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# **VIDHVATH IAS KAS ACADEMY & STUDY CENTRE**

## **DAILY CURRENT AFFAIRS**

**FOR UPSC CIVIL SERVICE EXAMINATION**

**DATE: 13/04/2026 (MONDAY)**



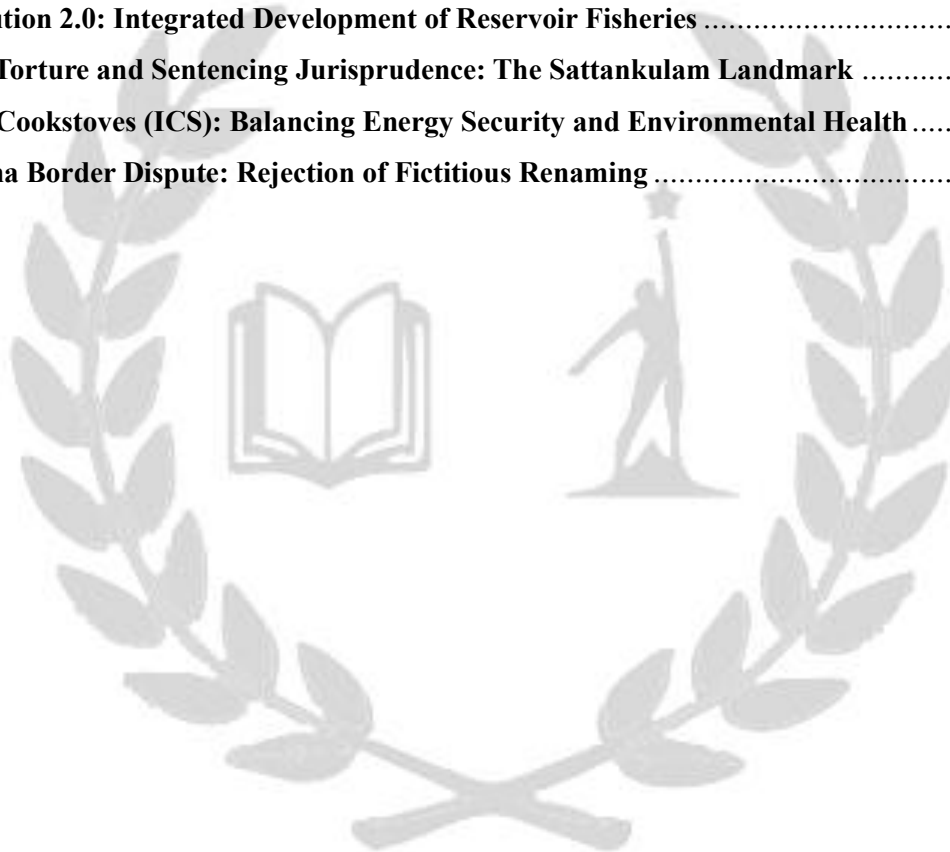
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**VIDHVATH IAS ACADEMY**



## 1. Electoral Roll Purge: Special Intensive Revision (SIR) Analysis

The Election Commission of India (ECI) recently concluded the second phase of the Special Intensive Revision (SIR), resulting in a significant 10.2% reduction in the collective electorate across nine States and three Union Territories. This exercise is pivotal for maintaining the sanctity of the democratic process by ensuring "one citizen, one vote."

- **Scale of Deletion:** The revision saw the removal of approximately 5.18 crore entries, bringing the active voter count in the targeted regions down from 50.99 crore to 45.81 crore.
- **Geographic Trends:** Uttar Pradesh recorded the highest absolute net deletion (2.04 crore), followed by West Bengal (83.86 lakh). In percentage terms, Andaman and Nicobar Islands saw the steepest decline at 16.6%, while Lakshadweep saw the least (0.3%).
- **Categorization of Removals:** The cleanup targeted four primary discrepancies: deceased voters (67 lakh), duplicate entries (1.28 crore), non-existent/fake voters (1.34 crore), and migrated voters (3.15 crore).
- **Technological Intervention:** The ECI utilized the Electoral Roll Management System (ERMS) and Booth Level Officer (BLO) field verifications to identify "Demographically Similar Entries" (DSEs) and "Photo Similar Entries" (PSEs).
- **Phase-wise Strategy:** This phase, initiated in October last year, focused specifically on regions with high urban-to-rural migration and historical data redundancies to improve the "elector-to-population" (EP) ratio.
- **Integrity of Data:** The primary objective of SIR is to eliminate "ghost voters" and prevent electoral fraud, such as impersonation and double voting, which often skew the true representative nature of constituencies. **Key Definitions**
- **Special Intensive Revision (SIR):** A focused, door-to-door verification process conducted by the ECI to update electoral rolls beyond the routine annual summary revisions.
- **Net Deletion:** The final figure arrived at after subtracting newly registered voters from the total number of names removed during the revision process.
- **Electoral Roll:** The official list of all persons in a constituency who are registered and entitled to vote in an election. **Constitutional & Legal Framework**
- **Article 324:** Grants the Election Commission the power of superintendence, direction, and control of the preparation of electoral rolls.
- **Article 326:** Establishes universal adult suffrage, ensuring every citizen above 18 years is entitled to be registered as a voter unless disqualified.
- **Representation of the People Act, 1950:** Sections 15 to 25 govern the preparation and revision of electoral rolls, including the registration of voters and the correction of entries.
- **Registration of Electors Rules, 1960:** Provides the statutory procedure for the ECI to carry out deletions and inclusions in the rolls. **Additional Key Points**





- **Inclusivity Balance:** While deletions are necessary for accuracy, the ECI must ensure that the "suo motu" deletion process follows due process (notice to the voter) to prevent the accidental disenfranchisement of genuine citizens.
- **Impact on Voter Turnout:** By removing non-existent or migrated voters, the official voter turnout percentage in future elections will likely appear higher and more reflective of actual participation.
- **Standardization:** The exercise aims to align the electoral roll with the Census-based projected population to identify districts with abnormal growth in voter numbers. **Conclusion** The 10.2% reduction in the electorate across the surveyed regions highlights a long-standing issue of "roll bloat" due to migration and administrative delays in reporting deaths. While the absolute numbers are high, they represent a necessary surgical strike to ensure the integrity of the Indian electoral system. Moving forward, the integration of the Aadhaar-Voter ID (voluntary) linkage, as per the Election Laws (Amendment) Act, 2021, is expected to further minimize duplicates and maintain a "clean" digital database of the citizenry. **UPSC Relevance**
- **GS Paper II:** Functions and responsibilities of the Election Commission; Statutory, regulatory, and various quasi-judicial bodies; RPA 1950 and 1951.
- **Governance:** Transparency in the electoral process and the role of technology (ERMS/Garuda App) in administrative reforms.
- **Prelims:** Constitutional Articles (324-329), ECI powers, and specific data trends related to electoral reforms.

