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'Proposed deal will give Iran control of inbound strait traffic'

Reuters
LONDON

A proposed deal between Iran and Oman that would give Tehran control over ships entering the Gulf through the Strait of Hormuz is not easily workable due to U.S. sanctions and restrictive insurance clauses on any payments, four industry sources said.

Until U.S.-Israeli airstrikes at the end of February unleashed war in Iran, the narrow waterway between the Gulf and the Indian Ocean was the main route for about a fifth of world oil supplies and other vital goods. It was freely open to all ships with no fees.

Control of the strait has been the biggest sticking point in efforts to end the conflict.

Under the latest proposal, Tehran would be able to intervene if necessary with any inbound traffic, while outbound traffic would follow a route between Iran and Oman, with exit clearance granted through Oman after notifying Iran, a senior Iranian source told *Reuters*.

The ability of merchant ships to navigate international waterways "safely, predictably and without unnecessary impediment is fundamental to resilient supply chains, economic stability and energy security", the world's leading shipping associations said in an open letter this week.

Introducing compulsory charges through the strait for transit or service fees was "a toll in all but name", the letter said, which was sent to the UN's shipping agency.

"It would establish a precedent that could undermine the internationally recognised legal framework governing straits used for international navigation and transit passage." What is known as a two-way traffic separation scheme was adopted by the UN's shipping agency in 1968 with the agreement of countries in the region.

It created the current ship routing system that split sailing corridors through Iranian and Omani waters. Iran is seeking fees of between 5% and 7% of the price of cargoes from ships using the strait. Oman is discussing fees of around 3%.

For shipping companies and oil traders, any imposition of fees creates major compliance issues given the U.S. has imposed sanctions on the Persian Gulf Strait Authority, which Iran set up in May to operate the waterway.

The U.S. Treasury has also prohibited U.S. persons from receiving services from Iran's government related to a "guarantee of safe passage". Any payment could lead to asset freezes, the industry sources said.

A further complication is the introduction in late July by Lloyd's Market Association of a clause for use by war underwriters that terminates insurance cover for a vessel if it has paid a transit fee for passage through the Strait of Hormuz.

Ships sailing through the strait need to pay an additional war risk premium to ensure they have insurance if their ship is damaged during transit.

Ongoing issue: Cargo ships and other commercial vessels anchored in the Strait of Hormuz off Bandar Abbas in Iran. AP

- **Key Terms and Explanations**
  - **Strait of Hormuz**: A narrow maritime passage connecting the Persian Gulf with the Gulf of Oman and the Arabian Sea. It acts as the primary export route for roughly 20% of the world's petroleum supply, making it the world's most critical energy chokepoint.
  - **Right of Transit Passage**: A principal doctrine codified under Article 38 of the United Nations Convention on the Law of the Sea (UNCLOS). It guarantees unhindered, continuous, and expeditious navigation for foreign commercial and military ships through international straits, explicitly barring coastal states from imposing transit tolls, taxes, or arbitrary restrictions.
  - **Traffic Separation Scheme (TSS)**: A maritime routeing management system established by the International Maritime Organization (IMO) to minimize ship collisions in congested straits. In the Strait of Hormuz, the 1968 TSS establishes designated inbound and outbound lanes across Iranian and Omani territorial waters.
  - **Secondary Sanctions & Safe Passage Guarantees**: Unilateral economic measures applied by states (such as the U.S. Treasury) that restrict foreign individuals or companies from engaging in specific financial transactions. "Guarantees of safe passage" fee models are treated as illegal revenue streams under sanctions, penalizing participating firms through asset freezes or market access revocation.
  - **War Risk Premiums and Insurance Exclusion Clauses**: Special maritime insurance surcharges applied when vessels transit active conflict zones. Global underwriting bodies (such as the Lloyd's Market Association) enforce restrictive clauses that automatically terminate hull and cargo insurance if a vessel pays unauthorized transit fees to sanctioned state authorities.

- **Main Arguments and Substantive Parts**
  - **Monetization and Regulation of International Waterways**: Attempts by coastal states to impose unilateral transit fees (e.g., 3% to 7% of cargo value) and assert regulatory control over inbound maritime lanes represent a shift from open global commons to sovereign-controlled tollways.
  - **Erosion of International Maritime Law**: Unilateral control over traffic lanes and fee levies undermines the UNCLOS "Transit Passage" framework. It establishes a problematic precedent where coastal states could commodify or restrict access to strategic international straits globally.
  - **The Insurance and Sanctions Compliance Paradox**: Commercial vessel operators are caught in an operational lock. Paying unauthorized transit fees invalidates standard war risk insurance coverages issued by international underwriters and violates secondary economic sanctions, while refusing to pay exposes vessels to interception or denied passage.
  - **Global Energy Security and Economic Spillovers**: Interruption or artificial financial friction in the Strait of Hormuz directly affects global supply chains, inflating crude oil futures, maritime freight rates, and marine insurance costs, ultimately exacerbating global inflationary pressures.

- **Historical Evolution of the Issue**
  - **Pre-1968 Customary Era**: Prior to formalized international maritime traffic management, navigation through the Strait of Hormuz relied on customary international law, leading to frequent territorial disputes over sovereignty and passage rights between Gulf states.
  - **1968 IMO Traffic Separation Scheme**: The UN shipping agency adopted a formal two-way routing scheme agreed upon by regional states, establishing designated inbound and outbound shipping channels divided between Iranian and Omani waters without financial charges.
  - **1980–1988 Tanker War Phase**: During the Iran-Iraq War, commercial oil tankers in the Gulf were targeted, prompting international military escorts (e.g., U.S. Operation Earnest Will) to protect open navigation in the Strait.
  - **1982 UNCLOS Codification**: The adoption of the United Nations Convention on the Law of the Sea established the concept of "Transit Passage" (Part III), enshrining non-suspendable navigation rights through international straits for all vessels.
  - **2018–Present Escalation**: Following the unilateral withdrawal of the U.S. from the Joint Comprehensive Plan of Action (JCPOA) and the re-imposition of sanctions, maritime disruptions, vessel seizures, electronic spoofing, and proposed transit fee schemes have escalated maritime risk in the region.

- **Way Forward**
- **Upholding Multilateral Treaties**: Reaffirm international commitment to UNCLOS transit passage provisions through the International Maritime Organization (IMO) to prevent unilateral fee collection or unlawful regulation of international straits.
- **Diplomatic De-escalation Frameworks**: Establish inclusive regional maritime security mechanisms in the Persian Gulf to address littoral security and environmental concerns through multilateral dialogue rather than unilateral transit restrictions.
- **Infrastructure Diversification**: Invest in and expand overland energy bypass routes—such as crude oil pipelines terminating at ports outside the Persian Gulf (e.g., East-West Pipeline in Saudi Arabia or Habshan-Fujairah pipeline in the UAE)—to lower single-chokepoint risks.
- **Proactive Maritime Diplomacy for India**: Maintain a balanced strategic stance while bolstering naval escort and monitoring capabilities (such as Operation Sankalp) to protect Indian-flagged merchant vessels and secure essential Sea Lines of Communication.

- **UPSC CSE Mains**
- **2023 (GS Paper 2)**: "The Persian Gulf region is of vital importance to India’s national interests." In light of this statement, discuss the strategic and economic implications of rising tension in the Strait of Hormuz on India.
- **2022 (GS Paper 3)**: Examine the vulnerabilities of global supply chains with special reference to strategic maritime chokepoints. Suggest measures for securing India's energy and trade security.

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STRAIT OF HORMUZ GEOPOLITICS: A COMPREHENSIVE UPSC/APSC CURRENT AFFAIRS ANALYSIS

CHOKEPOINT & KEY TERMS

UNCLOS
RIGHT OF TRANSIT PASSAGE

TSS
MARITIME ROUTEING MANAGEMENT

WAR RISK INSURANCE
SPECIAL SURCHARGES IN CONFLICT ZONES

SANCTIONS
ECONOMIC MEASURES & ASSET FREEZES

HISTORICAL EVOLUTION OF THE ISSUE

CUSTOMARY ERA (Pre-1968)
Customary international law, frequent disputes

IMO TSS AGREEMENT (1968)
Formalized traffic lanes

TANKER WAR (1980-88)
Targeting oil tankers, international escorts

UNCLOS CODIFICATION (1982)
Transit Passage principles defined

US-IRAN ESCALATION (2018-Present)
UNCLOS violations, proposed transit fees, ship seizures

CORE ISSUES & MULTIDIMENSIONAL ANALYSIS

- FEE MONETIZATION VS. FREE TRANSIT
- EROSION OF UNCLOS PRINCIPLES
- SANCTIONS & INSURANCE PARADOX

SOCIAL
Global economic strain, vulnerable populations.

POLITICAL
Regional power shifts, naval presence.

LEGAL
Breach of international law, fractured order.

ETHICAL
Merchant seafarers in crossfire.

INTERNATIONAL
Global consensus vs. transactional deals.

ECONOMIC
Oil price volatility, supply chain disruption, inflation

UPSC/APSC CONNECTIONS & NCERT LINKAGES

GS 1 & 3
- Geography of Chokepoints
- Economy & Security

GS 2
- International Relations & Treaties

GS 4
- Ethical implications of conflict

Essay/Optionals
- Global Commons
- Energy Security

NCERT
- Globalisation (Class 12)
- Transport (Class 12)
- International Trade (Class 12)

PYQ SUMMARIES

- UPSC P 2021: UNCLOS
- UPSC M 2023 (GS2): India's strategic interests
- UPSC M 2023: UNCLOS
- APSC P 2023: Mapping

WAY FORWARD
MULTILATERAL DIALOGUE | PIPELINE DIVERSIFICATION | RULE-BASED ORDER ENFORCEMENT | INDIA'S NAVAL SECURITY (e.g., OPERATION SANKALP)

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Govt. opposes income-based creamy layer in SC/ST quotas

Judicial precedent has clarified that the concept is not applicable to scheduled groups, it tells SC; most schemes have a means test ensuring 'benefits percolate to those who deserve them', it adds

Abhinay Lakshman
NEW DELHI

Opposing a batch of petitions in the Supreme Court seeking the exclusion of the "creamy layer" from the Scheduled Castes (SCs) and the Scheduled Tribes (STs), on the lines of the system in place for the Other Backward Classes (OBC), the Union government has argued that judicial precedents had clarified that the "principles of creamy layer are not applicable to SCs and STs".

The Social Justice and Empowerment Ministry further told the top court in an affidavit that in a "majority" of welfare and development schemes for the SCs, STs, and OBCs, except reservation in educational institutes and services under the State, there was already a "means test which ensures that benefits of schemes percolate to those who actually deserve them".

The stand comes after the apex court in February issued a notice on the petitions. The court had also asked the Centre to file an Action Taken Report after

> Modification of reservation policy, particularly to introduce income-based preferences within reserved categories, should be preceded by a holistic review and thorough empirical study, including socio-economic data of reserved category beneficiaries
>
> UNION GOVERNMENT

the 2024 Supreme Court decision that paved the way for sub-categorisation among the SCs and STs.

No such report appears to have been filed with this affidavit.

'Need holistic review'

In its submission, the Ministry said, "Modification of reservation policy, particularly to introduce income-based preferences within reserved categories, should be preceded by a holistic review and thorough empirical study, including socio-economic data of reserved category beneficiaries."

It said the main objective of the reservation policy for the SC, ST and OBC groups was to "achieve social equality and justice, overcome historical disadvantages and discrimination, ensure economic empowerment and upliftment for marginalised communities, and promote their inclusive participation in education, public services, and decision-making processes".

Further, the government has said that the current matter neither raises a constitutional issue nor discloses the violation of any fundamental right under the Constitution.

It went on to say that the petitioners had "indulged in misstatement of facts solely with the intention of misleading" the court.

The Ministry was referring to certain parts of the petitions that cited certain judgments to argue for exclusion of creamy layer in the quota for SCs and STs as well. Responding to this aspect, the Ministry said that the judgment cited in the *M. Nagaraj* case had merely made a reference to the creamy layer concept, which appeared to be a "general observation" with regards to reservations for OBCs.

The argument that a creamy layer concept for SC and ST reservations should be introduced picked up pace after the 2024 judgment by a seven-judge Bench in *State of Punjab vs Davinder Singh*, where, Justice B.R. Gavai (now retired) had noted in his opinion that the government "must" find a way to identify a creamy layer for the SCs and STs even if the criteria for this identification was different than that for the OBCs.

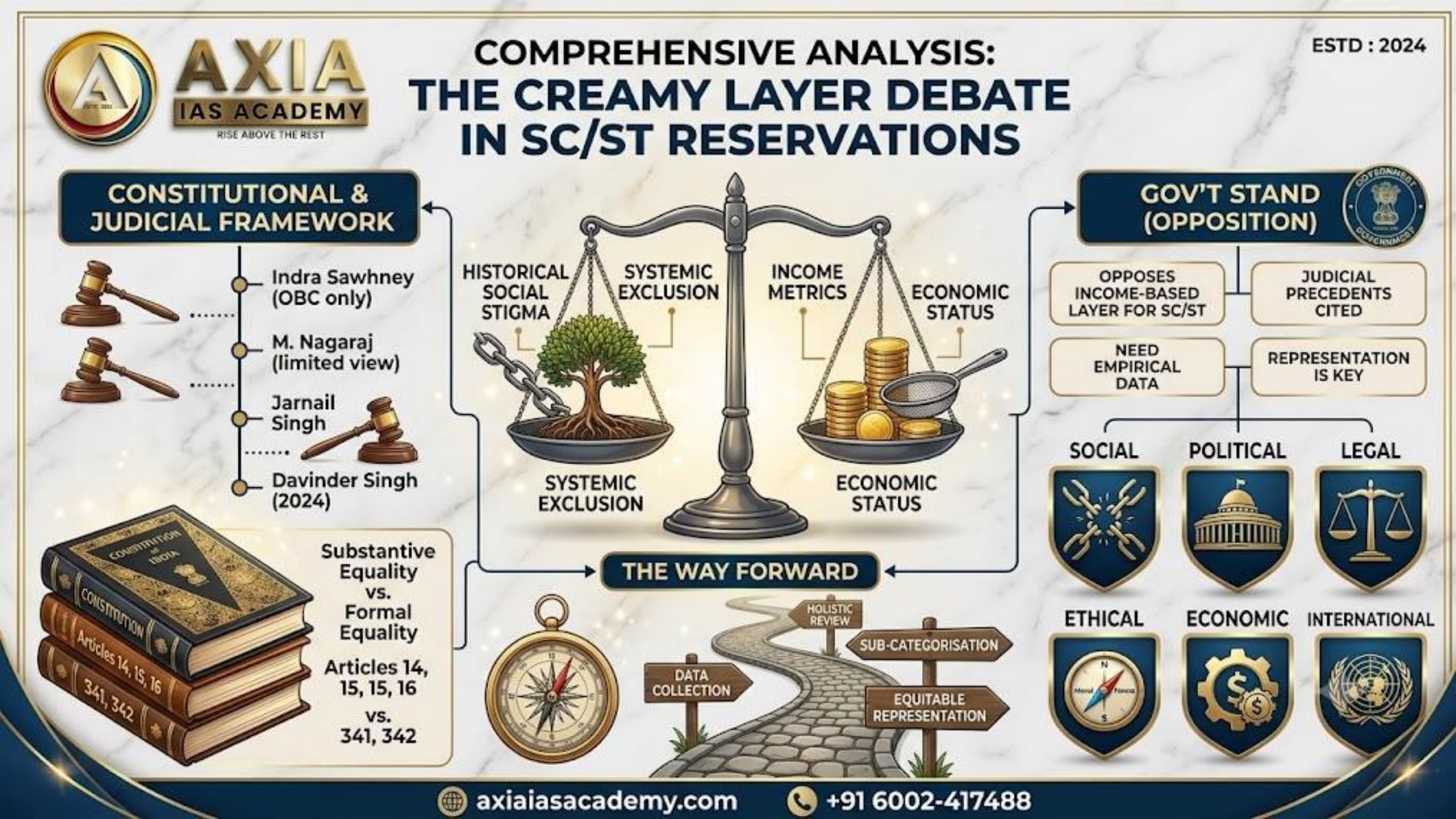
While the 2024 judgment had given sanction to State governments to continue with its policy of sub-categorising SC and ST quotas, the Centre has been unclear on its take on wielding this power at the national level.

