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## CONSTITUTION, POLITY & GOVERNANCE

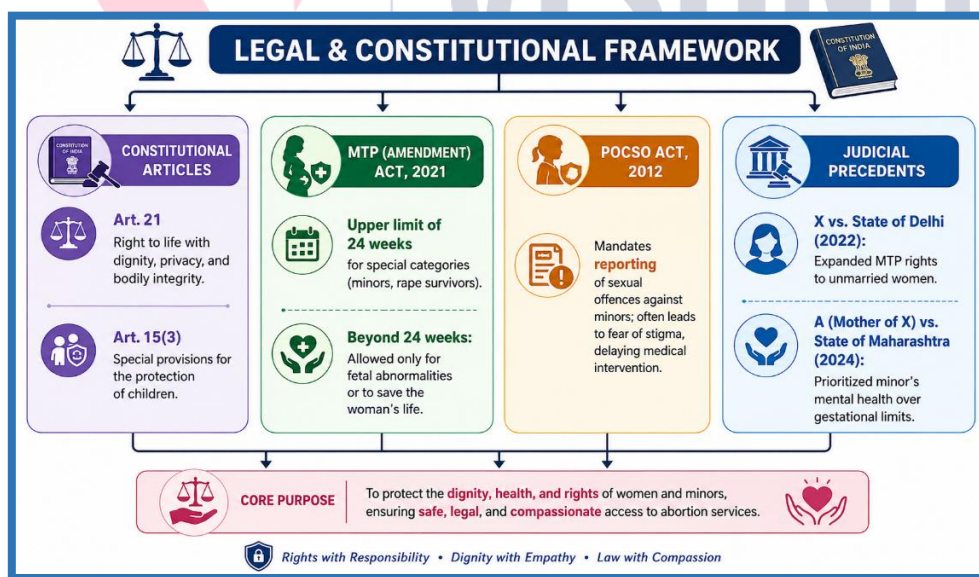
### 1. Lift Abortion Time Limit for Minor Rape Survivors: Supreme Court

#### Context:

Rejecting the government's curative petition against a 15-year-old's 30-week abortion, the Supreme Court stated that Medical Termination of Pregnancy (MTP) time limits should be eliminated for minor rape survivors, emphasizing that the State must not infringe upon their reproductive autonomy.

#### I. Background:

- **The Case:** A 15-year-old survivor sought an abortion at 30 weeks (past the 24-week legal limit), despite medical concerns raised by AIIMS regarding fetal viability and health risks.
- **SC Observation:** A Bench led by CJI Surya Kant ruled that forcing a minor to carry an unwanted pregnancy leaves a "permanent scar," asserting the choice belongs strictly to the survivor and her parents—not the State or medical authorities.
- **Legislative Gap:** The current MTP framework lacks flexibility for late-term abortions in sexual assault cases, in sharp contrast to the unconditional exemptions granted for severe fetal abnormalities.



#### II. Key Issues Involved:

- **Autonomy vs. Fetal Viability:** Clashing interests between a woman's right to her body and the "right to life" of a viable fetus (post-24 weeks).
- **Compounded Trauma:** Minor survivors often discover or disclose pregnancies late due to fear or lack of biological awareness, making the 24-week limit a barrier to justice.
- **Medical Ethics:** Doctors face a conflict between legal mandates and the Hippocratic Oath when performing high-risk, late-term "live-birth" abortions.
- **Judicial & Board Delays:** Red tape in lower courts and medical boards delays permissions, pushing pregnancies into more hazardous gestational phases.

### III. Supreme Court's Stand / Significance:

- **Transformative Constitutionalism:** The Court prioritized substantive equality over rigid procedural laws.
- **Right to Dignity (Article 21):** Forcing motherhood on a rape survivor violates her fundamental right to life and dignity.
- **Constitutional vs. Social Morality:** The law must protect individual liberty over societal stigma and transient emotions.
- **Access to Healthcare:** Recognizes abortion as an essential pillar of Reproductive Justice.

### IV. Challenges / Concerns:

- **Administrative Shortcomings:** The absence of uniform Standard Operating Procedures (SOPs) for Medical Boards results in variable decision-making.
- **Challenges in Rural Healthcare:** Availability of safe, late-term Medical Termination of Pregnancy (MTP) services is primarily limited to urban tertiary facilities such as AIIMS.
- **Neonatal Accountability:** In cases where a late-term abortion leads to a live birth, the legal and welfare obligations concerning the child are unclear.
- **Legal Discrepancy:** The intersection of POCSO reporting requirements and MTP confidentiality can sometimes deter survivors from pursuing legal assistance.

### V. Way Forward:

- **Legislative Amendment:** Modify the MTP Act to incorporate a distinct "Rape Survivor Exception" for minors, eliminating the gestational limit.
- **Victim-Centric Approach:** Establishing standardized Fast-track Medical Boards to deliver assessments within a 48-hour timeframe.
- **Sensitization:** Educating healthcare professionals and judicial authorities on the "Best Interest of the Child" principle in matters of reproduction.
- **Legal Awareness:** Streamlining the procedure for minors to seek legal recourse without the apprehension of immediate social stigma.

— QUICK REVISION BOX —		
<p><b>KEYWORDS</b></p> <ul style="list-style-type: none"> <li>• Reproductive Autonomy</li> <li>• Bodily Integrity</li> <li>• Fetal Viability</li> <li>• Substantive Due Process</li> <li>• Transformative Constitutionalism</li> </ul>	<p><b>CONSTITUTIONAL ARTICLES</b></p> <ul style="list-style-type: none"> <li>• Article 14</li> <li>• Article 15(3)</li> <li>• Article 21</li> </ul>	<p><b>IMPORTANT ACTS</b></p> <ul style="list-style-type: none"> <li>• MTP (Amendment) Act 2021</li> <li>• POCSO Act 2012</li> </ul>
<p><b>KEY JUDGEMENTS</b></p> <ul style="list-style-type: none"> <li>• Justice K.S. Puttaswamy (Privacy)</li> <li>• X vs. State of Delhi (2022)</li> <li>• A (Mother of X) vs. State of Maharashtra (2024)</li> </ul>	<p><b>TERM TO NOTE</b></p> <p><b>"Gestational Ceiling"</b> — The legal time limit beyond which abortion is restricted.</p>	

## 2. SC to Examine Plea Against Apnoea Test

### Context:

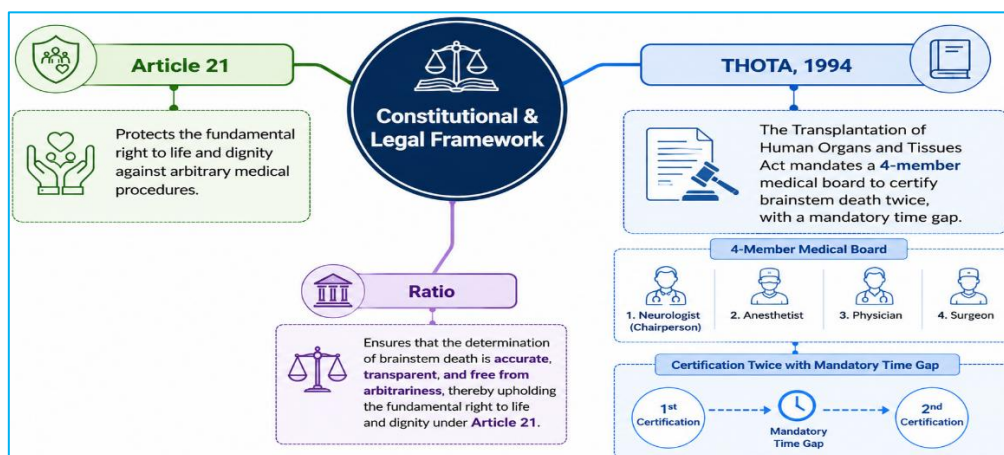
The Supreme Court (SC) instructed AIIMS to establish a panel of experts tasked with evaluating the scientific validity and safety of the 'apnoea test' employed for the certification of brain death.

## I. What is Apnoea Test?

- **Definition:** A required clinical examination to verify brainstem death by evaluating the irreversible cessation of respiratory function.
- **Certification Link:** Entails the temporary withdrawal of ventilator assistance and the elevation of carbon dioxide concentrations to determine the presence of spontaneous respiration.

## II. Legal & Ethical Issues:

- **The Right to Life and Dignity:** Declarations of premature brain death infringe upon bodily integrity.
- **Medical Ethics:** Claims of utilizing subjective assessments to enable organ harvesting.
- **Consent Issues:** Lack of transparency and insufficient informed consent from families.
- **Challenges in Organ Transplantation:** Conflicts of interest exist between critical care practices and organ donation protocols.
- **Gaps in Standardization:** Inadequate adherence to legal protections such as mandatory videography.









## III. Supreme Court's Concerns:

- **Patient Safety:** The apnoea examination may diminish cerebral blood circulation, which could lead to additional brain injury.
- **Scientific Validity:** Excessive dependence on clinical assessments without the support of objective supplementary techniques.
- **Human Rights Concerns:** Safeguarding at-risk patients from the unscientific cessation of life support.
- **Uniform Protocols:** The necessity for universally coordinated, reliable diagnostic procedures.

## IV. Way Forward:

- **Standard Medical Protocols:** Ensure that national regulations are in accordance with the multi-step diagnostic guidelines established by the WHO.
- **Independent Medical Review:** Incorporate objective confirmatory assessments such as EEG and cerebral angiography.

- **Ethical Safeguards:** Implement strict videography requirements and thorough conflict-of-interest evaluations.
- **Better Hospital Regulation:** Require comprehensive training for physicians on standardized certification procedures.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Apnoea Test, Brainstem Death, Bodily Integrity, Informed Consent.
 <b>Articles:</b>	Article 21 (Right to Life & Dignity).
 <b>Important Acts:</b>	THOTA, 1994.
 <b>Medical Terms:</b>	Electroencephalogram (EEG), Cerebral Angiography.
 <b>Authorities:</b>	NOTTO, AIIMS Expert Medical Committee.
 <b>Important Concepts:</b>	Irreversible cessation of brain function, Medical ethics in organ harvesting.

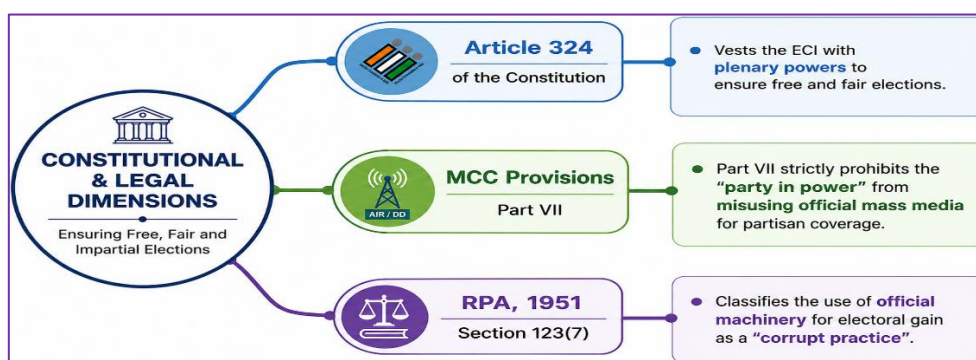
### 3. Did the PM's Broadcast Violate MCC?

#### Context:

The recent televised address by the Prime Minister on state-funded channels (Doordarshan, Sansad TV) amidst an ongoing election cycle has sparked a discussion regarding purported violations of the Model Code of Conduct (MCC).

#### I. What is Model Code of Conduct (MCC)?

- **Definition:** Non-statutory guidelines provided by the Election Commission of India (ECI) to govern the behavior of political parties and candidates.
- **Purpose:** To guarantee that elections are conducted freely and fairly, while also preventing the current government from exploiting official resources.



#### II. Issue Involved:

- **The Prime Minister's formal communication during electoral periods:** A nationwide address regarding legislative progress while the MCC is operational.
- **Employment of governmental resources:** Leveraging taxpayer-supported mass media for political communication.
- **Concerns regarding equitable competition:** Accusations of an imbalanced environment in democratic elections.
- **Discussion on electoral impartiality:** Confusing the distinction between governmental responsibilities and political campaigning.

### III. Arguments Supporting Violation Claim:






- **Misuse of official machinery:** Exploiting state-controlled media.
- **Indirect election influence:** Targeting opposition parties under the garb of policy discourse.
- **Unequal media access:** Denying equitable public broadcasting access to opposition parties.

### IV. Counter Arguments:

- **Governance communication duty:** The executive head must continually inform citizens on national matters.
- **No direct campaigning:** Broadcasts generally highlight legislative efforts rather than direct vote appeals.
- **Public interest communication:** State communication remains essential, even during elections.

### V. Way Forward:

- **More explicit MCC guidelines:** Detailed regulations concerning state broadcasting and digital media.
- **Institutional impartiality:** Guaranteeing the operational independence of Prasar Bharati.
- **Enhanced ECI supervision:** Swift and transparent resolution of electoral grievances.

QUICK REVISION BOX	
 UPSC Keywords	Level Playing Field, Electoral Neutrality, Corrupt Practice.
 Constitutional Articles	Article 324.
 Important Institutions	Election Commission of India (ECI), Prasar Bharati.
 Important Acts	Representation of the People Act, 1951 (Sec 123).
 Important Concepts	MCC Part VII (Party in Power), Free & Fair Elections.

## 4. SC Brings Survivors of Forcible Ingestion of Acid Under RPwD Act

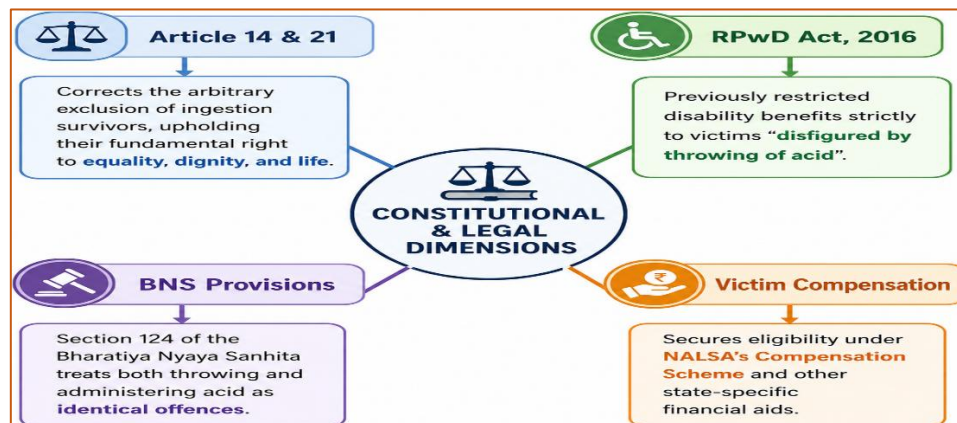
### Context:

The Supreme Court (SC) broadened the interpretation of the Rights of Persons with Disabilities (RPwD) Act, 2016, determining that individuals who have survived forcible acid ingestion should be officially acknowledged as 'acid attack victims'.

### I. What did the Supreme Court say?

- **Inclusion under the RPwD Act:** By invoking Article 142, the Supreme Court mandated that the definition of victims of acid attacks encompasses individuals who have been forcibly subjected to acid, irrespective of any visible external disfigurement.

- **Retrospective Application:** The "deemed amendment" is applicable retroactively from the commencement of the RPwD Act in 2016.
- **Rehabilitation Needs:** The Court recognized significant internal organ damage (including the esophagus and stomach), thereby granting survivors the right to disability certificates, financial assistance, and long-term care.



## II. Significance of the Judgment:

- **Broadens the scope of disability law:** Transitions the emphasis from apparent external deformities to unseen internal physical disabilities.
- **Victim-focused justice:** Aligns criminal law (which punishes ingestion) with disability support legislation.
- **Comprehensive welfare strategy:** Facilitates access to disability pensions, healthcare services, and employment reservations.
- **Enhances substantive equality:** Eliminates discriminatory legal distinctions among survivors of acid violence.







## III. Key Challenges:

- **Rehabilitation deficiencies:** Insufficient medical facilities for intricate internal reconstructive procedures.
- **Social prejudice:** Ongoing exclusion and mental distress.
- **Prolonged compensation:** Administrative obstacles within State victim compensation programs.
- **Healthcare accessibility:** Elevated personal expenses for ongoing medical treatment.
- **Ineffective enforcement:** Inadequate application of regulations concerning the sale of retail acid.

## IV. Way Forward:

- **Enhanced rehabilitation systems:** Offer complimentary, all-encompassing medical services aimed at addressing internal injuries.
- **Accelerated compensation processes:** Optimize NALSA protocols to ensure timely financial assistance.
- **Mental health counselling services:** Create specialized psychological support programs for survivors.
- **Tighter acid sale regulations:** Rigorously implement the Laxmi (2014) directives concerning over-the-counter acid sales.

- **Comprehensive social welfare initiatives:** Expedite the distribution of disability identification cards for survivors of ingestion.

QUICK REVISION BOX		
	<b>UPSC KEYWORDS</b>	: Judicial Activism, Substantive Equality, Social Model of Disability.
	<b>CONSTITUTIONAL ARTICLES</b>	: Article 14, 21, 142.
	<b>IMPORTANT ACTS</b>	: RPwD Act 2016, Bharatiya Nyaya Sanhita (Sec 124).
	<b>IMPORTANT JUDGEMENTS</b>	: <i>Shaheen Malik v. Union of India</i> (2026), <i>Laxmi v. Union of India</i> (2014).
	<b>INSTITUTIONS/ AUTHORITIES</b>	: Supreme Court, NALSA.
	<b>IMPORTANT CONCEPTS</b>	: Deemed Amendment, Invisible Disabilities, Victim-Centric Justice.

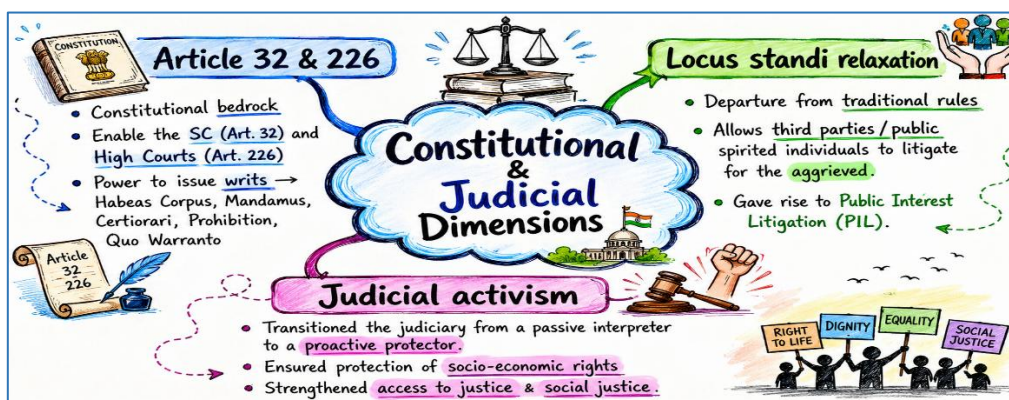
## 5. PIL has become 'paisa interest litigation': Top Court Judge

### Context:

In a recent hearing conducted by the Constitution Bench, a judge from the Supreme Court (SC) noted that Public Interest Litigation (PIL) is being increasingly exploited for purposes that are 'private', 'publicity', 'political', and 'paisa' (monetary) interest litigation.'

### I. What is Public Interest Litigation (PIL)?

- **Definition:** A legal framework established by judges that enables altruistic individuals to seek judicial intervention for the safeguarding of collective rights.
- **Purpose in India:** Developed after the Emergency period to enhance the democratization of "access to justice" for marginalized and underrepresented communities.



### II. Concerns Raised by the Court:

- **Frivolous petitions:** Overwhelming the courts by relying exclusively on newspaper reports without conducting independent investigations.
- **Publicity-oriented litigation:** Initiating cases solely for the purpose of attracting media attention.
- **Hidden commercial interests:** Exploiting the judicial system to undermine competitors or to extort funds.






- **Judicial time burden:** Intensifying the backlog of cases and distracting the Supreme Court from its constitutional responsibilities.
- **Political misuse:** Utilizing Public Interest Litigations (PILs) as tools in indirect political conflicts, which poses a threat of judicial overreach.

### III. Importance of Genuine PILs:

- **Safeguarding Fundamental Rights:** For instance, ensuring the rights of individuals awaiting trial.
- **Advocacy for marginalized populations:** Assisting bonded laborers and disadvantaged communities.
- **Environmental equity:** Leading the way in green legal principles (M.C. Mehta cases).
- **Accountability in governance:** Uncovering institutional corruption and indifference from the executive.

### IV. Way Forward:

- **Enhanced oversight protocols:** Thorough initial assessment of the petitioner's credentials.
- **Sanctions for frivolous PILs:** Enforcing substantial punitive costs to discourage "interferers".
- **Maintain judicial integrity:** Excluding personal interests to safeguard the PIL system.
- **Promote authentic social initiatives:** Redirecting the mechanism exclusively towards the marginalized.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	: Judicial Activism, Locus Standi, Separation of Powers.
 <b>Constitutional Articles</b>	: Article 32, 226, 39A.
 <b>Important Judgements</b>	: Hussainara Khatoon (1979), S.P. Gupta (1981).
 <b>Important Concepts</b>	: Suo Motu Cognizance, Meddlers vs. Bona fide petitioners.
 <b>Institutions/Authorities</b>	: Supreme Court of India.

