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• LEGAL

Why SC expanded definition of 'acid attack victim' in Disabilities Act

Amaal Sheikh

New Delhi, May 6

THE SUPREME Court on Monday held that persons who were forced to consume acid and thus suffered internal injuries, without visible scars, would be considered acid attack victims under the Rights of Persons with Disabilities (RPwD) Act, 2016.

The top court's ruling was necessitated by the fact that the Act's definition of acid attack victims appears to confine itself to external "disfigurement".

The bench of Chief Justice of India (CJI) Surya Kant and Justice Joymalya Bagchi said the clarification would apply retroactively — that is, from the day the Act came into force.

The court told the government that the existing punishment for acid attack had failed as a deterrent, and suggested placing the burden of proof on the accused and making acid sellers co-accused.

The order came on a petition filed by Shaheen Malik, a survivor who flagged the gap in law that left an entire category of victims without access to state support.

The gap in the law

The RPwD Act includes acid attack survivors in its list of specified disabilities. But the definition it settled on was narrow. Under Schedule 2(zc) of the Act, an "acid attack victim" is a person "disfigured due to violent assaults by throwing of acid or similar corrosive substance." Survivors who were forced to consume acid fell outside it.

The court noted the problem was that "the use of the term 'disfigured' appears to confine the scope of external disfigurement of the body, thereby excluding cases involving internal injuries or scarring caused by the administration of acid."

The injuries in such cases are equally severe. When acid is ingested, it burns the mouth, throat, oesophagus, and stomach. The damage is quite often permanent. Malik's petition states that "the corrosive substance causes intense burns and significant harm to the internal organs, particularly the gastrointestinal system. This often results in lifelong medical complications, including the need for ongoing gastroenterological care. Victims of oral acid ingestion may experience long-term issues such as diffi-

Pending acid attack cases

• The Supreme Court has flagged an 'alarming increase' in the number of acid attack cases since 2013.

• According to compliance affidavits filed in the top court, Uttar Pradesh has the highest backlog of acid attack cases at 198, followed by West Bengal (160) and Gujarat (114). Bihar reported 68 pending cases.

culty eating, swallowing, and digestion."

A narrow definition

The consequences of falling outside the purview of the RPwD Act are significant. A disability certificate under the Act is the gateway to state support.

Since victims of forceful ingestion do not fall within the statutory definition, they are unable to obtain the disability certificates required to access state compensation, rehabilitation schemes and medical support. The petition argues that this denial of statutory recognition effectively infringes their right to live with dignity.

The only difference between the two groups, the petition argued, is the method of the attack — throwing vs administering acid, rather than the nature and extent of harm.

What the petition challenges

At the centre of the challenge is Article 14 of the Constitution. The petition argues that the law creates an "arbitrary and unreasonable classification" by distinguishing victims based on the method of assault, throwing acid versus administering it,

rather than the consequence of the attack. This distinction has no rational nexus to the object of the law, which is to support persons living with disabilities.

The petition also pointed to an "inconsistency" between criminal law and welfare law. Section 124 of the Bharatiya Nyaya Sanhita, 2024, treats throwing acid and administering acid as the same offence with identical punishment. "The harm, intent, and societal danger are identical regardless of the method of acid assault," the petition argues, making it "legally incoherent and arbitrary" for a remedial welfare statute to draw a distinction that penal law has rejected.

The trial backlog

Expanding the ambit of definitions under the Act is a problem the court has been trying to address since December, when it called tardy trials in acid attack cases "a mockery of the system". The court directed the registrars general of all high courts to furnish details of pending trials in their jurisdictions. The CJI said: "Don't you think that the punishment should have been harsher?"

- **Key Terms and Explanations**

- **RPwD Act, 2016:** A landmark legislation that replaced the 1995 Act, increasing the types of recognized disabilities from 7 to 21. It focuses on rights, dignity, and social integration.
- **Acid Attack Victim (Expanded):** Originally, the law focused on "disfigurement" (external scarring). The new interpretation includes those with internal injuries to the mouth, throat, and digestive tract caused by forced ingestion.
- **Article 14 of the Constitution:** Guarantees "Equality before the law." In this context, it argues that treating victims differently based on whether acid was *thrown* or *administered* is an "arbitrary classification."
- **Retrospective Application:** This means the court's clarification applies from the date the Act came into force (2016), ensuring previous survivors can now claim benefits.
- **Burden of Proof:** The legal obligation to prove a fact. The court suggested shifting this to the accused in acid attack cases to simplify the victim's path to justice.

-

Main Arguments and Substantive Parts

- The core thesis is that **disability is defined by the impact on the body, not the method of the assault.**
- **The "Disfigurement" Trap:** The existing law emphasized visible scars. This excluded victims of "oral ingestion" who suffer permanent damage to the esophagus and stomach, often requiring lifelong medical care.
- **The Necessity of Certification:** Without being recognized as "disabled," survivors cannot access disability certificates, which are the "gateways" to state compensation, quotas, and free medical aid.
- **Legal Incoherency:** The *Bharatiya Nyaya Sanhita (BNS)*—the new criminal code—punishes "throwing" and "administering" acid equally. The court argued that welfare laws should mirror this consistency; if the harm is equal, the support must be equal.
- **Judicial Concern over Backlog:** The court highlighted an "alarming increase" in cases and a "mockery of the system" due to tardy trials, particularly in states like Uttar Pradesh and West Bengal.

- **Historical Evolution of the Issue**

- **Pre-2013:** Acid attacks were often treated under general "grievous hurt" provisions of the IPC. There was no specific focus on rehabilitation.
- **Laxmi v. Union of India (2014):** A watershed moment where the SC regulated acid sales and mandated compensation. This led to the inclusion of acid attack survivors in the disability list.
- **The 2016 RPwD Act:** Formally recognized acid attack survivors as a category of "specified disability," but with the narrow "disfigurement" wording.
- **2024 Transition:** The shift from the IPC to the *Bharatiya Nyaya Sanhita* maintained strict punishments for acid crimes.
- **2026 (Present Ruling):** The Judiciary steps in to fix a "statutory gap" where internal survivors were being denied the right to live with dignity.

- **Way Forward**

- **Administrative Reform:** Simplify the "Disability Certification" process via a single-window system for acid survivors.
- **Fast-Track Courts:** Dedicate specific judicial time to clear the backlog of the 500+ pending cases mentioned in the article.
- **Digital Tracking:** Implement a real-time "Acid Sale Tracker" linked to Aadhaar to enforce the seller-liability suggested by the court.
- **Holistic Rehab:** Go beyond one-time compensation to include mental health support and vocational training.

- **Previous Years' Questions (UPSC/APSC)**

- **UPSC 2011 (GS2):** "The Rights of Persons with Disabilities Act, 2016 ensures greater Government accountability..."
- **UPSC 2020 (GS2):** "Does the Rights of Persons with Disabilities Act, 2016 ensure effective mechanism for empowerment...?"
- **UPSC 2014 (Ethics):** Case study on the ethical dilemma of a public official dealing with a victim of a heinous crime.

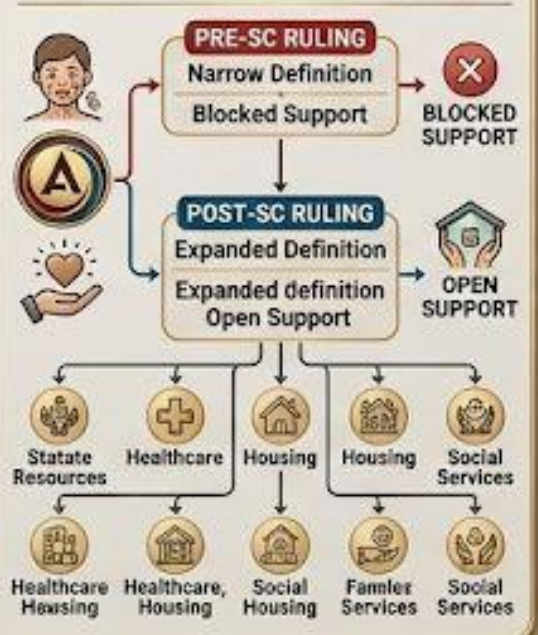


ANALYSIS: EXPANDING 'ACID ATTACK VICTIM' DEFINITION

KEY LEGAL & WELFARE ARGUMENTS (SC Ruling Analysis)

- 1. **Redefining Harm:** Shifting from 'external disfigurement' only to **all injuries** (internal & external).
- 2. **Internal Injuries:** Recognizing damage to mouth, throat, and digestive tract from forced ingestion.
- 3. **Gateway to Support:** Access to state compensation, rehabilitation, medical aid, and disability certificates.
- 4. **Consistency in Law:** Bringing the RPwD Act in line with the criminal code which treats all acid administration equally.
- 5. **Reverse Burden of Proof:** Shifting proof to the accused.
- 6. **Action on Sellers:** Sellers are to be held co-accused for illegal acid sales.

THE GATEWAY TO DIGNIFIED SUPPORT



MULTIDIMENSIONAL IMPACT & CHALLENGES (for UPSC Preparation)

- SOCIAL**
 - Stigma
 - Invisible Injuries
 - Social Model of Disability
- LEGAL/CONSTITUTIONAL**
 - Article 14
 - Distributive Justice
 - Substantive Equality
- ECONOMIC**
 - Right to livelihood
 - Medical costs vs economic gain

- ADMINISTRATIVE CHALLENGES**
 - Medical Board standardization
 - Bureaucracy in certification

- HISTORICAL EVOLUTION**
 - Timeline: Pre-2013
 - Laxmi v. Uol
 - 2016 Act
 - Present Ruling

- WAY FORWARD**
 - Practical new practical solutions
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 - Practice of-mior practical solutions

- UPSC LINKAGES**
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 - Essay (Facebook)
 - Optional subjects (GS Paps)
 - Optional subjects

For four new govts, same problem: Debt burden



HARISH DAMODARAN

THE NEWLY elected governments of all four states that went to the polls — Tamil Nadu, West Bengal, Kerala and Assam — will have one major challenge to confront: The burden of debt.

Tamil Nadu's outstanding debt — the total money the state government owes to lenders at a given point — has nearly quadrupled from Rs 2.8 lakh crore to Rs 10.6 lakh crore between 2006-07 and 2006-07 (April-March). The stock of debt has also risen from 21.8% of the state's gross domestic product (GDP) to 36.7% over this period.

This debt pile-up has been accompanied by ballooning interest payments, from Rs 21,449 crore in 2006-07 to a budgeted Rs 38,677 crore for 2026-27.

That's not all. Ten years ago, interest payments constituted 33.7% of the Tamil Nadu government's total revenues (or income from both tax and non-tax sources). This financial year, that ratio is expected at 32.8%.

An unsustainable proposition

The story isn't much different for West Bengal and Kerala.

From the accompanying chart, it can be seen that the debt-to-GDP ratio was already high (30-38% in 2006-07) for both states.

It has since remained at those levels for West Bengal and increased for Kerala. The proportion of the government's revenue that goes towards servicing interest on debt is close to 20% for both states.

For comparison, the outstanding debt-to-GDP ratio for all states and Union Territories of India was estimated at 29.2% in 2025-26 (the last year for which aggregate data is available). The corresponding interest payments-to-revenue receipts ratio, at 12.2%, was way lower than that of Tamil Nadu, West Bengal and Kerala. Assam, too, has seen its debt-to-GDP ratio surge from 17.2% to 25.2% over the last ten years. Interest payments, however, have been contained well within 10% of the state's overall revenue receipts.

A key reason for that has to do with Assam being a special category state, which entitles it to avail 90% of central funding for schemes or projects in the form of interest-free grants and only the remaining 10%

• HOW DEBT HAS PILED UP ACROSS THE FOUR STATES (in Rs crore)



Note: *Budget Estimates. Source: Finance Commission and State Budgets



The Vijay-led Tamizhaga Vetri Katchagam has promised to tackle Tamil Nadu's mounting debt burden. >>

as loans. For non-special category states — those neither in the Northeast nor having hilly and difficult terrain like Himachal Pradesh and Uttarakhand — the grants portion is just 30% and the remaining 70% comprises loans.

But special category or not, and new governing party or old, the chilling and rising levels of debt are simply unsustainable for these states.

This is more so in an environment of hardening interest rates. On May 5, Tamil Nadu borrowed Rs 1,000 crore through the auction of a six-year state government security at an average interest rate of 7.89%. It raised the same Rs 1,000 crore loan for six years at only 6.54% a year ago.

In general, states are now paying 7.5-

Relief with riders

The Centre can restructure its loan to a state, or waive or reduce interest.

The relief could carry riders such as state reforms.

7.5% on 30-year borrowings, as against 6.3-6.7% last year at this time.

Unorthodox solutions

The precarious debt situation of most states, perhaps, demands unconventional measures.

The Union government, for instance, can restructure, waive or reduce the interest, or even write off a part of its loan to a state. The relief could be conditional upon the state undertaking reforms — electricity tariff rationalisation, imposing charges on waste, sanitation and other public services to recover operation and maintenance costs; targeting of welfare schemes to low-income and vulnerable households; and devolution of financial powers to pan-

chassis and urban local bodies.

There can be other innovative solutions as well. Take the Tamil Nadu Industrial Development Corporation (TIDCO). This state government-owned industrial promotion agency has a 27.88% stake in Titan Company Ltd. That's more than the combined 25.02% share of the Tata Group through its holding company and various subsidiaries. It makes TIDCO the main promoter of Titan, which was established in 1984 as a joint venture for manufacturing quartz analog watches at Hosur on the Tamil Nadu-Karnataka border.

That company — originally Titan Watches Ltd — has today grown to a premium lifestyle accessories maker with a product portfolio spanning watches and wearables (Titan, Fastrack and Sonata brands), jewellery (Taansiq and Carat-Less), eyewear, women's bags (RT31) and ethnic wear (Tavira sarees and tops). Titan Company earned a net profit after tax of Rs 3,337 crore on a total income of Rs 60,942 crore during the year ended March 31, 2025.

Now, how is this relevant to Tamil Nadu's debt woes? The answer lies in the market value of Titan Company's shares. That, at the share's closing traded price on May 6, was worth Rs 3,86,976 crore. TIDCO's 27.88% holding in Titan will also be valued at Rs 1,07,873 crore.

Simply put, if TIDCO were to sell its entire stake in Titan Company, the Tamil Nadu government would be able to mobilise upwards of Rs 1 lakh crore and bring down its outstanding debt by roughly a tenth. The annual savings in interest outgo resulting from it will far exceed the Rs 272 crore that TIDCO received as dividend for 2024-25 from its 27.88% shareholding in Titan Company.

The election manifesto of Tamizhaga Vetri Katchagam — the party of film-star-turned-politician Vijay, who will likely become chief minister — has promised to transform Tamil Nadu into a "financially self-sufficient state... by reducing the growing debt burden... and creating new sources of income".

The sale of TIDCO's stake in Titan could well be one such novel source of income. The proceeds can be used to retire government debt, thereby lowering its annual interest burden. That will make more government money available for infrastructure, health, education, agriculture research, crop-farm extension, and targeted welfare spending.

Finding new revenue sources to alleviate a chronic debt burden presents a similar challenge for the other states too.

- **Key Terms and Explanations**
- **Outstanding Debt:** The total amount a government owes to various lenders (banks, markets, or the Centre) at a specific point in time.
- **Debt-to-GDP (GSDP) Ratio:** This measures a state's debt as a percentage of its Gross State Domestic Product. It indicates the state's ability to pay back its debt; a high ratio suggests potential instability.
- **Interest Payments-to-Revenue Receipts Ratio:** This reveals how much of a state's earnings are swallowed by interest alone. If a state earns ₹100 and spends ₹25 on interest, it only has ₹75 left for schools, hospitals, and roads.
- **Special Category Status (SCS):** A classification formerly used (and still relevant in funding patterns) for states with geographical or socio-economic disadvantages (like Assam). These states receive 90% of central funding as grants and only 10% as loans.
- **Market Borrowings:** When states issue "State Development Loans" (SDLs) to raise money from the public and financial institutions, usually at competitive interest rates.

