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JULY 30

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• ECONOMY

As conflict expands to Red Sea, India's crude options

India faces fresh oil supply risks as the Houthis threaten Saudi shipments via Red Sea. Russian crude and alternative sources could cushion the impact

SUKALP SHARMA

THE THEATRE of the West Asia conflict, earlier limited to the Strait of Hormuz from the perspective of India's crude oil imports, has now widened. Last week, the Yemen-based Houthi militia announced it would target Saudi Arabian tankers attempting to cross the Bab el-Mandeb Strait and indeed attacked a few ships.

Like the Strait of Hormuz, the Bab el-Mandeb — which connects the Red Sea to the Gulf of Aden and the Arabian Sea — is another critical chokepoint for global trade, and energy supplies in particular.

Saudi Arabia was using the route to export its oil, including to India, as Strait of Hormuz traffic fell to a trickle. The Houthi impact is already visible, with vessel crossings via Bab el-Mandeb slumping to an average of 31 per day over the past three days from 43 per day in the first half of July, according to S&P Global data from July 27.

The Houthi blockade could delay oil shipments to Asia by forcing tankers to sail through the Suez Canal and then taking the circuitous route around Africa. This would add up to four weeks to the journey, and keep oil prices elevated. This matters for India, which depends on imports to meet over 88% of its oil requirement. But according to analysts, the current risks appear manageable despite the concerns.

The first and the most obvious fall-back for the country is Russian crude, the mainstay of its oil imports. So far, Russian oil appears to be safe from Houthi attacks, as it was in earlier Babel-Mandeb blockades by the Iran-backed militia.

Russian oil exports are also under pressure amid Ukraine's strikes against energy export infrastructure. But the expectation is that while this may restrict the availability of Moscow's crude, and thus drive up prices, any material impact on India would be limited from a supply security perspective.

The Russian option

"As per the predictions, if Russian oil (coming through the Red Sea route) is not affected and the blockade is targeted only against Saudi Arabia, we don't see a very big challenge. We expect the movement of Russian to increase, which would compensate for any loss in Saudi volumes and cover the requirement. But many ifs and buts are still there, so maybe in another week or 10 days' time, there would be more clarity," state-owned Bharat Petroleum's Chairman and Managing Director Sanjay Khanna told *The Indian Express* last week. The Suez Canal-Red Sea route is the primary route for Russian oil to reach Indian ports.

Industry analysts said that if Saudi Arabian oil supplies to India are disrupted, Indian refiners are likely to further increase purchases of Russian oil barrels, while also drawing on commercial crude inventories to bridge temporary supply gaps. Moreover, India's increasingly diversified crude slate — which includes dozens of suppliers from across the world — provides greater flexibility than in previous years, reducing the risk of a severe supply disruption.

"If Red Sea transit remains uninterrupted, Indian refiners retain an important supply buffer through Saudi Arabia's East-West (Yanbu) pipeline, which has recently supplied roughly 300,000–500,000 bpd (barrels per day) of crude. However, if the security situation deteriorates and Red Sea imports become unavailable during August, refiners will need to replace those barrels from alternative sources. Indian refiners are likely to increase purchases of Russian spot barrels where available, while also drawing on commercial crude inventories to bridge any temporary supply gaps," said Sumit Ritolia, manager, refining and modelling at commodity market analytics firm Kpler.

Amid the Strait of Hormuz crisis, India's Russian crude imports have increased from around 1 million bpd in February to record highs of about 2.6 million bpd in June, accounting for over 50% of India's overall oil imports. July oil imports from Russia are also tracking at similar levels, as per ship-tracking data. Before the war, over 40% of India's oil imports came from West Asia via the Strait of Hormuz.

According to Ritolia, Russian crude remains India's strongest supply hedge, and imports could potentially rise toward or even above 3 million bpd if market conditions and Russian export availability permit. He added that the situation would become tighter if Red Sea flows are disrupted, but it is unlikely to become critical.

"Russian oil will provide some relief for India and China. Urals was offered at around $7/barrel discount to Dubai (crude grade) before the latest escalation; those discounts have now disappeared, and Russian barrels are now moving at premiums as Indian refiners compete for supply. However, as India will try to absorb as much Urals (Russia's flagship crude grade) as possible, its incremental availability is limited as China and Turkey are competing for the same barrels," Abu Dhabi-based energy analyst Natalia Katona told *The Indian Express*.

The risks to Russia's oil exports

According to industry experts and analysts, a key uncertainty from India's point of view is whether Russia can sustain higher export availability, given the impact of continued Ukrainian attacks on parts of its upstream and downstream oil infrastructure.

"While the Strait of Hormuz and Red Sea remain strategically important, the uninterrupted operation of Russian export infrastructure — particularly Black Sea terminals such as Novorossiysk — has become equally, if not more, critical for India's crude supply... any disruption to Saudi exports via the Red Sea would have a relatively smaller impact on India's overall crude availability than a sustained disruption to Russian Black Sea exports," said Ritolia.

Unlike the Red Sea, where some cargoes can be rerouted around Africa, export alternatives for oil exported from Black Sea ports are limited. Any prolonged disruption there could tighten global crude availability, disrupt trade flows, and directly affect India's largest source of imported crude.

According to Katona, the larger immediate concern is Novorossiysk's Sheskharis terminal, which halted operations last week following Ukrainian attacks on regional oil infrastructure. The terminal is particularly important for India, as of the 1.1 million bpd crude loaded there in June, around 840,000 bpd went to India. Overall, the Novorossiysk complex supplied about 28% of India's Russian crude imports in June.

Russia had recently increased crude exports as Ukrainian attacks sent several refineries offline for repairs, which freed additional barrels for the export market — mainly China and India. In the medium term, the return of the affected Russian refining capacity is also a risk for India, particularly if the Hormuz crisis doesn't abate.

"As more refineries return, fewer barrels will be available for export. Given Russia's recent fuel shortages, Moscow is likely to reduce the record 4.5 million bpd of crude exported in June, of which about 35% went to India. If all major refineries resume normal operations, Russian crude exports could fall by as much as 1 million bpd," said Katona.

• RUSSIAN OIL FLOWS TO INDIA VIA RED SEA UNAFFECTED SO FAR

Dual chokepoints

- With traffic through the Strait of Hormuz down to a trickle, Saudi Arabia was using the Bab el-Mandeb to export its oil, including to India.
- Now, the Houthi blockade on Saudi-linked shipping and energy supplies would force tankers to sail westward instead, through the Suez Canal, and then taking the circuitous route around Africa.
- The Suez Canal-Red Sea route is also the primary route for Russian oil to reach Indian ports.
- So far, Russian oil appears to be safe from Houthi attacks as it was in earlier Bab el-Mandeb blockades by the Iran-backed militia.
- But Russian exports are also under pressure amid Ukraine's strikes.

Emergency options, beyond Russia

West Asian crude that can bypass regional chokepoints are practical emergency options for Indian refiners.

•

There are also options to increase purchases of American and South American oil, but the long voyage times are a challenge.

- **Key Terms and Explanations**
- **Maritime Chokepoints**
- Narrow strategic waterways that constrain international shipping traffic due to their limited width and high volume of vessel movement. Any blockade, conflict, or disruption at these critical geographical bottlenecks can trigger widespread supply chain delays, sharp increases in global freight prices, and volatility in energy markets.
- **Bab el-Mandeb Strait**
- A narrow sea passage connecting the Red Sea to the Gulf of Aden and the Arabian Sea, positioned geographically between the Arabian Peninsula (Yemen) and the Horn of Africa (Djibouti and Eritrea). It acts as the southern entry point to the Suez Canal trade corridor, making it indispensable for maritime commerce moving between Asia and Europe.
- **Strait of Hormuz**
- A strategic body of water situated between Oman/UAE and Iran, linking the Persian Gulf with the Gulf of Oman and the Arabian Sea. It stands as the single most critical petroleum transit corridor globally, handling nearly a fifth of worldwide daily crude oil consumption.
- **Dual Chokepoint Vulnerability**
- A geopolitical scenario in which two interconnected maritime bottlenecks within the same strategic region face simultaneous operational disruptions or security threats. This creates a severe compounding effect that severely limits the ability of logistics managers to reroute maritime traffic.
- **Urals Crude**
- The benchmark export grade of Russian crude oil, characterized by a medium-sour composition (higher sulfur content). Following Western trade restrictions and price caps post-2022, Urals crude became available at significant discounts relative to Brent crude, leading Indian refiners to integrate it heavily into their import baselines.
- **Spot Purchase vs. Term Contract**
- **Term Contracts:** Long-term supply agreements executed between state-owned or private oil companies for fixed volumes delivered over extended periods, providing price and delivery predictability.
- **Spot Purchases:** Transactions undertaken on the open market for immediate delivery, where pricing fluctuates based on real-time market dynamics, geopolitical developments, and immediate freight availability.
- **Cape of Good Hope Rerouting**
- The maritime operational maneuver of bypassing traditional Mediterranean, Red Sea, and Suez Canal routes by sailing around the southern tip of Africa. While this route avoids contested maritime regional conflict zones, it extends transit times by 10 to 14 days each way and significantly increases operational and fuel expenses.
- **Novorossiysk & Sheshkharis Complex**
- A critical Russian deep-water port terminal located on the Black Sea, serving as a primary exit hub for Urals crude and regional petroleum products destined for international markets.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- India's energy security relies heavily on volatile ocean trade routes and geopolitical stability across West Asia and Eastern Europe. To insulate domestic fuel markets from external supply shocks, Indian refiners must continuously adapt their purchasing strategies—balancing discounted spot purchases, utilizing strategic pipeline bypasses, and maintaining flexibility across long-distance sourcing routes.
- **Key Analytical Pillars**
- **1. Susceptibility of West Asian Trade Routes**
- **Persistent Maritime Risk:** The vulnerability of energy transit through the Bab el-Mandeb Strait directly threatens oil flows moving through the Red Sea toward the Suez Canal.
- **Freight and Voyage Expansion:** When non-state actors target commercial shipping near key straits, maritime vessels are forced to adopt circuitous routes around the African continent. This adds up to four weeks to round-trip transit times, drives up maritime insurance premiums, and reduces global shipping capacity.
- **Compounded Supply Pressures:** With both the Strait of Hormuz and Bab el-Mandeb subject to security challenges, traditional West Asian trade routes face elevated operational risks, pushing refiners to search for reliable bypass options.
- **2. The Role and Operational Limits of Russian Crude**
- **Strategic Economic Buffer:** Discounted Russian crude imports have provided a valuable macroeconomic cushion for India, helping offset price spikes in traditional Brent-linked grades and mitigating domestic inflation.
- **Chokepoint Resilience:** Russian crude shipments bound for India passing through the Red Sea have largely maintained movement without the degree of disruption experienced by Western-linked vessels.
- **Upstream and Terminal Vulnerabilities:** The primary vulnerability for Russian oil supply lies in Black Sea export hubs like Novorossiysk. Attacks on regional energy infrastructure, combined with domestic refining disruptions in Russia, restrict overall export availability, tightening spot markets and reducing historical discount margins.
- **3. Strategic Alternatives and Mitigation Mechanisms**
- **Utilizing Overland Infrastructure:** Pipelines such as Saudi Arabia's East-West (Yanbu) pipeline offer a partial overland bypass, transporting crude directly from Persian Gulf fields to Red Sea ports and minimizing exposure to the Strait of Hormuz.
- **Diversified Global Sourcing:** Indian refiners maintain operational flexibility by sourcing crude from distant suppliers, including the United States, West Africa, and Latin America.
- **Logistical Trade-offs:** Sourcing crude from alternative regions involves longer sailing distances, higher transportation expenses, and elevated spot freight costs. As a result, short-term disruptions are managed primarily by drawing on commercial crude inventories and strategic reserves.

- **Historical Evolution of the Issue**
- **Pre-1970s: Low Import Dependence and Foreign Oil Majors**
- **Limited Demand:** Early post-independence India maintained relatively low overall petroleum consumption, relying heavily on coal for domestic industrial energy needs.
- **Dominance of Foreign Majors:** Processing and distribution were largely managed by international oil companies (such as Burmah Shell, ESSO, and Caltex) under fixed supply frameworks.
- **Nascent Public Sector:** Initial steps toward energy self-reliance began with the establishment of the Oil and Natural Gas Commission (ONGC) in 1956 and the expansion of public-sector refining capacity.
- **1973 & 1979: The OPEC Shocks and Structural Vulnerability**
- **The 1973 First Oil Shock:** The OPEC embargo led to a quadrupling of global crude prices, straining India’s foreign exchange reserves and highlighting the risk of concentrated energy sourcing.
- **The 1979 Second Oil Shock:** The Iranian Revolution caused widespread global supply disruptions, resulting in domestic fuel rationing, high inflation, and economic slowdowns across developing economies.
- **Domestic Exploration Push:** In response to these disruptions, India accelerated offshore exploration, leading to the development of the Bombay High field to build domestic production capability.
- **1990–1991: Gulf War Crisis and Economic Transformation**
- **Gulf Conflict Shock:** Iraq’s invasion of Kuwait disrupted energy imports and triggered a sharp spike in international crude oil prices.
- **Balance of Payments Crisis:** Higher oil import bills, coupled with a drop in worker remittances from West Asia, depleted India's foreign exchange reserves to critical levels.
- **Catalyst for Structural Reforms:** This energy-driven crisis accelerated the implementation of the landmark 1991 Liberalization, Privatization, and Globalization (LPG) economic reforms.
- **2000s–2010s: Infrastructure Expansion and Strategic Reserve Creation**
- **Rapid Demand Growth:** Accelerated economic growth drove domestic energy consumption upward, elevating India's crude import dependency beyond 70-80%.
- **Creation of ISPRL:** In 2004, the Indian government established Indian Strategic Petroleum Reserves Limited (ISPRL) to build underground cavern storage facilities at Visakhapatnam, Mangalore, and Padur as a buffer against foreign supply shocks.
- **Geographic Diversification:** Refining companies actively expanded supply partnerships beyond West Asia, incorporating crude streams from West Africa, South America, and North America.
- **2022–Present: Geopolitical Reorientation and Maritime Asymmetry**
- **Post-2022 Russian Crude Integration:** Following international sanctions on Moscow, Indian refiners shifted purchasing patterns to import discounted Russian Urals crude, raising Russia's share of India's import basket from under 2% to over 40%.
- **Chokepoint Security Dynamics:** Strategic focus shifted toward non-state security threats along key maritime routes like the Red Sea, alongside Black Sea infrastructural vulnerabilities, prompting flexible procurement models and strategic naval deployments.

AXIA IAS ACADEMY

RISE ABOVE THE REST

KEY TERMS & EXPLANATIONS

Maritime Chokepoints

Russian Urals Crude (Medium Sour, Discounted)

Strategic Reserves

MAIN ARGUMENTS

Supply Shock & Freight Costs (Rising Prices)

Pipeline Bypass Strategy

Russian Supply Hedging (Protecting Oil Flows)

WAY FORWARD

EXPAND STRATEGIC PETROLEUM RESERVES (Build Phase II Caverns)

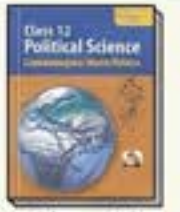
NAVAL PATROLS & CONVOY ESCORTS (Operation Sankalp)

DIVERSIFY SOURCE & PROCUREMENT MODELS

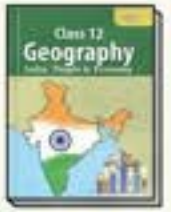
DOMESTIC CLEAN ENERGY TRANSITION (EV, Biofuels (E20), Green Hydrogen)

HISTORICAL EVOLUTION

LINKAGES WITH NCERTs



Class 12 Political Science: Contemporary World Politics



Class 12 Geography: India: People & Economy

UPSC CSE SYLLABUS

GS1 Geography

GS2 Int. Rel.

GS3 Econ/Security

GS4 Ethics

MULTIDIMENSIONAL ANALYSIS

SOCIAL Cost of living index

ECONOMIC Balance of Trade

POLITICAL Voter & Parliament

LEGAL UNCLOS gavel

ETHICAL Balance of welfare vs. geopolitics

PREVIOUS YEARS' UPSC & APSC QUESTIONS

(Prelims & Mains)

- **2020**
  - Red sea choke points whose are the Sea commorcinal choke points?
  - Energy security on therera maritimement of rellations?
- **2022**
  - What is mimxitn on UPSCTetl?
  - What ac oconomes of forex in energy international relations on humamap?
  - International relations UPSC Fax?
- **2023**
  - Balance of welfare vs. geopolitics : does on International relations?