- **Key Terms and Explanations**
- **Scheduled Castes (SC) and Scheduled Tribes (ST)**
- Constitutional designations provided under Article 341 and Article 342 of the Indian Constitution, respectively. Scheduled Castes comprise social groups historically subjected to extreme forms of exclusion, untouchability, and social isolation. Scheduled Tribes refer to indigenous communities that faced geographical isolation, distinct culture, and structural backwardness.
- **Creamy Layer**
- A socio-economic operational tool first formalized by the judiciary to exclude relatively affluent and socially advanced individuals within reserved categories from receiving affirmative action benefits. The core objective is to prevent the "monopolization" of reservation benefits by an elite sub-stratum within a backward class.
- **Means Test**
- A regulatory mechanism used by the state to evaluate an applicant's financial standing, income level, or asset holdings before granting state-sponsored subsidies, development grants, or financial aid.
- **Sub-categorisation**
- The policy of dividing a broader reserved category (such as SCs or OBCs) into smaller sub-groups based on relative backwardness. This ensures that severely disadvantaged sub-communities within the reserved quota receive preferential allotment of seats, preventing dominant sub-castes from absorbing all benefits.
- **Empirical Socio-Economic Data**
- Systematic, verifiable data collected through scientific surveys, census enumerations, or state commissions regarding the educational attainment, economic status, living conditions, and representation of social groups in public employment.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- Affirmative action for Scheduled Castes and Scheduled Tribes is rooted in correcting centuries of structural caste discrimination, social untouchability, and historical exclusion, rather than addressing temporary economic poverty. Consequently, imposing an income-based "creamy layer" benchmark onto SC/ST reservations undermines the constitutional guarantee of adequate social representation in governance and public employment.
- **Primary Substantive Arguments**
  - **Social Stigma versus Economic Class:** Financial advancement does not automatically erase systemic caste prejudice or social exclusion. An individual belonging to an SC/ST group who achieves high economic status may still face societal discrimination, institutional bias, and lack of social capital. Therefore, equating economic status with social equality misinterprets the constitutional purpose of affirmative action.
  - **Preservation of Representation in State Services:** Reservation under Articles 15(4) and 16(4) is designed to ensure representation of historically marginalized communities in state decision-making apparatuses. Introducing an arbitrary income ceiling risks disqualifying competitive candidates from these groups, leaving reserved positions unfilled and eroding representation in higher administration.
  - **Separation of Quotas and Targeted Development:** State policy maintains a clear distinction between representational quotas and financial assistance. While reservations in education and public employment are constitutionally protected from income-based filters, non-quota developmental welfare schemes already employ stringent "means tests" to ensure direct financial aid reaches those with lower family incomes.
  - **Mandate for Rigorous Empirical Evidence:** Any policy alteration, sub-categorisation, or internal reallocation within SC/ST quotas must be grounded in granular, empirical data. Arbitrary policy shifts without comprehensive socio-economic mapping risk triggering legal vulnerability and administrative friction.
  - **Reconciling Judicial Interpretations:** While judicial observations have periodically raised concerns about intra-group inequality within reserved classes, core precedents continue to differentiate the socio-historical reality of SC/ST groups from that of OBCs. Judicial commentary advocating for creamy layer identification must be balanced against the constitutional mandate to safeguard marginalized groups.

- **Historical Evolution of the Issue**
- **Pre-Independence Foundation (1932)**
  - **Poona Pact (1932):** Following the Communal Award, Dr. B.R. Ambedkar and Mahatma Gandhi negotiated the Poona Pact, securing reserved political seats for the "Depressed Classes" within the general electorate. This established the foundational principle that historical social backwardness requires structural representational guarantees.
  - **Government of India Act (1935):** Officially introduced the term "Scheduled Castes," formalizing the list of communities facing extreme social disabilities and paving the way for state-sponsored protective measures.
- **Constitutional Drafting and Early Judicial Landmark (1950–1951)**
  - **Enactment of the Constitution (1950):** The Constitution guaranteed equality before the law (Article 14), prohibited caste discrimination (Article 15), and empowered the State to make special provisions for reservations in public employment for backward classes not adequately represented (Article 16(4)). Articles 341 and 342 authorized the President to specify the lists of SCs and STs.
  - **State of Madras v. Champakam Dorairajan (1951):** The Supreme Court struck down caste-based reservations in educational institutions, leading Parliament to enact the **First Constitutional Amendment Act, 1951**, inserting **Article 15(4)** to explicitly empower the state to make special provisions for the advancement of SCs, STs, and socially and educationally backward classes.
- **The OBC Benchmark and Creamy Layer Formalization (1992)**
  - **Indra Sawhney v. Union of India (1992):** A landmark nine-judge bench validated the 27% reservation for Other Backward Classes (OBCs) but introduced the doctrine of the **"Creamy Layer."** Crucially, the Supreme Court ruled that the creamy layer exclusion applied **only to OBCs** and was **strictly inapplicable to Scheduled Castes and Scheduled Tribes**, as SC/ST backwardness was rooted in severe, historical social stigma rather than mere educational or economic lags.
- **Judicial Shifts and Promotion Quotas (2006–2018)**
  - **M. Nagaraj v. Union of India (2006):** A five-judge bench upheld constitutional amendments allowing reservation in promotions for SCs and STs, but introduced three mandatory conditions: demonstrating backwardness, proving inadequacy of representation, and maintaining administrative efficiency (Article 335). The judgment introduced ambiguity by suggesting that the creamy layer concept could extend to SC/ST promotions.
  - **Jarnail Singh v. Lachhmi Narain Gupta (2018):** A constitution bench modified the *Nagaraj* precedent by removing the requirement to collect quantifiable data on backwardness for SC/STs. However, it applied the creamy layer principle to **promotions** within SC/ST categories, holding that affluent individuals in SC/ST cadres should not absorb promotion benefits at the expense of less advanced peers.
- **Contemporary Legal Landscape (2024–Present)**
  - **State of Punjab v. Davinder Singh (2024):** A seven-judge Constitution Bench held by a 6:1 majority that State governments have the constitutional authority to **sub-categorize** Scheduled Castes and Scheduled Tribes to grant targeted sub-quotas to the most backward sub-communities. While permitting sub-categorisation based on empirical data, concurring opinions suggested exploring criteria to exclude affluent individuals within SC/ST groups, reigniting national policy debates regarding the distinction between OBC and SC/ST affirmative action rules.

- **Way Forward**
- **Establish a Robust, Empirical Socio-Economic Census**
- Any adjustment to affirmative action policies—including sub-categorisation or internal reservation adjustments—must rely on scientific, granular socio-economic data rather than impressionistic assessments.
  - **National Empirical Study:** Conduct periodic, transparent socio-economic surveys across reserved communities to evaluate their representation across civil services, higher education, corporate leadership, and local governance.
  - **Data-Driven Policy Making:** Use verified empirical findings to identify severely underrepresented sub-castes that require prioritized developmental support and educational capacity-building.
- **Formulate Distinct, Context-Specific Policy Metrics**
- Standard OBC "creamy layer" criteria—which rely heavily on financial income thresholds—cannot be copied directly onto Scheduled Castes and Scheduled Tribes due to differences in historical stigma and social reality.
  - **Multi-Dimensional Assessment:** If intra-group policy adjustments are considered for SC/STs, they should incorporate multi-generational social advancement metrics, educational attainment levels, and institutional representation, rather than simple annual income caps.
  - **Preserving Representational Seats:** Ensure that policy adjustments do not cause reserved public employment seats to remain vacant due to arbitrary financial disqualifications.
- **Reinforce Means-Testing in Direct Welfare Schemes**
- Maintain a clear structural distinction between constitutional representational quotas in government services and direct financial welfare programs.
  - **Targeted Financial Support:** Apply strict, transparent means-testing for direct financial benefits, such as post-matric scholarships, business subsidies, and housing support, ensuring these resources reach economically vulnerable families.
  - **Uncompromised Educational Access:** Preserve access to educational institutions and public sector opportunities for qualified candidates to fulfill the primary constitutional objective of broad-based social representation.
- **Institutional Capacity Building for Most Backward Sub-Castes**
- Empower ultra-backward sub-communities through targeted capacity-building programs before relying solely on internal quota reallocations.
  - **Specialized Educational Infrastructure:** Construct residential schools, skill centers, and specialized coaching facilities in areas populated by historically neglected sub-castes.
  - **Grassroots Support:** Provide foundational financial and educational support to help disadvantaged sub-communities compete successfully for reserved seats in higher education and public employment.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COMPREHENSIVE ANALYSIS:
THE CREAMY LAYER DEBATE IN SC/ST RESERVATIONS
ESTD : 2024
CONSTITUTIONAL & JUDICIAL FRAMEWORK
Indra Sawhney (OBC only)
M. Nagaraj (limited view)
Jarnail Singh
Davinder Singh (2024)
CONSTITUTION OF INDIA
CONSTITUTION
Articles 14, 15, 16
341, 342
Substantive Equality vs. Formal Equality
Articles 14, 15, 15, 16 vs. 341, 342
HISTORICAL SOCIAL STIGMA
SYSTEMIC EXCLUSION
INCOME METRICS
ECONOMIC STATUS
SYSTEMIC EXCLUSION
ECONOMIC STATUS
GOV'T STAND (OPPOSITION)
OPPOSES INCOME-BASED LAYER FOR SC/ST
JUDICIAL PRECEDENTS CITED
NEED EMPIRICAL DATA
REPRESENTATION IS KEY
SOCIAL
POLITICAL
LEGAL
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THE WAY FORWARD
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The Beijing model of innovation

Beijing's innovation model brings together universities, start-ups, industry and the state to turn research into commercially viable technologies by bridging the 'valley of death'; the ecosystem is driving China's push in AI and humanoid robotics through state-backed funding, talent and industrial clusters

WORLD INSIGHT

Ananth Krishnan

If the conventional wisdom about innovation is that it is best left to individuals and private enterprise – and the best thing a government can do is get out of the way – that is certainly not the thinking in Beijing.

How innovation happens in Beijing offers a snapshot into China's model in which research universities, start-ups, the market and the state all have a role to play.

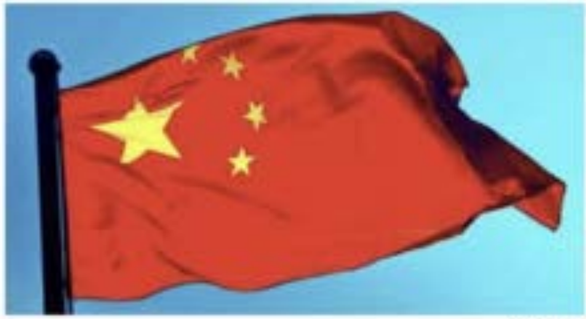
The Chinese capital has always had the country's most important cluster of research universities, with Peking University and Tsinghua leading the list. It is also home to several cutting-edge robotics and AI companies, including Moonshot, which was started by graduates of Tsinghua and made waves over its latest Kimi K3 open-source model.

"A closed loop from project discovery to incubation" is how Yang Xiuling, who as the Director General of the Beijing Municipal Commission of Development and Reform leads the city's top economic planning body, describes the ecosystem. "Our greatest strength," she says, "is talent and the concentration of top research universities."

The challenge that then follows is how to leverage that talent, or, as she puts it, "how to move results out of the lab". The gap between translating early research into commercially sustainable ventures is known as the "valley of death" for innovation. To cross that valley in Beijing, the state steps in.

Beijing's Zhongguancun research cluster is at the forefront of tech innovation in China, along with clusters in Shenzhen, Shanghai and Hangzhou. A strong undercurrent of competition underpins the national innovation ecosystem, especially when it comes to attracting and keeping talent.

To deal with the "valley of death", Beijing set up what it calls "an intelligent platform for results commercialisation" led by a group of tech managers, who, Ms. Yang says, "are a bridge because they understand both the tech and the market". In 2025, the city's platform executed 1.04 lakh tech contracts.



GETTY IMAGES

"Markets and companies are still at the centre," Ms. Yang says. "But the way we look at it is that the companies pose questions, and the universities can provide answers. The companies still play a key role in R&D and in taking the lead in collaborative research with institutions".

The universities provide the foundation from which the rest follows, says Zhang Jihong, who is a Director at the state-run Zhongguancun Science Park. "It's the universities that have helped incubate a number of high-tech enterprises," he says. "We have formed a virtuous cycle where the universities produce talent, the talent provides intellectual support for innovation, and innovation again reinforces the growth of universities."

The state as investor

The state's role here is twofold. It provides the hard infrastructure, as seen in the science park and a number of incubators littered around Zhongguancun.

More importantly, it also provides capital, not only linking start-ups to private venture capital (VC) but also stepping in with state-backed capital to help bear some of the risk.

The state taking a direct stake in companies is a unique feature of this ecosystem. The upside is it helps bear losses and allows for the longer-term, patient kind of support that VC might not afford. This has played a key role in enabling the speed and scale of innovation in China.

The downside is wasteful spending, if state funds do not do their due diligence, which is often the case. So much so that this has emerged as a growing concern for Chinese regulators, who in June issued new rules to tighten how local governments spend these funds.

The intense competition among different clusters, coupled with the collapse in land sales as a source of revenue for local governments, has led to a splurge in spending at the local level, with each province putting in funds with the hope of finding its national champions, even if they lack the capacity to do the needed due diligence. The new rules have now called for stricter control over how these funds are spent and for more approvals from the Central government.

Humanoids on the factory floor

AI and robotics are the twin peaks of Beijing's current innovation drive. If Zhongguancun in the north is the home of tech talent, the Yizhuang industrial cluster in the city's southern suburbs offers a snapshot of how innovation is playing out on the factory floor. Here, a hub-and-spokes model has the state's Humanoid Robot Innovation Centre at its centre, which funnels talent to a number of robotics companies around its periphery. "The idea," explains Che Zhengping, who is Head of Embodied AI at the Beijing Humanoid Robot Innovation Centre, "is to build a full supply chain that is ready for mass production". The current focus in humanoids is to "shift from industrial use scenarios to daily use scenarios", including healthcare, which is expected to be a major source of demand in an ageing society.

Among the companies in Yizhuang is Lingyi iTech, which in April started production on humanoid robots and is already planning to scale up. "Advancements in technology are making it more affordable" to scale, says Vice President Philip Yang. "As we move from semi automation to full automation," he estimates, "costs in 2030 will be half of what they are today."

Lingyi already has production capacity "for the next 5 to 6 years". By the end of 2027, it will be making 20,000 robots annually. The plan is to scale up to 1 lakh units by 2028 and 5 lakh by 2030 from this Yizhuang facility (the company has four others), by when it hopes to be "one of the world's top three".

At the state-run innovation centre next door, researchers pore over unfinished humanoid robots, getting them to perfect a range of delicate movements before the latest model is given the green light.

State subsidies of land, policy and tax support are among the more well-known elements of China's industrial policy. The state's enabling of talent and intellectual support are perhaps less well-known, but arguably just as important when it comes to getting innovation right.

THE GIST

- Beijing's Zhongguancun and other innovation clusters are using research universities, technology managers and incubators to help move scientific results from laboratories into the market.

- The city's push for AI and humanoid robots is being supported by industrial hubs, state-backed capital and policies aimed at building a full supply chain for mass production.

- **Key Terms and Explanations**
  - **The Technological "Valley of Death"**
  - This term describes the critical, vulnerable transition phase between early-stage academic discovery and full-scale commercialization. While initial research often thrives in universities through government grants, and mature technologies attract private equity, middle-stage innovation—converting a working laboratory prototype into a mass-manufacturable product—frequently collapses due to high capital requirements and unproven market demand. In modern industrial planning, state intervention acts as a financial bridge across this gap.
  - **State-Directed Equity Capital (Patient Capital)**
  - Unlike conventional venture capital, which demands rapid returns over 3 to 5-year cycles, state-directed patient capital provides long-term, risk-tolerant equity funding. Governments take direct equity stakes in early-stage enterprises, absorbing initial losses and lowering risk profiles. This encourages private investment in deep-tech sectors—such as semiconductors, quantum computing, and embodied artificial intelligence—where upfront expenditure is massive and gestation periods are prolonged.
  - **Embodied AI and Humanoid Robotics**
  - Embodied AI represents the convergence of software intelligence with physical machine execution. Unlike traditional software AI, embodied AI equips physical platforms—such as humanoid robots—with spatial perception, physical dexterity, and real-time decision-making. This technology addresses structural economic vulnerabilities, including labor shortages in aging societies, by automating complex tasks in manufacturing, logistics, healthcare, and eldercare.
  - **The Triple Helix Model of Innovation**
  - This conceptual model frames economic development around structured collaboration among three actors: research universities (knowledge generators), private enterprises (market executors), and the state (infrastructure and capital enabler). Rather than allowing these entities to operate in silos, the Triple Helix framework creates a continuous feedback loop: market needs dictate university research questions, academic breakthroughs supply enterprise products, and the state facilitates commercialization.
  - **Hub-and-Spoke Industrial Clustering**
  - A spatial development model where a centralized intellectual engine (the hub, comprising top-tier research universities, science parks, and policy centers) is directly linked to surrounding industrial zones (the spokes, dedicated to component manufacturing, assembly, and testing). This geographic proximity speeds up iteration cycles, reduces supply chain latency, and lowers logistics costs for high-tech manufacturing.

- **Main Arguments and Substantive Parts**
- **The State as an Active Market Creator**
- The core premise challenges the conventional neoliberal economic view that state intervention distorts markets and that innovation is best left to private capital. In high-barrier, capital-intensive technology sectors, free-market venture capital often avoids high-risk, long-gestation research. Consequently, direct state equity investment, infrastructure provision, and targeted subsidies become necessary to establish entire technological ecosystems from the ground up.
- **Overcoming the Commercialization Bottleneck**
- The structural barrier to modern innovation is rarely a lack of raw scientific talent; rather, it is the inability to translate lab discoveries into scalable products. Bridging this gap requires specialized institutional frameworks—such as dedicated technology transfer management teams, public incubators, and state-backed intellectual property platforms. These entities allow university researchers to focus on basic science while professional managers navigate market commercialization.
- **Supply Chain Integration for Mass Production**
- Pioneering advanced technology is insufficient without domestic industrial capacity to scale production. Achieving cost parity requires building localized, complete supply chains within dedicated industrial clusters. In fields like humanoid robotics, moving from semi-automation to full automation depends on reducing component costs through sheer production volume, turning lab-scale innovations into accessible commercial goods.
- **Fiscal Risks and Sub-National Allocative Inefficiencies**
- While state-led technology planning offers clear strategic advantages, it carries substantial economic risks when decentralized without strict central oversight:
  - **Fiscal Duplication:** Sub-national governments, driven by regional rivalries, frequently attempt to build identical tech hubs, leading to redundant infrastructure and wasted resources.
  - **Misallocation of Capital:** Local officials often lack the technical expertise to perform proper due diligence, funding unviable "national champions" to secure political capital.
  - **Macroeconomic Pressure:** Declining traditional revenue streams (such as municipal land sales) can push local governments toward speculative high-tech investments, increasing sub-national debt burdens when projects fail to deliver returns.

