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ANALYSIS**



JULY 18



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Panel defers adoption of report on Bill for removal of Prime Minister, CMs

Sobhana K. Nair
NEW DELHI

The Joint Committee of Parliament reviewing the legislation on the removal of the Prime Minister and Chief Ministers on serious charges decided to defer the adoption of a draft report that had been circulated nearly a week ago, after voting had been completed on two of the five recommendations made by the panel at a meeting on Friday.

The Constitution (One Hundred and Thirtieth Amendment) Bill seeks the automatic removal of a Prime Minister, Chief Minister or Minister after 30 consecutive days in judicial custody, in order to address what the government describes as a vacuum in cases where public functionaries continue in office during prolonged incarceration. The panel, headed by BJP MP Aparajita Sarangi, made five recommendations in its draft report, including replacing the Bill's provisions for a Minister's "removal" or requirement to "cease to be a Minister" with "suspension". The report was circulated to members on July 10.

On Friday, when the committee was voting on each of the recommendations separately, it was de-



The panel, headed by BJP MP Aparajita Sarangi, said the Bill has a far-reaching impact, but need more consultations. FILE PHOTO

cided that more consultations with stakeholders and discussions among members were required.

"The Joint Parliamentary Committee unanimously said this Bill has a far-reaching impact on our country. Everyone felt that the government's intentions in bringing the Bill were good, but we need more consultations. So we will keep the report pending for now," Ms. Sarangi told presspersons at the end of the meeting.

According to sources, voting on two of the recommendations had already been completed when Ms. Sarangi received a phone call and stepped out of the meeting.

Upon her return, the decision was taken to defer the adoption of the draft

report. Sources said that a few ruling party members had also voted against the first two recommendations.

AIMIM MP Asaduddin Owaisi and NCP(SP) MP Supriya Sule had submitted dissent notes but withdrew them after the panel decided to defer adoption of the report.

'No correlation'

It is learnt that Ms. Sule, who is the only representative from the INDIA bloc on the panel after other Opposition parties declined to join it, argued that triggering automatic removal on a 30-day period of incarceration is arbitrary and has no correlation with either the guilt of the accused or the gravity of the offence.

She is learnt to have ar-

gued that the Bill weaponises the criminal justice system for political vendetta by creating a parallel system of disqualification without establishing the guilt of the accused.

She reportedly rejected the recommendation made in the draft report to replace "removal" with "suspension", arguing that elected representatives cannot be equated with bureaucrats and that such a provision disregards their constitutional status and democratic mandate.

The panel had recommended that the Prime Minister, Union Ministers and Chief Ministers be suspended, rather than permanently removed from office, if they are detained for 30 consecutive days on charges relating to serious offences, pending the outcome of legal proceedings. It had also proposed an automatic reversal clause if such persons are acquitted or if the prosecution does not proceed within a specified period.

The committee further proposed that the term "serious criminal offences", as mentioned in the Statement of Objects and Reasons of the Bill, be defined as offences punishable with imprisonment for a term that may extend to five years or more.

- **Key Terms and Explanations**
- **Constitution Amendment Bill (Under Article 368)**
 - A formal legislative proposal introduced in Parliament to alter, vary, or repeal any provision of the Constitution of India. Unlike ordinary bills, it requires a special majority in both Houses of Parliament (a majority of the total membership and a two-thirds majority of members present and voting) and, in certain cases affecting federal structures, ratification by at least half of the state legislatures.
- **Judicial Custody vs. Police Custody**
 - Judicial custody implies that an accused person is under the direct keeping and supervision of the relevant magistrate and is typically lodged in a central or district jail. In contrast, police custody involves physical confinement at a police station for active interrogation. The transition to judicial custody occurs when the police have completed initial questioning, but the court deems it necessary to detain the individual to prevent tampering with evidence or influencing witnesses.
- **Administrative and Governance Vacuum**
 - A state of operational paralysis within the executive branch where the designated constitutional head (such as a Chief Minister or Prime Minister) is physically or legally incapacitated from performing official duties.
- **Joint Parliamentary Committee (JPC)**
 - An ad-hoc parliamentary committee constituted for a specific purpose and duration, drawing members from both the Lok Sabha and the Rajya Sabha. It is an instrument of legislative oversight designed to scrutinize complex bills, financial irregularities, or matters of profound national impact through cross-party deliberations.
- **Suspension vs. Removal of Public Functionaries**
 - Removal constitutes the absolute and permanent termination of an individual's tenure in office, effectively creating an immediate constitutional vacancy that must be filled by fresh appointments or elections. Suspension, however, is a temporary divestment of operational powers, statutory privileges, and official duties while the individual technically retains their title, pending the final judicial outcome of an investigation or trial.
- **Parallel System of Disqualification**
 - A legal mechanism that bypasses or operates alongside the established statutory framework for unseating elected representatives. Under the existing Representation of the People Act, 1951, disqualification is strictly tied to a formal court conviction. A parallel system introduces alternative triggers—such as a specific duration of pre-trial detention—to strip a functionary of office before judicial guilt is determined.
- **Main Arguments and Substantive Parts**
- **The Core Thesis**
 - The debate centers on creating an institutional mechanism to resolve the governance crisis that emerges when high constitutional functionaries face prolonged pre-trial incarceration. The central objective is to strike a delicate equilibrium between maintaining institutional integrity and preventing administrative paralysis, while simultaneously safeguarding the democratic mandate against arbitrary executive or investigative actions.
- **Arguments in Favor of Institutional Reform**
 - **Prevention of Governance Paralysis:** The state apparatus cannot function effectively from behind bars. A prolonged absence of a Prime Minister or Chief Minister stalls cabinet decisions, delays welfare disbursements, and compromises national or state security protocols.
 - **Upholding Public Trust:** High constitutional offices demand the highest standards of institutional morality. Allowing an incarcerated individual to retain absolute executive power erodes the public's faith in the rule of law and degrades the dignity of the office.
 - **Differentiating Bureaucratic and Political Standards:** Under standard civil service rules, a bureaucrat is automatically suspended if detained for more than 48 hours. Proponents argue that a similar, albeit more relaxed, accountability threshold must apply to the political executive to ensure uniformity in administrative ethics.
- **Counterarguments and Criticisms**
 - **Weaponization of Investigative Agencies:** The primary concern is that a low threshold for removal or suspension could turn the criminal justice system into a tool for political vendetta. If a mere 30 days of judicial custody triggers removal, the ruling dispensation could theoretically neutralize opposition leaders through politically motivated arrests.
 - **Subversion of the Presumption of Innocence:** A foundational tenet of criminal jurisprudence is that an individual is innocent until proven guilty by a court of law. Enforcing automatic removal or suspension at the pre-trial stage inflicts punishment before conviction, undermining constitutional due process.
 - **Disregard for the Sovereign Mandate:** Elected representatives derive their authority directly from the electorate. Equating them with career bureaucrats overlooks their unique constitutional status and risks subverting the democratic will of the people based purely on unproven allegations.
- **Proposed Balanced Modifications**
 - To mitigate these concerns, institutional reviews suggest shifting the penalty from permanent "**removal**" to temporary "**suspension**." Furthermore, the inclusion of an "**automatic reversal clause**" ensures that if the prosecution fails to proceed within a specified timeframe or if the individual is acquitted, their full powers are immediately restored. To prevent the misuse of law for trivial offenses, the trigger mechanism is confined strictly to "**serious criminal offenses**"—defined as those carrying a minimum prison sentence of five years or more.

- **Historical Evolution of the Issue**
- **The Constituent Assembly Deliberations (1946–1949)**
 - During the drafting of the Indian Constitution, framing members like Dr. B. R. Ambedkar deliberately chose not to overload the constitutional text with hyper-specific, rigid disqualification criteria for legislators and ministers. They envisioned India as a evolving democracy and left it to the wisdom of future Parliaments to enact appropriate statutory safeguards under Articles 102(1)(e) and 191(1)(e), trusting that convention and public morality would govern high offices.
- **The Enactment of the Representation of the People Act (RPA), 1951**
 - Parliament exercised its constitutional mandate by enacting the RPA, 1951. Section 8 of the Act laid down comprehensive criteria for the disqualification of choice representatives, anchoring the penalty exclusively to a formal **conviction** by a court of law. Crucially, Section 8(4) provided a protective shield for sitting MPs and MLAs, allowing them a three-month window to file an appeal, during which their disqualification remained deferred.
- **The Judicial Intervention: Lily Thomas v. Union of India (2013)**
 - The Supreme Court of India altered the accountability landscape by striking down Section 8(4) of the RPA as unconstitutional. The Court ruled that disqualification must be instantaneous upon conviction if the sentence is two years or more. This landmark judgment closed the loophole that allowed convicted politicians to retain their legislative seats during lengthy appeal processes, raising the bar for political accountability.
- **The Shift Toward Pre-Trial Custody Disclosures (Present Day)**
 - In recent decades, a new constitutional challenge has emerged: high-ranking executives (Ministers and Chief Ministers) experiencing prolonged detention *prior* to conviction. Because the RPA only addresses post-conviction scenarios, these leaders could legally continue to command executive authority from prison. This governance paradox has driven the current discourse toward exploring a new threshold—the proposed 130th Constitutional Amendment framework—seeking to regulate office security at the stage of prolonged judicial custody rather than waiting for a final, multi-year trial verdict.
- **Way Forward**
- **Introduction of Mandatory Judicial Screening**
 - To prevent the potential misuse of pre-trial detentions for political advantage, an automatic 30-day custody rule should not apply without judicial review. Instead, a prolonged detention should trigger a mandatory review by a high-powered judicial bench (such as the relevant High Court or the Supreme Court). This bench would evaluate the prima facie merit of the charges and ensure the arrest is not a product of political animus before any suspension of office takes effect.
- **Strict Narrowing of Qualifying Offenses**
 - The proposed standard of limiting these measures to offenses carrying a minimum sentence of five years is a useful starting point, but it requires finer refinement. The criteria should explicitly focus on specific categories such as systemic financial corruption, money laundering, crimes against the state, and heinous offenses, while excluding vague, politically sensitive charges often utilized during public demonstrations or civil dissent.
- **Fast-Tracking Trials for High Constitutional Officials**
 - The most effective way to address the tension between the presumption of innocence and the risk of a governance vacuum is to minimize the duration of the pre-trial phase. The legal framework should mandate the creation of dedicated, day-to-day special trial courts for sitting Prime Ministers, Union Ministers, and Chief Ministers, requiring a definitive verdict within a strict 90-to-180 day window from the date of arrest.
- **Statutory Mechanisms for Temporary Delegation**
 - Rather than resorting to absolute removal or permanent suspension, institutional rules should provide a clear path for the temporary delegation of executive responsibilities. Similar to arrangements made during medical emergencies, statutory provisions should allow a detained leader to formally delegate critical administrative powers to a designated Deputy Prime Minister or senior Cabinet Minister. This preserves the political mandate of the elected administration while ensuring the state continues to function smoothly.



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COMPREHENSIVE ANALYSIS: INCARCERATED HIGH PUBLIC FUNCTIONARIES (PM, CMs)

I. KEY TERMS & CONCEPTS

- **Constitution Amendment Bill (Art 368)**
Formal legislative proposal to modify the Constitution; requires special majority.
- **Judicial vs. Police Custody**
Police custody for investigation vs. Judicial custody under court's magisterial supervision.
- **Governance Vacuum (Administrative Paralysis)**
Inability of an executive head to perform duties, stall Cabinet and administration.
- **JPC Role (Joint Parliamentary Committee)**
Temporary cross-party legislative body to review complex bills and provide oversight.

II. HISTORICAL EVOLUTION



The implication moving to be unable to management of conspiracy and prevention of constitutional evolutions.

THE CONSTITUTIONAL BALANCING ACT & PROPOSED MECHANISM

1. PROBLEM: INCARCERATED EXECUTIVES

- Prevents operational governance paralysis
- Maintains high ethical standards for public office

2. RISK: WEAPONIZATION OF AGENCIES

- Mitigates potential political vendettas
- Upholds the democratic mandate of elected leaders



V. UPSC CSE LINKAGES & PYQs

Reference to GS Paper 2, GS Paper 4, Essay themes: GS2 2019, 2022; GS4 2016; Prelims 2020, 2021)
Examples: GS2 2019, 2022; GS4 2016; Prelims 2020, 2021)
NCERT link: 'Indian Constitution at Work' (Executive, Judiciary, Legislature)

III. MULTIDIMENSIONAL ANALYSIS

- Social** (Public Trust)
- Political** (Federal Balance)
- Legal** (Separation of Powers)
- Ethical** (Constitutional Morality)
- Economic** (Policy Continuity)

IV. WAY FORWARD: INTEGRATED SOLUTIONS

- **Mandatory Judicial Screening:** Prior HC/SC review before suspension triggers.
- **Strict Offense Threshold:** Confined to heinous crimes & systemic corruption.
- **Fast-Track trials:** Daily special courts to conclude trials within 90-180 days.
- **Temporary Delegation Mechanisms:** Clear statutory path for power transfer during crises.

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Govt. orders strict scrutiny of digitised birth, death records

Registrar General of India flags issuance of fake certificates, tells registration units in States to take measures to prevent misuse of the system; surge witnessed in request for digital copies amid SIR

Vijaita Singh
NEW DELHI

Amid a surge in demand for digitised birth certificates, the office of the Registrar General of India (RGI) is implementing stringent checks to prevent fraudulent digitisation of old records. The RGI informed the States in June that in certain instances, the credentials of registrars have been compromised due to user IDs, passwords, or one-time passwords (OTPs) being shared with unauthorised persons. On July 6, the RGI asked States to identify "Registration Units showing unexplained spikes in registrations".

"As a result, complaints have been received regarding issuance of fake or unauthorised digitised certificates in some instances. Such incidents not only undermine the integrity of the Civil Registration System but also threaten the reliability of vital records," the June 12 letter by A.K. Pandey, Deputy Registrar General (CRS), said.

On July 6, the RGI urged registration units in States to take measures to "enhance the security, trans-



The RGI has asked States to review the status of digitisation and preservation of legacy birth and death records. (EMMANUEL YOGINI)

parency, traceability, and authenticity of the digitisation process and to prevent misuse of the system".

The measures include mandatory verification of online applications for digitisation of old birth and death certificates by the registrar against the original birth and death registers; uploading of supporting documents, including the applicant's certificate and the relevant register page; forwarding of all applications to the district registrar for approval; submission of additional documents such as the application form when the registrar enters a request on behalf of an applicant;

mandatory scrutiny and approval by the district registrar before any digitised certificate is issued; compulsory use of e-signatures by district registrars to ensure authenticity, accountability and an audit trail; and the return of approved applications to the registrar for final issuance of the digital certificate.

The RGI has asked State committees to review the status of digitisation and preservation of legacy birth and death records, emphasising the need to maintain original registers and related documents securely and to ensure that all manual certificates are duly verified against the

corresponding registers before digitisation.