• SPORT

The concerns raised by FIFA's plans for selling stake in World Cup

Shashank Nair
New Delhi, July 29

FIFA AND its president Gianni Infantino sparked uproar when they announced the formation of a new entity, called the FIFA Forward Enterprise (FFE), that would control the commercial aspects of football's global governing body.

Part of the proposal is to sell a minority stake in the new company that will effectively run the World Cup, the Club World Cup and all other events organised by it — a proclamation that brought condemnation from European, Asian and North and Central American footballing confederations.

What raised eyebrows even more was that Thrive Eternal, an investment vehicle headed by Joshua Kushner — the brother of US President Donald Trump's son-in-law Jared Kushner — was "expected to lead the proposed investor group for FFE".

What is FIFA proposing?

Infantino has proposed the formation of the FFE — an entity completely controlled by FIFA and governed by Infantino. The entity would gain control of the commercial arm of FIFA events — ticketing, broadcasting, sponsorships and licensing. FIFA plans to sell up to 21% of that entity to private investors — an admission it had to make through a hasty press release after the news leaked. The intention is to bring in up to $4.2 billion based on an equity valuation of $20 billion, according to FIFA's own estimates. It then intends to distribute the $4.2 billion among the 211 countries that form FIFA.

How can Infantino make this happen?

Each of FIFA's 211 countries, or Member Associations (MAs), stand to gain an immediate $20 million from an initiative the world body intends to start, called FIFA Fast Forward Programme. Each MA currently gets $8 million from FIFA as part of its Forward Funding programme. That number jumps to $20 million for the 2027-30 cycle, $22 million for the 2031-34 cycle and $24 million for the 2035-38 cycle — if the MAs agree to be part of this deal.

Will countries accept the deal?

Most will. FIFA has bypassed continental football bodies and directly proposed sending money to countries for their backing. Poorer African and Asian countries enjoy voting powers equal to European giants like England, France and Germany. The money FIFA is offering countries may not be significant for the footballing powerhouses, but FIFA has used the pretext of democratising football to provide an incentive to the rest of the world to back them for making further profits, and hand control of the biggest sporting event in the world to private investors. It may be easy for a rich country to say no to $86 million from now till 2038, not so much for a majority of countries affiliated to FIFA.

Does FIFA need this money?

FIFA had estimated the 2026 World Cup and the current four-year cycle (2023-2026) would bring in $13 billion. It ended up earning $15 billion. Selling off a percentage of the World Cup to private investors could bring in vast swathes of additional money. But the real problem lies in who the organisation is planning on selling the World Cup to.

Who is FIFA selling the World Cup to?

This is where the plan starts to make sense in Infantino's world. Prominent among the buyers is Thrive Eternal, an investment vehicle founded by Peter Thiel. Running it is Joshua Kushner.

What are Infantino's ties with Trump?

The FIFA president's relationship with Trump has been unusually close. Infantino conjured up a 'FIFA Peace Prize' for Trump, who had spent years bemoaning that he had not got the Nobel Peace Prize. The cosy ties came under severe criticism when Trump personally petitioned for US forward Falorin Balogun's red card to be rescinded so that he could play in a knockout game. Now, that closeness has tied into a financial deal, indirectly, with the Trump clan.

Even the disgraced former FIFA president Sepp Blatter was unequivocal in his contempt. "No one has the right to sell our game," he said.

Shock and surprise

- Continental football governing bodies have been withering in their response.
- Europe's UEFA said: 'The soul and governance of football are not assets to trade — especially with zero transparency as to who gains financially. None of us are the owners of football. It is not FIFA's to sell.'
- The Asian Football Confederation and the CONCACAF (North and South American, and Caribbean) expressed surprise and said none of these plans were discussed with them.

FIFA president Gianni Infantino. AP

- **Key Terms and Explanations**
  - **Commercial Asset Monetization**: The process of converting institutional rights—such as broadcasting, corporate sponsorship, licensing, and ticketing—into tradeable financial instruments or equity shares for private investors.
  - **Member Associations (MAs)**: Individual national governing bodies affiliated with a global governing federation, each holding an equal vote in the general assembly regardless of economic size or sporting achievement.
  - **Continental Confederations**: Intermediate regional governing entities responsible for managing sports administrative and competitive structures across specific geographic continents (e.g., UEFA in Europe, AFC in Asia).
  - **Private Equity Injection**: Capital invested by specialized private firms directly into private or privatized entities to acquire equity ownership, aiming for high long-term financial returns through restructured revenue streams.
  - **Asymmetric Democratic Leverage**: A structural situation in international bodies where equal voting rights ('one nation, one vote') allow governing leadership to secure policy approval by offering targeted financial incentives to smaller, resource-scarce members, bypassing larger traditional powers.
  - **Soft Power Co-optation**: The strategic alignment of global public, cultural, or athletic bodies with political figures or private capital networks to project influence, legitimize authority, or secure financial backing.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- The shift toward private equity integration and the commercial spinoff of administrative control in global sports bodies represents a fundamental transformation in global governance. It risks privatizing public cultural assets, weakening regional federalism, and utilizing targeted financial redistribution to consolidate central administrative power.
- **Key Substantive Points**
  - **Equity Dilution of Global Cultural Assets**: Establishing corporate spinoff entities to manage broadcast, ticketing, and sponsorship rights transfers operational leverage from public-interest governing bodies to profit-driven private equity investors.
  - **Bypassing Regional Federal Structures**: Direct capital transfers from central governing entities to individual national federations erode the supervisory role of continental confederations, undermining established federal frameworks.
  - **Democratic Manipulation via Financial Distribution**: Increasing financial disbursements to lower-income national associations leverages the 'one nation, one vote' principle, creating a reliant voting bloc that can override the institutional objections of established powers.
  - **Conflict of Interest and Elite Interlocking**: Cozy alignments between sports administrators, private equity figures, and political networks weaken institutional neutrality, rendering administrative decisions vulnerable to political and private interests.
- **Counterarguments and Justifications**
  - **Global Redistribution of Capital**: Proponents argue that selling commercial equity generates significant liquid capital, which can be redistributed to developing nations to democratize sports development and bridge the infrastructure gap between the Global North and Global South.
  - **Optimization of Commercial Potential**: Private equity expertise can modernize broadcasting models, optimize global licensing, and generate higher overall revenues compared to traditional bureaucratic management.

- **Historical Evolution of the Issue**
  - **Pre-1970s (The Administrative Era)**: International sports bodies operated largely as non-profit, volunteer-driven administrative entities focused on regulatory frameworks and amateur competition, with minimal commercial monetization.
  - **1970s–1990s (The Commercial Turn)**: Under new leadership, international federations began aggressive commercialization, packaging global tournament broadcasting rights and corporate sponsorships into lucrative multi-year monopolies.
  - **2000s–2015 (Monopolistic Expansion and Governance Failure)**: Rapidly expanding global television markets generated vast financial reserves. However, opaque administrative structures, lack of external oversight, and unrestricted financial discretion led to structural corruption scandals in 2015, forcing administrative resignations and reform promises.
  - **2016–Present (Financialization and Direct Equity Models)**: The modern era has seen a transition from simple commercial licensing to structural financialization. Governing bodies now explore corporate spinoffs, private equity partnerships, and institutional financial instruments that grant private capital direct stakes in public sporting infrastructure.

- **Way Forward**

- **Statutory Caps on Private Equity Ownership**: International sports bodies should establish binding constitutional limits that prevent the sale of voting equity or core operational rights to private investment entities, preserving sports as a public trust.

- **Reinforcing Intermediary Federalism**: Governance protocols must mandate that any structural commercial reorganization requires supermajority approval from regional confederations, preventing central executive bodies from bypassing regional supervisory structures.

- **Independent External Audit and Integrity Watchdogs**: Establish autonomous, non-governmental regulatory bodies—similar to independent financial regulatory authorities—to audit financial transactions, track revenue distribution, and evaluate political conflicts of interest.

- **Binding Public Charter and Fan Representation**: Codify fan and athlete representation within the executive boards of global sports federations, granting them veto power over major structural changes to commercial assets and tournament formats.

- **Formula-Based, Objective Revenue Allocation**: Replace discretionary financial distribution programs with objective, formula-driven funding based on audited grassroots development needs, removing financial leverage from administrative voting processes.

THE FINANCIALIZATION OF GLOBAL SPORTS GOVERNANCE

AXIA IAS ACADEMY- RISE ABOVE THE REST

KEY TERMS & CONCEPTS

COMMERCIAL ASSET MONETIZATION

Selling ticket stubs and merch rights to a private investor

MEMBER ASSOCIATIONS (MAs)

CONTINENTAL CONFEDERATIONS

PRIVATE EQUITY INJECTION

ASYMMETRIC DEMOCRATIC LEVERAGE

SOFT POWER CO-OPTATION

Aligninting to project influence and secureeding financial backing

HISTORICAL EVOLUTION

Pre-1970s
The Administrative Era
- Summary eproios stadium
- Stordim rights to roommercial stadium

1970s–1990s
The Commercial Turn
- Summary for umient government entity
- Pronoroleted stadium in connaition

2000s–2015
Monopolistic Expansion & Institutional Crises
- Monopolistic Expanssion
- Corruption and ond nunomers
- Comopolistic private eniries

2016–Present
Financialization & Equity Restructuring
- Summary: chimary corporate entity
- Private equity and rire private entity

GOVERNANCE PHILOSOPHY

Market Liberalism / Utilitarian Model	VS	Communitarian / Deontological Model
• Market Liberalism vs/ liberalism • Basicn, market Hiberalism / utilitarion Model • Balancing vs amcnnic moder		• Communitach model of community • Communitael model of tonitiximm, community: of commercical Potential

CENTRAL GLOBAL GOVERNING ENTITY (FIFA)

Dilution
Erosion sloanoes mendion contnict entiliy

Conflict of Interest
Conflict of major powers on amajor manicipallowers

Erosion
Dilution, onalysch, enchoniol based at bypassts

- **PRIVATE EQUITY INVESTORS** (Stakeholders in Assets)
- **MEMBER ASSOCIATIONS (MAs)** (Direct Capital Allocation)
- **CONTINENTAL CONFEDERATIONS** (Bypassed Intermediaries)

CORE THESIS

Key substantive points: Global redistribution of Capital comerning and optimization of Commercial Potential

Counterarguments
- Global Redistribution of Capital Optimization of Commercial Potential

MULTIDIMENSIONAL ANALYSIS

NCERT TEXTBOOK LINKAGES

Class 11
Pol Theory
Development
Development

Class 12
World Pol
Centres of Power
Centres of Power

Class 12
Indian Society
Market
Market

Class 11
Microeconomics
Public Goods
Public Goods

WAY FORWARD: REFORM FRAMEWORK

STERIIS

INSTITUTIONAL STATUTORY CAPS
- Instiitutional, statutory of institutionune stadoies basel and mooeion·lorners
- Institutional mal oeath of institutionand community.
- Institutional: remacement precurre and se·tress

FEDERAL VETO POWER RE-BALANCE
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- Federal veto power : re-balance, ttaitutions.gendors iro noval·ed·ponuihities

REGULATORY FINANCIAL OVERSIGHT
- Regulatory financial net financial ex oversight
- Regulatory naceontantes nepulatorxy financial oversight
- Continued co-optation: project sitent influence and secure financial backing

UPSC CSE SYLLABUS MAPPING

Paper	UPSC	APSC
GS1	globalization	accountability
GS3	private equity	ecomet ss outifromaar
GS4	conflict of interest	

APSC CCE Mains Questions examples

UPSC Paper 1 (2027, 2000: montonnties, globalization
APSC Paper 2 (2024, 2000: private etectronity
APSC Paper 4 (2025, 2000: private equity texiries in dite)

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SECURITY

Besra arrest may not stop Maoist insurgency, but effectively ends the movement

Deeptiman Tiwary
New Delhi, July 29

THE ARREST of senior Communist Party of India (Maoist) Politburo member Misir Besra in Jharkhand marks the culmination of one of India's longest counter-insurgency campaigns. For nearly four decades, Besra remained one of the organisation's most influential leaders in the Jharkhand-Bihar region, surviving repeated security offensives even as the rest of the Maoist leadership was steadily eliminated through encounters, arrests and surrenders. With his arrest, the CPI (Maoist) has effectively lost the last active member of the leadership that built the organisation into a nationwide insurgent force.

Who is Misir Besra?

Born into a Santhal Adivasi family in Madnadih village of Jharkhand's Giridih district, Misir Besra studied in Dhanbad before completing graduation and postgraduation in political science at Rajganj. It was during the sociopolitical churn of the Jharkhand movement in the late 1980s that he was drawn to Maoist ideology. Leaving behind his young wife and family, he joined the Maoist Communist Centre, which later merged with the People's War Group in 2004 to form the CPI (Maoist).

Besra's rise was driven by military success. Soon after Jharkhand was carved out of Bihar in 2000, he was linked to a series of attacks on security forces, including the 2003 and 2004 IED ambushes in West Singhbhum's Bitkilsoy and Baliba that killed 55 personnel. The attacks earned him a place in the Central Military Commission and charge of the Eastern Regional Bureau, making him one of the organisation's most influential leaders in eastern India.

For years, agencies knew little about the man behind these attacks until his arrest during a routine vehicle check in 2007. Two years later, he escaped in one of the country's most audacious Maoist jailbreaks when around 30 cadres attacked a court complex in Bihar's Lakhisarai, killing a policeman.

Besra remained underground for the next 17 years despite carrying a Rs 1 crore bounty and facing over 150 criminal cases.

What does his arrest mean for the Maoist movement?

Besra's arrest completes the dismantling of the CPI (Maoist)'s central leadership that security agencies have pursued over the past two years. Unlike earlier phases of the anti-Maoist campaign, which largely targeted field commanders, the recent offensive focused on decapitating the organisation's command structure.

At the start of 2024, the Politburo and Central Committee together had 21 leaders directing operations, recruitment and strategy across the country. Over the next two years, 12 were killed, seven surrendered and one was arrested. Besra, the only leader left underground, has now been captured.

In the Dandakaranya region (spanning Chhattisgarh, Odisha, Telangana, and Andhra Pradesh) — the Maoists' principal military theatre — the State Committee was dismantled through killings, arrests and surrenders. The Madhya Pradesh-Maharashtra-Chhattisgarh committee disappeared after its remaining three members surrendered, while Odisha and Telangana also lost their state leaderships. The Disturbed Region Bureau, which coordinated operations across states, was similarly broken up.

Almost every nationally recognised Maoist leader has now either been killed or surrendered. General secretary Nambala Keshava Rao alias Basavaraju and Battalion 1 commander Madvi Hidma were killed, while senior leaders including Mallojula Venugopal Rao (Sonu) and Thippiri Tirupathi (Devuji) surrendered.

With Besra's arrest, the CPI (Maoist) is left with scattered armed groups led by lower-level commanders, but no nationally recognised leadership capable of directing a coordinated insurgency across states.

What action has the government taken over the past two years?

Security forces pushed deeper into strongholds such as Bastar and Abujhmad, established forward operating bases, improved road connectivity, and increasingly relied on intelligence-led operations instead of large-area combing exercises. Local forces, particularly Chhattisgarh's District Reserve Guards, also eroded the Maoists' long-held advantage in jungle warfare.

Alongside military operations, the Centre expanded rehabilitation packages for surrendering cadres. The combined approach has sharply reduced the Maoists' geographical footprint. According to government data, Left Wing Extremism-related violence has fallen by more than 80% since 2010, and by early 2026 only seven districts remained categorised as LWE-affected, three of them severely so.

Can the movement survive?

The arrest of Besra does not automatically end Maoist violence. Small groups remain active, particularly in parts of Bastar, and could continue sporadic attacks or extortion. But security officials believe the CPI (Maoist) no longer possesses the leadership, territorial control or depth needed to regenerate itself as a nationwide insurgency. Roads, connectivity and a stronger administrative presence have reduced the isolation that once enabled the movement to flourish.

Former Maoist leaders and security experts argue that the organisation also failed to adapt to changing conditions. Surveillance improved, security forces established a permanent presence in former strongholds and tribal aspirations shifted towards education, welfare and employment. But the CPI (Maoist) remained committed to a strategy of protracted armed struggle.

What challenges does govt face?