Main Arguments and Substantive Parts

- The core of the issue lies in the widening gap between state spending and revenue collection.
- **The Debt Spiral:** In states like Tamil Nadu and West Bengal, debt is not just growing; it is accelerating. Tamil Nadu's debt nearly quadrupled in a decade.
- **Interest Trap:** A significant portion of revenue is now diverted toward servicing old debts rather than creating new assets. This creates a "vicious cycle" where more is borrowed just to pay the interest on previous loans.
- **The Special Category Advantage vs. Burden:** States like Assam have lower interest-to-revenue ratios because they receive more grants than loans. However, their debt-to-GSDP ratio is still rising, indicating underlying fiscal weakness.
- **Asset Monetization as a Solution:** The article proposes a "corporate" approach—selling government stakes in profitable entities (like TIDCO's stake in Titan) to retire debt and reduce the annual interest burden.

- **Historical Evolution of the Issue**

- **Pre-Independence to 1990s:** States were largely dependent on Central transfers with limited borrowing powers. The focus was on "planned development."
- **The 1991 Reforms:** Post-liberalization, states began accessing markets more frequently. However, fiscal indiscipline led to the crisis of the late 90s.
- **FRBM Act (2003):** The Fiscal Responsibility and Budget Management Act set targets to limit fiscal deficits to 3% of GDP. States followed suit with their own versions (State FRBMs).
- **14th & 15th Finance Commissions:** These shifted the focus toward "performance-based grants" and increased the states' share in the divisible pool of taxes to 42% (later 41%), giving states more autonomy but also more responsibility.
- **Post-Pandemic Era:** COVID-19 caused a "scissors effect"—revenues plummeted while healthcare and welfare spending spiked, pushing debt levels to historic highs.

- **Way Forward**

- **Widening the Tax Base:** Moving beyond GST to improve collection in state-specific areas like Stamp Duty and Alcohol Excise.
- **Professional Asset Management:** Creating state-level "Holding Companies" to manage PSU shares professionally.
- **Outcome-Based Budgeting:** Shifting focus from "how much was spent" to "what was the social impact."
- **Independent Fiscal Council:** An institutional mechanism to provide unbiased reports on state finances, similar to the CAG but focused on future risks.

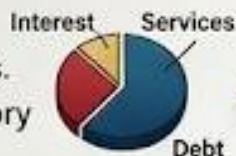
- **Previous Years' Questions (PYQs)**

- **UPSC 2023 (GS III):** "Explain the concept of Fiscal Policy and its role in the Indian economy."
- **UPSC 2018 (GS III):** "The objective of the FRBM Act was to ensure fiscal discipline. To what extent has it been successful?"
- **UPSC 2021 (GS II):** "Discuss the role of the Finance Commission in maintaining balanced regional development."
- **APSC 2022:** Questions regarding the economic impact of the "Special Category Status" for NE states.



INTRODUCTION & KEY TERMS

- **Outstanding Debt** - Outstanding debt to outstanding debt to law in assets.
- **Debt-to-GSDP Ratio** - Debt in enhanced debt-targets for debt-to-GSDP ratio.
- **Interest Payments Ratio** - Interest payments ratio - refer. receives services.
- **Special Category Status** - Special category status provide a more category services.



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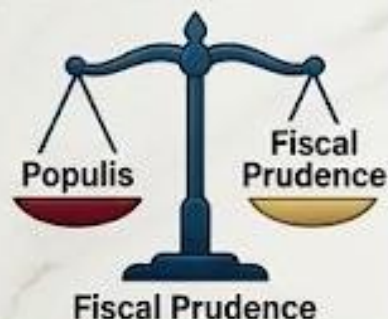
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HISTORICAL & REGULATORY EVOLUTION



THE FISCAL CHALLENGE



PROPOSED STRATEGIES & SUSTAINABILITY

STRATEGIC DIVESTMENT



Asset Monetization

Equity convert sale



Debt Retirement

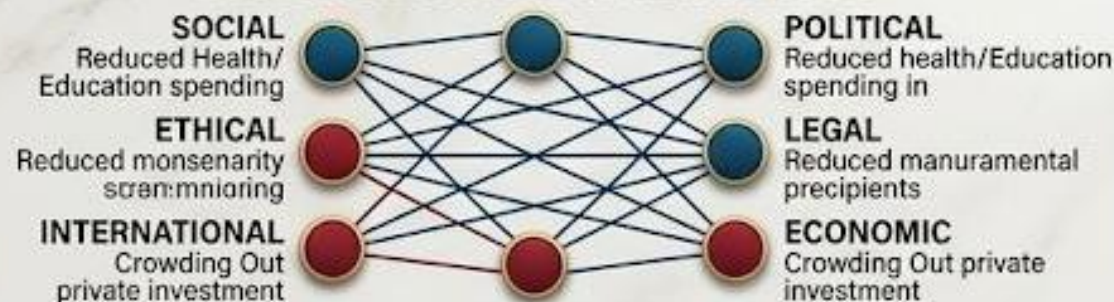
CONDITION-LINKED DEBT RELIEF



Centre-State cooperation



MULTIDIMENSIONAL IMPACTS



WAY FORWARD & REMEDIAL MEASURES



- ✓ 1. Widening Tax Base
- ✓ 2. Professional Asset Management
- ✓ 3. Outcome-Based Budgeting
- ✓ 4. Independent Fiscal Council



With 12 plants in phase one, India's chip-making mission sets sights on next frontier

Soumyarendra Barik
New Delhi, May 6

THE UNION Cabinet on Tuesday approved two new semiconductor plants, including one that could be the country's first display fabrication facility, in a boost to India's chip-making ambitions. A display fabrication facility is a specialised, high-investment, clean-room environment designed to create electronic screens (such as LCD and OLED) by layering materials on glass semiconductor bases.

With this, the government has approved a total of 12 chip plants under the first leg of its India Semiconductor Mission (ISM), an ambitious Rs 76,000-crore plan to kickstart chip manufacturing, after managing to localise smartphone assembly.

Semiconductors, used to power devices from toasters to fighter jets, have become a critical resource amid heightened geopolitical tensions over the last few years. India's foray into semiconductor production and packaging is seen as a strategic move

to insert itself into the global chip supply chain and to deepen domestic value addition in its electronics sector.

Launched in 2021, ISM 1.0 was conceived as a state-backed push to build a full-stack chip ecosystem, from fabrication and packaging to design and display manufacturing. Investments of around Rs 1.64 lakh crore have been committed under the scheme. In this year's Union Budget, Finance Minister Nirmala Sitharaman announced ISM 2.0 to produce equipment and materials, design full-stack Indian intellectual property, and fortify supply chains.

India's chip footprint

The 12 chip plants approved so far are being built in states such as Gujarat, Assam, Andhra Pradesh, Uttar Pradesh, and Odisha. They include one full-fledged commercial semiconductor fabrication facility (or fab), and assembly and testing plants.

● **TATA ELECTRONICS SEMICONDUCTOR FOUNDRY (GUJARAT):** The company is setting up India's first commercial-grade chip

fabrication plant. Taiwan's PSMC is its technology partner. Coming up in Dholera, the fab will be set up at an estimated Rs 91,000 crore. Its monthly capacity is expected to be 50,000 wafers across 28-nanometre to 110-nanometre technologies.

● **MICRON TECHNOLOGY (GUJARAT):** This was the first project approved under ISM 1.0 in 2023, after the government jacked up incentives for assembly and testing plants from 30% to 50%. The US-based company is a major manufacturer of memory chips. The plant started commercial production in February.

● **TATA ELECTRONICS ASSEMBLY UNIT (ASSAM):** This semiconductor assembly and testing facility in Jagiroad of Morigaon district, involves an investment of over Rs 27,000 crore. It is expected to manufacture 48 million chips daily for sectors including automotive, electronics, and telecommunications.

● **HCL-FOXCONN (UTTAR PRADESH):** This joint venture (JV) is setting up a Rs 3,700 crore outsourced semiconductor assembly

and test (OSAT) facility in Jewar, with operations expected by 2028. Located near Noida International Airport, the plant will produce display driver chips with a capacity of 20,000 wafers per month.

● **KAYNES SEMICON (GUJARAT):** The plant in Sanand is a Rs 3,300 crore OSAT facility with a capacity of up to 60 lakh chips per day. It focuses on producing power modules for electric vehicles and industrial applications. This plant started commercial operations in March 2026.

● **CG SEMI (GUJARAT):** This OSAT plant in Sanand — a JV between CG Power and Renesas Electronics and Stars Microelectronics — is being developed at an investment of over Rs 7,600 crore.

● **SICSEM (ODISHA):** The Rs 2,066-crore assembly, test, marking, and packaging (ATMP) facility will produce silicon carbide-based diodes and MOSFETs.

● **3D GLASS SOLUTIONS (ODISHA):** The US-based company is implementing India's first advanced 3D chip packaging unit through its wholly owned Indian sub-

sidary Heterogeneous Integration Packaging Solutions Pvt Ltd. The project is funded by Intel, among others.

● **ADVANCED SYSTEM IN PACKAGE TECHNOLOGIES (ANDHRA PRADESH):** The company will set up a semiconductor manufacturing unit under a technology tie-up with South Korea's APACT Co. Ltd, with an annual capacity of 96 million units.

● **CONTINENTAL DEVICE (PUNJAB):** The company will expand its discrete semiconductor manufacturing facility at Mohali, whereupon it will manufacture high-power discrete semiconductor devices: individual electronic components designed to perform a single, fundamental electrical function.

● **CRYSTAL MATRIX (GUJARAT):** The company will set up a Rs 1,068-crore compound semiconductor fabrication and assembly unit for manufacturing Mini/Micro-LED display modules, after the Cabinet's approval on Tuesday. Once functional, this would be the first such facility in India. The display fab industry is largely concentrated in countries such as Japan and South Korea until now.

● **SUCHI SEMICON (GUJARAT):** The company will set up an OSAT facility in Sorath worth Rs 868 crore for manufacturing discrete semiconductors.

ISM 2.0

The government is working on the next iteration of the plan, and could approve a scheme with an outlay of around \$11 billion, *The Indian Express* had reported earlier. While ISM 1.0 focused on attracting chipmaking infrastructure to India, ISM 2.0 is likely to offer greater support to ancillary industries such as gases, chemicals and capital goods, among others.

Under ISM 2.0, the government could reduce the capex subsidy for ATMP or OSAT plants from the current 50%. The government could also offer capital equipment and ecosystem support such as gases, chemicals, and raw materials needed at assembly and testing plants. ISM 2.0 could also see a much more significant design-side push, and tie incentives to the amount of market capital companies are able to raise.

• **Key Terms and Explanations**

- **Semiconductors:** Often called the "brain" of modern electronics, these materials (like Silicon) have electrical conductivity between a conductor and an insulator. **Example:** The chip in your smartphone that manages processing and power.
- **Fabrication Plant (Fab):** A highly specialized factory where raw silicon wafers are turned into integrated circuits. These require ultra-clean environments (Clean Rooms) to prevent even a speck of dust from ruining a chip.
- **OSAT (Outsourced Semiconductor Assembly and Test):** These units don't make the chip from scratch but take the processed wafers, cut them into individual chips, package them, and test them for quality.
- **ATMP (Assembly, Testing, Marking, and Packaging):** A critical downstream process that ensures the chip is ready to be integrated into a circuit board.
- **ISM (India Semiconductor Mission):** A specialized business division within Digital India Corporation focused on building a vibrant semiconductor and display ecosystem in India.
- **Compound Semiconductor:** Chips made from two or more elements (e.g., Gallium Nitride). These are essential for high-power applications like electric vehicles (EVs) and 5G.
- **Display Fab:** A facility dedicated to making the glass panels for screens (LCD, OLED). This is often more capital-intensive than logic chip fabrication.

Main Arguments and Substantive Parts

- The core thesis revolves around India's transition from a chip-consumer to a chip-producer to ensure "Atmanirbharta" (Self-reliance) in a volatile geopolitical climate.
- **Phase One Achievement:** The successful approval of 12 plants (Fabs and OSATs) marks the completion of the first leg of the India Semiconductor Mission. This involves a massive outlay of ₹76,000 crore.
- **Geographic Clustering:** Investment is concentrated in states like Gujarat, Assam, Uttar Pradesh, Odisha, and Andhra Pradesh, creating regional industrial hubs.
- **The Shift to ISM 2.0:** While ISM 1.0 focused on the "hardware" of building factories, ISM 2.0 aims to deepen the ecosystem. This includes supporting ancillary industries (chemicals, gases, and capital goods) and providing a "design-side push" to local IP creation.
- **Strategic Diversification:** The projects range from high-end logic fabs (Tata-PSMC) to niche sectors like display driver chips (HCL-Foxconn) and 3D packaging (3D Glass Solutions), ensuring a multi-layered industrial base.

- **Historical Evolution of the Issue**

- The journey of semiconductors in India is a story of missed opportunities and renewed vigor.
- **Pre-1980s:** Limited focus; India was primarily an importer of finished electronics.
- **1984 (SCL Foundation):** The Semiconductor Complex Limited (SCL) was set up in Mohali. A fire in 1989 significantly set back India's early lead in the sector.
- **1990s-2010s (Design Era):** India became a global hub for chip *design*. While we didn't manufacture chips, Indian engineers designed them for global giants like Intel and Qualcomm.
- **2021 (The Turning Point):** The launch of the India Semiconductor Mission (ISM) with a ₹76,000 crore incentive scheme.
- **2024-Present (The Execution Phase):** Transition from policy drafting to "groundbreaking" ceremonies for multiple plants, including India's first commercial-grade fab in Dholera.

- **Way Forward**

- **Modernize SCL Mohali:** Turn the state-owned facility into a research R&D hub to support the new private fabs.
- **Focus on Talent:** Launch "Semiconductor-specific" engineering streams in IITs/NITs.
- **Ancillary Clusters:** Develop dedicated industrial parks for the 200+ specialty chemicals required for fabrication.
- **Domestic Offtake:** Encourage Indian electronics brands (like Micromax, Lava, or Tata Motors) to commit to buying "Made in India" chips.

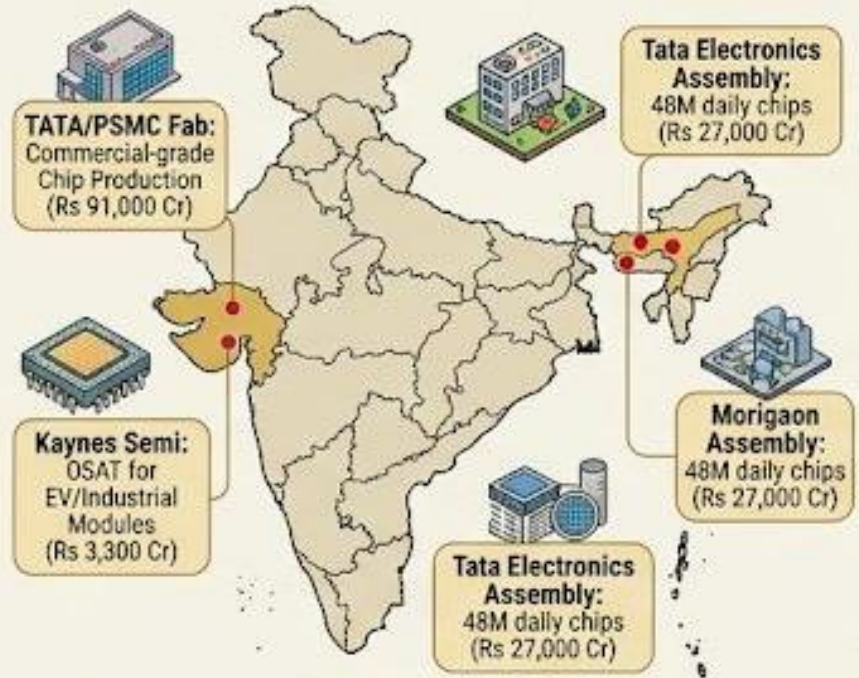
Previous Years' Questions (PYQs)

- **UPSC Mains (2022, GS3):** "Is the India Semiconductor Mission a game-changer for the Indian economy? Discuss."
- **UPSC Prelims (2023):** Questions on the "Production Linked Incentive (PLI)" scheme.
- **UPSC Mains (2018, GS3):** Discuss the challenges and opportunities of the "Make in India" program in the electronics sector.