## 6. SC Judge Strength Increased: Impact on Pendency

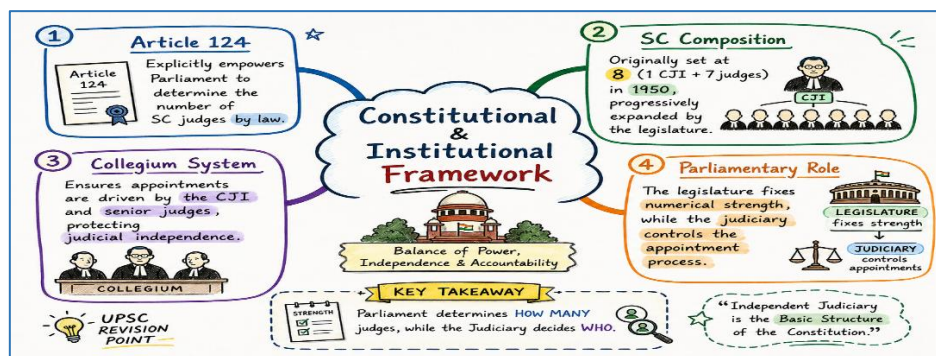
### Context:

The Union Cabinet has sanctioned an amendment bill that raises the authorized number of Supreme Court judges from 33 to 37 (not including the Chief Justice of India), thereby increasing the total operational strength to 38.

### I. Present Situation:

- **Enhancement of Supreme Court Strength:** Expanded initiatives aim to strengthen judicial capacity and address the increasing volume of cases.
- **Escalating Case Backlog:** The Supreme Court is presently contending with a backlog exceeding 80,000 cases.

- **Requirement for Reforms:** The significant influx of Special Leave Petitions (SLPs) calls for a comprehensive judicial reform that transcends simple numerical augmentations.








## II. Will Increasing Judges Solve Pendency?

- **Positive Aspects:**
  - **Accelerated disposal:** Speeds up the resolution of standard civil and criminal appeals.
  - **Decreased workload:** Averts judicial fatigue by allocating extensive daily cases.
  - **Enhanced bench specialization:** Promotes the prompt establishment of 5-judge Constitution Benches.
  - **Augmented access to justice:** Guarantees faster legal remedies for everyday citizens.
- **Limitations:**
  - **Vacancies within the lower judiciary:** Circumvents structural impediments at both the district and High Court tiers.
  - **Procedural delays:** Antiquated procedural regulations prolong litigation durations without justification.
  - **Infrastructure deficiencies:** Both administrative and physical courtroom arrangements are excessively strained.
  - **Frequent postponements:** The widespread 'adjournment culture' disrupts the continuity of hearings.
  - **Restricted application of technology:** Erratic implementation of digital case management systems.

## III. Key Reform Measures:

- **All India Judicial Service:** A centralized and merit-based approach to recruitment for lower courts.
- **Digital courts:** Enhancing virtual hearings and utilizing AI for case tracking.
- **Strengthening the subordinate judiciary:** Timely filling of judicial vacancies at the district level.
- **Case management reforms:** Establishing stringent timelines for the submission of arguments and filings.
- **Judicial infrastructure expansion:** Improving both physical and digital infrastructure through targeted central funding.

QUICK REVISION BOX		
	<b>UPSC KEYWORDS:</b>	Judicial Independence, Adjournment Culture, Institutional Efficiency.
	<b>CONSTITUTIONAL ARTICLES:</b>	Article 124 (Establishment of SC), Article 136 (SLPs).
	<b>IMPORTANT INSTITUTIONS:</b>	SC Collegium, National Judicial Infrastructure Authority of India.
	<b>COMMITTEES:</b>	Malimath Committee, Law Commission (120th Report).
	<b>CONCEPTS/TERMS:</b>	Sanctioned Strength, Puisne Judges, Access to Justice.

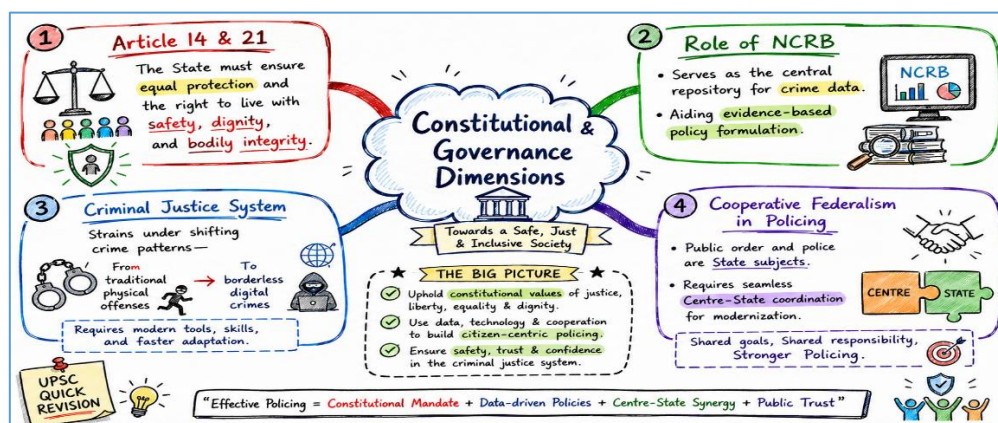
## 7. NCRB Data: Changing Trends in Crime and Internal Security

### Context:

The report titled 'Crime in India' published by the National Crime Records Bureau (NCRB) reveals a 6% decrease in the total national crime rate. Nevertheless, it points out a significant 17% increase in cybercrimes and identifies Delhi as the most dangerous metropolitan area for women and children.

### I. Key NCRB Findings:

- **Crime trends:** A notable decrease of 6% in overall registered crimes indicates a significant quantitative enhancement.
- **Women & child safety concerns:** Delhi ranks highest for crimes against women and has the most elevated juvenile crime rate among metropolitan areas.
- **Rise in cybercrime:** There has been a pronounced 17% increase in cybercrimes, with financial fraud constituting more than 72% of digital offenses.
- **Urban vulnerability:** Metropolitan areas exhibit concentrated increases in incidents of kidnapping, theft, and crimes targeting vulnerable populations.
- **Reporting vs actual crime debate:** The observed decline in crime rates may be indicative of a shift to new criminal legislation or systemic underreporting, rather than a genuine decrease in criminal activity.



### II. Key Challenges:

- **Insufficient policing capabilities:** Obsolete forensic systems hinder the ability to address complex digital fraud.







- **Deficiencies in women's safety infrastructure:** Inadequate last-mile connectivity and insufficient placement of emergency response teams.
- **Shortcomings in cybersecurity:** A deficiency in digital literacy renders citizens particularly vulnerable to the digital fraud landscape.
- **Prolonged justice delivery:** Low rates of conviction discourage reporting and empower habitual offenders.

### III. Government Measures:

- **Cyber Crime Portal:** The I4C initiative aims to provide a cohesive platform for the public to report digital crimes.
- **Nirbhaya Fund:** A national program that allocates resources for the enhancement of women's safety infrastructure.
- **Safe City Project:** An initiative focused on implementing technology-based surveillance and emergency response mechanisms in key urban areas.
- **Emergency response systems:** The nationwide 112 helpline and specialized fast-track courts are designed to expedite legal proceedings.

### IV. Way Forward:

- **Police modernization:** Enhancing technological resources and cyber forensic capabilities at the district level.
- **Gender-responsive policing:** Boosting female representation within police forces and creating effective Women Help Desks.
- **Accelerated conviction processes:** Rigorous implementation of digital evidence protocols as per the Bharatiya Sakshya Adhiniyam.
- **Public digital literacy:** Nationwide initiatives promoting cyber hygiene to eradicate the digital fraud ecosystem.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Cooperative Federalism, Digital Fraud Ecosystem, Evidence-Based Policy.
 <b>Constitutional Articles:</b>	Article 14, 21.
 <b>Important Institutions:</b>	National Crime Records Bureau (NCRB), I4C.
 <b>Important Schemes:</b>	Nirbhaya Fund, Safe City Project.
 <b>Data Sources:</b>	'Crime in India' Report (NCRB).
 <b>Important Concepts:</b>	Crime Rate (per lakh population), Underreporting vs. Actual Crime.

## 8. Governor's Role in a Hung Assembly

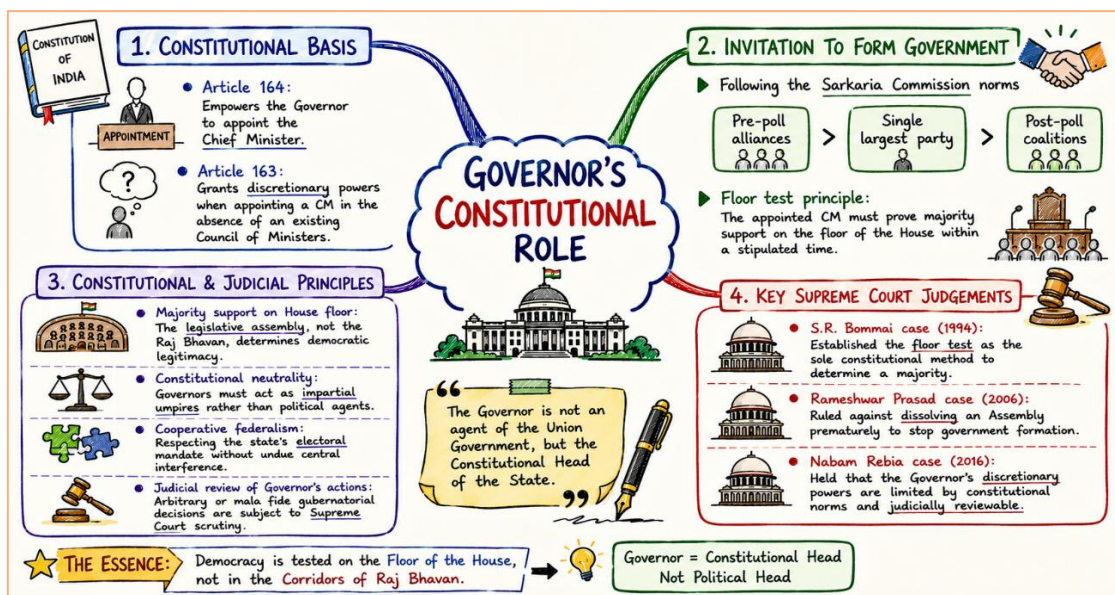
### Context:

The Tamil Nadu Assembly elections of 2026 resulted in a hung mandate, sparking renewed discussions regarding the Governor's "situational discretion" in the formation of government and the request for tangible letters of support.

### I. What is a Hung Assembly?

- **Definition:** A situation in which no individual political party or pre-election coalition achieves a definitive majority of seats.

- **Circumstances that contribute to this:** Divided electoral outcomes necessitating the formation of post-election coalitions or the establishment of minority governments.



## II. Key Concerns:

- **Accusations of biased behavior:** Claims of preferential treatment towards the ruling party of the Centre.
- **Prolonged delays in legislative tests:** Extended ambiguity fosters unethical defections and opportunistic negotiations.
- **Abuse of discretionary authority:** Disregarding established norms for political expediency.
- **Tensions between the Centre and States:** Erodes federal trust and compromises institutional integrity.

## III. Way Forward:

- **Time-sensitive floor tests:** Requiring confidence votes to be held within 48-72 hours to limit political maneuvering.
- **Established constitutional conventions:** Formalizing the guidelines set forth by the Sarkaria and Punchhi Commissions into an official code.
- **Impartiality of the Governor:** Selecting non-partisan, distinguished constitutional leaders.
- **Reinforcing federal ethics:** Guaranteeing that decisions align with the democratic mandate.

QUICK REVISION BOX	
UPSC Keywords	Situational Discretion, Floor Test, Horse-trading, Constitutional Morality.
Constitutional Articles	Article 163, 164, 174, 356.
Important Judgements	S.R. Bommai (1994), Rameshwar Prasad (2006), Nabam Rebia (2016).
Important Committees	Sarkaria Commission (1983), Punchhi Commission (2007).
Important Concepts	Pro-tem Speaker, Vote of Confidence, Cooperative Federalism.
Institutions/Authorities	State Governor, Supreme Court.

## 9. Cyber Warfare Outpacing Legal Accountability

### Context:

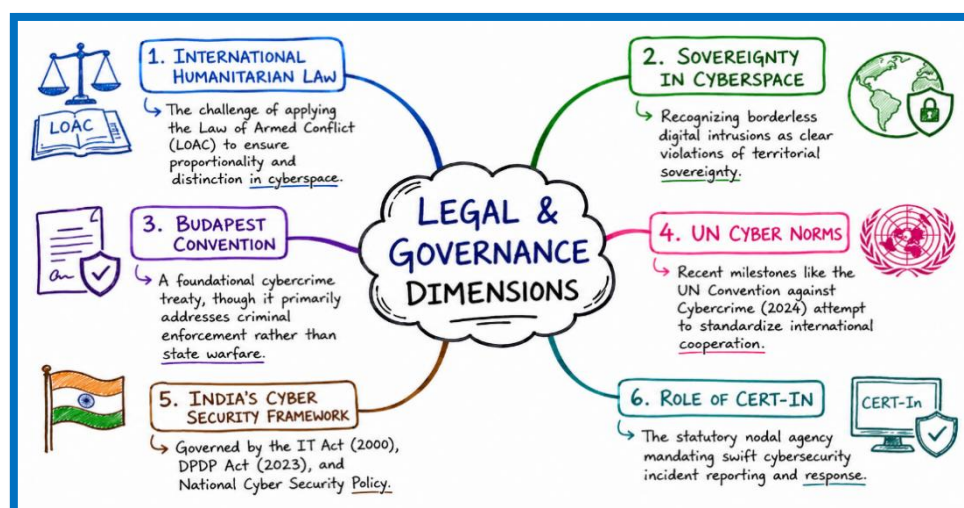
Recent global forums have underscored that advanced state-sponsored cyber warfare is swiftly surpassing current international legal frameworks, resulting in a significant accountability gap.

### I. What is Cyber Warfare?

- **Definition:** The employment of focused digital assaults aimed at interrupting the computer systems and information networks of an opponent.
- **Categories of cyber attacks:** Distributed Denial of Service (DDoS), ransomware, malware injection, and zero-day vulnerabilities.
- **Actors involved:** Carried out by state-sponsored Advanced Persistent Threats (APTs), hackers, and organized cybercriminal entities.

### II. Key Concerns:

- **Cross-border anonymity:** Cybercriminals employ digital proxies and spoofing techniques, making precise geographical identification nearly unfeasible.
- **Weak international legal framework:** The question of when a cyberattack constitutes a "use of force" as defined by the UN Charter remains a subject of legal debate.
- **Attribution challenges:** Technical suspicions seldom satisfy the rigorous evidentiary standards necessary to legally implicate a specific State.
- **Critical infrastructure attacks:** Disabling power grids, financial institutions, and healthcare systems without the deployment of any conventional weaponry.
- **Disinformation campaigns:** Utilizing algorithms as tools to influence electoral processes and disrupt social cohesion.
- **National security threats:** Engaging in covert espionage and the theft of intellectual property with minimal repercussions for the perpetrator.








### III. Challenges for India:

- **Increasing cybercrime:** Heightened susceptibility to international financial fraud and government-backed espionage.

- **Reliance on digital infrastructure:** Security threats exacerbated by the extensive nature of India's Digital Public Infrastructure (DPI).
- **Shortage of skilled personnel:** A significant national shortfall of qualified cyber forensic and security experts.
- **Data protection deficiencies:** Prolonged delays in the complete implementation of comprehensive data privacy regulations.

#### IV. Way Forward:

- **Global cyber governance framework:** Developing enforceable treaties under the UN that clearly outline and impose penalties for acts of cyber warfare.
- **Stronger cyber deterrence:** Establishing credible offensive capabilities to create a robust deterrence strategy.
- **International cooperation:** Institutionalizing real-time multilateral intelligence sharing and extradition processes.
- **Indigenous cyber capabilities:** Encouraging domestic research and development in quantum cryptography and zero-trust frameworks.
- **Cyber awareness and resilience:** Implementing rigorous cyber hygiene standards throughout both public and private sectors.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	Threshold Ambiguity, Cyber Deterrence, Attribution Gap, Asymmetric Warfare.
 <b>IMPORTANT CONVENTIONS</b>	Budapest Convention, UN Convention against Cybercrime (2024), Tallinn Manual.
 <b>IMPORTANT INSTITUTIONS</b>	CERT-In, I4C, National Critical Information Infrastructure Protection Centre (NCIIPC).
 <b>IMPORTANT REPORTS/STRATEGIES</b>	National Cyber Security Policy.
 <b>IMPORTANT CONCEPTS</b>	Advanced Persistent Threats (APTs), Sovereignty in Cyberspace, Zero-Day Exploits.

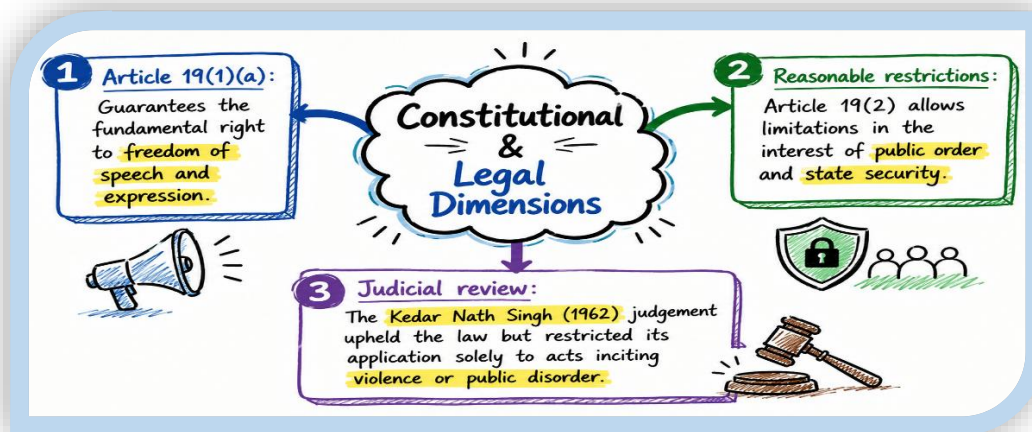
## 10. SC's Revival of Section 124A Triggers Concerns

### Context:

The Supreme Court has recently elucidated that subordinate courts are permitted to continue with sedition trials in accordance with Section 124A of the IPC, provided that the accused gives explicit consent, thereby partially easing the comprehensive suspension imposed in 2022.

### I. What is Section 124A?

- **Definition:** Criminalizes expressions or actions that incite or seek to incite hatred, contempt, or disaffection towards the legally established government.
- **Colonial background:** Implemented in 1870 to quell nationalist opposition, particularly employed against figures such as Bal Gangadhar Tilak and Mahatma Gandhi.
- **Purpose:** To avert the provocation of violence, disruption of public order, and efforts to undermine the State.



## II. Key Concerns regarding Sedition Law:

- **Colonial heritage:** A repressive instrument fundamentally incompatible with a contemporary democratic framework.
- **Deterrent impact on free expression:** Stifles valid political critique and democratic opposition due to the apprehension of legal repercussions.
- **Exploitation against opposition:** Capriciously utilized against reporters, civil liberties advocates, and scholars.
- **Minimal conviction rates:** Indicates systemic exploitation where "the procedure itself serves as the penalty."
- **Democratic oversight:** Protects the current administration from legitimate, constitutional examination.

## III. Supreme Court's Position:

- **Need for reassessment:** In *S.G. Vombatkere (2022)*, the Supreme Court observed that the provision is misaligned with modern democratic principles.
- **Equilibrium:** Highlighted the importance of balancing civil liberties with the security concerns of the State.
- **Temporary safeguards:** Recently permitted consensual trials to avert prolonged detention of undertrials confronted with several overlapping charges.






## IV. Arguments Supporting Retention:

- **National integrity:** Addresses ongoing insurgencies, left-wing extremism, and radicalization.
- **Anti-secession concerns:** Prevents organized efforts to divide the Union.
- **Internal security challenges:** Addresses legislative deficiencies in managing covert subversive actions.

## V. Way Forward:

- **Narrow interpretation:** Implement the *Kedar Nath* guidelines stringently during the FIR registration process.
- **Strong safeguards:** Require prior approval from a senior official before applying sedition laws.

- **Protect democratic dissent:** Educate law enforcement to distinguish between legitimate government critique and anti-national conduct.
- **Police reforms:** Improve investigative capabilities to avoid the arbitrary enforcement of state security regulations.

QUICK REVISION BOX		
	<b>UPSC KEYWORDS</b>	Chilling Effect, Reasonable Restrictions, Democratic Dissent.
	<b>CONSTITUTIONAL ARTICLES</b>	Article 19(1)(a), Article 19(2), Article 14, Article 21.
	<b>IMPORTANT JUDGEMENTS</b>	<i>Kedar Nath Singh v. State of Bihar (1962)</i> , <i>S.G. Vombatkere v. Union of India (2022)</i> , <i>Kamran v. State of MP (2026)</i> .
	<b>IMPORTANT CONCEPTS</b>	“Process is the punishment”, Doctrine of Proportionality, Sovereign Integrity.
	<b>IMPORTANT LEGAL TERMS</b>	Disaffection, Subversive Activities, Section 152 of BNS (Bharatiya Nyaya Sanhita).