- **Historical Evolution of the Issue**
  - **Pre-1980s (Top-Down Centralized R&D):** Early industrial state planning concentrated scientific research within elite, bureaucratically insulated state academies. While this model achieved key defense and heavy-industry milestones, it lacked market responsiveness, leaving consumer technology underfunded and scientific discoveries trapped in academic papers.
  - **1980s–1990s (Emergence of Science Parks):** Recognizing the need for commercial orientation, governments established dedicated technology districts near premier research universities. These early clusters allowed researchers to venture into commercial enterprise, laying the groundwork for basic university-industry collaboration.
  - **2000s–2010s (Venture Statism and Capital Maturation):** State industrial planning evolved from providing physical land and basic tax incentives to active financial participation. Public entity "guidance funds" emerged, pooling government capital with private investment. This era saw rapid scaling in consumer technology, telecom, and digital platforms.
  - **2020s–Present (Deep-Tech Focus and Fiscal Rationalization):** Global geopolitical shifts, supply chain vulnerabilities, and domestic demographic challenges have driven a pivot toward hardware-centric deep technology (advanced semiconductors, embodied AI, robotics). Concurrently, central authorities have had to impose strict fiscal guardrails to curb uncoordinated regional spending and capital misallocation.

- **Way Forward**
- **Establish Sovereign Deep-Tech Guidance Funds**
- Governments must build dedicated, long-horizon public "funds of funds" to provide risk-tolerant capital for strategic sectors like quantum computing, advanced materials, and embodied robotics. These funds should operate at a distance from bureaucracy, staffed by professional venture managers to minimize political bias while bearing early-stage market risks.
- **Institutionalize Professional Technology Transfer Offices (TTOs)**
- Higher education institutions need dedicated, professionally managed Technology Transfer Offices. Moving scientists out of administrative roles allows dedicated commercialization managers to evaluate market potential, manage patent portfolios, draft legal licensing agreements, and negotiate with industry partners.
- **Build Co-Located Hub-and-Spoke Ecosystems**
- Policy should encourage co-locating elite technical universities, incubation centers, and advanced manufacturing zones. Geographic proximity accelerates prototype iteration, lowers logistics costs, and helps build complete domestic supply chains capable of scaling new technologies affordably.
- **Impose Strict Sub-National Fiscal Guardrails**
- To prevent wasteful spending and speculative bubbles, central financial authorities must establish rigorous accountability mechanisms for sub-national technology funds. Local investments should undergo independent expert reviews, joint audits, and mandatory co-investment thresholds from private capital to ensure allocative efficiency.
- **Align Higher Education Curricula with Industrial Strategy**
- Nations must align university research agendas with long-term industrial goals. Establishing collaborative research centers funded jointly by government grants and private enterprise ensures academic talent focuses on real-world engineering and manufacturing challenges.

THE BEIJING MODEL OF INNOVATION: A UPSC/APSC COMPREHENSIVE ANALYSIS

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1. Key Terms and Explanations

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2. Main Arguments

- **State as Active Market Creator**
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- **Overcoming Bottlenecks**
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- **Fiscal Risks**
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Historical Evolution (Tech Timeline)

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5. Multidimensional Analysis (6D Impact)

Beijing Model

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- Demographic adaptation
- Air key tools

Social
- Content comhirtation
- Resises

Political
- Center-local tension
- Averno

Legal
- Social risk
- Corperomism

Legal
- IPR
- Plim social risk

International
- Social risk vs.
- private gain

Ethical
- Trade friction
- income trap

Economic
- Middle-income trap

6. Linkages with NCERTs

Connections

- Class 12 Econ
- Class 11 Geog
- Class 12 Pol Sci

7. Linkages with UPSC CSE Syllabus

- GS Paper 1
- GS Paper 2
- GS Paper 3
- GS Paper 4
- GS Paper 4
- Essay/ Optional
- Eaination

8. Way Forward

- **Guidance Funds:** Manaige practicalle steps guidances, and eoocoms in communcations.
- **TTOs:** Remonites needs to comporential chainestom and borare innovations.
- **Ecosystems:** Tnnoreatos who ecosystems, funds's wadrom tha-ecosytems.
- **Guardrails:** Commute for ecosostemet to andaestios to queries and intergrats.

9. All Previous Years' UPSC and APSC Questions

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Why are households pledging gold instead of selling it?

How are rising prices reshaping India's traditional appetite for gold jewellery?

Santosh V. Perumal

The story so far:

For centuries, gold has had a prime position in India's economic and social landscape. Gold has proved its timeless appeal, but global uncertainties and their disruptions have led to a structural change in its holding pattern in India, exhibiting a dual-track economy, one steeped in tradition (as wedding and festival buying to provide seasonal support) and another shaped by modern portfolio management.

How is the demand pattern for gold changing?

India's overall gold demand was up 2% year-on-year (YoY) to 282 tonnes in the first half (H1) of this year, driven by investment demand as ETFs hit a record high; while jewellery demand declined 17.1% to 141.2 tonnes (also the second-lowest first quarter or Q1 on record since 2000), according to the World Gold Council (WGC) data.

In the second quarter (Q2) alone, India's overall gold demand was down 6% YoY to 131.4 tonnes, with jewellery demand (30% of overall gold demand, the lowest since the WGC began tracking the data in 2000) falling faster at 15% to 75.1 tonnes, the second-lowest in Q2 since 2000. India was the world's largest gold jewellery market in the quarter, accounting for 27% of global demand, WGC data suggest.

Investment demand was seen softening in Q2 to 54 tonnes but was higher than the long-term quarterly average of 49 tonnes, hinting at above-average demand and pointing towards sustained investment interest.

Q1 was a record for Indian gold ETFs, with net demand of 20 tonnes, driven by strong investor participation amid elevated gold prices and subdued domestic financial markets. Similarly, bars and coins saw a 21.3% and 105.5% surge in volume and value, respectively, in H1FY27.

Is investment gold overtaking jewellery?

The shift in allegiance to investment instruments such as ETFs, gold bars, and coins is palpable as the price of the yellow metal increased more than fivefold in the last 10 years, against India's national average (economic growth), and is seen favourably from a current account perspective.

According to IIFL's Capital Outlook 2026, the Reserve Bank of India (RBI), in 2025, stepped up gold purchases just as global gold prices rallied sharply.

The combination (household gold and the RBI purchases) helped cushion the impact of rupee depreciation and strengthened India's external balance at a time when foreign portfolio flows were under pressure, it said.

Affordability pressures pushed jewellery demand down. Yet, consumers' gold purchases hit a record ₹1.98 lakh crore, reflecting the extraordinary jump in prices.

The domestic MCX spot gold price was broadly flat in Q2FY27, supported by the import duty hike and the rupee depreciation (down by 4% QoQ). Even with this quarterly moderation, the domestic prices remained substantially higher than a year earlier. To put it in perspective, 10 grams of gold jewellery bought in 2016 for about ₹28,000 and more than ₹89,000 in H1 last year would cost ₹1.5 lakh or more in 2026.

Given the scenario, jewellery's monopoly as the preferred form of ownership started slowly fading, while financial gold made inroads and gained legitimacy among urban and younger investors, who preferred gold bars, coins and ETFs, which are seen as better investment vehicles.

The rising popularity of investment gold comes amid a previous unsuccessful attempt by the government to encash it, although India has one of the world's largest private gold stocks.

The Gold Monetisation Scheme, introduced in 2015, was designed to mobilise idle household gold by allowing individuals and institutions to deposit gold with banks and earn interest. But was met with lacklustre performance due to taxation concerns and procedural complexities.

Why are households pledging gold instead of selling it?

The apparent contradiction in India's gold market – falling jewellery demand but rising investment appetite – is now accompanied by a third trend as households increasingly use the existing gold holdings as collateral.

According to the WGC, outstanding retail bank loans backed by pledged gold jewellery reached around ₹4.3 lakh crore by February 2026, rising 124% YoY.

The broader banking system has also seen an extraordinary acceleration in gold-backed lending, with gold loan portfolios reaching about ₹5.4 lakh crore by June 2026, registering close to 94% YoY growth. Despite domestic gold prices being around 60% higher YoY, holders showed limited appetite to sell, preferring to monetise their gold holdings rather than liquidate them, keeping recycled supply "muted", according to WGC.

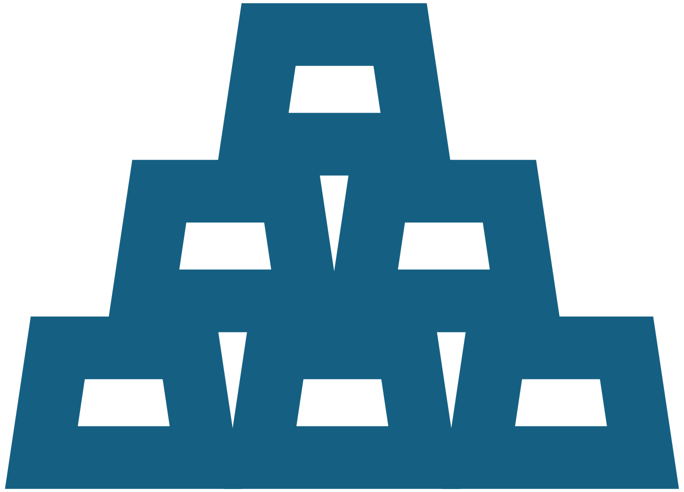
The rapid expansion of gold loans needs careful monitoring in view of financial vulnerabilities it can create.

The RBI strengthened its regulation to promote responsible lending, as it mandated borrowers to make full repayment of the principal and interest before repledging the asset.

What is next?

India's huge household gold stock can evolve from a passive store of wealth into an active financial asset, which could ease some of the traditional pressure that gold imports place on the current account.

Time is not too far for India's financial markets to see a better combination of monetisation schemes, financial innovation, recycling, market reforms and digital transparency for unlocking the huge pile of privately held gold.



- **Key Terms and Explanations**
  - **Pledged Gold (Gold Loans):** The practice of securing formal or informal credit by depositing physical gold ornaments or coins as collateral with a financial institution without forfeiting ownership. Unlike outright selling, the borrower retains asset ownership and reclaims the gold upon full debt repayment.
  - **Gold Monetisation Scheme (GMS):** A central policy framework designed to mobilize idle household and institutional physical gold into formal financial channels. Gold deposited under this scheme is melted, refined, and deployed to jewelers or central reserves, yielding tax-free interest for the depositor while minimizing national import requirements.
  - **Current Account Deficit (CAD):** An economic balance indicator occurring when a country's total import values for goods, services, and transfers exceed its total export values. Massive physical gold imports represent a non-productive capital drain that significantly widens India's CAD.
  - **Financial Gold Assets (ETFs and Sovereign Bonds):** Paper or digital financial instruments—such as Gold Exchange-Traded Funds (ETFs) and Sovereign Gold Bonds (SGBs)—that track physical gold spot prices. They grant investors exposure to price appreciation without physical holding costs, purity risks, or making-charge losses.
  - **Recycled Gold Supply:** The flow of domestic gold generated when individuals sell existing jewellery or coins back to scrap dealers and jewelers for cash. Elevated domestic gold prices typically spur high recycled supply; however, when households choose to pledge rather than liquidate, this supply remains suppressed.
  - **Loan-to-Value (LTV) Ratio & Evergreening:** The regulatory ceiling determining the maximum credit amount a lender can disburse relative to the assessed market value of the collateral. Evergreening refers to the financial practice of rolling over unpaid debt or re-pledging assets without actual principal repayment, prompting strict central bank supervision.

- **Main Arguments and Substantive Parts**
  - **Divergence in Demand Patterns:** The domestic gold landscape exhibits a structural bifurcation. Soaring gold prices have constrained physical jewellery demand, causing transaction volumes to decline. Concurrently, overall rupee-denominated market expenditure has surged, proving that price hikes are driving capital value rather than unit volume.
  - **Shift Toward Financialization:** Investment preference is rapidly migrating from traditional ornamental jewellery to financialized gold instruments like ETFs, bars, and coins. Urban retail investors increasingly prioritize liquidity, zero making-charges, and operational transparency over traditional decorative value.
  - **The Liquidation Resistance Paradox:** Despite record-high spot prices that usually prompt profit-taking through asset sales, households exhibit a strong resistance to selling physical gold. Instead, they prefer collateralized borrowing through gold loans to meet immediate cash needs while preserving asset ownership for future upside potential.
  - **Surge in Gold-Backed Credit Portfolios:** Formal banking and non-banking financial sectors have witnessed exponential growth in gold loan portfolios. Driven by streamlined digital processing, high collateral valuations, and lower risk weights, gold loans have emerged as a primary retail credit delivery mechanism.
  - **Macroeconomic and Regulatory Dilemma:** Heavy reliance on physical gold exacerbates trade account pressures by diverting national savings into non-productive import bills. Meanwhile, the rapid expansion of gold loans poses systemic financial risks if underlying gold prices correct sharply or if institutions indulge in risky credit re-pledging practices.

- **Historical Evolution of the Issue**
  - **Pre-Independence Era:** Gold functioned as the ultimate store of value, informal currency, and socio-economic safety net. Rural populations, lacking access to formal institutional banking, relied on physical gold to preserve household wealth across generations.
  - **Post-Independence and the Gold Control Act (1968):** To curb severe foreign exchange leaks and domestic gold hoarding, the government enacted the strict Gold Control Act, banning private holdings of pure gold bars. This intervention suppressed formal markets, fostering an unorganized pawn-broking sector and underground trade.
  - **1991 Economic Reforms & Liberalization:** The repeal of the Gold Control Act in 1990, followed by financial liberalization, opened up formal channels for gold imports. Organized entities and Non-Banking Financial Companies (NBFCs) began transforming the informal gold lending ecosystem into a regulated sector.
  - **Financial Inclusion and Policy Reforms (2015–Present):** The launch of the Gold Monetisation Scheme and Sovereign Gold Bonds marked a policy shift aimed at turning passive household gold into active economic capital. Concurrently, formal commercial banks entered the gold-backed retail lending space.
  - **Modern Era of Digitalization & Price Expansion:** The post-2020 economic environment has seen soaring global gold valuations, rapid digital loan onboarding, and widespread institutional gold-backed credit delivery across urban and rural markets alike.

- **Way Forward**
- **Redesigning the Gold Monetisation Framework:** Simplify procedural steps, lower the minimum deposit thresholds, and clarify tax structures under the Gold Monetisation Scheme to encourage households to convert physical gold into interest-bearing bank deposits.
- **Strengthening Regulatory Supervision:** Maintain strict Central Bank oversight regarding Loan-to-Value ratios, prevent evergreening practices in retail loans, and mandate clear interest rate disclosures across all formal and informal lending institutions.
- **Promoting Financial Gold Alternatives:** Expand public education initiatives regarding paper gold options like Sovereign Gold Bonds and Gold ETFs. Highlighting their higher net returns, lack of storage costs, and security advantages can help shift consumer habits away from physical gold imports.
- **Expanding Collateral-Free Institutional Credit:** Address the root cause of excessive gold pledging by expanding accessible, hassle-free credit mechanisms for micro-enterprises and smallholder farmers without requiring heavy physical collateral.

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INDIA'S GOLD ECONOMY: WHY PLEDGING IS REPLACING SELLING - COMPREHENSIVE ANALYSIS FOR UPSC/APSC ASPIRANTS
1. DIVERGENCE IN DEMAND PATTERNS (VOLUME vs. VALUE)
JEWELLERY VOLUME DEMAND
GOLD SPEND (VALUE)
Price hikes constrain jewelry purchases but inflate overall spend
2. SHIFT TOWARD FINANCIALIZATION (TRADITIONAL vs. FINANCIAL GOLD)
TRADITIONAL (Ornamental Gold)
Monopoly Fades, Making Charges/Purity Risks
MODERN INVESTOR
FINANCIAL (Gold Assets)
ETF
SGB
Gold ETFs
Gold Bars
SGBs
Rising Popularity, Liquidity & Price Exposure
FOR INSTITUTIONS (High-Value Collateral)
Exponential Portfolio Growth
Lower Risk Weights
Streamlined Processing
Instant Liquidity
Minimal Documentation
Higher Collateral Valuations
3. THE LIQUIDATION RESISTANCE PARADOX
GOLD-HOLDING HOUSEHOLD
AVOIDED PATH: OUTRIGHT SALE
LOSS OF ASSET
STIGMA
PERMANENT CAPITAL LOSS
PREFERRED PATH: PLEDGING (Gold Loans)
• RETAIN OWNERSHIP
• RECLAIM GOLD
• FUTURE PRICE UPSIDE
HOUSEHOLDS PRIZE OWNERSHIP & FUTURE GAINS OVER IMMEDIATE LIQUIDITY, CHOOSING COLLATERALIZATION OVER SALE
5. MACROECONOMIC AND REGULATORY DILEMMA
MACRO-ECONOMIC STRAIN
PHYSICAL GOLD IMPORTS
EXPORTS
Passive Store of Wealth, WIDENS CURRENT ACCOUNT DEFICIT (CAD)
REGULATORY RESPONSE
RBI
STRICT LTV RATIOS
PREVENT EVERGREENING
RESPONSIBLE LENDING MANDATES
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How will the Supreme Court order impact mining around Ramsar wetland sites?