Uptick in digital copies

Due to the ongoing special intensive revision (SIR) of electoral rolls where birth certificates are among the accepted identity documents, several birth and death registration units are seeing an upsurge in requests for digital copies.

The Registration of Births and Deaths Act, 1969, which was amended in 2023 makes online registration of births and deaths compulsory on the Central Civil Registration System (CCRS) portal.

For children born on or after October 1, 2023, the digital birth certificate is the single document to prove the date of birth for various services such as admission to educational institutions, government jobs, marriage registration among others. Hospitals are required to report each birth within 21 days.

The Union Home Ministry is set to introduce a Bill in the Monsoon session of Parliament to amend the Registration of Births and Deaths Act, 2023, to make provisions of delayed registration more stringent.

- **Key Terms and Explanations**

- **Civil Registration System (CRS):** A continuous, permanent, compulsory, and universal recording of the occurrence and characteristics of vital events, primarily births and deaths. It serves as the foundational legal repository of a citizen's entry into and exit from the state's legal framework.
- **Registrar General of India (RGI):** A statutory office under the Ministry of Home Affairs responsible for directing, coordinating, and supervising the registration of births and deaths across the country, as well as conducting the decennial Census. The RGI acts as the apex nodal authority ensuring uniformity across diverse state-level registration machineries.
- **Central Civil Registration System (CCRS) Portal:** A centralized, integrated digital platform developed to unify registration processes across all states and union territories. It transitions the traditionally fragmented, state-specific portals into a singular database to ensure data integrity and real-time tracking.
- **Special Intensive Revision (SIR):** A rigorous, time-bound administrative exercise conducted by election authorities to update, verify, and clean electoral rolls. It involves adding eligible voters, removing deceased or shifted individuals, and rectifying errors, which sharply increases the immediate civic demand for official identity proofs.
- **Legacy Records:** The historical, paper-based registers of vital events maintained by local registration units over decades prior to the advent of computerized databases. These documents are highly susceptible to physical degradation and require systematic digitization.
- **Single Document Proof:** A legal mandate under modern statutory frameworks where a digital birth certificate serves as the definitive, standalone proof of age and identity for a spectrum of essential services, eliminating the requirement for multiple secondary documents.

- **Main Arguments and Substantive Parts**

- The rapid digitization of foundational databases introduces a structural paradox: while it streamlines citizen access, it simultaneously expands the digital vulnerability surface. Balancing security with administrative efficiency forms the core challenge of modern statecraft.

- **The Core Thesis**

- The transition of vital statistics—specifically birth and death records—from localized physical ledgers to a centralized digital ecosystem represents a monumental leap in state legibility and public service delivery. However, this digitization process faces structural threats from credential compromises, unauthorized data inputs, and the creation of fraudulent records. To preserve the sanctity of the citizen database, the state must implement rigorous, multi-tiered human-in-the-loop verification processes, even if it introduces temporary administrative friction.

- **The Surge in Demand and Systemic Vulnerabilities**

- **Electoral Synchronicity:** The mandate to purify electoral rolls during Special Intensive Revisions acts as a catalyst, triggering an unprecedented influx of applications for digitized birth certificates. Because these certificates serve as foundational identity proofs, local registration units experience extreme administrative stress.
- **Compromised Operational Security:** The rapid push for digitization has exposed operational loopholes. The unauthorized sharing of critical credentials—such as user IDs, passwords, and One-Time Passwords (OTPs)—among registry personnel and external agents compromises the security of the portal, leading to unauthorized digital entries.

- **Countermeasures and Structural Scrutiny**

- **Mandatory Physical Cross-Verification:** To prevent the digital laundering of fraudulent old records, state authorities have mandated that every digital application for a legacy record must be physically cross-verified against the original paper register page.
- **Accountability via Cryptographic Measures:** The introduction of compulsory e-signatures for district registrars ensures a transparent audit trail. By shifting ultimate approval authority to higher district officials, the system introduces a check against local-level collusion or negligence.
- **Targeting Anomalous Data Spikes:** The state relies on statistical anomalies—specifically "unexplained spikes" in registration volumes within specific units—as red flags to initiate targeted security audits, treating sudden data surges as potential indicators of systemic compromise.

- **Historical Evolution of the Issue**
- **The Pre-Independence and Early Post-Independence Era**
 - **Colonial Fragmented Roots:** Prior to a unified law, individual provinces and princely states maintained localized records through village headmen or sanitary inspectors. The primary objective was not citizen empowerment, but monitoring public health, epidemics, and basic taxation metrics.
 - **The 1969 Legislative Landmark:** The enactment of the Registration of Births and Deaths (RBD) Act, 1969, established the first uniform, statutory framework across India. It anchored the responsibilities of the central RGI and state-level Chief Registrars, transitioning registration from a discretionary public health function to a formal civic obligation.
- **The E-Governance Transition and the 2023 Overhaul**
 - **The Digital India Imperative:** The decade following 2010 witnessed disparate state-level attempts to digitize records. However, this created fragmented, non-interoperable data silos, leaving legacy systems vulnerable to identity duplication and verification gaps across state boundaries.
 - **The 2023 Statutory Overhaul:** A major amendment to the RBD Act in 2023 completely overhauled the system. It made online registration compulsory on the centralized CCRS portal and elevated the digital birth certificate to the status of a single, definitive document for key citizen interactions, such as school admissions, government employment, and passport issuance.
 - **The Present Security Consolidation:** Following the implementation of the 2023 mandates, the current administrative focus has shifted toward plugging security leaks. Facing the threat of digitized forgeries, the government is introducing strict workflow controls and preparing further legislative measures to make delayed registrations far more difficult to execute without multi-layered clearance.
- **Way Forward**
- **Implementing Zero-Trust Architecture and Cryptographic Access**
 - The office of the Registrar General of India should transition the CCRS portal from simple password/OTP protocols to a comprehensive Zero-Trust Architecture. Every registration unit must utilize multi-factor authentication (MFA) linked strictly to biometric verification (such as Aadhaar-based facial or iris recognition) for registrars. This ensures that credential delegation or password sharing becomes technically impossible, anchoring systemic accountability directly to the operating official.
- **Automated Anomaly Detection and AI-Driven Auditing**
 - Instead of relying solely on manual complaints, the central portal should integrate real-time data analytics. Algorithms can be deployed to automatically flag registration units that exhibit anomalous spikes in activity—such as an unusual surge in legacy digitizations outside normal working hours. Once triggered, these anomalies should automatically suspend the unit's approval capability until a mandatory physical audit of the matching register pages is performed by a district-level officer.
- **Establishing Decentralized Helpdesks for Inclusivity**
 - To ensure that stringent verification processes do not lead to public exclusion, states should set up dedicated civil registration helpdesks at the block level. These centers should explicitly assist citizens with delayed registrations or complex legacy record digitizations. By providing free, formalized institutional support, the state can reduce citizen reliance on informal intermediaries or cyber-café operators, who are often sources of credential misuse and fraudulent documentation.
- **Legal Clarification of Electronic Liability and Public Audits**
 - The upcoming legislative amendments should explicitly define and criminalize the unauthorized sharing of administrative credentials for sovereign databases. Penalties must be clearly laid out in the statute. Simultaneously, the system should introduce a framework for annual, independent third-party cybersecurity audits of the civil registration system. Publishing summarized metadata from these audits will help reinforce public trust in the integrity and resilience of the national vital records database.



SECURING THE SOVEREIGN DATABASE: A UPSC ANALYSIS OF THE DIGITAL VITAL RECORDS MANDATE

CONTEXT: SURGE & THREAT



KEY TERMS

Registrar General of India (RGI): Registrar General of India, rago programmen.mndate nnnitation

Civil Registration System (CRS): Civil registration System (CRS) enfor of diata certification

CCRS Portal: A securanetonn for Civil registration system of the CCRS Portal

Legacy Records: Legacy Records, security (Unauthorized ID, Password, and OTP sharing)

SIR: A egristration bitalagattt: certificacy or putificate with cuitain continication

MANDATORY GOVERNMENT SCRUTINY PROCESS



WAY FORWARD



- Zero-Trust Architecture & Cryptographic Access
- AI-Driven Auditing of Anomalies
- Decentralized Citizen Helpdesks for Inclusivity
- Strict Legal Clarification of Electronic Liability

MULTIDIMENSIONAL IMPACTS (UPSC GS LENSES)



GS 2: GOVERNANCE, POLITY, E-GOV APPLICATIONS

GS 3: CYBERSECURITY, INTERNAL SECURITY INFRASTRUCTURE

GS 4: ADMINISTRATIVE ETHICS, PUBLIC SERVICE VALUES

The case for updating the Indus Waters Treaty



AMITABH SINHA

SEVERAL RHETORICAL statements have emerged from Pakistan in the last couple of weeks over India's decision to keep the Indus Waters Treaty "in abeyance" following the terrorist strikes in Pulwama last year. Pakistan even organised an "international" conference on the treaty last month, where senior ministers and leaders threatened war and other consequences if the flow of rivers in the Indus basin was disrupted.

Incidentally, Pakistan has still not responded to India's two notices, in 2023 and 2024, to modify and renegotiate the treaty.

While the decision to hold the treaty in abeyance is an exceptional measure to deal with an extraordinary security situation arising from Pakistan's continued support for cross-border terrorism, there is nothing unusual in India's request to amend or renegotiate the treaty. Many other transboundary riverwater-sharing arrangements have built-in provisions for periodic review.

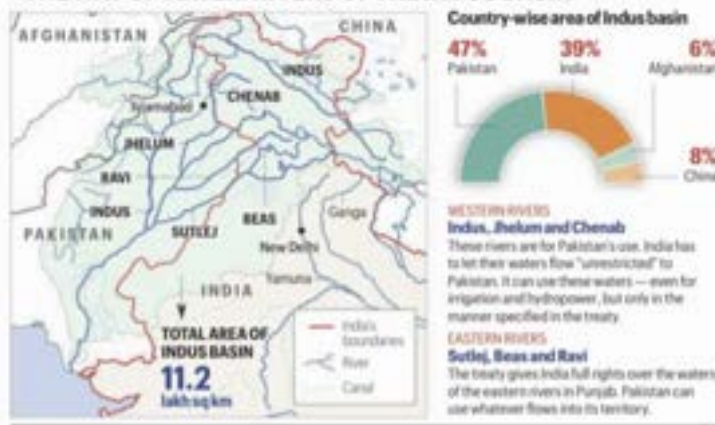
The need for reviewing and updating the Indus Waters Treaty has been articulated, even by Pakistani experts and scholars, for several years now, much before the present stand-off. But India's request for modification or renegotiation of the treaty is the first such official move from either side.

Dynamic systems

River systems are dynamic entities. As river flow and water use changes, the dependent populations increase or decrease, new water management technologies and practices emerge, and better data and scientific knowledge develop. The management of these river waters, therefore, cannot be a static arrangement.

There are at least 250 separate transboundary riverwater-sharing treaties worldwide, covering 113 transboundary river systems, according to a 2023 study. It is unclear how many of these have built-in provisions for review or update. But over time, these treaties gave rise to supplementary protocols, amendments, navigational or data-

• THE WAY OF WATER: RIVERS OF THE INDUS BASIN



sharing arrangements, or other cooperative mechanisms, taking the total number of agreements to 688, according to the study. This number now exceeds 800, according to the International Freshwater Treaties database maintained by Oregon State University. This is evidence that many of these treaties are constantly being reviewed and updated to reflect new ground realities.

India's other major transboundary river agreement, the 1996 agreement with Bangladesh on the Ganga, has a 30-year validity. This agreement is due for renewal this year.

While the Indus Waters Treaty is often seen as a static agreement in perpetuity, it is not. Two provisions of the treaty allow it to be adapted to newer situations. Article VII allows the Permanent Indus Commissions of the two countries to undertake new drainage or other engineering works through mutual agreement and cooperation. This provision has never been made use of. Additionally, Article XII provides for modification of the provisions of the treaty "from time to time" but only through another government level treaty. India has invoked this provision to serve Pakistan's notices, seeking its modification or a complete renegotiation.

Review, rework

The agreements governing more than 100 transboundary river systems globally have risen over the years to 800-plus.

This is evidence that many of these treaties are constantly being reviewed and updated to reflect new ground realities.

River systems are dynamic entities. Their management, therefore, cannot be static. The 1960 IWT is inadequate to address contemporary challenges

But several other important elements of modern integrated water management practices are also missing from the treaty. For instance, it has no mention of ground-water resources, which, like surface waters, are connected across boundaries.

It also has no provisions for water quality or maintaining environmental flows in the rivers. Pakistan, for example, has repeatedly complained that India dumps a lot of municipal and sewage waste in the eastern rivers over which it has full control under the treaty, and that this adversely affects soil and water health in Pakistan.

These issues are not unique to the Indus Waters Treaty. Most water-sharing arrangements formulated at the time lack these features. However, the difficulties in updating or modifying the Indus Waters Treaty have now become an issue.

Another way the Indus treaty differs from other riverwater-sharing treaties is the manner in which it allocates water. Most water-sharing agreements ensure the availability of a certain volume of water from the rivers, or a minimum percentage of the flows, for all parties. The Indus Waters Treaty is a rare example of an agreement in which entire rivers have been allocated to one party or the other. That is why it is often described as a partition agreement rather than a sharing arrangement. This kind of clean partitioning of entire rivers is seen as one of the major reasons for the lack of interest in developing joint river basin management programmes.

The case for modifying or renegotiating the treaty is both common-sensical and compelling. A recent study by Indian researchers Vinod Mishra and Urmil Vengal of IIT Gandhinagar showed how climate change was differently affecting water availability in the Indus basin. The basins of the eastern rivers, for instance, have seen a 20% decline in annual rainfall over the last 70 years. Precipitation in the basins of the western rivers has remained largely unchanged.

As it stands, the treaty is leading to inefficient utilisation of the Indus waters, and remains oblivious to the changing needs and demands. India's request to renegotiate the treaty has to be seen as deflected from its decision to put it in abeyance. In fact, agreeing to renegotiate can be the most reliable way for Pakistan to ensure that the treaty is no longer held in abeyance.

Many modern riverwater-sharing arrangements, like the one over the Mekong River in Southeast Asia, finalised in 1995, have much more flexible institutional structures and easier processes for making changes. While the Permanent Indus Commission (PIC), established by the Indus treaty, functions merely as its implementing agency, the Mekong River Commission also acts as a joint river water-management system. It cannot change provisions of the original treaty, but is otherwise empowered to develop and revise joint basin management strategies, data-sharing protocols and water quality rules. The PIC has so far largely focused on ensuring that the provisions of the Indus Waters Treaty are not violated.

Inadequate treaty

Even before the present stand-off, it was widely recognised that the Indus Waters Treaty, the result of a unique situation between the two countries in the 1950s, was not adequate to address contemporary water management challenges. This wasn't just about climate change becoming an additional factor. No treaty negotiated before the 1990s could have factored in climate change.