## INTERNATIONAL RELATIONS

### 11. Shifting Sands in the Gulf: UAE's OPEC Exit, Regional Tensions, and India's Strategic Recalibration

#### Context:

Prime Minister Modi's visit to the UAE, which resulted in significant agreements in the energy and defense sectors, aligns with the UAE's strategic withdrawal from OPEC and the increasing security concerns in the Gulf due to Iranian assaults, thereby fundamentally altering the geopolitical landscape of the region.

#### I. Geopolitical Context:

- **Gulf regional tensions:** The increasing friction poses a threat to vital choke-points in the Middle East.
- **Saudi Arabia-UAE differences:** The UAE's departure from OPEC underscores the conflicts regarding production quotas and leadership roles.
- **Iran-related security concerns:** Proxy assaults amplify the vulnerabilities present in the Gulf's energy infrastructure.
- **Changing energy geopolitics:** The UAE is focusing on enhancing its sovereign oil capacity rather than adhering to cartel limitations.

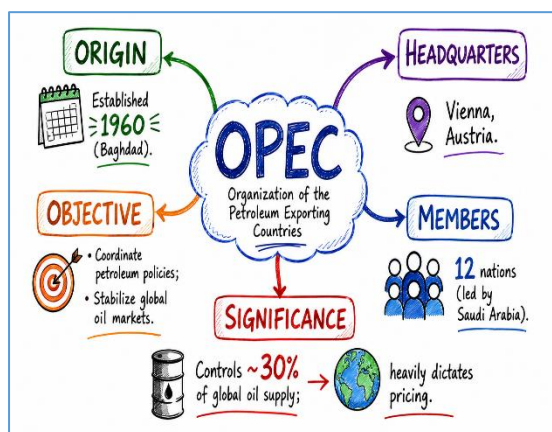
#### II. India-UAE Relations:

- **Energy collaboration:** Transitioning from a buyer-seller dynamic to partnerships focused on strategic petroleum reserves.
- **Defence and security collaboration:** Enhancing maritime security cooperation and conducting joint military exercises.

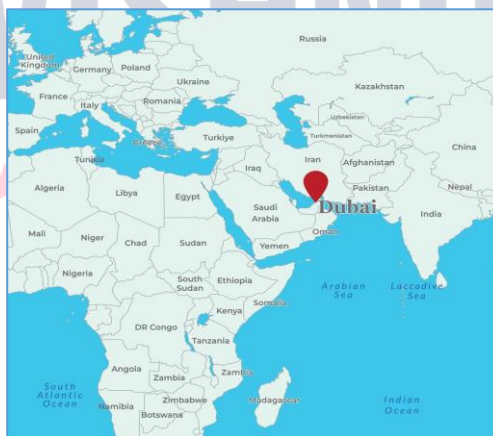
- **Trade and investment relations:** Strengthened by the Comprehensive Economic Partnership Agreement (CEPA); the UAE continues to be a key source of Foreign Direct Investment (FDI).
- **Comprehensive Strategic Partnership:** Expanding the strategic integration of I2U2 and the International Multimodal Connectivity (IMEC).
- **Significance of the diaspora:** Over 3.5 million Indians contribute to essential remittance flows.

### III. Strategic Importance for India:

- **Energy security:** The independent production of the UAE ensures dependable and unrestricted crude oil supplies.
- **Maritime security in West Asia:** Protecting the Strait of Hormuz from potential blockades.
- **Stability of sea lanes:** Ensuring the protection of essential trade routes that are critical for global supply chains.



- **Counter-terror cooperation:** Collaborative intelligence sharing to combat regional extremism.
- **Connectivity and economic interests:** A vital hub for the IMEC economic corridor.









### IV. Key Challenges:

- **Regional instability:** Tensions in the Gulf pose a threat to significant Indian investments.
- **Iran-Israel tensions:** The escalation of these tensions risks a broader and more unpredictable conflict.
- **Oil price volatility:** Disruptions within OPEC lead to market unpredictability.
- **Great power competition:** The rivalry between the US and China is manifesting in the Gulf region.
- **Security of the Indian diaspora:** There are risks associated with evacuation during sudden outbreaks of conflict.

### V. Way Forward:

- **Multi-alignment diplomacy:** Skillfully managing relationships amid conflicting rivalries in the Gulf.

- **Diversified energy partnerships:** Broadening green energy initiatives and establishing agreements for non-OPEC oil supplies.
- **Strengthening I2U2/West Asia engagement:** Utilizing minilateral approaches to foster economic integration.
- **Strategic balancing in the Gulf region:** Engaging in proactive naval diplomacy to promote regional stability.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Strategic Autonomy, Peak Oil, De-hyphenation.
 <b>Important Groupings/Forums:</b>	I2U2, IMEC, GCC, OPEC+.
 <b>Important Agreements:</b>	India-UAE CEPA, Abraham Accords.
 <b>Important Regions/Straits:</b>	Strait of Hormuz, Gulf of Oman.
 <b>Important Concepts:</b>	Multi-alignment, Minilateralism.
 <b>Important Strategic Terms:</b>	Net Security Provider, SLOCs.

## 12. India-Vietnam Enhanced Comprehensive Strategic Partnership

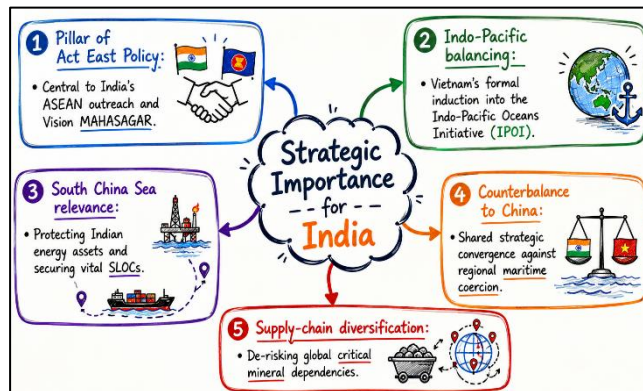
### Context:

India and Vietnam have recently elevated their relationship to an "Enhanced Comprehensive Strategic Partnership," which includes the establishment of a 2+2 Dialogue and a strategic Memorandum of Understanding regarding cooperation in rare-earth elements.

### I. India-Vietnam Relations: Key Areas

- **Defence collaboration:** Formation of a Strategic Diplomacy-Defence Dialogue (2+2); Agreement on Mutual Submarine Rescue.
- **Maritime security:** Collaborative hydrographic surveys; improved sharing of white shipping information.
- **Rare-earth collaboration:** Strategic Memorandum of Understanding between IREL (India) and VINATOM (Vietnam).
- **Trade and connectivity:** Integration of UPI digital payments; \$25 billion trade objective by 2030.

- **Energy collaboration:** Joint exploration of oil and gas in offshore blocks of Vietnam.



## II. Geopolitical Significance:

- **The centrality of ASEAN:** Establishing a foundation for India's comprehensive economic and security strategy in Southeast Asia.
- **The principle of freedom of navigation:** Maintaining a rules-based framework in accordance with UNCLOS in contested maritime areas.
- **The convergence of QUAD:** Strongly aligns with the objectives of a free, open, and inclusive Indo-Pacific region.
- **Maritime geopolitics:** Ensuring the security of the vital Malacca-South China Sea passage.

## III. Key Challenges:

- **Chinese assertiveness:** The aggressive militarization and ongoing territorial disputes in the South China Sea.
- **Regional tensions:** The geopolitical shifts are challenging the broader consensus and unity within ASEAN.
- **Trade imbalance:** Structural and logistical obstacles are impeding the achievement of bilateral trade objectives.
- **Implementation delays:** The sluggish operationalization of defense exports (such as BrahMos) and credit lines.

## IV. Way Forward:

- **Fortify defense relationships:** Accelerate the transfer of technology and the export of strategic weaponry.
- **Broaden technological collaborations:** Amplify the integration of AI, cybersecurity, and the fintech ecosystem.
- **Reinforce ASEAN involvement:** Utilize Hanoi to enhance the regional frameworks between India and ASEAN.
- **Augment maritime collaboration:** Expand joint naval exercises and improve maritime domain awareness.



QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Enhanced Comprehensive Strategic Partnership, Minilateral balancing
 <b>Important Policies/Initiatives:</b>	Act East Policy, Vision MAHASAGAR, IPOI
 <b>Important Groupings/Forums:</b>	2+2 Dialogue, ASEAN
 <b>Important Regions/Seas:</b>	South China Sea, Indo-Pacific
 <b>Important Agreements:</b>	Mutual Submarine Rescue MoU, IREL-VINATOM rare-earth pact
 <b>Important Strategic Concepts:</b>	Freedom of Navigation, Supply-chain resilience

### 13. India-Trinidad and Tobago Pact on Diaspora Ancestry

#### Context:

India and Trinidad and Tobago have recently entered into an agreement for archival cooperation aimed at assisting the Indian diaspora, specifically the Girmitya community, in tracing their ancestral origins and reestablishing their connection to their cultural heritage.

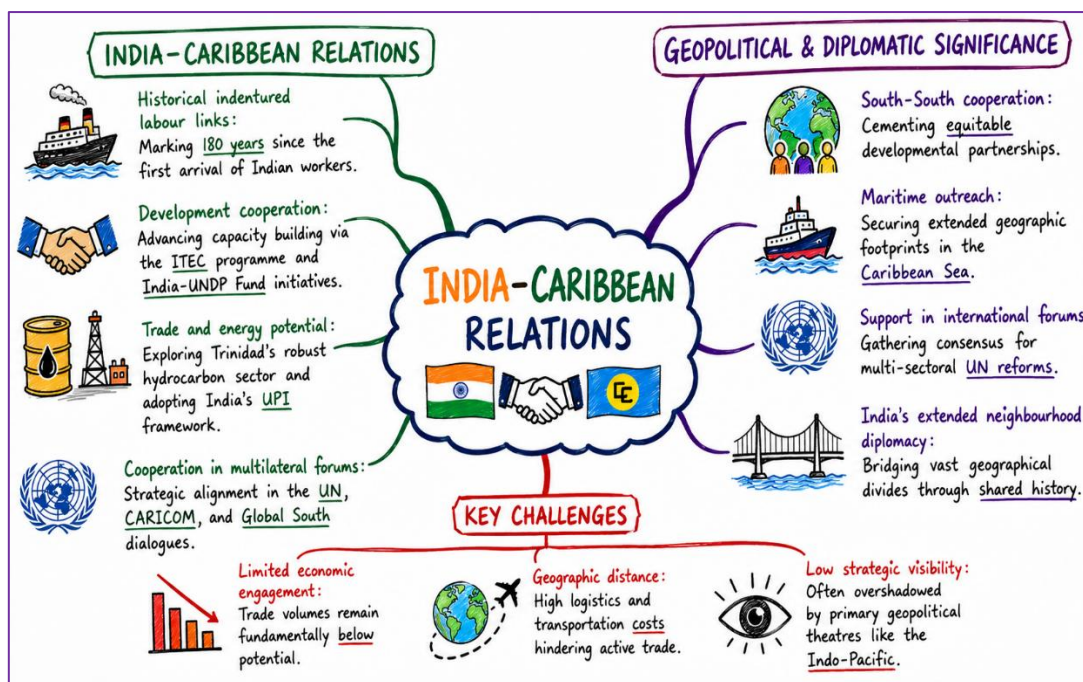
#### I. About the India-Trinidad Pact:

- **Exploring ancestral heritage:** The digitization of historical documents to assist Indo-Trinidadians in tracing their lineage.
- **Collaborative cultural and archival efforts:** An agreement between the National Archives of India and Trinidad aimed at preserving historical information.
- **Enhancing interpersonal connections:** Streamlining the documentation process for Overseas Citizenship of India (OCI) applications, which has recently been expanded to include individuals up to the 6th generation.

#### II. Strategic Importance for India:

- **Diaspora diplomacy:** Utilizing the demographic reality (Indo-Trinidadians constitute approximately 40-45% of the population) to foster enduring bilateral goodwill.
- **Soft power projection:** Transforming historical memory and the preservation of heritage into lasting diplomatic assets.
- **Strengthening Global South outreach:** Enhancing India's cultural leadership and identity within developing countries.
- **Expanding Caribbean engagement:** Leveraging Trinidad as an economic conduit to the Americas.
- **Cultural connectivity:** Creating the Girmitya Studies Centre and improving cultural heritage sites such as Nelson Island.





## II. Way Forward:

- **Enhance cultural diplomacy:** Accelerate the implementation of the Girmitya Studies Centre.
- **Broaden digital archival collaboration:** Guarantee smooth, digitized, and transnational access to heritage documents.
- **Fortify trade and educational connections:** Capitalize on the OCI expansion to foster increased economic and scholarly relationships.
- **Reinforce CARICOM involvement:** Employ Trinidad as a central institution for wider regional integration.

QUICK REVISION BOX	
UPSC Keywords:	Diaspora statecraft, Girmitya community, OCI Extension
Important Regions/Groupings:	Trinidad and Tobago, CARICOM, Global South
Important Diplomatic Concepts:	Diaspora diplomacy, Extended neighbourhood
Important Agreements/Initiatives:	Archival Cooperation Pact, UPI Integration
Important Strategic Terms:	South-South cooperation, Strategic gateway
Important Soft Power Concepts:	Cultural memory, Heritage diplomacy

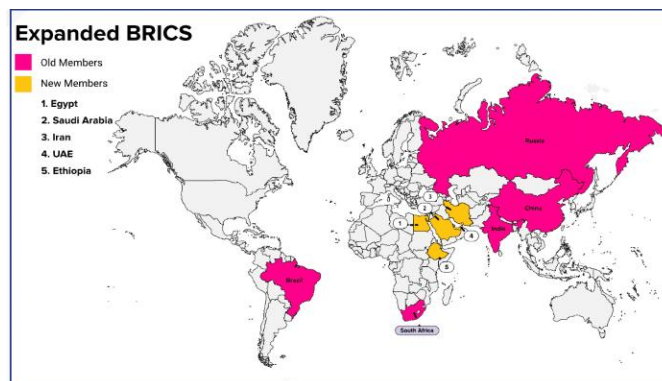
## 14. India's West Asia Policy and the Two-State Solution at BRICS

### Context:

External Affairs Minister S. Jaishankar reaffirmed India's unwavering commitment to a two-state resolution regarding the Palestine conflict during the latest BRICS discussions.

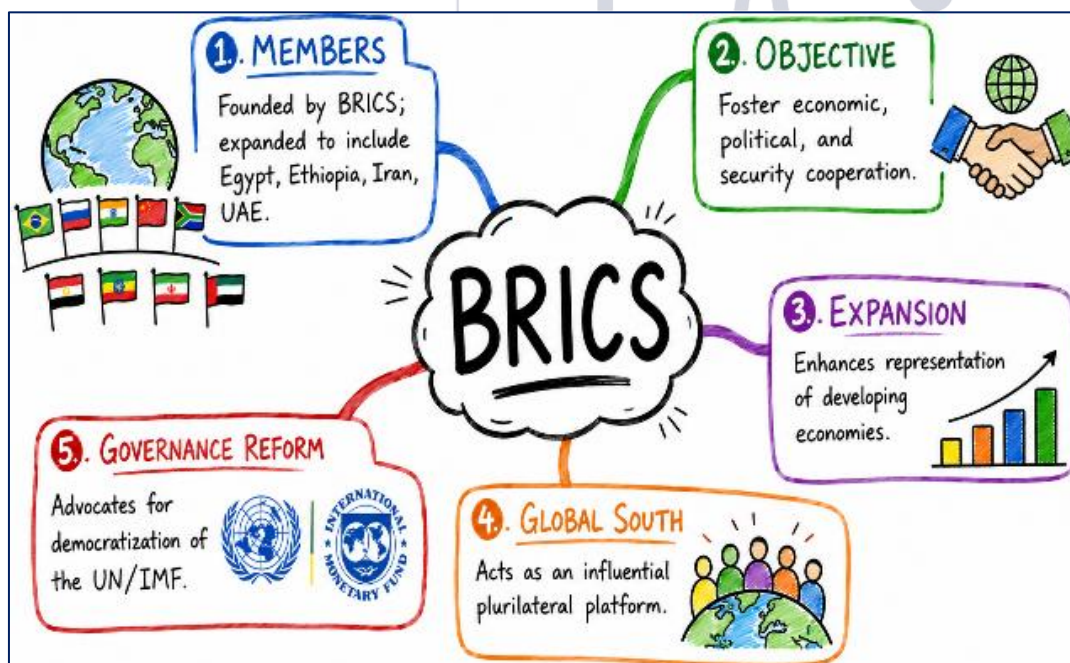
### I. What is the Two-State Solution?

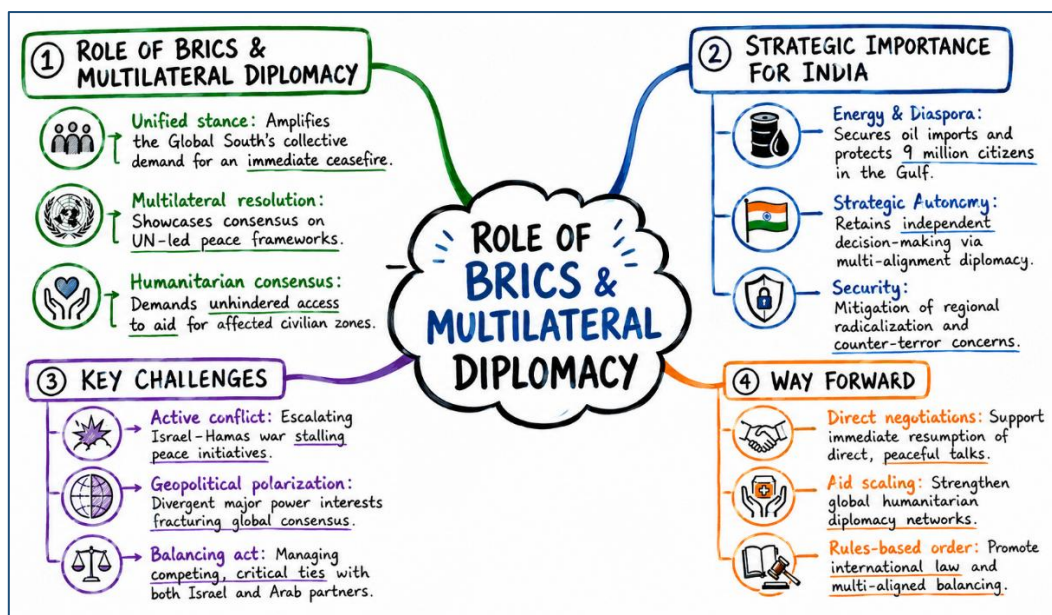
- **Sovereign coexistence:** The creation of an independent Palestinian state adjacent to Israel, within secure and recognized borders.
- **Capital issue:** Addressing the status of East Jerusalem as the prospective capital of Palestine.
- **UN-backed peace:** In accordance with UN Resolutions 242 and 338 to promote regional stability.



#### India's Position on Palestine:

India has historically supported the Palestinian cause while also fostering strong strategic and defense relationships with Israel. New Delhi manages this through a balanced, de-hyphenated policy in West Asia, consistently promoting dialogue and diplomacy as alternatives to violence.





QUICK REVISION BOX	
<b>UPSC Keywords:</b>	De-hyphenation, Strategic Autonomy, Multi-alignment
<b>Important Regions:</b>	Gaza Strip, West Bank, East Jerusalem
<b>Important Groupings/Forums:</b>	BRICS, United Nations Security Council (UNSC)
<b>Important Concepts:</b>	Two-State Solution, Global South Leadership
<b>Important Agreements/Resolutions:</b>	UN Resolutions 242 & 338
<b>Important Strategic Terms:</b>	Rules-based order, Plurilateralism

## 15. India-Norway Green Strategic Partnership

### Context:

India and Norway have recently upgraded their bilateral relationship to a "Green Strategic Partnership" during the historic visit of the Indian Prime Minister to Oslo, while also advocating for peace in Ukraine.

### I. India-Norway Relations: Key Areas

- **Green Strategic Partnership:** An integrated framework that emphasizes climate transition and sustainability.
- **Renewable energy collaboration:** Concentrating on offshore wind, hydropower, and carbon capture utilization and storage (CCUS).
- **Blue economy partnership:** Promoting zero-emission shipping, marine technology, and ocean governance.
- **Maritime and Arctic collaboration:** Enhancing joint polar research at India's Himadri station located in Svalbard.
- **Trade and technology connections:** Utilizing the India-EFTA Trade and Economic Partnership Agreement (TEPA) to generate \$100 billion in investments.



## 16. India-Netherlands Strategic Partnership

### Context:

India and the Netherlands have recently enhanced their bilateral relations by establishing a Strategic Partnership, which includes a detailed five-year roadmap (2026–30) and the signing of 17 agreements during the visit of the Indian Prime Minister to The Hague.

### I. Key Outcomes of the Visit:

- 17 bilateral agreements: Covering key areas such as defense, semiconductors, migration, and essential minerals.
- Trade and investment cooperation: Formation of a Joint Trade and Investment Committee (JTIC) aimed at enhancing bilateral trade.
- Semiconductor and technology collaboration: A significant Memorandum of Understanding (MoU) between Tata Electronics and ASML for the Dholera fabrication facility, in addition to an academic "brain bridge" initiative connecting leading institutions.
- Water management partnership: Collaborative technical efforts on the Kalpasar project in Gujarat and comprehensive urban river management approaches.



in Gujarat and comprehensive urban river management approaches.