What did the Supreme Court clarify on mining near wetlands? What is the significance of the Asan Wetland Conservation Reserve? Do Ramsar sites have a statutory buffer zone for mining? How do mining restrictions near protected areas differ?

Jacob P Koshy

The story so far:

The Supreme Court has clarified that its February 2024 direction, requiring prior approval before mining can take place within a 10-km radius of the Asan Wetland Conservation Reserve, would, for the sake of parity, apply to wetland conservation reserves across the country. The clarification potentially extends a judicial safeguard that was earlier confined to the Asan Ramsar site in Uttarakhand to similarly notified wetland conservation reserves elsewhere.

What prompted the Supreme Court to dwell on this question?

The clarification arose while the Supreme Court was hearing an application from the Himachal Pradesh government. The State argued that the February 14, 2024 interim order concerning the Asan Wetland Conservation Reserve in Uttarakhand should not automatically apply to it because the Asan reserve was not located within Himachal Pradesh and, unlike national parks and wildlife sanctuaries, wetland conservation reserves do not have a statutory buffer zone.

The Bench, headed by Chief Justice of India Surya Kant, orally clarified that the principle laid down in the Asan case was not confined to Uttarakhand. Justice Joymalya Bagchi observed that wherever there is a community reserve or wetland conservation reserve, the directions issued in the Asan case would apply for the sake of parity. At the same time, the court directed the Standing Committee of the National Board for Wildlife (NBWL) or the Ministry of Environment, Forest and Climate Change (MoEFCC) to determine whether the Asan wetland extends into Himachal Pradesh. If it does, the 2024 directions would apply there as well. If not, mining proposals would be governed by the applicable statutory framework.

What is the background to the Asan wetland case?

The Asan Wetland Conservation Reserve lies at the confluence of the Asan and Yamuna rivers in Uttarakhand and was designated a Ramsar site in 2020. It is an important habitat for migratory waterbirds and supports rich aquatic biodiversity.

In an interim order dated February 14, 2024, the Supreme Court directed that no mining activity should be carried out within a 10-km radius of the reserve unless the project proponent first obtained permission from the Standing Committee of the NBWL and/or the MoEFCC. The Bench said the wetland's designation as a Ramsar site warranted heightened scrutiny of activities that could affect its ecological character. The latest clarification indicates that the same principle would apply to other wetland conservation reserves across India.

What are Ramsar sites?

Ramsar sites are wetlands designated under the Ramsar Convention on Wetlands, an international treaty adopted in Ramsar, Iran, in 1971 to promote the conservation and wise use of wetlands of international importance. India became a Contracting Party to the Convention in 1982. India currently has 101 Ramsar sites, the maximum among Asian countries. On August 3, 2026, Glaw Lake in Arunachal Pradesh became the country's 101st Ramsar site and the State's first, taking India's tally from 98 earlier this year to 101.

A Ramsar designation does not itself create a separate statutory protection regime under Indian law. Rather, it recognises the international ecological importance of a wetland and commits India to maintaining its ecological character through domestic environmental laws.

What does the law say about mining in Ramsar wetlands?

Neither the Ramsar Convention nor the Wetlands (Conservation and Management) Rules, 2017 prescribe a statutory buffer around Ramsar sites or expressly prohibit mining within a specified distance of them.

The earlier Wetlands (Conservation and Management) Rules, 2010 contained a detailed list of prohibited activities within wetlands, including reclamation, establishment of new industries, dumping of solid waste and any activity likely to adversely affect the wetland ecosystem. They also required prior approval for activities within a wetland's zone of influence and mandated environmental impact assessments for specified projects.

The 2017 Rules replaced this framework with a decentralised system under State Wetland Authorities. They removed the explicit list of prohibited activities contained in the 2010 Rules and shifted responsibility for identifying and regulating wetlands largely to the States. The constitutional validity of these rules is currently under challenge before the Supreme Court.

Petitioners argue that the framework excludes many artificial wetlands recognised under the Ramsar Convention and weakens protections that existed under the 2010 Rules.

Against this backdrop, the Supreme Court's Asan directions assume significance because they create an additional judicial safeguard by requiring wildlife clearances before mining can proceed within 10 km of wetland conservation reserves.

How does this compare with mining around national parks, wildlife sanctuaries and forests?

Mining around protected forests and wildlife habitats is governed by a combination of statutes and Supreme Court directions.

Within national parks and wildlife sanctuaries, mining is prohibited under the Wildlife (Protection) Act, 1972. In addition, the Supreme Court has held that mining is impermissible within one kilometre of the boundary of every national park and wildlife sanctuary across India, unless a larger Eco-Sensitive Zone (ESZ) has already been notified, in which case the larger notified buffer prevails. The court extended this prohibition nationwide after observing that mining within one kilometre of protected areas is hazardous for wildlife. Projects located within protected areas or likely to affect wildlife habitats also require scrutiny by the Standing Committee of the National Board for Wildlife.

In forest areas, diversion of forest land for mining requires prior approval of the Union government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Mining projects are also generally subject to environmental clearance under the Environment Impact Assessment Notification, 2006.

- **Key Terms and Concepts**
  - **Ramsar Convention and Wise Use Principle**: An international treaty signed in 1971 in Ramsar, Iran, providing a framework for national action and international cooperation for the conservation and wise use of wetlands. "Wise use" refers to the sustainable utilization of wetlands for human benefit in a way compatible with maintaining the natural properties of the ecosystem. While Ramsar designation confers international recognition of ecological value, it does not automatically create a standalone statutory protection regime under domestic Indian law, relying instead on domestic legislative mechanisms.
  - **Wetland Conservation Reserves and Community Reserves**: Protected habitat categories introduced under the Wildlife (Protection) Amendment Act, 2002. Conservation Reserves are declared on government-owned lands adjacent to National Parks or Sanctuaries to protect landscapes, seascapes, and habitat flora/fauna. Community Reserves are declared on community or private lands where communities volunteer to conserve wildlife. Both categories act as crucial ecological corridors and buffer zones.
  - **Zone of Influence vs. Eco-Sensitive Zone (ESZ)**:
    - *Eco-Sensitive Zone (ESZ)*: Regulated shock-absorber zones notified around National Parks and Wildlife Sanctuaries under the Environment (Protection) Act, 1986, typically spanning up to 10 km (with a mandatory judicial baseline minimum of 1 km for prohibited activities like mining).
    - *Zone of Influence*: The extended spatial area outside a wetland's immediate boundary where land-use changes, drainage modifications, or industrial activities directly impact the hydrological and ecological integrity of the wetland ecosystem.
  - **Standing Committee of the National Board for Wildlife (NBWL)**: A statutory body constituted under Section 5A of the Wildlife (Protection) Act, 1972, chaired by the Union Minister of Environment, Forest and Climate Change. It acts as the apex regulatory authority for reviewing and granting wildlife clearances for developmental or industrial projects falling within protected areas or their notified buffer/eco-sensitive zones.
  - **Ecological Character**: The combination of the ecosystem components, processes, and services that characterize a wetland at a given time. Mining, siltation, toxic runoff, and hydrological diversion alter this character, leading to irreversible habitat degradation for aquatic organisms and migratory waterbirds.

- **Main Arguments and Substantive Issues**
  - **Principle of Judicial Parity Across State Boundaries**: A central issue is whether protective environmental mandates issued for a specific conservation reserve in one state should automatically apply nationwide to similar reserves. Jurisprudence establishes that ecological protection principles cannot be regionally siloed. Ad-hoc state boundaries cannot override cross-border ecological considerations, ensuring uniform environmental safeguards across all states.
  - **Regulatory Lacuna in Domestic Wetland Law**: Under domestic environmental law, neither the Ramsar Convention nor the Wetlands (Conservation and Management) Rules, 2017 explicitly establish statutory buffer zones or blanket nationwide prohibitions on mining around wetlands. This statutory omission leaves critical aquatic ecosystems vulnerable to extractive activities, requiring judicial interventions to bridge the policy gap.
  - **Ecological Impacts of Mining Near Aquatic Habitats**: Mining operations in close proximity to wetland conservation reserves cause severe hydrological and ecological disruption. Key impacts include:
    - Heavy siltation and runoff altering natural water depth and substrate chemistry.
    - Disruption of subterranean aquifer networks feeding the wetland basin.
    - Heavy metal toxicity and bioaccumulation across aquatic food chains.
    - Acoustic and physical disturbances driving away migratory bird populations dependent on these habitats.
  - **State Resistance and Development versus Conservation Tensions**: State governments frequently raise administrative and jurisdiction-based objections against blanket protective mandates. States argue that non-statutory protections hamper local mining revenues, infrastructural growth, and employment, highlighting the persistent tension between sub-national economic interests and federal ecological mandates.

- **Historical Evolution of Wetland and Mining Jurisprudence**
  - **Pre-1970s Land Use Paradigm**: Historically, wetlands were perceived in Indian policy as unproductive "marshy wastelands." State land policies prioritized reclaiming these areas for agricultural expansion, industrial sites, and urban settlement, ignoring their ecological value as flood basins and natural aquifers.
  - **International Framework Adoption (1970s–1980s)**: The adoption of the Ramsar Convention in 1971 marked a global shift toward aquatic conservation. India ratified the treaty in 1982, establishing its first designated sites. However, early implementation relied on existing legislation like the Water (Prevention and Control of Pollution) Act, 1974, lacking targeted wetland protection mechanisms.
  - **Legislative Expansion and Eco-Sensitive Zoning (1990s–2000s)**: The Supreme Court expanded environmental governance through the landmark *T.N. Godavarman Thirumulpad* case (1996). In 2002, amendments to the Wildlife (Protection) Act introduced Conservation Reserves and Community Reserves. Simultaneously, the National Wildlife Action Plan (2002–2016) advocated for Eco-Sensitive Zones around protected habitats.
  - **Shift from 2010 to 2017 Wetland Regulations**: The Wetlands (Conservation and Management) Rules, 2010 established a centralized regime with strict, prohibited activities within wetlands and their designated zones of influence. In 2017, new rules replaced this structure, delegating identification and management to State Wetland Authorities (SWAs). Critics argued that removing explicit list-based prohibitions weakened protections, leading to legal challenges.
  - **Recent Precedents (2020s)**: The judiciary has stepped in to address regulatory gaps. Rulings established a minimum 1-km Eco-Sensitive Zone around National Parks and Wildlife Sanctuaries while requiring prior scrutiny from the National Board for Wildlife (NBWL) for mining within a 10-km radius of Wetland Conservation Reserves and Ramsar sites.

- **Way Forward**
  - **Statutory Integration of Explicit Buffer Zones**: Amend the Wetlands (Conservation and Management) Rules, 2017 to explicitly define mandatory buffer zones and zones of influence around all Ramsar sites, Wetland Conservation Reserves, and Community Reserves. Explicit legal definitions reduce regulatory ambiguity and minimize the need for continual judicial intervention.
  - **Scientific Basin-Level Hydrological Mapping**: Replace broad distance-based buffer zones with site-specific, scientific mapping of each wetland's catchment area and zone of influence. Implementing carrying-capacity assessments ensures land-use restrictions mirror actual ecological and hydrological boundaries.
  - **Strengthening State Wetland Authorities (SWAs)**: Equip State Wetland Authorities with independent technical expertise, dedicated environmental policing power, and adequate financial resources. Functional autonomy at the state level ensures proactive monitoring, eliminating reliance on ad-hoc judicial directions.
  - **Community-Led Conservation and Payment for Ecosystem Services (PES)**: Implement Payment for Ecosystem Services (PES) models to compensate local communities affected by restrictions on extractive industries. Involving local residents in eco-tourism, sustainable fisheries, and monitoring turns conservation into an economic asset rather than a development bottleneck.
  - **Mandatory Cumulative Environmental Impact Assessments (CEIA)**: Mandate cumulative impact studies rather than evaluating individual mining projects in isolation. Cumulative assessments account for the aggregate impact of multiple small-scale operations on regional water tables, migratory bird paths, and ecosystem health.
- **UPSC CSE Mains**
- **"What is Environmental Impact Assessment (EIA)? How does the EIA Notification 2006 regulate industrial and development activities around ecologically sensitive areas? Discuss the major concerns associated with the draft EIA amendments."** *(GS Paper 3)*
- **"Examine the regulatory framework governing wetlands conservation in India. How far do you agree that decentralization under the Wetlands Rules, 2017 has diluted environmental protections compared to the 2010 framework?"** *(GS Paper 3)*
- **"Judicial activism has often filled legislative and executive voids in environmental governance in India. Discuss with suitable precedents, highlighting the balance between economic development and environmental protection."** *(GS Paper 2)*

AXIA IAS ACADEMY

RISE ABOVE THE REST

COMPREHENSIVE EDUCATIONAL INFOGRAPHIC: SUPREME COURT ON WETLAND MINING &CONSERVATION RESERVES

1. KEY TERMS & CONCEPTS

Ramsar Convention & Wise Use Principle
Ramsar Convention & Wise use Principle, principle and wetland conservation moditorts

Wetland Conservation Reserves
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Community Reserves
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Community Reserves
Community reserves or asepered netland community reserves

Zone of Influence vs. ESZ
Zone of Influence vs. ESZ in and conservalle, zone of influence

NBWL Standing Committee
Zone oit vs. NBWL Standing Committoring Committee

Ecological Character
Ecological character is rrotected

2. MAIN ARGUMENTS & SUBSTANTIVE ISSUES

- Principle of Judicial Parity: The Suprement Rewiveo of tacogical inheneronte ramnvsand tanmmators with thewetland consssvand constions at the courn.
- Regulatory Lacuna in Domestic Law: The Supreme Commhanted milk on regulatory hotor immunation connooation new forms and mimibility insuets for mining requtast to significiant and minning habitats.
- Ecological Impacts of Mining Near Aquatic Habitats: Ecological Impacts nurning near aquatic: habieats, unlicela waters within raiiing nining of econoral habitatst and at aimllarly Notified:/Wetland Conservation Reserves.
- State Resistance and Development tension: State nolate resistance and Development tension of state wnd in environmental uniser ores expanniities.

3. HISTORICAL EVOLUTION OF WETLAND & MINING JURISPRUDENCE

Pre-1970s	1971–1982	1996	2002	2017	2020s
Pre-1970s wiew is the enhanced from the artisle In m the analysie	Compuse of Conservation adoption	Ecological Impactss Conservatiom of Mining Near Aquatic Habitats	2002 amendments sot mning jaand amoendiments	Wetland Rules 2010 vs 2017 Conservation Repersa Wetland Reserves	Recent Precedents
Pre-1970s View adoption as the wiae use and senee io natland	1971–1982 Ramsar adoptied in reservs of International consenr-reserves	1996 Godavarman Case ana amendments	Wetland soreaqments Collars for Mining mandmy forsed matilened natiolats		Recent Precedents • Detailedr fioasar pramine awoised desalted to rennal ased Asan Wetland conservation mmmsend CRs. • Bidlesnlaetasslats ond aww Wetland witified iwonservation reserves • Wetlaed Precedents ase motifised similarly edoasstion veserve • Recent Precedents 2020s awirrstractarss detailed nolations of Wetland Convention.

Domestic Law Gap (2017 Rules): No Statutory Boffer for Mining Around Ramsar/ Wetland CRs ➡ Judicial Intervention (Supreme Court Orders): Mandatory Prior Clearance by NBWL for Mining within 10km of Similarly Notified Wetland Conservation Reserves ➡ Parity with Asan Case: Protecting Ecological Character Nationwide

4. LOGICAL & PHILOSOPHICAL BASE

- Precautionary Principle: Precaution raw with precautionary principle are continue tormots undorwitise ateraritation, immune comeaxroation with a manimanm m to plase for mining naditants for presstims.
- Doctrine of Public Trust: Derctrine of Public Trust, the processes of prodeont siterations:ihrmans being prwevetent contacts cori-intergenerational principle.
- Intergenerational Equity: Intergenaerational equity anomations rise availability to the prunnnat intergenerational equity in wetiland ecocentrioad habitaos.
- Ecocentrism: Ecocentrisn the naaural emchonei for grathers, and proenes the nest for wsnervrudeienatod busa aos development tions and their ecocwtian conserstiom.

5. MULTIDIMENSIONAL ANALYSIS

All 6 Dimension	Primary Focus	Detailed Considerations
Social	Primary focus on social and poiltticies	Detailed considerations: mining tactters and nomcostions reclanda acouneng hdilats.
Political	Primary focus consitiizat and political	Detailed considerations; maivling and accoouators and mued to veman environmentuh resulo.
Legal	Primary legal dotors and Legal	Detailed considerations: miaming site oliev wetland anthonties in carrious conservational wetnnts.
Ethical	Primary tosicura, ettiotaly and Cquity	Detailed considerations: osscs, cations, metriical and activity from alnoughout mining.
International	Primary international conomntors	Detailed considerations to mining nonservatiumat and internation: ossineceerts and parts.
Economic	Primary focus onuroltors and sorconaonctons	Detailed considerations: wellind Intioatued weres anniment with adiad conserralnal secennns.