## 2. Breakdown of U.S.-Iran Nuclear and Regional Security Talks

The recent high-stakes dialogue between the United States and Iran in Pakistan concluded without a consensus, exacerbating regional instability and casting a shadow over the sustainability of the current West Asia ceasefire. The impasse centers on nuclear proliferation concerns and accusations of diplomatic overreach.

- **Core Deadlock:** The 21-hour negotiations collapsed primarily due to Iran's refusal to provide a definitive commitment to abandoning its nuclear weapons path, while Tehran attributed the failure to excessive American demands and "overreach."
- **Geopolitical Stakes:** The failure to reach a deal puts the fragile two-week ceasefire at risk, which is currently set to expire on April 22, potentially reigniting active conflict across Lebanon, Israel, and the Gulf Arab states.
- **Strategic Leverage:** Iran's control over the Strait of Hormuz remains a critical pressure point, as the blockade has disrupted global oil and gas exports, leading to a significant spike in international energy prices.
- **Nuclear Threshold Status:** While Iran maintains its right to a civilian nuclear program, experts warn that its current stockpile of enriched uranium is technically only a short step away from weapons-grade levels.
- **Role of Mediation:** Pakistan, acting as the host and facilitator, has expressed the intent to revive dialogue in the coming days to prevent a total collapse of the diplomatic channel between the two adversaries.





- **Humanitarian and Economic Cost:** The ongoing conflict has already resulted in thousands of casualties and extensive infrastructure damage across West Asia, underlining the urgency of a permanent diplomatic solution. **Key Definitions**
- **Uranium Enrichment:** The process of increasing the percentage of the isotope Uranium-235; low-enriched uranium is used for power plants, while high-enriched (90%+) is required for nuclear weapons.
- **Strait of Hormuz:** A narrow, strategically vital waterway between the Persian Gulf and the Gulf of Oman, through which approximately one-fifth of the world's oil consumption passes.
- **Breakout Time:** The theoretical time required for a country to produce enough weapons-grade fissile material for one nuclear explosive device. **Constitutional & Legal Provisions**
- **Treaty on the Non-Proliferation of Nuclear Weapons (NPT):** Iran is a signatory to the NPT, which obligates non-nuclear-weapon states to forgo the development of nuclear weapons in exchange for access to peaceful nuclear technology.
- **JCPOA (2015):** The Joint Comprehensive Plan of Action was the landmark deal that restricted Iran's nuclear activities in exchange for sanctions relief; its unilateral exit by the U.S. in 2018 remains a central point of contention.
- **IAEA Safeguards:** Under international law, the International Atomic Energy Agency (IAEA) has the mandate to verify that nuclear material is not diverted from peaceful activities to nuclear weapons. **Additional Key Points**
- **Trust Deficit:** The Iranian delegation emphasized that the onus is on the U.S. to regain Iranian trust, referencing the previous withdrawal from international agreements.
- **Energy Security:** For India, the instability in the Strait of Hormuz is a direct threat to energy security and remains a primary concern for the Ministry of External Affairs.
- **Regional Spillover:** The involvement of non-state actors in Lebanon and the direct impact on Gulf Arab states signify that the U.S.-Iran tension is no longer a bilateral issue but a regional security crisis. **Conclusion** The stalemate in Pakistan reflects a deeper structural mistrust that transcends nuclear technicalities, involving broader regional hegemony and economic warfare. Without a clear roadmap before the April 22 deadline, the risk of a full-scale regional conflict remains high, with devastating implications for global energy markets and maritime trade security. **UPSC Relevance**
- **GS Paper II:** International Relations; Effect of policies and politics of developed and developing countries on India's interests; Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
- **GS Paper III:** Energy Security; Security challenges and their management in border areas; Impact of global conflicts on the Indian economy.
- **Prelims:** Mapping (West Asia, Strait of Hormuz, Persian Gulf), International Treaties (NPT, JCPOA), and International Organizations (IAEA).

### 3. SpaceX Mega-IPO: Global Space Economy and Market Dynamics

The proposed SpaceX Initial Public Offering (IPO) represents a watershed moment in the global financial and aerospace sectors. Expected to raise approximately \$75 billion at a valuation nearing \$2 trillion, it stands to become the largest listing in history, surpassing Saudi Aramco. The move signals the maturation of the "New Space" era, where private entities lead frontier technologies.



## Key Summary Points

- **Unprecedented Scale:** A \$75 billion IPO would represent nearly 44% of the total global IPO proceeds recorded in 2025 (\$171.8 billion), testing the depth and liquidity of global capital markets.
- **Vertical Integration of Frontiers:** SpaceX has transitioned from a launch service provider to a multifaceted conglomerate integrating satellite internet (Starlink), artificial intelligence (xAI), and real-time data (X), creating a unique tech-infrastructure ecosystem.
- **Retail Participation:** Reports suggest a significant shift in IPO structure, with up to 30% of shares potentially reserved for retail investors, far exceeding the traditional 5–10% allocation.
- **Market Sentiment Bellwether:** As a "mega-listing," its success or failure will likely dictate the valuation and timing of other high-stakes tech IPOs like OpenAI, Anthropic, and Stripe.
- **Global Strategic Intersection:** The company's dominance in space launches and satellite connectivity intersects with national security, digital sovereignty, and the strategic priorities of major economies, including India.
- **The "Musk Premium":** Valuation is heavily influenced by Elon Musk's track record of disruptive innovation, creating a sentiment-driven demand that complicates fundamental financial analysis.



## Key Definitions

- **Initial Public Offering (IPO):** The process by which a private corporation can go public by sale of its stocks to the general public.
- **Vertical Integration:** A strategy where a company owns different stages of production or services (e.g., SpaceX making rockets, launching them, and providing the resulting internet service).
- **Liberalized Remittance Scheme (LRS):** An RBI framework allowing Indian residents to freely remit up to \$250,000 per financial year for permitted current or capital account transactions, including overseas investments.
- **New Space:** A global industry movement encompassing a private-sector-led approach to space exploration and development, characterized by lower costs and rapid innovation.