- Green energy cooperation: Creation of a "Green and Digital Sea Corridor" to support green hydrogen exports and offshore wind energy partnerships.

### II. Key Challenges:

- **Trade barriers:** Adapting to intricate EU regulatory structures, including the Carbon Border Adjustment Mechanism (CBAM).
- **Technology dependence:** Managing extensive US-led global export restrictions on advanced semiconductor manufacturing equipment.
- **Global economic slowdown:** Persistent geopolitical tensions in Eurasia and West Asia affecting stable supply chains.
- **Regulatory differences:** Closing disparities in intellectual property regulations and facilitating smooth labour movement.



### III. Way Forward:

- Broaden high-technology collaboration: Accelerate the establishment of public-private partnerships in clean technology and advanced semiconductor manufacturing.
- Fortify port and maritime connections: Speed up the implementation of the suggested Green and Digital Sea Corridor.

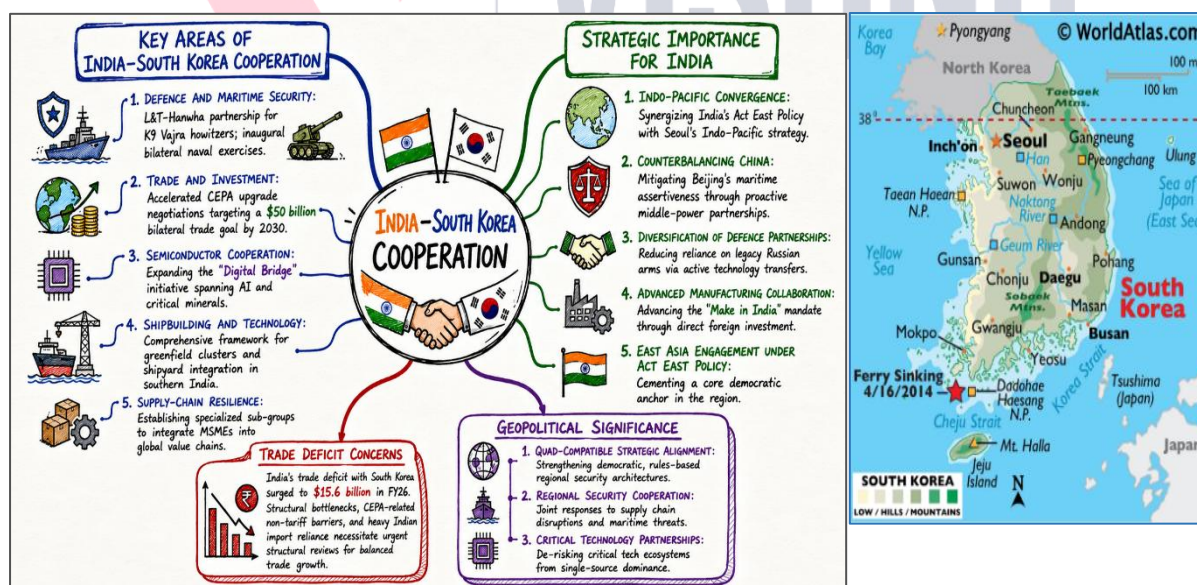
- Intensify climate collaborations: Improve joint financing and technology transfer within the framework of the International Solar Alliance (ISA).
- Augment India–EU strategic relations: Leverage Dutch diplomatic power to hasten the progress of the delayed India-EU Free Trade Agreement negotiations.

QUICK REVISION BOX		
	<b>UPSC KEYWORDS:</b>	De-risking, Brain Bridge, MLSA
	<b>IMPORTANT AGREEMENTS/ INITIATIVES:</b>	2026–30 Roadmap, Kalpasar Project, ASML-Tata MoU
	<b>IMPORTANT REGIONS/ ROUTES:</b>	Dholera, Strait of Hormuz, Green Sea Corridor
	<b>IMPORTANT STRATEGIC CONCEPTS:</b>	Strategic Autonomy, Plurilateralism
	<b>IMPORTANT ECONOMIC/ TECHNOLOGY TERMS:</b>	CBAM, Semiconductor Fab
	<b>IMPORTANT GROUPINGS/ FRAMEWORKS:</b>	IPOI, JTIC

## 17. India-South Korea Strategic Partnership

### Context:

India and South Korea have recently progressed to the 12th round of negotiations for the upgrade of the Comprehensive Economic Partnership Agreement (CEPA) to tackle India's ongoing trade deficit, while also enhancing strategic defense and shipbuilding collaboration as part of the new Vision 2026-2030.









### I. Key Challenges:

- **Ongoing trade imbalance:** Distorted export-import relationships originating from the 2010 CEPA framework.
- **Regulatory obstacles:** Constrictive rules of origin and rigorous phytosanitary regulations.
- **Restricted defense industrial integration:** Administrative challenges hindering comprehensive technology transfers.

## II. Way Forward:

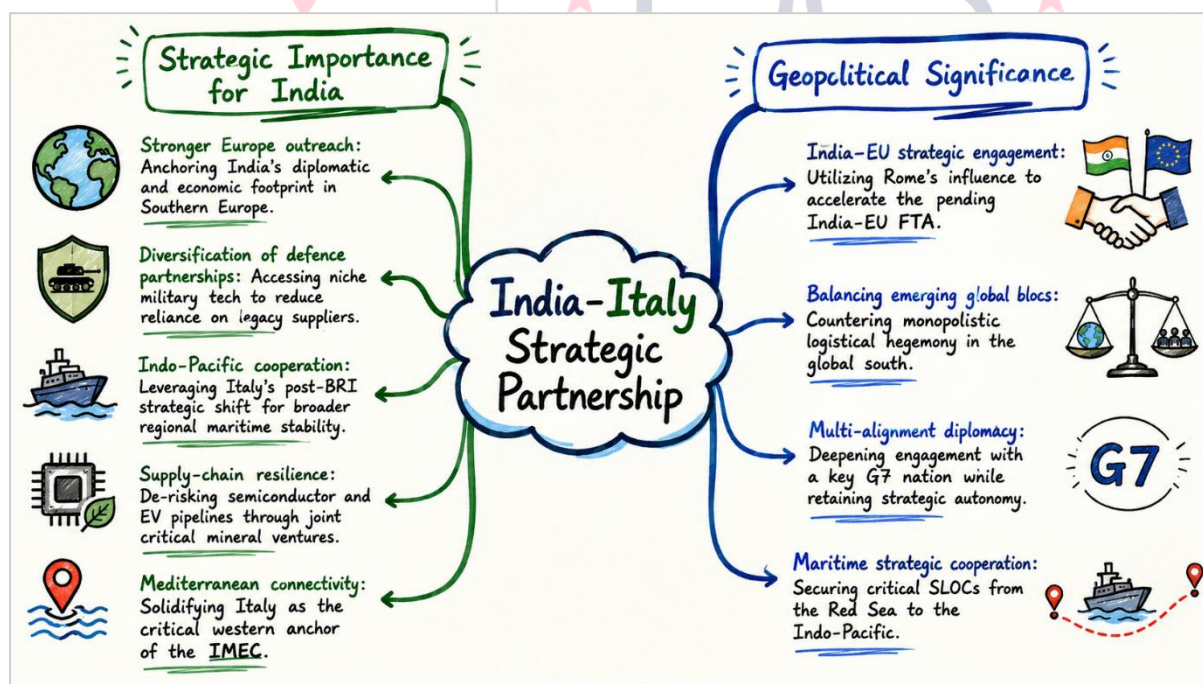
- **Enhance the CEPA framework:** Accelerate discussions to establish fair and contemporary trade agreements.
- **Broaden defense co-production:** Expedite the India-Korea Defence Innovation Accelerator Ecosystem (KIND-X).
- **Augment semiconductor collaboration:** Promote partnerships between public and private sectors for cutting-edge semiconductor and AI hardware development.
- **Reinforce Indo-Pacific collaboration:** Expand joint naval exercises and improve maritime domain awareness.

QUICK REVISION BOX	
	<b>UPSC KEYWORDS</b>   De-risking, Middle-power diplomacy, KIND-X
	<b>IMPORTANT POLICIES/INITIATIVES</b>   Act East Policy, Vision 2026-2030, Digital Bridge
	<b>IMPORTANT GROUPINGS/Frameworks</b>   CEPA, QUAD
	<b>IMPORTANT STRATEGIC CONCEPTS</b>   Rules-based order, Supply-chain resilience
	<b>IMPORTANT ECONOMIC/TECHNOLOGY TERMS</b>   Rules of Origin, Phytosanitary standards
	<b>IMPORTANT REGIONS/SEAS</b>   Indo-Pacific, South China Sea

## 18. India-Italy Special Strategic Partnership

### Context:

India and Italy have recently upgraded their relationship to a "Special Strategic Partnership" during the visit of the Indian Prime Minister to Rome, where they adopted a Defence Industrial Roadmap and established a trade target of €20 billion by the year 2029.



### I. Key Outcomes of the Partnership:

- **Defence cooperation agreement:** A strategic framework for the co-development and co-production of naval platforms, helicopters, and electronic warfare.

- **Maritime security collaboration:** Structured dialogues aimed at enhancing Indo-Mediterranean interoperability and promoting Blue Economy initiatives.
- **Technology and innovation ties:** Creation of the INNOVIT India hub alongside the expansion of collaboration in human-centric AI.
- **Clean energy partnership:** A bilateral Memorandum of Understanding concentrating on green hydrogen, smart grids, and the recovery of critical minerals from electronic waste.
- **Industrial and trade cooperation:** The integration of the "Make in India" initiative with Italian advanced manufacturing through the Joint Strategic Action Plan for 2025–2029.



## II. Key Challenges:

- **Restricted bilateral commerce:** Present trade volumes do not meet the inherent structural potential.
- **Defence execution deficiencies:** Addressing historical procurement challenges and bureaucratic hold-ups.
- **Regulatory and technological obstacles:** Aligning India's data localization requirements with the rigorous standards of Europe's GDPR.

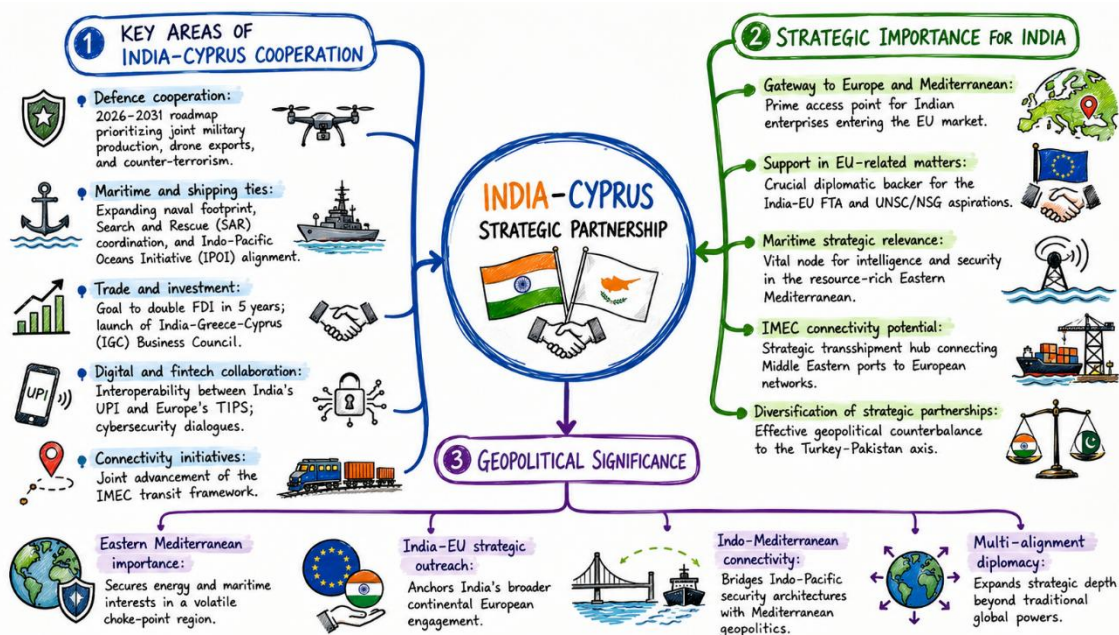
## III. Way Forward:

- **Broaden defense co-production efforts:** Accelerate the establishment of private sector defense hubs and facilitate technology transfers.
- **Augment technology collaborations:** Optimize digital public infrastructure frameworks to support cross-border fintech initiatives.
- **Improve maritime collaboration:** Institutionalize naval PASSEX exercises and proactively safeguard regional chokepoints.
- **Reinforce India–EU connectivity projects:** Promptly implement IMEC ministerial mechanisms to release infrastructure funding.

QUICK REVISION BOX	
<b>UPSC Keywords:</b>	Multi-alignment, Strategic Autonomy
<b>Important Agreements/ Initiatives:</b>	Defence Industrial Roadmap, INNOVIT India, Action Plan 2025-29
<b>Important Regions/ Routes:</b>	Indo-Mediterranean space, Red Sea, Strait of Hormuz
<b>Important Strategic Concepts:</b>	De-risking, Supply-chain resilience
<b>Important Economic/ Technology Terms:</b>	GDPR, Circular economy, Data localisation
<b>Important Groupings/ Frameworks:</b>	IMEC, G7, EU-FTA

## 19. Eastern Mediterranean Pivot: India-Cyprus Strategic Cooperation

Context:



India and Cyprus have recently upgraded their bilateral relations to a Strategic Partnership, introducing a Defence Cooperation Roadmap for the period of 2026 to 2031.

### II. Key Challenges:

- **Restricted economic interaction:** Present bilateral trade levels are fundamentally low.
- **Geopolitical regional strains:** Ongoing historical disputes between Turkey and Cyprus, along with instability in the Levant.
- **Obstacles to connectivity:** Delays in financing and infrastructure that hinder the operationalization of IMEC.



### III. Way forward:

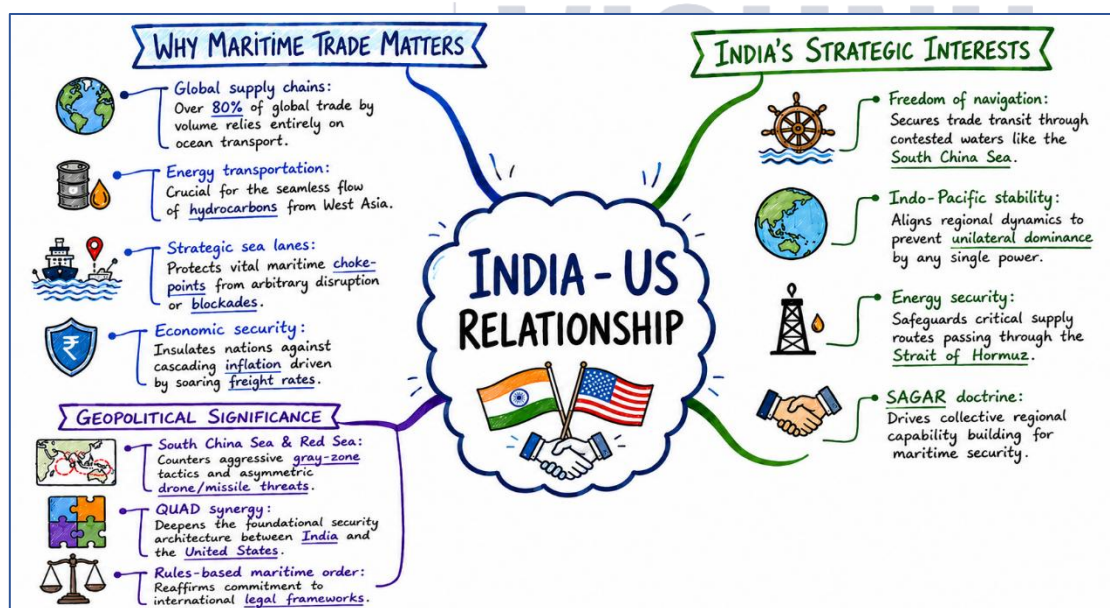
- **Broaden maritime collaboration:** Establish formal joint naval drills and agreements on white shipping.
- **Intensify defense collaboration:** Accelerate the transfer of technology and the export of military equipment.
- **Fortify economic interconnectivity:** Utilize the IGC Council to develop robust supply chains.
- **Augment India-EU alliances:** Take advantage of Cyprus's EU Presidency to hasten FTA discussions.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	Multi-alignment, Strategic Autonomy, Forward Maritime Presence
 <b>Important Agreements</b>	5-Year Defence Roadmap, Migration & Mobility Partnership
 <b>Important Regions/Routes</b>	Levant, Eastern Mediterranean, IMEC
 <b>Important Strategic Concepts</b>	Turkey-Pakistan Counterbalance, IPOI synergy
 <b>Important Economic/Connectivity Terms</b>	UPI-TIPS integration, Transshipment Hub
 <b>Important Groupings/Frameworks</b>	India-Greece-Cyprus (IGC) Council

## 20. India-US Elevate Ties: Strategic Dialogue on Maritime Security

### Context:

Indian External Affairs Minister S. Jaishankar and US Secretary of State Marco Rubio emphasized the necessity for "uninterrupted" maritime commerce in light of increasing global geopolitical risks.









### I. Key Challenges:

- **Asymmetric warfare:** State and non-state actors deploying low-cost drone strikes and piracy.
- **Chokepoint vulnerabilities:** High concentration of shipping through narrow, conflict-prone channels.
- **Supply-chain disruptions:** Forced rerouting of cargo vessels, straining global logistics.

### II. Way Forward:

- **Enhance MDA:** Scale up intelligence-sharing via India's Information Fusion Centre (IFC-IOR).
- **Strengthen naval coordination:** Expand joint patrolling and interoperability drills.

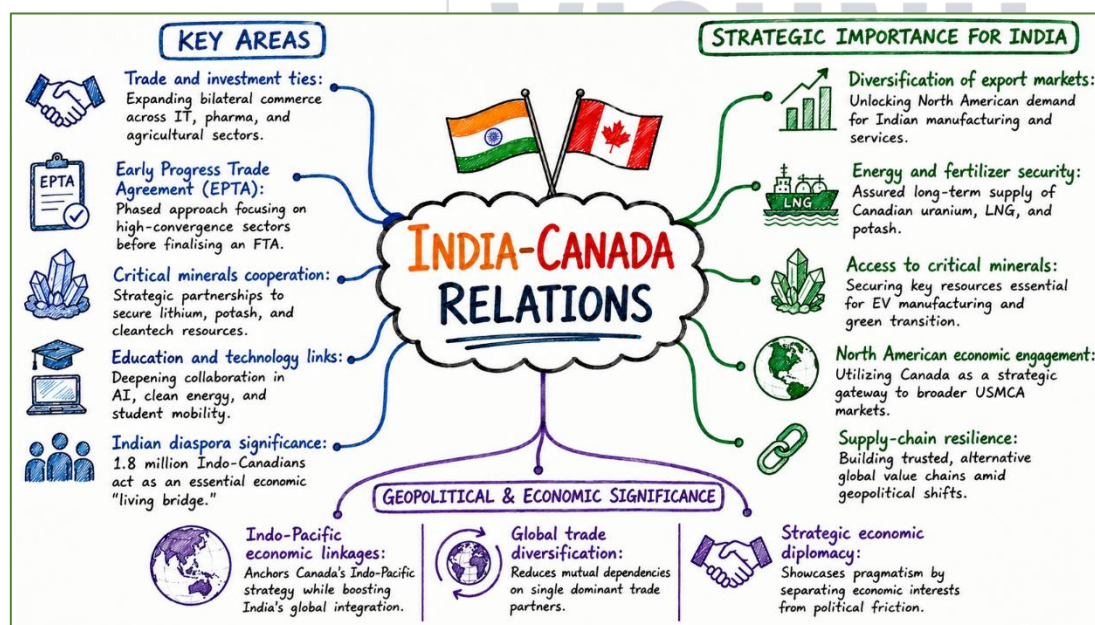
- **Enforce UNCLOS:** Hold nations accountable to the United Nations Convention on the Law of the Sea.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	Freedom of Navigation (FONOPs), Strategic Autonomy, Rules-based Order
 <b>IMPORTANT SEAS/STRAITS</b>	Red Sea, Bab-el-Mandeb, Malacca Strait, Strait of Hormuz
 <b>IMPORTANT DOCTRINES/INITIATIVES</b>	SAGAR, Indo-Pacific Oceans Initiative (IPOI)
 <b>IMPORTANT GROUPINGS/Frameworks</b>	QUAD, UNCLOS, IFC-IOR
 <b>IMPORTANT STRATEGIC CONCEPTS</b>	Maritime Domain Awareness (MDA), Sea Lines of Communication (SLOCs)
 <b>IMPORTANT MARITIME TERMS</b>	Chokepoints, Gray-zone warfare, Asymmetric threats

## 21. India - Canada Trade Deal Negotiations

### Context:

India and Canada are working towards finalizing a Comprehensive Economic Partnership Agreement (CEPA) by the end of the year, with the goal of achieving \$50 billion in bilateral trade by 2030.