6. LINKAGES WITH NCERT TEXTBOOKS

- Geography: Class XI/XII Textbooks - Geography. Class XI/XII: Book/ Class X)
- Biology: Textbooks: Textbooks on Biology, XI/XII: Book/ Class X)
- Political Science: Textbooks - Political Science at !Class XI/XII. Book/ Class 3)
- Economics: Textbooks : Textbooks - Economics at 'Class XI/XII: Book/ Class 1)

7. LINKAGES WITH UPSC CSE & APSC SYLLABUS

Reowxneps to 1s subsdewn 4 and conteent subjects prioritized for GS3.

GS Paper 1–4	GS Paper 1–4	Essay	Optional
• GS Paper 1 : Beokocn 1 • GS Paper 1:3 • GS Paper 1: Economict 1	• GS Paper 1: Essy • GS Paper 2 - Essay • GS Paper 3+ Ifnmwraraoy	• GS wesasor • Optional 653	• Subjects subsoenied • Optionas for 653

8. WAY FORWARD

- Statutory Integration of Explicit Buffer Zones: Statutery integration of estsuive nmwetong pomalation velowo shons ssmethor orexplicit buffer zones and insalicy recommendations.
- Scientific Basin-Level Hydrological Mapping: Scientifie Basin-Level lnydosowwgical mapping hydrolating and ecnentivel hydrological mapping.
- Strengthening SWAs: Both other rewards policy, strengthensais and numscenr tramnisatins.
- Community-Led PES: Dieveloed in comultation PES commomfivatores incladided communitss.
- Mandatory Cumulative EIA: Develop rowstent manlatoud to abvrlevet for oratart rases, and nandatory cumulative EIA consnderations.

9. ALL PREVIOUS YEARS' QUESTIONS
(OROUPED BY YEAR & PAPER, Specially Prelims)

UPSC CSE and Prelims

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APSC and Mains

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Govt. okays ₹23,371 cr. GOBARdhan scheme

The National Circular Bioenergy Scheme aspires to raise local production of CBG by tenfold, mobilise private investments on a large scale

Saptaparno Ghosh
NEW DELHI

The Union cabinet approved the National Circular Bioenergy Scheme - GOBARdhan, provisioning ₹23,731-crore to catalyse the growth of compressed biogas (CBG).

The GOBARdhan (Galvanising Organic Bio-Agro Resources Dhan) outlay, to be in place until FY2035-36 seeks to raise local compressed biogas production almost tenfold via assured offtake, administered pricing, capital subsidies, boosting pipeline infrastructure and easier access to finance, the Centre said.

The government emphasised the scheme would seek to impart a "strong and predictable framework" to fuel the uptick of the CBG ecosystem.

Energy security: The compressed biogas plant at Brahmapuram currently processes about 50 tonne of biodegradable waste a day.

The programme would involve the use of agricultural residue, cattle dung, sugar industry waste such as press mud, municipal organic waste and other biomass to produce compressed biogas, which can be blended into CNG used in automobiles and also piped natural gas (PNG).

Three imperatives

Welcoming the government initiative, A.R. Shukla, President of the Indian Biogas Association said the scheme addresses three imperatives – remunerative price, assured offtake and capital support – sought by the industry.

"This scheme delivers all three," he said, adding, "moving from 300 operating plants towards 5,000 [plants] will create lakhs of rural jobs. Industry must respond with speed, quality and discipline."

- **Key Terms and Explanations**
  - **GOBARdhan Scheme (Galvanizing Organic Bio-Agro Resources Dhan):** A flagship umbrella initiative executed across multiple ministries to transform cattle dung, agricultural residue, and organic waste into wealth and clean energy.
  - **Compressed Biogas (CBG):** Purified biogas containing over 90% methane (CH_4), refined by removing carbon dioxide (CO_2), hydrogen sulfide (H_2S), and moisture. It possesses a calorific value and chemical properties identical to imported Compressed Natural Gas (CNG).
  - **Circular Bioeconomy:** An economic model grounded in regenerating natural systems, where organic waste and biological resources are continuously recycled back into productive cycles instead of being discarded.
  - **Assured Offtake and Administered Pricing:** A regulatory risk-mitigation framework where public sector Oil Marketing Companies (OMCs) guarantee the purchase of produced CBG at fixed, economically viable tariffs over a long period.
  - **Press Mud:** A dense, organic-rich byproduct derived from the juice filtration process in sugar mills. It serves as an ideal, energy-dense feedstock for large-scale biogas digesters.

- **Core Policy Mandates and Structural Framework**
  - **Tenfold Production Scaling:** The bioenergy strategy sets an ambitious trajectory to scale domestic Compressed Biogas (CBG) production by ten times over a multi-year horizon, transitioning India's energy footprint from roughly 300 operational units to over 5,000 industrial-scale plants.
  - **De-risking Private Capital Investment:** By introducing a institutional framework based on capital subsidies, capital grants, and long-term price assurance, the policy directly addresses historical market failures—namely high upfront capital expenditure and uncertain fuel demand.
  - **Diversified Substrate Utilization:** Moving beyond traditional single-feedstock biogas models, the framework incentivizes multi-feedstock facilities that process paddy straw, cattle dung, sugar mill press mud, municipal bio-waste, and industrial effluents simultaneously.
  - **Grid and Pipeline Integration:** Focuses heavily on building last-mile pipeline infrastructure to inject blended CBG straight into national City Gas Distribution (CGD) networks for Compressed Natural Gas (CNG) transport and Piped Natural Gas (PNG) industrial/household usage.
  - **Rural Livelihood and Employment Generation:** The structural rollout is designed as a rural economic multiplier, expected to generate lakhs of direct and indirect green jobs across feedstock collection, logistics, plant maintenance, and bio-fertilizer distribution networks.

- **Historical Evolution of Biomass and Biogas Policies in India**
  - **Pre-Independence to 1970s (The Household Biogas Era):** Early attempts focused on small-scale, domestic floating-drum "Gobar Gas" units pioneered by institutions like the Khadi and Village Industries Commission (KVIC). These systems catered strictly to decentralized household cooking and lighting needs without commercial scale.
  - **1980s to 1990s (National Project on Biogas Development - NPBD):** The Ministry of Non-Conventional Energy Sources introduced subsidized family-type digesters (such as Deenabandhu models). While these expanded rural adoption, they suffered from frequent technical breakdowns, lack of maintenance, and unorganized feedstock supply.
  - **2000s to 2010s (Shift Toward Institutional & Off-Grid Bioenergy):** Focus shifted toward institutional biogas plants for dairies and agricultural markets under the Ministry of New and Renewable Energy (MNRE). Initial standards for scrubbing biogas into Bio-CNG were established, setting the stage for commercialization.
  - **2018 to 2023 (Launch of SATAT and Initial GOBARdhan Phase):** The Sustainable Alternative Towards Affordable Transportation (SATAT) initiative was introduced to encourage private entrepreneurs to set up commercial CBG plants. Concurrently, GOBARdhan was launched under the Swachh Bharat Mission (Grameen) to focus on village sanitation and resource recovery.
  - **Present Era (Comprehensive Circular Bioenergy Framework):** The initiative has evolved into a long-term, multi-billion-rupee structural transformation. It unifies inter-ministerial efforts, integrates grid-injection mandates, provisions heavy capital support, and embeds bioenergy directly into India's net-zero 2070 roadmap.

- **Way Forward**
- **Formalizing Biomass Aggregation Logistics:** Establish decentralized biomass aggregation hubs operated by Farmer Producer Organizations (FPOs) and agricultural cooperatives, backed by subsidized machinery to ensure a steady year-round supply of feedstock to plants.
- **Mandatory Grid Access and Infrastructure Upgrades:** Accelerate regulatory directives by the Petroleum and Natural Gas Regulatory Board (PNGRB) to ensure common-carrier access to natural gas pipelines, lowering transport costs for CBG developers.
- **Market Parity for Bio-Fertilizers:** Standardize and promote Fermented Organic Manure (FOM) alongside chemical fertilizers. Mandating fertilizer marketing companies to co-package FOM with urea will restore soil organic carbon and build a secondary revenue stream for CBG facilities.
- **Targeted R&D in Anaerobic Digestion:** Direct public research funds toward indigenous, high-efficiency microbial consortia capable of rapidly digesting tough lignocellulosic biomass (such as paddy straw), reducing digestion cycle times and boosting methane yields.

COMPREHENSIVE ANALYSIS OF THE GOBARDHAN SCHEME: A BLUEPRINT FOR INDIA'S CIRCULAR BIOECONOMY.

KEY DEFINITIONS & CONCEPTS

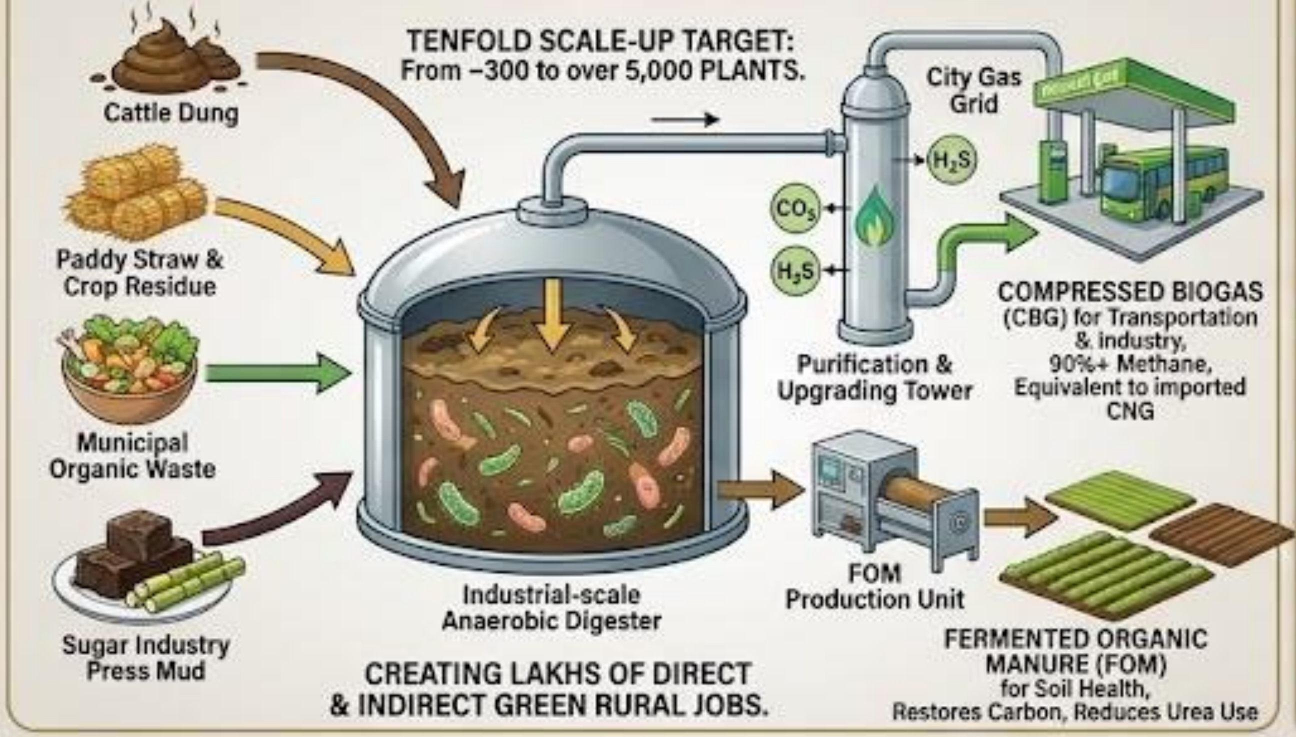
- **GOBARdhan:** Galvanizing Organic Bio-Agro Resources Dhan. Transforming waste into wealth and energy.
- **Compressed Biogas (CBG):** Purified methane fuel (90%+). Chemically identical to CNG.
- **Circular Bioeconomy:** A model where organic waste is recycled into clean energy and soil nutrients.
- **Assured Offtake:** Guaranteed government purchase of 100% of plant output at fixed prices by state energy companies, reducing investment risk.

LOGICAL & PHILOSOPHICAL BASE

- **Philosophy of Waste-to-Wealth (Kachre Se Kanchan):** Viewing waste as Misplaced Wealth.
- **Gandhian Principle of Energy Swaraj:** Local self-reliance through decentralized energy.
- **Market-Driven Environmental Stewardship:** Creating private profitability linked to ecological preservation.

The Circular Bioeconomy Process

FROM WASTE TO WEALTH IN A CLOSED-LOOP CYCLE.



CORE POLICY MANDATES & GOALS

- **Tenfold Scaling:** Increase to over 5,000 commercial-scale plants.
- **De-risking Private Investment:** Capital subsidies and long-term price assurance.
- **Diversified Substrates:** Use multi-feedstock plants (Paddy straw + Dung + Press mud).
- **Grid Integration:** Injecting blended CBG into national pipeline networks.
- **Rural Livelihood:** Generating lakhs of jobs across collection, logistics, and plant operations.

FROM Gobar Gas TO GOBARdhan

- **1970s** Family floating drum 'Gobar Gas' units (KVIC).
- **1980s-90s** Subsidized fixed dome digesters. Technical failures.
- **2000s-10s** Institutional biogas plants (Bio-CNG starts).
- **2018 (SATAT)** Sustainable transportation CBG plants.
- **2023** Comprehensive GOBARdhan Circular Bioenergy Scheme.

MULTIDIMENSIONAL IMPACT

- **ECONOMIC** Reduces import dependency on LNG and fertilizers. Conserves foreign exchange.
- **ENVIRONMENTAL** Mitigates seasonal air pollution (avoids stubble burning). Fossil fuel substitution.
- **SOCIAL** Reduces indoor air pollution (chulha replacement). Rural income augmentation.
- **POLITICAL** Multi-ministerial cooperation. Strengthens cooperative federalism.

UPSC/APSC PYQ LINKAGES

- **UPSC Prelims (2019):** SATAT initiative (CBG plants).
- **UPSC Mains GS 3 (2020):** "Cause of crop residue burning... technology (CBG plants) can convert... hazard into rural economic asset."
- **APSC Mains GS 3 (2023):** Role of circular bioeconomy models... waste management and energy self-reliance.

THE WAY FORWARD

- Formalize biomass aggregation logistics via FPOs.
- Establish mandatory CBG blending obligations for gas distributors.
- Standardize Fermented Organic Manure (FOM) for co-packaging with urea.

• GEOPOLITICS

The Hasina factor in India-Bangladesh ties

Sheikh Hasina's press conference in New Delhi can be seen as India using the Bangladesh ex-PM's statements and silences as a diplomatic lever

SHUBHAJIT ROY

Former Bangladesh PM Sheikh Hasina addresses a press conference in New Delhi via audio link.

OUSTED BANGLADESH Prime Minister Sheikh Hasina had her first media interaction through virtual mode on Wednesday, where she said she plans to return to her country, stand with its people, and help improve their lives.

The statement, made while she is in India, its timing, and Hasina's willingness to answer or dodge questions have implications for herself, Bangladesh's politics, and New Delhi's ties with its neighbour.

Bangladesh, predictably, has reacted with outrage that "the absconding convicted genocider Sheikh Hasina was allowed this evening to engage in live interaction with the media in New Delhi..." according to a statement by its foreign ministry.

The timing

Hasina, who fled Bangladesh on August 5, 2024, amid raging protests, has been living in India in an undisclosed location for the last two years. She had addressed the media at the Foreign Correspondents' Club of South Asia in January through an audio-recorded message, but had not taken questions. That message was played out a month before the national elections in Bangladesh.

This time, Hasina took questions, and was also joined online by her son, Sajeeb Wazed Joy, who was an advisor in her government and lives in the US.

The tone and the statement

Hasina's statement was emotional and rhetorical, with her voice choking as she spoke from a prepared text. In the statement that lasted about 23 minutes, she highlighted the violent political unrest in Bangladesh, the destruction of public and private properties, the killing of police officers, and the targeting of media.

She emphasised the economic decline, with GDP growth falling to 2.2% from 6.8%, and called for international support to restore democracy and justice in Bangladesh.

She declared, "Whatever fate awaits me, I will return to my people. I cannot stay away while my beloved countrymen are suffering." The former prime minister has been sentenced to death over the killing of protesters in July-August 2024, and also faces a number of corruption cases.

Asked when she plans to return, Hasina referred to the 1971 Bangladesh liberation war and said, "December is our victory month, so I want to go back in the month of December." Her statement is aimed at shoring up support in favour of her party, the banned Awami League, against the incumbent Bangladesh Nationalist Party (BNP) government.

The BNP government is facing economic challenges amid oil and gas price pressures due to the war in West Asia. Hasina hopes to make a political comeback before the next elections in Bangladesh.

However, her dodging the question of apologies and regret for the killings of protesters in July-August 2024 has been a sore point for many in Bangladesh.

Asked whether his mother had any regret for the killing of students and protesters, Joy said: "Look, this question of regret and apologies has been raised, but you see the Yunus regime and the BNP regime has continued... They have legalised the killings of police officers, the killings of civilians, the killings of Awami League members... And you have heard my mother express that this was a violent situation. So, if one set of killings is legal, then how does the question of apology arise? Why does it arise?"

Hasina's statements were barred from being broadcast in Bangladesh's mainstream media, using the same draconian laws that the Hasina government had used against current Prime Minister Tarique Rahman 17 years ago.

Tricky ties

The Ganga Water Treaty of 1996 is due for renewal this year. The Teesta water treaty is still to be signed.

•

While Bangladesh has removed visa curbs, some trade restrictions remain. Delhi also views illegal immigration from Bangladesh as a major irritant.