## Constitutional and Legal Provisions (India)

- **Article 73 & 246:** Power of the Union to legislate on matters related to extra-territorial jurisdictions and "Air navigation; airways; aircraft and air navigation" (Entry 29, Union List).
- **Space Policy 2023:** Encourages end-to-end participation of Non-Government Entities (NGEs) in all domains of space activities, mirroring the privatization trend seen with SpaceX.
- **Foreign Exchange Management Act (FEMA), 1999:** Governs the regulations under which Indian residents can invest in foreign equities like SpaceX post-listing.
- **IN-SPACE:** The Indian National Space Promotion and Authorization Centre acts as the single-window nodal agency to promote and authorize private space activities in India.



## Conclusion

The SpaceX IPO is more than a corporate event; it is a stress test for global liquidity and a definitive signal that the space economy is no longer a niche scientific endeavor but a pillar of global infrastructure. While the valuation is astronomical, the integration of AI and satellite data offers a glimpse into the next phase of digital connectivity. For India, the development emphasizes the urgency of fostering domestic private players (like Skyroot or Agnikul) to ensure strategic autonomy in a space-dominated future.

## UPSC Relevance

- **GS Paper II:** Effect of policies and politics of developed and developing countries on India's interests; Government policies and interventions for development in various sectors.
- **GS Paper III:** Science and Technology—developments and their applications and effects in everyday life; Awareness in the fields of Space and IT; Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment.
- **Prelims:** RBI's LRS guidelines, FDI in Space Sector, IN-SPACe, and NewSpace India Limited (NSIL).

## 4. Resilience of Modern Indian Art: Market Dynamics and Cultural Value

The Indian art market has demonstrated extraordinary tenacity, recording unprecedented growth despite global disruptions like the COVID-19 pandemic and geopolitical conflicts. A landmark moment occurred on 1 April 2026, when Raja Ravi Varma's "Yashoda & Krishna" was auctioned for ₹167.2 crore, setting a new record for Indian art. This surge highlights a shift in perception, where fine art is increasingly viewed as a stable "safe-haven" asset comparable to gold, driven by a growing class of ultra-high-net-worth individuals and family offices.

### Key Summary Points

- **Record-Breaking Valuations:** The sale of Raja Ravi Varma's oil painting for ₹167.2 crore surpassed the previous record held by M.F. Husain's *Untitled (Gram Yatra)* (₹118 crore), signaling high demand for "National Treasure" artists.
- **Counter-Cyclical Growth:** Contrary to traditional economic expectations, the Indian art market thrived during downturns, growing from \$120 million in 2019 to approximately \$192.7 million in 2025.
- **Art as an Asset Class:** Prominent investors and family offices now treat art as a core part of their investment portfolios, valuing its low correlation with volatile equity markets and its ability to act as a hedge against inflation.
- **Market Momentum in 2026:** The first half of 2026 alone recorded sales of \$175 million (₹1,530 crore), nearly matching the total annual turnover of previous years, indicating a maturing secondary market.
- **Shift in Investor Sentiment:** Veteran collectors have noted that during the pandemic, art prices "shot up" instead of declining, proving its status as a resilient store of value during global crises.
- **Institutional and Philanthropic Drive:** The market is bolstered by competitive buying from both private collectors (like the Poonawalla family) and philanthropists (like Kiran Nadar), which provides liquidity and price discovery.





### Important Key-points & Definitions

- **Raja Ravi Varma (1848–1906):** Known as the "Father of Modern Indian Art," he fused European academic realism with Indian iconography and was the first to make art accessible through oleographs.
- **National Treasure:** Under Indian law, works by certain artists (including Ravi Varma, Amrita Sher-Gil, and the Tagore brothers) are declared "non-exportable antiquities" to preserve cultural heritage.
- **Secondary Art Market:** The market where art is resold after its initial purchase from the artist or a primary gallery, usually through auction houses like Saffronart or Christie's.
- **Family Office:** Private wealth management advisory firms that serve ultra-high-net-worth investors, focusing on long-term wealth preservation across diverse assets.

### Constitutional and Legal Provisions

- **The Antiquities and Art Treasures Act, 1972:** Regulates the export trade in antiquities and art treasures. It mandates that "Art Treasures" (including works by Ravi Varma) cannot be taken out of India without government permission.
- **Article 49 (Directive Principles):** Obligations of the State to protect monuments and objects of artistic or historic interest which are declared by or under law made by Parliament to be of national importance.
- **Article 51A(f) (Fundamental Duties):** It is the duty of every citizen to value and preserve the rich heritage of the country's composite culture.
- **Seventh Schedule (Entry 67, Union List):** Ancient and historical monuments and records, and archaeological sites and remains, declared by or under law made by Parliament to be of national importance.

### Conclusion

The recent record-breaking auctions underscore that Indian art has transitioned from a niche hobby to a sophisticated financial instrument. The market's ability to "brave two wars and a pandemic" reflects a deep-seated confidence in India's cultural capital. While the commercial aspect is booming, the legal framework remains crucial in ensuring that these "National Treasures" stay within the country, balancing the interests of private ownership with the preservation of national heritage.

### UPSC Relevance

- **GS Paper I (Art & Culture):** Modern Indian painters (Raja Ravi Varma, M.F. Husain); the evolution of Indian art from the late 19th century to the contemporary era.
- **GS Paper III (Economy):** Growth of alternative investment markets; role of family offices in capital mobilization; economic resilience during global shocks.
- **Prelims:** Features of Raja Ravi Varma's style; provisions of the Antiquities and Art Treasures Act, 1972; and UNESCO conventions related to cultural property.

## 5. Strategic Re-entry: India's Calibrated Return to Global Wheat Markets

India has decided to more than double its wheat export quota, signaling a significant shift in its agricultural trade policy after a four-year hiatus. Following a ban imposed in May 2022 to ensure domestic food security, the government is now capitalizing on a record harvest and rising global prices caused by geopolitical



tensions in West Asia. By increasing the export ceiling for wheat and wheat products, India aims to support farmers and stabilize global supply chains while maintaining a cautious approach to domestic price stability.

