entry capsules to Indian refueling demonstrators—proves that India's space ecosystem is no longer just about the government, but a thriving hub for global and private innovation.

UPSC Relevance

- **GS Paper III:** Science and Technology (Development and their applications); Achievements of Indians in science & technology; Indigenization of technology; Awareness in the fields of Space.
- **GS Paper II:** Bilateral, regional and global groupings and agreements involving India (NSIL's international partnerships).
- **Prelims:** PSLV variants (DL, XL, QL), difference between Hyperspectral and Multispectral imaging, role of NSIL vs IN-SPACE, and mission objectives of Anvesha.



9. Strengthening Maritime Security: India's Deepening Engagement with ReCAAP

India, a founding member of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP), is significantly intensifying its collaboration with the Singapore-based Information Sharing Centre (ISC). This move aims to enhance regional maritime safety through the **Maritime Rescue Coordination Centre (MRCC)**, aligning with India's broader strategic vision for a secure and stable Indo-Pacific.

- **Focal Point Synergy:** India is set to deepen the operational link between its Maritime Rescue Coordination Centre (MRCC)—the designated Indian focal point—and the ReCAAP ISC to streamline real-time reporting and response.
- **Evolving Threat Landscape:** Maritime crime in Asian waters has transitioned from high-profile hijackings and kidnappings to sea robberies targeting engine parts and machinery for parallel markets, requiring refined surveillance strategies.
- **Institutional Leadership:** The current leadership of ReCAAP ISC by **Vijay D. Chafekar**, a retired Additional Director General of the Indian Coast Guard, underscores India's influential role in shaping regional maritime security policies.
- **Global Interest:** Originally an Asian initiative, ReCAAP's 21-nation membership now includes non-Asian powers like the US, UK, and Germany, reflecting its status as a "Centre of Excellence" for maritime information sharing.
- **Operational Hotspots:** Despite successful enforcement, the **Straits of Malacca and Singapore (SOMS)** remain a critical vulnerability, accounting for a high volume of incidents (108 in 2025), necessitating continued multilateral patrolling.
- **Domestic Enforcement Success:** Targeted arrests by Indian authorities at anchorages like Kakinada have demonstrated a "deterrent effect," leading to a notable decline in petty sea robberies within Indian territorial waters.



Key Definitions

- **Piracy:** Under international law (UNCLOS), illegal acts of violence or detention committed for private ends by a private ship on the **high seas** (beyond national jurisdiction).
- **Armed Robbery Against Ships:** Similar illegal acts committed within a State's **internal waters, archipelagic waters, or territorial sea**.
- **Focal Point:** A designated national agency (e.g., Indian Coast Guard) responsible for 24/7 communication with the ISC to facilitate immediate action on reported incidents.
- **Hyperspectral Imaging:** Advanced surveillance technology (often used on ships/satellites) that detects objects by analyzing a wide spectrum of light, useful for identifying camouflaged pirate vessels.

Constitutional & Legal Provisions

- **Article 51(c):** A Directive Principle of State Policy (DPSP) that mandates India to foster respect for international law and treaty obligations, providing the basis for participating in ReCAAP.



- **The Maritime Anti-Piracy Act, 2022:** India's domestic legislation that gives effect to **UNCLOS** (United Nations Convention on the Law of the Sea). It enables Indian authorities to prosecute pirates apprehended on the high seas, regardless of nationality.
- **Section 3 of the Anti-Piracy Act:** Prescribes punishment for piracy, ranging from life imprisonment to death if the act causes loss of life.
- **Article 253:** Empowers Parliament to make laws for implementing international agreements, which was the constitutional route used to enact the 2022 Anti-Piracy law.

Additional Key Points

- **The "Clean Slate" in Maritime Security:** Just as in insolvency law, the "clean slate" principle in maritime law ensures that vessels seized from pirates and legally auctioned are free from prior liabilities or criminal claims.
- **SAGAR Vision:** Security and Growth for All in the Region (SAGAR) remains the umbrella framework for India's maritime engagements, emphasizing cooperative rather than confrontational security.

Conclusion

India's proactive stance within ReCAAP signifies its emergence as a "Preferred Security Partner" in the Indian Ocean Region (IOR). By integrating domestic legal frameworks like the Maritime Anti-Piracy Act with regional information-sharing hubs, India is successfully bridging the gap between national enforcement and international cooperation. As ReCAAP approaches its 20th anniversary in March 2026, the transition of maritime threats toward "petty theft" highlights a success in suppressing major piracy, but also the need for sustained, granular surveillance in busy shipping lanes.