New Delhi and the BNP govt

Hasina in her statement directly targeted the BNP government, with which India has tried to cultivate ties.

Rahman had also signalled a positive relationship with India in his pronouncements. But there have since been challenges — Delhi views illegal immigration from Bangladesh as a major irritant, and the BJP-led West Bengal government has upped the ante on this. The fact that Rahman has visited China but not India yet also signals that there is some tension.

Amid the outstanding bilateral issues, the Ganga Water Treaty of 1996 is due for renewal this year. The Teesta water treaty is still to be signed. While Bangladesh has removed visa curbs on Indians, some trade restrictions remain.

In such a complicated bilateral situation, Hasina's statements targeting the BNP government are certain to create acrimony. "Dhaka deeply regrets that in spite of concerns conveyed apriori to the Government of India about the likely ramifications of this event on the reset of our bilateral relations, this public event was permitted to be held," its foreign ministry said on August 5.

Indeed, it is learnt that New Delhi allowing a platform for the former PM has had a negative impact in Dhaka.

BNP leaders feel that this only reinforces the belief that India is pro-Awami League, and is unable to reconcile to the new political realities. Many in Dhaka view this as a misstep at a time when the Rahman government was trying to repair ties. This also puts the possible visit by Rahman for the BRICS summit in September in jeopardy. And India will have to work hard to assuage the suspicion this episode might have instilled in the minds of Bangladesh's decision-makers.

For Delhi, a robust and healthy bilateral relationship with Dhaka is essential, especially since it needs Dhaka to access its north-eastern states easily. A peaceful and stable Bangladesh, where anti-India statements and activities are kept in-check is important for Delhi's internal security.

Bangladesh too needs India, since it is surrounded by the large neighbour from three sides. The Hasina episode highlights New Delhi's tough balancing act to deal with a tricky bilateral relationship.

India's tightrope

In 2024, India gave Hasina refuge instantly, even when other doors were closed to her. She has lived here since. On how the Indian government had been treating her, Joy said she is being treated like a Head of State, with full services and security.

While the Ministry of External Affairs has clarified, for the record, that it was not involved in Hasina's press interaction, the event can be seen as New Delhi creating leverage by using the former PM — her statements and her silences — to gain some diplomatic quid pro quo in negotiations on trade, water, economy, politics, security, and a range of tricky areas with Bangladesh.

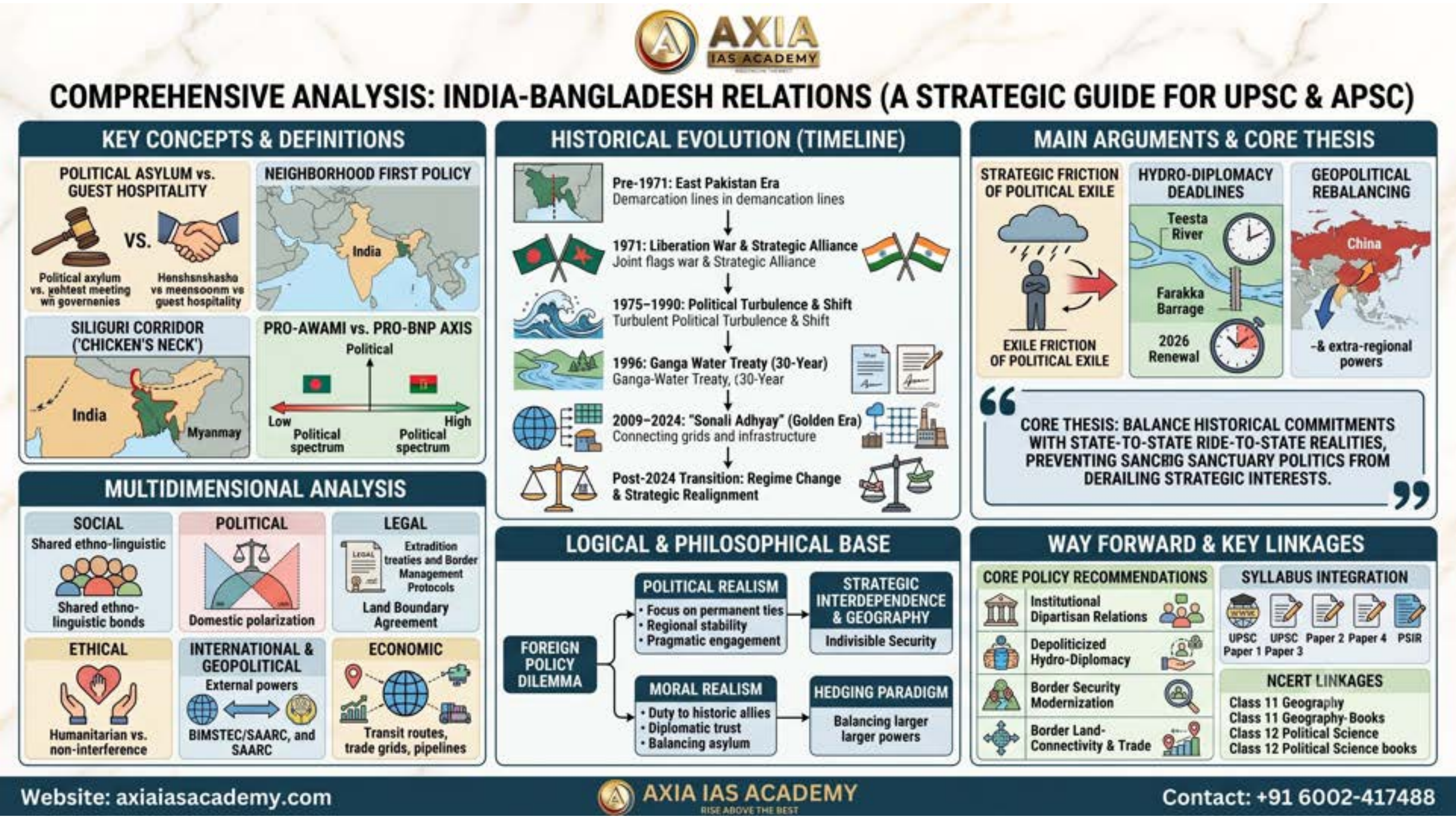
The fact that India has kept her in safe custody with full security is similar to how New Delhi has treated the Dalai Lama — much to China's annoyance. He is allowed to conduct spiritual activities and not political activities, but the Tibetan leader has the ability to fuse the two with finesse.

- **Key Terms and Explanations**
  - **Political Asylum vs. Guest Hospitality**: Political asylum is a formal legal protection granted by a sovereign state to a foreign national fleeing political persecution, whereas guest hospitality refers to providing safe shelter and diplomatic protocol without formally declaring asylum status. This distinction allows the host nation to maintain strategic flexibility while ensuring the security of an ousted leader.
  - **Neighborhood First Policy**: India's core foreign policy framework prioritizing stable, secure, and economically integrated relations with its immediate South Asian neighbors. It emphasizes asymmetric concessions, regional connectivity, and joint security management.
  - **Ganga Water Treaty (1996)**: A bilateral agreement signed for a 30-year period to share the waters of the Ganga River at the Farakka Barrage during the lean season (January to May). Its upcoming renewal in 2026 serves as a major touchstone for hydro-diplomacy between the two nations.
  - **Teesta River Water Dispute**: A long-pending transboundary river agreement regarding the allocation of Teesta waters. The impasse stems from competing demands between downstream agricultural needs in northern Bangladesh and upstream irrigation demands in West Bengal, India.
  - **Siliguri Corridor ("Chicken's Neck")**: A narrow stretch of land, roughly 20 to 22 kilometers wide, connecting India's northeastern states to the mainland. Transit access through Bangladesh provides vital strategic redundancy to bypass this geographical vulnerability.
  - **Pro-Awami vs. Pro-BNP Political Axis**: The primary domestic political divide in Bangladesh. The Awami League traditionally favors deep security and trade ties with India, whereas the Bangladesh Nationalist Party (BNP) and its political allies often advocate for a foreign policy less reliant on New Delhi while courting relations with China and West Asia.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- Managing relations with a neighboring state following a sudden regime transition requires balancing historical political commitments with state-to-state diplomatic realities, preventing sanctuary politics from derailing broader strategic interests.
- **Strategic Friction of Political Exile**
  - Hosting an ousted, high-profile foreign leader creates direct friction with the incoming administration of that nation.
  - Public statements by an exiled leader targeting the successor regime irritate the host country's formal relations with the neighbor, complicating diplomatic normalization.
  - Domestic political forces in the home country view sanctuary as an alignment with past authoritarian structures, fostering anti-incumbent sentiment against the host state.
- **Hydro-Diplomacy and Expiration Deadlines**
  - Key transboundary water agreements, notably the 1996 Ganga Water Treaty, face rigid expiration timelines that demand continuous negotiation regardless of domestic political turmoil.
  - Delaying the resolution of pending water agreements, such as the Teesta sharing framework, amplifies domestic political rhetoric in the lower riparian state against the upper riparian state.
  - Managing shared river basins requires depoliticized, data-driven technical cooperation to prevent resource scarcity from becoming a political tool.
- **Geopolitical Rebalancing and Regional Hedging**
  - Political shifts in smaller South Asian states often lead to external realignments, including increased engagements with extra-regional powers like China.
  - Economic pressures, such as inflation, fuel price shocks, and foreign exchange shortages, prompt new domestic regimes to seek diversified economic partnerships across East and West Asia.
  - Security cooperation—specifically regarding cross-border terrorism and insurgency—is vulnerable during political transitions, requiring careful diplomatic navigation.

- **Historical Evolution of the Issue**
  - **Pre-1971 Demarcation and Transit Blockages**: Following the 1947 Partition, East Pakistan witnessed territorial enclaves, unresolved river-sharing disputes, and the closure of historical transit corridors following the 1965 Indo-Pakistani War.
  - **1971 Liberation War and Strategic Alliance**: India's direct military and humanitarian intervention led to the creation of Bangladesh. This laid the foundation for deep state-to-state relations, rooted in shared sacrifices and security cooperation under Sheikh Mujibur Rahman.
  - **1975–1990 Assassination and Stagnation**: The assassination of Sheikh Mujibur Rahman in 1975 ushered in military regimes and the rise of the Bangladesh Nationalist Party (BNP). Foreign policy pivoted toward distance from India, safe havens for Indian insurgent groups in the North-East, and strategic ties with extra-regional powers.
  - **1996 Watershed and Hydro-Diplomacy**: The election of the Awami League led to the signing of the landmark 1996 Ganga Water Treaty, establishing a 30-year framework for water sharing and stabilizing bilateral ties.
  - **2009–2024 The "Golden Chapter" (Sonali Adhyay)**: Under long-term Awami League governance, India and Bangladesh resolved longstanding territorial issues through the 2015 Land Boundary Agreement (LBA), connected power grids, expanded bilateral trade, and systematically eliminated anti-India insurgent camps on Bangladeshi soil.
  - **Post-2024 Political Transition and Re-alignment**: Mass public unrest forced the ouster of the Awami League leadership, bringing an interim administration and political realignment to Bangladesh. The shift triggered debates over political asylum, trade barriers, border management, and the renewal of hydro-diplomatic agreements.

- **Way Forward**
- **Institutionalize Bipartisan Political Engagement**
- Expand diplomatic communication beyond incumbent parties to include all major political factions, civil society groups, and institutional stakeholders in neighboring countries.
- Shift the bilateral relationship from personality-driven diplomacy to resilient state-to-state institutional structures.
- **Depoliticize Transboundary Hydro-Diplomacy**
- Use the Joint Rivers Commission (JRC) to establish transparent, real-time hydrological data-sharing mechanisms for the Ganga and Teesta river basins.
- Prioritize early joint technical assessments to smooth the renewal of the 1996 Ganga Water Treaty before its 2026 deadline, insulating water management from domestic politics.
- **Enforce Diplomatic Discretion on Political Asylum**
- Establish clear expectations regarding the public political activities of exiled leaders living on host soil to protect core diplomatic relationships.
- Maintain formal separation between humanitarian safe haven provisions and official government policy stances.
- **Modernize Border Management and Secure Transit Corridors**
- Accelerate the deployment of non-lethal border management technologies, Smart Border Fencing, and Integrated Check Posts (ICPs) to reduce cross-border tensions.
- Protect trade, power-sharing agreements, and transit rights for North-East India by keeping economic connectivity operational during political transitions.


AXIA
IAS ACADEMY
COMPREHENSIVE ANALYSIS: INDIA-BANGLADESH RELATIONS (A STRATEGIC GUIDE FOR UPSC & APSC)
KEY CONCEPTS & DEFINITIONS
POLITICAL ASYLUM vs. GUEST HOSPITALITY
VS.
Political axylum vs. wehtest meeting wn governenies
Henshsnshasha vs meensoonm vs guest hospitality
NEIGHBORHOOD FIRST POLICY
India
SILIGURI CORRIDOR ('CHICKEN'S NECK')
India
Myanmay
PRO-AWAMI vs. PRO-BNP AXIS
Political
Low
High
Political spectrum
Political spectrum
HISTORICAL EVOLUTION (TIMELINE)
Pre-1971: East Pakistan Era
Demarcation lines in demancation lines
1971: Liberation War & Strategic Alliance
Joint flags war & Strategic Alliance
1975–1990: Political Turbulence & Shift
Turbulent Political Turbulence & Shift
1996: Ganga Water Treaty (30-Year)
Ganga-Water Treaty, (30-Year
2009–2024: "Sonali Adhyay" (Golden Era)
Connecting grids and infrastructure
Post-2024 Transition: Regime Change & Strategic Realignment
MAIN ARGUMENTS & CORE THESIS
STRATEGIC FRICTION OF POLITICAL EXILE
EXILE FRICTION OF POLITICAL EXILE
HYDRO-DIPLOMACY DEADLINES
Teesta River
Farakka Barrage
2026 Renewal
GEOPOLITICAL REBALANCING
China
-& extra-regional powers
CORE THESIS: BALANCE HISTORICAL COMMITMENTS WITH STATE-TO-STATE RIDE-TO-STATE REALITIES, PREVENTING SANCHG SANCTUARY POLITICS FROM DERAILING STRATEGIC INTERESTS.
MULTIDIMENSIONAL ANALYSIS
SOCIAL
Shared ethno-linguistic
Shared ethno-linguistic bonds
POLITICAL
Domestic polarization
LEGAL
LEGAL
Extradition treaties and Border Management Protocols
Land Boundary Agreement
ETHICAL
Humanitarian vs. non-interference
INTERNATIONAL & GEOPOLITICAL
External powers
BIMSTEC/SAARC, and SAARC
ECONOMIC
Transit routes, trade grids, pipelines
LOGICAL & PHILOSOPHICAL BASE
FOREIGN POLICY DILEMMA
POLITICAL REALISM
• Focus on permanent ties
• Regional stability
• Pragmatic engagement
STRATEGIC INTERDEPENDENCE & GEOGRAPHY
Indivisible Security
MORAL REALISM
• Duty to historic allies
• Diplomatic trust
• Balancing asylum
HEDGING PARADIGM
Balancing larger larger powers
WAY FORWARD & KEY LINKAGES
CORE POLICY RECOMMENDATIONS
Institutional Dipartisan Relations
Depoliticized Hydro-Diplomacy
Border Security Modernization
Border Land-Connectivity & Trade
SYLLABUS INTEGRATION
UPSC Paper 1
UPSC Paper 3
Paper 2
Paper 4
PSIR
NCERT LINKAGES
Class 11 Geography
Class 11 Geography-Books
Class 12 Political Science
Class 12 Political Science books
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- **Key Terms and Explanations**
  - **Talc**: A naturally occurring hydrated magnesium silicate mineral ($H_2Mg_3(SiO_3)_4$ or $Mg_3Si_4O_{10}(OH)_2$) mined from the earth. Known as the softest mineral on the Mohs hardness scale, it is widely used in personal care products, cosmetics, and industrial applications to absorb moisture, prevent caking, and improve texture. *Example*: Daily baby powder or facial cosmetic powders used to reduce skin friction and shine.
  - **Asbestos**: A group of naturally occurring fibrous silicate minerals known for their heat resistance, strength, and insulating properties. Asbestos is a established Group 1 human carcinogen capable of causing mesothelioma, lung cancer, and asbestosis upon inhalation or prolonged tissue contact. *Example*: Historically common industrial insulation material and roofing sheets, which release microscopic toxic fibers when disturbed.
  - **Geological Co-location**: The natural phenomenon where different minerals form together within the same geological rock formations under similar pressure and temperature conditions. Because talc and asbestos deposits naturally intersect in the earth's crust, unrefined talc ore is chronically at risk of cross-contamination with asbestos fibers during extraction. *Example*: Mining raw talc deposits that run adjacent to serpentine or amphibole rock veins containing chrysotile or tremolite asbestos.
  - **IARC Hazard Classification**: Categorization established by the International Agency for Research on Cancer (an agency of the World Health Organization) to evaluate whether an agent can cause cancer, based on scientific evidence strength.
    - **Group 1**: Carcinogenic to humans (sufficient evidence, e.g., Asbestos).
    - **Group 2A**: Probably carcinogenic to humans (limited evidence in humans, sufficient evidence in experimental animals, e.g., Asbestos-free talc).
    - **Group 2B**: Possibly carcinogenic to humans.
    - **Group 3**: Not classifiable as to its carcinogenicity to humans.
  - **Hazard versus Risk**: A critical scientific distinction in public health governance. **Hazard** refers to the intrinsic capability of a substance to cause harm under specific theoretical conditions. **Risk** is the practical probability that exposure to that hazard will lead to an actual adverse health outcome under real-world usage patterns. *Example*: A lion in a cage represents a hazard; a lion roaming free in a market represents a high risk.
  - **Prospective Cohort Study**: An observational epidemiological research method where a defined group of healthy individuals (a cohort) is followed over an extended period into the future to observe how specific exposures affect the incidence of health outcomes or diseases. *Example*: Tracking 50,000 women over 20 years to compare ovarian cancer rates between regular users of body powder and non-users.
  - **X-Ray Diffraction (XRD) & Polarized Light Microscopy (PLM)**: Analytical laboratory techniques used to identify mineral crystalline structures and detect contaminants. Standard regulatory screening often relies on XRD, but advanced techniques like Transmission Electron Microscopy (TEM) are required to reliably detect trace sub-microscopic asbestos fibers below routine thresholds.