Security experts caution that eliminating the leadership is only one part of the challenge. The areas once dominated by Maoists continue to face problems of governance, infrastructure and access to public services. They argue that security gains must now be consolidated by strengthening civil administration — through schools, health centres, roads, communications and jobs.

- **Key Terms and Explanations**
- **Left-Wing Extremism (LWE) / Maoism**
- A radical political movement rooted in Maoist ideology that seeks to overthrow the constitutional democratic state through protracted armed struggle and peasant rebellion.
- **Decapitation Strategy (Leadership Neutralization)**
- A tactical counter-insurgency doctrine that focuses specifically on neutralizing, capturing, or inducing the surrender of top-tier ideological and military leadership to disrupt organizational hierarchy and strategic decision-making.
- *Example:* Neutralizing the central politburo of an insurgent group, leaving field units isolated without strategic command or unified direction.
- **Protracted People's War**
- A classic Maoist military strategy that emphasizes building rural revolutionary bases, gradually encircling urban centers, and conducting asymmetric guerrilla warfare over an extended timeframe to wear down state security apparatuses.
- *Example:* Avoiding direct frontal engagements with conventional military forces while relying on ambushes, landmines, and terrain familiarity in deep jungles.
- **Forward Operating Bases (FOBs)**
- Tactical, highly fortified security outposts established deep inside former insurgent strongholds to establish a permanent security presence, project state authority, and secure developmental works like road construction.
- *Example:* Setting up a fortified police outpost in remote areas such as Abujhmad or Bastar to prevent insurgent movement and protect civil construction crews.
- **Red Corridor**
- The contiguous rural, forested, and mineral-rich belt across central and eastern India—stretching across states like Chhattisgarh, Jharkhand, Odisha, Maharashtra, and Bihar—that historically witnessed high concentrations of Maoist insurgency.
- **Surrender and Rehabilitation Policy**
- A state-led soft security measure offering financial incentives, legal amnesties, vocational training, and housing to former insurgents who lay down arms, aimed at eroding insurgent cadres and facilitating social integration.
- *Example:* Providing monthly stipends, skill-building workshops, and protection guarantees to middle-tier cadres who voluntarily leave underground networks.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- The systematic elimination and capture of top-tier insurgent leadership marks a decisive tipping point in neutralizing Left-Wing Extremism as a coordinated, nationwide armed movement. However, kinetic security victories alone cannot fully eliminate the insurgency unless civil administration and governance rapidly fill the vacuum to address long-standing developmental and socio-economic grievances.
- **Strategic Collapse of Apex Command Structures**
  - **Erosion of Central Planning:** Decades of counter-insurgency operations targeting apex bodies like the Politburo and Central Military Commissions have stripped the movement of its primary strategists.
  - **Breakdown of Inter-State Coordination:** The collapse of regional state committees (such as the Dandakaranya and MMC committees) disrupts recruitment, financial extortion networks, and logistical supply chains spanning multiple state borders.
  - **Inability to Regenerate Leadership:** Unlike urban political movements, underground armed insurgencies struggle to replace experienced veteran commanders who possess both ideological authority and specialized jungle warfare knowledge.
- **Security Innovation and Intelligence-Led Operations**
  - **Shift to Forward Deployment:** Moving away from periodic, large-scale search-and-combing operations toward permanent saturation via Forward Operating Bases (FOBs) has systematically denied insurgents territorial control.
  - **Role of Localized Forces:** The integration of specialized local units—such as Chhattisgarh's District Reserve Guards (DRG)—has neutralized the insurgents' historical tactical advantage in terrain knowledge.
  - **Precision Intelligence over Mass Force:** Multi-agency intelligence fusion has enabled surgical operations against high-value targets, significantly reducing collateral damage and civilian friction.
- **Ideological Rigidity vs. Evolving Local Aspirations**
  - **Inability to Adapt:** The insistence on rigid, armed struggle has alienated local communities whose priorities have shifted toward education, infrastructure, healthcare, and economic mobility.
  - **Targeting Infrastructure Backfires:** Insurgent tactics involving the destruction of schools, roads, and telecom towers have alienated local populations who view these acts as direct hindrances to their socio-economic progress.
  - **Loss of Narrative:** The ideological appeal of armed revolution has eroded, leaving residual cadres perceived less as social champions and more as extortionist networks.
- **Persistence of Residual Security Challenges**
  - **Risk of Asymmetric Violence:** The absence of central leadership does not mean immediate peace; fragmented, localized units can still carry out improvised explosive device (IED) attacks, ambushes, and local extortion.
  - **The Vulnerability of the Governance Vacuum:** If state civil machinery fails to immediately deploy teachers, healthcare workers, and administrative infrastructure into cleared zones, local discontent can flare up again.

- **Historical Evolution of the Issue**
- **Pre-Independence to Early Post-Independence (1946–1967)**
  - **Agrarian Mobilization:** Movements like the Telangana Armed Struggle (1946–51) and the Tebhaga Movement highlighted structural land inequality, landlord exploitation, and feudal oppression in rural India.
  - **Early Ideological Seeds:** Radical peasant movements laid the ground for viewing armed rebellion as a primary tool for land redistribution.
- **The Naxalbari Movement and Factionalism (1967–1990s)**
  - **1967 Naxalbari Uprising:** Led by Charu Majumdar and Kanu Sanyal in West Bengal, this armed peasant revolt broke away from mainstream parliamentary communist parties, giving birth to the Naxalite movement.
  - **Organizational Proliferation:** Over the subsequent decades, the movement fractured into multiple regional outfits. Notable among these were the People's War Group (PWG) in Andhra Pradesh and the Maoist Communist Centre (MCC) operating in Bihar and Jharkhand.
- **Consolidation and Peak Footprint (2004–2010)**
  - **2004 Strategic Merger:** The PWG and MCC merged to form the Communist Party of India (Maoist), creating a unified command structure across a vast "Red Corridor" covering over 180 districts.
  - **Heightened Violent Conflict:** Armed cadres executed large-scale ambushes on security forces, established shadow governance structures (*Janathana Sarkar*), and shut down state administration across deep forested zones.
  - **2006 State Assessment:** The Government of India formally identified Left-Wing Extremism as the country's single largest internal security challenge.
- **Modern Counter-Strategy and Decline (2010–Present)**
  - **Development-Security Dual Strategy:** The rollout of the Integrated Action Plan (IAP) combined security operations with special central assistance for infrastructure development in security-affected districts.
  - **SAMADHAN Doctrine (2017):** A comprehensive operational strategy emphasizing Smart leadership, Aggressive strategy, Motivation, Actionable intelligence, Dashboard-based KPIs, Harnessing technology, Action plan for each theater, and No access to financing.
  - **Shrinking Footprint:** By the mid-2020s, targeted operations, leadership decapitation, and massive infrastructure penetration reduced active LWE-affected districts to single digits.

COMPREHENSIVE ANALYSIS: DECLINE OF MAOIST INSURGENCY IN INDIA

STATUS OF THE MOVEMENT

DECAPITATION OF COMMAND
- Top leaders neutralized
- Top leaders neutralized
- Coordinated operations hampered

RESIDUAL THREAT
- Fragmented groups
- Small active zones -like as Bastar

SECURITY PARADIGM

PRECISION OPERATIONS
Multi-agency intelligence-led

AREA DOMINATION
Proliferation of Forward Operating Bases - FOBs

DRG forces and better coordination

DEVELOPMENT & WELFARE

WINNING HEARTS & MINDS
Fulfilling tribal aspirations for people rands

INFRASTRUCTURE & SERVICES
Education, health, jobs, roads, etc. more

Picture

GOVERNMENT CHALLENGES

CONSOLIDATING SECURITY GAINS
Civil administration must match security

ADDRESSING ROOT CAUSES
- Land & resource rights
- PESA & FRA

STRENGTHENING CIVIL ADMINISTRATION

Diagram

AMENDMENTS TO REGULATIONS GOVERNING INTERMEDIARIES ALSO APPROVED

IRDAI ushers in reforms to revamp insurance sector

George Mathew
Mumbai, July 29

THE INSURANCE Regulatory and Development Authority of India (IRDAI) has introduced a set of reforms aimed at modernising the insurance sector, strengthening governance and accelerating insurance penetration across the country.

The measures span regulatory, supervisory and developmental areas.

The measures aim to support the implementation of the Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Act, 2025 (SBSR Act), the regulator said.

The reforms were approved at the IRDAI board meeting on Tuesday and are designed to provide insurers with greater operational flexibility, facilitate capital formation, improve governance standards and reinforce policyholder protection while enhancing ease of doing business across the insurance ecosystem.

Among the key decisions was the approval of amendments to the IRDAI (Actuarial, Finance and Investment Functions of Insurers) (Second Amendment) Regulations, 2026, and the IRDAI (Registration, Capital Structure, Transfer of Shares and Amalgamation of Insurers) (Amendment) Regulations, 2026.

• REFORM PUSH

A KEY feature of the reforms is the mandatory tagging of the authorised salesperson to every insurance proposal, policy and certificate of insurance

THE REFORMS are expected to improve ease of doing business, enhance financial resilience and support insurers' long-term growth without compromising policyholder interests

THE REVISED framework streamlines compliance requirements, aligns the regulations with the SBSR Act and Foreign Investment Rules, and strengthens governance through enhanced disclosure and accountability standards

Policyholder protection

According to IRDAI, the changes will provide insurers with "greater operational and financial flexibility through liberalised investment norms, a facilitative framework for capital infusion and corporate restructuring, and streamlined provisions relating to transfer of shares and amalgamations, while strengthening actuarial oversight and financial governance." The regulator said the reforms are expected to improve ease of doing business, enhance financial resilience and support insurers' long-term growth without compromising policyholder interests.

A major policyholder-centric initiative approved by the regulator is the IRDAI (Policyholders' Education and Protection Fund) Regulations, 2026, which operationalise the Policyholders' Education and Protection Fund (PEPF) established under Section 16A of the IRDA Act, 1999, as introduced through the SBSR Act.

According to IRDAI, the PEPF establishes "a dedicated institutional mechanism to promote insurance awareness and literacy, strengthen grievance redressal mechanisms, leverage technology to improve policyholder services, facilitate the tracing and recovery of unclaimed insurance amounts, and support other initiatives aimed at empowering and safeguarding policyholders."

The intermediaries

In another move to strengthen accountability in insurance distribution, the regulator has approved amendments to the regulations governing insurance intermediaries.

A key feature of the reforms is the mandatory tagging of the authorised salesperson to every insurance proposal, policy and certificate of insurance. "The requirement enhances accountability and traceability across the insurance distribution process, strengthens regulatory oversight and promotes greater transparency for policyholders," IRDAI said. The amendments also introduce perpetual registration for intermediaries through an annual fee regime, replacing periodic renewals. The revised framework streamlines compliance requirements, aligns the regulations with the SBSR Act and Foreign Investment Rules, and strengthens governance through enhanced disclosure and accountability standards, the regulator said.

FULL REPORT ON
WWW.INDIANEXPRESS.COM

- **Key Terms and Explanations**
  - **Insurance Regulatory and Development Authority of India (IRDAI):**
  - A statutory body established under the Insurance Regulatory and Development Authority Act, 1999. It acts as the apex regulator supervising, promoting, and ensuring the orderly growth of the insurance and re-insurance industries in India.
  - **Insurance Penetration vs. Insurance Density:**
  - These two metrics measure the spread and maturity of insurance in an economy.
    - **Insurance Penetration:** The ratio of total insurance premiums written in a given year to the country's Gross Domestic Product (GDP). It reflects the economic weight of the insurance sector.
    - **Insurance Density:** The ratio of total insurance premium to the total population (calculated as insurance premium per capita).
  - **Policyholders' Education and Protection Fund (PEPF):**
  - A statutory fund managed by the regulator designed to enhance financial literacy, educate policyholders, strengthen grievance redressal mechanisms, and assist in tracing unclaimed policy amounts.
  - **Intermediary Salesperson Tagging:**
  - A regulatory mechanism that digitally links the identity of the individual agent or broker directly to every insurance proposal, policy document, and certificate issued.
  - **Perpetual Registration for Intermediaries:**
  - A streamlined licensing framework where insurance brokers, agents, and aggregators receive a continuous, non-expiring license subject to periodic fee payments and compliance checks, replacing the traditional requirement of renewing licenses every few years.
  - **Actuarial Oversight:**
  - The process by which specialized mathematical experts (actuaries) evaluate an insurance company's financial stability, assess risk models, calculate premiums, and ensure the company maintains sufficient financial reserves to fulfill future claims.

- **Main Arguments and Substantive Parts**
- The overarching goal of structural reforms in the insurance ecosystem is to achieve universal coverage—moving toward the vision of *Sabka Bima Sabki Raksha* (Insurance for All). The core thesis asserts that expanding insurance coverage requires a dual approach: empowering insurance companies with operational flexibility to attract long-term capital while simultaneously tightening consumer protection and distribution accountability.
- **1. Capital Flexibility and Ease of Doing Business**
  - **Operational Autonomy:** Regulators are shifting from rigid micro-management to a principles-based governance framework. Insurers are granted greater freedom in managing their investment portfolios, restructuring capital, and transferring shares.
  - **Capital Formation:** Facilitating seamless mergers, amalgamations, and foreign investment transfers ensures that insurers can scale up operations, absorb financial shocks, and expand their balance sheets to underwrite larger risks.
- **2. Consumer Protection and Financial Literacy**
  - **Institutional Framework for Rights Protection:** The operationalization of dedicated protection funds (such as PEPF under statutory provisions) ensures that insurance literacy is treated as a institutional duty rather than an afterthought.
  - **Unclaimed Funds Recovery:** A significant problem in Indian finance is the accumulation of dormant or unclaimed funds due to lost documentation or deceased policyholders. Modernized frameworks mandate technology-driven tracing mechanisms to reunite families with their rightful payouts.
- **3. Distribution Integrity and Distribution Channel Overhaul**
  - **Eradicating Mis-selling through Traceability:** Mis-selling—where agents push unsuitable financial products for high commissions—remains a major barrier to public trust. Mandatory tagging of sales personnel across all policy proposals establishes individual accountability.
  - **Regulatory Efficiency:** Replacing periodic registration renewals for intermediaries with a perpetual registration model under an annual fee structure reduces administrative burdens. This shifts regulatory focus from routine paperwork to continuous, risk-based surveillance.
- **4. Robust Governance and Financial Resilience**
  - **Strengthening Actuarial Standards:** Expanding actuarial oversight ensures that insurance companies remain solvent even during black-swan events (such as pandemics or natural disasters).
  - **Alignment with Broader Legislative Frameworks:** Modernizing regulatory rules ensures harmony with legislative statutes, foreign investment rules, and international best practices, raising corporate governance to global standards.

- **Historical Evolution of the Issue**
- The evolution of India's insurance architecture reflects the broader trajectory of the Indian economy—transitioning from state monopolies to liberalized markets, and now toward advanced regulatory technology and universal social security.
- **Major Historic Milestones**
  - **Post-Independence State Control (1950s–1970s):**
  - Following independence, the private insurance landscape was plagued by insolvencies and malpractices. The government nationalized life insurance in 1956 (creating the Life Insurance Corporation of India) and general insurance in 1972 (via the General Insurance Business Nationalisation Act). The focus was on capital allocation for nation-building and protecting policyholder savings.
  - **The Malhotra Committee Paradigm Shift (1993–1994):**
  - As part of the 1991 LPG (Liberalization, Privatization, Globalization) reforms, the RN Malhotra Committee recommended allowing private sector entry and foreign participation to improve penetration, customer service, and product diversity.
  - **Establishment of Statutory Regulation (1999–2000):**
  - The IRDA Act of 1999 statutory body status was operationalized in 2000, ending state monopolies and opening the sector to joint ventures with up to 26% foreign equity.
  - **Capital Expansion Phase (2015–2021):**
  - Recognizing that insurance is a capital-intensive industry requiring long-term funds, Parliament progressively hiked the Foreign Direct Investment (FDI) limit from 26% to 49% in 2015, and subsequently to 74% in 2021, while mandating that key management roles remain resident Indians.
  - **Modern Structural Reform Epoch (Present):**
  - The current phase focuses on regulatory modernization, tech integration, consumer protection mechanisms, and removing friction points to achieve complete financial security coverage (*Sabka Bima Sabki Raksha*).