UPSC Relevance

- **GS Paper II:** Bilateral, regional and global groupings and agreements involving India; Effect of policies and politics of developed and developing countries on India's interests.
- **GS Paper III:** Internal Security (Maritime Security); Role of external state and non-state actors in creating challenges to internal security.
- **Prelims:** ReCAAP (Headquarters: Singapore), UNCLOS definitions of Piracy vs Armed Robbery, and the role of the Indian Coast Guard as the MRCC.

10. Fiscal Resilience: India's Path to the FY26 Deficit Target

Economic indicators for the financial year 2025-26 (FY26) suggest that the Government of India is well-positioned to achieve its fiscal deficit target of 4.4% of Gross Domestic Product (GDP). Despite a downward revision in nominal GDP growth projections from 10.1% to 8%, fiscal prudence remains intact due to robust revenue management and controlled expenditure, potentially allowing the government to overachieve its consolidation goals.

- **Fiscal Consolidation Trajectory:** The government has committed to a steady glide path, targeting a reduction of the fiscal deficit from 4.8% in FY25 to 4.4% in FY26, with a long-term goal of reaching below 4.5% as mandated by the revised fiscal roadmap.
- **Nominal vs. Real Growth Dynamics:** While the National Statistical Office (NSO) revised the nominal GDP growth target downward to 8%, the "denominator effect" remains stable as absolute economic figures align with original budget estimates, preventing a slippage in the deficit-to-GDP ratio.



- **Revenue Buffers:** A projected gross tax revenue shortfall of approximately ₹1.9 trillion is being mitigated by a significant buffer of ₹0.5 trillion in unutilized GST compensation cess and higher-than-expected non-tax revenues, including RBI dividends.
- **Expenditure Calibration:** Fiscal discipline is supported by a 2% saving in revenue expenditure (day-to-day costs), while Capital Expenditure (Capex) remains at nearly 100% of the budgeted amount (₹10.18 lakh crore) to sustain economic momentum.
- **Global Investor Sentiment:** Achieving or bettering the target (potentially to 4.3%) acts as a strong "optical signal" to global rating agencies and investors, reinforcing India's image as a macroeconomically stable destination amidst global volatility.
- **Inflation Influence:** A lower deflator (the gap between nominal and real GDP) due to softer food and oil prices has contributed to the lower nominal growth rate, reflecting a transition toward a more stable, low-inflationary environment.

Key Definitions

- **Fiscal Deficit:** The difference between the government's total expenditure and its total receipts (excluding borrowings); it indicates the total borrowing requirements of the government.
- **Nominal GDP:** The market value of all finished goods and services produced within a country in a year, calculated at current market prices without adjusting for inflation.
- **GDP Deflator:** A measure of the level of prices of all new, domestically produced, final goods and services in an economy; it is the ratio of nominal GDP to real GDP.
- **Crowding Out:** A situation where high government borrowing leads to an increase in interest rates, making it more expensive for the private sector to borrow and invest.



Constitutional & Legal Provisions

- **Article 112:** Requires the President to lay before both Houses of Parliament an "Annual Financial Statement" (the Budget) showing the estimated receipts and expenditure for the year.
- **Article 266:** Establishes the Consolidated Fund of India, from which all government expenditures (except for the Contingency Fund) are met, necessitating legislative approval.
- **FRBM Act, 2003:** The Fiscal Responsibility and Budget Management Act provides the legal framework for fiscal discipline, requiring the government to set and adhere to annual targets for deficit and debt.
- **Finance Act:** The annual legislation that gives effect to the government's taxation proposals, essentially the legal instrument for revenue collection.

Additional Key Points

- **Strategic Buffer:** The government's ability to "better" the target suggests a shift from mere compliance to active fiscal management, creating a cushion for potential external shocks.
- **Quality of Expenditure:** By protecting Capex while trimming revenue spending, the government is ensuring that borrowing is used for asset creation rather than just consumption.



Conclusion

India's adherence to the 4.4% fiscal deficit target in FY26, despite a cooling nominal growth environment, underscores a mature approach to macro-economic management. By balancing the need for aggressive growth-oriented capital spending with strict revenue discipline, the government is successfully maintaining its creditworthiness. This fiscal "over-performance" provides the necessary stability to transition toward the broader "Viksit Bharat 2047" vision, ensuring that high growth is not compromised by unsustainable debt.

UPSC Relevance

- **GS Paper III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment; Government Budgeting (Fiscal Policy, FRBM Act).
- **GS Paper II:** Government policies and interventions for development in various sectors.
- **Prelims:** Definition of Fiscal Deficit, Nominal vs. Real GDP, components of Capital vs. Revenue expenditure, and recent NSO data trends.