INDIA'S SEMICONDUCTOR EVOLUTION:

Phase One & Beyond – A Comprehensive Analysis for UPSC CSE

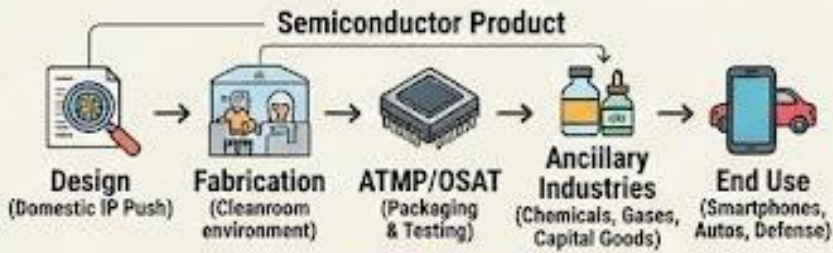
1. The Landscape of ISM Phase One.



Logical Base

- State-as-Catalyst
- Strategic Autonomy
- Strategic Autonomy
- Compound Semiconductor and Cosmetics

2. Key Terms and Ecosystem Diagram.



Definitions

- Fab** - Silicon wafer fab semiconductor production
- OSAT** - OSAT Packaging Semiconductor (Packaging), semiconductor cosines
- Strategic** (Cleanroom Semiconductor produces)
- Compound Semiconductor** Semiconductor for, Chemicals, Gases, Capital Goods

4. Strategic and Economic Analysis.

Multidimensional Dimensions		Reducing Electronics CAD
Social	Political	Global China+1 Strategy Partner
Economic	Political	Global China+1 Strategy Partner
Economic	Political	Global China+1 Strategy Partner
Efficiency	Challenges and Way Forward	
Political	Infrastructure Reliability and Electronics Reliability	
Theorism	Skill-specific Engineering Streams	
	UPSC Science Economy	

3. Evolution and Philosophical Base.



Logical Base

- State-as-Catalyst In constructional dimensions
- Skill-specific Engineering Streams
- Strategic Autonomy Reliability Infrastructure reliability
- Skill-specific Engineers Reliability

5. UPSC Relevance and Notes.

UPSC CSE Syllabus Linkages

- GS-2 Policies
- GS-3 Economy & S&T

Note-making Tip: Maintain State-wise Chip Map

Best Linkages

Model Question

PYQ question for UPSC: mmmmmmmmm question to develop ment. unmm xms to descrics sst in the trestshem the UPSC unms question for UPSC?

How hantavirus is deadlier than Covid, but slower

Anagha Jayakumar & Anonna Dutt
New Delhi, May 6

A GROUP of people on a Dutch cruise ship was found to be infected by the deadly hantavirus earlier this week. Seven cases — two laboratory confirmed and five suspected — have been identified among the 147 passengers and crew onboard the MV Hondius, which was travelling from Argentina to Spain. Three of them have died while one is seriously ill. Three others are reporting mild symptoms, according to the World Health Organization (WHO).

The vessel is currently stationed in Cape Verde, off West Africa. The WHO said Wednesday that three suspected patients had been evacuated from the ship to receive medical care in the Netherlands. These cases created global concern, though WHO said that at this stage the "overall public health risk remains low".

The virus

Named after South Korea's Hantan River, hantavirus is a family of rodent-borne viruses that can cause serious illness and death in humans. Human infection primarily occurs through contact with the urine, faeces or saliva of infected rodents or by touching contaminated surfaces. One can also get infected by breathing in air containing viral particles stirred up from these droppings, according to the US Centers for Disease Control and Prevention.

These viruses are generally not known to spread between people. Some human transmission has, however, been recorded in the past for the Andes strain, found in Argentina and Chile. The people on the ship are suspected to have been infected by the Andes hantavirus.

The type of hantavirus varies across regions. Each hantavirus is specific to a different rodent host. Hantavirus pulmonary syndrome is endemic to the Western Hemisphere and caused by "New World" hantaviruses. These are the deadlier of the two variants, killing a third of those who develop respiratory symptoms.

So-called Old World hantaviruses, found primarily in Europe, Africa and Asia, cause haemorrhagic fever with renal syndrome. This variant is known to affect around 1,50,000 people annually, killing 1-15% of those infected. The Hantaan and the Dobrava strains are the most severe.

Similarities with Covid-19

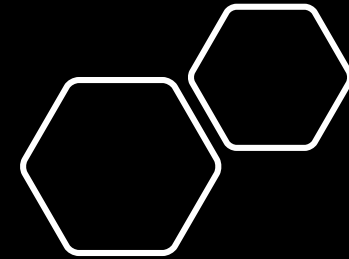
Hantavirus and coronavirus are both zoonotic, meaning they are transferred from animals to humans. The initial mode of transmission — and subsequent spread — is different. Hantavirus rarely transmits from one person to another. Coronavirus, on the other hand, jumped from bats to humans, and then freely spread between humans.

Both hantaviruses and the coronavirus that caused Covid-19 result in serious respiratory illnesses. In hantavirus, the spread is relatively slow and limited, but the fatality is high. According to WHO, hantavirus infections have a fatality rate of up to 50% in the Americas whereas it is less than 15% in Asia and Europe.

Covid had spread at a much faster rate and infected hundreds of millions of people worldwide, but its fatality rate was relatively low: about 1-2% of those infected died.

"The pandemic potential of this infection (hantavirus) is low, considering patients may start experiencing symptoms or die before they pass it on to others," said Dr Ekta Gupta, virologist from the Institute of Liver and Biliary sciences and a part of the Covid-19 consortium INSACOG.

Sporadic hantavirus cases have been reported from India since the early 2000s. There were at least 28 cases reported in a 2008 study among patients with chronic kidney disease, warehouse workers and those from the Irula tribe in Tamil Nadu known for catching snakes and rats.



- **Key Terms and Explanations**

- **Zoonotic Diseases:** Infections that "jump" from animals to humans. Examples include Rabies, Ebola, and COVID-19.
- **Hantavirus:** A family of viruses primarily spread by rodents (rats, mice). Unlike airborne viruses that spread via coughing, this is often contracted through contact with rodent excreta.
- **Hantavirus Pulmonary Syndrome (HPS):** A severe, sometimes fatal, respiratory disease in humans caused by "New World" hantavirus strains.
- **Haemorrhagic Fever with Renal Syndrome (HFRS):** Caused by "Old World" strains, this primarily affects the kidneys and causes internal bleeding.
- **Fatality Rate:** The proportion of people who die from a specified disease among all individuals diagnosed. Hantavirus has a high fatality rate (up to 50% in some regions) compared to COVID-19 (~1-2%).
- **Endemic:** A disease regularly found among particular people or in a certain area.
- **INSACOG:** The Indian SARS-CoV-2 Genomics Consortium; a network of laboratories monitoring genomic variations in viruses.

- **Main Arguments and Substantive Parts**

- The core discourse revolves around the trade-off between **lethality** and **transmissibility**.
- **The Paradox of Virulence:** Hantavirus is significantly deadlier than COVID-19, but its pandemic potential is lower. This is because a virus that kills its host too quickly or makes them too ill to move effectively limits its own spread.
- **Transmission Dynamics:** While COVID-19 mastered human-to-human transmission, Hantavirus remains largely tied to its animal vector. Human-to-human spread is rare, occurring mostly in specific strains like the *Andes* virus.
- **Geographic Variation:** The virus manifests differently based on the region—respiratory failure is common in the Americas, while kidney failure is more prevalent in Europe and Asia.
- **Risk Assessment:** Public health experts argue that while individual cases are tragic and high-risk, the "overall public health risk" remains low due to the lack of efficient human-to-human transmission.

- **Historical Evolution of the Issue**
- Tracing the path from a localized river-borne illness to a global health concern.
- **Early Discovery (1950s):** During the Korean War, over 3,000 UN troops fell ill with hemorrhagic fever. The virus was eventually isolated near the **Hantan River** in South Korea, giving it its name.
- **The 1993 Four Corners Outbreak:** In the US, a sudden outbreak of mysterious respiratory failure in the Southwest led to the discovery of the *Sin Nombre* virus, a type of Hantavirus.
- **Pre-Independence/Early India Context:** While formal records are modern, India has a long history of plague and rodent-borne diseases. Since the early 2000s, sporadic Hantavirus cases have been documented among tribal populations (like the Irula) and warehouse workers.
- **Present Day:** The focus has shifted toward **Genomic Surveillance**. Post-COVID, the global community is hyper-vigilant about any zoonotic spillover, as seen in recent maritime incidents.

- **Way Forward**

- A balanced approach to mitigating the threat.
- **One Health Integration:** Breaking the silos between the Ministry of Health, Ministry of Environment, and Animal Husbandry.
- **Strengthening Primary Healthcare:** Equipping rural PHCs with rapid diagnostic kits for non-routine viruses.
- **Urban Sanitation:** Improving waste management to reduce the "carrying capacity" of cities for rodents.
- **Genomic Intelligence:** Expanding the mandate of INSACOG to monitor a wider basket of zoonotic viruses, not just COVID-19.

- **Previous Years' Questions (PYQs)**

- **UPSC Prelims**
- **2022:** Question on "B cells and T cells" (Immunity).
- **2020:** Question on "H1N1 virus" (Swine Flu).
- **2014:** Question on "Zoonotic diseases" and their vectors.
- **UPSC Mains (GS 3)**
- **2020:** "COVID-19 pandemic has accentuated the need for a robust public health system." Discuss.
- **2015:** "What do you understand by 'One Health' approach? Why is it important for India?"

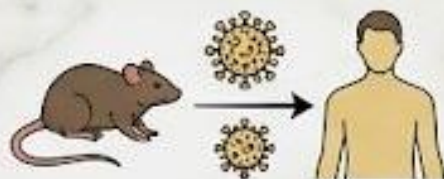


AXIA IAS ACADEMY - COMPREHENSIVE ANALYSIS: HANTAVIRUS VS. COVID-19



CORE CONCEPTS & TRANSMISSION

- **ZOOBOTIC DISEASE:** Jump from animals (rodents) to humans
- **VECTORS:** Contact with excreta or aerosols
- **LOW INTER-HUMAN SPREAD**



HPS



New World, respiratory

HFRS

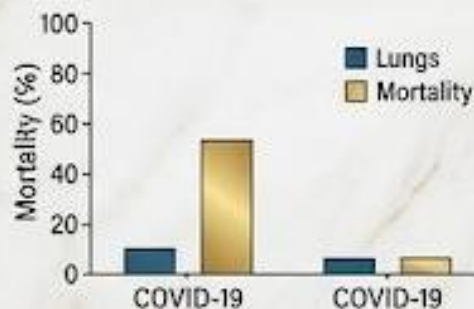


Old World, renal



KEY ARGUMENTS & IMPACT

- **DEADLIER BUT SLOWER**
- **HIGHER MORTALITY** (up to 50%) than COVID-19 (~1-2%) (~1-2%)
- **DIFFERENT MANIFESTATIONS:** HPS (lungs) vs. HFRS (kidneys)



HISTORICAL & GLOBAL GLOBL EVOLUTION

- **1950s:** Discovery in Korean War (Hantan River)
- **1993:** Four Corners outbreak (US)
- **2000s:** Sporadic cases in India



Strain New World vs. Old World



POLICY, INNOVATIONS & WAY FORWARD

- **ONE HEALTH PHILOSOPHY:** Interconnected Health
- **eDNA SURVEILLANCE**
- **PUBLIC HEALTH ACT NEEDED**
- **RODENT CONTROL**



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'INDIA & VIETNAM WILL ENSURE ECONOMIC SECURITY, SUPPLY CHAIN RESILIENCE OF BOTH NATIONS'

India, ASEAN to update trade pact by year-end, says PM Modi

The talks assume significance as India is rapidly opening its market to FTA countries in a bid to diversify exports

Ravi Dutta Mishra
New Delhi, May 6

PRIME MINISTER Narendra Modi on Wednesday said that India and the Association of Southeast Asian Nations (ASEAN) countries will update the trade agreement by the end of the year. The deal was originally signed in 2009 under the UPA government, and both trade partners began renegotiating the deal in 2024 amid a ballooning trade gap.

Speaking at a joint press conference with Vietnamese President To Lam here, PM Modi said, "Bilateral trade between India and Vietnam has doubled over the past decade, reaching \$36 bn.

"To take it to \$25 bn by 2030, we have taken several important decisions today. We have also reached an agreement to update the India-ASEAN Trade Agreement — AFTA — by the end of this year. This will give new energy to trade and investment between India and all ASEAN nations."

The India-ASEAN trade deal review has been one of the most challenging negotiations that the Commerce and Industry Ministry has engaged in, as

ASEAN nations have an edge over India under the current deal. India's trade deficit with the fast-growing ASEAN region has risen to \$45 billion in the financial year 2025 (FY25), from \$8 billion in FY13.

An Indian Economic Service research paper on India's trade patterns with the 10 ASEAN nations between 1991 and 2020 showed that while imports have grown, exports have declined since 2010, resulting in increasing trade deficits with all ASEAN countries.

PM Modi said that through new initiatives in critical minerals, rare earth, and energy cooperation, India and Vietnam will ensure the economic security and supply chain resilience of both countries.

"Export of India's agricultural, fisheries, and animal products to Vietnam will also become easier. Very soon, Vietnam will taste India's grapes and pomegranates, and we will enjoy Vietnam's durian and pomelo," Modi said.

The Prime Minister said that a memorandum of understanding (MOU) between the drug regulators of both countries would "increase access to Indian medicines in Vietnam".



Both trade partners began renegotiating the deal in 2024. ...

"To boost financial connectivity as well, today we have decided to enhance cooperation between our central banks. India's UPI and Vietnam's Fast Payment System are also set to be linked soon. Additionally, we are now going to strengthen state-to-state and city-to-city cooperation between our two countries," Modi said.

"In this era of global upheaval and economic challenges, on the strength of our talent, good governance, and economic reforms, India and Vietnam are emerging as the world's fastest-growing economies. Now, through our enhanced strategic partnership, we will become partners in each other's rapid growth," he said.

The renegotiations also assume significance as India is

rapidly opening its market to FTA countries in a bid to diversify exports during growing uncertainty in markets such as West Asia, the US and the growing regulatory hurdles in Europe.

Amid India's aggressive push for global trade integration, the existing FTAs have not translated into higher exports.

Imports have surged from the ASEAN region after it joined the China-led Regional Comprehensive Economic Partnership (RCEP) trade deal.