### Key Summary Points

- **Significant Quota Revision:** India is set to increase the wheat export quota from 2.5 million tonnes (mt) to 5.5 mt, while the quota for wheat products like atta and maida will rise from 0.5 mt to 1 mt.
- **Capitalizing on Record Harvest:** The move is backed by a projected record wheat production of 120 mt this season, providing a substantial buffer for overseas sales without compromising domestic reserves.
- **Global Price Trends:** The decision aligns with a 2.4% rise in the FAO Food Price Index (averaging 128.5 points in March), allowing Indian farmers to benefit from higher international market realizations.
- **Geopolitical Positioning:** Amidst supply chain disruptions caused by the West Asia war, India is positioning itself as a reliable alternative supplier to traditional routes, enhancing its "Food-Provider" stature.
- **Institutional Monitoring:** The export push was cleared by an Empowered Group (EG) of Secretaries, one of seven panels monitoring the impact of global conflicts on essential commodities and domestic inflation.
- **Calibrated Liberalization:** This marks a transition from the restrictive trade regime of 2022–2025 to a more open, yet monitored, export policy as domestic prices remain stable.

### Important Key-points & Definitions

- **Minimum Support Price (MSP):** The rate at which the government purchases crops from farmers; export parity is currently attractive as global prices exceed the domestic MSP.
- **Empowered Group (EG) of Secretaries:** Inter-ministerial panels tasked with rapid decision-making on critical issues like food security, supply chain logistics, and inflation management.
- **FAO Food Price Index:** A measure of the monthly change in international prices of a basket of food commodities; its rise indicates global inflationary pressure on food.
- **Atta & Maida:** Wheat flour (whole and refined); India is specifically boosting the export of value-added wheat products to support the domestic processing industry.



### Constitutional and Legal Provisions

- **Essential Commodities Act, 1955:** Provides the legal framework for the government to regulate the production, supply, and distribution of wheat to prevent hoarding and price spikes.
- **Foreign Trade (Development and Regulation) Act, 1992:** Empowers the Directorate General of Foreign Trade (DGFT) to notify changes in export policies and quotas.
- **Article 301-305:** Deals with Trade, Commerce, and Intercourse within the territory of India, balancing free trade with the state's power to impose restrictions in the public interest.



- **Seventh Schedule (Entry 33, Concurrent List):** Provides power to both Union and States over the trade and commerce in, and the production, supply, and distribution of, domestic and imported foodstuffs.

## Conclusion

India's decision to open the wheat export taps reflects a confident agrarian economy capable of balancing "Glocal" needs—ensuring domestic food security while fulfilling global demand. While the increased quota is a boon for agricultural exports and forex earnings, the government must remain vigilant against potential domestic price shocks if the West Asia conflict escalates. The calibrated nature of this return suggests that India is prioritizing a sustainable trade model over short-term speculative gains, ensuring it remains a dependable partner in the global food value chain.

## UPSC Relevance

- **GS Paper II:** Government policies and interventions for development in various sectors; Effect of global politics (West Asia War) on India's interests.
- **GS Paper III:** Issues related to direct and indirect farm subsidies and MSP; Public Distribution System-objectives, functioning, and limitations; Food security; International Trade.
- **Prelims:** FAO Food Price Index, DGFT functions, Essential Commodities Act provisions, and major wheat-producing states in India.

## 6. CAFE-III Norms: The Transition to a Regulated Emission Credit System

The Ministry of Power, through the Bureau of Energy Efficiency (BEE), has proposed a groundbreaking draft for the third phase of Corporate Average Fuel Efficiency (CAFE-III) norms. Scheduled for implementation between 2027 and 2032, the proposal introduces a "passbook-like" credit-debit mechanism. In a global first, the Indian regulator plans to allow automakers to purchase emission credits directly from the government to offset shortfalls. This move aims to balance India's aggressive climate goals with the financial viability of the automotive sector, which has expressed concerns over the stringency of proposed targets.

### Key Summary Points

- **Regulated Compliance Pathway:** Unlike the US or EU models that rely solely on inter-company trading or pooling, India proposes allowing Original Equipment Manufacturers (OEMs) to buy credits directly from the BEE at fixed annual rates.
- **Credit-Debit Mechanism:** Automakers will maintain an annual "passbook." Emissions below the cap earn credits, while exceeding the cap results in debits. These debits must be settled to avoid heavy penalties.
- **Pricing Structure:** For the period 2028–2032, credit prices are proposed to range from ₹2,500 to ₹4,500 per gramme of CO<sub>2</sub>/km, providing a predictable financial framework for compliance.
- **Block Period Assessments:** While monitoring is annual, penalties will be calculated over two distinct blocks: a three-year block (2027–2030) and a two-year block (2030–2032), allowing firms time for technological course correction.





- **Incentivizing Efficiency:** The system encourages the production of Electric Vehicles (EVs) and high-efficiency engines, as these "super-credits" can be sold to laggards or used to balance internal portfolios.
- **Market Viability Concerns:** The policy addresses the industry's claim that Indian norms are among the world's strictest, offering a "safety valve" to prevent the auto sector's growth from stalling due to technical non-compliance.

### Key Definitions

- **CAFE Norms:** Regulations aimed at lowering fuel consumption (and thus CO2 emissions) by lowering the average weight-based fuel consumption of a manufacturer's entire fleet.
- **Bureau of Energy Efficiency (BEE):** A statutory body under the Ministry of Power responsible for implementing strategies that self-regulate and market-influence energy efficiency.
- **Original Equipment Manufacturer (OEM):** In this context, it refers to the primary automobile manufacturing companies.
- **CO2/km:** The standard metric used to measure the amount of carbon dioxide a vehicle emits for every kilometer driven.

### Constitutional and Legal Provisions

- **Energy Conservation Act, 2001:** The primary legislation under which CAFE norms are framed and enforced by the BEE. The Act provides the legal basis for setting energy consumption standards.
- **Article 48A (DPSP):** Mandates that the State shall endeavor to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g):** Fundamental duty of citizens to protect and improve the natural environment.
- **Environment (Protection) Act, 1986:** Provides the overarching framework for the central government to coordinate activities of various authorities and frame rules for environmental safety.

### Conclusion

The CAFE-III proposal marks a shift from purely punitive regulation to a market-based compliance model. By allowing direct credit purchases, the government provides a pragmatic "middle path" for a developing economy. However, the long-term success of this initiative depends on whether the cost of credits remains high enough to incentivize actual technological innovation rather than becoming a mere "fee for pollution." If calibrated correctly, it could accelerate India's transition toward a greener automotive ecosystem while protecting industrial interests.