- **Key Terms and Explanations**

- **Indus Waters Treaty (IWT)**

- Signed in 1960 by India and Pakistan under the mediation of the World Bank, this agreement establishes a framework for the utilization and distribution of the waters of the Indus River system. It divides the six rivers of the basin into two categories: the Eastern Rivers (Sutlej, Beas, and Ravi), allocated to India for unrestricted use, and the Western Rivers (Indus, Jhelum, and Chenab), allocated primarily to Pakistan, with India permitted limited, non-consumptive uses such as run-of-the-river hydropower projects.

- **Permanent Indus Commission (PIC)**

- A bilateral body established under Article VIII of the treaty, comprising commissioners from both India and Pakistan. Its primary function is to serve as the regular channel of communication, look into technical matters, and manage the implementation of the treaty provisions. However, its scope is strictly administrative rather than strategic, meaning it acts as an implementing authority rather than a body empowered to independently revise or amend the original treaty architecture.

- **Partition Agreement vs. Sharing Agreement**

- A fundamental conceptual distinction in hydropolitics. Most modern transboundary water agreements are "sharing agreements," which allocate specific volumes or percentages of water from a common resource based on fluctuating seasonal availability. In contrast, the treaty acts as a "partition agreement," slicing the geography of the river system cleanly down the middle by giving entire rivers exclusively to one country or the other, which historically eliminated the need for complex, joint day-to-day management but created a static resource boundary.

- **Environmental Flows (E-Flows)**

- The quantity, quality, and timing of water flows required to sustain freshwater ecosystems, riverine habitats, and the livelihoods that depend on these ecosystems. In modern water management, leaving a minimum amount of water untouched within the riverbed is essential for its ecological health. The original framework lacks explicit provisions for environmental flows, treating the water primarily as an economic and agricultural commodity to be divided.

- **Article XII of the IWT**

- The legal mechanism built into the treaty that governs its modification, amendment, or termination. Specifically, Article XII(3) stipulates that the provisions of the treaty may be modified from time to time by a duly ratified treaty concluded for that purpose between the two governments. This is the precise legal window through which renegotiation or comprehensive updates must be pursued, requiring formal diplomatic consensus rather than minor administrative adjustments by the Commission.

- **Main Arguments and Substantive Parts**
- **Core Thesis**
 - The governance of transboundary river basins must reflect the dynamic, evolving nature of natural ecosystems and changing human requirements. The structural framework established in 1960 has become inadequate because it treats a living river system as a static, unchangeable entity, failing to account for contemporary ecological, climatic, and technological realities.
- **The Problem of Structural Rigidity**
- **The Flaw of Absolute Partition:** The clean partitioning of the Indus basin into separate spheres of control has inadvertently choked the potential for integrated basin-wide development. Unlike modern frameworks that view an entire river basin as a single ecological unit, this mechanism discourages joint resource management, data sharing, and cooperative environmental safeguards.
- **Institutional Inflexibility:** While newer international bodies, such as the Mekong River Commission established in 1995, possess flexible institutional structures that allow for iterative rule-making and adaptive management, the Permanent Indus Commission is structurally constrained. It is confined to monitoring violations rather than adapting to new hydrological challenges.
- **The Ecological and Environmental Vacuum**
- **Absence of Groundwater Regulations:** The existing framework focuses exclusively on surface water flows. It completely overlooks transboundary aquifers and groundwater resources, which science now recognizes as deeply interconnected with surface river health.
- **Neglect of Water Quality:** The agreement contains no robust mechanisms to regulate pollution or monitor water quality. This lack of standards creates bilateral friction, as seen in complaints regarding municipal and industrial waste disposal affecting down-river soil and public health.
- **The Reality of Climate Change**
- **Shifting Rainfall Patterns:** Hydrological data reveals that climate change is affecting the sub-basins asymmetric fashion. Research from institutions like IIT Gandhinagar indicates a significant 20% decline in annual rainfall over the Eastern river basins over the past seven decades, whereas the Western basins have seen more stable but highly volatile precipitation patterns.
- **Glacial Vulnerability:** The Indus system relies heavily on glacial meltwater. Rising global temperatures introduce unpredictable risks of flash floods, changing seasonal peak flows, and long-term water scarcity—variables that the 1960 framework simply could not anticipate.
- **The Imperative for Formal Modification**
- **Global Precedents for Adaptation:** Across the globe, transboundary water agreements are routinely updated. Data shows that out of hundreds of international river treaties, a significant number feature built-in periodic reviews or have integrated supplementary protocols to mirror changing ground realities. India's own 30-year Ganga Water Treaty with Bangladesh, up for review, demonstrates this principle of temporal validity.
- **Delinking Ecology from Security:** To safeguard the livelihood of millions across the basin, the process of modernizing the treaty must be treated as a pragmatic resource necessity. It should be shielded from periodic cross-border security standoffs and diplomatic freezes.

- **Historical Evolution of the Issue**

- **The Post-Partition Crisis (1947–1948)**

- The partition of the Indian subcontinent in 1947 created an artificial political border right across the continuous Indus river basin. The headworks of vital irrigation canals supplying Pakistan's agricultural heartland remained in India (East Punjab), while the downstream lands lay in Pakistan (West Punjab). The brief lapse of the Standstill Agreement in April 1948 led to India temporarily stopping water supply to Pakistani canals, culminating in the Inter-Dominion Accord of May 1948, which required Pakistan to pay seigniorage charges for water delivery and underscored the urgent need for a permanent, legally binding settlement.

- **The Decade of Mediation and Signing (1951–1960)**

- Recognizing the explosive potential of the dispute, David Lilienthal (former head of the Tennessee Valley Authority) suggested a technical, non-political approach to basin management, prompting the World Bank to offer its mediation in 1951. Over nearly a decade of negotiations, the technical idealism of managing the basin as a single integrated unit faded due to mutual distrust. The parties ultimately opted for a political division of the water instead. This culminated in the signing of the Indus Waters Treaty in Karachi on September 19, 1960, by Prime Minister Jawaharlal Nehru and President Ayub Khan.

- **Functional Survival Amid Geopolitical Strains (1960s–2010s)**

- Despite three major armed conflicts between India and Pakistan (1965, 1971, and 1999) and multiple periods of high diplomatic tension, the treaty remained functional. However, the implementation grew increasingly litigious. India's construction of run-of-the-river projects allowed under the treaty—such as the Salal project on the Chenab, the Kishanganga project on the Jhelum, and the Ratle hydroelectric project—became subjects of prolonged legal battles, arbitration requests, and neutral expert assessments, highlighting the friction caused by the treaty's rigid technical parameters.

- **The Modern Shift to Modification (2020s–Present)**

- The combination of sustained cross-border security challenges, such as the terrorist strikes in Pahalgam, and pressing environmental realities altered India's diplomatic strategy. Rather than maintaining a static stance, India issued formal notices to Pakistan in 2023 and 2024 via the government-to-government channel under Article XII. These notices officially requested a comprehensive renegotiation of the treaty to address modern challenges like climate change, environmental flows, and water quality, moving the discourse from routine implementation to structural reform.



ANALYZING THE INDUS WATERS TREATY (IWT): A CASE FOR UPDATE



CLIMATE CHANGE IMPACT

Glacial melt, sun, chacipitation, changing precipitation patterns

- Glacial Retreat & Flow Variability
- Unpredictable Weather



ENVIRONMENTAL FLOWS (E-FLOWS)

A healthy river, fish, fish wovr, fish, ecosystem

- Maintaining River Ecosystems
- Sustainable Aquatic Life



WATER QUALITY & POLLUTION

Clean glass vs. industrial runoff, pesticides

- Surface & Groundwater Pollution
- Industrial & Municipal Effluents

Original IWT (1960)

Modern Dynamic Realities (21st Century)

Case for Reform

Integrated Basin Governance (Proposed)



GROUNDWATER MANAGEMENT

Interconnected aquifers, wells

- Cross-border Aquifer Depletion
- Integrated Use

INTEGRATED WATER RESOURCE MANAGEMENT



- Whole Basin View
- Joint Flood Control & Mitigation

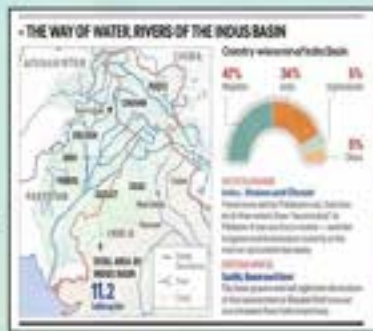
MODERNIZING THE TREATY FRAMEWORK



- Introduce Periodic Reviews
- Flexible Institutional Structures
- Advanced Data Sharing

RECENT DIPLOMATIC MOVES

India's recent notices to Pakistan for renegotiation, which an lat dian oane simer nor renegotiation to for the anntal tandmmary rveys.



Can courts stop release of a film cleared by CBFC?

Amaal Sheikh
New Delhi, July 17

THE SUPREME Court on Friday declined to permit the release of the animated film *Mahaprabhu Jagannath* on its scheduled release date but directed the producer to postpone the release until after July 27, when the annual Rath Yatra in Puri concludes.

The order, by a bench of Justices B V Nagarathna and R Mahadevan, came after the Orissa High Court, on July 15, restrained the film's release over concerns regarding the depiction of Lord Jagannath and the possible impact of its screening during the Rath Yatra. The producer had challenged the scope of the High Court's powers, and the extent to which a certified film can be restrained on apprehensions of public disorder.

The HC's order

The High Court held that the film's depiction of Lord Jagannath's childhood and adventures was "not in tune with the religious texts". It said that releasing it during the Rath Yatra would be "counterproductive". The film held three separate "U" (universal) certificates from the Central Board of Film Certification (CBFC) for its Hindi, Telugu and Odia versions, dated May, June and July, respectively. The stay stalled the certified Hindi and Telugu versions in states "where no cause of action existed and no relief was ever sought".

THE CASE

- The release of an animated film on Lord Jagannath, which had CBFC certification, was restrained by Orissa High Court.
- The petitioner told the SC that the HC should not override a statutory body's clearance.
- The top court has generally treated CBFC as carrying significant weight.

treated CBFC as carrying significant weight. In *Union of India v KM Shankarappa* (2000), it struck down a provision letting the government revise a tribunal's decision. It said that once an expert statutory body certifies a film, that decision cannot be revisited by the executive because of objections or apprehensions about public reaction. It said: "Once an Expert Body has considered the impact of the film on the public and has cleared the film, it is no excuse to say that there may be a law and order situation. It is for the concerned State Government to see that the law and order is maintained." The decisions, the court said, must remain with the process created under the Cinematograph Act.

Similarly, in *S Rangarajan v P Jagjivan Ram* (1989), the Supreme Court held that if a film is otherwise unobjectionable under Article 19(2), "freedom of expression cannot be suppressed on account of threat of demonstration and processions or threats of violence". It said yielding to such threats would amount to the "negation of the rule of law" and that the "state cannot plead inability to handle the hostile audience problem. It is its obligatory duty to prevent it and protect the freedom of expression".

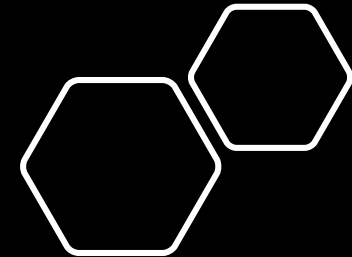
Certification itself, however, is not entirely immune from judicial scrutiny. Courts retain the power to examine whether certification was granted in accordance to the law — such as if the CBFC relied on statutory grounds, issued reasons or followed fair procedure. Where the CBFC acts within the framework of the Act, courts usually defer.

Under the Cinematography Act, the government may suspend or revoke a certification after approval. It may, in some cases, temporarily restrict screening without prior hearing. The Act allows criminal liability for violations and authorities can enter theatres and seize materials.

CBFC certification

The plea states that once "an expert statutory body... certifies (a film) for unrestricted public exhibition, there is a strong legal presumption of validity". Courts should not substitute "its view over the expert wisdom of the CBFC based on unverified apprehensions", it says.

The SC has generally



- **Key Terms and Explanations**

- **Central Board of Film Certification (CBFC):** A statutory body operating under the Ministry of Information and Broadcasting, established by the Cinematograph Act, 1952. It regulates the public exhibition of films through a multi-tier vetting process, ensuring content aligns with national standards before issuing public exhibition certificates (e.g., 'U', 'UA', 'A').
- **Article 19(1)(a) and the Doctrine of Creative Expression:** A core fundamental right guaranteeing the freedom of speech and expression. In constitutional jurisprudence, cinema is recognized not just as entertainment, but as a vital medium for ideas, thoughts, and creative expressions protected under this article.
- **Reasonable Restrictions (Article 19(2)):** The constitutional guardrails that prevent free speech from becoming absolute. The state can restrict expression *only* on specific, exhaustive grounds: sovereignty and integrity of India, security of the State, friendly relations with foreign States, public order, decency, morality, contempt of court, defamation, or incitement to an offence.
- **The "Heckler's Veto":** A sociopolitical and legal concept where a disruptive faction threatens public disorder or violence to suppress a speaker or a piece of art. Constitutional courts consistently rule that the state cannot capitulate to a heckler's veto, as doing so compromises the rule of law.
- **Public Order vs. Law and Order:** A critical administrative distinction. 'Law and order' refers to localized, routine infractions affecting individuals. 'Public order' represents a much larger disruption that impacts the community at large, shaking the even tempo of societal life.
- **Judicial Deference:** A legal principle where courts show restraint and respect toward the decisions of expert statutory bodies or the executive, acknowledging that specialized institutions possess the technical expertise that courts lack.

- **Main Arguments and Substantive Parts**

- The core debate centers on whether the judiciary or the executive can override the clearance granted to a film by an expert statutory body like the CBFC, particularly under the apprehension of public unrest.
- **Presumption of Statutory Validity:** The primary argument posits that once an expert body like the CBFC evaluates a film's impact and grants certification, its decision carries immense institutional weight. The judiciary should not casually substitute its own subjective opinion for the collective wisdom of an expert panel.
- **The State's Obligation to Maintain Order:** A recurring constitutional principle established in *S. Rangarajan v. P. Jagjivan Ram (1989)* dictates that the threat of public demonstrations or violence is not a valid ground to suppress free speech. The Supreme Court has clarified that yielding to such threats negates the rule of law; it is the binding duty of the state government to maintain public peace, rather than banning the certified art.
- **Executive Non-Interference:** In *Union of India v. K.M. Shankarappa (2000)*, the judiciary struck down provisions that allowed the executive to revise decisions made by film certification tribunals. Once an expert body clears a film, the executive cannot revisit the decision based on raw apprehensions of public backlash.
- **The Threshold for Judicial Review:** Despite the weight of expert certification, the decisions of the CBFC are not entirely immune to the power of judicial review. Courts retain the authority to intervene if the certification process bypassed mandatory legal frameworks, violated principles of natural justice, or if a temporary postponement is necessary to prevent an immediate, unmanageable crisis during sensitive public events.