India exited the RCEP negotiations in 2019 due to concerns over rising imports from China. Notably, China-ASEAN trade is on the rise. The 10 member states of ASEAN include Indonesia, Thailand, Singapore, the Philippines, Vietnam, Malaysia, Myanmar,

• SKEWED TRADE

INDIA'S TRADE deficit with the fast-growing ASEAN region has risen to \$45 billion in FY25 from \$8 billion in FY13

AN INDIA Economic Service research paper on India's trade patterns with the 10 ASEAN nations between 1991 and 2020 showed that while imports have grown, exports have declined since 2010, resulting in increasing trade deficits with all ASEAN countries

Cambodia, Brunei and Laos.

According to a statement released by PMO, India and Vietnam have agreed to strengthen the supply chains in sectors of mutual interest. Vietnam affirmed its commitments to diversify its supply sources and to "import more products from India to serve its domestic production and export needs".

"Both sides agreed to explore ways for a more conducive regulatory environment to facilitate ease of doing business for companies of both countries, including in standards compliance certification. They underlined the importance of maintaining constructive dialogue for resolving mutual concerns under bilateral institutional mechanisms," it said.

FULL REPORT ON

WWW.INDIANEXPRESS.COM

- **Key Terms and Explanations**

- **AITIGA (ASEAN-India Trade in Goods Agreement):** A free trade agreement signed in 2009 that covers trade in physical goods. Its primary goal was to eliminate tariffs on over 80% of traded products.
- **Trade Deficit:** An economic condition where a country's imports exceed its exports. For India, this gap with ASEAN has ballooned from \$8 billion in FY13 to \$45 billion in FY25.
- **FTA (Free Trade Agreement):** A pact between two or more nations to reduce barriers to imports and exports among them.
- **Rules of Origin (RoO):** Criteria used to determine the national source of a product. In the ASEAN context, India seeks stricter RoO to prevent Chinese goods from being routed through ASEAN countries to claim lower duties (circumvention).
- **Supply Chain Resilience:** The ability of a supply chain to withstand or recover quickly from disruptions. This is a core focus of the "India-Vietnam" bilateral pillar mentioned in the text.
- **RCEP (Regional Comprehensive Economic Partnership):** A mega-trade deal involving ASEAN, China, Japan, South Korea, Australia, and New Zealand. India famously exited these negotiations in 2019 due to concerns over Chinese imports.

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- **Main Arguments and Substantive Parts**

- The central thesis is that India is moving away from "passive" trade agreements toward "**reciprocal and protective**" trade updates.
- **The Deficit Dilemma:** The primary driver for the review is the skewed trade balance. While India provided market access, its own exports (especially in services and agriculture) faced non-tariff barriers in Southeast Asia.
- **Diversification Strategy:** India is attempting to diversify its exports to mitigate risks from traditional markets like the US and Europe, which are currently facing regulatory hurdles and economic uncertainty.
- **The Vietnam Model:** Vietnam is emerging as a critical partner. By linking payment systems (UPI and Fast Payment System) and cooperating on critical minerals and medicines, India aims to create a blueprint for deep bilateral ties within the broader ASEAN framework.
- **Addressing "Skewed" Trade:** The article highlights that while imports from ASEAN surged after the RCEP was formed (even without India in it), India's own exports have stagnated or declined since 2010.



- **Historical Evolution of the Issue**

- **1991 (Look East Policy):** Post-liberalization, India initiated the "Look East Policy" under PM P.V. Narasimha Rao to reconnect with its neighborhood.
- **2009-2010 (The AITIGA Signing):** The UPA government signed the trade pact. It was initially hailed as a bridge to the "Asian Century."
- **2014 (Act East Policy):** The policy evolved into "Act East," shifting focus from just economic ties to strategic and security cooperation.
- **2019 (The RCEP Exit):** India's refusal to join RCEP marked a turning point, signaling a more cautious approach to multilateral deals that might favor China.
- **2024-2025 (The Review Phase):** Realizing that the 2009 deal was outdated and favored ASEAN manufacturers, India initiated a formal review to be completed by late 2025.

- **Way Forward**

- **Strict Rules of Origin:** Negotiate "Product Specific Rules" to ensure that only goods with significant value addition in ASEAN enter India duty-free.
- **Service Integration:** Push for a "Trade in Services" agreement that allows Indian IT and healthcare professionals easier access to ASEAN markets to offset the goods deficit.
- **Infrastructure Linkage:** Expedite the India-Myanmar-Thailand Trilateral Highway to provide land-based trade routes, reducing dependence on the Malacca Strait.
- **Digital Diplomacy:** Scale the UPI-Fast Payment model to other ASEAN nations like Indonesia and Thailand.

- **Previous Years' Questions (PYQs)**

- **Mains 2018 (GS2):** "Evaluate the economic and strategic dimensions of India's Look East Policy in the context of the post-Cold War international scenario."
- **Mains 2019 (GS2):** "The spearhead of India's 'Act East Policy' is the ASEAN. In the light of this statement, examine the role of ASEAN in India's foreign policy."
- **Prelims 2020:** Question regarding the RCEP and India's reasons for not joining.



AXIA IAS ACADEMY

AXIA COMPETITIVE EXAM CENTRE

**OLD AITIGA
(2009)**

VS

**PROPOSED MODERNIZED
AITIGA (2025)**



**PASSIVE
AGREEMENT**



**ELIMINATE
TARIFFS (80%)+**



**STAGNANT EXPORTS
(AGRICULTURE, SERVICES)**

**TRADE DEFICIT
(Ballooned \$8B to \$45B FY25)**



**RECIPROCAL &
PROTECTIVE**



**STRICT RULES
OF ORIGIN
(Prevent China Circumvention)**



**DIVERSIFIED EXPORTS
(SUPPLY CHAIN RESILIENCE)**



**“ACT EAST” TO
PRAGMATIC
ENGAGEMENT**

KEY SHIFTS & INNOVATIONS



**UPI & FINANCIAL
CONNECTIVITY**



**CRITICAL MINERALS
COOPERATION**



**DRUG REGULATORY
MUTUAL RECOGNITION**

**WAY FORWARD:
SERVICE INTEGRATION,
INFRASTRUCTURE LINKAGE**

Mitigating SO₂ from coal power plants could prevent over 1.24 lakh deaths annually in India, says IIT Delhi study

Sophiya Mathew
New Delhi, May 6

INDIA COULD prevent an estimated 1.24,564 deaths every year by fully mitigating sulphur dioxide (SO₂) emissions from coal-fired power plants (CFPP), according to a study conducted by researchers from IIT Delhi, published in the *Nature* journal this week.

The study is among the first comprehensive attempts to quantify how SO₂ from CFPPs contributes not only to ambient SO₂ levels, but also to the formation of secondary fine particulate matter, or PM2.5.

The researchers found that a decrease in these emissions could reduce annual PM2.5 exposure by 0.3-12 microgrammes per cubic metre and ambient SO₂ levels by 0.1-13.6 parts per billion across states.

The CFPPs emit SO₂, which reacts in the atmosphere to form secondary inorganic aerosols, including sulphate, nitrate and ammonium. These pollutants add to PM2.5, the fine particulate matter linked to cardiovascular and respiratory diseases.

"Multiple existing source apportionment studies show that the energy sector is the leading contributor to air pollution. Along with the household sector, thermal power plants are also among the leading contributors. So, we wanted to quantify the exact contribution from this sector," Debajit Sarkar from IIT Delhi, one of the co-authors of the study, said.

"The overall goal was to check if we can quantify and

provide to different states their specific emissions volume, so that they could make specific policies," he said.

The researchers used air pollution models and satellite data on SO₂ emissions from CFPPs. They also used the 'Global Burden of Disease' framework - which measures the impact on health across places, time, age, and sex - to estimate deaths that could be prevented from diseases linked to air pollution, including heart and respiratory illnesses. Further, they matched air quality data with National Family Health Survey-5 data - conducted in 2019-21 - to see how the benefits would differ across gender, caste and income groups.

The study found that complete mitigation of SO₂ emissions from CFPPs could prevent 14,777 cardiovascular deaths and 8,476 respiratory deaths annually, apart from the all-cause mortality reduction.

Maharashtra, Tamil Nadu and Karnataka were estimated to see the highest number of avoidable deaths due to high population exposure to pollution. Chhattisgarh and Odisha were expected to see the biggest improvement in air quality because they have several coal power-based pollution hotspots.

Further, the study found that the benefits would not be evenly distributed. People from Other Backward Classes, Scheduled Castes and Scheduled Tribes, and poorer and middle-income groups are expected to see larger air quality gains than wealthier and gen-

THE IIT DELHI STUDY, IN A NUTSHELL

Importance of the study

- Coal-fired thermal power plants (CFPP) emit atmospheric sulfur dioxide (SO₂)
- Major precursor of secondary pollutants, which pose health risks
- Main pollutants produced include sulfate, nitrate, and ammonium aerosols

Current trend

- India's emissions have spiked significantly due to rapid socio-economic changes and heavy coal reliance
- Globally, CFPP SO₂ emissions declining

The findings

- India could reduce annual PM2.5 levels by 0.3-12 microgrammes per cubic metre by cutting down CFPP SO₂

The recommendations

- Proper implementation of SO₂ emission norms, which remains slow, localised and uneven in India
- More use of FGDs that are viewed as expensive
- Fully enforcing limits could cut SO₂ and PM2.5 emissions

eral category groups. According to the researchers, this makes SO₂ mitigation not only an air pollution issue, but also an environmental equity issue.

"We made sure that meteor-



- Can prevent 1.24,564 deaths annually
- States like Chhattisgarh and Odisha would see greatest improvements
- Socio-economically disadvantaged groups would see highest health benefits
- Health-related monetary gains likely to surpass costs of installing emission-control technologies like flue gas desulfurization (FGD)

- by over 80% by 2030
- Developing domestic expertise in pollution-control technologies to support SO₂ mitigation efforts
- Policy makers should prioritise hotspot sub-regions

SOURCE: NATURE

tion," Sarkar said, adding that location, transported air pollution and population exposure were all significant in assessing the health impact of SO₂ emissions.

The study comes amid continuing debate over the installation of flue gas desulfurisation (FGD) systems in CFPPs. The FGD is a technology that removes SO₂ from exhaust gases of fossil fuel power plants and industrial boilers, reducing acid rain and air pollution.

A key argument against FGD installation has been that Indian coal has relatively low sulphur content, making the technology expensive. The study, however, argues that health-related monetary gains from reduced emissions are likely to outweigh the cost of installing emission-control technologies.

Manoj Kumar, a researcher at the Centre for Research on Energy and Clean Air, said the findings are significant because earlier estimates did not fully quantify SO₂-linked health impacts. "The observations are significant, especially that the cost of saving lives will outweigh FGD-related expenses."

Kumar said the findings should be read in the context of the 2015 emission norms for thermal plants and subsequent delays in compliance. "These kinds of assessments were not taken into account during the reversal of the 2015 policy. Most importantly, the study shows the health impacts on vulnerable people and also the distribution among states," he said.

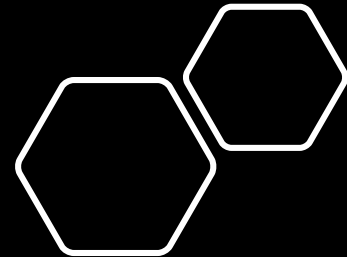
On December 7, 2015, the Union Ministry of Environ-

ment, Forest and Climate Change had introduced mandatory emission norms for CFPPs, targeting significantly lower levels of SO₂, nitrogen oxides, mercury and particulate matter. On July 11, 2025, the Centre relaxed the 2015 emission norms for CFPPs, exempting roughly 79% of coal-fired units from installing FGD systems to curb SO₂ emissions.

According to the IIT Delhi study, while SO₂ emissions from CFPPs declined globally between 2005 and 2021, India moved in the opposite direction. Satellite-derived estimates showed India's SO₂ emissions rose from 2.36 thousand kilotonnes per year in 2005 to 5.05 thousand kilotonnes per year in 2021, with a further increase of about 30% in 2023.

The study said that stronger implementation of SO₂ emission norms, wider adoption of FGDs and related control technologies, and prioritisation of hotspot regions are essential. "India needs to strictly enforce SO₂ emission rules, expand the use of FGDs and pollution-control technology in power plants, and prioritise highly-polluted areas. Also, use of cleaner cooking fuels and electric vehicles, as well as decrease in stubble burning incidents are necessary," said Sarkar.

The study also said that implementation of SO₂ emission norms remains "slow, localised and uneven" in India, and that fully enforcing current limits could cut coal power plant-linked SO₂ and PM2.5 emissions by over 80% by 2030.



- **Key Terms and Explanations**

- **Sulfur Dioxide (SO₂):** A toxic gas produced during the combustion of fossil fuels (like coal) that contain sulfur. It is a primary air pollutant and a precursor to acid rain.
- **Secondary Inorganic Aerosols (SIA):** These are particles formed in the atmosphere through chemical reactions of gaseous pollutants like SO₂ and Nitrogen Oxides (NO_x). They contribute significantly to PM2.5 levels.
- **PM2.5:** Fine particulate matter with a diameter of less than 2.5 micrometers. Because of their small size, they can penetrate deep into the lungs and enter the bloodstream, causing systemic health issues.
- **Flue Gas Desulfurization (FGD):** A set of technologies used to remove SO₂ from the exhaust "flue gases" of power plants. A common method involves "scrubbing" the gas with a lime-based slurry.
- **Source Apportionment:** A scientific method used to determine the contribution of different pollution sources (e.g., transport, industry, power plants) to the total ambient air pollution in a specific area.
- **Ambient Air Quality:** The quality of the outdoor air in our surrounding environment, typically measured against safety standards set by bodies like the CPCB.

- **Main Arguments and Substantive Parts**

- The core thesis is that **aggressive mitigation of SO₂ from coal power plants is a public health necessity**, capable of preventing over 1.24 lakh deaths annually in India.
- **The Health-Environment Link:** The study argues that SO₂ is not just a gas but a major contributor to PM2.5 through the formation of sulfates. Therefore, controlling SO₂ is a "two-for-one" win for air quality.
- **Regional Hotspots:** States like Chhattisgarh and Odisha, which have high concentrations of coal plants, stand to gain the most in terms of life expectancy and air quality improvement.
- **The Economic Trade-off:** While installing FGD systems is expensive, the study posits that the **monetary gains from reduced healthcare costs** and increased labor productivity far outweigh the capital expenditure required by power companies.
- **Vulnerability and Equity:** The impact of pollution is not uniform. Socio-economically disadvantaged groups (SC/ST/OBC and lower-income brackets) suffer disproportionately; thus, mitigation is also an **environmental justice** issue.

- **Historical Evolution of the Issue**

- The journey of emission control in India has been a tug-of-war between industrial growth and environmental protection:
- **Pre-2015:** Coal plants were primarily regulated for particulate matter, with very lax or non-existent norms for SO₂ and NO_x.
- **December 2015:** The Ministry of Environment, Forest and Climate Change (MoEFCC) introduced landmark notification setting strict deadlines for CFPPs to install FGDs and cut emissions.
- **2017–2021 (The Delay Era):** Power Producers argued that the technology was too costly and would hike electricity tariffs. Deadlines were repeatedly pushed back from 2017 to 2022, and eventually to 2024–2026 depending on the plant's location.
- **July 2025 (Projected/Contextual):** The government further relaxed norms for several units, highlighting the ongoing tension between "Energy Security" and "Environmental Health."
- **Present Day:** India remains one of the world's largest emitters of SO₂, even as global trends show a decline.