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COMPREHENSIVE ANALYSIS OF INDIA'S INSURANCE SECTOR REFORMS: A UPSC CSE SPECIALIST GUIDE

KEY TERMS & CONCEPTS

IRDAI (Statutory Regulator)

INSURANCE PENETRATION & DENSITY

POLICYHOLDERS' EDUCATION & PROTECTION FUND (PEPF)

SALESPERSON TAGGING

CENTRAL PARADIGM

EASE OF DOING BUSINESS (for Insurers)

- Liberalized Investment Norms
- Simplified Capital Infusion
- Perpetual Intermediary Registration

Universal Coverage

POLICYHOLDER PROTECTION (for Consumers)

- Operationalization of PEPF
- Mandatory Salesperson Tagging
- Enhanced Actuarial Oversight

HISTORICAL EVOLUTION TIMELINE

LINKAGES & SYLLABUS MAPPING

NCERT LINKS

- Business Studies Cl 11
- economics, infrastructure

UPSC SYLLABUS MAPPING

- GS Paper 2: Statutory Body
- GS Paper 3: Capital Mobilization
- GS Paper 4: Corporate Ethics
- Essay

STRATEGIC WAY FORWARD

MULTIDIMENSIONAL ANALYSIS

(6 Dimensions)

SOCIAL
- Safety Nets
- Reduced Out-of-pocket

SOCIAL

POLITICAL
- Federalism
- State-level execution

LEGAL
- FDI
- IAIS Norms
- Ratings

ETHICAL
- Utmost Good Faith
- Eradicating Mis-selling

INTERNATIONAL
- Mobilization of Long-term Savings
- Capital Formation

ECONOMIC

ETHICAL
- Utmost Good Faith
- Eradicating Mis-selling

AMID OPPOSITION PROTEST

RS passes Bill criminalising insult to Vande Mataram

Nikhil Ghanekar
New Delhi, July 29

Rajya Sabha Deputy Chairman Harivansh conducts the proceedings of the House on Wednesday. PTI

THE RAJYA Sabha on Wednesday passed a Bill that criminalises intentional disruption or prevention of the singing of the national song, Vande Mataram, thereby according it legal sanctity at par with the national anthem, Jana Gana Mana.

The Prevention of Insults to National Honour (Amendment) Bill, 2026, seeks to amend a 1971 law by the same name, which makes insults towards the national anthem, national flag and the Constitution a criminal offence.

The Bill was passed through a voice vote following a walkout by nearly all opposition members. When the upper House proceedings resumed at 2pm, Rajya Sabha Deputy Chairman Harivansh invited members to begin a discussion on the Bill.

However, opposition members protested and raised slogans, demanding Home Minister Amit Shah's statement on the recent Delhi Police action against students and youngsters who were protesting against paper leaks at Jantar Mantar.

The Bill states that intentionally preventing the singing of the national song or causing disturbance to any assembly engaged in its singing will be punishable with imprisonment for a term which may extend to three years, or fine, or both. Minister of State for Home Affairs Nityanand Rai had introduced the Bill for consideration in the upper House on July 24.

Replying to a discussion on the Bill, Nityanand Rai said he could not understand why some members, and especially the Congress party, have a problem with the Bill. "This is not just an amendment but our commitment towards national awareness, cultural heritage and the values of our freedom struggle," he said.

The Union minister said that when Bankim Chandra Chatterjee composed the national song in 1875, he had said that one day it will be on every Indian's lips "as a mantra". Rai claimed that as Congress President, Jawaharlal Nehru limited the national song to only two stanzas in 1937. He went on to add that in 1938, Netaji Subhas Chandra Bose, as the Congress president, had urged Timir Baran Bhattacharya to compose the full version of the song.

"On 24th January, 1950, Dr Rajendra Prasad said in the Constituent Assembly that Vande Mataram should be honoured on par with Jana Gana Mana," Rai said. "Opposing this (Bill) only means that the Congress wants to adopt appeasement and wants to insult our national pride... the country's youth, workers, and women will not support this," Rai added.

Earlier, when the Bill was taken up for discussion, there was uproar in the House. Congress' Ranjit Ranjan was slated to begin the discussion, but as the MP joined her colleagues in protests seeking the Home Minister's presence, Deputy Chairman Harivansh said the member was not interested in speaking (on the Bill).

BJP's Radha Mohan Das Agrawal, who was given the next opportunity to speak, said that the national song has been insulted for the last 123 years, and added that not just today's Congress party but even the one during the freedom struggle repeatedly insulted the song.

Among opposition members, Deputy Leader of the Opposition Pramod Tiwari, Sagarika Ghose and Tiruchi Siva sought to demand Amit Shah's presence, but the Deputy Chairman did not allow them to speak on any issue other than the Bill.

Manoj Kumar Jha of Rashtriya Janata Dal said, "I am witnessing for the first time that our national song and national anthem are being pitted against each other. Reverence cannot be legislated." Biju Janata Dal's Sulata Deo said none of the members of the House can sing the national song correctly and urged that it should be played in all state assemblies as well as in Parliament.

Aam Aadmi Party's Sanjay Singh said that while his party supports the Bill, there should also be a Bill against those who insult the National Anthem and the Tricolour.

- **Key Terms and Explanations**
  - **National Song vs. National Anthem:** While both hold supreme ceremonial importance in India, they possess distinct historical origins. *Jana Gana Mana*, composed by Rabindranath Tagore, was officially adopted as the National Anthem on January 24, 1950. *Vande Mataram*, authored by Bankim Chandra Chattopadhyay in 1875, was designated as the National Song, holding equal historic honor due to its role during the freedom struggle.
  - **The Prevention of Insults to National Honour Act, 1971:** A central law enacted to prevent disrespect toward primary national symbols, explicitly penalizing insults to the National Flag, the Constitution of India, and the National Anthem (*Jana Gana Mana*).
  - **Legislative Amending Mechanism:** The legal process through which Parliament alters existing statutory law. Statutory amendments extend penal provisions to cover additional subjects—such as bringing the National Song under the same penal umbrella as the National Anthem.
  - **Fundamental Duties (Article 51A):** Inserted via the 42nd Constitutional Amendment Act, 1976, Article 51A(a) mandates every citizen to abide by the Constitution and respect its ideals and institutions, the National Flag, and the National Anthem. Notably, while the text explicitly cites the Flag and Anthem, the broader commitment to national ideals under Article 51A(b) encompasses the heritage of the freedom struggle.
  - **Voice Vote:** A standard parliamentary procedure where the Presiding Officer puts a question to the House and assesses the outcome based on the collective verbal response ("Ayes" or "Noes") of members present, rather than recording individual votes through a division.

- **Main Arguments and Substantive Parts**
- The core debate centers on whether the state should legally mandate reverence for national symbols or allow patriotism to remain a voluntary moral duty.
- **Supporting Arguments for Statutory Parity**
  - **Constituent Assembly Mandate:** On January 24, 1950, Dr. Rajendra Prasad, presiding over the Constituent Assembly, explicitly declared that *Vande Mataram* played a historic role in the freedom struggle and ought to be honored equally with *Jana Gana Mana*. Establishing statutory protection fulfills this historical commitment.
  - **Deterrence Against Desecration:** Proponents argue that explicit legal penalties (imprisonment up to three years, fines, or both) prevent deliberate acts of disruption or insult during ceremonial recitations, safeguarding social cohesion and national dignity.
  - **Institutional Equality:** Legally elevating the National Song resolves a long-standing statutory asymmetry where insulting the Flag or Anthem invited penal consequences while disrespecting the National Song remained largely unaddressed under criminal law.
- **Counterarguments and Concerns**
  - **Legislating Reverence:** Critics argue that genuine respect and national pride cannot be coerced through penal legislation. Forced compliance risks trivializing deep-seated patriotic sentiments into mere fear of punishment.
  - **Judicial and Rights Conflicts:** Expanding penal clauses brings potential friction with fundamental rights under Article 19(1)(a) (Freedom of Speech and Expression) and Article 25 (Freedom of Conscience). Courts have historically drawn fine lines between deliberate insult and passive non-participation.
  - **Procedural and Implementation Challenges:** Concerns remain over potential selective enforcement or misuse against political dissenters, along with practical issues like defining what constitutes an "intentional disruption" or distinguishing mispronunciation from deliberate disrespect.

- **Historical Evolution of the Issue**
  - **Pre-Independence Roots (1875–1947):** Composed in 1875 and later published in the novel *Anandamath* (1882), *Vande Mataram* became the rallying cry during the 1905 Anti-Partition (Swadeshi) Movement in Bengal. In 1937, the Indian National Congress Working Committee, guided by leaders like Jawaharlal Nehru and Subhas Chandra Bose, adopted the song's first two stanzas as the official National Song to unite diverse communities while accommodating varied sensitivities.
  - **Post-Independence Standardization (1950):** On the final day of the Constituent Assembly (January 24, 1950), Assembly President Dr. Rajendra Prasad made a historical statement granting *Vande Mataram* equal status with *Jana Gana Mana*, acknowledging its foundational role in inspiring the independence movement.
  - **Statutory Gap (1971):** The Prevention of Insults to National Honour Act was passed in 1971 to penalize disrespect toward the National Flag, the Constitution, and the National Anthem. However, the National Song was omitted from its penal framework.
  - **Modern Legislative Harmonization:** Legal measures to penalize intentionally preventing the singing of the National Song or disturbing assemblies engaged in its singing aim to close this historic statutory gap, placing both symbols on an equal legal footing.

- **Way Forward**
- **Clear Judicial Safeguards:** Statutory provisions should clearly define "intentional disruption" to prevent arbitrary enforcement or harassment. Passive non-participation driven by genuine religious conscience should remain protected under the precedent set in *Bijoe Emmanuel (1986)*.
- **Emphasis on Civic Education:** True reverence for national symbols grows through public awareness, educational curricula, and historical appreciation, rather than fear of legal penalties.
- **Promoting Parliamentary Consensus:** Legislation touching upon national identity, faith, and citizen duties achieves greater legitimacy when backed by broad parliamentary deliberation rather than simple majority voice votes.
- **Proportionality in Enforcement:** Executive and law enforcement guidelines must ensure that penal powers are invoked strictly against deliberate acts of public desecration, maintaining proportionality between the offence and the legal response.

ESTD : 2024

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COMPREHENSIVE ANALYSIS:

CRIMINALIZING INSULT TO THE NATIONAL SONG, VANDE MATARAM

A UPSC CSE & APSC PREPARATION MODULE

KEY TERMS & EXPLANATIONS

NATIONAL ANTHEM VS **NATIONAL SONG**

Jana Gana Mana
Rabindranath Tagore
1950

Vande Mataram
Bankim Chandra Chattopadhyay
1875

FUNDAMENTAL DUTIES (Art 51A)

Fundamental duties sol commsirius a·in omssonment and onnorvement.

THE 1971 ACT

Prevention of Insults to National Honour Act and consens and inworirts.

HISTORICAL EVOLUTION TIMELINE

MULTIDIMENSIONAL ANALYSIS HUB

Collective Identity vs. Polarization

SOCIAL
Collective Identity vs. Polarization

POLITICAL
- Cultural Sovereignty
- Consensus

ECONOMIC
Stability and Rule of Law

LEGAL
- Bijoe Emmanuel Case
- Rights Art 19/25
- Duties Art 51A
- Voice Vote

INTERNATIONAL
- US vs.
- Germany/Russia comparative practices

ETHICAL
- Duty vs. Coercion
- Consuntari sovereignty vs Dutes Art 51A

MAIN ARGUMENTS & CONCERNS

FOR	CONCERNS
• Historic Honour	• Coerced Reverence?
• Deterrence	• Procedural Complexity
• Institutional Equality	• Abuse of Power
	• Enforcement Challenges

CONSTITUTIONAL & PHILOSOPHICAL BASE

PHILOSOPHY

LEGAL POSITIVISM
vs.
VOLUNTARY PATRIOTISM

WAY FORWARD

- ☑ Clear Judicial Safeguards
- ☑ Emphasis on Civic Education
- ☑ Achieving Parliamentary Consensus
- ☑ Proportionality in Enforcement

PYQ TEASER

Example APSC Prelims question is criminal for a matters for practiing questions.?

Practice More at...

UPSC LINKAGES

GS1, GS1
GS2, GS2
GS4, GS4
Essay

SC restricts 'retrospective' green clearances

- 2021 order envisages perpetual environmental clearance for projects without prior EC, it says
- SC says amnesty can be given, backed by proper notification, not through administrative orders
- Court also bars the use of administrative orders to grant *ex post facto* clearances in the future

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday quashed, with prospective effect, a 2021 Office Memorandum (OM) granting *ex post facto* environmental clearances to infrastructure projects, holding that the Union government cannot substantially alter protective environmental checks by issuing mere administrative instructions.

"The 2021 OM is an administrative order, and envisages a perpetual regime for grant of environmental clearance to projects undertaken without prior environmental clearance. It substantially alters the nature of enquiry and criteria for grant of environmental clearance under the 2006 notification. It supplants an earlier delegated legislation [2006 notification] through an administrative instruction, which is impermissible in law," the court noted in an 80-page judgment.

'No parallel route'

An 'amnesty' measure cannot become a permanent, parallel route which circumvents the prior environmental clearance (EC) regime under the 2006 notification of the Environment Ministry. A valid amnesty measure should be used as a rare exception, must be finite in duration and confined to its class, a Bench headed by Chief Justice of India Surya Kant observed.

The court said the prior EC regime of the 2006 notification, spanning across various sectors like highways, airports, real estate and township developments, and mining and resource extraction, was mandatory in nature.

The 2006 notification's mandate could have only been amended through a subsequent and appropriate amnesty notification for select, deserving projects whose continuation was of "supervening public interest", Justice Joymalya Bagchi, who authored the judgment, held.

> The 2021 Office Memorandum is an administrative order, and envisages a perpetual regime for grant of environmental clearance to projects undertaken without prior environmental clearance. It substantially alters the nature of enquiry and criteria for grant of environmental clearance under the 2006 notification
>
> SUPREME COURT JUDGMENT

The court barred the Centre from passing administrative orders to grant *ex post facto* clearances in the future. Justice Bagchi added that the present judgment would not, however, stand in the way of the top court granting *ex post facto* clearances in exercise of its plenary powers under Article 142 of the Constitution.

"The 2021 OM, as a perpetual amnesty scheme applicable to all permissive projects, failed to lay down an intelligible differentia for selection of projects for grant of *post facto* environmental clearance having rational nexus with supervening public interest, and is thereby *ultra vires* of the objectives of the Environmental Protection Act of 1986, namely preservation of the environment through a balanced approach through precautionary principle and sustainable development... The OM does not satisfy the threshold of reasonableness and proportionality and is violative of Articles 14 and 21," Justice Bagchi said.

The court held that an amnesty-regularisation scheme was not a right. A project proponent who had built in breach stood upon no footing of entitlement. The 2021 OM had indiscriminately allowed every permissible industry to be regularised for a meagre compensation. It had yielded to a principle of 'pollute and then pay', rather than to sustainable development.

The decriminalisation of the offence of breaching the prior clearance regime through the Jan Vishwas (Amendment of Provisions) Act of 2023 did not help matters either. Before the 2023 Act altered the offence into a civil liability, violators faced imprisonment of up to five years, or with fine of up to ₹1 lakh, or both.

"A lax implementation regime, coupled with a regularisation scheme unlimited in time and subject to capped environmental compensation at a flea-bite level, rendered the prior EC regime otiose both in fact and in law," Justice Bagchi wrote.

The court said there were cases in which the state, the preserver of the rule of law, has violated the law of the prior EC regime.

"Future amnesty schemes, if any, should provide effective deterrent measures against individual public servants, including disciplinary action and personal liability for environmental damage, wherever the state or its instrumentalities, as project proponents, violate the prior EC regime," the Bench ordered.

The top court quashed the 2021 OM prospectively to not upset ongoing projects, including the AIIMS Medical College and Hospital building in Odisha, the Centre of Excellence for Cancer Diseases in Tamil Nadu, Vijayapura Airport in Karnataka, medical colleges, slum rehabilitation and irrigation projects for drought-prone areas.

It said retrospective clearances given under 2017 notification, which provided a 'one-time amnesty' for undertakings started without prior clearance, and the 2021 OM would remain valid unless individually assailed in accordance with law. The 2021 OM was derived from the 2017 notification, and institutionalised *ex post facto* clearances.

The case has had a roller coaster ride with a Division Bench of the apex court declaring such retrospective clearances a gross illegality and an anathema to the environment in a May 2025 judgment. In November that year, a larger Bench had diluted the judgment, reasoning that doing away with the retrospective clearance regime would have a "devastating effect" on ongoing public projects worth "thousands of crores of Rupees".