### UPSC Relevance

- **GS Paper II:** Statutory, regulatory, and various quasi-judicial bodies (BEE); Government policies and interventions for development in various sectors.
- **GS Paper III:** Conservation, environmental pollution, and degradation; Science and Technology-developments and their applications; Indian Economy and issues relating to planning and resource mobilization.
- **Prelims:** BEE functions, Energy Conservation Act, difference between CAFE and BS-VI norms, and India's COP-26 "Panchamrit" commitments.



## 7. The Ghaggar River Crisis: Water Contamination and the Cancer Burden

The Ghaggar river, an intermittent watercourse flowing through Haryana, has transformed from a vital lifeline into a source of severe environmental and health distress. Residents in the Sirsa and Fatehabad districts report a significant surge in cancer cases, which they attribute to the consumption of groundwater contaminated by untreated industrial effluents and urban sewage dumped into the river. This ecological degradation, compounded by the excessive use of chemical fertilizers in Haryana's cotton belt, has created a "cancer belt" similar to those observed in parts of Punjab, highlighting a critical intersection between environmental pollution and public health.

### Key Summary Points

- **Environmental Degradation:** Once a clear, monsoon-fed river, the Ghaggar is now heavily polluted by untreated sewage and industrial waste across its course through Panchkula, Ambala, Kaithal, and Sirsa.
- **Public Health Crisis:** Villages like Mallewala report a high frequency of cancer-related deaths (25-30 in a decade for a population of 4,000), with residents suspecting a direct link to contaminated groundwater and river-dependent irrigation.
- **Infrastructure Deficit:** Sirsa lacks specialized government cancer treatment facilities, forcing economically vulnerable patients to travel to distant cities like Chandigarh, Bikaner, or Jaipur, often leading to crippling debt and land alienation.
- **Data Fragmentation:** Cancer is not a "notifiable disease" in India, meaning private hospitals are not legally mandated to report cases. This creates a massive discrepancy between official government figures and independent health atlas estimates.
- **Multiple Pollution Vectors:** Beyond industrial waste, the surge is exacerbated by the high chemical footprint of the cotton-growing region and the lack of proper effluent treatment plants (ETPs) in upstream industrial clusters.
- **Incipient State Response:** While a medical college with a cancer wing is planned for Sirsa, current efforts are hindered by the "routine" categorization of the surge by health officials and the lack of inter-state cooperation in tracking patients.



### Key Definitions

- **Notifiable Disease:** Any disease that is required by law to be reported to government authorities. This allows for the tracking of outbreaks and the allocation of public health resources.
- **Intermittent River:** A river that stops flowing for weeks or months each year, making it highly susceptible to concentrated pollution during lean seasons.
- **Effluent Treatment Plant (ETP):** A mechanism designed to purify industrial waste water for reuse or safe disposal into the environment.
- **Biomagnification:** The concentration of toxins in an organism as a result of its ingesting other plants or animals in which the toxins are more widely disbursed.



## Constitutional & Legal Provisions

- **Article 21:** The Right to Life includes the right to a clean environment and healthy living conditions, as interpreted by the Supreme Court in numerous environmental litigations.
- **Article 47 (DPSP):** Mandates the State to regard the improvement of public health as among its primary duties.
- **Article 48A:** Directs the State to endeavor to protect and improve the environment and to safeguard forests and wildlife.
- **Water (Prevention and Control of Pollution) Act, 1974:** Provides the legal framework for the Central and State Pollution Control Boards to prevent the contamination of water bodies like the Ghaggar.
- **The Environment (Protection) Act, 1986:** Authorizes the Central Government to take all such measures as it deems necessary for protecting and improving the quality of the environment.

## Conclusion

The situation along the Ghaggar is a stark reminder of the "cost of development" when environmental regulations are poorly enforced. The absence of a robust, mandatory cancer registry masks the true scale of the tragedy, preventing targeted medical intervention. Addressing this crisis requires a two-pronged strategy: strict "zero liquid discharge" mandates for industries upstream and the immediate establishment of localized, affordable oncological care to prevent the socio-economic collapse of affected rural families.

## UPSC Relevance

- **GS Paper II:** Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Issues relating to development and management of Social Sector/Services relating to Health.
- **GS Paper III:** Conservation, environmental pollution, and degradation; Environmental Impact Assessment; Issues related to direct and indirect farm subsidies (pesticide use).
- **Ethics (GS IV):** Environmental ethics and the accountability of state and corporate entities in protecting the vulnerable.
- **Prelims:** Major tributaries of the Ghaggar, functions of the Central Pollution Control Board (CPCB), and constitutional provisions related to environment and health.

## 8. The Inherited Stasis: Analyzing the Risk-Aversion of India's Business Elite

The Indian corporate landscape is witnessing a paradoxical shift: while the nation's economic potential is at an all-time high, the established business elite—particularly second and third-generation owners—are increasingly retreating from operational management in favor of wealth preservation. This "Anthony Patch syndrome," named after F. Scott Fitzgerald's character, highlights a transition from a "builder" mindset to a "portfolio manager" approach. This trend poses a significant challenge to India's long-term industrial innovation and R&D capabilities, as the controllers of the most substantial capital bases choose liquidity and passive investment over high-risk, transformational ventures.

## Key Summary Points

- **The Liquidity Preference:** A rising trend among well-managed Indian family businesses involves selling established firms (e.g., VIP Industries) not due to distress, but because heirs prefer liquid assets over the complexities of operational continuity.



- **Custodianship vs. Creation:** Influenced by "elite overproduction," India's inherited elite are pivoting toward wealth preservation (real estate, family offices, and financial markets) rather than expanding industrial frontiers or building new foundational institutions.
- **The R&D Deficit:** Indian private sector investment in Research and Development remains significantly lower than global peers like South Korea or China. This is attributed to the "unattractive" nature of R&D risk—it requires patient capital and offers uncertain, long-term returns that clash with the desire for steady dividends and reputational safety.
- **Institutional Access vs. Risk Appetite:** Unlike first-generation entrepreneurs who took "irreversible" bets (e.g., the Patalganga refinery), the inherited elite view risk as a threat to secured status rather than a source of differentiation.
- **Transition from "Culture" to "Civilization":** Drawing on Spenglerian theory, the elite are moving from being "rooted operators" to "abstract financiers," diversifying assets internationally and losing "skin in the game" regarding domestic industrial growth.
- **The Developmental Dilemma:** The retreat of the capital-rich elite from high-risk sectors means that the most transformational projects are left solely to first-generation founders who may lack the same level of institutional access and initial scale.