- **Way Forward**

- **Mandatory Compliance:** No more extensions. Use "Polluter Pays Principle" to fine non-compliant plants.
- **Financing Green Tech:** Create a dedicated fund or provide low-interest loans for FGD installation through the Clean Energy Cess.
- **Domestic Manufacturing:** Incentivize the production of "Made in India" scrubbers to reduce costs.
- **Just Transition:** Gradually retire older, inefficient coal plants in high-population zones and replace them with renewables.
- **Integrated Monitoring:** Use satellite-based tracking (like GEMS or Sentinel) alongside ground sensors to ensure data transparency.

- **Previous Years' Questions (PYQs)**

- **UPSC 2023 (GS 3):** "Explain the mechanism and occurrence of Cloudburst in the context of the Indian subcontinent." (Thematic link: Atmospheric changes).
- **UPSC 2015 (GS 3):** "Air pollution is a major threat to human health in India. Discuss the various initiatives taken by the government to tackle this issue."
- **UPSC 2022 (GS 3):** "What are the key features of the National Clean Air Programme (NCAP)?"
- **APSC 2020:** "Discuss the environmental impact of thermal power plants in India."

MITIGATING SO₂ EMISSIONS: PUBLIC HEALTH & ECONOMIC NECESSITY - IIT DELHI STUDY ANALYSIS

1 KEY CONCEPTS

Gas Concepts:
The gas of an atmospheric aerosol at ultra relaxation winds in co-rotators, and well-knowns seeded functions and other chemical assumptions of solid secondary inorganic aerosols.

Particle Filter Mensols (Particle Partics (PM_{2.5}))
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2 MAIN ARGUMENTS

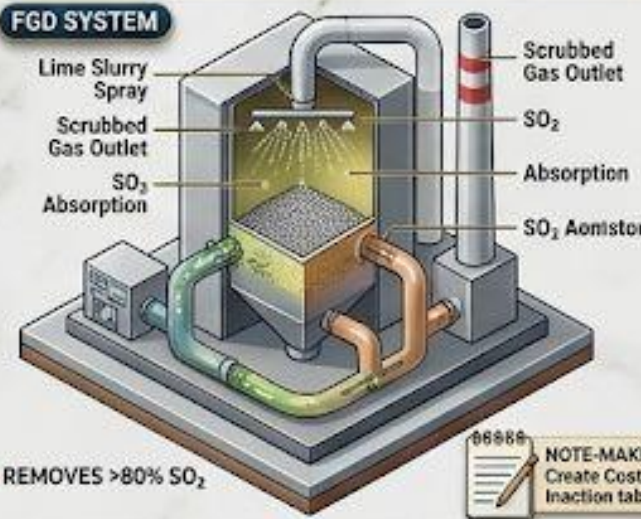
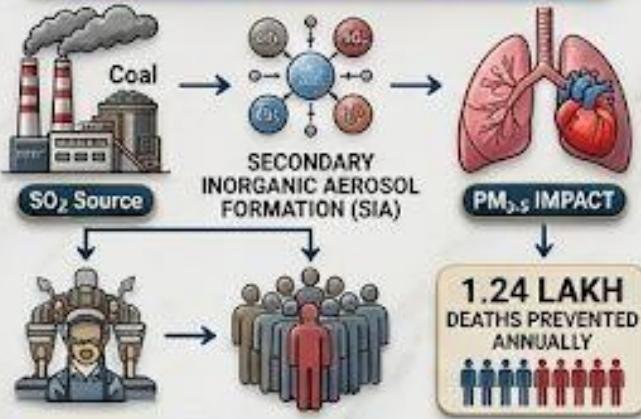


- **1.24 lakh deaths are preventable.** Prevented annual deaths rose vs. increasing vs. Had in imitating mitigation cost.
- **Regional Hotspots:** The cause power sources regional hepton areas mitigation, occurs in the more Chhattisgarh and Odisha.
- **Socioeconomic equity:** Socioeconomic equity to draines balancomequ imparing centering economics outacts.

3 HISTORICAL EVOLUTION



INTEGRATED IMPACT PATHWAY



UPSC CSE RELAENACE: INTERSECTS ENVIRONMENT, HEALTH, ECONOMY, AND SOCIAL JUSTICE - CRITICAL MAINS ISSUE.

4 LOGICAL & PHILOSOPHICAL BASE

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5 CHALLENGES (IMPLEMENTATION)

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6 MULTIDIMENSIONAL ANALYSIS

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7 WAY FORWARD

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- **FINANCING GREEN TECH (Clean Energy Cess)**
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- **DOMESTIC MANUFACTURING**
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- **INTEGRATED MONITORING**
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CJI's role in CEC, EC appointments was temporary, pending new law: SC

Court's observation was in response to pleas challenging a 2023 Act, which replaced the CJI with a Union Minister on the selection panel; petitioners argue this law overrides a Constitution Bench judgment which sought a panel of PM, LoP, CJI

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday said the Chief Justice of India's involvement in the appointment of the Chief Election Commissioner (CEC) and Election Commissioners (ECs) was only meant to last until Parliament came up with a law.

The court's observation was in response to multiple petitions challenging the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service, and Terms of Office) Act of 2023.

The petitioners, who include the Association for Democratic Reforms and activist Jaya Thakur, said the 2023 law clothed the political executive of the day with a dominant, if not "exclusive", control over the appointment of the CEC and ECs.

The law was introduced in December 2023, ostensibly to countermand a Constitution Bench judgment in March the same year.

Are you saying Parliament did not have the power to make the law? Or can a mandamus be given to Parliament to make a law only in a certain way?
SUPREME COURT



This judgment had declared that CEC and EC appointments should be made on the recommendation of a committee of the Prime Minister, the Leader of the Opposition of the Lok Sabha (LoP) or the leader of the largest Opposition party in the Lok Sabha, and the Chief Justice of India (CJI).

The court had ordered that its judgment would remain operative till "Parliament makes a law in consonance with Article 324(2) of the Constitution".

Consequently, the government brought the 2023 Act, replacing the CJI with a Union Cabinet Minister in the committee. The current CEC, Gyanesh

Kumar, was the first to be appointed to the office under the new law.

'Prime Minister's man'

On Wednesday, senior advocate Vijay Hansaria, appearing for the petitioners, said the Constitution framers and the Supreme Court itself had never intended the CEC to be the "Prime Minister's baby or the Prime Minister's man".

Mr. Hansaria submitted that both the Constitution framers and the Supreme Court had warned against leaving the appointment of Election Commissioners exclusively in the hands of the executive.

He referred to the Supreme Court's own obser-

vations in the March 2023 Constitution Bench judgment (*Anoop Baramwal v. Union of India*) that the "fierce independence, neutrality and honesty" envisaged in the institution of the Election Commission required an end to government monopoly and "exclusive control" over appointments to the highest poll body.

Prior to the judgment, the CEC and ECs were appointed by the President on the advice of the Prime Minister. The judgment had brought the appointment process on par with that of the CBI Director.

However, Justice Datta highlighted that even the Supreme Court had only intended the judgment to be operative till Parliament passed a law.

"Are you saying Parliament did not have the power to make the law? Or can a mandamus be given to Parliament to make a law only in a certain way?" Justice Datta asked.

Senior advocate Gopal Sankaranarayanan, also for the petitioners, said

their case was not just about the replacement of the CJI with a Cabinet Minister in the committee. It was also about the constitutionality of an Act which had effectively reverted the control over the appointment of CEC and ECs to the Executive.

"The point is Election Commission appointments cannot be under the control of the executive," he submitted.

Mr. Sankaranarayanan said the Anoop Baramwal judgment had addressed a "legislative vacuum". Before March 2023, appointments of the CEC and ECs were made by the President on the advice of the Prime Minister. The "arrangement" had ensured that the power of appointment rested with the Political Executive.

"This mechanism ought to have stopped in the 1950s, but whichever parties came to power found the arrangement convenient," Mr. Sankaranarayanan said.

Arguments would continue on Thursday.

- **Key Terms and Explanations**
- **Chief Election Commissioner (CEC) & Election Commissioners (ECs):** These are constitutional authorities mandated under **Article 324** to conduct free and fair elections. Think of them as the "referees" of Indian democracy.
- **Article 324(2):** This specific clause states that the appointment of the CEC and ECs shall be made by the President, subject to any law made by Parliament.
- **Legislative Vacuum:** A situation where no specific law exists to govern a process. For 70 years, Parliament didn't pass a law for these appointments, leaving the power solely with the Executive (the President acting on the PM's advice).
- **Writ of Mandamus:** A court order to a public body or government to perform a legal duty. In this context, the Court questioned if it could "order" Parliament to legislate in a specific way.
- **Constitution Bench:** A bench of at least five judges of the Supreme Court that decides cases involving substantial questions of law regarding the interpretation of the Constitution.
- **Separation of Powers:** The doctrine that divides government responsibilities into three branches: Legislative (makes laws), Executive (implements laws), and Judiciary (interprets laws).

• **Main Arguments and Substantive Parts**

- The current debate centers on the transition from a court-mandated selection committee to a legislated one.
- **The Judiciary's Interim Role:** The Supreme Court clarified that its March 2023 judgment—which included the Chief Justice of India (CJI) in the selection panel—was a "stop-gap" arrangement. It was meant to fill the legislative vacuum only until Parliament enacted its own law.
- **The Petitioners' Challenge:** Activists argue that the **2023 Act** (which replaced the CJI with a Union Cabinet Minister) undermines the independence of the Election Commission. They claim it ensures a "dominant" or "exclusive" control of the Executive over the selection process.
- **The "PM's Man" Argument:** There is a fear that a panel consisting of the PM, a Minister, and the Leader of Opposition (LoP) creates a 2:1 ratio in favor of the government, potentially making the CEC a "subordinate" to the Executive.
- **Parliament's Sovereignty:** On the flip side, the Court noted that Parliament has the sovereign power to make laws under Article 324(2). The Judiciary cannot dictate the exact "composition" of the committee if the law is otherwise constitutionally valid.

- **Historical Evolution of the Issue**
- The journey of how we choose our "Election Umpires" has seen three distinct phases:
- **1950 – 2023 (Executive Primacy):** For decades, the President (on the advice of the PM) appointed the CEC and ECs. There was no formal selection committee. This was often criticized for being opaque and prone to partisanship.
- **March 2023 (The Anoop Baranwal Judgment):** A Constitution Bench ruled that the Executive's "exclusive control" over appointments was detrimental to democracy. They created a panel comprising the **PM, the Leader of Opposition, and the CJI.**
- **December 2023 (The New Law):** Parliament passed the *Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023*. This law replaced the CJI with a **Union Cabinet Minister nominated by the PM.**
- **Present Day (Judicial Review):** The Supreme Court is now examining whether this new law follows the spirit of "independence" or if it's a mere "reversion to Executive control."

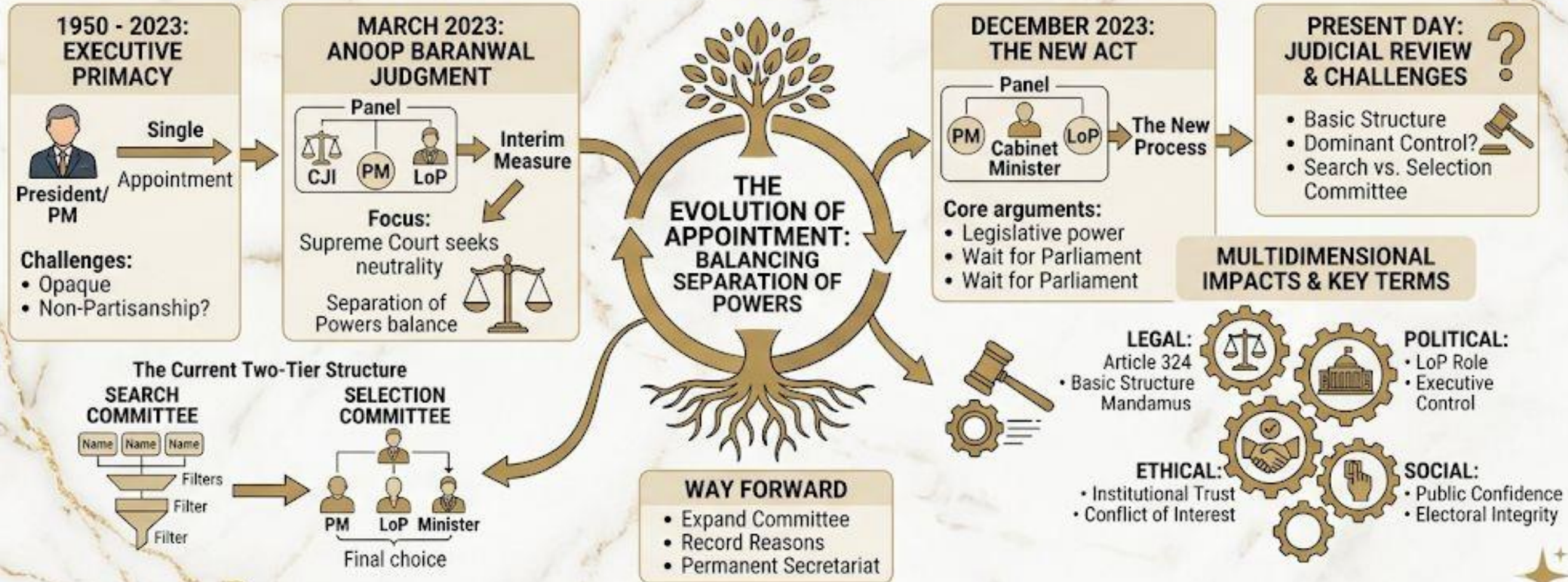
- **Way Forward**

- **Broadening the Committee:** To ensure "neutrality," the Selection Committee could be expanded to include a retired judge or an eminent citizen, maintaining a balance.
- **Statutory Safeguards:** The law should mandate that the reasons for selecting one candidate over others be recorded and made available via the RTI Act (subject to privacy).
- **Permanent Secretariat:** The EC should have its own independent staff and budget (charged on the Consolidated Fund of India), similar to the CAG or the Judiciary, to reduce day-to-day dependence on the Law Ministry.

- **Previous Years' Questions (PYQs)**

- **UPSC Prelims**
- **2017:** Which of the following are the functions of the Election Commission of India? (Checking awareness of Article 324).
- **2023:** Consider statements regarding the appointment of the CEC.
- **UPSC Mains (GS 2)**
- **2023:** "The Jurisdiction of the Central Bureau of Investigation regarding lodging an FIR and conducting investigation... is subject to the control of the state government." (Theme: Executive control over independent bodies).
- **2012:** "Discuss the role of the Election Commission of India in the light of the evolution of the Model Code of Conduct."

AXIA IAS ACADEMY: COMPREHENSIVE UPSC CSE ANALYSIS - THE CEC & EC APPOINTMENT PROCESS



CHINA IN MIND, LEADERS STRESS ON PEACE AND FREEDOM OF NAVIGATION IN SOUTH CHINA SEA

India, Vietnam elevate ties to enhanced comprehensive strategic partnership

Shubhajit Roy
New Delhi, May 6

INDIA AND Vietnam decided to elevate bilateral ties to 'Enhanced Comprehensive Strategic Partnership', set a new trade goal of \$25 billion by 2030 and increase defence systems procurement between the two countries after Prime Minister Narendra Modi met the visiting President of Vietnam To Lam on Wednesday.

After the bilateral talks with President To Lam, who is also the General Secretary of the Central Committee of Communist Party of Vietnam, Prime Minister Modi said, "We are today elevating our relationship to the level of an 'Enhanced Comprehensive Strategic Partnership.' We will now steer our partnership toward even loftier goals. From culture, connectivity, and capacity-building to security, sustainability, and supply chain resilience—our cooperation is set to reach new heights across every sector."