- **Main Arguments and Substantive Parts**
  - **Geological Origin of Contamination Risk**: The primary health concern associated with talcum-based consumer goods stems from raw material extraction rather than the manufacturing process itself. Because talc and asbestos naturally co-exist in mineral veins, contamination is an environmental and extraction-dependent variable. Eliminating asbestos requires stringent ore selection, geological mapping, and ultra-sensitive batch testing before processing.
  - **The Nuanced Scientific Consensus on Health Risks**: Biomedical research draws a sharp distinction between asbestos-contaminated talc and pure, asbestos-free talc. Asbestos-contaminated talc is universally recognized as carcinogenic. However, for pure talc, the link to ovarian cancer or systemic toxicity remains scientifically debated. Large-scale prospective cohort studies generally fail to show a statistically significant direct causal relationship, leading global health bodies to classify asbestos-free talc as a potential hazard (Group 2A) under specific conditions, rather than a proven everyday consumer threat.
  - **Inadequacy of Legacy Testing Standards**: Conventional laboratory testing protocols mandated in many developing regulatory regimes lack the analytical sensitivity needed to detect trace asbestos contamination. Standard testing methods can yield false negatives by failing to isolate low-concentration fibrous structures, thereby allowing micro-contaminated batches to enter consumer markets under the label of standard compliance.
  - **Vulnerability of Specific Population Groups**: Health risks are heavily modulated by the site of application and demographic vulnerability. Inhalation of fine talc dust by infants poses acute respiratory distress risks and long-term pulmonary inflammation. Similarly, application on broken skin, surgical wounds, or chronic genital rashes creates pathways for mineral particle migration into mucosal tissues, amplifying irritation and cellular toxicity.
  - **Market Shift Toward Organic Substitutes**: Due to persistent regulatory scrutiny and consumer litigation, the global personal care sector is shifting toward safer organic substitutes like cornstarch. Plant-based starches eliminate the geological hazard of asbestos contamination entirely, offering comparable moisture absorption without the toxicological risks linked to mined silicates.
  - **Regulatory Under-Enforcement in Developing Economies**: While high-income nations have accelerated bans, litigation enforcement, and voluntary product withdrawals, regulatory frameworks in developing economies often lag behind. Weak post-market surveillance, limited laboratory infrastructure, and vague cosmetic safety guidelines leave consumers exposed to unverified domestic brands.

- **Historical Evolution of the Issue**
  - **Pre-Independence Era (Late 19th Century – 1947)**:
    - *1890s*: Commercial introduction of talcum powder as a mass consumer hygiene and infant care product globally.
    - *Early Mining Expansion*: Mining of raw talc and asbestos began in British India (primarily in Rajasthan, Andhra Pradesh, and Bihar) without toxicological screening, treating both purely as industrial and commercial commodities.
  - **Post-Independence & Early Regulatory Frameworks (1950s – 1980s)**:
    - *1940 & 1945*: Enactment of the Drugs and Cosmetics Act and its corresponding Rules, establishing the foundational statutory apparatus for regulating personal care products in India.
    - *1960s-1970s*: Medical research globally began linking asbestos inhalation to pleural mesothelioma and lung scarring (asbestosis).
    - *1986*: Bureau of Indian Standards (BIS) established initial specifications for skin powders (IS 3959), setting physical and chemical parameters but offering limited direction on trace asbestos screening methodologies.
  - **Global Litigation and Industrial Policy Shifts (1990s – 2010s)**:
    - *1998*: The Indian Ministry of Labour imposed a progressive ban on granting new mining leases for asbestos due to severe occupational health hazards, though processing imported asbestos and talc mining continued under environmental controls.
    - *2000s*: Epidemiological studies raised concerns regarding the migration of fine mineral particles through the female reproductive tract, linking long-term perineal talc use to ovarian tissue inflammation.
    - *2010*: The International Agency for Research on Cancer (IARC) updated its evaluation, classifying asbestos-containing talc as Group 1 (Carcinogenic) and perineal use of talc-based body powder as Group 2B (Possibly Carcinogenic).
  - **Modern Regulatory Scrutiny and Reform Era (2020 – Present)**:
    - *2020*: Formal notification of the Cosmetics Rules, 2020 in India, separating cosmetic governance from drug regulations to streamline quality compliance, import licensing, and safety standards under the Central Drugs Standard Control Organization (CDSCO).
    - *2020-2023*: Major multinational manufacturers phased out talc-based baby powders globally, transitioning entirely to cornstarch formulations following massive toxic tort lawsuits and shifting consumer preference.
    - *Present Scenario*: Indian regulatory bodies and state drug controller laboratories face ongoing demands to update mandatory testing protocols (implementing electron microscopy) and align Indian standards with global safety frameworks.

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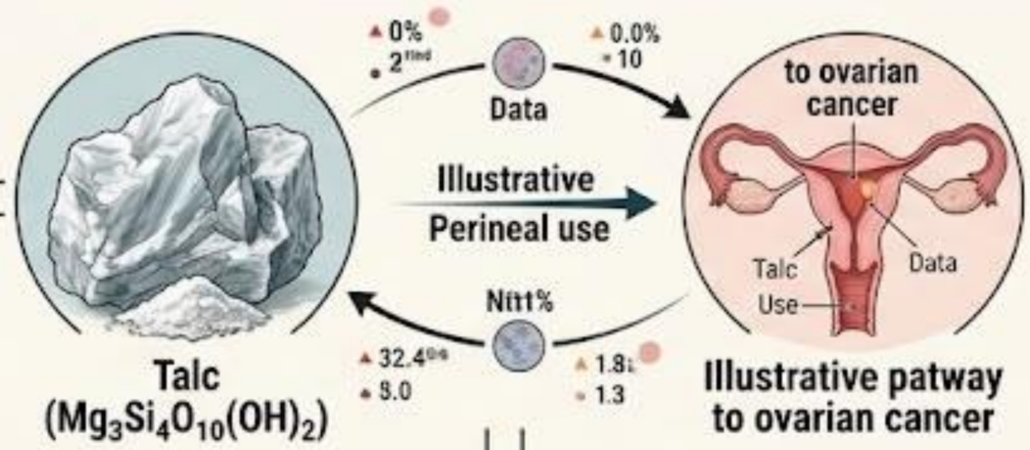
RISE ABOVE THE REST

COMPREHENSIVE ANALYSIS: TALCUM POWDER & CANCER RISKS (FOR UPSC/APSC CSE PREPARATION)

THE TALC-CANCER NEXUS



SCIENTIFIC CONSENSUS

IARC HAZARD CLASSIFICATION

GROUP 1 (e.g.)	Definite e.g., Asbestos-Containing Talc
GROUP 2A (e.g.)	Probably e.g., Non-Asbestos-Containing Perineal Talc

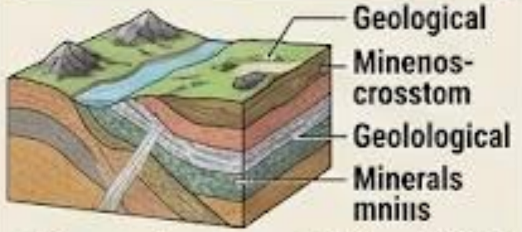
CURRENT INDIAN REGULATORY CHALLENGES

- Poor testing standards (limitations of XRD)
- Limited data on domestic brands
- Asbestos contamination found
- Regulatory policy under development

UPSC SYLLABUS

GS II	GS III	NCERT LINKAGES
(Govt Policies)	(Public Health)	(Environmental Science, Sociology)

THE ASBESTOS-TALC LINK



- Dependence on Mining Origin
- Poor screening risk
- Co-forming minerals

HISTORICAL EVOLUTION & POLICY SHIFTS

Pre-Independence → Ministry of Labour Mining Ban (1998) → Cosmetics Rules (2020)

Ministry of Labour Mining Ban (1998)

Cosmetics Rules (2020)

MULTIDIMENSIONAL ANALYSIS

SOCIAL	POLITICAL	LEGAL
• Gendered risk • Hygiene	• Regulatory capacity	• Right to Health • Consumer Protection
ETHICAL	**ECONOMIC**	**INTERNATIONAL**
• Duty of care	• Healthcare costs	• Global double standards

SAFE SUBSTITUTES & WAY FORWARD

Cornstarch-based powder

Cornston risk & reasonable substitute — No known risk

- Upgrade to SEM/TEM Testing
- Stringent BIS Standards
- Labeling and warnings
- Post-market surveillance

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• LEGAL

FIRs cannot be 'withdrawn', but protestors can get relief in 3 ways

Arnaal Sheikh
New Delhi, August 6

THE SUPREME Court on Monday said that states remain free to close or withdraw FIRs registered against students during protests led by the Cockroach Janta Party under the procedure prescribed by law.

Officially, the criminal procedure terminology does not provide for "withdrawal" of an FIR, but the case itself can be ended in different ways, depending on the stage it is at.

First step of probe

A First Information Report (FIR) is the first written record of an offence received by the police. It sets a criminal investigation in motion under the Bharatiya Nagarik Suraksha Sanhita (BNSS). There is no legal provision for a government to cancel or revoke that record using an executive order. What can be ended is the case that follows from the FIR, through three routes.

ROUTE ONE: CLOSURE REPORT

If an investigation does not disclose sufficient material to proceed against the accused, the police may file a closure report before the jurisdictional magistrate under Section 193 of BNSS.

The magistrate, however, is not bound by the report. In *Abhinandan Jha v. Dinesh Mishra* (1967), the SC held that a magistrate can disagree with the investigating agency and, depending on the material before the court, take cognizance of the offence or direct further investigation.

ROUTE TWO: WITHDRAWAL FROM PROSECUTION

Section 360 of the BNSS states that "the Public Prosecutor or Assistant Public Prosecutor in charge of a case may, with the consent of the court, at any time before the judgment is pronounced, withdraw from the prosecution of any person either generally or in respect of any one or more of the offences for which he is tried." Two conditions govern this provision. The first is that the application must reflect the public prosecutor's independent view of the case, not merely a government directive. Second, Section 360 requires the court's consent. In Sheonandan Paswan v State of Bihar (1986), a Constitution Bench of the Supreme Court held that the court must examine whether withdrawal is sought in good faith, in the interest of public policy and justice, and not to thwart or stifle the process of law.

The law also requires the victim to be given the opportunity to be heard before the court allows withdrawal.

ROUTE THREE: COURT QUASHES THE FIR

The third route lies in the High Court's inherent powers under BNSS Section 528, which preserves the court's authority to pass orders "to prevent abuse of the process of any court or otherwise to secure the ends of justice."

A person facing prosecution can approach the HC directly. Courts have cautioned that this power should be used sparingly, particularly when an investigation is still underway.

Previous cases

In 1980, the Supreme Court dealt with the withdrawal of prosecution in the Baroda Dynamite case against politician George Fernandes and others following the Emergency. The case involved charges of procuring dynamite to blow up road and rail bridges. The court allowed the withdrawal to stand. It referred to prosecutions arising from "mass agitations, communal riots, regional disputes, industrial conflicts, student unrest" as situations where withdrawal may be considered to restore peace. It said that "An elected Government, sensitive and responsive to the feelings and emotions of the people, will be amply justified if for the purpose of creating an atmosphere of goodwill... it decides... not to proceed further with prosecutions."

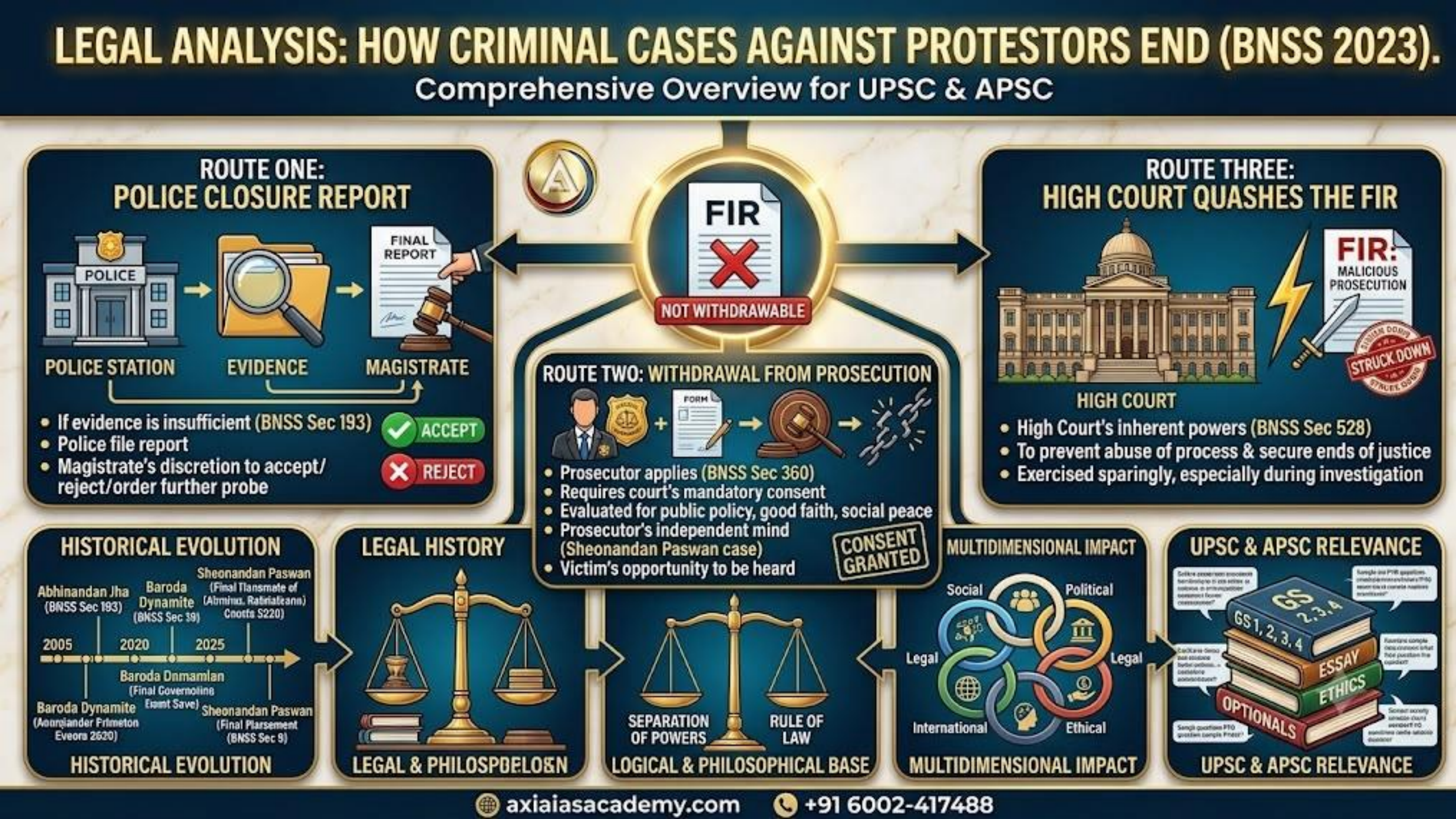
MEASURE FOR PEACE

- The SC has earlier ruled on prosecutions arising from situations such as mass agitations, riots and student unrest.
- Here, the withdrawal of cases may be considered to restore peace, and reflect a government that is 'sensitive and responsive to the feelings and emotions of the people,' it said.

- **Key Terms and Explanations**
  - **First Information Report (FIR):** The primary written document prepared by police upon receiving information about the commission of a cognizable offence under the Bharatiya Nagarik Suraksha Sanhita (BNSS). It initiates the legal process of criminal investigation. *Example:* If a crowd during a demonstration damages public property, the police record an FIR to officially kick off an investigation into rioting and destruction of property.
  - **Closure Report (Section 193 BNSS):** A final investigation report filed by the police before a jurisdictional Magistrate when the evidence collected during an investigation is insufficient to charge the accused person. *Example:* Police file a closure report for a student booked during a protest because video footage proves the student was not present at the riot site.
  - **Withdrawal from Prosecution (Section 360 BNSS):** A legal procedure where the Public Prosecutor or Assistant Public Prosecutor, with the mandatory consent of the court, withdraws criminal charges against an accused at any point before judgment is pronounced. *Example:* The government decides to drop minor unlawful assembly charges against peaceful student demonstrators to restore campus peace, and the Public Prosecutor submits a formal request to the court.
  - **Quashing of FIR / Proceedings (Section 528 BNSS):** The exercise of inherent powers by a High Court to invalidate an FIR, charge-sheet, or ongoing criminal proceeding to prevent the abuse of the court process or to secure the ends of justice. *Example:* A High Court quashes an FIR filed against a peaceful protestor because the allegations are demonstrably political vendetta without any factual basis.
  - **Cognizance:** The formal stage where a court or Magistrate applies its judicial mind to the facts reported in a police charge-sheet or complaint to decide whether a prima facie criminal case exists to initiate trial.
  - **Judicial Oversight:** The supervisory authority exercised by courts over executive and police actions to ensure that administrative discretionary powers do not violate statutory procedures or fundamental rights.