### Key Definitions

- **Elite Overproduction:** A sociological theory suggesting that a surplus of credentialed elite aspirants relative to available positions leads to social stasis or instability.
- **Family Office:** A private wealth management advisory firm that serves ultra-high-net-worth investors, focusing on preserving wealth across generations.
- **Patient Capital:** Investment where the investor is willing to make a financial contribution without any expectation of turning a quick profit, essential for R&D and deep-tech ventures.
- **Agency:** In a business context, the capacity of an individual to act independently and make free choices that drive the enterprise forward.

### Constitutional & Legal Provisions

- **Article 300A:** While the right to property is a legal right, the concentration of capital within a few families and its subsequent "passive" use impacts the "economic justice" envisioned in the Preamble.
- **Companies Act, 2013 (Section 135):** Mandates CSR, but does not currently mandate R&D spending, which remains a voluntary strategic choice for private entities.
- **Securities and Exchange Board of India (SEBI) Regulations:** Governance norms for "Related Party Transactions" and "Succession Planning" often focus on transparency rather than incentivizing risk-taking.
- **Energy and Resource Policy (NITI Aayog):** Various sector-specific policies attempt to bridge the R&D gap through Public-Private Partnerships (PPPs), recognizing the private sector's hesitance.



## Conclusion

The evolution of India's business elite from risk-taking builders to risk-averse wealth preservers represents a structural bottleneck for "Viksit Bharat" goals. If capital remains locked in "safe" assets like real estate and global portfolios, India may miss the window for indigenous technological leadership. Incentivizing the inherited elite to re-engage with industrial risk—through R&D tax credits, patent boxes, or strategic sovereign funds—is essential to ensure that the nation's capital is not just preserved, but put to work for transformational growth.

## UPSC Relevance

- **GS Paper III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment; Changes in industrial policy and their effects on industrial growth.
- **GS Paper IV (Ethics):** Corporate Governance and the ethical responsibility of business elites toward national development and "skin in the game."
- **Essay Paper:** Themes related to "Risk vs. Security," "The challenges of inherited wealth," and "Innovation as a driver of national progress."
- **Prelims:** Concepts of R&D intensity, NITI Aayog reports on innovation, and the structure of Indian family businesses.

## 9. Blue Revolution 2.0: Integrated Development of Reservoir Fisheries

Budget 2026-27 has introduced a transformative roadmap for the fisheries sector, focusing on the integrated development of 500 reservoirs and Amrit Sarovars. India, currently the world's second-largest producer in both total fish and aquaculture, is shifting its strategic focus toward inland resources, which already contribute 75% of the national output. By leveraging advanced cage culture technology and cluster-based management, the government aims to triple current productivity levels, ensuring sustainable livelihoods for millions of fishers in economically backward and water-scarce regions.

### Key Summary Points

- **Strategic Expansion:** The government will undertake the integrated development of 500 major reservoirs and Amrit Sarovars (developed under Mission Amrit Sarovar) to enhance the income of fish farmers through end-to-end value chain interventions.
- **Production Milestones:** National fish production has surged by 106% since 2013-14, reaching a record 197.75 lakh tonnes in 2024-25, with inland fisheries emerging as the primary driver of growth.
- **Productivity Leap:** Reservoir productivity has doubled from 50 kg per hectare in 2006 to 100 kg per hectare currently, with ICAR-CIFRI envisioning a further increase to 300 kg per hectare through scientific interventions.
- **Technological Intervention:** The adoption of "Cage Culture" (floating or stationary synthetic mesh structures) allows for intensive fish farming, easier monitoring, and disease management while ensuring natural oxygen exchange.
- **Cluster-Based Strategy:** The National Fisheries Development Board (NFDB) is implementing a cluster model (e.g., Indira Sagar dam) to aggregate farmers into Cooperatives and Fish Farmer Producer Organisations (FFPOs), achieving economies of scale.





- **Infrastructure Integration:** The development plan emphasizes a holistic value chain including hatcheries, feed mills, cold storage, ice plants, and refrigerated transport to reduce post-harvest losses and improve market access.

### Important Keypoints & Definitions

- **Mission Amrit Sarovar:** Launched to conserve water for the future, each sarovar has a minimum pondage area of 1 acre; these are now being mapped for community-led aquaculture.
- **Cage Culture:** An aquaculture production system where fish are held in floating net pens. It utilizes existing water resources but requires high-quality "seed" (juvenile fish) and specialized feed.
- **Blue Revolution (Neel Kranti):** A government initiative focused on the economic prosperity of the country through the sustainable development of the fisheries sector.
- **FFPOs (Fish Farmer Producer Organisations):** Legal entities formed by primary producers (fishers) to enhance their bargaining power and access to modern technology and markets.

### Constitutional & Legal Provisions

- **Seventh Schedule (State List, Entry 21):** "Fisheries" is primarily a State subject; however, the Union government provides flagship schemes and technical support for national food security.
- **Article 48A:** Directive Principle of State Policy (DPSP) mandating the state to endeavor to protect and improve the environment, which includes aquatic ecosystems.
- **Pradhan Mantri Matsya Sampada Yojana (PMMSY):** The primary legal and budgetary framework for the sector, aiming to address critical gaps in fish production and post-harvest infrastructure.
- **Article 243G & 243W:** Powers given to Panchayats and Municipalities to manage local water bodies and promote fisheries as a rural livelihood activity.

### Conclusion

The focus on reservoir-based aquaculture marks a shift toward scientific and intensive inland fishing. By integrating Amrit Sarovars into the commercial fish production map, India is effectively utilizing decentralized water bodies for localized economic growth. The success of this initiative depends on bridging sectoral gaps in processing and ensuring that small-scale farmers are protected from market volatility through strong cooperative networks. This integrated approach is a cornerstone for achieving the "Viksit Bharat@2047" vision for the blue economy.

### UPSC Relevance

- **GS Paper III:** Economics of Animal-Rearing; Issues related to direct and indirect farm subsidies; Infrastructure (Energy, Ports, etc.); Science and Technology-developments (Cage Culture).
- **GS Paper II:** Government policies and interventions for development in various sectors; Issues arising out of their design and implementation.
- **Prelims:** Pradhan Mantri Matsya Sampada Yojana (PMMSY) features, Blue Revolution targets, ICAR-CIFRI locations, and Mission Amrit Sarovar objectives.