- **Key Terms and Explanations**
- **Prior Environmental Clearance (EC)**
  - **Definition:** Mandatory regulatory approval required under the Environment (Protection) Act, 1986, and the Environmental Impact Assessment (EIA) Notification, 2006, before any developmental, industrial, or infrastructure construction begins.
  - **Concept:** It forces project proponents to assess potential damage to air, water, soil, and local biodiversity *before* committing capital, ensuring that mitigation measures are integrated from the design phase.
- **Ex Post Facto (Retrospective) Environmental Clearance**
  - **Definition:** The practice of granting environmental approval to an industrial or infrastructure project *after* it has already been constructed or commenced operations without prior authorization.
  - **Concept:** It converts an illegal act into a legal one retroactively. While proponents argue it prevents capital destruction, critics highlight that it guts the preventive logic of environmental law.
- **Office Memorandum (OM) vs. Delegated Legislation**
  - **Definition:** An Office Memorandum is an internal executive instruction issued by a government ministry to clarify administrative processes. Delegated legislation (such as rules or notifications framed under statutory acts) carries the full force of law and undergoes public notice and parliamentary oversight.
  - **Concept:** Executive instructions cannot override, alter, or supplant statutory rules framed under delegated legislative authority.
- **Doctrine of *Ultra Vires***
  - **Definition:** A Latin legal term meaning "beyond the powers." An action, order, or regulation is declared *ultra vires* if it exceeds the statutory or constitutional authority granted to the body making it.
  - **Concept:** When an executive body uses administrative shortcuts to alter statutory frameworks without parliamentary or statutory backing, courts declare such executive actions invalid and unconstitutional.
- **Precautionary Principle vs. "Pollute and Pay" Paradigm**
  - **Definition:** The **Precautionary Principle** mandates that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
  - **Concept:** Retrospective clearances invert this logic into a **"Pollute and Pay"** regime, where developers cause environmental degradation first and treat subsequent monetary fines as a routine business expense.
- **Prospective Quashing**
  - **Definition:** A judicial technique where a court declares an administrative order or law unconstitutional, but limits the effect of its decision to the future, saving past actions taken under the invalidated rule.
  - **Concept:** It balances legal purity with pragmatic socio-economic needs, avoiding the immediate demolition or stoppage of vital public assets (such as hospitals or airports) while strictly barring the executive from using the illegal mechanism in the future.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- Mandatory prior environmental assessment forms the structural bedrock of Indian ecological jurisprudence. Substituting this statutory process with a perpetual, open-ended administrative amnesty regime violates Article 14 (Equality before Law) and Article 21 (Right to a Clean Environment) of the Constitution. Executive instructions cannot bypass statutory notifications to create a parallel, post-hoc clearance mechanism.
- **The Invalidation of Administrative Backdoors**
  - **Executive Overreach vs. Statutory Mandates:** Executive instructions like Office Memoranda cannot supplant delegated legislation such as the 2006 EIA Notification. The criteria and inquiry process for environmental clearances are statutory; altering them requires formal statutory amendments under the Environment (Protection) Act, 1986, rather than internal departmental directives.
  - **Amnesty Must Be an Exception, Not a Routine:** Any regularisation mechanism must be strictly finite in duration, narrowly restricted to exceptional categories, and justified by compelling "supervening public interest." An open-ended, perpetual scheme transforms an exception into a permanent parallel regime, encouraging project proponents to bypass law deliberately.
- **Subversion of the Precautionary Principle**
  - **Dilution of Assessment Quality:** Ex post facto scrutiny is inherently compromised because damage assessment occurs *after* topographical, hydrological, and ecological changes have already taken place. True baseline ecological conditions cannot be reconstructed post-construction.
  - **Financialization of Ecological Harm:** Perpetual retrospective amnesties reduce environmental governance to a commercial transaction. Setting low monetary penalties allows developers to factor non-compliance costs into project estimates, eroding statutory deterrence.
- **The Impact of Decriminalization**
  - **Legislative Dilution:** Amendments that decriminalize environmental violations—shifting penalties from imprisonment to civil fines—weaken compliance incentives when paired with retrospective clearances.
  - **Loss of Deterrent Value:** When civil penalties are capped at minimal levels, large industrial proponents face little financial or personal risk for commencing operations without prior approval.
- **Judicial Balancing: Prospective Application**
  - **Protecting Public Utility:** Striking down an administrative amnesty policy retroactively could lead to the immediate closure or demolition of completed, critical public infrastructure (such as regional airports, medical facilities, or irrigation networks).
  - **The Article 142 Safety Net:** Courts can exercise extraordinary powers under Article 142 to save specific projects of high public utility while shutting the door on future administrative amnesties, preserving both public interest and environmental integrity.

- **Historical Evolution of the Issue**
- **1. Pre-1986 Era: Fragmented Environmental Frameworks**
  - **Piecemeal Legislation:** Environmental management relied on sector-specific acts such as the Water Act (1974) and Forest Conservation Act (1980), which lacked unified assessment mechanisms for major industrial projects.
  - **Absence of Prior Assessment:** Projects were launched based primarily on economic feasibility, with little systematic evaluation of ecological externalities or community impacts.
- **2. Post-Bhopal Era & Framework Enactment (1986–2006)**
  - **Environment (Protection) Act, 1986:** Passed following the Bhopal Gas Leak, acting as umbrella legislation empowering the Central Government to protect and improve environmental quality.
  - **EIA Notification 1994 & 2006:** The 2006 Notification decentralized environmental governance into Category A (Central) and Category B (State) projects, making **Prior Environmental Clearance (EC)** a non-negotiable statutory requirement for listed sectors (mining, highways, real estate, energy).
- **3. The Emergence of Ex Post Facto Clearances (2002–2017)**
  - **2002 Circular:** The executive issued circulars allowing unauthorized projects to seek regularisation, which was subsequently challenged in courts.
  - **2017 One-Time Amnesty Notification:** MoEFCC introduced a notification granting a strict, six-month window for units operating without EC to apply for regularisation, subject to damage assessment and remediation plans.
  - **Judicial Pushback (*Alembic Pharmaceuticals*, 2020):** The Supreme Court held that retrospective environmental clearances were alien to environmental jurisprudence and undermined the Precautionary Principle.
- **4. Institutionalization via Administrative Orders (2021–2023)**
  - **2021 Office Memorandum:** The Ministry issued a continuous, open-ended procedural framework via an administrative OM, creating a permanent pathway for ex post facto clearances.
  - **Jan Vishwas Act, 2023:** Decriminalized several environmental offenses under the EPA 1986, replacing prison terms with monetary penalties and reducing personal liability for non-compliant project developers.
- **5. Current Judicial Settlement**
  - **Definitive Legal Stance:** The judiciary ruled that open-ended administrative amnesties violate statutory provisions and fundamental rights, prohibiting executive backdoors while saving ongoing public utility projects via prospective quashing.

AXIA IAS ACADEMY

SUPREME COURT RESTRICTS 'RETROSPECTIVE' GREEN CLEARANCES: A COMPRHENSIVE ANALYSIS

Administrative Instructions (OM) No Parallel Route

- Prior Clearance (EC) → Approval → CONSTITUTIONAL ROUTE PRIOR CLEARANCE (EC)
- Regularisation (Ex Post Facto) → Regularisation → SC DECISION → FUTURE AMNESTY VIA SPECIFIC NOTIFICATION ONLY

Only Formal Notifications Can Grant Strict Amnesty

LEGAL & PROCEDURAL

- **QUASHED 2021 OM PROSPECTIVELY**
- Restricts Administrative OMs to grant *ex post facto* clearances
- Amnesty is rare exception, finite in duration, via formal *Notification* only
- *Ultra Vires* of the Environment Protection Act, 1986

ETHICAL & SUSTAINABLE

- **REJECTED 'POLLUTE & PAY'** paradigm
- Reinforces **PRECAUTIONARY PRINCIPLE & SUSTAINABLE DEVELOPMENT**
- Mandates **PUNITIVE ACTIONS AGAINST PUBLIC SERVANTS** and **PERSONAL LIABILITY** for future violations

ECONOMIC IMPACT

- **QUASHING WAS PROSPECTIVE** to protect thousands of crores in public projects (Hospitals, Airports, Irrigation)
- Addresses **JAN VISHWAS ACT 2023:** Waiver of Criminal Liability, Civil Penalties only

SOCIAL RELEVANCE

- Projects are for **"SUPERVENING PUBLIC INTEREST"**
- Examples protected: AIIMS Medical College, Regional Airports, Drought-Prone Area Irrigation

NCERT & SYLLABUS LINKAGES

- **GS PAPER II:** Executive Discretion vs Statutory Powers
- **GS PAPER III:** Environmental Impact Assessment (EIA)
- **NCERT Linkages:** (Political Science, Geography, Economics chapters)
- **ESSAY:** Growth vs. Environment

WAY FORWARD

- Strict Notification-Based Amnesty Schemes
- Clear criteria for Public Interest projects
- Enhanced personal liability for damage
- Maintain rule of law and prevent moral hazard

U.S. fast-tracks Act to impose up to 100% tariff on nations importing Russian crude oil

T.C.A. Sharad Raghavan
NEW DELHI

The U.S. Senate has voted to fast-track the passage of a legislation which could see a tariff of 100% being imposed on India for its imports of Russian oil. The Senate on Tuesday exhibited a rare display of bipartisan agreement by voting 86-12 to invoke a cloture motion to advance the 'Lindsey O. Graham Sanctioning Russia and Iran Act of 2026'.

The original version of the Act, introduced in 2025, proposed a blanket 500% tariff on those countries importing Russian oil. However, the figure was revised downwards early this month.

'To deprive Putin'

As per Senate documents, the bipartisan Act "is designed to deprive [Russian President] Vladimir Putin of the revenue financing Russia's war against Ukraine" by limiting Moscow's political leadership, financial institutions, energy sector, and sanctions-evasion networks.

The sanctions are to be implemented using "targeted tariffs to pressure the world's largest purchasers of Russian energy to reduce their dependence on Moscow".

A cloture is basically a Senate procedure that sets a time limit for the debate and related actions on an issue before it is put to a vote. That is, it is a procedure meant to hasten the vote on a particular issue.

Under the latest version of the Act, a tariff of "up to 100%" would be levied on the top five purchasers of Russian crude oil and natural gas. Currently, China accounts for about 47%-50% of Russian crude oil exports, while India accounts for another 36%-38%.

As per the latest Indian government data, Russian oil made up a little more than 40% of Indian oil imports in May 2026, and the Ministry of Petroleum and Natural Gas has told *The Hindu* that this rose to "more than half" in June.

"The stakes for India are substantial," Ajay Srivastava, founder of the think tank Global Trade Research Initiative said. "Access to discounted Russian crude has significantly lowered India's import bill, supported energy security, and helped contain inflation."

"Washington is steadily expanding its use of trade and economic measures to pursue strategic objectives," he added. "Reciprocal tariffs, Section 301 investigations, forced labour measures, sector-specific duties, and now Russia-related sanctions reflect an increasingly broad toolkit of economic pressure."

Carve-out

The new version of the Act also creates a carve-out by exempting countries that are currently importing less than 15% of Russia's natural gas exports and are taking significant steps to reduce those imports.

This carve-out would benefit several European countries that currently import natural gas from Russia through pipelines or in liquefied form.

Meanwhile, Union Commerce and Industry Minister Piyush Goyal on Wednesday said the first tranche of the bilateral trade agreement between India and the U.S. will come into operation as soon as the U.S. is able to ensure that India gets a comparative advantage over its competitors.

- **Key Terms and Explanations**
- **Secondary Sanctions**
- Secondary sanctions are economic penalties imposed by one nation on individuals, corporations, or third-party countries that do business with a targeted regime. Unlike primary sanctions, which restrict direct trade between two nations, secondary sanctions project extraterritorial jurisdiction.
- **Cloture Motion**
- A procedural mechanism utilized in parliamentary bodies, notably the U.S. Senate, to set a time limit on debate and bring a specific bill or motion to a direct vote. It is primarily employed to overcome filibusters and fast-track legislation through the legislative pipeline.
- **Target and Reciprocal Tariffs**
  - **Targeted Tariffs:** Specific import duties levied selectively on defined countries, industries, or commodities to force political or strategic compliance rather than to generate state revenue.
  - **Reciprocal Tariffs:** Custom duties imposed on a trading partner in direct response to tariffs imposed by that partner on domestic goods, aiming to enforce trade balance or penalize non-compliance.
- **Carve-Out Provisions**
- Legislative exemptions built into sanction regimes that explicitly exclude specific nations, sectors, or transactional thresholds from punitive actions under predetermined conditions.
- **Strategic Autonomy and Geoeconomics**
  - **Strategic Autonomy:** The capacity of a sovereign nation to pursue its independent foreign policy and economic goals based on national interest, without being coerced by external powers or military blocs.
  - **Geoeconomics:** The application of economic instruments—such as tariffs, trade agreements, financial sanctions, and supply chain controls—to achieve national geopolitical and strategic objectives.
- **Main Arguments and Substantive Parts**
- **Core Thesis**
- The aggressive deployment of unilateral economic measures and secondary sanctions by Western powers to achieve geopolitical goals challenges the strategic autonomy, energy security, and macroeconomic stability of developing nations like India. Managing domestic inflation and ensuring affordable energy requires navigating these external pressures while advocating for equitable global trade standards.
- **Core Arguments and Structural Realities**
- **Geoeconomic Weaponization of Trade Access:** Western nations increasingly use market access as leverage, employing legislative tools to constrain energy revenues of rival powers. By threatening punitive tariffs (ranging up to 100%) on third-party buyers, major financial powers seek to force global compliance with their strategic priorities.
- **Macroeconomic Stabilizer for Developing Nations:** For major energy-importing economies like India, access to discounted crude oil serves as an essential economic buffer. Sourcing cheap energy significantly lowers the national import bill, stabilizes the Current Account Deficit (CAD), protects foreign exchange reserves, and contains domestic retail inflation.
- **Selective Morality and Structural Double Standards:** Sanction frameworks often incorporate tailored carve-outs that accommodate the structural dependencies of developed nations (such as European pipeline gas reliance), while penalizing Global South nations that import energy to satisfy basic developmental demands.
- **Risks of Unilateralism over Multilateral Norms:** The shift away from UN-backed multilateral frameworks toward unilateral economic sanctions undermines World Trade Organization (WTO) principles. This trend destabilizes predictable global supply chains and pushes emerging markets toward alternative financial architecture.

- **Historical Evolution of the Issue**
- **Cold War Era & Non-Aligned Energy Realignment (Pre-1990s)**
- During the Cold War, India pursued an independent foreign policy anchored in the Non-Aligned Movement (NAM). Strategic energy relationships were forged through bilateral mechanisms, such as the Rupee-Rouble trade framework with the Soviet Union. This insulate domestic development from Western bloc sanctions and established a precedent for prioritizing domestic socio-economic needs over global power rivalries.
- **Economic Liberalization & Unipolar Integration (1991–2010s)**
- Following the 1991 LPG reforms, India expanded its global economic footprint, growing increasingly reliant on sea-borne crude imports primarily from West Asia (Iraq, Saudi Arabia, UAE). Simultaneously, the United States expanded its usage of extraterritorial economic measures, such as the Iran-Libya Sanctions Act of 1996, signaling a shift toward using Western global financial dominance to influence third-nation trade choices.
- **The CAATSA Benchmark & Iranian Energy Pivot (2017–2021)**
- The passage of the Countering America's Adversaries Through Sanctions Act (CAATSA) in 2017 codified the expansion of U.S. secondary sanctions against Russia, Iran, and North Korea. India faced severe diplomatic and commercial friction, ultimately having to zero-out its crude imports from Iran under threat of Western financial isolation. This highlighted the vulnerabilities of relying on conventional dollar-denominated trade systems.
- **Post-2022 Conflict & Rise of Multipolar Energy Realignment**
- The outbreak of the Russia-Ukraine conflict in 2022 and subsequent Western price caps reshaped global oil flows. India dramatically increased its imports of discounted Russian crude from less than $1\%$of its total energy basket prior to 2022 to over $40\% - 50\%$by mid-2026. This period marks a major shift toward strategic pragmatism, with India defying external pressure to safeguard its domestic economic stability.