11. Satellite Refueling: India's Leap Toward a Circular Space Economy

On January 12, 2026, the Indian Space Research Organisation (ISRO) launched the PSLV-C62 mission, carrying AyulSAT, a groundbreaking technology demonstrator by Chennai/Bengaluru-based startup OrbitAid Aerospace. This mission marks India's entry into the elite club of nations capable of on-orbit satellite servicing, aiming to transition the space sector from "launch and discard" to a sustainable, serviceable model.

- **On-Orbit Refueling Demonstration:** AyulSAT is designed to perform internal propellant, power, and data transfers in microgravity. This validates the "orbital petrol pump" concept, allowing satellites to be topped up rather than decommissioned when they run out of fuel.
- **Standard Interface for Docking (SIDRP):** The mission utilizes the proprietary **Standard Interface for Docking and Refuelling Port**, a patent-pending mechanism that provides a universal "plug-and-play" connector for future satellites to dock and receive life-extension services.
- **Mitigating Space Debris:** By extending a satellite's operational life, this technology directly addresses the **Kessler Syndrome**—a scenario where the density of objects in Low Earth Orbit (LEO) leads to a cascade of collisions, creating more debris and making orbits unusable.
- **Economic Paradigm Shift:** The mission lays the foundation for an "**On-Orbit Economy**," where the high cost of launching replacement satellites (millions of dollars) is replaced by the more affordable option of servicing existing assets.
- **Global Standing:** Success in this mission makes India only the second country (after China) to publicly demonstrate such a capability, placing it ahead of many traditional space powers in the commercial in-orbit servicing market.
- **Strategic Integration:** AyulSAT was launched as a co-passenger alongside DRDO's **Anvesha (EOS-N1)**, a hyperspectral imaging satellite, showcasing a blend of private innovation and strategic national priority on a single PSLV flight.





Key Definitions

- **Kessler Syndrome:** A theoretical scenario where the amount of junk in orbit around Earth reaches a point where it creates a chain reaction of collisions, making space activities and satellites impossible for generations.
- **Life Extension:** The process of providing additional fuel, power, or repairs to a satellite to keep it operational beyond its original designed mission duration.
- **Propellant Transfer:** The hazardous and complex process of moving liquid fuel between two tanks or two spacecraft in the vacuum and zero-gravity of space.
- **Hyperspectral Imaging:** An imaging technique that collects and processes information from across the electromagnetic spectrum, used by the primary payload (Anvesha) to identify materials on the ground with high precision.

Constitutional & Legal Provisions

- **Article 51A(h):** Part of the Fundamental Duties of Indian citizens to develop the scientific temper and the spirit of inquiry; this mission exemplifies the pinnacle of Indian scientific advancement.
- **Space Policy 2023:** The regulatory framework that allowed startups like OrbitAid to utilize ISRO's launch facilities and receive technical mentorship, effectively "unlocking" the space sector for private players.
- **Debris-Free Space Mission 2030:** An ISRO-led initiative that aims to ensure all Indian space missions leave zero debris in orbit by the end of the decade; satellite refueling is a core technological pillar of this mission.
- **Registration Convention (1975):** An international treaty that requires India to register every object launched into space with the United Nations, ensuring accountability for space debris and orbital safety.

Additional Key Points

- **The Chaser Satellite:** Following AyulSAT (the target), OrbitAid plans to launch a "chaser" satellite by late 2026 to demonstrate actual docking and fuel transfer between two independent spacecraft.
- **Bilateral Synergy:** OrbitAid is also collaborating with Japanese firm **ispace** to adapt the SIDRP interface for sustainable lunar infrastructure, indicating the technology's potential for deep-space exploration.

Conclusion

The AyulSAT mission is a transformative moment for the Indian space ecosystem, signaling a move toward "Space Sustainability." By proving that satellites can be refueled and serviced in orbit, India is not just reducing the risk of a "Kessler catastrophe" but is also positioning itself as a global hub for space logistics. This "servicing-first" approach will be crucial for the upcoming era of mega-constellations and human spaceflight missions like Gaganyaan.

UPSC Relevance

- **GS Paper III:** Science and Technology- developments and their applications and effects in everyday life; Achievements of Indians in science & technology; Indigenization of technology and developing new technology; Awareness in the fields of Space.



- **GS Paper II:** Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
- **Prelims:** ISRO's PSLV-C62 mission details, definitions of Kessler Syndrome, Space Debris, and the role of NSIL and IN-SPACe in supporting startups.