### I. Key Challenges in Bilateral Ties:

- **Political and diplomatic tensions:** Fluctuating political strains that disrupt ongoing bilateral discussions.
- **Khalistan-related concerns:** Security challenges associated with anti-India extremist actions occurring within Canada.
- **Trade negotiation differences:** Ongoing disputes regarding



agricultural tariffs and access to the dairy market.

- **Regulatory barriers:** Stringent sanitary and phytosanitary (SPS) regulations obstructing Indian export activities.

## II. Way Forward:

- **Reinstate high-level discussions:** Establish regular ministerial meetings to foster mutual trust.
- **Conclude equitable trade agreement:** Accelerate the EPTA by addressing mutual market concerns.
- **Enhance diaspora involvement:** Utilize community networks to counteract fringe extremism.
- **Broaden critical mineral collaborations:** Create joint task forces focused on green energy supply chains.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	Strategic Partnership, Economic Diplomacy
 <b>Important Agreements/Negotiations</b>	CEPA, EPTA
 <b>Important Strategic Concepts</b>	Supply-Chain Resilience, Indo-Pacific Strategy
 <b>Important Economic/Trade Terms</b>	Free Trade Agreement (FTA), Market Access
 <b>Important Resources/Sectors</b>	Uranium, Potash, Critical Minerals, IT
 <b>Important Diplomatic Terms</b>	Track 1.5 Diplomacy, Non-tariff Barriers

ECONOMY

## 22. Revenue-Deficit States May Face Fiscal Stress

### Context:

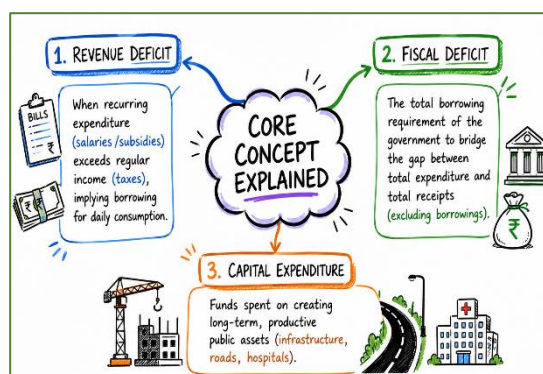
The Ministry of Finance has recently emphasized that States that consistently experience revenue deficits and carry substantial debt burdens are subjected to significant fiscal stress and increased susceptibility to macroeconomic shocks.

### I. Economic Context:

- **Escalating fixed expenditures:** Between 50-65% of state income is allocated to salaries, pensions, and interest obligations.
- **Welfare expenditure challenges:** The growth of non-merit subsidies depletes government funds, resulting in restricted fiscal capacity.
- **Diminished growth in own-tax revenues:** The lack of progress in state-level tax buoyancy heightens dependence on Central transfers.
- **Rising debt obligations for States:** Total State liabilities remain at approximately 35-40% of GSDP, putting pressure on fiscal stability.

## II. Why Fiscal Stress Matters?

- **Reduced productive expenditure:** Hinders the establishment of essential infrastructure and the development of capacity.
- **Increased reliance on borrowing:** Initiates a detrimental cycle of debt due to escalating interest servicing responsibilities.
- **Strain on infrastructure investment:** Contravenes the 'Golden Rule' of public finance, which stipulates that borrowing should be solely for investment purposes rather than for consumption.
- **Effect on long-term economic growth:** Restricts structural growth in GSDP, thereby constraining future revenue generation potential.
- **Fiscal tensions between Centre and State:** Results in ongoing requests for increased devolution and relaxation of borrowing limits during periods of fiscal consolidation.



## III. Key Challenges:

- **Populist subsidies:** An increase in off-budget borrowing for welfare programs.
- **Limited taxation authority:** A significant reliance on fluctuating petroleum VAT and state excise taxes.
- **GST compensation issues:** A fiscal deficit following the end of assured shortfall grants.
- **Escalating interest obligations:** As much as 20-25% of revenue receipts allocated to debt servicing in states facing severe financial stress.

## IV. Way Forward:

- **Fiscal responsibility:** Rigorous compliance with the targets set by the FRBM Act (keeping the Fiscal Deficit at 3% of GSDP).
- **Streamlined subsidies:** Shift from universal handouts to focused, merit-based programs.
- **Enhance tax revenue:** Improve tax management, expand the tax base, and significantly digitize revenue collection.
- **Emphasis on capital spending:** Redirect state borrowing exclusively towards investments that create assets and generate multiplier effects.
- **Improved Centre-State collaboration:** Fortify institutional communication structures through the Finance Commission.

QUICK REVISION BOX		
	<b>UPSC Keywords</b>	Fiscal Federalism, Off-budget Borrowing, Tax Buoyancy, Debt Trap.
	<b>Important Economic Terms</b>	Revenue Deficit, Primary Deficit, Capital Outlay.
	<b>Important Fiscal Concepts</b>	Golden Rule of Public Finance, FRBM Norms.
	<b>Important Institutions/Reports</b>	16th Finance Commission, RBI State Finances Report.
	<b>Important Constitutional Articles</b>	Art. 293 (State Borrowings), Art. 280 (Finance Commission).

## 23. Das Adam Smith Problem: Rethinking Smith's Moral and Economic Worlds

### Context:

Recent international discussions regarding increasing inequality and behavioral economics have brought renewed attention to the "Das Adam Smith Problem", highlighting the pressing necessity to harmonize market capitalism with ethical principles.

### I. What is the "Das Adam Smith Problem"?

- **Evident Paradox:** A historical discourse examining the coherence between Adam Smith's two seminal works.
- **Theory of Moral Sentiments (1759):** Proposes that human actions are motivated by "sympathy" (empathy) and collective morality.
- **Wealth of Nations (1776):** Advocates for rational self-interest as the fundamental catalyst for economic success.
- **Central Discussion:** The challenge of reconciling ethical societal principles with profit-oriented market dynamics.

### Core Concepts:

Concept	Meaning
Self-interest	The pursuit of personal economic utility driving market efficiency.
Invisible Hand	Unseen market mechanism translating individual self-interest into collective societal benefit.
Moral Sentiments	The innate human capacity for empathy guiding ethical social interactions.







### Key Criticisms / Challenges:

- **Market fundamentalism:** Over-reliance on self-interest fosters monopolies and market failures.
- **Rising inequality:** Pure profit-maximization frequently ignores distributive justice.
- **Weak ethical regulation:** Exacerbates consumer exploitation and systemic moral hazards.

### Way Forward:

- **Ethical market governance:** Embed stringent moral hazard checks within financial regulatory bodies.
- **Inclusive economic policies:** Focus on multi-dimensional poverty alongside GDP growth.
- **Sustainable development:** Adopt green accounting and community-focused enterprise models.

QUICK REVISION BOX	
	<b>UPSC Keywords:</b> Market Fundamentalism, Stakeholder Capitalism, Behavioral Economics, Moral Hazard.
	<b>Important Thinkers:</b> Adam Smith, Amartya Sen (Welfare Economics).
	<b>Key Concepts:</b> Invisible Hand, Sympathy vs. Self-Interest, ESG Framework.
	<b>Core Idea:</b> Free markets function optimally only when embedded within strong social morality and institutional trust.

## 24. 30 Banks Integrated with UDGM Portal

### Context:

The Reserve Bank of India (RBI) has recently notified the Supreme Court that 30 banks have been integrated with the UDGM portal, which now encompasses almost 90% of all unclaimed bank deposits.

### I. Economic Context:

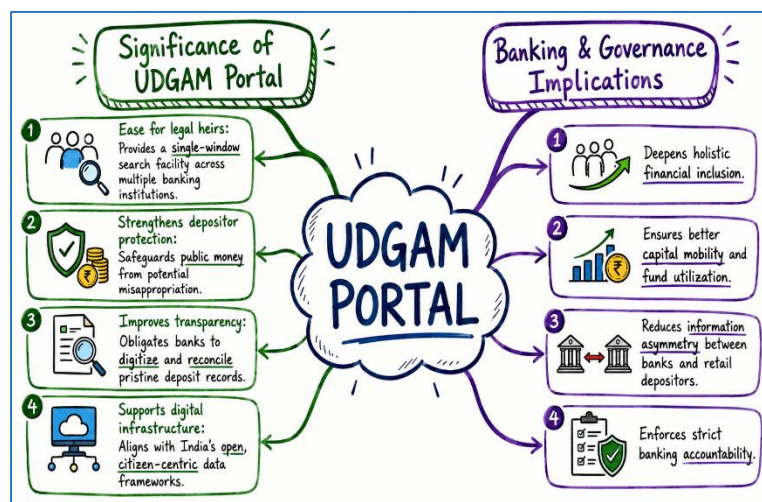
- **Increasing unclaimed deposits:** Substantial amounts of money are being allocated each year to the Depositor Education and Awareness (DEA) Fund.
- **Dormant accounts concern:** This typically stems from factors such as customer relocation, death, or overlooked investments.
- **Financial awareness deficiencies:** Legal heirs frequently do not possess essential information about the financial assets of the deceased.
- **Digital governance:** There is an ongoing effort to centralize dispersed financial information through consolidated public platforms.

### II. Economy Simplified:

Term	Meaning
UDGM Portal	Unclaimed Deposits–Gateway to Access InforMation; an RBI centralized search platform.
Unclaimed Deposits	Balances in bank accounts inactive or unclaimed for 10 years or more.
Dormant Account	A bank account with no customer-initiated transactions for over two years.

### III. Key Challenges:

- **Digital literacy disparities:** Significantly restrict portal utilization among elderly individuals and rural communities.
- **Documentation challenges:** The portal solely facilitates searches; intricate KYC and legal







their documentation are still necessary for genuine settlement.

- **Cybersecurity issues:** Increasing threats related to data privacy and identity theft.
- **Restricted integration:** Savings and insurance assets from post offices are presently not included.

#### IV. Way Forward:

- **Financial literacy:** Significantly enhance the outreach of RBI's '100 Days 100 Pays' initiative.
- **Streamlined claims process:** Standardize and digitize the documentation for legal heirs across all banking institutions.
- **Enhanced cybersecurity measures:** Establish strong encryption protocols and multi-factor authentication systems.
- **Broader integration:** Swiftly incorporate the remaining banks and non-banking financial organizations.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	<ul style="list-style-type: none"> <li>• Information Asymmetry</li> <li>• Financial Inclusion</li> <li>• Digital Public Infrastructure</li> </ul>
 <b>Important Terms:</b>	<ul style="list-style-type: none"> <li>• DEA Fund</li> <li>• Inoperative Accounts</li> <li>• Core Banking Solution (CBS)</li> <li>• KYC</li> </ul>
 <b>Important Institutions:</b>	<ul style="list-style-type: none"> <li>• Reserve Bank of India (RBI)</li> </ul>
 <b>Digital Initiatives:</b>	<ul style="list-style-type: none"> <li>• UDGAM Portal</li> <li>• '100 Days 100 Pays' Campaign</li> </ul>

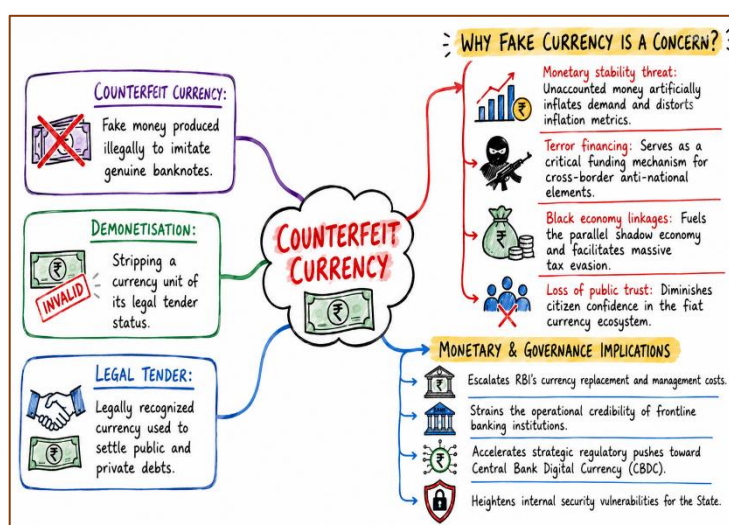
## 25. Prevalence of Fake Currency Still a Reality Post-Demonetisation

### Context:

The RBI Annual Report for the fiscal year 2026 underscores an ongoing issue in currency management, indicating a 5.7% increase in the identification of counterfeit notes within the banking sector.

### I. Economic Context:

- **Increase in counterfeit detection:** The incidence of counterfeit ₹500 notes has escalated by 20.5%, accounting for almost 62% of all identified fakes.
- **Concerns regarding security:** Advanced printing techniques consistently undermine the integrity of current currency.







- **Reality following demonetisation:** The goal of eliminating high-quality counterfeits continues to be unattainable.
- **Circulation of cash:** A significant reliance on cash endures, even with the swift expansion of digital payment methods.

## II. Key Challenges:

- **Advanced printing techniques:** High-quality forgeries can effortlessly evade manual and basic detection methods.
- **Cross-border smuggling:** Weak border controls significantly aid organized counterfeit operations.
- **Informal sector:** Cash-dominant rural and informal economies are particularly vulnerable.
- **Detection limitations:** Retail environments generally do not possess advanced note verification equipment.

## III. Way Forward:

- **Enhanced security capabilities:** Swiftly implement polymer banknotes, micro-optic technology, and dynamic inks.
- **Fortify intelligence operations:** Improve stringent collaboration between the Financial Intelligence Unit (FIU), National Investigation Agency (NIA), and border security agencies.
- **Encourage digital transactions:** Increase the adoption of UPI in rural areas to reduce reliance on physical cash.
- **Upgrade detection mechanisms:** Provide all banking branches with state-of-the-art counterfeit sorting equipment.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Shadow Economy, Fiat Currency, Terror Financing.
 <b>Important Concepts:</b>	Monetary Stability, High-Quality Counterfeit Indian Currency (HQIC).
 <b>Important Institutions:</b>	RBI, Financial Intelligence Unit (FIU), NIA.
 <b>Important Initiatives:</b>	e-Rupee (CBDC), Utkarsh 2029 framework.

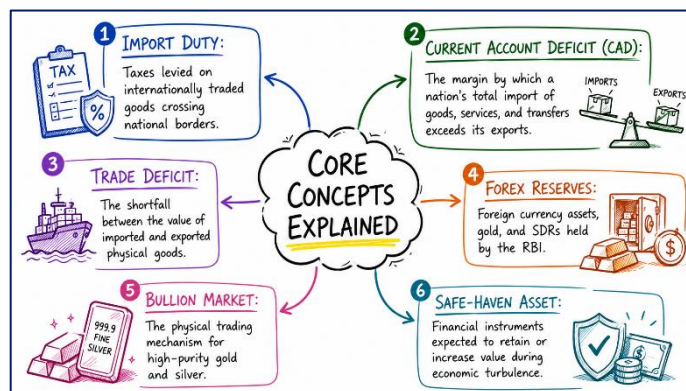
## 26. Government Doubles Duty on Imports of Gold and Silver

### Context:

The Indian Government has increased the effective import duty on gold and silver to 15% (comprising 10% Basic Customs Duty and 5% Agriculture Infrastructure and Development Cess), resulting in a total tax obligation (which includes 3% IGST) of approximately 18.4%.

## I. Economic Context:

- Prompted by the crisis in West Asia and rising crude oil prices, India is experiencing an expanding trade deficit.
- In the previous fiscal year, India imported \$84 billion worth of bullion despite the elevated global prices.
- The increase in tariffs is intended to preserve foreign exchange for essential imports and to stabilize the Indian Rupee in relation to the US Dollar.

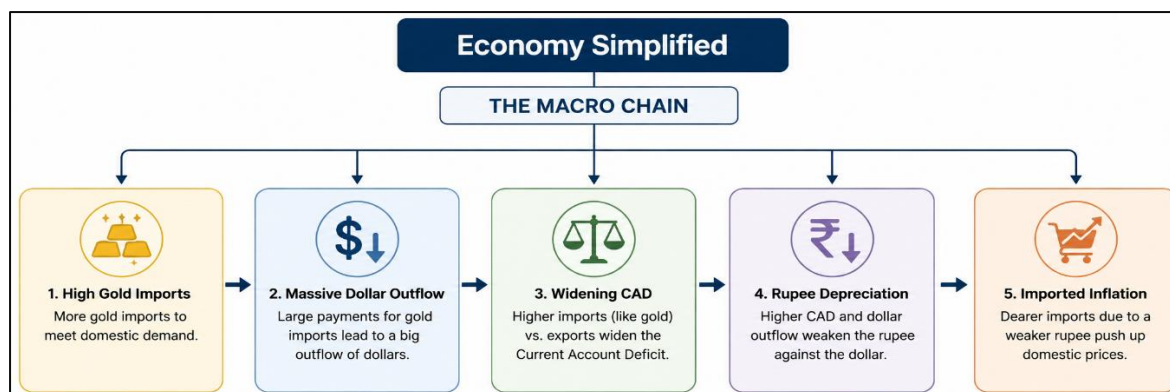


## II. Implications for India:

- **External Stability & Rupee:** Limiting dollar outflows effectively reduces the Current Account Deficit (CAD) and alleviates the depreciation of the Rupee.
- **Forex Management:** This strategy enables the Reserve Bank of India (RBI) to maintain its reserves instead of depleting them to support the currency.
- **Domestic Prices:** The increase in landed costs slightly affects household finances without making a significant change to the overall Consumer Price Index (CPI).
- **Jewellery Sector:** This situation constrains the working capital of Micro, Small, and Medium Enterprises (MSMEs), jeopardizing their competitiveness in labor-intensive export markets.
- **Informal Economy:** The expanded tariff arbitrage significantly encourages cross-border smuggling and the operation of hawala networks.
- **Fiscal Revenue:** It offers a prompt, though temporary, increase in customs revenue.

## III. Challenges / Concerns:

- **Cultural Inelasticity:** The demand for bullion in India exhibits a structural rigidity, particularly due to factors such as weddings and rural savings; consequently, increases in price seldom lead to a proportional decrease in volume.
- **Export Disruption:** The requirement for upfront duty payments significantly constrains the liquidity available to jewelry manufacturers.
- **Macro Dependency:** Tariffs on bullion are insufficient to independently counterbalance the substantial import expenses incurred from crude oil.



#### IV. Way Forward:

- India needs to swiftly shift from physical gold to financial gold. It is essential to enhance the adoption of Sovereign Gold Bonds (SGBs) and Gold ETFs.
- Reforming the Gold Monetisation Scheme to tap into dormant household wealth and formalizing the domestic recycling system will fundamentally decrease dependence on imports, while the RBI continues to implement proactive foreign exchange interventions.

<b>QUICK REVISION BOX</b>	
	<b>UPSC Keywords:</b> Tariff Arbitrage, Cultural Inelasticity, Safe-Haven Asset.
	<b>Important Concepts:</b> Current Account Deficit, Balance of Payments.
	<b>Important Institutions:</b> Reserve Bank of India (RBI), CBIC.
	<b>Key Government Initiatives:</b> Sovereign Gold Bonds, Gold Monetisation Scheme.

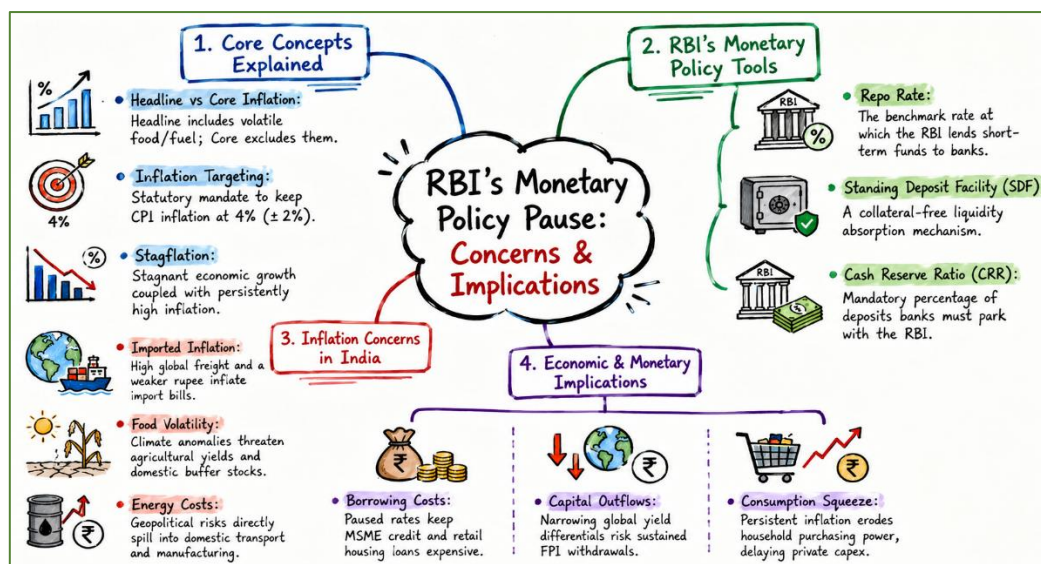
## 27. RBI Monetary Policy & Inflation Concerns

### Context:

In the context of geopolitical tensions in West Asia and the increase in global crude oil prices, the Reserve Bank of India (RBI) has highlighted the growing risks associated with imported inflation. This has led the Monetary Policy Committee (MPC) to keep the repo rate steady at 5.25% while adopting a careful 'neutral' position.