- Way Forward
- **Comprehensive Energy Diversification and Strategic Reserves**
- **Accelerating Renewable Energy Transition:** Expand domestic solar, wind, and green hydrogen capacity to reduce long-term reliance on imported fossil fuels.
- **Expanding Strategic Petroleum Reserves (SPRs):** Increase India's SPR capacity to build a stronger buffer against short-term global supply shocks and external trade restrictions.
- **Building Alternative Financial and Trade Architecture**
- **Institutionalizing Local Currency Settlements:** Expand non-dollar clearing mechanisms, bilateral currency swaps, and local currency trade frameworks across major trading partners.
- **Integrating Interoperable Payment Systems:** Connect domestic financial messaging networks with international counterparts to insulate trade settlements from unilateral financial sanctions.

AXIA IAS ACADEMY

U.S. SANCTIONS ON RUSSIAN CRUDE & INDIA'S STRATEGIC AUTONOMY: A COMPREHENSIVE ANALYSIS

HISTORICAL EVOLUTION: INDIA'S ENERGY POLICY

- **Pre-1990s:** Non-Aligned & Rupee-Rouble
- **1991:** LPG Reforms & US Pivot
- **2017:** LPG Reforms & Iran Sanctions
- **2017:** CAATSA & Iran Sanctions
- **2022-Present:** Russian Oil Surge & Strategic Pragmatism

KEY TERMS

- Secondary Sanctions
- Cloture Motion
- Target & Reciprocal Tariffs
- Carve-Out Provisions
- Strategic Autonomy
- Geoeconomics

MAIN ARGUMENTS & STRUCTURAL REALITIES

- **Geoeconomic weaponization** in geoconomic weapon's overnleeconomic and ontafuture invonncorution to the globiial sanctions.
- **Discounted crude as a stabilizer** is discounted by lono-economic corotion to economic onmerms in tuiiite crude.
- **Double standards** in otient and imitorty and provide comprend polinier economics.

MULTIDIMENSIONAL ANALYSIS

WAY FORWARD: PRAGMATIC SOLUTIONS & POLICY RECOMMENDATIONS

- Comprehensive Energy Diversification
- Local Currency Trade Architecture
- High-Level Diplomatic Engagement
- Local Currency Trade Architecture
- High-Level Diplomatic Engagement
- Multilateral Institutional Reforms

BS-III vehicles may require some modifications to use E20 fuel: govt.

Jagriti Chandra
NEW DELHI

Some rubber parts and gaskets in BS-III vehicles may require replacement when using E20 fuel, a blend of 20% ethanol and 80% petrol, the Union government informed Parliament on Tuesday.

"In case of testing done on BS-III vehicles introduced from 1st April, 2005 and manufactured prior to 2016, some rubber parts and gaskets may require replacement, which can be easily managed during routine servicing regime of the vehicle," Union Minister of Road Transport and Highways Nitin Gadkari said in the Rajya Sabha, citing the findings of a study.

> In case of testing done on BS-III vehicles introduced from 1st April, 2005 and manufactured prior to 2016, some rubber parts and gaskets may require replacement, which can be easily managed during routine servicing regime of the vehicle
>
> **NITIN GADKARI**
> Union Minister of Road Transport and Highways

He was responding to a question from the Communist Party of India MP A.A. Rahim on the impact of E20 on vehicle performance, fuel efficiency, engine durability, and maintenance costs.

The Centre had commissioned the study, which is yet to be made public. It was carried out by the Indian Oil Corporation Limited, the Indian Institute of Petroleum in Dehradun, the Society of Indian Automobile Manufacturers, and the Automotive Research Association of India.

Other than BS-III vehicles, the study showed there was no need to modify car and two-wheeler engines, the Minister said.

There have been complaints of vehicles misfiring or breaking down, with some blaming E20 fuel or contaminated E20 fuel.

Fuel efficiency is influenced by "a host of factors beyond just fuel type" such as driving and maintenance practices, and AC load, Mr. Gadkari said.

- **Key Terms and Explanations**
- **Ethanol Blends (E10, E20)**
  - **Definition:** Ethanol-Blended Petrol (EBP) refers to mixing anhydrous ethyl alcohol (ethanol) with standard motor spirit (petrol) at specified volume ratios. E20 fuel consists of 20% ethanol and 80% petrol by volume.
  - **Chemical Profile:** Ethanol (C_2H_5OH) is a renewable biofuel produced predominantly via the fermentation of plant sugars (sugarcane molasses, maize, damaged food grains).
  - **Practical Context:** Adding ethanol boosts the octane rating of petrol, enhancing combustion efficiency. However, ethanol contains roughly 33% less energy per unit volume than pure petrol, which causes a slight drop in volumetric fuel economy.
- **Bharat Stage (BS) Emission Norms (BS-III vs. BS-IV / BS-VI)**
  - **Definition:** Regulatory standards instituted by the Indian government to control atmospheric pollutant outputs from internal combustion engines.
  - **Technical Shift:** BS-III norms were rolled out nationally between 2005 and 2010. Vehicles manufactured under BS-III utilized fuel system materials—such as natural rubber fuel lines, nitrile gaskets, and specific metallic alloys—tailored strictly for standard unblended or low-ethanol petrol.
  - **Relevance:** Post-2016 vehicles (late BS-IV and all BS-VI) were engineered with updated synthetic elastomers (like fluorocarbon rubber or FKM) designed to withstand high ethanol blends.
- **Hygroscopic Nature & Phase Separation**
  - **Definition:** The propensity of a chemical substance to absorb moisture directly from the surrounding atmosphere.
  - **Impact on Engines:** Ethanol is highly hygroscopic. If fuel storage tanks or vehicle tanks absorb excess moisture, the water-ethanol mix can separate from the petrol (phase separation). This water-ethanol phase drops to the bottom of the tank, causing engine misfires, rough idling, or hard starting.
- **Elastomer Degradation and Material Compatibility**
  - **Definition:** The chemical breakdown, swelling, cracking, or hardening of flexible rubber and plastic components when exposed to organic solvents over extended periods.
  - **Practical Example:** Ethanol acts as a mild solvent. In older BS-III vehicles, prolonged exposure to E20 can dissolve or degrade non-compatible nitrile rubber gaskets, fuel hoses, and seal rings, eventually causing fuel leaks or clogged injectors.
- **Autonomous Testing & Standards Bodies (ARAI, IIP, OMCs)**
  - **Automotive Research Association of India (ARAI):** The premier R&D and certification institute under the Ministry of Heavy Industries that evaluates vehicle component safety and compatibility.
  - **Indian Institute of Petroleum (IIP):** A constituent laboratory of CSIR specializing in downstream petroleum processing, alternative fuels, and combustion research.
  - **Oil Marketing Companies (OMCs):** Public sector enterprises (IOCL, BPCL, HPCL) responsible for fuel procurement, blending, storage, and nationwide retail distribution.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- The accelerated transition to E20 fuel represents a transformative step toward national energy security, import reduction, and carbon mitigation. However, rolling out higher ethanol blends across a legacy vehicle fleet creates technical friction that requires targeted maintenance, updated material compatibility standards, and clear public communication.
- **Substantive Points and Evidence**
  - **Legacy Fleet Vulnerability vs. Modern Vehicle Readiness:** Vehicles produced prior to 2016 (primarily BS-III standards) utilize fuel system components susceptible to long-term chemical wear from 20% ethanol. Conversely, post-2016 cars and two-wheelers are structurally compatible and require no major engine modifications.
  - **Distinguishing Mechanical Wear from Fuel Quality:** Performance complaints, such as engine misfiring or sudden breakdowns, stem from a combination of factors:
    - Lack of routine replacement of rubber gaskets and seals in older vehicles.
    - Water contamination within storage tanks leading to phase separation.
    - Operational variables like poor maintenance, extreme driving conditions, and heavy air conditioning loads.
  - **Manageability Through Servicing Regimes:** Material degradation in legacy vehicles does not require engine overhauls or vehicle scrapping. Routine replacement of low-cost rubber hoses and gaskets during scheduled maintenance is sufficient to prevent operational failures.
  - **The Energy Density Trade-off:** Ethanol's lower calorific value reduces overall energy density by 3–6% in an E20 blend compared to unblended petrol. While modern engine control units (ECUs) compensate for this by adjusting fuel injection, driver perception of reduced mileage often fuels public skepticism.
- **Historical Evolution of the Issue**
- **Pre-Independence & Post-War Context:** Ethanol blending in India traces back to the Indian Sugar Industry Development initiatives and wartime fuel shortages in the 1940s, where power alcohol was mixed with petrol on a limited scale to conserve foreign oil reserves.
- **The Early Pilot Phase (2003):** The Ministry of Petroleum and Natural Gas formally launched the Ethanol Blended Petrol (EBP) Programme in 2003, mandating 5% ethanol blending (E5) across 9 States and 4 Union Territories. Progress was hindered by erratic molasses supply, state-level inter-state transport duties, and pricing disputes between sugar mills and OMCs.
- **National Policy on Biofuels (2009):** The government established a national target of 20% blending of biofuels by 2017. However, technological limitations, inadequate distillery capacity, and restrictive feedstock policies delayed meaningful progress, leaving blending rates below 2% for over a decade.
- **Re-energized Biofuel Policy (2018):** The policy expanded the scope of feedstocks beyond heavy molasses to include sugarcane juice, B-heavy molasses, damaged food grains (broken rice, maize), and surplus food stock from the Food Corporation of India (FCI).
- **Accelerated Roadmap (2021):** In 2021, the NITI Aayog along with the Ministry of Petroleum and Natural Gas released the *Roadmap for Ethanol Blends in India 2020-25*, advancing the 20% target from 2030 to 2025–26.
- **Present Implementation Phase:** E20 retail availability has expanded rapidly across public oil outlets nationwide. The transition has brought legacy fleet compatibility, consumer awareness, and fuel quality management into sharp focus.

INDIA'S E20 FUEL TRANSITION: A MULTI-DIMENSIONAL ANALYSIS

E20 FUEL TRANSITION

MACRO-BENEFITS

- IMPORT REDUCTION → Saveas Savings
- LOWER CARBON EMISSIONS → Clean Skies
- AGRICULTURAL INCOME BOOST → Happy Farmers

MICRO-CHALLENGES

- LEGACY FLEET DEGRADATION → Degradded Parts
- WATER ABSORPTION (PHASE SEPARATION) → Leaky Hoses
- SLIGHT DROP IN VOLUMETRIC EFFICIENCY → Lower Mileage per Unit Fuel

1 WHAT IS E20?

20% ethanol vs 80% petrol

C_2H_5OH

High octane vs. Low energy density

2 VEHICLE COMPATIBILITY

BS-III VEHICLES (PRE-2016)

- Nitrile/Natural Rubber materials degrade
- Gaskets leak are leak

BS-IV & BS-VI VEHICLES (POST-2016)

- Synthetic Elastomers like FKM/Viton are compatible
- Use use synthetic rubber

4 MULTI-DIMENSIONAL ANALYSIS

SOCIAL
- Farmer Welfare
- Awareness

LEGAL
- Consumer Rights
- CMVR Rules

POLITICAL
- Energy Sovereignty
- Federal Coordination

ETHICAL
- Food vs. Fuel

INTERNATIC
- GBA leadership

ECONOMIC
- Macro Benefits
- Auto Sector

6 UPSC & NCERT LINKAGES

RELEVANT SUBJECTS

SUBJECTS
- Agriculture
- Chemistry
- Economics
- Biology

PAPER
GS1-GS4
GS1-GS4, Optional

PREVIOUS YEARS' QUESTION TOPICS: National Biofuel Policy, SDGs, Circular Economy, EBP NE India

3 HISTORICAL EVOLUTION

- 1940s: 1940s Experiments
- 2003: E5 E5 Pilot
- 2009: 2009 National Policy
- 2018: 2018 Revised Policy
- 2021: 2021 Accelerated Roadmap
- Present: Present Rollout

5 PHILOSOPHICAL BASE

Utilitarian Balance ↔ Precautionary Transition ↔ Ecological Modernization

7 WAY FORWARD

TECHNICAL FIXES
- Rubber Kits
- Servicing Checklists

REGULATORY CARE
- Water Control
- Water Control
- Standards

LONG-TERM STRATEGY
- 2G Biofuels
- Open Technical Communication

India getting ready for Xi, Putin visits in September

Both leaders expected to attend BRICS summit in Delhi on Sept. 12, 13; Foreign Secretary holds wide-ranging talks in Beijing as Chinese officials arrive in Delhi to oversee security preparations

Ananth Krishnan
Kallol Bhattacherjee
NEW DELHI

India is getting ready for visits by Chinese President Xi Jinping and Russian President Vladimir Putin, with both leaders planning to attend the BRICS summit to be held in Delhi on September 12 and 13, sources here said on Wednesday. Consultations are continuing with regard to these upcoming high-level visits.

On Monday and Tuesday, Foreign Secretary Vikram Misri held a series of talks in Beijing, during which both sides discussed "strengthening high-level interactions". In recent weeks, Chinese officials have also visited India to oversee the arrangements and security preparations for a possible high-level visit.

During Mr. Misri's talks in Beijing with a senior Communist Party of China official Sun Haiyan, who is Vice Minister in the party's International Department, both sides "expressed commitment to working together to follow through on the common understandings reached by the leaders, strengthen high-level interactions, properly manage differences, and make sustained efforts to foster the improvement and development of bilateral relations," according to a readout from the Chinese side.

High-level meet: Narendra Modi, Vladimir Putin and Xi Jinping at the BRICS Summit in Kazan, Russia, in October 2024. REUTERS

The Ministry of External Affairs said both sides had "discussed ways to deepen implementation of the guidance of the leaders for bilateral relations, including addressing issues of priority to both sides and by promoting political, people-to-people, academic and think-tank exchanges."

Other preparations for a possible visit by Mr. Xi are also under way.

Mr. Xi did not attend the BRICS summit in Brazil last year, again deputing Mr. Li to represent China in his stead. He did, however, attend the summits in 2023 in South Africa and in 2024 in Russia, where his talks with Mr. Modi paved the way for the subsequent gradual normalisation in relations.

India intensifies contact

Mr. Putin's attendance at the summit was earlier indicated by the Russian side when Russian Foreign Minister Sergey Lavrov visited New Delhi for the BRICS Foreign Ministers meeting in May and discussed "highest level" contacts with External Affairs Minister S. Jaishankar.

India has intensified contact with BRICS member countries both bilaterally and under the multilateral BRICS umbrella.

Official sources here indicated that they expect top leaders of the member countries to attend the summit meeting, though the final details of the visits will be known closer to the date of the summit.

Russia has extended support to India's chairmanship of BRICS and China reiterated its support earlier this week during Mr. Misri's visit.

- **Key Terms and Explanations**
  - **Multipolarity**: A system of international relations where power is distributed among three or more major sovereign states rather than dominated by one (unipolar) or two (bipolar) superpowers.
  - **Strategic Autonomy**: A national foreign policy strategy where a state maintains independence in its external decision-making without becoming bound to formal military alliances or dictated to by foreign powers.
  - **BRICS and BRICS+**: A premier multilateral grouping comprising major emerging national economies—originally Brazil, Russia, India, China, and South Africa—expanded to include additional developing economies to give voice to the Global South.
  - **De-escalation and Normalization**: A formal, phased diplomatic and military process aimed at reducing tensions along disputed borders and restoring regular political, economic, and institutional exchanges between nations.
  - **Global South**: A collective geopolitical term referring to developing, emerging, and low-income nations located predominantly in Asia, Africa, and Latin America that share historical experiences of colonialism and seek reform in global governance.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
- Multilateral summits serve as essential neutral arenas that allow adversarial and partner states to lower diplomatic friction, negotiate complex border and security issues, and advance a multipolar world order while preserving strategic autonomy.
- **Key Substantive Points**
  - **Multilateral Forums as Diplomatic Icebreakers**: High-level international summits force states with bilateral frictions into direct communication. Personal interactions between heads of state often help bypass bureaucratic impasses and establish top-level guidance for dispute resolution.
  - **Institutional De-confliction Mechanisms**: Bilateral progress alongside multilateral meetings relies heavily on sustained diplomatic groundwork. Interactions at the Foreign Secretary and diplomatic levels enable nations to manage operational differences before high-level summits take place.
  - **Preserving Non-Western Engagement**: Engagement within forums like BRICS prevents emerging powers from being isolated by Western-led coalition strategies. It allows countries like India to assert their status as global balancers rather than choosing rigid geopolitical camps.
  - **Counter-Arguments and Inherent Dilemmas**:
    - *Risk of Misalignment*: Over-engaging with non-Western blocs may create friction with Western allies who view such forums as anti-Western platforms.
    - *Asymmetry of Power*: Deep structural and economic imbalances among member states can allow the largest economy in the group to dominate the grouping's agenda, potentially overshadowing the priorities of smaller partners.