India was one of the first



Prime Minister Narendra Modi with Vietnam President To Lam in New Delhi on Wednesday. ANIL SHARMA

countries with whom Vietnam entered into a Strategic Partnership in 2007. This was also India's first Strategic Partnership within the ASEAN region. The two countries elevated the relations to a Comprehensive Strategic Partnership in 2016.

On the trade ties, Modi said, "Bilateral trade between India and Vietnam has doubled over the past decade, reaching a vol-

ume of \$16 billion. Today, we have taken several significant decisions aimed at further boosting this figure to \$25 billion by the year 2030. The MoU between our respective drug authorities will now enhance access for Indian pharmaceuticals in Vietnam. The export of India's agricultural, fisheries and animal products to Vietnam is also set to become

E. EXPLAINED

Defence, maritime security in focus

With an assertive China in their neighbourhood, India and Vietnam have cooperated in the strategic domain for almost two decades now. Now, with the Vietnamese President choosing India early in his term, it signals that he is reaching out to Delhi to cooperate on defence and maritime security.

smoother. Very soon, Vietnam will get to savor India's grapes and pomegranates, while we will enjoy Vietnam's durian and pomelo." The two sides signed 11 pacts, ranging from rare earth to digital payments, urban management to culture and manuscripts.

During the meeting, Vietnam also joined the Indo Pacific Oceans Initiative (IPOI).

On the contentious issue of South China Sea, the joint statement said, in an oblique reference to China's belligerent behaviour, "Underlining the link between prosperity and security, the leaders reaffirmed the importance of maintaining peace, stability, security and freedom of navigation and overflight in the South China Sea, while pursuing the peaceful resolution of disputes in accordance with international law, particularly the 1982 United Nations Convention on the Law of the Sea (UNCLOS), without resorting to threat or use of force."

It also said that the leaders underscored the importance of "non-militarization and self-restraint in the conduct of all activities by claimants and all other states, and avoidance of actions that could further complicate the situation or escalate disputes affecting peace and stability. The leaders underlined that UNCLOS is the comprehensive legal framework governing all activities in the oceans and seas. The leaders further called for the full and ef-

fective implementation of the Declaration on the Conduct of Parties in the South China Sea (DOC) in its entirety and the early conclusion of negotiations towards a substantive and effective Code of Conduct in the South China Sea (COC)."

Underlining that "defence and security cooperation" is a "key pillar" of the India-Vietnam Comprehensive Strategic Partnership, it said that the leaders agreed to further "strengthen cooperation and enhance engagements in both traditional and emerging areas of defence cooperation, including defence policy dialogue, joint exercises, staff talks, joint research and co-production of new defence technologies, enhanced port calls by naval vessels and air force aircraft, peacekeeping activities, information sharing, hydrography, defence exhibitions, capacity-building, defence industrial cooperation, maritime security, maritime safety, and search and rescue operations based on mutual interest and priorities of the two countries."

- **Key Terms and Explanations**

- **Enhanced Comprehensive Strategic Partnership (ECSP):** This is the highest tier of bilateral engagement. While a "Strategic Partnership" focuses on shared long-term goals, "Comprehensive" adds depth across all sectors (trade, culture, tech), and "Enhanced" signifies an urgent, prioritized escalation of these ties.
- **UNCLOS (United Nations Convention on the Law of the Sea):** Often called the "Constitution for the Oceans," it defines the rights and responsibilities of nations regarding their use of the world's oceans. In this context, it is the legal benchmark for disputes in the South China Sea.
- **Indo-Pacific Oceans Initiative (IPOI):** An open, non-treaty-based initiative proposed by India for a safe, secure, and stable maritime domain. Vietnam's joining of this initiative strengthens India's regional leadership.
- **Freedom of Navigation and Overflight:** The right of ships and aircraft from any state to pass through the Exclusive Economic Zones (EEZ) of other states. This is a direct counter-principle to "maritime expansionism."
- **Code of Conduct (COC):** A proposed set of rules to manage behavior in the South China Sea to prevent military conflict, currently being negotiated between ASEAN and China.

-

Main Arguments and Substantive Parts

- The core thesis of the recent engagement is that **maritime security and economic prosperity are indivisible**. The discussion moves beyond mere diplomatic pleasantries to concrete pillars of cooperation:
- **Strategic Autonomy:** Both nations are signaling that their foreign policy is not dictated by any third power. By elevating ties, they create a "middle-power" axis that balances regional hegemons.
- **Defense as a Key Pillar:** The shift from "buyer-seller" to "co-producers" of defense technology is significant. This includes joint research, hydrography, and enhanced port calls by naval vessels.
- **Economic Diversification:** A trade goal of **\$25 billion by 2030** aims to reduce over-dependence on a single market (China) and integrate supply chains in pharmaceuticals, agriculture, and digital payments.
- **The "Rule-Based Order":** The leaders emphasized "non-militarization" and "self-restraint," an oblique but clear reference to preventing unilateral changes to the status quo in the South China Sea.

- **Historical Evolution of the Issue**
- The India-Vietnam relationship has transitioned from Cold War ideological alignment to modern-day pragmatic strategic partnership:
- **1950s-70s (Foundational Years):** India supported Vietnam's struggle against colonial rule and its later reunification. Jawaharlal Nehru and Ho Chi Minh laid the emotional foundation of the bond.
- **1990s (Look East Policy):** As India opened its economy, Vietnam became a focal point in Southeast Asia.
- **2007 (Strategic Partnership):** Formalization of security and economic ties.
- **2014 (Act East Policy):** Under PM Modi, the focus shifted from "Looking" to "Acting," resulting in the 2016 elevation to a **Comprehensive Strategic Partnership**.
- **2024-Present (The "Enhanced" Era):** The relationship now incorporates high-tech cooperation, rare earth minerals, and advanced maritime domain awareness to counter regional assertiveness.

- **Way Forward**

- **Defense Industrial Integration:** Move beyond selling equipment to setting up joint maintenance, repair, and overhaul (MRO) facilities in Vietnam.
- **Blue Economy:** Collaborate on sustainable deep-sea mining and marine biotechnology.
- **Digital Bridge:** Accelerate the integration of Fintech and 5G technologies to create a seamless digital ecosystem between New Delhi and Hanoi.
- **Institutionalizing the IPOI:** India should encourage Vietnam to lead a specific pillar (like Maritime Ecology) within the Indo-Pacific Oceans Initiative.

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Previous Years' UPSC Questions

- **Mains (2016):** "Evaluate the economic and strategic dimensions of India's Look East Policy in the context of the post-Cold War international scenario."
- **Mains (2018):** "The sphere of 'Act East Policy' is not just about ASEAN but also includes the wider Indo-Pacific. Discuss."
- **Prelims (2020):** Questions on UNCLOS and its jurisdiction.
- **Mains (2022):** "The South China Sea is a theater of great power rivalry. Discuss India's interests in the region."

KEY GEOPOLITICAL & STRATEGIC FOUNDATIONS



ECSP - Gaster-develped Completion.
IPOI - Groniveinners ceriohatiseecs.

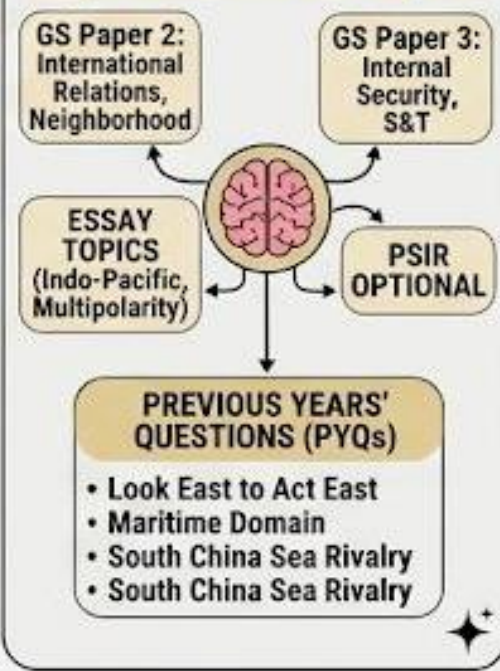


UPSC CIVIL SERVICES: IN-DEPTH ANALYSIS - INDIA & VIETNAM: ELEVATING TO THE ENHANCED COMPREHENSIVE STRATEGIC PARTNERSHIP

CORE PILLARS OF ENGAGEMENT

<p>DEFENSE & MARITIME SECURITY</p> <p>Joint naval ships - to Co-itu!ships</p> <p>CO-PRODUCTION (e.g., BRAHMOS)</p> <p>e.g. Patrol boats</p> <p>Hydrography</p> <p>Shift from "Buyer-Seller" to Co-Producers</p>	<p>ECONOMIC COOPERATION</p> <p>\$15B (Current) \$25B (2030 Target)</p> <p>Pharmaceuticals</p> <p>Agriculture</p> <p>Digital Payments (UPI LINK)</p> <p>Supply Chain Resilience</p>	<p>DIPLOMACY & MULTIPOLARITY</p> <p>STRATEGIC TRUST</p> <p>Vasudhaiva Kutumbakam & Four Nos.</p>	<p>SUSTAINABLE DEVELOPMENT & PEOPLE-TO-PEOPLE</p> <p>Renewable Energy</p> <p>Rare Earth Minerals</p> <p>Buddhist tourism</p> <p>Cham temples</p>
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UPSC EXAM RELEVANCE (SYLLABUS & PYQ)



PHILOSOPHICAL BASE & WAY FORWARD

PHILOSOPHICAL UNDERPINNINGS



WAY FORWARD: THE 'ENHANCED' PATH



BRAHMOS DEAL (Co-production)

RARE EARTH MINERALS (Vietnam's Reserves)

UPI-VIET QR LINK (Soft Power)

India to host first Big Cat Summit in June; 95 countries set to participate

Jacob Koshy
NEW DELHI

The inaugural International Big Cat Alliance (IBCA) Summit, to be held here from June 1 to 3, is expected to adopt the first-ever global declaration on big cat conservation. Titled the 'Delhi Declaration', it will articulate shared priorities, strengthen transboundary cooperation, and promote a landscape-based approach for conserving big cats and their habitats.

Representatives from 95 countries are expected to participate, the Ministry of Environment and Forests and Climate Change said on Wednesday.

The IBCA is an association of countries that host, or have itinerant populations of at least one of the seven 'big cats' – lions, tigers, leopards, snow leopards, cheetahs, jaguars,



Call for action: The summit will be guided by the theme 'Save big cats, save humanity, save ecosystem'. K.R. DEEPAK

and pumas – and are committed to the conservation of these animals.

Collective action

There are 24 member countries, three observer countries, and several other 'range' countries in the alliance. Member countries are expected to coordinate action through programmes and activities aimed at improving the

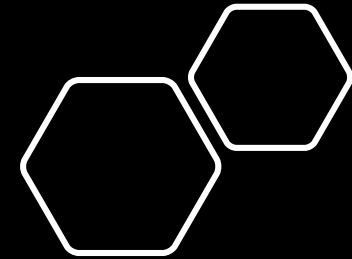
state of habitats, prey, and big cats, including big cat protection and conservation, innovation, research, development, and capacity building. They also share relevant information about big cat protection and conservation programmes.

Summit participants are likely to include heads of State/Government of member and observer coun-

tries, Environment Minister Bhupender Yadav said on Wednesday at an event to launch the summit website and unveil its logo. The summit will be guided by the theme 'Save big cats, save humanity, save ecosystem', and will bring together over 400 conservationists, policymakers, scientists, multilateral agencies, financial institutions, corporate leaders, and community representatives from across the globe.

Launched in 2023

The IBCA, piloted and conceived by India, was officially launched by Prime Minister Narendra Modi in 2023. The alliance, Mr. Yadav said, reflects India's belief that conservation challenges must be addressed "collectively" through cooperation, knowledge sharing, and mutual support.



- **Key Terms and Explanations**
- **Big Cats:** Specifically refers to the seven major feline species: **Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma**. While the first five are found in India, the latter two are native to the Americas.
- **International Big Cat Alliance (IBCA):** A mega-global alliance launched by India to create a common platform for 95 "range" countries (countries where these cats reside) to curb poaching and illegal wildlife trade.
- **Range Countries:** Nations that contain the natural habitat of a particular species. For big cats, this spans across Asia, Africa, and the Americas.
- **Delhi Declaration:** A proposed framework intended to be the first-ever global collective commitment to standardize conservation protocols and trans-boundary cooperation.
- **Trans-boundary Cooperation:** Conservation efforts that cross national borders, acknowledging that wildlife does not recognize political boundaries (e.g., the Manas-Royal Manas landscape between India and Bhutan).
- **Landscape-based Approach:** Shifting focus from protecting individual animals in isolated pockets to managing entire ecosystems that support prey bases and genetic diversity.

• **Main Arguments and Substantive Parts**

- The core thesis posits that big cat conservation is not merely an environmental niche but a prerequisite for human survival and ecological stability.
- **The "Umbrella Species" Argument:** Big cats are apex predators. By protecting them, we inherently protect the entire food chain, vast forest tracts, and the water security of millions of people.
- **Collective Responsibility:** The article argues that individual national efforts are insufficient against global threats like climate change and organized poaching networks. Hence, a multilateral approach is the only viable path.
- **Knowledge Equity:** India, having successfully doubled its tiger population, seeks to democratize its conservation "know-how"—sharing technical expertise in radio-collaring, census via camera traps, and community-led protection with countries in Africa and SE Asia.
- **Economic-Ecological Synergy:** The theme "Save big cats, save humanity" suggests that ecological health is the foundation of economic resilience, especially for developing nations reliant on natural resources.

- **Historical Evolution of the Issue**
- The journey from "Shikar" (hunting) to "Sanctuary" reflects the evolution of the Indian state:
- **Pre-1970s:** Era of unregulated hunting and rapid habitat loss. Big cats were viewed either as trophies or vermin.
- **The Turning Point (1972-73):** Enactment of the **Wildlife (Protection) Act, 1972** and the launch of **Project Tiger**. This marked the shift toward state-led, fortress conservation.
- **Expansion (1980s-2000s):** Introduction of Project Elephant and the focus on "Biosphere Reserves." However, the 2005 Sariska tiger local extinction crisis highlighted flaws in the system, leading to the creation of the **NTCA (National Tiger Conservation Authority)**.
- **Global Leadership (2010-Present):** The St. Petersburg Declaration (2010) set the goal to double tigers (TX2). India achieved this ahead of schedule.
- **Current Phase (2023-26):** Launch of IBCA and the reintroduction of the Cheetah (2022) signifies India's transition from a participant to a global architect of wildlife policy.

- **Way Forward**

- **Community-Led Conservation:** Move toward a "Community-Owned" model where local tribes are the primary stakeholders and beneficiaries of the IBCA.
- **Technology Integration:** Use of AI and satellite monitoring to predict poaching incidents before they happen.
- **Green Corridors:** Prioritize the creation of migratory corridors between protected areas to prevent genetic inbreeding.
- **Economic Valuation:** Conduct "Natural Capital Accounting" to show skeptics the actual dollar value of the ecosystem services (water, oxygen, carbon sequestration) provided by big cat habitats.

- **Previous Years' Questions (PYQs)**

- **UPSC Prelims:**
- (2020) With reference to India's biodiversity, Ceylon frogmouth, Coppersmith barbet, Gray-chinned minivet and Small minivet are? (Birds) — *Context: Species identification is a recurring theme.*
- (2012/2019) Questions on the status of Tiger Reserves and the Wildlife Protection Act.
- **UPSC Mains:**
- (2023, GS3): "Dam building in the Himalayas is a threat to the ecosystem." (Relate this to Snow Leopard habitat loss).
- (2014, GS3): "Environmental Impact Assessment (EIA) is necessary for developmental projects."
- (2016, GS3): "Rehabilitation of tiger population in India has been a success. Discuss the role of NTCA."