### I. Economic Context:

- **Current Situation:** Interest rates have been held steady to assess inflation trends; the Consumer Price Index (CPI) forecast for fiscal year 2027 has been increased to 5.1%.
- **Economic Slowdown:** The projected GDP growth rate has been reduced to 6.6% due to international challenges.
- **Commodity Disruptions:** High prices for fuel and metals pose a risk to the stability of domestic prices.






## II. Challenges / Concerns:

- **Supply-Side Constraints:** Monetary policy tightening proves ineffective in addressing inflation driven by supply chain issues.
- **Fiscal Challenges:** Increasing subsidy expenditures on fertilizers and fuel exert pressure on the fiscal deficit.
- **Rupee Regulation:** Efforts to defend the Indian Rupee deplete foreign exchange reserves and impact domestic liquidity.

## III. Way Forward:

- **Supply-Side Measures:** Emphasize trade policy (export restrictions) and buffer stocks rather than implementing aggressive interest rate increases.
- **Data-Informed Policy:** Stay flexible in operations while stabilizing inflation expectations.
- **Foreign Exchange Reserves:** Enhance export competitiveness to inherently mitigate external macroeconomic disturbances.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Imported Inflation, Neutral Stance, Yield Differential, Hawkish.
 <b>Important Concepts:</b>	Flexible Inflation Targeting, Base Effect, Stagflation.
 <b>Key Institutions:</b>	Monetary Policy Committee (MPC).
 <b>Key Frameworks:</b>	Urjit Patel Committee Report, FRBM Act.

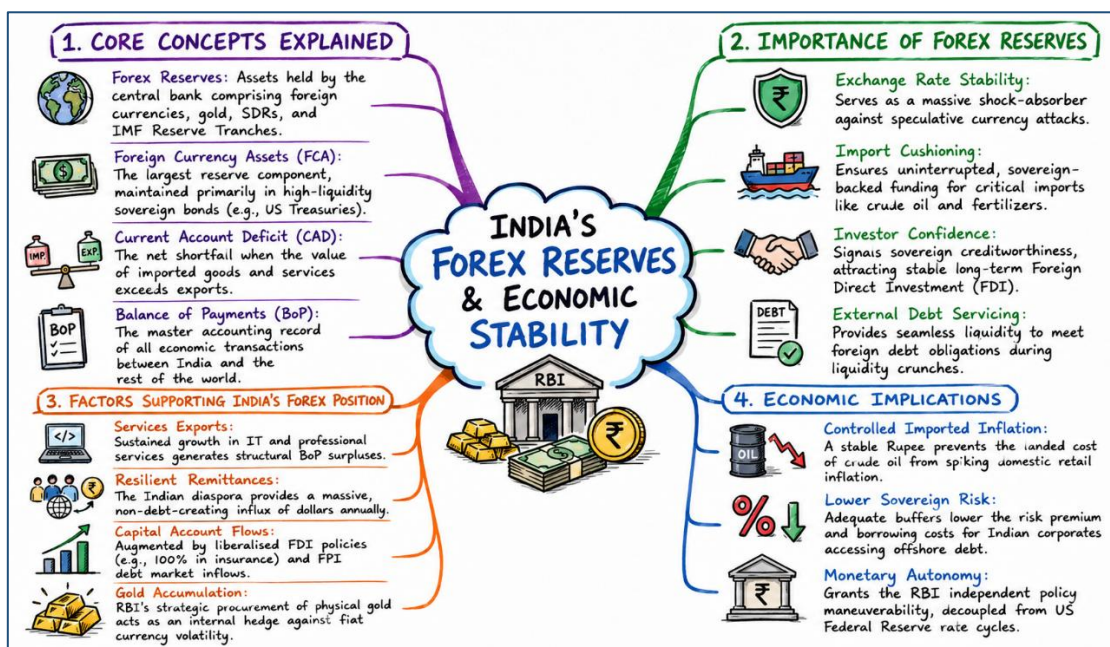
## 28. Forex Reserves – India's Economic Airbag

Context:

In the face of global uncertainties, high crude oil prices, and the conflict in West Asia, India's foreign exchange reserves reached a substantial \$682.3 billion in May 2026. The Reserve Bank of India (RBI) highlighted that this reserve offers a solid import cover for 11 months and corresponds to 89.1% of India's external debt, emphasizing the nation's strong macroeconomic resilience.

### I. Economic Context:

- **Geopolitical Challenges:** Ongoing supply-chain disruptions and fluctuations in energy prices have consistently impacted the currencies of emerging markets.
- **Strategic Measures:** The Reserve Bank of India (RBI) has proactively employed its foreign exchange reserves to protect the Indian Rupee (INR) from undue depreciation driven by market sentiment, while refraining from establishing a fixed exchange rate.
- **Global Monetary Contraction:** Changing expectations regarding US interest rates persist in shaping the movement of safe-haven capital.







### II. Challenges / Concerns:

- **Volatile 'Hot Money':** A significant dependence on Foreign Portfolio Investors (FPIs) renders the capital account susceptible to abrupt reversal risks.
- **Persistent Trade Deficit:** The structurally elevated and inelastic domestic demand for crude oil and physical bullion consistently depletes dollar reserves.
- **Opportunity Cost:** Allocating capital to low-yielding foreign treasury bonds incurs a fiscal opportunity cost when compared to investments in domestic infrastructure.

### III. Way Forward:

- **Export Diversification:** Enhance recent Free Trade Agreements (FTAs) to significantly increase merchandise manufacturing exports.
- **Attract Sticky Capital:** Encourage long-term, employment-generating foreign direct investment (FDI) rather than short-term portfolio investments.

- **Energy Transition:** Expedite the domestic ethanol blending initiative and expand green energy capacity to fundamentally reduce dependence on crude oil.
- **Rupee Internationalisation:** Foster cross-border trade settlements in Indian Rupees (INR) to naturally circumvent reliance on the US dollar.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Import Cover, Hot Money, Safe-Haven Flows, Imported Inflation.
 <b>Important Concepts:</b>	Balance of Payments (BoP), Special Drawing Rights (SDRs), Capital Account Convertibility.
 <b>Important Institutions:</b>	Reserve Bank of India (RBI), International Monetary Fund (IMF).
 <b>Key Indicators:</b>	Import Cover Ratio, Forex-to-External Debt Ratio.

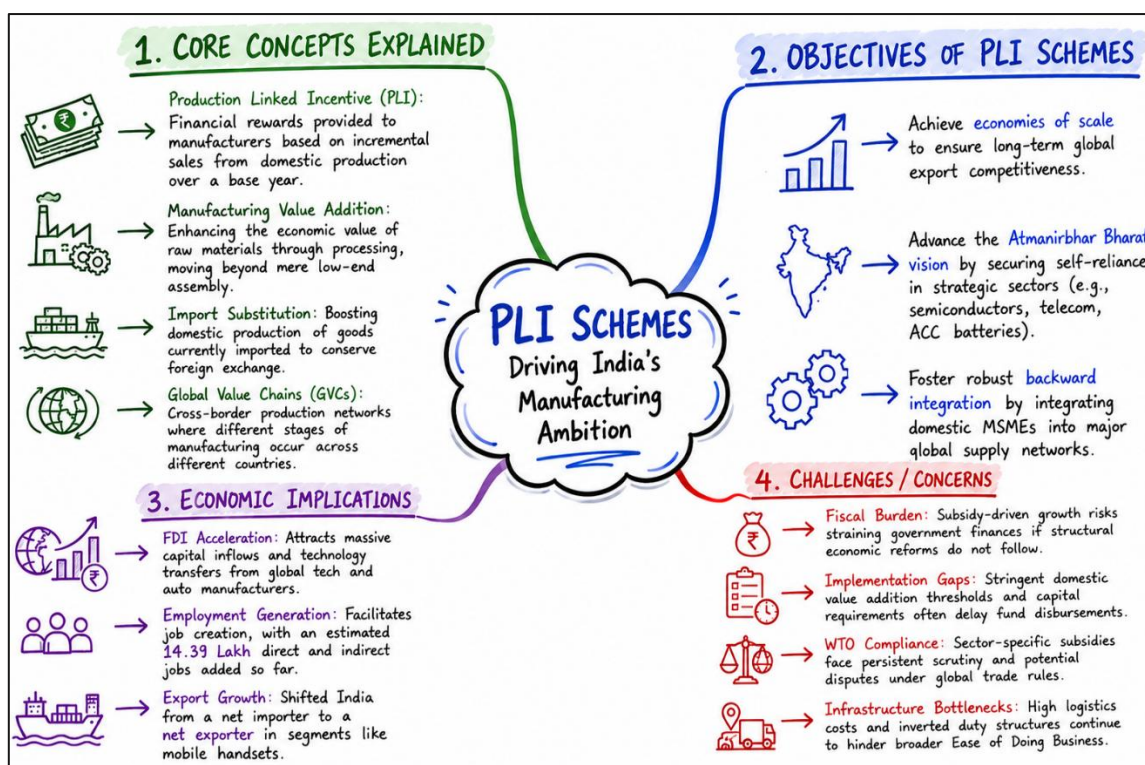
## 29. India's Manufacturing Push under PLI Schemes

### Context:

In May 2026, information released by the Ministry of Commerce & Industry indicated that India's Production Linked Incentive (PLI) programs have garnered investments exceeding ₹2.16 lakh crore and have stimulated production amounting to ₹20.41 lakh crore across 14 key sectors, thereby reinforcing the government's vigorous efforts to establish Global Value Chains (GVCs) within India.

### I. Economic Context:

- **Stagnant Manufacturing Share:** A historical challenge to elevate the manufacturing sector's share of GDP beyond 16-17%.
- **Geopolitical Realignment:** The "China Plus One" approach offers a limited opportunity to draw in relocating global capital.
- **Trade Imbalances:** Excessive dependence on imported electronics, active pharmaceutical ingredients (APIs), and components for green energy.



## II. Way Forward:

- Streamline the Goods and Services Tax (GST) and address inverted duty discrepancies to inherently promote component manufacturing.
- Shift industrial policy focus from mere assembly to advanced technology research and development (R&D) and high-value design.
- Enhance port infrastructure and multi-modal connectivity to guarantee the sustainability of the manufacturing ecosystem beyond the duration of subsidy programs.

QUICK REVISION BOX		
	<b>UPSC Keywords</b>	Economies of Scale, China Plus One, Value Addition, Backward Integration.
	<b>Important Concepts</b>	Export Competitiveness, Import Substitution, Inverted Duty Structure.
	<b>Important Institutions</b>	DPIIT, Ministry of Heavy Industries.
	<b>Key Government Initiatives</b>	Make in India, Atmanirbhar Bharat, National Programme on ACC Battery Storage.

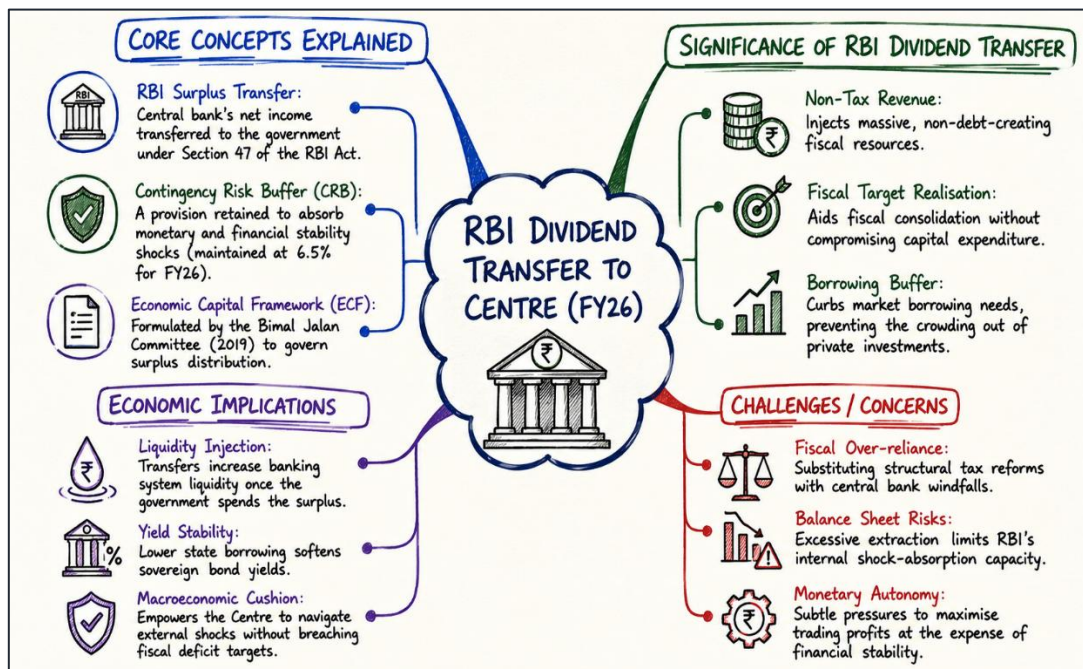
## 30. RBI Dividend Transfer to Government

### Context:

The Reserve Bank of India (RBI) has recently sanctioned a landmark surplus transfer amounting to ₹2.87 lakh crore to the Central Government for the fiscal year 2026, providing essential financial assistance in the face of global economic uncertainties.

### I. Economic Context:

- **Record Payout:** Exceeds the previous year's transfer of ₹2.69 lakh crore.
- **Revenue Drivers:** Enhanced by interest accrued on foreign securities, foreign exchange operations, and valuation increases.
- **Balance Sheet:** Grew by 20.6% to reach ₹92 lakh crore, indicating strong monetary activities.



## II. Way Forward:

- **Prudent Buffers:** Rigorously follow the Bimal Jalan guidelines to protect essential risk buffers.
- **Revenue Diversification:** Emphasize tax buoyancy and deliberate disinvestments.
- **Targeted Capex:** Direct the surplus towards infrastructure projects with multiplier effects, steering clear of ongoing revenue expenses.

QUICK REVISION BOX	
<b>UPSC Keywords:</b>	Non-Tax Revenue, Crowding Out, Sovereign Yields.
<b>Important Concepts:</b>	CRB, Fiscal Deficit, Open Market Operations.
<b>Important Institutions:</b>	Reserve Bank of India (RBI).
<b>Key Committees:</b>	Bimal Jalan Committee (2019), Economic Capital Framework (ECF).

## SOCIAL ISSUES & SOCIAL JUSTICE

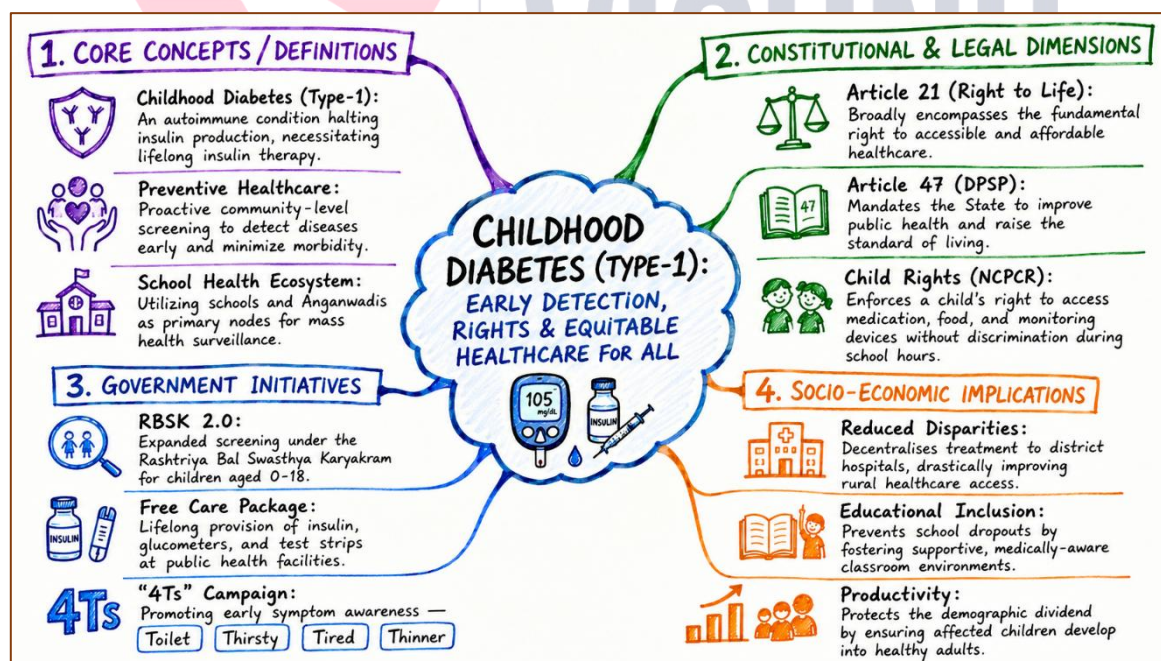
### 31. Govt. Issues Guidelines on Childhood Diabetes Care

#### Context:

The Union Health Ministry has released India's first national framework on childhood diabetes. The guidance mandates universal screening, free diagnosis, and lifelong management within the public health system.

#### I. Social Context:

- **Escalating Disease Burden:** India is experiencing a concerning increase in childhood non-communicable diseases (NCDs), especially Type-1 diabetes, which necessitates immediate institutional action.
- **Economic Strain:** The continuous reliance on insulin and monitoring devices forces at-risk families into devastating out-of-pocket healthcare costs.
- **Fragmented Care:** Traditionally, delayed diagnoses have significantly worsened diabetic complications, underscoring the lack of cohesive community-based screening initiatives.

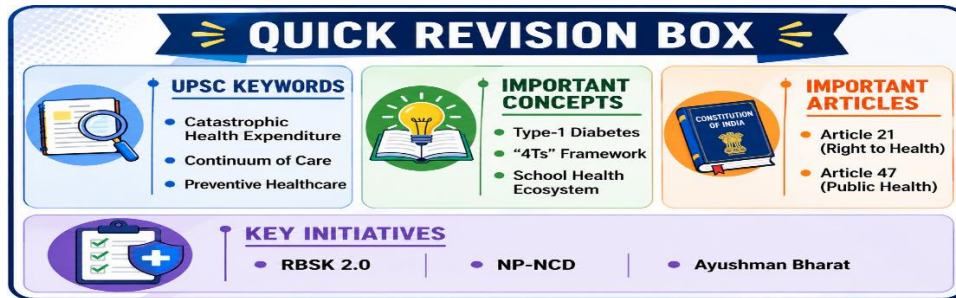


#### II. Challenges / Concerns:

- **Infrastructure Deficiencies:** There is a significant lack of continuous cold-chain storage for insulin in rural Primary Health Centres (PHCs).
- **Lack of Awareness:** Parents and teachers often overlook early symptoms, perceiving them merely as behavioral problems.
- **Social Prejudice:** Children with diabetes frequently encounter social isolation and stringent institutional regulations that fail to acknowledge their medical circumstances.

### III. Way Forward:

- **Capacity Development:** Implement comprehensive training programs for educational personnel and Anganwadi workers focused on emergency glycemc management.
- **Supply Chain Digitalization:** Utilize real-time tracking systems to guarantee the availability of insulin and continuous glucose monitoring devices at the final distribution point.
- **Comprehensive Support:** Incorporate mental health and nutritional counseling into standard procedures for managing chronic diseases.



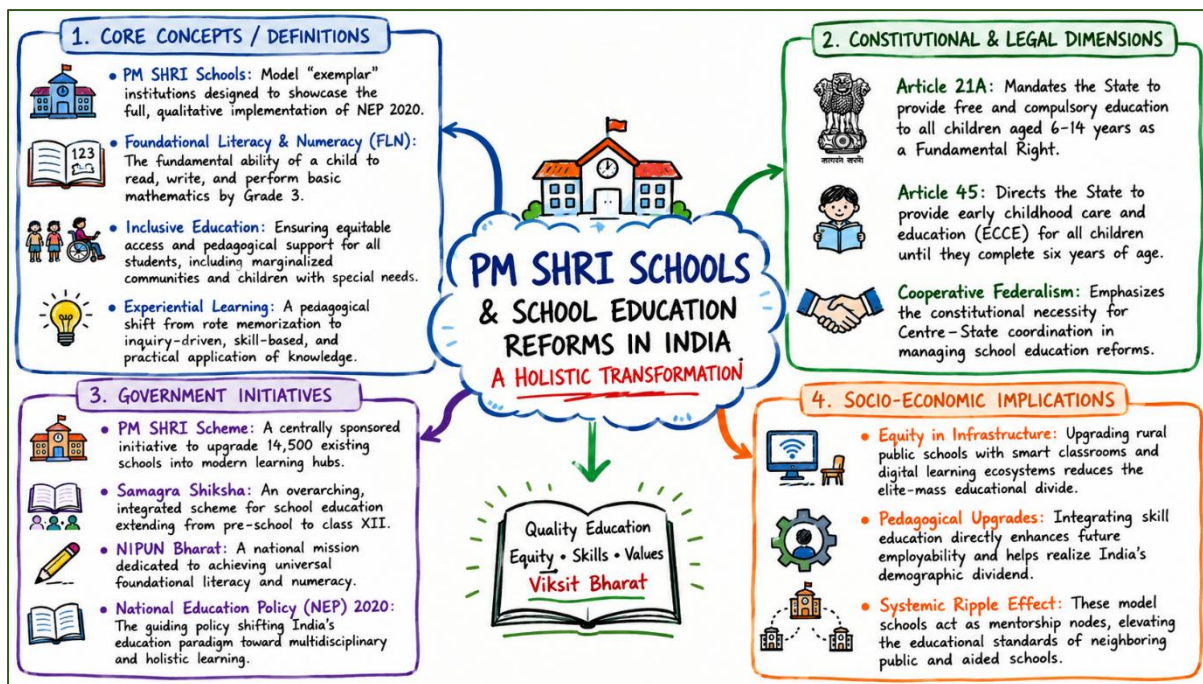
### 32. PM SHRI Push: Centre-State Friction in School Reform

#### Context:

After recent state elections, the Education Ministry has renewed efforts to implement the PM SHRI scheme in West Bengal, Kerala, and Tamil Nadu. The move seeks to resolve federal disputes over MoUs and withheld education funds.