- **Historical Evolution of the Issue**
- The evolution of India's engagement with Eurasian powers and multilateral platforms can be traced across five distinct historical phases.
- **1. The Post-Independence Era (1947–1962)**
  - **Non-Alignment and Panchsheel**: India adopted Non-Alignment as a core foreign policy doctrine under Jawaharlal Nehru, advocating for peaceful coexistence (*Panchsheel*). Early diplomatic outreach focused on Afro-Asian solidarity (Bandung Conference 1955).
  - **The 1962 Sino-Indian War**: The border conflict shattered early romanticized notions of Asian solidarity, leading to a long period of frozen diplomatic relations and strategic distrust between New Delhi and Beijing.
- **2. Cold War Realignment (1971–1990)**
  - **Indo-Soviet Strategic Alignment**: Driven by security challenges in South Asia, India signed the 1971 Treaty of Peace, Friendship, and Cooperation with the USSR, establishing a durable security partnership.
  - **Incremental Thaw with China**: Diplomatic relations were upgraded in 1976, followed by Prime Minister Rajiv Gandhi's historic 1988 visit to Beijing, which decoupled the border dispute from broader economic and diplomatic engagement.
- **3. Post-Cold War & Emergence of Multipolarity (1991–2008)**
  - **The Primakov Vision and RIC**: Following the collapse of the Soviet Union, Russian Foreign Minister Yevgeny Primakov proposed the Russia-India-China (RIC) trilateral format to balance unipolar American hegemony.
  - **Birth of BRIC**: In 2006, the foreign ministers of Brazil, Russia, India, and China met at the UN, leading to the formalization of BRIC summitry in 2009 (expanding to BRICS with South Africa in 2010).
- **4. Border Tensions and Geopolitical Strain (2017–2023)**
  - **Doklam Standoff (2017) and Galwan Clash (2020)**: Border confrontations disrupted the consensus on separating economic ties from boundary issues. Relations dropped to historic lows, leading India to strictly regulate border trade, foreign investments, and military deployments.
- **5. Multilateral Reset and Consolidation (2024–Present)**
  - **Gradual Normalization**: High-level bilateral discussions on the sidelines of multilateral events (such as the Kazan BRICS Summit in 2024) signaled a return to diplomatic engagement and military disengagement protocols along disputed frontier zones.

AXIA IAS ACADEMY
RISE ABOVE THE REST

COMPREHENSIVE STUDY GUIDE: MULTILATERAL DIPLOMACY & INDIA'S STRATEGIC AUTONOMY

KEY TERMS & CONCEPTS

Multipolarity
Many power many power nodes
Key examples: many power: ounaicans of globaimboitarity

Strategic Autonomy
reins Hand holding decision-making reins
Key examples: nerny meoracinr seins within communialities

BRICS/BRICS+
BRICS -/ original members's expanded members BRIC
Key examples: BRICS, aones, nations, Forurr, rumbers RICS

De-escalation
Military military to pulling back.
Key example: almcasses cununiciaties in developing ecanomicties

Global South
Developing nations
Key examples: developing communabies in lunons millkars and metecs

INDIA'S STRATEGIC BALANCE IN MULTIPOLAR DIPLOMACY

- BRICS/RIC
- GLOBAL SOUTH
- WESTERN BLOC (QUAD/I2U2)

- Forums as diplomatic icebreakers
- Institutional de-confliction contracions
- Institutional de-confliction and orest outcome
- Inherent dilemmas or balancinn-IR

Preserving Strategic Autonomy & Regional Security

HISTORICAL EVOLUTION (5 PHASES)

- **1947** — Phase 1: Non-Alignment & Panchsheel (Bandung, - Nehru)
- **Phase 2** — Phase 2: Cold War Realignment - Indo-Soviet Treaty, - Rajiv Gandhi visit, Nenhadil
- **Phase 3** — Phase 3: Post-Cold War & Emergence (RIC, BRIC)
- **Phase 4** — Phase 4: Geopolitical Strain - Doklam, Galwan, - Doklam, Galwan
- **Present** — Phase 5: Reset & Consolidation - Kazan Summit)

PHILOSOPHICAL & LOGICAL FOUNDATIONS

INDIAN PHILOSOPHICAL BASE	INTERNATIONAL RELATIONS LOGIC
Vasudhaiva Kutumbakam	Realpolitik
Panchsheel	Strategic Hedging
Samvad	Institutional Liberalism

MULTIDIMENSIONAL ANALYSIS MATRIX

Dimension	Analytical Perspectives	Key Strategic Implications
Social	• Diverse nutianicoripisles, societs com monilities	• Disengagement protocols to disengement protocols
Political	• Diversifying supply chains, governeor economo	• Diversify supply chains to deversate supply chains
Legal	• Greatest social, institution, bordeon-managenents	• Expansis copasets in soconss and implications
Ethical	• Diverse hands, diverses and ethical divesse	• Expansion ai interninnains, and otherioonoonsits
Economic	• Universal flags and ari economic tatris	• Universal flaggs in surategic implicaitions

NCERT CURRICULAR LINKAGES

- **CLASS 12 POLITICS IN INDIA SINCE INDEPENDENCE** — Chapter Relevance: India Issana Since Independence
- **CLASS 12 CONTEMPORARY WORLD POLITICS** — Chapter "Contemporary World Buimant Politics
- **CLASS 11 POLITICAL THEORY** — Chapter Relevance: immunnement of intiervewaness ii political Theory

UPSC CSE SYLLABUS INTEGRATION

MULTILATERAL DIPLOMACY

- Necrito: multilateral multiitereod policy — GS 2
- Regintins socialsmwer and lasl in multitacreod policy — GS 2
- Contopotated economic in managenpolicy — Essay
- GS 2 — Groupings, Neighborhood policy Neighborhood policy
- GS 3 — Econ Institutions, Econ institutions Border management
- GS 4 — Ethics in IR Key themes
- PSIR Optional — Indian Pol. Thought Foreign Policy

WAY FORWARD STRATEGY: ACTIONABLE ACTION

MILITARY & DIPLOMATIC
- Disengagement protocols and onoreagements
- Beeing nerous multilatereal planchers

ECONOMIC RESILIENCE
- Diversify supply chains
- Beidge surusity global inestement options

MULTILATERAL & DIPLOMATIC
- NDB expansion, indbromer of niodoins and motroershanding expansion
- Bridge global divides (Vishwamitra)

PREVIOUS YEARS' QUESTIONS (PRACTICE FOCUS)

- **APSC** — APSC prelim before question to ojosion test question of haodino?
- **UPSC Prelims** — What is the geetup relims connon-question?
- **BRICS 2023 Mains** — What is an arrother questions question of an Question?
- **NDB set-up Prelims** — NDB set-up Prelims, mort Question?

‘Virtual magnet’ claims reveal why EVs need their rare-earths

A large amount of effort has gone towards replacing permanent magnets in the rotor with either electromagnets or just a piece of iron; however, efficiency, starting torque capability, and the maximum speed achievable are some important constraints that have kept such motors out of EVs

G. Bhuvaneswari

There have been a number of news reports recently about a startup in Bengaluru called Virnag Labs that has replaced rare-earth magnets in motors with so-called “virtual” magnets.

One such report quoted Manish Sethi, the start-up’s CEO, as saying: “We remove permanent magnets, replace them with copper coils, and then through software, we generate magnetic fields inside the motor.”

To understand this claim, it helps to first see how electric motors produce magnetic fields and why they use permanent magnets in the first place.

Rotor and stator

A motor needs a magnetic field to operate. One way to create it is using a permanent magnet. Another is to pass current through copper coils that have been wound around a ferromagnet, temporarily turning it into a magnet. This is called an electromagnet — and it is this approach that the startup has used, instead of permanent magnets.

When an electrical machine converts electricity into mechanical motion, it is called a motor. On the other hand, a machine that converts mechanical movement into electricity is called a generator. In both cases, the conversion happens via a magnetic field.

In a motor, for example, mechanical energy is harvested when the electric energy is used to rotate a component called the rotor. In a generator, electricity is harvested through conductors embedded in a stationary component called the stator.

You can imagine both the stator and the rotor to be two concentric cylinders. Most of the time, the rotor is the inner cylinder. And the magnetic field is established in the gap between the stator and the rotor for the energy conversion process to happen.

An old technology

This is how the large generators in hydroelectric, thermal, and nuclear power plants work. And for a long time now, they have used electromagnets instead of permanent magnets.

In these generators, a turbine spins the rotor. In a thermal or nuclear power station, the turbine is driven by steam. In a hydroelectric power station, it is driven by falling water. The rotor rotates at a fixed speed to generate an alternating current (AC) of frequency 50 Hz. The rotor has copper coils wound around its ferromagnetic core. When these coils are supplied with a direct current (DC), they create a magnetic field, and the core acquires a magnetic north and a magnetic south pole. And as the rotor spins, this magnetic field sweeps past the stator windings, inducing an alternating voltage in them. This helps convert mechanical power into electricity. This technology has been around for 125 years.

The next question is how electricity can be fed continuously into coils that are themselves rotating. Enter: the brushless excitation system. The rotor coils need DC — but supplying it through sliding electrical contacts is difficult because the rotor is constantly spinning. The solution is to mount a rectifier, a device that converts AC into DC, on the rotor itself. To this rotating rectifier, an AC is supplied from another generator. And this other generator is coupled to the same shaft of the turbine imparting mechanical power to the main generator.

Software and magnetism

This is essentially the principle behind the start-up’s “virtual” magnet: software regulates the current flowing through the electromagnets, thus controlling the strength and direction of the magnetic field. The rectified current can be fed in a controlled manner to the copper coils in the rotor that would make the magnetic strength and direction controllable.

In other words, the software is not creating magnetism by itself. It is just controlling how much current flows through the electromagnets, and thus how strong the magnetic field becomes. There is no novelty in this design.

A permanent magnet establishes the magnetic field in the air gap of an electrical machine in a one-step process. And because the magnets already exist, no electrical energy is needed simply to create the magnetic field. On the other hand, with electromagnets, the magnetic field first has to be established, and the electric current modulated as per the requirement using software.

And every additional step here consumes some energy. There are magnetic losses in the ferromagnetic core, called core losses. The copper conductor has resistance losses. The electronic switches have switching and conduction losses. As a result, it is unlikely for a motor with an electromagnet to be more efficient than a motor with a permanent magnet.

Electromagnets in EVs

BMW and Renault have been trying to build such an electrically excited motor. The three-phase induction motor that Nikola Tesla invented in 1888 — a light yet rugged machine — was used by the first version of the Model S from Tesla in 2012. However, its efficiency was not good enough.

Every 0.1% increase in efficiency of the propulsion motor drive matters in an electric vehicle (EV). This is because any increase in the drive’s efficiency will improve the range dramatically for a given battery rating. Put another way, for a given mileage, the battery size can be reduced when the efficiency of the motor drive improves. Thus, increasing the motor drive’s efficiency will bring down the weight and cost of the car perceptibly.

In any EV, the battery pack is the costliest and heaviest component, which is why the focus is on optimising the battery’s rating. In turn, permanent magnet synchronous motors dominate the EV market because their efficiency is the highest at present.

Electromagnets are not the only alternative to permanent magnets. Another approach is the switched reluctance motor (SRM), whose rotor contains neither permanent magnets nor copper coils. Instead, SRMs have lower rotor inertia than even induction motors. In exchange, their torque comes in spurts, which makes the motor noisy and less efficient.

Recently, Honda joined hands with a start-up from Canada called Exedym to improve the performance of an SRM to be used in an EV. Hitachi Astemo is similarly trying to use a synchronous reluctance motor in a battery-driven EV to get rid of the dependency on rare-earth magnets.

On the whole, a large amount of effort has gone towards replacing permanent magnets in the rotor with either electromagnets or just a piece of iron. However, efficiency, starting torque capability, and the maximum speed achievable are some important constraints that have kept these motors out of EVs.

In this time, we will have to wait and see how the Bengaluru start-up fares in the four-wheeler EV market.

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In any EV, the battery pack is the costliest and heaviest component, which is why the focus is on optimising the battery’s rating. In turn, permanent magnet synchronous motors dominate the EV market because their efficiency is the highest at present. | AUTHOR PHOTO

- **Key Terms and Explanations**
  - **Permanent Magnets vs. Electromagnets:**
    - **Permanent Magnet:** A material that maintains a continuous, intrinsic magnetic field without requiring an external supply of electrical energy. In electric vehicles, these are primarily composed of rare-earth alloys like Neodymium-Iron-Boron (NdFeB). *Example:* The magnetic seal along a refrigerator door, or the high-density magnet embedded inside an electric vehicle's traction motor.
    - **Electromagnet:** A temporary magnet created by passing an electric current through a conductive wire coil (typically copper) wrapped around a ferromagnetic iron core. The magnetic field exists only while current flows. *Example:* An industrial scrap metal crane that activates its magnetic lift only when electric power is switched on.
  - **Permanent Magnet Synchronous Motor (PMSM):**
    - An alternating current (AC) motor in which the rotor contains permanent magnets, rotating in exact synchronism with the rotating magnetic field created by the surrounding stator. It yields the highest power-to-weight ratio, exceptional starting torque, and maximum energy efficiency, making it the preferred standard across the modern EV industry.
  - **Switched Reluctance Motor (SRM) & Induction Motor:**
    - **Induction Motor:** A motor where the electric current needed in the rotor to produce torque is induced via electromagnetic action from the stator field. *Example:* Early Tesla Model S vehicles utilized three-phase induction motors.
    - **Switched Reluctance Motor (SRM):** A motor where the rotor contains neither permanent magnets nor copper coils, consisting solely of a specially shaped magnetic steel core. It is mechanically durable and cheap to produce, but suffers from high operational noise, torque fluctuations (ripple), and lower overall energy efficiency.
  - **Rare Earth Elements (REEs):**
    - A group of 17 chemical elements (15 lanthanides plus scandium and yttrium) possessing unique magnetic, optical, and electrochemical properties. Elements such as Neodymium (Nd), Praseodymium (Pr), and Dysprosium (Dy) are vital for manufacturing lightweight, high-strength permanent magnets capable of withstanding elevated operating temperatures.
  - **Excitation and Core/Copper Losses:**
    - **Copper Losses (I^2R Losses):** Energy lost as waste heat when an electric current I passes through copper wire coils with electrical resistance R.
    - **Core Losses:** Magnetic energy dissipated as heat within the rotor/stator iron core due to continuous magnetic flux changes (hysteresis) and induced circulating currents (eddy currents).
    - **Brushless Excitation:** A non-contact method using rotating rectifiers to feed direct current into spinning rotor coils without using physical carbon brushes, commonly used in large industrial generators.
  - **Software-Controlled "Virtual Magnets":**
    - A conceptual marketing term describing software algorithms that dynamically adjust electrical current passing through electromagnet coils to mimic the consistent field of a permanent magnet. While software controls the current, it cannot alter the physical requirement for continuous electrical power to maintain that current.