12. The Age of Consent Debate: Navigating POCSO and Adolescent Autonomy

The Supreme Court of India, in *State of Uttar Pradesh vs. Anurudh & Anr. (2026)*, has highlighted the unintended criminalization of consensual adolescent relationships under the Protection of Children from Sexual Offences (POCSO) Act, 2012. This judicial acknowledgment has reignited the discourse on whether the "bright-line" age of consent—currently fixed at 18 years—needs recalibration to distinguish between predatory abuse and evolving adolescent sexuality.

- **Strict 18-Year Threshold:** Under the POCSO Act and the Bharatiya Nyaya Sanhita (BNS), any individual below 18 is a "child." Consent is legally irrelevant, and sexual acts with minors are treated as "statutory rape," regardless of the minor's perceived maturity or willingness.
- **Misuse in Romantic Relationships:** Empirical data from the Enfold study reveals that nearly 24.3% of POCSO cases involve consensual romantic relationships, often initiated by disapproving parents to criminalize elopements, leading to high acquittal rates as victims frequently refuse to testify.
- **Evolution of the Law:** India's age of consent has shifted significantly over time, from 10 years in 1860 to 16 years until 2012. The 2013 Criminal Law Amendment raised it to 18 to align IPC (now BNS) with the POCSO framework, emphasizing maximum protection.
- **The "Romeo-Juliet" Clause:** Advocates for reform suggest adopting "close-in-age" exemptions, similar to those in the UK or Canada, which exempt teenagers from criminal prosecution if their partner is within a specific age gap (e.g., 2 to 3 years) and the act is consensual.
- **Legislative Resistance:** Parliament and the Law Commission (283rd Report) have consistently opposed lowering the age, fearing it would weaken the deterrent against child trafficking, early marriage, and exploitation by those in positions of trust.
- **Judicial Dichotomy:** While the Supreme Court recently reaffirmed that consent is immaterial for minors, it also invoked Article 142 to waive sentencing in specific adolescent cases, highlighting a growing tension between strict statutory application and ground-level justice.

Key Definitions

- **Age of Consent:** The legally defined age at which an individual is considered to have the mental and emotional capacity to validly agree to sexual activity.
- **Statutory Rape:** A sexual offence where the victim is under the legal age of consent; the act is a crime even if the victim ostensibly agreed to it.
- **Romeo-Juliet Clause:** A legal provision that prevents the criminalization of sexual activity between two minors or a minor and a young adult when the age difference is minimal and the act is consensual.
- **Bright-line Rule:** A clearly defined rule or standard in law composed of objective factors, which leaves little or no room for varying interpretation.



Constitutional & Legal Provisions

- **Article 15(3):** Empowers the State to make "special provisions for women and children," providing the constitutional bedrock for the POCSO Act.
- **Article 21:** The Right to Life and Personal Liberty, which the courts have increasingly interpreted to include the right to sexual autonomy and privacy for those nearing the age of majority.
- **Article 142:** Grants the Supreme Court extraordinary power to pass any order necessary for "doing complete justice" in any cause or matter pending before it.
- **Section 19 (POCSO):** Mandates compulsory reporting of any suspected sexual offence against a child, creating a legal conflict in cases of consensual adolescent relationships.
- **Section 63 (BNS):** Retains the definition of rape to include acts with any woman under 18 years of age, with or without her consent.

Additional Key Points

- **Impact of Mandatory Reporting:** The "must-report" clause often forces doctors and frontline workers to report consensual teenagers, leading to institutional trauma for the adolescents involved.
- **Social Ecosystem:** Beyond law, the debate emphasizes the need for Comprehensive Sex Education (CSE) and gender-sensitive law enforcement to address cultural taboos around dating.

Conclusion

The debate over the age of consent is a conflict between the "Right to Protection" and the "Right to Autonomy." While a blanket reduction of the age threshold risks exposing vulnerable children to predators, the current rigid framework arguably ignores the biological and social realities of late adolescence. A pragmatic solution—such as introducing "guided judicial discretion" or "close-in-age" exemptions—could preserve the protective spirit of POCSO while ensuring that the law does not become an instrument of harassment against young people navigating consensual intimacy.

UPSC Relevance

- **GS Paper II:** Social Justice (Issues relating to children); Governance (Government policies and interventions); Judiciary (Landmark judgments and interpretation of laws).
- **GS Paper I:** Social Issues (Role of women and children, adolescent behavior).
- **Prelims:** Provisions of POCSO Act 2012, BNS 2023, Justice Verma Committee recommendations, and Law Commission reports.