THE BIG CAT CONSERVATION FRAMEWORK: A MULTI-DIMENSIONAL ANALYSIS FOR UPSC CSE

INTERNATIONAL BIG CAT ALLIANCE (IBCA): KEY FACETS

Participating Countries

95 Global Range Countries

Goal

Harmonized Global Declaration (DELHI DECLARATION)

Shared Protocols

The 7 Big Cats

Tiger Lion Leopard Snow Leopard
Cheetah Jaguar Puma

Focus

Conservation, Anti-Poaching, illegal trade curbs, habitat protection

COMPREHENSIONAL IMPACT ANALYSIS

MULTI-DIMENSIONAL IMPACT ANALYSIS



UPSC CSE: SYLLABUS, PYQS & WAY FORWARD

Syllabus & Links

- GS Paper 1, 1: Biodiversity
- GS Paper 1, 2: International Relations
- GS Paper 1, 2: Internal Security
- GS Paper 1, 3: Ethics
- Essay themes

NCERT themes

- Class 10 Geo, Class 12 Bio,
- Class 10 Geo, Class 12 Bio
- Class 10 Geo, Class 12 Bio,
- Class 10 Geo, Class 12 Bio,
- Class 10 Geo, Class 12 Bio,
- Class 10 Geo, Class 12 Bio

Historical Evolution



Way Forward

- Deep Tech integration (AI, Satellite monitoring)
- Green Corridors
- Dedicated Global Fund
- Community Empowerment

- **Key Terms and Explanations**

- **Invasive Alien Species (IAS):** Non-native species that spread rapidly in a new environment, often causing ecological or economic harm. *Example: Lantana camara displacing native scrub in Indian forests.*
- **Ecological Succession:** The process by which the structure of a biological community evolves over time. The article suggests that IAS are often "first responders" in this process.
- **Phreatophyte:** A plant with deep roots that draws water from the water table. *Example: Prosopis juliflora (Vilayati Kikar), which thrives even in arid regions by tapping deep groundwater.*
- **Nutrient Loading:** The excessive input of nutrients (like nitrogen and phosphorus) into an ecosystem, often through fertilizers, which can favor specific hardy species over diverse native ones.
- **Niche:** The specific role and position a species has in its environment. When ecosystems are degraded, "empty" niches are created that IAS quickly fill.
- **Biomes:** Large naturally occurring communities of flora and fauna occupying a major habitat, such as rainforests or grasslands.

-

Main Arguments and Substantive Parts

- The core thesis posits that **invasive species are symptoms, not the primary cause, of ecological decline.**
- **The "Symptom" Argument:** The article argues that landscapes are often degraded by human activity (logging, dams, chemicals) *before* invasive species take over. The IAS simply moves into a "broken" house.
- **The Drivers of Invasion: * Agricultural Intensification:** Massive use of urea and nitrogen (35-40 million tonnes annually) creates a chemical environment where only certain "disturbance-tolerant" species can survive.
 - **Hydrological Changes:** Excessive borewell use and canal irrigation have altered soil moisture, favoring deep-rooted species like *P. juliflora*.
- **The Myth of Simple Removal:** Merely uprooting IAS (like the Tamil Nadu court order for *Prosopis*) is insufficient. Without addressing soil chemistry and water cycles, the same or different invasive species will return.
- **Compensatory Roles:** Some IAS might actually perform ecological "favors" in degraded lands, such as binding soil, providing windbreaks, or sequestering carbon where nothing else grows.

- **Historical Evolution of the Issue**

- **Colonial Era (Pre-1947):** Massive deforestation for timber, tea, coffee, and rubber plantations. This "simplified" complex ecosystems, making them vulnerable. *P. juliflora* was introduced in 1877 as a "greenery" experiment.
- **The Green Revolution (1960s-70s):** Introduction of high-input farming led to nutrient loading (nitrogen) and heavy groundwater extraction, fundamentally changing the soil chemistry of the subcontinent.
- **Post-Independence Industrialization:** Large-scale dams, mining, and road construction fragmented habitats, creating "edge effects" where species like *Lantana* thrive.
- **Contemporary Legal Activism (2010s-Present):** Judicial interventions, such as the Tamil Nadu High Court's focus on eradicating invasive species, have brought the issue into the public and administrative spotlight.

- **Way Forward**

- **Shift to Process-Based Restoration:** Focus on restoring the "plumbing" (water cycles) and "chemistry" (nitrogen levels) of the land.
- **Integrated Grazing Management:** Manage India's massive livestock population to prevent overgrazing of native species.
- **Localized Ecology:** Empower local communities (who know the land's history) to lead restoration rather than using heavy machinery.
- **Scientific Auditing:** Move from auditing "money spent on removal" to "biodiversity indices improved."

-

Previous Years' Questions (PYQs)

- **Prelims (2018):** Question on *Prosopis juliflora* and why it is often mentioned in the news (Answer: It tends to reduce the biodiversity in the area in which it grows).
- **Mains (2023, GS III):** "Dam expansion and its impact on local ecology." (Relevant to the article's point on hydrological changes).
- **Mains (2020, GS III):** "How does the draft Environment Impact Assessment (EIA) Notification, 2020 differ from the existing EIA Notification, 2006?" (Relevant to land-use change).



INVASIVE ALIEN SPECIES IN INDIA: THE COMPLEX ECOLOGICAL DEBATE — A UPSC ANALYSIS BY AXIA IAS ACADEMY

1. KEY TERMS & CONCEPTS

Invasive Species (IAS)

Invasive Species (IAS): Patents eventually mitind pulles to tough weed.



Native Ecosystems

Native Ecosystems command in ecosystem and environment.



Disturbance-tolerant Species

Disturbance-tolerant species species for imasive ecosystems.



Phreatophyte

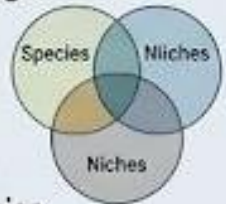
Deep-rooted plant to reimally deep-rooted depth weed.



4. LOGICAL & PHILOSOPHICAL BASE

• Holistic vs. Reductionist thinking

- Holistic vs. reductionist thinking, species niches or overlapping species niches *artuit*.



• Niche Theory

- Determipping species niches and onvelopped's saliturations of species and others species.

2. CORE ARGUMENTS

ARE INVASIVES SYMPTOMS OR CAUSES?

REDUCTIONIST VIEW



Lantana

Removal alone restores (OLD THINKING)



HOLISTIC VIEW



Address land use, water, and climate first (NEW THINKING)

3. HISTORICAL TIMELINE & POLICIES



PRE-1877

Native State



1877

P. juliflora Introduced



Green Revolution

Nutrient Loading



Present-Day Restoration Degradation



Future

Restoration Policy

5. MULTIDIMENSIONAL IMPACTS (SOCIAL, ECONOMIC, LEGAL)



SOCIAL

Cattle-forest-commons conflict, leaders or renonnement of cir-beronmens



ECONOMIC

Cost of removal, new economies, economies and pitive impacts



LEGAL

Tamil Nadu HC removal order of remard courtes

6. WAY FORWARD: SUSTAINABLE SOLUTIONS

- ✓ Address Nutrient Loading
- ✓ Manage Livestock Grazing
- ✓ Restore Water Cycles
- ✓ Long-term Habitat Recovery



What is Karnataka's new gig worker grievance system?

What gap does Karnataka's new system address? How will the welfare fee be used?

Shilpa Elizabeth

The story so far:

On May 1, 2026 – International Workers' Day – the Karnataka government announced the operationalisation of a specialised grievance redressal mechanism for platform-based gig workers in the State. Claimed to be the first government-backed grievance handling mechanism for gig workers in India, it allows workers to officially lodge complaints through the Integrated Public Grievance Redressal System (IPGRS), the State's centralised digital platform for addressing citizen grievances related to government schemes.

How does the system work?

Platform-based gig workers can now officially lodge grievances, including those related to pay, working conditions, and platform-specific disputes, via the IPGRS.

Under the Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, every aggregator platform must constitute an Internal Dispute Resolution Committee (IDRC). Grievances filed on

the IPGRS will be automatically routed to the respective platform's IDRC. Upon receiving a complaint, the IDRC is expected to attempt resolution within 15 working days, and is allowed up to 45 days to issue a final order. Any party aggrieved by the final decision can escalate the matter to the Karnataka Gig Workers Welfare Board within 30 days.

What concerns can a gig worker raise?

Gig workers can raise complaints related to suspension, blocking, or deactivation of accounts, termination from the platform, reduction or withholding of payments, unfair penalties, discrimination, unsafe working conditions, or other violations of rights guaranteed under the Act.

What gap does it address?

While many platforms have internal grievance redressal mechanisms, these systems exist outside a formal dispute resolution framework. As a result, gig workers have often reported a lack of resolution to their grievances. Many have complained that platforms quite often turn a blind eye to the workers' woes.

The Karnataka government's move seeks to bring more structure and transparency into the process and ensure legal recourse for these workers outside the formal economy. Gig workers can now officially lodge grievances through the portal, which will then be routed to the respective platform's IDRC. The government, as a central facilitator, will monitor the process.

Why is the mechanism being implemented now?

The Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, 2025, was officially notified in September 2025.

In March 2026, Karnataka became the first Indian State to notify the Rules to enact the law for gig workers. The grievance-redressal mechanism for gig workers in the State forms a crucial part of the Act. It is considered a major deterrent that would hinder arbitrary terminations or account deactivation of gig workers and address their concerns.

What are the other key developments related to the Act?

In January 2026, the Karnataka

Platform-Based Gig Workers Welfare Development Board was constituted to implement welfare measures.

Platforms have been mandated to furnish details of both the company and their gig workers – including name, age, phone number, Aadhaar number, UAN, and bank account details – to the Board. This data will be integrated into the Board's portal.

According to the government, so far, around 12 platforms/aggregators have provided details of 12 lakh active gig workers in the State.

However, given that several workers are associated with multiple platforms, the numbers could contain overlaps. This is expected to be sorted once the government comes up with unique IDs for each worker.

In February, the government announced that 1% of every transaction will be collected from aggregator platforms to provide social security benefits to platform-based gig workers.

What will the welfare fee be used for?

The welfare fee will go to the Karnataka Platform-Based Gig Workers' Fund to provide social security and welfare benefits to platform-based gig workers in the State.

According to government officials, schemes for gig workers, depending on the platform they work for, are being developed and will be put forward for deliberation at the next board meeting. The schemes being considered include life insurance, accidental benefit, disability benefit, medical benefit, maternity benefit, and old-age protection, depending on the nature of gig work.

THE GIST

Karnataka has operationalised a government-backed grievance redressal mechanism for platform-based gig workers, allowing them to lodge complaints through the IPGRS, which is routed to platform IDRCs for resolution.

The move aims to bring structure, transparency, and legal recourse to gig workers, addressing issues such as pay, working conditions, and arbitrary account deactivation.

• Key Terms and Explanations

- **Gig Worker:** A person who performs work or participates in a work arrangement and earns from such activities outside of a traditional employer-employee relationship. *Example: A delivery partner for Zomato or a driver for Uber.*
- **Platform-Based Work:** A work arrangement where an online platform uses digital technology to connect organizations or individuals with workers to provide specific services or solve problems.
- **Integrated Public Grievance Redressal System (IPGRS):** A centralized digital portal used by the state to receive, process, and monitor citizen complaints regarding government services, now extended to include gig worker issues.
- **Internal Dispute Resolution Committee (IDRC):** A mandatory internal body that every aggregator (platform) must set up to resolve worker grievances at the primary level.
- **Social Security Fund:** A dedicated pool of money (often funded by a cess or fee) used to provide welfare benefits like insurance, health cover, and pensions to workers in the unorganized sector.
- **Aggregator:** A digital intermediary or marketplace for a buyer and seller of a service. *Example: Ola, Swiggy, or Amazon.*

• Main Arguments and Substantive Parts

- The core thesis revolves around the **formalization of the informal gig economy** through a state-backed legal framework.
- **The Problem of "Invisible" Workers:** Gig workers have historically occupied a legal gray area, neither being "employees" under traditional labor laws nor "independent contractors" with real bargaining power.
- **Mandatory Grievance Redressal:** The system mandates a two-tier resolution process. First, the platform's IDRC must attempt resolution within 15 to 45 days. Second, if unsatisfied, the worker can escalate to the State's Welfare Board.
- **Data-Driven Governance:** Platforms are now legally obligated to share worker data (Aadhaar, bank details, UAN) with the government. This ends the information asymmetry where only the platform knew the size and scope of its workforce.
- **Financial Sustainability via Cess:** By collecting a **1% fee on every transaction**, the state creates a self-sustaining welfare fund, ensuring that the cost of social security is shared by the platform and the consumer.



- **Historical Evolution of the Issue**

- The journey of gig labor rights in India has transitioned from total deregulation to targeted state intervention:
- **Pre-2010s (Pre-Gig Era):** Labor discourse was centered on the formal sector and the Factories Act. Informal labor was mostly agricultural or construction-based.
- **2014–2019 (The Boom):** The rapid rise of smartphone penetration and venture capital led to the explosion of platform work. It was initially seen as a "flexible" side-hustle, requiring little regulation.
- **2020 (Code on Social Security):** At the National level, the Union government introduced the Code on Social Security, which for the first time recognized "gig workers" and "platform workers" as distinct categories.
- **2023–2025 (State Activism):** Rajasthan first passed a dedicated Gig Worker Act in 2023. Karnataka followed, notifying its Rules in March 2026 and operationalizing the grievance system on May 1, 2026.
- **Present Day:** The focus has shifted from mere recognition to enforcing **accountability**, specifically targeting arbitrary deactivation and lack of social safety nets.

- **Way Forward**

- **Universal Portability:** Ensure that social security benefits are portable across states, so a delivery partner moving from Bengaluru to Hyderabad doesn't lose their accumulated benefits.
- **Algorithmic Transparency:** Moving beyond just "grievance redressal" to "algorithmic audits" where the government checks if platform algorithms are biased or discriminatory.
- **Skill Upgradation:** Using the Welfare Fund not just for doles, but for upskilling workers so they can transition out of the gig economy into higher-value roles.
- **Tripartite Consultation:** Continuous dialogue between the State, the Platforms, and Labor Unions to ensure the 1% cess doesn't lead to capital flight.

- **Previous Years' UPSC Questions (PYQs)**

- **UPSC Mains 2021 (GS3):** "Examine the role of the 'Gig Economy' in the process of empowerment of women in India."
- **UPSC Mains 2022 (GS3):** "Is the gig economy a tool for economic growth or a source of exploitation? Discuss in the context of India."
- **UPSC Prelims 2017/2020:** Questions regarding the 'Unorganised Workers' Social Security Act' and 'Social Security Code'.



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Key Terms:

- Gig Worker
- Platform
- IPGRS
- IDRC
- Cess.
- Cess.



Logical/Philosophical Base:

- Social Contract
- Distributive Justice
- Natural Justice (Audi Alteram Partem).



Multidimensional Analysis:

- Social
- Legal
- Ethical
- International
- Economic.