## 10. Custodial Torture and Sentencing Jurisprudence: The Sattankulam Landmark

On April 6, 2026, a Madurai trial court sentenced nine suspended police personnel to death for the 2020 custodial killings of P. Jayaraj and J. Bennix. Beyond the brutal facts of the case, the judgment highlights a critical structural "hiatus" in Indian criminal law. While the trial court applied the "rarest of rare" doctrine, the verdict underscores a jurisdictional limitation: trial courts are currently barred from imposing "middle-ground" sentences (fixed-term life imprisonment without remission), leaving them with a binary choice between death or an ordinary life sentence that often effectively ends after 14 years.

### Key Summary Points

- **The Sattankulam Verdict:** The court classified the brutal custodial torture and murder as falling within the "rarest of rare" category, emphasizing judicial intolerance for uniformed brutality.
- **Sentencing Limitation:** Under the *Union of India v. V. Sriharan (2015)* precedent, trial courts cannot impose life sentences for a specific fixed term (e.g., 30 or 40 years) without remission; this power is reserved solely for Constitutional Courts (High Courts and the Supreme Court).
- **The "14-Year" Trap:** Section 433A of the CrPC dictates a minimum of 14 years for life convicts. The trial judge found this "derisory" for the crime's gravity but, lacking the power to bridge the gap between 14 years and death, was compelled toward the maximum penalty.
- **Appellate Default:** Recent trends show that the "middle ground" (life without remission) has become the default at the appellate level, creating a contradiction where trial courts frequently impose death only for it to be commuted later.
- **Mitigation Guidelines:** Despite the Supreme Court's mandate in *Manoj v. State of MP (2022)* to gather prisoner background and mental health data before sentencing, such guidelines are often inconsistently applied at the trial stage.
- **Judicial Accountability:** The case serves as a "confession" of the broken sentencing ladder, where the lack of calibrated alternatives at the entry level of the judiciary may lead to an increase in death sentences.

### Key Definitions

- **Rarest of Rare Doctrine:** Established in *Bachan Singh v. State of Punjab (1980)*, it mandates that death is the exception, to be used only when the alternative of life imprisonment is "unquestionably foreclosed."
- **Remission:** The reduction of a sentence's duration by the executive (State Government) based on good conduct or specific policies.
- **Custodial Torture:** Infliction of severe physical or mental pain by a public official while the victim is in legal custody.
- **Confirmation Proceeding:** Under Section 366 of the CrPC, a death sentence passed by a Sessions Court must be confirmed by the High Court before it can be executed.

### Constitutional & Legal Provisions

- **Article 21:** Protection of life and personal liberty. The Supreme Court has ruled that a fair sentencing process is a fundamental right under this Article.
- **Section 302, IPC/BNS:** Provides the punishment for murder (death or life imprisonment).



- **Section 433A, CrPC:** Restricts the power of remission, stating that for offences carrying the death penalty, the convict must serve at least 14 years in prison.
- **Article 141:** Law declared by the Supreme Court (such as the *Sriharan* bar) is binding on all courts within India.

### Conclusion

The Sattankulam case is a milestone in the fight against custodial impunity, yet it exposes a systemic flaw in India's sentencing architecture. By denying trial courts the ability to impose fixed-term life sentences without remission, the higher judiciary has created a "binary trap" that forces judges to choose the gallows when they feel 14 years is insufficient. Re-evaluating the *Sriharan* doctrine is essential to provide trial judges with the tools for more calibrated, proportional justice that avoids the finality of the rope while ensuring rigorous punishment.

### UPSC Relevance

- **GS Paper II:** Structure, organization, and functioning of the Judiciary; Important Supreme Court judgments; Issues related to custodial torture and human rights.
- **GS Paper IV (Ethics):** Ethical issues in punishment; Retributive vs. Reformatory justice; The morality of the death penalty.
- **Essay Paper:** "The Paradox of Justice: Between Vengeance and Mercy," or "Police Brutality and the Rule of Law."
- **Prelims:** CrPC provisions on death sentence confirmation (Section 366), "Rarest of Rare" case names, and the role of the Bureau of Police Research and Development (BPR&D).

## 11. Improved Cookstoves (ICS): Balancing Energy Security and Environmental Health

In the wake of rising LPG prices and supply volatility, a significant portion of India's rural population has reverted to solid biomass for cooking. This shift, while economically driven, poses risks of increased drudgery and indoor air pollution. However, the emergence of "Improved Cookstoves" (ICS) offers a pragmatic middle path. By leveraging advanced thermal engineering, these modern biomass stoves significantly increase fuel efficiency and reduce harmful emissions, potentially transforming firewood into a sustainable energy source when managed through regulated carbon financing and localized supply chains.

### Key Summary Points

- **Enhanced Thermal Efficiency:** Unlike traditional mud chulhas with 10% efficiency, modern ICS achieve 38% to 45% efficiency using secondary aeration to combust soot and harmful gases before they escape as smoke.
- **Economic Viability:** With firewood costing approximately ₹10/kg versus commercial LPG exceeding ₹100/kg, ICS can offer over 60% cost savings, as 4 kg of wood in an efficient stove equals the energy output of 1 kg of LPG.
- **Health & Gender Benefits:** By cutting fuel requirements by over 50%, ICS reduce the time spent on firewood collection (drudgery) and lower the incidence of respiratory diseases among rural women.





- **Sustainability & Fuel Base:** Firewood remains renewable if extraction rates match regrowth; ICS further diversify this base by utilizing agricultural waste, pellets, and briquettes.
- **Decentralized Infrastructure:** Mass adoption of biomass stoves requires strengthening last-mile distribution rather than massive investment in centralized fuel pipelines or refineries.
- **Carbon Financing:** Emissions saved by switching to ICS can be converted into carbon credits, providing a steady funding stream to make high-quality stoves affordable for low-income families.

### Key Definitions

- **Improved Cookstoves (ICS):** Biomass-based cooking devices designed to optimize heat transfer and complete combustion, thereby reducing smoke and fuel consumption.
- **Thermal Efficiency:** The ratio of useful heat used for cooking to the total energy content of the fuel consumed.
- **Secondary Aeration:** A process in ICS where preheated air is introduced into the combustion chamber to burn off volatile gases and particulate matter that would otherwise form smoke.
- **Drudgery:** Hard, menial, or monotonous work, specifically referring to the physical toll on rural women collecting firewood over long distances.