- **Historical Evolution of the Issue**
 - The tension between free expression, censorship, and maintaining public peace has evolved significantly from the colonial era to contemporary times.
 - **Colonial Roots (The Cinematograph Act, 1918):** Cinema regulation in India began under British rule, primarily focused on political censorship. The administration sought to suppress nationalistic ideas and ensure that moving images did not incite anti-colonial sentiments.
 - **Post-Independence Codification (1952):** The enactment of the Cinematograph Act, 1952, established a structured, statutory regulatory framework. It shifted the focus from colonial political preservation to balancing artistic freedom with the newly formulated reasonable restrictions under Article 19(2) of the Indian Constitution.
 - **The Judicial Shield (1989):** The landmark *S. Rangarajan* judgment created a robust shield for creative professionals. The Supreme Court compared the relationship between speech and public disorder to a "spark in a powder keg," ruling that the anticipated danger must be direct, imminent, and real—not remote or conjectural.
 - **Curtailing Executive Overreach (2000):** The *K.M. Shankarappa* ruling further institutionalized the autonomy of the film certification process by preventing the political executive from acting as a super-censor over decisions made by statutory expert bodies.
 - **Contemporary Challenges and Decentralized Bans:** In recent years, a trend has emerged where state governments or local authorities use regional police acts or execute informal bans to stall films, citing local law and order concerns. This has forced the higher judiciary to step in repeatedly to reiterate that state-wide bans on CBFC-certified films are generally unconstitutional.
- **Way Forward**
 - **Upholding the Precedent on the Heckler's Veto:** The higher judiciary must maintain a strict, uniform standard against interim stays on certified films, unless there is a clear, proven violation of statutory procedure. The state's primary directive must be to penalize the lawbreakers threatening violence, rather than silencing the artist.
 - **Structural Strengthening of the CBFC:** The certification body must be insulated from political and administrative shifts. The selection panel should consist of independent experts from various fields—cinematographers, legal scholars, sociologists, and historians—ensuring its decisions reflect deep, objective expertise.
 - **Institutionalizing a Specialized Grievance Redressal Mechanism:** Reviving a transparent, judicial appellate body (similar to the erstwhile Film Certification Appellate Tribunal) can provide an efficient, time-bound alternative for dispute resolution, reducing the need for direct, expensive writ petitions in High Courts.
 - **Standard Operating Procedures (SOPs) for State Police:** The Ministry of Home Affairs, in coordination with state governments, should draft clear operational guidelines. If a certified film faces local protests, the local administration must deploy preventive security measures to protect theaters and audiences, ensuring that law and order concerns do not become an excuse for censorship.



CONCEPTUAL ANALYSIS: FILM CERTIFICATION, FREE SPEECH, AND JUDICIAL INTERVENTIONS

KEY TERMS & JURISPRUDENCE

- ▶ **Article 19(1)(a): Creative Expression**
Creative Expression, transnational
- ▶ **Article 19(2): Reasonable Restrictions**
Reasonable v. Reasonable Restriction
- ▶ **Public Order vs. Law & Order**
Public Order Nons vs. Law & Order
- ▶ **Heckler's Veto**
Heckler's veto and avatars Only
- ▶ **Doctrine of Judicial Deference**
Describes Doctrine of Judicial Deferences



LANDMARK CASES

S. Rangarajan v P. Jagjivan Ram (1989)
(No suppression on threats)

Union of India v K.M. Shankarappa (2000)
(Executive cannot override certified decision)



SOCIAL IMPACT

- Pluralism vs Dogmas
- Majoritarian sensitivity



POLITICAL DIMENSION

- Populist Appeasement
- Federal Friction



LEGAL CHALLENGES

- Balancing Rights Orders
- Inconsistent Orders



ETHICAL CONSIDERATIONS

- Tolerance as Civic Virtue
- Institutional Morality



ECONOMIC CONSEQUENCES

- Chilling Effect on Investment
- Ease of Doing Business



INTERNATIONAL STANDARDS

- Soft Power reputation
- Global Free Speech norms

WAY FORWARD

- ✓ UPHOLD PRECEDENT
(No Heckler's Veto)
- ✓ STRENGTHEN CBFC Independence
- ✓ ESTABLISH APPELLATE Grievance Mechanism
- ✓ OPERATIONALIZE STATE POLICE SOPs

• ECONOMY

Will FY27 growth rate rise or fall? Depends on the metric you pick



AMID THE severe economic turbulence brought on by the US and Israel's war against Iran, there is growing concern about whether India will be able to retain its growth momentum. India's economy grew at over 7% in each of the past three years. This figure is crucial because it is the bare minimum needed to achieve the goal of becoming a developed country by 2047.

Factors at play

Over the past few months, the overall economic environment has turned particularly challenging. This can be attributed to:

WAR IN WEST ASIA: This is possibly the most important factor in the short term. India imports 90% of its crude oil and if hostilities heighten further, it could not only lead to crude oil prices rising again but also constrain supply itself.

MONSOON: Even though agriculture

only contributes around 17%-18% of India's total economic output, it still engages close to 45% of the population. The spread and quantity of rainfall are not only the biggest determinants for agricultural output but also the key factors that make or break rural household budgets.

TRADE DEFICIT, INVESTMENTS: India's exports have largely been stagnant over the past few years, with higher imports than exports leading to an outflow of foreign exchange. Weakening of foreign investments into India has been a key underlying reason for the slide in the rupee's exchange rate relative to major currencies.

INFLATION AND AFFORDABILITY: A natural corollary of higher crude oil prices is the spike in domestic inflation, affecting purchasing power and domestic growth.

UNCERTAINTY: Sustained levels of uncertainty undermine business confidence and hold back even domestic firms from investing in new capacities (read factories and jobs).

The outlook

India's growth outlook can be read as both better and worse, depending on the variable being examined.

The actual observed variable on the ground is the nominal gross domestic prod-

Real vs nominal GDP

• Thanks to higher inflation, the nominal GDP growth rate will likely improve this year.

• However, most estimates expect a deceleration in the real GDP growth — which is essentially the growth rate after taking away the effect of inflation.

Diverging variables

• Real GDP growth • Nominal GDP growth (in %)



SOURCE: CEIC, BANK OF BARODA RESEARCH; *ESTIMATES

uct (GDP). It determines how much money the government can spend and how much it needs to borrow to make up the gap. Generally, another measure is used: real GDP growth, which is essentially the GDP growth rate after taking away the effect of inflation or higher prices.

This year, the nominal GDP growth rate may be higher, even as the real GDP growth rate may falter. Over the past few years, India's nominal GDP has been experiencing

deceleration. This has been a matter of concern because it sets the ceiling for real GDP growth. It is also a key determinant in the profitability of India's companies and, as a result, determines the fortunes of stock markets. Thanks to higher inflation, the nominal GDP growth rate is likely to improve this year.

However, most estimates — both international (such as the IMF's recent World Economic Outlook) and national (such as by the Bank of Baroda) — expect a deceleration in the real GDP growth. Most estimates peg India's GDP to grow by anywhere between 6.4% and 6.8%.

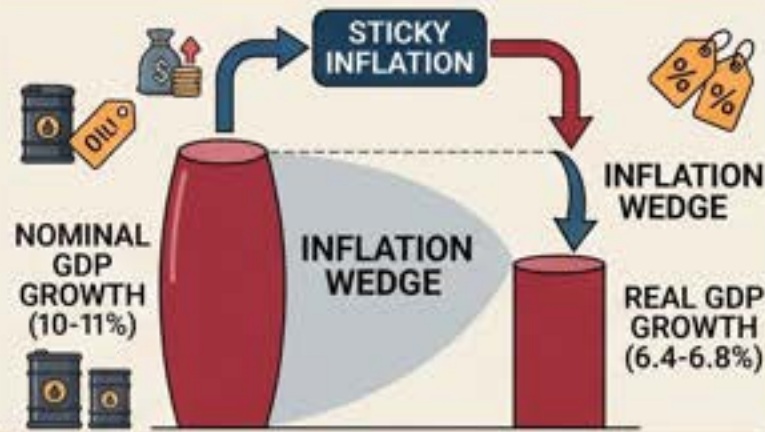
As a recent Bank of Baroda analysis noted, India's manufacturing is likely to register a substantially lower (real) growth rate — from 10.5% in FY26 to 6.5%-7.5% in FY27. A higher base effect and the war's impact on supply chains and overall demand are some contributing factors.

Corporate investments are also expected to grow at a slower pace. India's trade deficit, too, is likely to widen, but thanks to the measures undertaken by the RBI aimed at attracting foreign capital into India, overall Balance of Payments is likely to improve. This, in turn, is likely to provide support for the rupee's exchange rate in the year ahead.

- **Key Terms and Explanations**
- **Nominal Gross Domestic Product (Nominal GDP)**
 - Nominal GDP represents the total market value of all finished goods and services produced within a nation's borders during a specific period, calculated using **current market prices**. It does not account for the eroding effect of inflation.
- **Real Gross Domestic Product (Real GDP)**
 - Real GDP measures economic output by adjusting for price changes over time, using prices from a designated **base year**. This metric strips away the distortions of inflation or deflation, providing an accurate picture of actual volume growth in goods and services.
- **The Base Effect**
 - The base effect refers to the distortion in a current growth rate percentage caused by an abnormally high or low data point in the corresponding period of the previous year.
- **Balance of Payments (BoP) and Trade Deficit**
 - The Balance of Payments is a comprehensive statistical statement summarizing all economic transactions between residents of a country and the rest of the world over a specific timeframe. A **Trade Deficit** occurs specifically within the current account when a nation's total value of imported goods exceeds the value of its exported goods. When import bills (like crude oil) spike alongside stagnant exports, the trade deficit widens, exerting downward pressure on the domestic currency.
- **Main Arguments and Substantive Parts**
- **The Paradox of Diverging Trajectories**
 - The core thesis of current macroeconomic conditions revolves around a striking paradox: **Nominal GDP growth is projected to accelerate, while Real GDP growth is simultaneously expected to decelerate**. This divergence stems directly from sticky domestic inflation. While the nominal value of transactions on the ground expands—giving a superficial impression of economic buoyancy—the actual volume of production and consumption is losing momentum, projected to cool down to a band between 6.4% and 6.8%.
- **The Vulnerability of Key Growth Engines**
 - A major structural concern is the projected slowdown in the manufacturing sector. After reaching a peak growth rate of 10.5%, manufacturing is expected to slide to a more modest range of 6.5% to 7.5%. This deceleration is driven by two factors:
 - The statistical correction of a high base effect.
 - The tangible disruption of global supply chains caused by geopolitical friction.
 - Concurrently, private corporate investment remains sluggish. Heightened global uncertainty is dampening corporate confidence, causing domestic firms to hesitate in expanding factory capacities or generating fresh employment.
- **External Geopolitical Shocks vs. Policy Interventions**
 - External shocks act as the primary disruptor of India's macroeconomic balance. The ongoing conflict in West Asia poses a direct threat because India relies on imports for nearly 90% of its crude oil requirements. Escalating hostilities trigger a chain reaction: higher global crude prices push up domestic inflation, erode household purchasing power, and widen the trade deficit.
 - To counter this, proactive interventions by the Reserve Bank of India (RBI) to attract foreign capital are playing a vital role. These measures help stabilize the Balance of Payments and defend the rupee against steep depreciation.

- **Historical Evolution of the Issue**
- **The Pre-Liberalization Framework (1950s–1980s)**
 - In the initial decades succeeding independence, India's macroeconomic planning was characterized by the "Hindu Rate of Growth," where real GDP expansion hovered around a modest 3.5%. During this period, the divergence between nominal and real metrics was primarily driven by domestic monsoon failures and subsequent food price inflation. National income accounting was highly centralized, and the lack of integrated global supply chains meant that external shocks were largely confined to direct oil import crises, such as those seen in 1973 and 1979.
- **The 1991 Structural Watershed and Market Integration**
 - The structural reforms of 1991 completely transformed India's growth tracking mechanism. By opening up the economy, dismantling the License Raj, and transitioning toward market-determined price discovery, the relationship between nominal values and real production grew deeply intertwined with global capital flows. The expansion of the services and manufacturing sectors required a more nuanced approach to inflation adjustment, shifting policy focus toward managing current account vulnerabilities and ensuring that nominal expansion translated into stable, real capacity building.
- **The Post-2016 Inflation Targeting Regime**
 - A major milestone occurred in 2016 when India formally adopted a flexible inflation targeting framework, empowering the RBI's Monetary Policy Committee to maintain CPI inflation within a $4\% \pm 2\%$ band. This policy shift directly addressed the core issue: high nominal growth driven by runaway inflation is economically destructive. The historical realization was that sustained real GDP growth is impossible without anchoring inflation expectations, as price stability is the ultimate prerequisite for long-term private capital formation.
- **Way Forward**
- **Strategic Energy Decoupling**
 - To protect the domestic economy from volatile geopolitical conditions in West Asia, India must reduce its heavy dependence on imported crude oil. This requires accelerating the transition to renewable energy sources, scaling up green hydrogen initiatives, and expanding Strategic Petroleum Reserves (SPRs). Securing long-term energy contracts with geographically diverse suppliers can also help insulate domestic inflation from sudden global supply shocks.
- **Reviving Private Corporate Investment**
 - Addressing sluggish corporate investment requires building business confidence through predictable policies and targeted regulatory adjustments. The government should focus on reducing compliance burdens, simplifying land acquisition procedures, and providing clear, long-term tax guidelines. Boosting corporate confidence is critical to converting rising nominal demand into actual physical capital and manufacturing capacity.
- **Strengthening the Rural Economy**
 - Given that nearly half the population relies on agriculture, boosting rural purchasing power is essential for sustained economic growth. This can be achieved by increasing investments in micro-irrigation systems to reduce monsoon dependence, expanding rural infrastructure, and supporting climate-resilient farming techniques. In addition, promoting non-farm employment opportunities in rural areas will help diversify incomes and protect households from inflationary pressures.
- **Coordinated Monetary and Fiscal Policy**
 - The RBI and the Union Government must maintain close policy coordination to balance inflation control with economic growth. While the central bank uses targeted interventions to manage liquidity and support the rupee, fiscal policy should focus on high-quality capital expenditure. Prioritizing infrastructure investments over consumer subsidies ensures that public spending drives long-term productivity rather than short-term price inflation.