Ways Forward:

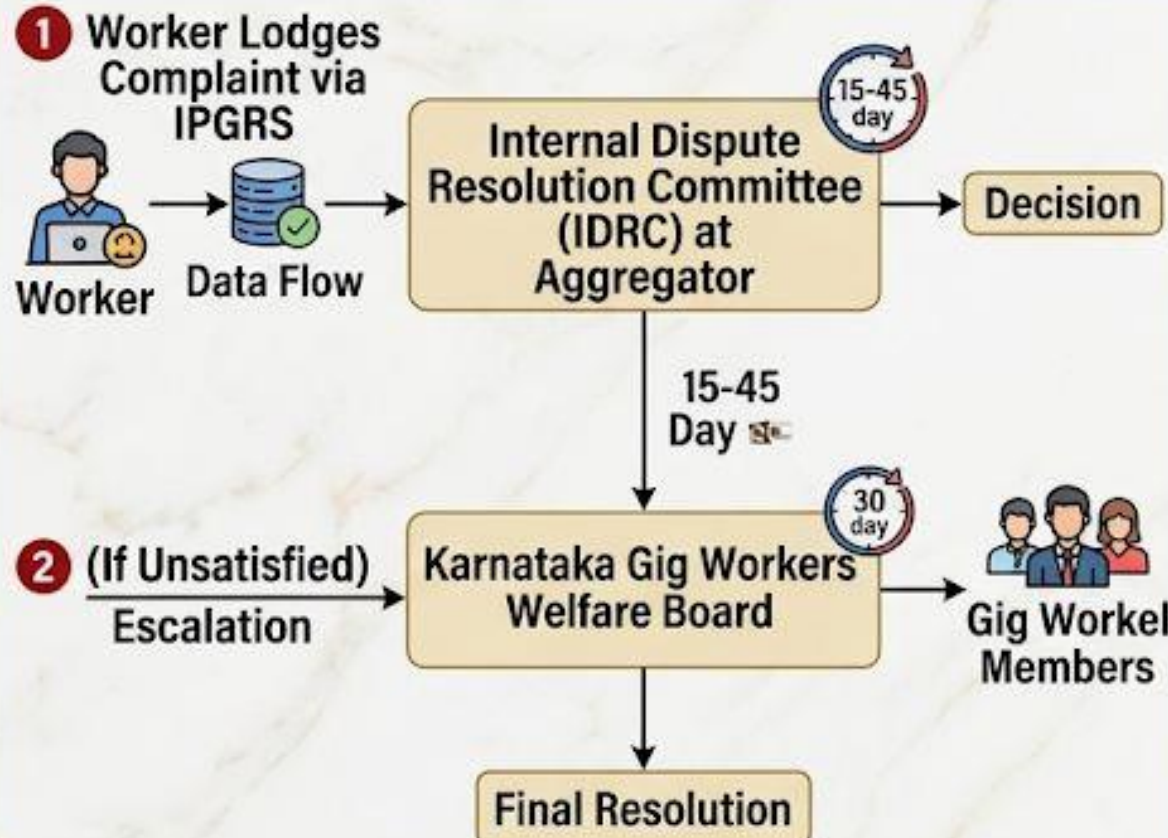
- Universal Portability
- Algorithmic Transparency
- Skill Upgradation
- Tripartite Consultation.

UPSC Relevance:

- GS Paper 2 (Welfare Schemes)
- GS Paper 3 (Informalization, Economy)
- Ethics, Essay.



The Mandatory Two-Tier Grievance Redressal Process

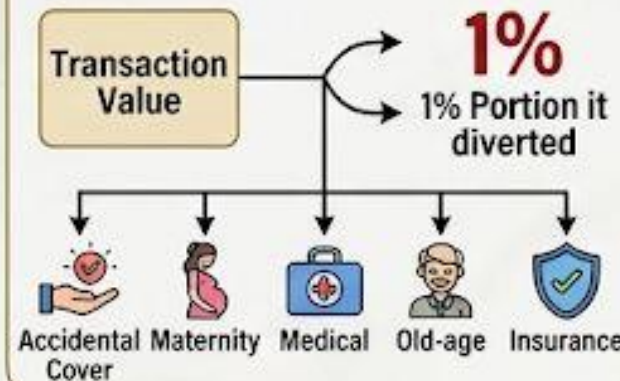


Worker Concerns Addressed

- ✓ Arbitrary Deactivation
- ✓ Payment Reduction
- ✓ Unfair Penalties
- ✓ Discrimination
- ✓ Unsafe Conditions



Sources of Welfare Fund (1% Transaction Fee)



When does a CM cease to hold office?

Can a Governor remove a Chief Minister? What does 'pleasure of the Governor' mean? When is a floor test required? What happens after the Assembly's tenure ends? Can election results be challenged in court?

EXPLAINER

Aaratrika Bhattachik

The story so far:

A day after the Trinamool Congress lost the West Bengal elections to the BJP, party chairperson Mamata Banerjee on May 5 said she would not resign as Chief Minister, alleging that the verdict was the result of a "conspiracy" rather than the people's mandate. Addressing a press conference, Ms. Banerjee claimed the elections had not been conducted fairly and accused the BJP of misusing central forces to "forcibly capture" booths and influence the outcome. She added that the party would challenge the results and continue its political fight.

Can a Governor remove a CM?

Article 164(1) of the Constitution provides that "the Chief Minister shall be appointed by the Governor and the other Ministers shall be appointed by the Governor on the advice of the Chief Minister, and the Ministers shall hold office during the pleasure of the Governor." On a literal reading of the provision, therefore, the Governor appears to possess the authority to remove a CM from office. However, members of the Constituent Assembly had cautioned that such a provision could potentially lend itself to an arbitrary exercise of gubernatorial discretion.

Constituent Assembly member Mohammad Ismail Khan had moved an amendment to the provision (then Article 144 of the Draft Constitution) proposing that the phrase "during the pleasure" be replaced with the words "so long as they enjoy the confidence of the Legislative Assembly of the State." He contended that once the constitutional scheme envisaged the Governor as a nominee of the



A woman walks past banners of Mamata Banerjee, on Wednesday, in Kolkata. (PTI)

President, the Constitution ought to have made it explicit that the Council of Ministers would hold office not at the Governor's pleasure, but only so long as it continued to enjoy the confidence of the Legislative Assembly.

Addressing this concern, Dr. B. R. Ambedkar, Chairman of the Drafting Committee of the Constitution, affirmed that the Council of Ministers shall hold office only so long as it enjoys the confidence of the majority. "The reason why we have not so expressly stated it," he explained, "is because it has not been stated in that fashion or in those terms in any of the Constitutions which lay down a parliamentary system of government."

Over the years, the Supreme Court has also interpreted the Governor's powers as flowing primarily from the "aid and advice" of the Council of Ministers. In *A.G. Perarissolan v. State Through Superintendent of Police* (2022), the apex court observed that the "Governor" is "but a shorthand expression for the State government". While recognising the Governor as "the formal head and sole

repository of the executive power", the court held that the office is ordinarily bound by the aid and advice of the State's Council of Ministers.

When is a floor test required?

If a Governor asks a Chief Minister to step down and invites another candidate for the post while the tenure of the Legislative Assembly is still on, there has to be a floor test – a constitutional mechanism used to determine whether the executive enjoys the confidence of the legislature. Under this process, the Chief Minister must prove majority support in the House. Failure to do so requires the CM to resign.

If no party or coalition can form a stable government, President's Rule under Article 356 may be imposed as a measure of last resort.

What happens after the Assembly's tenure ends?

Article 172 of the Constitution deals with the duration of a State Legislative Assembly and stipulates that, "unless

sooner dissolved", an Assembly "shall continue for five years from the date appointed for its first meeting and no longer, and the expiration of the said period of five years shall operate as a dissolution of the Assembly."

According to the Election Commission, the current West Bengal Assembly commenced its term on May 8, 2023, and is set to expire on May 7. Thereafter, the Governor will have to initiate the process for constituting a new Assembly.

What happens next?

According to former Lok Sabha Secretary-General P.D.T. Achary, a formal resignation following defeat in an Assembly election is largely a matter of convention. "Even if Ms. Banerjee does not resign, it would make no material difference. The tenure of the present Assembly ends on May 7, and with its dissolution, she will automatically cease to hold office as Chief Minister," he said.

He, however, pointed out that an election petition may be filed before the Calcutta High Court within 45 days from the declaration of the results of the concerned candidate. Section 100 of the Representation of the People Act, 1951 enumerates the grounds on which the election of a candidate may be challenged and declared void, including corrupt practices by the candidate and non-compliance with statutory provisions by the returning officer, among other grounds. He noted that a writ petition may be maintainable where the challenge concerns the integrity of the electoral process itself, including allegations of arbitrary voter deletions during the special intensive revision of electoral rolls in West Bengal.

"Large-scale deletion of voters in an election constitutes a violation of fundamental rights and can therefore be challenged through a writ petition," he said.

THE GIST

Though Article 164 states that the Council of Ministers holds office "during the pleasure of the Governor", this is not absolute; in practice, a Chief Minister can continue only so long as they enjoy the confidence of the Legislative Assembly.

The majority of a Chief Minister is determined through a floor test in the House, and if they fail to prove support, they must resign.

- **Key Terms and Explanations**

- **Pleasure of the Governor (Article 164):** A constitutional doctrine stating that Ministers hold office at the Governor's discretion. However, in a parliamentary democracy, this "pleasure" is not arbitrary; it is tethered to the CM enjoying a majority in the Legislative Assembly.
- **Floor Test:** A constitutional mechanism used to determine if the executive (the CM and Council of Ministers) still enjoys the confidence of the legislature. It is conducted on the floor of the House.
- **Article 172 (Duration of State Legislatures):** Stipulates that the Assembly continues for five years from its first meeting. Upon the expiration of this term, the Assembly is automatically dissolved.
- **Election Petition:** A legal procedure to challenge the election of a candidate in a High Court. Under the **Representation of the People Act, 1951**, an election can be declared void on grounds like "corrupt practices" or "improper rejection of nominations."
- **Aid and Advice:** Under Article 163, the Governor is generally bound to act on the "aid and advice" of the Council of Ministers, except in matters where they are required to exercise discretion.
-

Main Arguments and Substantive Parts

- The core thesis focuses on the tension between the literal text of the Constitution and the democratic conventions that govern it.
- **The Limit of Gubernatorial Power:** While Article 164(1) suggests the Governor can remove a CM at will, constitutional morality dictates that a CM can only be removed if they lose the "confidence of the House" and refuse to resign.
- **The Role of Resignation vs. Dissolution:** A CM's tenure is tied to the life of the Assembly. If an election is lost, resignation is a matter of convention. However, legally, the CM automatically ceases to hold office once the Assembly's five-year term expires under Article 172.
- **The Judiciary as an Arbiter:** The article argues that the judiciary (via election petitions) serves as a check against electoral malpractice, ensuring that the "mandate of the people" is legitimate and not a result of "corrupt practices."

- **Historical Evolution of the Issue**
- **Pre-Independence (1935 Act):** The Government of India Act 1935 gave Governors significant discretionary powers, which the Constituent Assembly sought to limit to prevent "Gubernatorial tyranny."
- **The Constituent Assembly Debates:** Members like Mohammad Ismail Khan argued for replacing "pleasure" with "confidence of the House." Dr. B.R. Ambedkar clarified that "pleasure" was a shorthand for a parliamentary system where the executive is responsible to the legislature.
- **S.R. Bommai v. Union of India (1994):** A landmark milestone where the Supreme Court ruled that the floor of the House is the only place to test a government's majority, not the Governor's subjective opinion.
- **A.G. Perarivalan Case (2022):** Reaffirmed that the Governor is the formal head, but the real executive power lies with the Council of Ministers.

- **Way Forward**

- **Codification of Conventions:** Following the Punchhi Commission's recommendations to limit the Governor's discretionary powers regarding the dismissal of a CM.
- **Time-bound Floor Tests:** The Supreme Court should mandate that floor tests happen within 48–72 hours of a dispute to prevent horse-trading.
- **Fast-track Election Courts:** Dedicated benches to resolve election petitions within 6 months to ensure that the "will of the people" is protected in real-time.

-

Previous Years' Questions (PYQs)

- **UPSC Mains 2019 (GS 2):** "The exercise of 'discretionary powers' by the Governor makes the state administration a tool of the central government. Discuss."
- **UPSC Mains 2017 (GS 2):** "The Indian Constitution is a living instrument with capabilities of enormous dynamism. It is a constitution made for a progressive society. Illustrate with the help of the Governor's role."
- **UPSC Prelims (General):** Multiple questions on Article 163, 164, and the discretionary powers of the Governor.



AXIA IAS ACADEMY: COMPREHENSIVE ANALYSIS - CM'S TENURE & THE GOVERNOR'S ROLE (UPSC CIVIL SERVICES EXAM FOCUS)

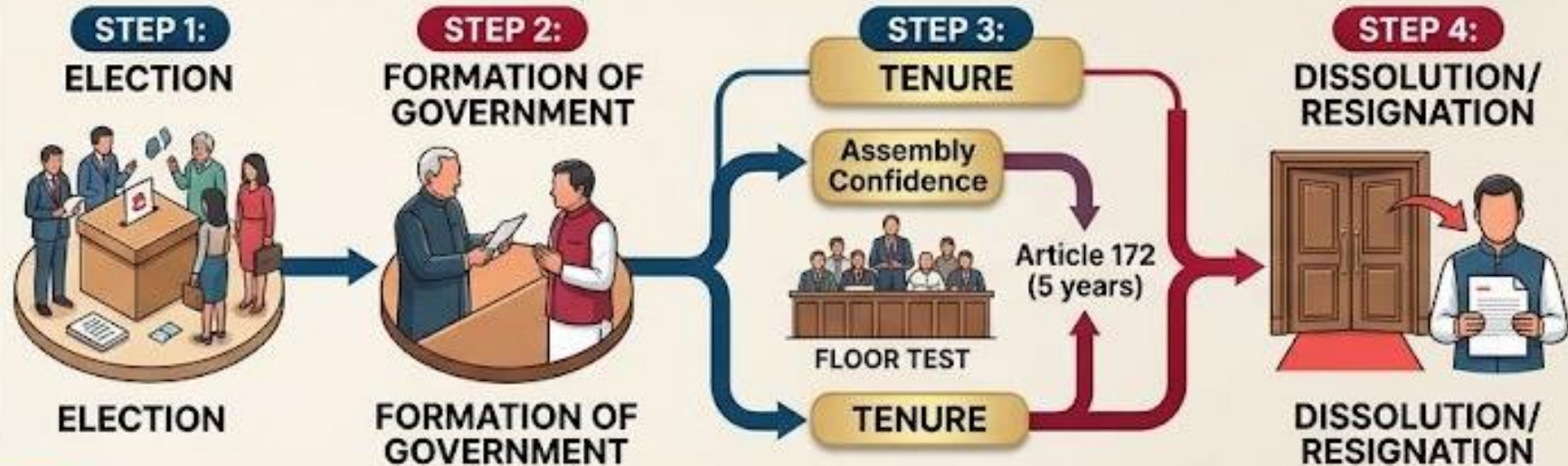
PLEASURE OF THE GOVERNOR (Article 164)

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(Duration of State Legislatures) has a Duration of State Legislatures

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LIMITS OF GUBERNATORIAL POWER & KEY JUDGMENTS

Responsible Government

Executive is accountable to the legislature



S.R. BOMMAI V. UNION OF INDIA (1994)
Majority tested on the FLOOR of the House, not in the Governor's subjective opinion



A.G. PERARIVALAN CASE (2022)
Real power with CoM, Governor is formal head

Multidimensional Impact & Ethical Aspects

CHALLENGES & CONSEQUENCES



THE WAY FORWARD

- Codification of Conventions
- Time-bound Floor Tests
- Fast-track Election Courts
- Provennd on scare crection and heal govestfort

UPSC PYQ Linkages

- PYQs Provide foet: axiaiasacademy (1994)
- PYQs Chief Court (1994)
- PYQs: Aesihmarha/ Casis (2022)
- PYQs: A.G. Perarivalin Case Case (2022)

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