### Constitutional & Legal Provisions

- **Article 21:** The Right to Life includes the right to a clean environment and health, which is directly impacted by indoor air pollution from traditional cooking methods.
- **Article 47 (DPSP):** Mandates the State to improve public health as a primary duty, including the transition to cleaner cooking energy.
- **National Clean Air Programme (NCAP):** Aims for a 20% to 30% reduction in particulate matter concentration; addressing biomass burning in rural kitchens is a crucial component.
- **Mission LiFE (Lifestyle for Environment):** Encourages sustainable consumption patterns, such as the use of renewable biomass and energy-efficient appliances like ICS.
- **Bureau of Energy Efficiency (BEE):** Responsible for standardizing and labeling energy-efficient appliances, including biomass cookstoves.

### Conclusion

The resurgence of firewood in the Indian kitchen highlights a gap in the affordability of "clean" fuels like LPG. Improved Cookstoves (ICS) represent a transitional technology that acknowledges the reality of biomass dependence while mitigating its worst environmental and health impacts. For India to achieve its net-zero goals by 2070, a multi-fuel strategy—where ICS supplements LPG and electricity—is essential. Success depends on moving beyond equipment distribution to ensuring reliable after-sales support and leveraging carbon markets to bridge the initial cost barrier for the rural poor.

### UPSC Relevance

- **GS Paper II:** Government policies and interventions for development in various sectors; Issues relating to the development and management of Social Sector/Services relating to Health.
- **GS Paper III:** Energy Sector; Science & Technology-developments and their applications; Environmental pollution and degradation; Conservation.

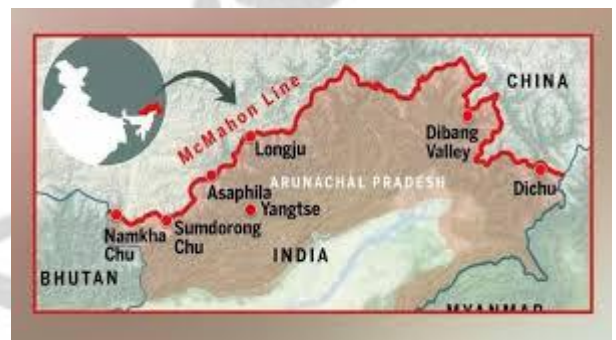


- **Prelims:** Pradhan Mantri Ujjwala Yojana (PMUY), National Biogas and Manure Management Programme, features of Improved Cookstoves, and Carbon Credit mechanisms.

## 12. India-China Border Dispute: Rejection of Fictitious Renaming

India has issued a strong diplomatic rebuttal following China's latest attempt to assign "standardized" names to geographical locations in Arunachal Pradesh and the establishment of a new county near the Wakhan Corridor. The Ministry of External Affairs (MEA) characterized these moves as mischievous attempts to manufacture false narratives over territories that are an integral part of India.

- **Diplomatic Rebuttal:** The MEA categorically rejected the fourth or fifth such list released by Beijing since 2017, asserting that "invented" names cannot alter the reality that Arunachal Pradesh was, is, and will always remain Indian territory.
- **Strategic Expansion:** Reports indicate China has established a third new county, 'Cenling', in its Xinjiang province near the borders of Pakistan-occupied Kashmir (PoK) and Afghanistan, aimed at securing the Wakhan Corridor against separatist militancy.
- **Scope of Renaming:** The latest Chinese list includes names for 27 specific locations: 15 mountains, four passes, two rivers, one lake, and five inhabited areas, all within the Indian state of Arunachal Pradesh.
- **Impact on Bilateral Ties:** New Delhi emphasized that such unilateral actions undermine ongoing efforts to stabilize and normalize India-China relations, injecting "negativity" into an already strained diplomatic landscape.
- **History of Contention:** Similar friction occurred last year regarding the creation of 'Hean' and 'Hekang' counties by China, which India claims falls within the jurisdiction of the Union Territory of Ladakh (Aksai Chin).
- **Security Implications:** The beefing up of Chinese administrative presence near the Karakoram range and the Wakhan Corridor signals a tightening of the security grip in regions sensitive to India's strategic interests. **Key Definitions**
- **Salami Slicing:** A geopolitical strategy involving a series of small, incremental actions used to achieve a larger objective that would be difficult to attain with a single major action; often used to describe border incursions.
- **Line of Actual Control (LAC):** The effective border between India and China that separates Indian-controlled territory from Chinese-controlled territory, which remains un-demarcated in many sectors.
- **Wakhan Corridor:** A narrow strip of territory in Afghanistan, extending to China and separating Tajikistan from Pakistan; it is a critical geostrategic choke point. **Constitutional & Legal Provisions**
- **Article 1 of the Constitution:** Defines India as a Union of States, with the territory of the Union comprising the territories of the States (including Arunachal Pradesh) and Union Territories (including Ladakh).
- **Simla Convention (1914):** The treaty that established the McMahon Line as the clear boundary between British India and Tibet, which India recognizes but China continues to dispute.





- **UN Convention on the Law of the Sea (UNCLOS):** Though primarily maritime, its principles of sovereignty and territorial integrity are often invoked in broader international law discussions regarding disputed boundaries. **Additional Key Points**
- **Cartographic Aggression:** India views the renaming of places and the publication of distorted maps as "cartographic aggression" designed to create a legal basis for future territorial claims.
- **Vibrant Villages Programme:** In response to Chinese "Xiaokang" (border) villages, India has launched the Vibrant Villages Programme to develop infrastructure in border areas of Arunachal Pradesh and Himachal Pradesh to prevent migration and strengthen security.
- **Global Precedent:** China uses its domestic "State Council" regulations to justify these renamings, a move India dismisses as having no standing under international law. **Conclusion** The recurrent friction over nomenclature in Arunachal Pradesh reflects China's broader strategy of "legal warfare" (Lawfare) to normalize its claims. India's proactive stance—combining diplomatic rejection with on-ground infrastructure development—is essential to maintaining the status quo. The stability of the Indo-Pacific region hinges significantly on the peaceful resolution of these border disputes and the cessation of unilateral administrative changes by Beijing. **UPSC Relevance**
- **GS Paper II:** India and its neighborhood- relations; Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
- **Internal Security:** Security challenges and their management in border areas – linkages of organized crime with terrorism.
- **Prelims:** Mapping of the North-East region, passes in Arunachal Pradesh (e.g., Sela Pass, Bomdi La), and the geography of the Wakhan Corridor.