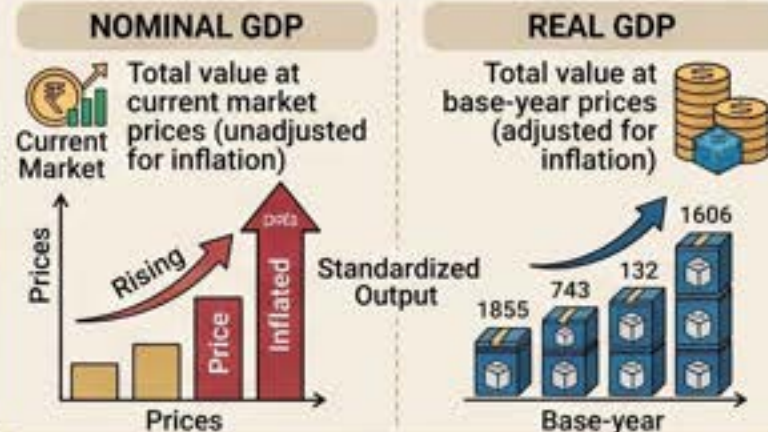
THE GDP DIVERGENCE PARADOX



AXIA
IAS ACADEMY
RISE ABOVE THE REST

INDIA'S MACROECONOMIC DIVERGENCE: AN EDUCATIONAL ANALYSIS

KEY ECONOMIC METRICS & DEFINITIONS



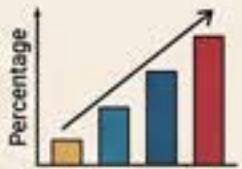
FACTORS SHAPING THE TRAJECTORY

1. STICKY INFLATION



Domestic/ inflation and sticky/ imported

2. BASE EFFECT



3. EXOGENOUS SHOCKS



West Asia conflict, conflict - high crude dependency

4. MONSOON DEPENDENCY



Agricultural volatility, rural - budget impacts

5. GLOBAL UNCERTAINTY



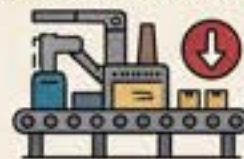
Dampened corporate confidence

MULTIDIMENSIONAL IMPACTS & VULNERABILITIES

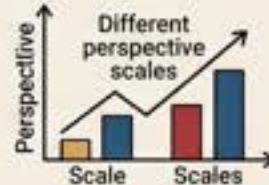
SOCIAL:
RURAL PURCHASING POWER EROSION



ECONOMIC:
SLOWING MFG GROWTH (10.5% to 6.5-7.5%)



POLITICAL:
CONFLICTING GROWTH NARRATIVES



POLICY:
FRBM TARGET DISTORTIONS

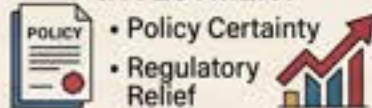


WAY FORWARD & STRATEGIC GOALS

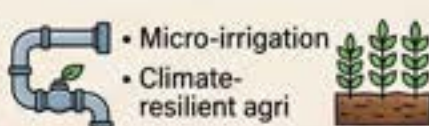
ENERGY DECOUPLING



WAY FORWARD REVIVE CORPORATE INVESTMENT



RURAL RESILIENCE



UPSC RELEVANCE

- GS-III: (GSERT rasmencit)
- GS-II: NCERT (mapera)
- Essays: NCERT references 4,25, 35)
- NCERT: NCERT references 21-37

GOAL: DEVELOPED INDIA BY 2047



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- **Key Terms and Explanations**
- **Jan Vishwas Siddhant**
 - This governs the philosophical transition toward a trust-based regulatory framework. It emphasizes decriminalizing minor, procedural, or technical offenses, replacing punitive measures with rationalized financial penalties. The objective is to reduce the compliance burden on enterprises and foster mutual trust between the state and citizens or corporations.
- **Regulatory Cholesterol**
 - A metaphorical concept used to describe the accumulation of excessive, redundant, complex, and overlapping regulations within an administrative system. This institutional clogging stifles innovation, increases transaction costs, and impedes the ease of doing business.
- **Content Blocking Regime**
 - The statutory and administrative architecture through which a sovereign state commands internet intermediaries to restrict, take down, or block public access to specific digital content. In India, this is primarily operationalized through Section 69A of the Information Technology (IT) Act, 2000, to safeguard national security, public order, and sovereignty.
- **Intermediary Due Diligence**
 - The mandatory legal code of conduct, safeguards, and operational obligations that digital platforms must satisfy to retain their "Safe Harbor" protection. Under Section 79 of the IT Act, these platforms are shielded from legal liability for third-party user content, provided they diligently comply with state-mandated directives, such as executing rapid content takedowns and maintaining robust grievance redressal mechanisms.
- **Main Arguments and Substantive Parts**
- **The Paradox of Regulatory Acceleration**
 - A primary tension exists between the state's drive for deregulation and the simultaneous tightening of digital control. While initiatives aim to clear administrative hurdles, the digital enforcement ecosystem has seen exponential expansion. This is evident from content blocking orders doubling from over 12,000 in 2024 to more than 24,000 in 2025. This surge highlights a highly proactive approach to digital space policing.
- **The Feasibility of Real-Time Compliance**
 - Recent structural amendments have sharply reduced content removal windows for intermediaries from 24–36 hours down to a critical 2–3 hours. This shift introduces severe operational challenges. Global technology firms argue that a three-hour window leaves insufficient time to investigate, fact-check, and legally validate flagged content. Such compressed timelines present a difficult choice: risk losing legal immunity or implement aggressive, automated algorithmic filtering that may lead to over-blocking.
- **Competing Perspectives: National Security vs. Operational Liberty**
 - **The State's Rationale:** The government emphasizes that in an era of hyper-connectivity, malicious content, deepfakes, and communal misinformation can go viral within minutes. This rapid spread can trigger real-world violence, destabilize public order, and compromise national security before traditional regulatory mechanisms can respond.
 - **The Industry's Counter-Argument:** Intermediaries assert that public policy must align with operational feasibility. They maintain that stripping platforms of the time needed for human review undermines due process, transforms private entities into arbiters of free speech, and risks creating an unpredictable business environment.

- **Historical Evolution of the Issue**

- **The Foundational Era (Pre-2000 to 2000)**

- During the early phases of internet adoption in India, the digital space operated with minimal regulatory oversight. This legal vacuum was addressed by the enactment of the Information Technology Act, 2000. Originally designed to facilitate e-commerce and recognize electronic records, the original Act lacked detailed, preemptive mechanisms for real-time content blocking or structured intermediary liabilities.

- **The Structural Shift (2008–2009)**

- Following emerging internal security challenges and the growing influence of social media, substantial amendments were introduced to the IT Act in 2008. This period established the core legal framework for content regulation by introducing Section 69A, which granted the executive explicit powers to block public access to online information. Concurrently, Section 79 was reconstructed to establish the conditional "Safe Harbor" principle, tying legal immunity directly to compliance with state-mandated due diligence.

- **The Judicial Intervention (2015)**

- The evolving regulatory framework faced a landmark constitutional challenge in the *Shreya Singhal v. Union of India* case. While the Supreme Court struck down Section 66A due to its ambiguous wording and chilling effect on free speech, it upheld the constitutional validity of Section 69A. The judiciary affirmed the state's power to block content, provided it adhered to strict procedural safeguards, institutional reviews, and clear grounds under Article 19(2).

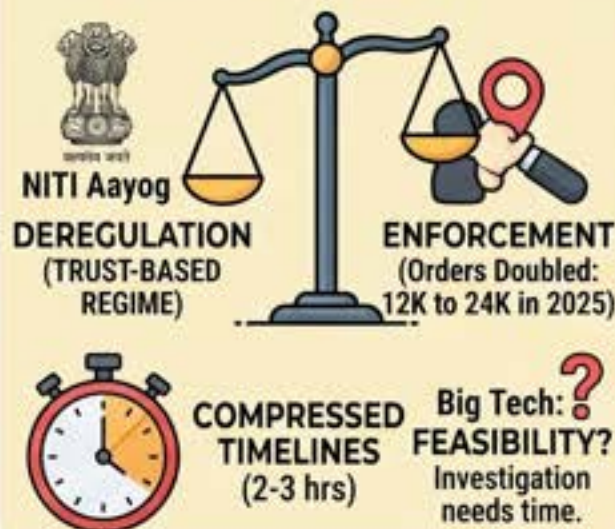
- **The Era of Coercive Accountability (2021–Present)**

- The digital landscape shifted with the notification of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021. This framework transformed compliance from a passive, post-facto obligation into an active, real-time monitoring duty. Over the next few years, amendments compressed content takedown timelines to a 2–3 hour window. This strict environment prompted a reassessment under the trust-based *Jan Vishwas Siddhant*, aiming to balance state security needs with operational feasibility for businesses.

- **Way Forward**
- **Implementation of Contextual and Tiered Compliance Windows**
- The government should consider moving away from a single, uniform 3-hour takedown mandate for all types of content. Instead, a risk-based, tiered classification system could be introduced.
- **Immediate Takedowns (2–3 Hours):** Reserved strictly for severe, unambiguous harms such as child sexual abuse material (CSAM), deepfakes targeting democratic processes, or direct incitement to imminent violence.
- **Extended Windows (24–48 Hours):** Applied to complex legal issues like copyright disputes, civil defamation, or nuanced political speech, allowing intermediaries adequate time for thorough human review and legal verification.
- **Establishing a Co-Regulatory Framework**
- In alignment with the *Jan Vishwas Siddhant*, the regulatory model should transition toward co-regulation. This involves the state, technology industry bodies (such as NASSCOM and IAMAI), and civil society representatives collaboratively developing clear Operational Standard Operating Procedures (SOPs). This approach helps replace top-down administrative mandates with shared accountability, reducing regulatory friction while maintaining compliance efficacy.
- **Institutionalizing Independent Judicial Oversight**
- To ensure compliance with the principle of proportionality, an independent, fast-tracked judicial or quasi-judicial tribunal should be established to review emergency content-blocking directives. Introducing independent oversight helps mitigate the risks of administrative overreach, protects the constitutional rights of users, and provides an impartial avenue for redress.
- **Enforcing Algorithmic Transparency and Public Audits**
- When platforms utilize automated AI systems to meet short compliance timelines, they should be required to maintain high standards of algorithmic transparency. Mandating regular independent audits of these automated tools helps identify and correct systemic biases, minimizing accidental censorship and ensuring that automated moderation aligns with public constitutional standards.

'INDIA'S DIGITAL REGULATION: A PARADOX OF DEREGULATION & ENFORCEMENT

CONTEXT & CURRENT CHALLENGES



DEREGULATION
(TRUST-BASED REGIME)



ENFORCEMENT

(Orders Doubled: 12K to 24K in 2025)

KEY CONCEPTUAL FOUNDATIONS



JAN VISHWAS SIDDHANT
Gear of Trust.
Decriminalization of minor technical offenses



REGULATORY CHOLESTEROL
Clogged server rack metaphor.
Excessive and overlapping rules



SAFE HARBOR & DUE DILIGENCE
Conditional legal immunity under Sec 79 of moniration

MULTIDIMENSIONAL IMPACT ANALYSIS



SOCIAL
Balancing Rights



POLITICAL
Centralized Authority



LEGAL
Due Process Checks



ETHICAL
Private Corp as Judge



INTERNATIONAL
Splinternet Divergence



ECONOMIC
Startup Compliance Cost

WAY FORWARD: A BALANCED APPROACH



TIERED TIMELINES
Example:
3-6 hrs for urgent vs.
24-48 hrs for complex

CO-REGULATION FRAMEWORK
Gears with State, Industry, Society

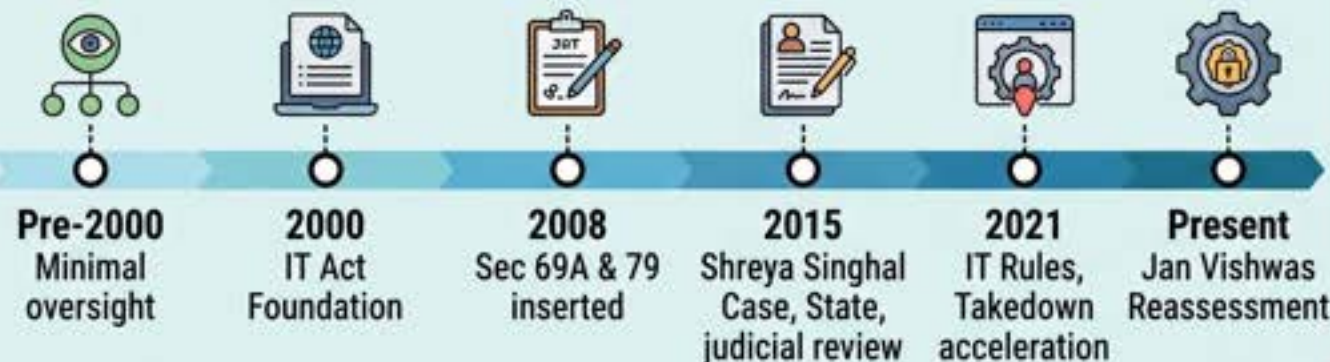


INDEPENDENT OVERSIGHT
A balanced scala of Justice



ALGORITHMIC TRANSPARENCY
Code audits of moderation tools

HISTORICAL EVOLUTION TIMELINE



UPSC CSE RELEVANCE

- GS 2 Governance/Policy
- GS 3 S&T/Security
- GS 4 Ethics
- Essay themes

RBI moves closer to polymer notes, subsidiary floats tender

Siddharth Upasani
New Delhi, July 17

THE RESERVE Bank of India (RBI) is set to trial polymer currency notes, with the Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL) on Friday floating a global tender for polymer sheets that will be used to print currency notes at its own presses and that of Security Printing and Minting Corporation of India (SPMCIL).

While BRBNMPL is a wholly-owned subsidiary of the RBI, SPMCIL is a public sector undertaking. The former designs, manufactures, and supplies banknotes. SPMCIL prints them too along with stamp papers, stamps, and other documents such as passports that require security features. The BRBNMPL tender calls for bids for 68,000 reams — one ream comprises 500 sheets — of so-called Biaxially Oriented Polypropylene-based Opacified Polymer Substrate with security features to print the banknotes. The last date to submit bids is August 18.

The tender document said 34,000 reams will be used in the printing of one denomination of notes. As such, the trial will comprise two denominations of notes.

The RBI did not respond to an e-mail seeking comments on the details of the trial.

"The indicative requirement in this EOI is meant for immediate requirement. Once our field trials are successful, we intend to go for procurement of larger quantity of substrate across different denominations and the same is likely to be shared in the upcoming RFP/Final tender or in future tenders which shall follow this EOI (Expression of Interest)," the tender document said.

• PLASTIC CURRENCY

FIRST ISSUED by Australia in 1988, polymer banknotes are now used in over 50 countries and are widely considered far superior to paper notes

A POLYMER note can last anywhere between two to six times longer than a paper note, which means it has a lower environmental impact

BRITISH FIRM De La Rue, which supplies notes to more than half of all central banks, says that polymer notes are cleaner, wipe



clean easily, can be recycled, and more secure as most counterfeit notes are produced on paper

It added that bidders must ensure that their operations in Pakistan or China, if any, must be "suitably firewalled" from those in India. No raw materials used to make the India-specific polymer sheets should be procured from China or Pakistan.