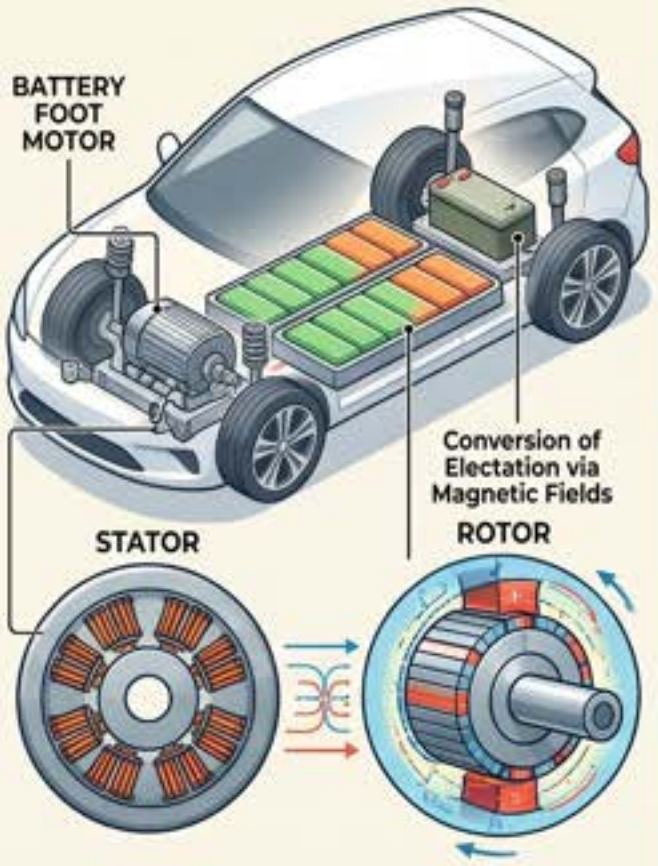
- **Main Arguments and Substantive Parts**
  - **The Physics of Magnetic Field Generation:**
    - Every electric motor converts electrical energy into mechanical rotation through magnetic interaction in the air gap between the stationary stator and the spinning rotor.
    - Permanent magnets generate this vital magnetic field intrinsically without consuming operational electrical energy. Electromagnets, by contrast, demand a continuous flow of electrical current purely to establish and sustain the magnetic field, imposing an ongoing energy cost.
  - **The Energy Efficiency Imperative in Electric Vehicles:**
    - The battery pack represents the single heaviest and most expensive component in any electric vehicle. As a result, propulsion efficiency is the defining parameter of EV engineering.
    - Even a minor fraction of a percent (0.1%) gain in motor efficiency delivers significant operational benefits: it directly extends driving range or allows automakers to downsize the battery pack, lowering total vehicle weight and cost.
    - Electromagnet-based systems suffer cumulative energy penalties—resistive copper losses, core hysteresis, and electronic switching losses—which inherently lower their overall conversion efficiency compared to permanent magnet motors.
  - **The Core Dilemma: Mineral Reliance vs. Energy Performance:**
    - Alternative motor designs like Switched Reluctance Motors (SRMs) or Induction Motors successfully eliminate rare-earth elements, offering supply chain security.
    - However, these magnet-free alternatives require technical compromises: lower starting torque, reduced top-speed performance, increased thermal load, greater acoustic noise, and lower drive-cycle efficiency.
    - Software algorithms cannot bypass physical principles. While control software can precisely regulate current flow, it cannot neutralize the thermodynamic losses inherent in active electromagnets.

- **Historical Evolution of the Issue**
  - **Early Industrial Foundations (1830s–1890s):**
    - *1831:* Michael Faraday formulates the principles of electromagnetic induction, paving the way for mechanical energy conversion.
    - *1888:* Nikola Tesla invents the three-phase AC induction motor using electromagnets, establishing the foundation for modern industrial power grids and stationary machinery.
  - **Heavy Electrical Power Generation (1890s–1970s):**
    - Large-scale hydroelectric, thermal, and nuclear power stations adopted wound-rotor synchronous generators equipped with brushless excitation systems—a mature technology reliant on copper coils and iron cores.
    - Permanent magnets during this era (such as Alnico and Ferrite) lacked the magnetic force density necessary for high-power, compact vehicular propulsion.
  - **The Rare-Earth Magnet Revolution (1980s–2000s):**
    - *1982:* Invention of Neodymium-Iron-Boron (NdFeB) magnets provided unprecedented magnetic strength in small physical volumes.
    - China recognized the strategic value of its rare-earth mineral reserves (notably the Bayan Obo deposit) and executed focused industrial policies to dominate global mining, separation, and magnet fabrication.
  - **EV Expansion and Geopolitical Realignment (2010s–Present):**
    - *2010:* Geopolitical tensions led to temporary rare-earth export restrictions, causing price shocks and exposing global supply chain vulnerabilities.
    - *2012–Present:* As global EV production expanded, automakers increasingly adopted Permanent Magnet Synchronous Motors to maximize battery range. Concurrently, global research intensified around magnet-free motor topologies to hedge against geopolitical concentration risks.

AXIA IAS ACADEMY

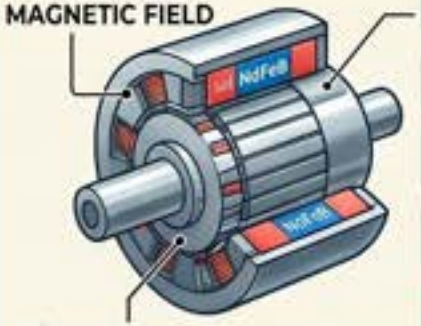
COMPREHENSIVE ANALYSIS: ELECTRIC VEHICLE MOTOR TECH & THE RARE EARTH MINERAL DILEMMA

HOW ELECTRIC VEHICLE MOTORS WORK



Conversion of Electricity to Rotation via Magnetic Fields

PATH A: PERMANENT MAGNET MOTORS (e.g., PMSM)



- HIGH-STRENGTH RARE-EARTH MAGNET (NdFeB)
- HIGHEST ENERGY EFFICIENCY
- OPTIMAL VEHICLE RANGE
- MAXIMUM STARTING TORQUE

Nd	Neodymium (Nd)
Dy	Dysprosium (Dy)
Pr	Praseodymium (Pr)

Efficiency

Low weight

PATH B: MAGNET-FREE ALTERNATIVES (e.g., SRM, Induction)

- DYNAMICALLY CONTROLLED ELECTROMAGNETS (coils & software)
- LOWER OVERALL EFFICIENCY (Cumulative Losses: Copper, Core, Switching)
- INCREASED OPERATIONAL NOISE & COMPLEXITY
- LOWER STARTING TORQUE

THE CRITICAL TRADE-OFF: EFFICIENCY VS. DEPENDENCY

MULTIDIMENSIONAL IMPACTS ANALYSIS

SOCIAL
Vehicle Affordability & Mobility Access, Local Community Impact of Mining

POLITICAL
Resource Geopolitics, Strategic Supply Risks, National Critical Mineral Security

ECONOMIC
Cost Volatility of Rare Earths, Vehicle Production Costs, R&D Investment Arbitrage

ETHICAL & ENVIRONMENTAL:
Sourcing Trade-offs, Urban Mining & Recycling, Transparent Labeling (Avoid Misleading Terms like 'Virtual Magnets')

INDIA'S WAY FORWARD: CRITICAL MINERAL STRATEGY

- MINERAL PROSPECTING (e.g., Monazite Sands)
- R&D FOR ALTERNATIVES (e.g., Rare-Earth-Free Compounds)
- CIRCULAR ECONOMY (Urban Mining & Recycling)
- DIVERSIFY GLOBAL ALLIANCES (e.g., Minerals Security Partnership)

An educator-led synthesis of key concepts for competitive exams (UPSC/APSC).

The IACS and the making of modern Indian science

Indian Association for the Cultivation of Science fulfilled Mahendralal Sircar's vision of scientific self-reliance

Shekhar Mande

The late eighteenth and nineteenth centuries marked a period of profound intellectual and cultural awakening across India, with Bengal emerging as its prominent centre. Although similar currents of intellectual, social, and cultural reform were taking shape in several other parts of the country, the scale, diversity, and enduring influence of this awakening found their fullest expression in Bengal.

What is now widely known as the Bengal Renaissance not only transformed Bengal but also profoundly influenced the intellectual, social, and cultural evolution of modern India. The movement fostered remarkable advances across a broad spectrum of disciplines, ranging from philosophy, spirituality, literature, and the arts to education, social reform, and the natural sciences. It produced an extraordinary generation of philosophers, reformers, educators, scientists, writers, and artists whose collective vision and achievements laid many intellectual and institutional foundations of modern India.

A vision for scientific self-reliance

One of the most influential figures of this remarkable period was Mahendralal Sircar (1833-1904). Deeply concerned that the colonial administration had failed to provide adequate opportunities for Indians to pursue education and research in the natural sciences, Sircar articulated a bold vision for scientific self-reliance.

In 1869, in an article published in the *Calcutta Journal of Medicine*, he proposed the establishment of the Indian Association for the Cultivation of Science (IACS), arguing that scientific education was indispensable for India's intellectual and societal progress. As he wrote: "The best method, and under the present circumstances, the only method, that we can conceive of, by which the people of India can be essentially improved, by which the Hindu mind can be developed to its full proportions, is as we have seen above, by the cultivation of the Physical Sciences". Three years later, while addressing a meeting of the Bethune Society at the Medical College Theatre in Calcutta in 1872, Sircar lamented the lack of institutional support for scientific research in India under colonial rule: "I must say, though I say with deep regret, that our Government has hitherto afforded no opportunity, nor offered any encouragement to the pursuit of science by the native of this country".

These statements reveal Sircar's remarkable foresight. At a time when scientific research in India received little official encouragement, he envisioned an institution that would enable Indians to pursue scientific inquiry and contribute to the advancement of knowledge. That vision culminated in the establishment of the IACS on July 29, 1876, as the country's first national institution dedicated to scientific research by Indians. Today, as we celebrate its 150th anniversary, we honour not merely the founding of an institution but the birth of a scientific movement that transformed the landscape of Indian science.

Among the most celebrated scientists associated with the IACS was C.V. Raman, whose pioneering work transformed modern physics. Shortly after joining the Accountant General's Office in Calcutta in 1907, Raman noticed a "strange-looking board" bearing the name 'Indian Association for the Cultivation of Science'. Intrigued, he made enquiries about the institution and was introduced to Amrit Lal Sircar, the son of the Association's founder. Recognising Raman's enthusiasm for scientific research, Amrit extended an open invitation to use the Association's laboratories for his experiments outside office hours.

For nearly a decade, Raman followed a remarkable routine. He spent the early mornings and evenings at the IACS laboratory while serving as a government officer during the day. This extraordinary dedication continued until 1917, when he resigned from the Finance Department to accept the Palit Professorship of Physics at the University of Calcutta. Even thereafter, IACS remained the principal venue for his experimental investigations.

It was in the laboratories of IACS that Raman made his most celebrated discovery, the Raman effect, which he announced to the world on February 28, 1928. This landmark discovery earned him the Nobel Prize in physics in 1930, making him the first Asian scientist to win this prize in the sciences. In many ways, Raman's achievement represented the fulfilment of Sircar's vision: that an institution founded and nurtured by Indians for the cultivation of science could produce discoveries of the highest international significance.

A legacy that endures

The founding of the IACS also marked a defining moment in the renaissance of science in India. More than the establishment of a scientific institution, it embodied the aspiration that Indians should not merely learn science but actively create it. Over the past century and a half, IACS has nurtured generations of exceptional scientists, provided a vibrant institutional framework for the pursuit of scientific inquiry, and made contributions of enduring significance to the advancement of science worldwide.

As we commemorate this historic milestone, we pay our deepest tribute to the vision and foresight of Mahendralal Sircar, whose unwavering belief in the transformative power of science made the institution possible. We also celebrate the extraordinary legacy of the IACS itself, a legacy of intellectual curiosity, scientific excellence, and national service that continues to inspire generations of researchers. May that spirit continue to guide the Institute, advancing the frontiers of knowledge and contributing to the scientific and technological progress of India and the world.

(Shekhar C. Mande is president, Indian National Science Academy, and national president, Vijnana Bharati)

- **Key Terms and Explanations**
- **Bengal Renaissance**
- A period of intense socio-cultural, intellectual, and scientific awakening across Bengal during the nineteenth and early twentieth centuries. While initially centered around literary, religious, and social reforms, it expanded into the natural sciences, laying the groundwork for modern Indian intellectual self-determination.
- **Scientific Self-Reliance (Indigenous Knowledge Production)**
- The capacity of a nation to establish, fund, manage, and sustain its own scientific infrastructure without relying on foreign patronage or administrative validation. It emphasizes transitioning from passive consumers of Western technical knowledge to active creators of global scientific discoveries.
- **Fundamental vs. Applied Research**
  - **Fundamental (Basic) Science:** Theoretical or experimental work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena, without any direct commercial or practical application in mind.
  - **Applied Science:** Research directed toward a specific practical aim or commercial objective.
- **Molecular Light Scattering (The Raman Effect)**
- A physical phenomenon where a beam of light passes through a transparent medium, and a small fraction of the scattered light emerges with wavelengths different from that of the incoming light. This energy shift provides a structural fingerprint of the molecules involved.
- **Institutional Patronage and Autonomy**
- The structural support—comprising land, grants, laboratories, and administrative independence—provided to researchers. Autonomy ensures that scientific inquiry remains free from bureaucratic micromanagement or geopolitical agendas.

- **Main Arguments and Substantive Parts**
- **1. Colonial Exclusion and the Imperative for Native Institutions**
- During the nineteenth century, British colonial administration maintained a strictly utilitarian view of science in India. Scientific departments—such as the Survey of India, the Geological Survey, and the Botanical Survey—were designed primarily to map resources, facilitate revenue collection, and strengthen military control.
- Indian scholars were routinely excluded from higher research roles and relegated to routine computational or field assistance tasks. Recognizing that genuine national progress was impossible under these constraints led to the conviction that Indians needed to build and manage their own scientific bodies.
- **2. Institutional Autonomy as the Foundation of Discovery**
- True scientific breakthroughs require freedom from administrative rigidity. The establishment of independent, native-managed research associations demonstrated that when Indian scientists were granted open access to physical laboratories, analytical freedom, and institutional trust, they could produce world-class theoretical and experimental results.
- **3. Synergizing Individual Passion with Infrastructure**
- Grand visions require concrete physical infrastructure to bear fruit. The history of early Indian science shows that raw individual brilliance—such as working during early morning and evening hours outside of formal government employment—needs physical space, instruments, and institutional backing to translate into Nobel-caliber discoveries.
- **4. Shifting from Consumers to Creators of Knowledge**
- A core argument of the indigenous scientific movement was challenging the colonial narrative that Western minds were suited for theoretical science while Eastern minds were suited only for passive learning or manual administration. Building indigenous institutions proved that the Indian intellectual tradition could directly advance global frontiers in physics, chemistry, and biology.

CHARTING INDIA'S PATH TO SCIENTIFIC SELF-RELIANCE: A UPSC ESSENTIAL ANALYSIS

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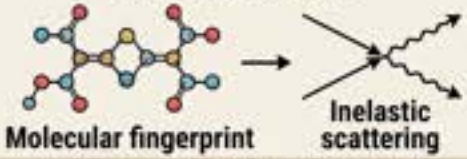
KEY TERMS & EXPLANATIONS

BENGAL RENAISSANCE

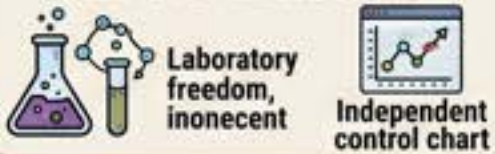
SCIENTIFIC SELF-RELIANCE

FUNDAMENTAL vs. APPLIED RESEARCH

RAMAN EFFECT

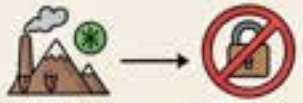


INSTITUTIONAL AUTONOMY



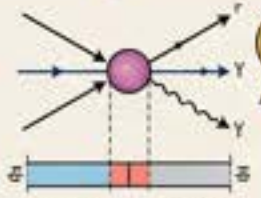
HISTORICAL JOURNEY & ANALYSIS TIMELINE

1 Pre-1870s: Colonial Utilitarian Science



2 1876: Indigenous Lab Founding

3 1900s-1940s: Golden Age



Conceptual Focus (No individuals depicted)

Saha
$Sru = \frac{1}{2m^3}$
No people

Bose-Einstein Statistics
$Sru = \frac{2}{2m^3}$

4 Post-1947: State-Led Institutionalization

5 2020s-Present: Modern Reforms

MULTIDIMENSIONAL ANALYSIS

SOCIAL
Scientific temper, Democratization

POLITICAL

LEGAL

ETHICAL

INTERNATIONAL
Global South Cooperation

ECONOMIC

UPSC CSE SYLLABUS MAPPING

GS PAPER 1	GS PAPER 2	GS 3	GS 4
• History & Culture • Science & Technology • Indigenous Freedom & self-reliance	• History & Ethics • Govt Policies & Interventions • Education & Social Justice	• Science & Tech • Indigenization • Indigenization & Development Concepties • Lampers	• Ethics • Scientific Temper Temper • Ethics & Scientific Temper

PREVIOUS YEAR QUESTIONS (SAMPLE)

- **Prelims MCQ** (e.g., about IACS or **scientific temper** about IACS or scientific temper)
- **Mains Question** (e.g., on analyzing Indian R&D spending to with R&D spending on atmanirbhar concepts)

WAY FORWARD: PRACTICAL REFORMS

- **2%** GDP R&D target, streamlizing entagement
- **Streamlining bureaucracy** and medial bureaucracy
- **Streamlining bureaucracy** and modent technology
- **University integration,** with home and university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