#### I. Social Context:

- **Quality versus Access:** With enrollment secured under the RTE Act, focus now shifts to tackling learning gaps and infrastructure deficits.
- **Digital Divide:** The gap in digital literacy between rural and urban areas demands the establishment of contemporary, technology-driven public school facilities.
- **Federal Friction:** As a Concurrent List subject, education faces rising Centre-State tensions over uniform policy versus state autonomy.



## II. Challenges / Concerns:

- **Branding versus Funding:** States are opposed to the use of the prefix "PM SHRI" due to their 40% financial contribution, which has resulted in the suspension of Samagra Shiksha funds.
- **Ideological Conflicts:** Ongoing disagreements exist regarding language policies and the Centre's requirement to fully adopt NEP 2020.
- **Delays in Implementation:** Administrative inaction adversely affects students, denying them crucial infrastructure and improvements in learning.

## III. Way Forward:

- **Consensus Development:** Create impartial institutional dialogue platforms to distinguish urgent educational reforms from political branding conflicts.
- **State Adaptability:** Permit states to modify naming conventions and contextualize the NEP 2020 frameworks while maintaining essential quality standards.
- **Decoupling Financial Resources:** Guarantee that essential infrastructural funding under Samagra Shiksha is not strictly contingent upon the adoption of controversial flagship initiatives.

QUICK REVISION BOX		
	<b>UPSC Keywords</b>	Cooperative Federalism, Digital Learning Ecosystem, Foundational Literacy, Exemplar Institutions.
	<b>Important Concepts</b>	Experiential Learning, Inclusive Education, Concurrent List Dynamics.
	<b>Important Articles</b>	Article 21A (Right to Education), Article 45 (ECCE).
	<b>Key Initiatives</b>	PM SHRI, NIPUN Bharat, Samagra Shiksha Abhiyan, NEP 2020.

### 33. Ebola Outbreak in Congo is a Global Emergency, says WHO

#### Context:

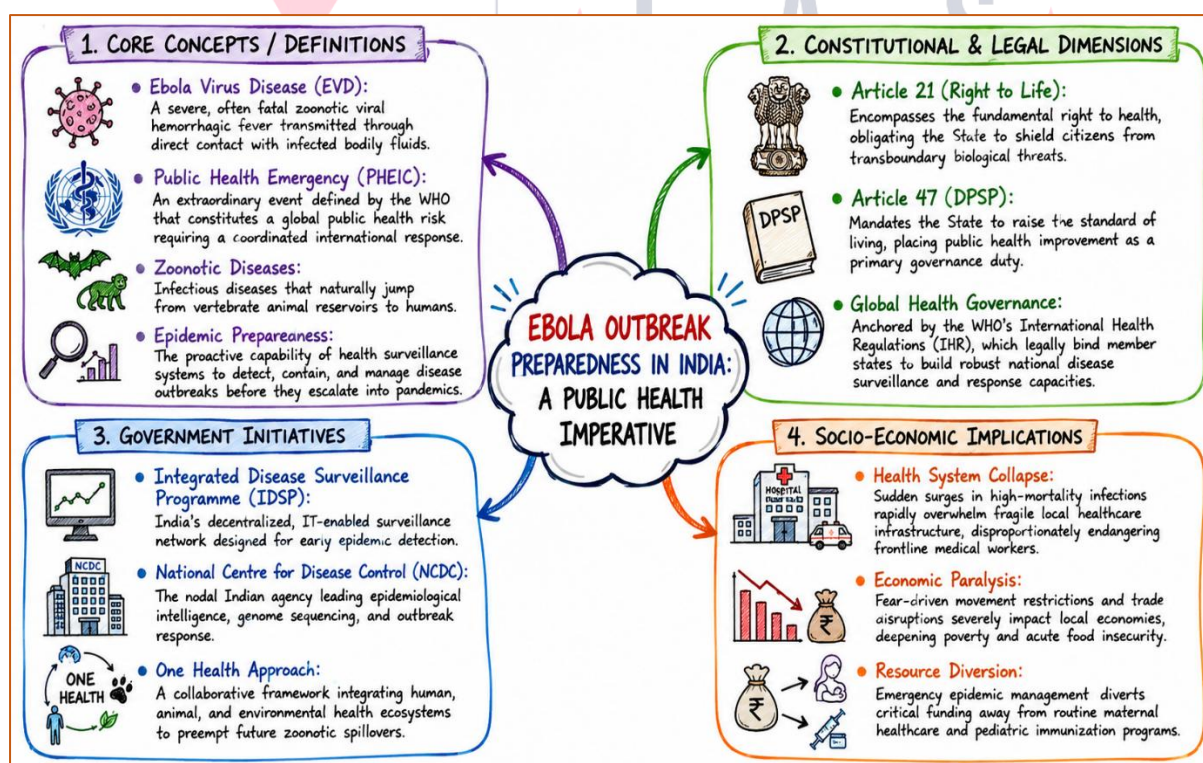
In May 2026, the World Health Organization (WHO) announced that the swiftly proliferating Ebola outbreak (Bundibugyo strain) in the Democratic Republic of the Congo (DRC) and adjacent Uganda constituted a Public Health Emergency of International Concern (PHEIC), underscoring the significant global threat posed by cross-border transmission.

#### I. Social Context:

- **Compounding Vulnerabilities:** The epidemic is concentrated in densely populated conflict zones, where humanitarian crises weaken public health efforts.
- **Trust Deficit:** Armed conflict and systemic neglect fuel community mistrust, hindering contact tracing and safe burials.
- **Global Mobility Risks:** Increased regional migration and cross-border mining trade networks heighten the urgent risk of international disease transmission.





#### II. Challenges / Concerns:

- **Absence of Countermeasures:** The Bundibugyo strain presently does not have any approved vaccines or targeted therapeutic interventions.
- **Ongoing Conflict Areas:** Continuous armed hostilities render it exceedingly difficult to safely send medical staff and set up secure isolation facilities.
- **Inadequate Surveillance:** The slow diagnosis at informal, permeable borders hampers the efficacy of international health screenings for entry and exit.



### III. Way Forward:

- **Community Involvement:** Build trust through local leaders to ensure compliance with isolation and healthcare protocols.
- **Expedited R&D:** Fast-track global trials, funding, and fair access to medical countermeasures.
- **International Collaboration:** Strengthen WHO emergency funds for rapid aid to vulnerable nations.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	PHEIC, Zoonotic Spillover, One Health Approach, Cross-Border Transmission.
 <b>Important Concepts:</b>	Epidemic Preparedness, Hemorrhagic Fever, Global Health Governance.
 <b>Important Articles:</b>	Article 21 (Right to Health), Article 47 (Public Health).
 <b>Important Organisations / Initiatives:</b>	WHO IHR (2005), NCDC, IDSP, Africa CDC.

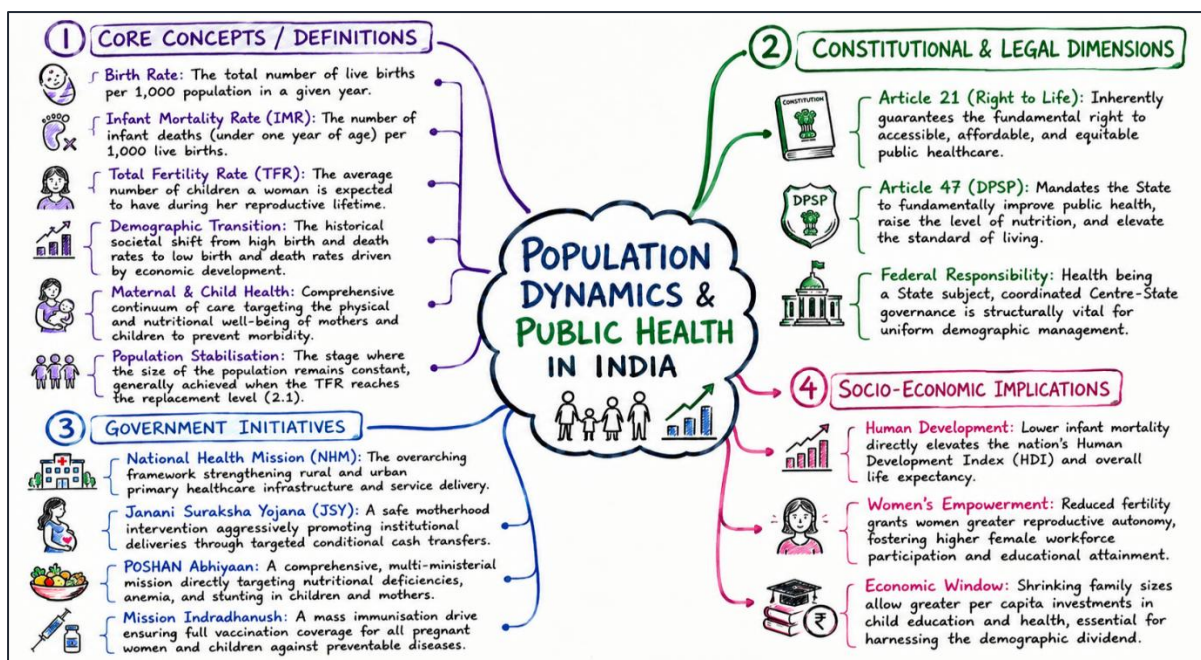
### 34. India's Demographic Shift: IMR Falls, TFR Below Replacement

#### Context:

As per the most recent demographic survey report from the Sample Registration System (SRS) published in May 2026, India has experienced a notable reduction in its Infant Mortality Rate (IMR), now at 24 per 1,000 live births. Additionally, there has been a significant decrease in the Total Fertility Rate (TFR), which has reached 1.9, officially dropping below the replacement level.

#### I. Social Context:

- **Demographic Shift:** India moves from high fertility and mortality to stabilized population growth.
- **Healthcare Interventions:** Falling child mortality reflects better maternal care, institutional deliveries, and female literacy.
- **Regional Disparities:** States like Bihar lag behind Kerala and Delhi in fertility and infant health indicators.



## II. Challenges / Concerns:

- **Ageing Population Risk:** Sub-replacement TFR speeds ageing, straining labour supply and social security.
- **Healthcare Inequality:** Vulnerable groups face high costs and poor access to facilities.
- **Nutrition Deficits:** Childhood malnutrition and stunting remain widespread despite lower mortality.

## III. Way Forward:

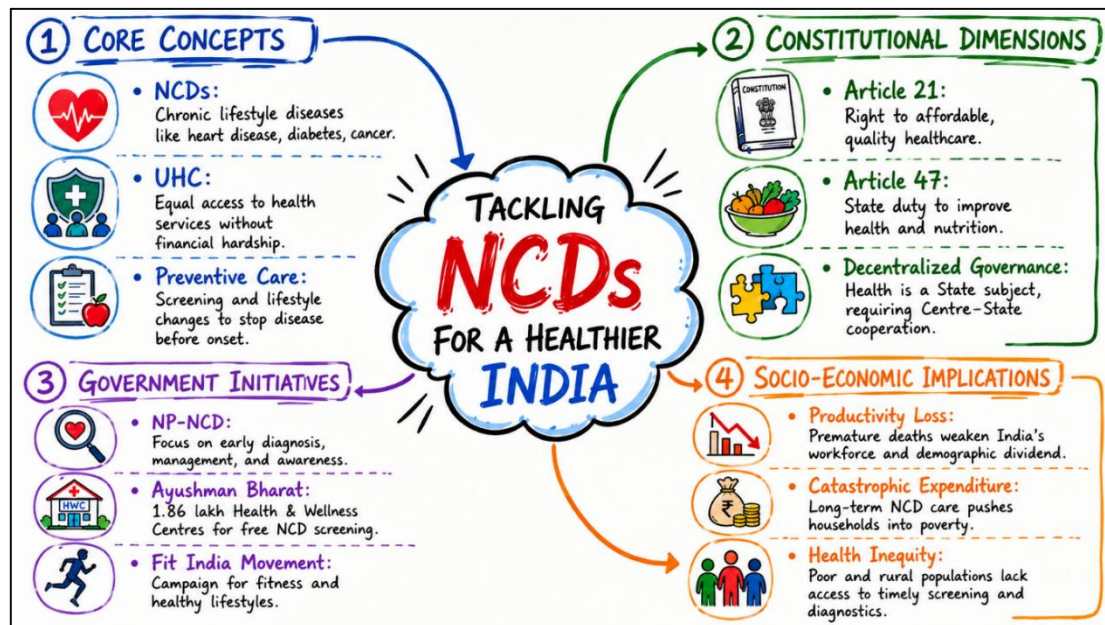
- **Targeted Health Governance:** Shift to district-specific interventions tackling regional disparities.
- **Social Security Infrastructure:** Build robust geriatric care and pension systems for ageing demographics.
- **Quality of Care:** Strengthen primary health centres with neonatal units and nutrition monitoring.

QUICK REVISION BOX	
<b>UPSC Keywords</b>	<ul style="list-style-type: none"> <li>• Demographic Dividend</li> <li>• Replacement Level Fertility</li> <li>• Institutional Deliveries</li> <li>• Ageing Population</li> </ul>
<b>Important Concepts</b>	<ul style="list-style-type: none"> <li>• IMR</li> <li>• TFR</li> <li>• Demographic Transition</li> <li>• Population Stabilisation</li> </ul>
<b>Important Articles</b>	<ul style="list-style-type: none"> <li>• Article 21 (Right to Health)</li> <li>• Article 47 (Nutrition &amp; Public Health)</li> </ul>
<b>Key Initiatives</b>	<ul style="list-style-type: none"> <li>• NHM</li> <li>• Janani Suraksha Yojana</li> <li>• POSHAN Abhiyaan</li> <li>• Mission Indradhanush</li> </ul>

## 35. India's Health Transition: NCDs Cause 60% of Deaths

### Context:

Recent findings from the Sample Registration System (SRS) Statistical Report 2024 indicate that Non-Communicable Diseases (NCDs) were responsible for 60% of all fatalities in India from 2022 to 2024, underscoring a swift epidemiological shift from infectious diseases to lifestyle-related illnesses.



### I. Social Context:





- **Epidemiological Transition:** Chronic NCDs have overtaken infectious diseases as India's main cause of death.
- **Rural Vulnerability:** NCDs now drive premature deaths in rural areas due to poor diets and low activity.
- **Double Burden:** Public healthcare struggles with rising NCDs alongside persistent communicable diseases.

### II. Challenges / Concerns:

- **Infrastructure Gaps:** Rural PHCs lack diagnostics and trained staff.
- **Behavioral Rigidities:** Processed food, tobacco, alcohol, and sedentary habits rise.
- **Screening Deficits:** Low awareness delays diagnosis, making treatment costly and fatal.

### III. Way Forward:

- **Preventive Care:** Scale up community-level screening for hypertension and diabetes.
- **Nutritional Interventions:** Enforce food labeling and tax unhealthy processed foods.
- **Digital Health:** Use platforms like eSanjeevani to link rural patients with specialists.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	<ul style="list-style-type: none"> <li>Epidemiological Transition</li> <li>Catastrophic Health Expenditure</li> <li>Demographic Dividend</li> <li>Double Burden of Disease</li> </ul>
 <b>Important Concepts</b>	<ul style="list-style-type: none"> <li>NCDs</li> <li>Universal Health Coverage</li> <li>Preventive Healthcare</li> </ul>
 <b>Important Articles</b>	<ul style="list-style-type: none"> <li>Article 21 (Right to Health)</li> <li>Article 47 (Public Health)</li> </ul>
 <b>Key Initiatives</b>	<ul style="list-style-type: none"> <li>NP-NCD</li> <li>Ayushman Arogya Mandirs</li> <li>Fit India Movement</li> </ul>

### 36. 90% of Indian Babies are Born in Hospitals: NFHS-6

#### Context:

NFHS-6 (2023-24) reports institutional deliveries in India have risen to 90.6%. This marks major progress toward universal access to safe childbirth.



#### I. Social Context:

- Demographic Shift:** From home births with untrained midwives to widespread institutional deliveries bridging rural-urban divides.
- Behavioral Nudge:** Awareness drives and ASHA-Anganwadi outreach foster stronger health-seeking behavior.
- Empowerment Linkage:** Institutional deliveries rise alongside women's digital inclusion, financial autonomy, and independent healthcare choices.





#### II. Challenges / Concerns:

- Quality vs. Quantity:** Expanded access but overcrowded facilities and shortage of specialists weaken rural care.
- Rising C-Sections:** Profit-driven Caesarean spikes in private hospitals defy WHO norms.

- **Persistent Disparities:** State-level gaps persist due to terrain, connectivity, and outreach barriers.
- **Continuum Gaps:** ANC registrations high, but post-natal care and breastfeeding remain weak.

### III. Way Forward:

- **Capacity Expansion:** Upgrade PHCs/CHCs with 24×7 obstetric care and specialists.
- **Clinical Auditing:** Mandate audits to curb unnecessary Caesareans in private facilities.
- **Regional Interventions:** Mobile units and tailored financing for difficult terrains.
- **Holistic Convergence:** Align maternal health with sanitation, clean fuel, and nutrition policies.

QUICK REVISION BOX		
 <b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>• Institutional Deliveries</li> <li>• Cooperative Federalism</li> <li>• Demographic Shift</li> </ul>	<ul style="list-style-type: none"> <li>• Out-of-Pocket Expenditure (OOPE)</li> <li>• Social Determinants of Health</li> </ul>
 <b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>• Maternal Mortality Ratio (MMR)</li> <li>• Infant Mortality Rate (IMR)</li> <li>• Reproductive &amp; Child Healthcare</li> </ul>	<ul style="list-style-type: none"> <li>• Skilled Birth Attendance</li> </ul>
 <b>IMPORTANT ARTICLES</b>	<ul style="list-style-type: none"> <li>• Article 21 (Right to Health as part of Right to Life)</li> <li>• Article 47 (State duty to improve public health)</li> </ul>	
 <b>IMPORTANT GOVERNMENT INITIATIVES</b>	<ul style="list-style-type: none"> <li>• Janani Suraksha Yojana (JSY)</li> <li>• PM Surakshit Matritva Abhiyan (PMSMA)</li> </ul>	<ul style="list-style-type: none"> <li>• National Health Mission (NHM)</li> <li>• POSHAN Abhiyaan</li> </ul>

## GEOGRAPHY, DISASTER MANAGEMENT & ENVIRONMENT

### 37. India's First Green Methanol Plant: Kutch's Invasive Weed to Marine Fuel

#### Context:

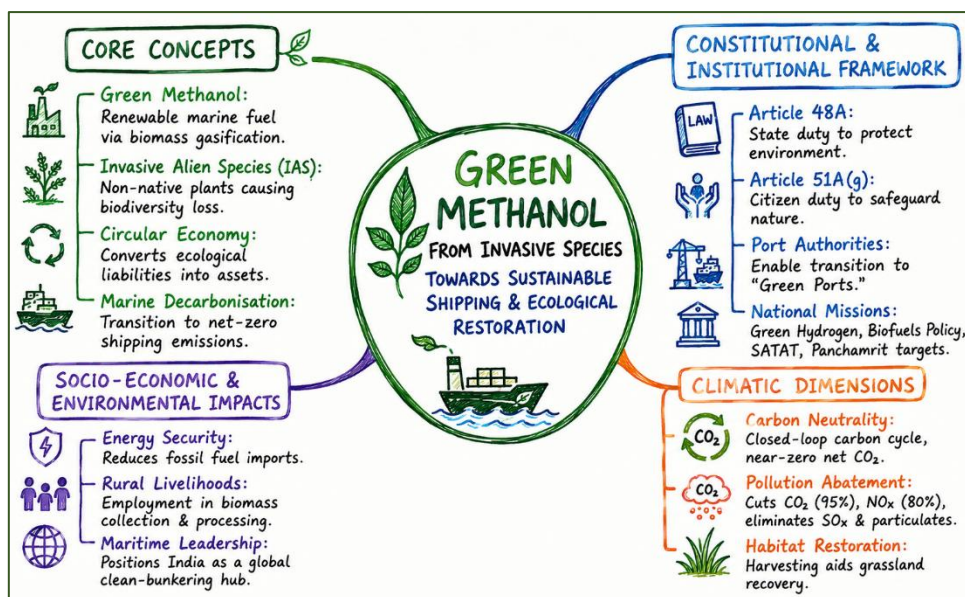
India inaugurated its first green methanol plant in Kutch, Gujarat, converting the region's most invasive weed into clean marine fuel — a step towards biofuel innovation and maritime decarbonisation.