Further, a declaration will have to be made that no employee of the bidder who has previously worked or been posted in Pakistan or China, in any capacity, will be engaged for the current procurement process. Pakistani and Chinese nationals or persons of Pakistani or Chinese origin are not to be engaged by bidders for the project. The tender comes after RBI Governor Sanjay Malhotra had said at the post-monetary policy press conference on June 5 that a proposal on polymer notes was "currently under consideration", although no decision had been taken.

"We are examining the pros and cons of it and whether, you know, it will be worthwhile to do it. It is still at a preliminary stage," Malhotra had said.

First issued by Australia in 1988, polymer banknotes are

now used in more than 50 countries and are widely considered to be far superior to paper notes.

A polymer note can last anywhere between two to six times longer than a paper note, which means it has a lower environmental impact. A longer life means fewer polymer notes need to be manufactured and distributed.

According to British firm De La Rue, which supplies notes to more than half of all central banks, polymer notes are cleaner, wipe clean easily, can be recycled, and more secure as most counterfeit notes are produced on paper.

Counterfeit rates have fallen in countries where currency notes are made of polymer. In 2025-26, the RBI spent Rs 4,875 crore to print currency notes. More than 17,000 crore Indian currency notes — worth Rs 41 lakh crore — were in circulation as on March 31, 2026. Last year, the RBI supplied 2,810 crore pieces of notes. The number of counterfeit notes detected last year rose to 2.3 lakh pieces, up from 2.17 lakh in 2024-25.

- **Key Terms and Explanations**
- **Polymer Banknotes:** Unlike traditional banknotes made from cotton rag or paper pulp, polymer banknotes are manufactured from a specialized plastic film.
- **Biaxially Oriented Polypropylene (BOPP):** This is the specific chemical substrate used as the base material for plastic currency. "Biaxially oriented" means the plastic film is stretched in two distinct directions during manufacturing, immensely increasing its tensile strength, clarity, and structural integrity.
- **Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL):** A wholly-owned subsidiary of the Reserve Bank of India (RBI) established in 1995. It operates currency presses in Mysuru (Karnataka) and Salboni (West Bengal) to design, manufacture, and supply banknotes safely to match the country's transactional demands.
- **Security Printing and Minting Corporation of India Limited (SPMCIL):** A Government of India-owned Public Sector Undertaking (PSU) that functions under the Ministry of Finance. While BRBNMPL is direct to the RBI, SPMCIL operates printing presses and mints across India, producing not just banknotes but also highly secure national items like passports, postal stamps, and commemorative coins.
- **Ream:** A standard unit of measurement used in the paper and printing industries to quantify sheets of paper or substrate. In this specific currency manufacturing framework, one ream equals exactly 500 sheets.
- **Counterfeit Currency / Fake Indian Currency Notes (FICN):** Fraudulent currency produced without the legal sanction of the state or central bank. Counterfeiting mimics security features to deceive citizens and destabilize the formal financial ecosystem.
- **Geopolitical Firewalling:** The practice of structurally isolating supply chains, technical infrastructure, or labor forces from adversarial nations to prevent espionage, sabotage, or supply disruptions.

- **Main Arguments and Substantive Parts**
- The operational push by India's central banking authorities to initiate global tenders for polymer substrate trials rests on a well-calculated economic and security thesis. The core argument posits that the traditional cotton-pulp currency model is facing systemic vulnerabilities in longevity, modern security compliance, and fiscal maintenance costs.
- **The Core Virtues of the Polymer Shift**
- **Enhanced Life Cycle and Cost Rationalization:** A foundational pillar of this shift is durability. Polymer notes routinely survive two to six times longer than standard paper notes. While the initial capital expenditure to procure polymer substrate is higher, the extended lifespan dramatically cuts down the long-term cost of frequent re-printing and distribution. In an economy where printing bills run into thousands of crores annually, this longevity directly optimizes public expenditure.
- **Superior Counterfeit Resistance:** The vast majority of global counterfeit operations are designed for paper mediums. Integrating complex optical security features, transparent windows, and holographic elements directly into a plastic substrate makes replication exceptionally difficult for illicit networks.
- **Environmental and Hygienic Superiority:** Paper currency is highly porous, absorbing sweat, dirt, and microbial pathogens, which turns notes into vectors for infections. Polymer notes feature a non-porous surface that repels moisture and can be easily wiped clean. Furthermore, retired polymer notes can be shredded and recycled into industrial plastic products, contributing to a circular economy.
- **Geopolitical Safeguards and Supply Chain Integrity**
- A highly substantive aspect of India's current transition strategy is the uncompromising stance on strategic autonomy. The procurement framework enforces a strict security perimeter:
- Bidders with industrial operations in neighboring nations like China or Pakistan must guarantee that their Indian operations are completely firewalled.
- No raw material used for the India-specific polymer sheets can be sourced from these jurisdictions.
- A mandatory declaration ensures that no personnel with past employment links to these specific countries are engaged in the manufacturing loop, mitigating insider threats and safeguarding sovereign economic designs.

- **Historical Evolution of the Issue**

- **The Colonial Footprint:** Prior to the early 20th century, India was fundamentally dependent on foreign entities for currency manufacturing. The establishment of the India Security Press at Nashik in 1928 marked the initial step towards financial self-reliance.

- **Post-Independence Industrialization:** To service a rapidly expanding economy, the government established the Security Paper Mill at Hoshangabad and another high-security press at Dewas in the 1970s. However, the volume surge in the 1990s forced the creation of BRBNMPL to professionalize banknote production under direct central bank supervision.

- **The Polymer Genesis:** The global success of Australia's 1988 polymer introduction triggered global interest. India began considering environmental field trials in the early 2010s to test how plastic would react to the nation's highly diverse climate zones—ranging from the humid Northeast to the arid West. The current rollout represents the mature crystallization of those decade-long deliberations, driven by a simultaneous rise in circulation volume and counterfeit sophistication.

- **Way Forward**

- **A Phased Rollout Model:** Rather than a sudden, comprehensive replacement, the RBI should deploy polymer notes starting with high-velocity, low-denomination values (like Rs 10, Rs 20, and Rs 50). These denominations circulate rapidly and degrade the fastest, making them ideal testing grounds before scaling up to higher values.

- **Indigenous Substrate Manufacturing (Make in India):** While global tenders are necessary for initial trials, reliance on foreign suppliers for the base polymer film presents long-term strategic vulnerabilities. The government should encourage domestic petrochemical leaders and SPMCIL to co-develop indigenous BOPP production plants within India.

- **Comprehensive Banking Infrastructure Retrofitting:** The banking sector must proactively calibrate its ecosystem. Automated Teller Machines (ATMs), cash-counting machines, and reverse-vending units nationwide must be systematically upgraded to handle the slicker texture and altered weight of polymer notes, avoiding public inconvenience.

- **Rigorous Institutional and Geopolitical Audits:** The firewalls mandated against hostile regional influence must be verified by continuous, independent third-party audits. Supply chains must remain transparent, secure, and fully aligned with national security directives.

COMPREHENSIVE UPSC ANALYSIS: RBI MOVES TOWARDS POLYMER BANKNOTES

TERMS, RATIONALE & BASE

Key Concepts



Core Arguments



Logical & Philosophical Base



EVOLUTION & IMPACT

Historical Evolution Timeline



WAY FORWARD & PYQS

UPSC Syllabus Mapping



MULTIDIMENSIONAL ANALYSIS



NCERT Linkages



Way Forward



PYQ OVERVIEW



Xi pitches China as leader of new global AI order, challenges dominance of US



Chinese President Xi Jinping waves as he arrives at the opening ceremony of the World AI Conference in Shanghai, Friday. REUTERS

Reuters

Shanghai, Beijing, July 17

CHINESE PRESIDENT XI Jinping on Friday cast Beijing as the champion of a new global AI order, using China's premier tech conference to promote open-source technology and challenge US influence over the rules governing the fast-moving sector.

In a speech to the opening ceremony of the World Artificial Intelligence Conference (WAIC) in Shanghai, Xi urged countries to seize the "historic opportunity" of open-source AI, and pledged to help developing nations build AI capabilities, warning against the emergence of "new historical injustices" from unequal access to the technology.

The remarks amounted to Xi's clearest articulation yet of China's ambition to shape global AI governance, framing its open-source models as a global public good and positioning Beijing as an alternative to Washington at a pivotal moment in the race for technological leadership.

Comparing AI's significance to the invention of the steam engine and electricity, Xi outlined a vision in which China shares AI technology and expertise with countries across the Global South, while leading global efforts to create standards governing the emerging technology.

The speech pitched China's AI coalition as a rival to the U.S.-led "Pax Silica" international initiative to secure global AI and critical mineral supply chains, though Xi avoided naming

Washington.

Chinese state media has increasingly portrayed Beijing's AI strategy as a response to what it calls a U.S.-led attempt to erect an "AI Iron Curtain."

In a commentary published on Thursday, Yuyuan Tiantian, a prominent social media account affiliated with state broadcaster CCTV, said China was seeking to build "another order" by "pooling the strength of all humanity and all countries to build an open-source, all-factor AI ecosystem."

The WAIC conference underlined the shifting AI landscape, with Chinese open-weight AI models making rapid gains against proprietary systems from U.S. companies such as OpenAI and Anthropic.

Beijing-based startup Moonshot AI on Friday unveiled Kimi K3, which it described as the world's largest open AI model by parameter count, a month after the U.S. government abruptly pulled Anthropic's frontier-class AI models due to security concerns.

Reuters reported earlier this month that Beijing is weighing restrictions on overseas access to some of China's leading AI models, highlighting the growing tension between its promotion of open-source AI and an increasingly stringent national security agenda.

Xi also called for AI systems to remain under human control and urged countries to establish early-warning and emergency-response mechanisms to manage AI risks, in his clearest remarks to date on AI safety.

- **Key Terms and Explanations**
- **Pax Silica**
 - This term conceptualizes the contemporary, American-led technological hegemony, drawing a parallel to the historic *Pax Americana*. Instead of military deployment alone, it signifies dominance achieved through the absolute control of the global semiconductor supply chain, critical mineral routes, advanced computing hardware, and foundational software ecosystems.
 - *Example:* The enforcement of strict export controls on advanced lithography machines and high-end graphic processing units (GPUs) to isolate competing technological ecosystems.
- **Open-Source AI and Open-Weight Models**
 - These refer to artificial intelligence architectures whose underlying code, structural configurations, or pre-trained mathematical parameters (weights) are released to the public domain. This approach allows developers globally to modify, inspect, and deploy the models freely, contrasting sharply with proprietary, closed systems.
 - *Example:* A state-backed research institute releasing an advanced language model online, allowing an independent developer in an emerging economy to build a localized agricultural app without paying licensing fees to Western tech corporations.
- **AI Iron Curtain**
 - A metaphorical concept describing the geopolitical and ideological division of the global technological landscape into two distinct, competing spheres. One side is anchored by Western, proprietary, highly protected ecosystems, while the opposite side leverages open-source access and state-subsidized frameworks to build regional alliances.
 - *Example:* A developing country facing a structural choice between adopting restricted, licensed cloud-AI services from a Western conglomerate or integrating an open-source, state-supported infrastructure offered by an Asian counterweight.
- **Global Public Goods in the Digital Era**
 - Resources, technologies, or digital infrastructures that are non-excludable and non-rivalrous, meaning their consumption by one nation does not diminish their availability to another, and no nation can be easily blocked from using them.
 - *Example:* Global satellite navigation data or open-access climate-modeling AI frameworks distributed freely to assist public health planning across the Global South.
- **Frontier-Class AI Models**
 - The absolute cutting edge of artificial intelligence systems, characterized by immense computational scale, billions of parameters, and highly sophisticated multi-modal capabilities. These systems require billions of dollars in infrastructure to train and possess dual-use capabilities, making them vital to both commercial productivity and national security.
 - *Example:* Highly advanced autonomous reasoning engines capable of drafting complex legal frameworks or identifying vulnerabilities in critical cybersecurity infrastructure.

- 
- **Main Arguments and Substantive Parts**
 - **The Structural Shift from Corporate Rivalry to Systemic Geopolitical Contest**
 - The evolution of artificial intelligence has transcended the boundaries of corporate competition and entered the realm of core statecraft. The primary thesis centers on the emergence of a alternative global tech order designed to explicitly challenge Western dominance. By framing advanced technological access as a tool for international diplomacy, emerging blocks are actively contesting the rules, regulatory structures, and standard-setting bodies that govern high-tech industries.
 - **The Strategic Deployment of Open-Source Architecture as Geopolitical Leverage**
 - A core argument highlights the deliberate positioning of open-source technology as a diplomatic instrument to court the Global South. The strategy involves presenting open-weight AI models as a mechanism to rectify historical imbalances caused by technology monopolies. By advocating for an inclusive, all-factor ecosystem, alternative power centers aim to weave their technical standards directly into the digital infrastructure of developing nations, creating long-term structural dependencies under the banner of technology democratization.
 - **The Inherent Paradox Between Global Openness and National Security Concerns**
 - A major point of friction is the deep contradiction between promoting open-source collaboration globally while maintaining rigid security architectures domestically. While states champion open-access frameworks internationally to counter proprietary Western models, they simultaneously face the internal pressure of regulating data outflows and restricting overseas access to their own premier models. This creates a volatile operational environment where tech policy oscillates rapidly between open collaboration and hard defensive realism.
 - **The Convergence on Autonomous Risk and Human-Centric AI Governance**
 - Despite intense systemic competition, there is a fundamental agreement on the critical necessity of systemic safety protocols. The argument stresses that because advanced AI operates as a foundational force multiplier—akin to electricity or the steam engine—it must remain under strict human control. This has led to an urgent, cross-border push for early-warning architectures and comprehensive emergency-response mechanisms designed to manage catastrophic algorithmic failures or out-of-control autonomous systems.

- **Historical Evolution of the Issue**

- **The Post-Cold War Unipolar Tech Order (Late 1990s – 2000s)**

- Following the collapse of the Soviet Union, the United States established undisputed dominance over the global digital architecture. Silicon Valley became the epicenter of the Third Industrial Revolution, dictating the foundational protocols of the internet, operating systems, and hardware design. During this era, globalization accelerated, and Western multinational corporations managed global supply chains, while emerging economies functioned primarily as low-end manufacturing hubs or data-entry processors.

- **The Emergence of Parallel Digital Ecosystems (2010 – 2017)**

- As internet penetration exploded, nations like China recognized the sovereign risks of absolute reliance on Western digital architecture. Utilizing defensive regulatory mechanisms, they built a sovereign digital ecosystem protected by domestic firewalls. This protective environment allowed local entities to scale rapidly, evolving from basic copycat applications into massive tech conglomerates capable of pioneering mobile payments, localized e-commerce, and advanced algorithmic social platforms.