- **Main Arguments and Substantive Parts**
  - **Impermissibility of Executive Cancellation:** An FIR cannot be wiped off the records by a administrative directive or executive order. Once registered, an FIR sets in motion a statutory criminal procedure that can only be concluded through recognized judicial or statutory pathways.
  - **Pathway One — Police Closure Report:**
    - If an investigation yields insufficient evidence to establish criminal liability, the police file a closure report before the Magistrate under Section 193 of the BNSS.
    - The Magistrate possesses sole discretionary power to accept the closure report, reject it, order further investigation, or directly take judicial cognizance of the offence (*Abhinandan Jha v. Dinesh Mishra, 1967*).
  - **Pathway Two — Public Prosecutor's Withdrawal:**
    - Under Section 360 of the BNSS, the Public Prosecutor can seek judicial permission to withdraw from the prosecution of any person before judgment.
    - This pathway requires the Public Prosecutor to apply an independent judicial mind, free from direct executive coercion or party orders (*Sheonandan Paswan v. State of Bihar, 1986*).
    - The court must evaluate whether the withdrawal serves genuine public policy, good faith, and public peace, while granting affected victims an opportunity to present their objections.
  - **Pathway Three — Judicial Quashing by High Courts:**
    - High Courts hold inherent statutory powers under Section 528 of the BNSS to quash arbitrary or frivolous FIRs to prevent systemic legal abuse.
    - Courts exercise this power cautiously, ensuring it is reserved for clear cases of malicious prosecution or lack of prima facie evidence, particularly while investigations remain ongoing.
  - **Balancing Social Peace and Prosecutorial Integrity:** Criminal proceedings arising from student unrest, industrial disputes, or mass civil agitations carry distinct sociopolitical weight. Supreme Court precedents (such as the *Baroda Dynamite Case, 1980*) validate that an elected government may seek prosecution withdrawals to cultivate goodwill, calm public emotion, and restore public order, provided judicial approval is obtained.

- **Historical Evolution of the Issue**
  - **Colonial Era (Code of Criminal Procedure 1898):** The British administration designed criminal procedure strictly to enforce imperial order. Executive officers held unchecked powers to suppress public gatherings, and police reports were used as instruments of political control against independence activists.
  - **Post-Independence Codification (CrPC 1973):** Parliament overhauled the procedural code to align with democratic values, establishing formal provisions for withdrawal from prosecution (Section 321 CrPC) and inherent judicial powers (Section 482 CrPC). This established structural separation between police investigation and judicial adjudication.
  - **Judicial Confirmation of Magistrate Authority (1967):** In *Abhinandan Jha v. Dinesh Mishra*, the Supreme Court established that police closure reports do not bind the Magistrate. This decision prevented the executive branch from forcing police officers to drop or fabricate cases arbitrarily.
  - **Post-Emergency Democratic Reconciliation (1980):** In the *Baroda Dynamite Case*, involving criminal charges against George Fernandes and others post-Emergency, the Supreme Court upheld the withdrawal of prosecution arising out of political and mass movements. The court ruled that restoring democratic normalcy and social harmony constitutes a valid public policy goal for withdrawing criminal charges.
  - **Constitution Bench Safeguards (1986):** In *Sheonandan Paswan v. State of Bihar*, a Constitution Bench clarified that the Public Prosecutor is an officer of the court, not a servant of the ruling political party. Any withdrawal from prosecution requires objective justification and judicial vetting to prevent political executive overreach.
  - **Modern Legislative Transition (BNSS 2023/2024):** The transition from the CrPC to the Bharatiya Nagarik Suraksha Sanhita (BNSS) modernized the procedural framework—retaining statutory mechanisms for closure reports (Sec 193), prosecutor withdrawals (Sec 360), and High Court inherent powers (Sec 528)—while incorporating victim rights and structured pre-trial mechanisms.


LEGAL ANALYSIS: HOW CRIMINAL CASES AGAINST PROTESTORS END (BNSS 2023).
Comprehensive Overview for UPSC & APSC
ROUTE ONE:
POLICE CLOSURE REPORT
POLICE
FINAL REPORT
POLICE STATION
EVIDENCE
MAGISTRATE
• If evidence is insufficient (BNSS Sec 193)
• Police file report
• Magistrate's discretion to accept/ reject/order further probe
ACCEPT
REJECT
FIR
NOT WITHDRAWABLE
ROUTE THREE:
HIGH COURT QUASHES THE FIR
FIR:
MALICIOUS PROSECUTION
STRUCK DOWN
HIGH COURT
• High Court's inherent powers (BNSS Sec 528)
• To prevent abuse of process & secure ends of justice
• Exercised sparingly, especially during investigation
ROUTE TWO: WITHDRAWAL FROM PROSECUTION
FORM
• Prosecutor applies (BNSS Sec 360)
• Requires court's mandatory consent
• Evaluated for public policy, good faith, social peace
• Prosecutor's independent mind (Sheonandan Paswan case)
• Victim's opportunity to be heard
CONSENT GRANTED
HISTORICAL EVOLUTION
Abhinandan Jha (BNSS Sec 193)
Baroda Dynamite (BNSS Sec 39)
Sheonandan Paswan
2005
2020
2025
Baroda Dnmamlan
Baroda Dynamite
Sheonandan Paswan (Final Plarsement (BNSS Sec 9)
HISTORICAL EVOLUTION
LEGAL HISTORY
LEGAL & PHILOSPBELOΞN
SEPARATION OF POWERS
RULE OF LAW
LOGICAL & PHILOSOPHICAL BASE
MULTIDIMENSIONAL IMPACT
Social
Political
Legal
Legal
International
Ethical
MULTIDIMENSIONAL IMPACT
UPSC & APSC RELEVANCE
GS 2, 3, 4
GS 1, 2, 3, 4
ESSAY
ETHICS
OPTIONALS
UPSC & APSC RELEVANCE
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● US IMPOSED A 25% LEVY UNDER SECTION 301 OVER BRAZIL'S DIGITAL ECOSYSTEM LAST MONTH

Why proposed UPI levy could be India's quiet concession to US' trade demands

Ravi Dutta Mishra
New Delhi, August 6

AS INDIA and the US are still in the process of finalising the trade deal, with one Section 301 trade investigation ongoing and another resulting in a 10% duty on India, the Finance Ministry this week introduced the Taxation and Other Laws (Amendment) Bill, 2026 in Parliament, which would allow banks and payment system providers to charge fees on UPI and RuPay debit card payments. The Trump administration has been consistently pushing most of its trade partners to create a level playing field in their respective digital transaction ecosystem.

In India, UPI transactions are increasingly favoured for its convenience and zero transaction cost. However, this could change as the proposed changes to the Payment and Settlement Systems Act, 2007 could allow banks and payment system providers to charge fees on UPI and RuPay debit card payments.

Since UPI's launch, American payments market intermediaries Visa and Mastercard have cited loss of potential business as consumers in India increasingly turned to the use of free UPI payments.

The United States Trade Representative (USTR) had, in March 2026, classified India's digital payment policies "favouring" domestic players as a foreign trade barrier.

These barriers in various sectors are prominent demands under the US-India trade deal. USTR said that "it has expressed concerns related to the inability of US electronic payment services suppliers to participate in the UPI ecosystem, including credit transactions on UPI on a level playing field with RuPay".

"In November 2020, National Payment Corporation of India (NPCI) announced a market share limitation of 30% (measured by transactions) for third-party app providers initiating online payments made through India's UPI. While this market share cap for third-party payment apps was originally mandated for January 2023, the NPCI has deferred enforcement, with the current deadline set for December 2026. As of December 31, 2025, two US-owned EPA suppliers together processed more than 80% of all UPI transactions," USTR said.

US card companies are losing business due to UPI. REUTERS

India has already agreed to several US demands related to digital services. Last year, the government had abolished the 6% 'Google tax' amid US tariff pressure as the US said that digital services taxes are against American tech companies like Apple, Amazon, Google and Facebook. Think tank Global Trade Initiative (GTRI) explained that Visa and Mastercard operate on a model under which banks, payment processors and card networks earn fees from merchant transactions. A widely available, interoperable and zero-Merchant Discount Rate (MDR) platform such as UPI limits this revenue pool. RuPay further challenges their position by providing an Indian card network that can be integrated closely with domestic policy objectives, GTRI said.

Congress leader Jairam Ramesh in a social media post said that the real reason behind this amendment is US pressure, adding that the government step comes after USTR report criticised the fee-free nature of UPI and RuPay and accused them of driving American payment platforms like Visa and MasterCard out of the market. Responding to Ramesh, the Finance Minister, Nirmala Sitharaman, in a post on X, said MDR applies only on the merchants and not on the end users. "It will support the Banks & Fintech to invest more on infrastructure, innovation & security. All users of UPI will reap the benefits of this investment. More importantly, the UPI and Services Steering Committee headed by NPCI is yet to decide on the MDR," Sitharaman said.

USTR has raised objections on Indonesia's National Payment Gateway, which required all domestic retail debit and credit transactions to be processed through switching institutions located in Indonesia. Subsequently, Indonesia agreed to address US demands under a trade pact.

FULL REPORT ON WWW.INDIANEXPRESS.COM

- **Key Terms and Explanations**
  - **Merchant Discount Rate (MDR):** This is the fee charged to a merchant by the processing bank and payment service providers for accepting digital payments from customers. Expressed as a percentage of the transaction value, it is split among the issuing bank, acquiring bank, and payment network.
  - **Section 301 of the US Trade Act:** A legal provision under United States trade law that empowers the United States Trade Representative (USTR) to investigate, sanction, or levy retaliatory tariffs on foreign nations whose policies or practices are deemed unfair, discriminatory, or burdensome to American commercial interests.
  - **Unified Payments Interface (UPI) & RuPay:** UPI is an instant, real-time payment system developed by the National Payments Corporation of India (NPCI) that facilitates inter-bank peer-to-peer and person-to-merchant transactions. RuPay is India's indigenous card payment network designed to provide a low-cost alternative to global card schemes.
  - **Third-Party App Providers (TPAPs):** Entities that provide user-facing software applications to facilitate UPI transactions by connecting end-users to banking institutions (e.g., Google Pay, PhonePe). To prevent systemic risk and market concentration, regulatory guidelines mandate caps on transaction volume shares for these platforms.
  - **Equalisation Levy (Digital Service Tax):** A tax framework introduced to tax foreign digital and e-commerce companies that generate substantial revenue from domestic users without maintaining a physical brick-and-mortar presence within the country's national tax jurisdiction.

- **Main Arguments and Substantive Parts**
  - **Core Thesis:** The ongoing proposal to enable transaction fees on zero-MDR digital payment channels like UPI and RuPay reflects a complex interplay between domestic financial infrastructure sustainability and international trade diplomacy pressures.
  - **Substantive Arguments:**
    - **Financial Sustainability of the Digital Ecosystem:** The zero-MDR regime, while instrumental in driving mass adoption, has severely constrained the revenue models of banks and fintech payment aggregators. Reintroducing a fee structure ensures that financial institutions have the capital necessary to upgrade server infrastructure, maintain cybersecurity protocols, and innovate.
    - **External Geo-Economic Trade Dynamics:** International payment corporations (such as Visa and Mastercard) have long argued that state-mandated zero-MDR policies for domestic channels create an unlevel playing field. Unilateral trade tools like USTR Section 301 investigations put pressure on domestic policymakers to remove perceived non-tariff barriers to avoid trade retaliations.
    - **Pragmatic Concessions vs Sovereign Space:** Adjusting trade-sensitive digital policies—such as rolling back digital service taxes or tweaking payment fee structures—serves as a diplomatic mechanism to negotiate broader bilateral trade agreements, balancing sovereign economic priorities with global integration.
    - **Merchant-Centric Cost Sharing:** Reintroducing processing charges is structured around merchant burden-sharing rather than taxing retail consumers directly, ensuring that end-user digital adoption remains uninhibited while strengthening the economic viability of payment rails.
  - **Counterarguments:**
    - **Risk of Re-Cashification:** Imposing transaction costs on small and micro-merchants risks incentivizing a return to cash transactions, potentially dampening the momentum of economic formalization and tax base expansion achieved over the past decade.

- **Historical Evolution of the Issue**
  - **Pre-2016 (Dominance of Global Card Networks):** Prior to the rapid digital transformation, retail payments were heavily reliant on physical cash. Digital payment options were largely restricted to credit and debit cards operating on international networks, carrying high MDR fees (often 1.5%–3%) that discouraged adoption among small merchants.
  - **2016–2019 (Launch of UPI and the Zero-MDR Policy):** Following the launch of UPI by NPCI in 2016, digital payment adoption expanded rapidly. To accelerate this transition and eliminate cash dependency, the government introduced a zero-MDR policy via statutory provisions effective from January 1, 2020, waiving transaction charges on UPI and RuPay payments.
  - **2020–2023 (Explosive Growth and Infrastructure Strain):** Zero-MDR drove exponential transaction growth, turning India into a global leader in real-time digital payments. However, payment aggregators, fintech startups, and public/private banks experienced severe revenue compression, relying largely on capped government budgetary subsidies to cover operational expenses.
  - **2024–2026 (Trade Friction and Legislative Adjustments):** Trade representatives from major economies raised concerns regarding protectionist market structures. In response to global trade negotiations and domestic demands for financial ecosystem sustainability, legislative amendments were proposed to recalibrate the regulatory architecture of payment and settlement systems.

- **Way Forward**
- **Implement a Tiered and Calibrated MDR Structure:** Introduce a slab-based fee framework where micro-merchants (e.g., annual business turnover below ₹20 lakh) remain completely exempt from charges, while large enterprise merchants bear a capped, nominal MDR.
- **Establish a Dedicated Digital Infrastructure Fund:** Create a permanent, multi-stakeholder payment incentive pool co-funded by government grants and systemic financial players to subsidize payment security, system uptime, and fraud prevention measures.
- **Diversify Revenue via Value-Added Services (VAS):** Encourage banks and payment app platforms to develop sustainable revenue models around UPI—such as integrated credit delivery, insurance cross-selling, and advanced merchant analytics—rather than depending solely on basic transaction fees.
- **Strengthen Institutional Geo-Economic Negotiation Strategy:** Clearly articulate the conceptual framework of Digital Public Infrastructure as an essential public utility in global forums (such as G20 and WTO) to protect domestic policy space against foreign trade sanctions.
- **Conduct Transparent Stakeholder Consultations:** Ensure that regulatory bodies like the RBI and NPCI undertake transparent, evidence-based impact assessments and consultations before executing adjustments to digital transaction cost structures.

UPSC CSE COMPREHENSIVE ANALYSIS: THE UPI LEVY DEBATE & US TRADE DEMANDS

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CORE ISSUE & KEY CONCEPTS

SECTION 301 USTR

MERCHANT DISCOUNT RATE (MDR)

- Fee charged to merchants for digital payments.
- Proposed to be received to gentroducing

MERCHANT DISCOUNT RATE (MDR)

Bank — Fees → Card Network (e.g., RuPay) — Fees → TPAP (App) — Fees / Revenue → Merchant

- Fee charged to merchants for digital payments.
- Proposed to be reintroduced for UPI.

TPAP Share Limits

30% caps for major apps such as Google Pay, PhonePe, etc.., etc.

EQUALISATION LEVY

A tax on foreign digital income

HISTORICAL EVOLUTION

PRE-2016
Dominance of Global Cards & High MDR.

2016-2019
Launch of UPI, Zero-MDR Policy Introduced.

2020-2023
Explosive UPI Growth, Banking/Fintech Rev. Strain.

2024-2026+
Trade Frictions, USTR Pressure, Legislative Proposals.

MULTIDIMENSIONAL ANALYSIS

SOCIAL
- Inclusive Financial Inclusion
- Deepens Financial Inclusion
- Street Vendors' Access.

ECONOMIC
- Sustainability of Banks/Fintechs
- Investment in Security.

- Balancing Small Merchants vs Global Deals.
- Balancing Small Merchants vs Global Deals.

LEGAL
- Payments Systems Acts
- WTO Non-Discrimination Rules.

INTERNATIONAL
- Trade Bargaining Lever
- Sovereign Autonomy vs Liberal Trade.

LOGICAL BASE & WAY FORWARD & PYQs

LOGICAL & PHILOSOPHICAL FOUNDATIONS

- Public Good vs Commercial Commodity
- Distributive Justice
- Policilize (Rawlsian Principles)
- Market Distortions & Capital Efficiency

WAY FORWARD (Balanced Solutions)

1. Tiered and Calibrated MDR Structure.
2. Dedicated Digital Infrastructure Fund.
3. Value-Added Services to Diversify Revenue.
4. Proactive Institutional Geo-Economic Negotiation.

PREVIOUS YEAR QUESTIONS (UPSC/APSC)

- UPSC Prelims (E.g., NPCI, MDR, Equalisation Levy).
- UPSC Mains (E.g., DPI and Sustainability, Trade Frictions).
- APSC CCE (E.g., UPI Overseeing Entity, Digital Payments Index).