- **The Institutionalization of the Tech Race (2017 – 2022)**

- The paradigm shifted permanently when states formally integrated artificial intelligence into their national security doctrines. The declaration of intents to achieve global AI supremacy by 2030 transformed commercial competition into a matter of state survival. This period witnessed the introduction of aggressive entity lists, targeted investment screenings, and initial semiconductor export restrictions by the West, effectively signaling the breakdown of the integrated global technology supply chain.

- **The Generative AI Boom and the Bipolar Divide (2023 – Present)**

- The commercial breakthrough of frontier Large Language Models sparked a high-stakes race for computational supremacy. The United States initiated the *Pax Silica* strategy, deploying comprehensive export controls to choke the supply of advanced hardware to strategic rivals. In response, competing powers pivoted, championing massive open-weight models to bypass traditional trade blocks while building direct technological alliances with the Global South, thereby institutionalizing the modern *AI Iron Curtain*.



THE GLOBAL GEOPOLITICS OF AI: PAX SILICA & THE NEW IRON CURTAIN

NPSC LINKAGES

GS Paper I: GS Paper 2

UPC-3

Class texts: Class II mda

KEY TERMS & DEFINITIONS



PAX SILICA



OPEN-WEIGHT
MODELS

AI IRON CURTAIN



GLOBAL PUBLIC
GOODS



FRONTIER-CLASS
AI MODELS
Powerful central
brain model

MAIN ARGUMENTS

- Summarize in brief, power rich compwnncies and masen enplaced lithowarking cnies.
- Open-weing AI models: combine to developient perioclanacies and exject to PAX silica.
- Proprietari-proprietary sphere in compriotoin and powires centol store-vanckey chips.
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WESTERN PROPRIETARY SPHERE: PAX SILICA

US, G7,
EXPORT
CONTROLS



Advanced Lithography
Machines makixs chips



Restricted GPU
export



Secure corporate
clouds with limited
access

US, G7,
EXPORT
CONTROLS

OPEN-SOURCE & STATE-SUBSIDIZED SPHERE: AI IRON CURTAIN

State
Alternatives,
Global South
Partners



Massive open-weight
models. Public access
codes



State-backed
servers

State Alternatives,
Global South Partners,

COURT THE
GLOBAL SOUTH

HISTORICAL EVOLUTION



INDIA'S STRATEGIC PATH



DIGITAL
NON-ALIGNMENT



Dynamic
balancing
loaning



SOVEREIGN AI
INFRASTRUCTURE



IndiaAI &
Bhashini



GLOBAL
MINI-LATERAL
SAFETY



Neutral
nations
forming a
council

NCERT

- GS Paper 1
- GS Paper 2
- GS Paper 3
- GS Paper 4
- GS Paper 5

UPSC LINKAGES

- Class texts I
Presendation
Texts
- Class texts II &
Class texts

● EX-MINISTER SONAM WANGYAL HAD RECALLED THAT DURING HIS SECOND FAST TO SEEK ST STATUS FOR LADAKH PEOPLE, INDIRA FLEW TO LEH TO ASSURE HIM ABOUT ACCEPTING THE DEMAND

How Sonam Wangchuk's father broke his 1984 fast after Indira met him

Vikas Pathak

New Delhi, July 17

While activist Sonam Wangchuk has been on an indefinite hunger strike at Jantar Mantar since June 28 as part of a protest organised by the Cockroach Janta Party (CJP) to demand the resignation of Union Education Minister Dharmendra Pradhan over alleged NEET paper leak, he seems to be carrying forward his father Sonam Wangyal's legacy.

Wangyal had fasted for 16 days in 1982 and again for five days in 1984 to demand the Scheduled Tribe (ST) status for the people of Ladakh.

The 1984 hunger strike of Wangyal ended when then PM

Indira Gandhi flew to Leh to meet him. She persuaded him to end his fast, offering him a glass of soft drink. Gandhi also expressed her intent to accept his demand, but was assassinated later that year.

Subsequently, it was PM Rajiv Gandhi, who in 1989 ensured the ST status to a number of Ladakh communities.

Recounting the episode in his memoir titled *Political Evolution in Post-Independence Ladakh*, published by the International Association for Ladakh Studies, Wangyal wrote, "Ladakh had also long deserved tribal status. People living in the North-East states and along the Himalayas had been declared Scheduled Tribes, but



Then PM Indira Gandhi with Sonam Wangyal. @MANSOORKHANINC

Ladakh had been ignored."

Wangyal stated that in 1982, "a campaign was launched in this regard, and I took an active part in the movement". Both the Muslim and Buddhist com-

munities of Ladakh were involved in this campaign, he maintained. "To help express the frustrations of the people against the indifference of the government towards this long-

standing demand, I went on hunger strike for 16 days from the 15th to the 30th of January. In 1984, I again went on hunger strike for five days," Wangyal recalled. "Mrs Indira Gandhi, then the Prime Minister of India, visited Leh and assured us that Ladakh would be granted Scheduled Tribe status. She asked me to withdraw my hunger strike, and offered me a glass of soft drink."

On Indira's return to Delhi, Wangyal stated, "She announced the intention of the Government to grant ST status to the people of Ladakh, however, this decision wasn't implemented until 1989."

Wangyal, who belonged to an underprivileged family in

Ladakh, met Shridhar Koul Dulu — who was raising a volunteer force to ward off the Pakistani invasion in October 1947 — and volunteered to join him. Dulu advised him to go to Delhi to raise resources for his schooling, and also wrote a letter to then PM Jawaharlal Nehru recommending it.

Wangyal wrote in his memoir that he proceeded to Manali on foot to go to Delhi, walking over snow for seven days. It took him 45 days to reach Delhi, where he sought an appointment with the PM. Nehru met him and offered him a scholarship to study. Wangyal was then admitted to SP High School in Srinagar. He finished his matriculation and became

a private assistant to Kushok Bakula, the head Lama of Spituk Monastery in Leh.

Soon afterwards, Wangyal launched a campaign against corruption in the administration, and was arrested and jailed multiple times. He was said to be often beaten up by the police. He was later named the Leh district president of the National Conference (NC) and then, after the dissolution of the NC, became the Leh unit chief of the Congress.

In 1957, Wangyal was elected to the Legislative Council of J&K, and remained an MLC for a decade. In 1967, he became an MLA from Leh on a Congress ticket. He later also served as a minister in the J&K Cabinet.

- **Key Terms and Explanations**
- **Scheduled Tribe (ST) Status (Article 342):** This is a formal constitutional designation granted by the President of India to communities characterized by primitive traits, distinctive culture, geographical isolation, shyness of contact with the community at large, and backwardness. For instance, notifying communities like the Balti, Changpa, or Purigpa provides them with access to political reservation, educational quotas, and targeted developmental funds.
- **Democratic Dissent and Satyagraha:** A political mechanism deeply rooted in India's freedom struggle, where individuals or groups employ non-violent resistance—such as indefinite hunger strikes—to register moral protest against state apathy. It acts as an ultimate tool to bridge the vast geographical and psychological distance between peripheral populations and the central seat of power.
- **Frontier Federalism:** A specialized concept in political science dealing with how a large nation-state governs its highly sensitive, resource-scarce, and geopolitically vulnerable border regions. Unlike mainland states, frontier federalism demands a delicate balance between strict national security protocols and the accommodation of distinct local aspirations.
- **Sub-national and Regional Aspirations:** The political mobilization of a geographically and culturally distinct population seeking greater administrative autonomy, protection of indigenous land rights, and distinct identity recognition within the broader federal framework of the nation.
- **Main Arguments and Substantive Parts**
- The discourse surrounding the political evolution of remote border zones revolves around several core theses regarding integration and governance:
- **The Core Thesis:** The political stability and national integration of sensitive frontier zones depend heavily on the timely recognition of their unique cultural identities. When local populations feel structurally neglected compared to other tribal-dominated regions, it triggers prolonged, peaceful democratic resistance to demand institutional safeguards.
- **The Dynamics of Cross-Community Mobilization:** A highly significant element of successful frontier movements is their capacity to transcend religious or ethnic divides. In diverse regions, the alignment of distinct groups—such as Buddhist and Muslim populations—under a unified regional identity creates a powerful, secular front that strengthens their collective bargaining power with the central government.
- **State Responsiveness as a Trust-Building Tool:** High-level, empathetic interventions by central leaders (such as direct prime ministerial dialogues and assurances during agitations) serve as vital instruments for defusing localized alienation. Historical precedents show that personal political engagement often acts as the primary catalyst for resolving deep-seated regional grievances.
- **Counterarguments and Administrative Dilemmas:** From a central administrative viewpoint, governing complex border regions presents significant challenges. Policymakers often argue that creating fragmented autonomous zones or granting special statuses to small, highly dispersed populations can lead to administrative inefficiencies, escalate sub-regional rivalries, and potentially complicate national security operations in high-altitude conflict zones.

- **Historical Evolution of the Issue**

- **The Dawn of Independence (1947):** During the geopolitical shocks of partition and tribal invasions, remote northern borderlands faced severe existential threats. Local populations raised volunteer forces to defend their territories, establishing an early legacy of patriotism tied with an immediate need to seek direct central assistance for education, infrastructure, and basic survival.
- **Institutional Integration and Early Representation (1950s–1970s):** Peripheral regions were initially integrated into broader state administrative frameworks (such as the Jammu & Kashmir state polity). Local leaders entered legislative councils and cabinets, attempting to voice regional grievances. However, these arrangements often diluted the specific demands of highly isolated tribal groups, leading to growing undercurrents of dissatisfaction.
- **The Escalation of Mass Mobilizations (1980s):** Frustrated by perceived systemic indifference and observing the extensive constitutional protections granted to tribal communities in the North-East, local leaders launched intense public agitations. This period saw historic, prolonged hunger strikes in 1982 and 1984, which successfully drew the national leadership's direct attention to the region's vulnerabilities.
- **Policy Resolution and Identity Recognition (1989):** Following intense political negotiations and prior commitments made by central leaders, the Union Government formally extended Scheduled Tribe status to the dominant communities of the region. This marked a watershed moment in validating their distinct indigenous identity.
- **The Post-Reorganization Era (Present Day):** The structural dismantling of the older state framework and the creation of a separate Union Territory without a legislature rewritten the geopolitical dynamics. While it fulfilled a long-standing demand for separation from regional dominance, it simultaneously triggered a new wave of democratic movements demanding full statehood and constitutional protections under the Sixth Schedule to protect local land, employment, and ecology.

- **Way Forward**

- **Institutionalizing Constitutional Protections:** The Union Government should constructively evaluate options to grant robust constitutional safeguards to the region. Whether through the inclusion under the Sixth Schedule or a specially customized constitutional mechanism, providing local populations with legislative control over land protection, local employment, and cultural preservation is paramount.
- **Empowering Autonomous Local Councils:** The existing Ladakh Autonomous Hill Development Councils (LAHDCs) must be structurally strengthened. This requires clear devolution of financial powers, administrative autonomy, and legislative competence over local subjects to ensure that developmental planning is genuinely grassroots-driven rather than bureaucratic.
- **Establishing Permanent Dialogue Mechanisms:** To prevent recurring public agitations and hunger strikes, the state must institutionalize permanent, structured channels of communication between senior union policymakers and regional representatives, ensuring local grievances are proactively addressed before escalating into gridlocks.
- **Promoting Eco-Sensitive and Sustainable Development:** Economic policies must be strictly aligned with the region's ecological carrying capacity. Focus should pivot toward green investments, high-value low-impact ecotourism, carbon-neutral infrastructure, and micro-hydro or solar power projects that generate local employment while fully safeguarding the fragile Trans-Himalayan environment.

COMPREHENSIVE ANALYSIS: FRONTIER GOVERNANCE & TRIBAL IDENTITY | AXIA IAS ACADEMY

FOR UPSC CSE PREPARATION

KEY TERMS & EXPLANATIONS

Scheduled Tribe (ST) Status (Art 342)
Preserving deviation of irrotedined attrols tito the constitution in dehs

Satyagraha/Dissent
Symbolize; non-violent resistance is non-core trasivolized with non-violent resistance

Frontier Federalism
A centralized capital in the a centralized capital and local autonomy

Sub-national Aspirations
Sub-national aspirato-marperovemiue diverse culture cultural cultures

Narrative: points Scheduled tribe (sr) too of national concepts

UPSC CSE SYLLABUS MAPPING

Strongest linkages are:

GS 1
Society

GS 2
Polity

GS 3 Security/
Environment

Ethics

Essay

Optionals:
PSIR, Sociology,
Geography

Key focus areas:

- Federal structure issues
- Tribal rights vs. mulerration
- Tribal rights vs. national security
- Tribal rights vs. national security

NCERT LINKAGES

Class 11 Pol Sci: **Indian Constitution at Work (Federalism)**
Class 12 Pol Sci: **Politics in India Since Independence (Regional Aspirations)**
Class 11 Geography: **India - Physical Environment (Physiographic divisions and isolation)**

Conceptual reasons for linkage: conividuents from conceptual conceptuat innity to to national imates and roomnly economic isolations

MULTIDIMENSIONAL ANALYSIS

SOCIAL

Preserving heritage, distinct dialects, maintaining inter-faith harmony

POLITICAL

Balancing aspirations with central admin, address lack of local legislature, local body empowerment

LEGAL

Efficacy of Arts 244, 342, 6th Schedule vs. current mechanisms for autonomy

ETHICAL

Moral accountability to historical assurances, empathy in engagement, limits of dissent

INTERNATIONAL

Volatile border management, relationship with nuclear neighbors, local population as front-line defense

ECONOMIC

Extreme constraints, sustainable development model, eco-tourism, organic agriculture

LOGICAL & PHILOSOPHICAL BASE

Gandhian Self-Suffering

Asymmetric Federalism Principle

Rawlsian Justice/Difference Principle

WAY FORWARD

A roadmap steps

Institutionalizing Constitutional Protections (e.g. Sixth Schedule)

Empowering Local Councils (e.g. LAHDC)

Permanent Dialogue Mechanisms

Eco-Sensitive and Sustainable Development

UPSC PREVIOUS YEARS' QUESTIONS (THEMES)

Focus on key areas:

- Fifth & Sixth Schedule comparison
- Tribal land transfer cases
- Impact of Fifth Schedule on Land Rights

Country's first night safari: What is the Kukrail project and why is it significant

SC cleared the Rs 1,510-cr Kukrail Night Safari project in Lucknow. Here's why it took four years & what visitors can expect

Maulshree Seth
Lucknow, July 17

THE SUPREME Court has okayed the Uttar Pradesh government's ambitious Kukrail Night Safari and Day Zoo project, clearing the final hurdle for what is proposed to be India's first Night Safari and the world's fifth after Singapore, Thailand, China and Indonesia. The project faced years of scrutiny because it is to come up inside the ecologically sensitive 2,027-hectare Kukrail Reserve Forest on the outskirts of Lucknow, which is also home to India's first gharial conservation centre, established in 1975.

What is the project all about

The Rs 1,510-crore project will come up over 855 acres within the Kukrail Reserve Forest and will be developed in two phases:

PHASE I: Night Safari and

Eco-tourism Zone
PHASE II: Day Zoo

According to the project plan, the Night Safari will feature theme-based zones inspired by wildlife landscapes in India and abroad, along with night trails, naturalistic animal habitats and forest trails. Visitors will travel in battery-operated vehicles; the trail is being chalked out.

The UP government said the project will combine wildlife conservation, research, education and tourism. The master plan also includes conservation breeding facilities, wildlife interpretation and education centres, cafeterias, a 7D theatre and an auditorium.

What will visitors see

Unlike conventional zoos, the Night Safari will allow visitors to observe nocturnal animals during their active hours using a special lighting system designed to mimic natural



moonlight.

Officials said this would be the unique feature of the night safari. "The proposed special lighting system would be designed to mimic moonlight. The idea is to allow visitors to observe wildlife clearly without disturbing or creating discomfort for the animals" explained an official.

The proposal includes creating naturalistic habitats for several species, including: Asiatic lions, Bengal tigers, Leopards, Hyenas, Flying squirrels, and Gharials.

The habitats will be modelled on natural ecosystems, incorporating grasslands, wetlands, rock formations and native vegetation for "immer-

sive visitor experience". The facility is expected to manage footfall of about 4,000 visitors during weekdays and about 8,000 on weekends or holidays.

Why was there a four-year wait for approval

The project was first announced by Chief Minister Yogi Adityanath in July 2022 and received Uttar Pradesh Cabinet approval the following month. However, because it was proposed inside the Kukrail Reserve Forest, it had to undergo multiple regulatory and judicial clearances.

In 2023, the proposal received approvals from the State Wildlife Board and the Central Zoo Authority (CZA). Because it involved forest land and wildlife habitat, it also required forest, wildlife and environmental clearances.

The project was subsequently examined by the Supreme Court-appointed Central Empowered Committee (CEC), which conducted inspections and sought modifications to the project design.

After multiple rounds of hearings, the SC finally ap-

proved the project this week.

The prolonged scrutiny stemmed from the ecological significance of the reserve forest, one of Lucknow's largest protected green spaces. Developed as a plantation forest in the 1950s, the reserve is named after the Kukrail stream, a tributary of the Gomti River, and serves as an important urban forest. Efforts are also under way to revive the Kukrail stream. The forest is also home to the Kukrail Gharial Rehabilitation Centre (KGRC), established in 1975 to save the critically endangered gharial.

The centre has become one of the most successful reptile conservation facilities, breeding and releasing gharials into rivers across India. It houses research laboratories, veterinary facilities, and rescue enclosures for gharials and turtles, officials say. The government said the Night Safari project is intended not merely as a tourism destination but also as a conservation and research facility, promoting wildlife conservation and breeding, research on nocturnal wildlife behaviour, and undertaking public awareness on wildlife protection.

- **Key Terms and Explanations**
- **Night Safari & Nocturnal Habitats:** A specialized conservation and tourism facility designed to display animals that are active primarily during the night. Unlike conventional day zoos, these projects utilize state-of-the-art, low-intensity lighting systems that mimic natural moonlight, allowing humans to observe nocturnal behaviors without disrupting the biological clocks (circadian rhythms) of the animals.
- **Reserve Forest:** A specific category of protected forest designated under the Indian Forest Act, 1927. In a reserve forest, certain activities like hunting, grazing, or lumbering are strictly prohibited unless explicit permission is granted by the state government. They enjoy a higher degree of protection compared to protected or unclassified forests.
- **Central Zoo Authority (CZA):** A statutory body established under the Wild Life (Protection) Act, 1972, functioning under the Ministry of Environment, Forest and Climate Change. The CZA regulates the functioning of zoos across India, lays down minimum standards for housing and veterinary care, and must approve any new zoo or safari project before it can commence operations.
- **Central Empowered Committee (CEC):** A specialized advisory committee originally constituted by the Supreme Court of India to look into environmental and forest compliance matters. Its primary role is to monitor the implementation of court orders regarding forest conservation and inspect major infrastructure projects proposed within ecologically sensitive zones to prevent environmental degradation.
- **Ex-Situ Conservation:** The preservation of components of biological diversity outside their natural habitats. Facilities like the Kukrail Gharial Rehabilitation Centre (KGRC) serve as prime examples, where critically endangered species are bred in controlled environments, researched, and subsequently reintroduced into their natural riverine habitats to bolster wild populations.
- **Urban Forest & Green Lungs:** A collection of forests or dense tree covers within an urban area that acts as a natural carbon sink, mitigates the urban heat island effect, recharges groundwater tables, and filters air pollution. The Kukrail forest acts as a vital ecological shield for the expanding cityscape of Lucknow.



- **Main Arguments and Substantive Parts**

- The core debate surrounding major eco-tourism projects centers on whether extensive human infrastructure can coexist harmoniously within a protected forest ecosystem. The synthesis of economic ambition and conservation biology reveals several critical components.

- **Core Thesis**

- The project redefines the traditional boundary between passive forest conservation and active ecological tourism. By transforming a significant portion of an urban reserve forest into a world-class conservation and research hub, the initiative posits that sustainable public engagement can generate the financial and social capital required to safeguard urban biodiversity, provided it undergoes rigorous judicial and scientific scrutiny.

- **Supporting Pillars and Structural Design**

- **The Dual-Phase Structural Framework:** The development is segmented into clear operational phases to minimize sudden environmental shocks. Phase I focuses on the creation of the Night Safari and an integrated Eco-tourism Zone, while Phase II introduces a contemporary Day Zoo. This phased approach allows for gradual ecological adaptation and systematic infrastructure deployment.

- **Advanced Eco-Engineering Solutions:** To prevent behavioral distress in nocturnal species such as leopards, hyenas, and flying squirrels, the project incorporates naturalistic habitat designs. These designs utilize native vegetation, wetlands, and simulated rock formations, alongside a specialized lighting matrix designed to mirror ambient moonlight, minimizing human-induced light pollution.

- **Conservation as the Primary Objective:** Far from being a mere entertainment theme park, the project anchors its legitimacy on conservation breeding programs, wildlife interpretation centers, and active research laboratories dedicated to studying nocturnal animal behavior and veterinary science.

- **Counterarguments and Institutional Challenges**

- **The Risk of Habitat Fragmentation:** Critics and environmentalists express concern that introducing a footfall of 4,000 to 8,000 daily visitors, even in battery-operated vehicles, could cause irreversible soil compaction, disturb the local avian population, and pollute the delicate Kukrail stream basin.

- **Regulatory Frictions and Delayed Clearances:** The four-year delay between the project's conception and its final judicial clearance highlights a structural friction. It underscores the challenges of executing high-investment infrastructure projects within protected areas while navigating multiple layers of environmental bureaucracy, including the State Wildlife Board, the CZA, and the Supreme Court-appointed CEC.

- **Historical Evolution of the Issue**
- **The 1950s (The Foundation of the Urban Lung):** Recognizing the need to secure the catchment area of the Kukrail stream (a vital tributary of the Gomti River) and shield Lucknow from urban expansion, the area was developed as a plantation forest. This early policy focused primarily on basic afforestation and timber management.
- **1975 (The Conservation Pivot):** A major turning point occurred with the establishment of the Kukrail Gharial Rehabilitation Centre (KGRC). Initiated during a period when India's gharial population faced imminent extinction, this center became one of the nation's most successful reptile conservation experiments, successfully captive-breeding and releasing thousands of gharials into northern Indian rivers.
- **July 2022 (The Integration of Eco-Tourism):** The state government shifted its approach from passive preservation to active eco-tourism, announcing the creation of a massive Rs 1,510-crore Night Safari. The plan aimed to replicate successful global models seen in Singapore and Chiang Mai.
- **2023 (The Era of Regulatory Review):** As the project area expanded across 855 acres of the reserve forest, it triggered intense regulatory reviews. Over the course of the year, the project had to secure clearances from the State Wildlife Board and the Central Zoo Authority, followed by rigorous field inspections and design modifications mandated by the Supreme Court's Central Empowered Committee.
- **Present Day (The Judicial Precedent):** The Supreme Court's final approval marks a landmark moment. It establishes a judicial precedent that permits large-scale, low-impact public infrastructure inside urban reserve forests, provided that comprehensive, evidence-based mitigation measures are strictly implemented.

- **Way Forward**

- To ensure the long-term success of this initiative, policy makers must balance economic goals with a strong commitment to environmental protection.
- **Dynamic Carrying Capacity Management:** The state should implement an automated ticketing and entry system that dynamically adjusts visitor limits based on seasonal animal behavior and environmental factors, ensuring footfall never crosses ecological thresholds.
- **Continuous, Independent Ecological Auditing:** A permanent monitoring framework should be set up alongside institutions like the Wildlife Institute of India (WII). This team will continuously study the impact of simulated moonlight on the stress levels and reproductive cycles of the resident animals.
- **Eco-Centric Infrastructure Design:** All internal transport must be strictly electric, zero-emission, and noise-dampened. Construction inside the 855-acre zone should rely entirely on green, local, and permeable materials to prevent soil compaction and maximize groundwater recharge.
- **Holistic River Rejuvenation:** The development of the safari should be tied to a comprehensive project to clean and revive the Kukrail stream. Eliminating upstream urban sewage inflows will secure a clean water supply for the gharial conservation zones.
- **Inclusive Community Economics:** Local youth and communities should be trained as certified eco-guides and conservation educators. This ensures that the economic benefits of tourism flow directly into the local economy, building community support for protecting the forest.

- **UPSC CSE Prelims Questions**

- **1. With reference to the Central Zoo Authority (CZA) in India, consider the following statements:**
- It is a statutory body established under the Environment (Protection) Act, 1986.
- It is chaired by the Union Minister of Environment, Forest and Climate Change.
- No zoo in India can operate without the recognition of the CZA. *Which of the statements given above are correct? (A) 1 and 2 only (B) 2 and 3 only (C) 1 and 3 only (D) 1, 2 and 3* **Answer: (B)** (Explanation: The CZA is established under the Wild Life (Protection) Act, 1972, not the EPA 1986. Statements 2 and 3 are factually correct).

KUKRAIL NIGHT SAFARI: A PARADIGM FOR URBAN ECO-CONSERVATION | COMPREHENSIVE UPSC ANALYSIS

Key Terms & Explanations

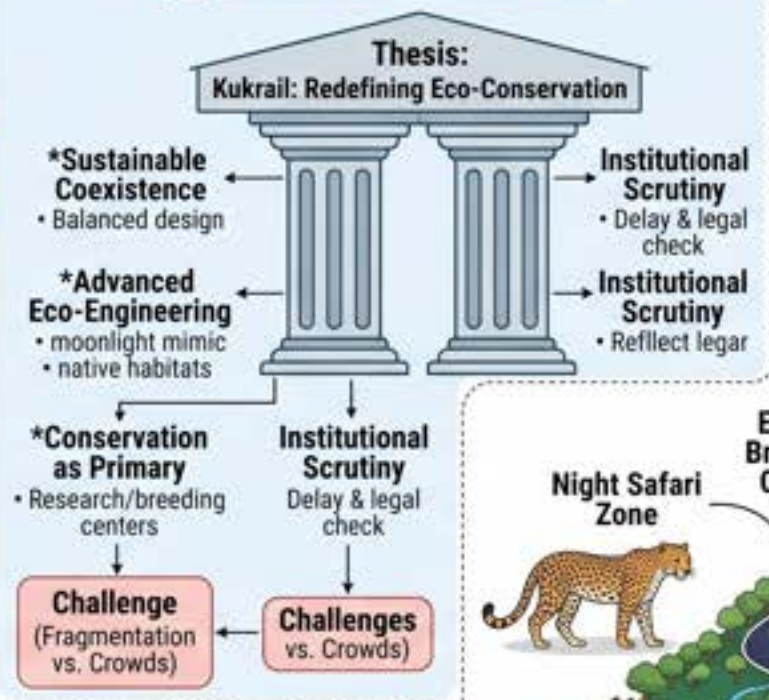
- Night Safari**
 - Owl safari (uvv) and special light
 - Reserve light trail on special light
- Reserve Forest**
 - Protected area sign protected area
 - Reserve forest communication
- Central Zoo Authority**
 - Official seal Authority (1972 Act)
 - Central zoo authority committee
- Central Empowered Committee**
 - CEC, SC-appointed body
 - CEC, compounded forest
 - Central Empowered national committee
- Ex-Situ Conservation**
 - KGRC and baby gharial (KGC)
 - KGRC conservation den lungs
- Urban Forest & Green Lungs**
 - Clean air diagram diagram
 - Clean air preteemionalitne
 - Clean ar its treals of moekem area

Linkages with UPSC CSE Syllabus

- | | | |
|-----------------|---|---|
| GS Paper | GS 1
Urbanization, resource | GS 2
Statutory bodies (CZA)
Judicial Oversight |
| GS Paper | GS 3
Biodiversity
Conservation
EIAs | GS 4
Environmental Ethics |

Optional subject Geography, Zoology

Main Arguments & Thesis



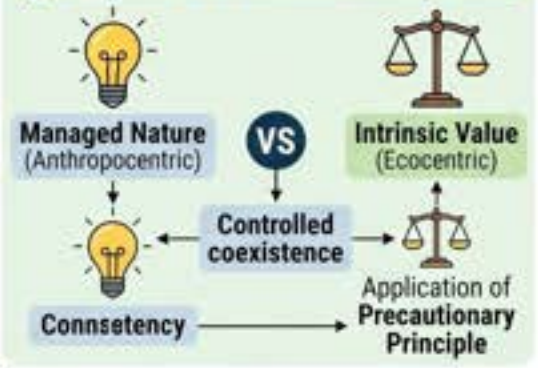
Linkages with NCERTs

- Class 12 Biology**
 - Chapter: 3-33
 - Contants of Biology
 - Page: 57
- Class 11 Natural Vegetation**
 - Chapter Biology, 16
 - Chapter Roronomind Page. 78
 - Natural Vegetation, 151
- Class 10 Forests**
 - Chapter: 154
 - Biodivern: 137
 - Condersomation. 157

Historical Evolution



Logical & Philosophical Base



Multidimensional Analysis



Previous Years' Questions (PYQs)

- | Prelims & Mains |
|---|
| Prelims <ul style="list-style-type: none"> CZA status (GS 3), -innat must be cofinitionstisms for its development Gharial habitat (GS 3) Reserve Foreset definition Reserve Forest definition test definition |
| Mains <ul style="list-style-type: none"> Balancing development (GS 3). Condensed question questionned EIA and judiciary (GS 3) - Condensed question questionned Urban Forests (GS 1). -Condensed question questionned |



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