#### I. Ecological Context:

- **Invasion:** Prosopis juliflora overruns Banni grasslands, displacing native flora.
- **Disruption:** Causes groundwater depletion, allelopathy, and loss of grazing lands.
- **Resource:** Provides abundant biomass for clean energy.

#### II. Disaster Management & Governance:

- **Slow-Onset Mitigation:** Prevents land degradation and droughts.
- **Global Compliance:** Meets IMO 2050 GHG reduction mandate.
- **Sustainable Governance:** Shifts from eradication to resource management.

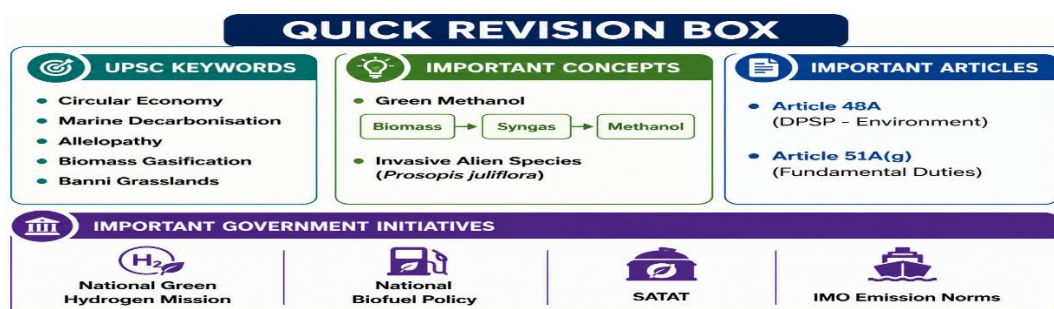


### III. Challenges:

- **Commercial Viability:** Higher costs vs subsidized bunker fuels.
- **Logistics:** Need robust biomass supply chains.
- **Technology:** Scale-up requires heavy capital.
- **Grid Dependence:** Renewable-only operations remain difficult.

### IV. Way Forward

- **Financial Support:** Subsidies, tax incentives, viability gap funding.
- **Infrastructure:** Ports with methanol storage & bunkering facilities.
- **Scientific Policy:** Ecological extraction guidelines to aid regeneration.



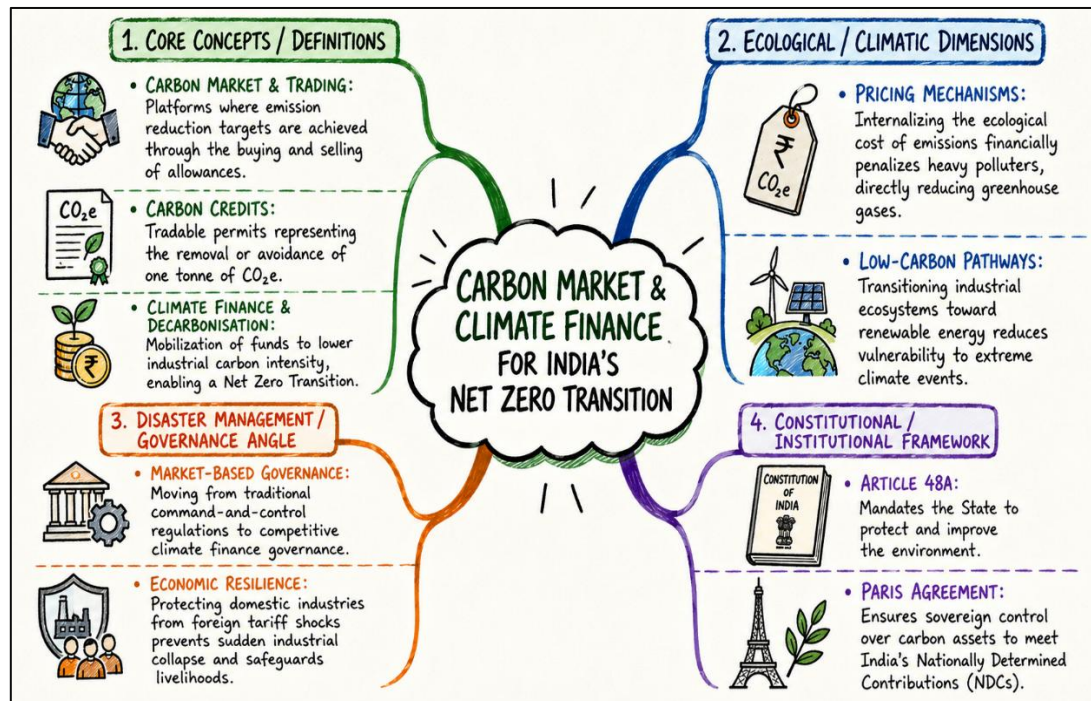
## 38. Carbon Borders & Sovereign Credits: India's IBAM Strategy

### Context:

Amidst the rollout of the EU's Carbon Border Adjustment Mechanism (CBAM), recent May 2026 dialogues under the India-EU FTA have highlighted India's strategy to leverage its Carbon Credit Trading Scheme (CCTS) and propose an India Border Adjustment Mechanism (IBAM) to retain domestic carbon tax revenues.

## I. Geographic / Environmental Context:

- **Emission Hotspots:** India's mineral-rich, energy-intensive industrial corridors (steel, aluminium) are highly susceptible to global carbon tariffs and carbon leakage.
- **Geographic Mitigation:** Capturing carbon revenues domestically facilitates localized environmental remediation and curbs regional industrial pollution.



## II. Government Initiatives:

- **CCTS:** Compliance market evolving from PAT Scheme
- **Green Hydrogen Mission & NAPCC:** Driving deep decarbonization

## III. Impacts:





- **Green Investments:** Funds clean tech upgrades
- **Competitiveness:** Avoids double taxation, rewards sustainability

## IV. Challenges:

- **MRV Gaps:** High verification costs
- **MSME Burden:** Disproportionate compliance load

## V. Way Forward:

- **IBAM:** Domestic carbon levy for Just Transition
- **Global Recognition:** Secure acceptance of CCTS certificates

QUICK REVISION BOX		
	<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Climate Finance</li> <li>Carbon Leakage</li> <li>Just Transition</li> <li>Sovereign Carbon Assets</li> <li>Energy Transition</li> </ul>
	<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>Carbon Market</li> <li>Carbon Credits</li> <li>Decarbonisation</li> <li>Net Zero Transition</li> </ul>
	<b>IMPORTANT ARTICLES</b>	<ul style="list-style-type: none"> <li>Article 48A</li> <li>Paris Agreement (Article 6)</li> </ul>
	<b>IMPORTANT GOVERNMENT INITIATIVES</b>	<ul style="list-style-type: none"> <li>CCTS</li> <li>PAT Scheme</li> <li>National Green Hydrogen Mission</li> <li>NAPCC</li> </ul>

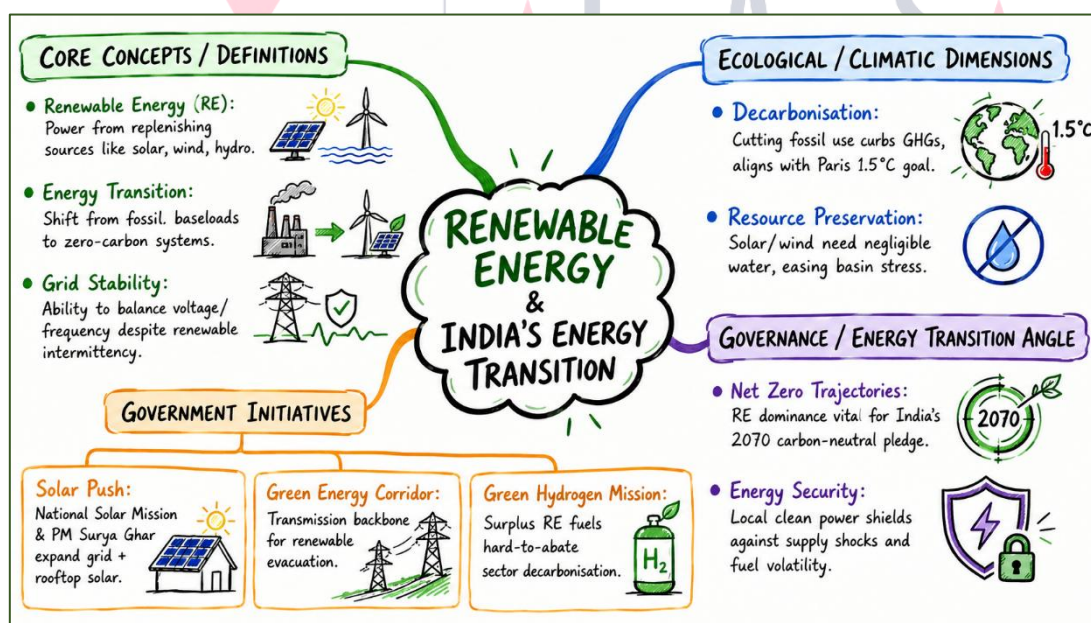
### 39. Renewable Energy Meets Global Electricity Demand for the First Time

#### Context:

According to the latest global electricity assessments, renewable energy sources (predominantly solar and wind) have for the first time met all global electricity demand growth, effectively outpacing coal and gas in the power mix and signaling a historic decoupling of economic growth from fossil fuels.

#### I. Geographic / Environmental Context:

- **Global Demand Surge:** Rapid urbanisation, extreme heatwaves driving cooling needs, and AI data centre growth are pushing electricity demand beyond 3.6% annually.
- **Geographic Shift:** Emerging economies in the Global South, led by India, are anchoring industrial growth in solar and wind, reshaping the fossil-fuelled trajectory of past industrialisation.



#### II. Socio-Economic & Environmental Impacts:

- **Economic Competitiveness:** Falling solar + storage costs provide low-inflation growth base.





- **Green Employment:** Transition drives local jobs in manufacturing, grids, and installations.

### III. Challenges / Concerns:

- **Intermittency:** Solar peaks mismatch evening demand, risking reliability.
- **Infrastructure Bottlenecks:** Old networks struggle with decentralized RE flows.
- **Financing Gaps:** High capital + currency risks slow green projects in developing nations.

### IV. Way Forward:

- **Accelerate Storage:** Scale BESS & pumped hydro to make solar dispatchable.
- **Grid Modernisation:** Smart AI grids enable predictive load and flexible demand.
- **Equitable Finance:** MDBs must de-risk RE to ensure fair global transition.

QUICK REVISION BOX			
	<b>UPSC KEYWORDS:</b>	<ul style="list-style-type: none"> <li>• Energy Transition</li> <li>• Grid Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Decarbonisation</li> <li>• Intermittency</li> <li>• Energy Security</li> <li>• Climate Mitigation</li> </ul>
	<b>IMPORTANT CONCEPTS:</b>	<ul style="list-style-type: none"> <li>• Renewable Energy</li> <li>• Battery Energy Storage Systems (BESS)</li> </ul>	<ul style="list-style-type: none"> <li>• Net Zero Emissions</li> <li>• Clean Energy Mix</li> </ul>
	<b>IMPORTANT AGREEMENTS:</b>	<ul style="list-style-type: none"> <li>• Paris Agreement</li> </ul>	
	<b>IMPORTANT GOVERNMENT INITIATIVES:</b>	<ul style="list-style-type: none"> <li>• National Solar Mission</li> <li>• PM Surya Ghar Yojana</li> </ul>	<ul style="list-style-type: none"> <li>• Green Energy Corridor</li> <li>• National Green Hydrogen Mission</li> </ul>

## 40. Solid Waste Management Rules 2026: Decentralisation vs. Top-Down Mandates

### Context:

Critiques of the recently implemented Solid Waste Management (SWM) Rules, 2026 emphasize the pressing necessity for a decentralized, subsidiarity-oriented strategy regarding urban waste, warning against inflexible, top-down directives imposed on local authorities.

### I. Geographic / Environmental Context:

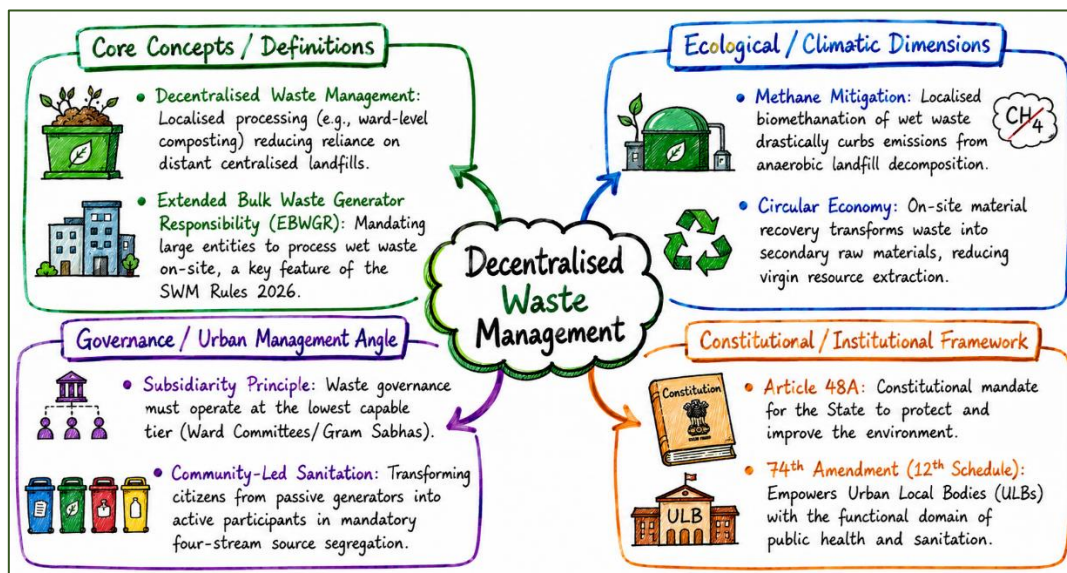
- **Urban Expansion:** Unregulated urban growth leads to the proliferation of toxic landfills in peri-urban areas, thereby polluting nearby water basins.
- **Geographical Disparity:** Global waste management standards fail to account for the unique geographical contexts of Himalayan settlements, coastal regions, and large metropolitan areas.

### II. Government Initiatives:

- **Solid Waste Management Rules, 2026:** Enforces mandatory four-stream segregation, EBWGR, and digital compliance tracking.
- **Swachh Bharat Mission-Urban 2.0:** Targets "Garbage Free Cities" and scientific legacy dumpsite remediation.

### III. Socio-Economic & Environmental Impacts

- **Fiscal Prudence:** Decentralisation significantly cuts exorbitant transportation logistics costs for cash-strapped ULBs.
- **Livelihood Formalisation:** Integrates informal waste-pickers into the formal, localised green economy.



#### IV. Challenges / Concerns:

- **Unfunded Mandates:** The regulations set forth in 2026 require substantial digital compliance from local entities, yet do not provide the necessary financial support through statutory fiscal transfers.
- **Capacity Deficit:** Smaller municipalities and panchayats are deficient in the technical skills required for the mandated processes of biomining and GIS tracking.

#### V. Way Forward:

- **State-Driven Adaptability:** Enable states to customize compliance frameworks according to their specific ecological and administrative capabilities rather than adhering to inflexible national standards.
- **Economic Empowerment:** Support new decentralized responsibilities with reliable, formula-driven funding structures for Urban Local Bodies (ULBs).



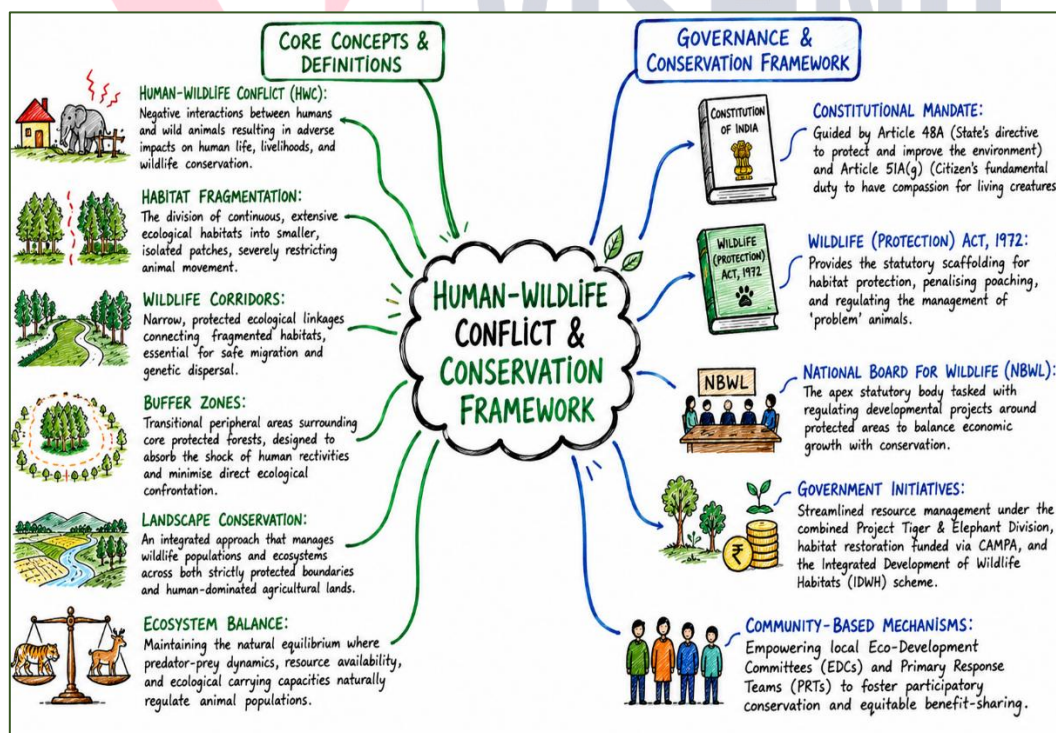
## 41. From Conflict to Coexistence: Rethinking India's Human-Wildlife Interface

### Context:

Reports from 2026 show a surge in human-wildlife conflict across India, with fatal elephant encounters in Kerala and tiger attacks in Maharashtra and Karnataka. This escalating crisis highlights the limits of reactive mitigation measures. It calls for a shift toward scientific coexistence strategies within human-dominated landscapes.

### I. Environmental Context & Drivers of Conflict:

- **Infrastructure Expansion:** Rapid spread of highways, railways, and powerlines cuts across traditional migration routes, fragmenting animal movement.
- **Land-Use Alteration:** Urban sprawl, intensive farming, and mining steadily push into forest fringes and eco-sensitive zones, shrinking natural habitats.
- **Climate Stress:** Rising heat and erratic rainfall deplete forage and water, driving wildlife into villages and farms in search of survival.
- **Invasive Species:** Proliferation of weeds like Lantana camara degrades forest quality, reducing prey availability and weakening ecosystems.
- **Loss of Ecological Connectivity:** Severed corridors restrict dispersal of wide-ranging species such as elephants and tigers, intensifying conflict at human frontiers.



### II. Socio-Economic & Ecological Impacts:

- **Human Toll:** Rising fatalities and injuries, hitting forest-dwelling and agrarian communities hardest.
- **Economic Distress:** Crop loss and livestock predation trap marginal farmers in debt and insecurity.

- **Retaliatory Killings:** Declining tolerance sparks poisoning, electrocution, and poaching of keystone species.
- **Biodiversity Threat:** Stress, unnatural deaths, and weakened genetic diversity endanger wildlife populations.

### III. Challenges & Concerns:

- **Delayed Compensation:** Slow relief disbursement due to bureaucratic hurdles, heightening local anger.
- **Saturation of Reserves:** Tiger numbers surpass carrying capacity, causing territorial spillovers.
- **Reactive Management:** Reliance on post-incident captures over proactive spatial planning.
- **Technological Gaps:** Weak deployment and upkeep of early warning systems in fragmented landscapes.

### IV. Way Forward:

- **Scientific Land-Use Planning:** Declare strict no-go zones for mining and high-impact projects in key habitats.
- **Corridor Restoration & Smart Infrastructure:** Legally protect migratory corridors; mandate eco-bridges, underpasses, and canopy links in new projects.
- **Technology Integration:** Expand AI surveillance, GPS collars, thermal drones, and SMS alerts for real-time conflict prevention.
- **Sustainable Coexistence Models:** Promote community tolerance via swift compensation, crop insurance, and livelihood alternatives.

QUICK REVISION BOX	
<p><b>UPSC KEYWORDS</b></p> <ul style="list-style-type: none"> <li>• Carrying Capacity</li> <li>• Spatial Planning</li> <li>• Landscape Conservation</li> <li>• Retaliatory Killing</li> <li>• Ecological Connectivity</li> <li>• Ecotone Dynamics</li> <li>• Linear Infrastructure</li> </ul>	<p><b>IMPORTANT CONCEPTS</b></p> <ul style="list-style-type: none"> <li>• Human-Wildlife Conflict</li> <li>• Buffer Zones</li> <li>• Wildlife Corridors</li> <li>• Habitat Fragmentation</li> <li>• Ecosystem Balance</li> </ul>
<p><b>IMPORTANT ARTICLES</b></p> <ul style="list-style-type: none"> <li>• Article 48A (Directive Principles of State Policy)</li> <li>• Article 51A(g) (Fundamental Duties)</li> </ul>	<p><b>IMPORTANT GOVERNMENT INITIATIVES</b></p> <ul style="list-style-type: none"> <li>• Project Tiger &amp; Elephant Division</li> <li>• CAMPA (Compensatory Afforestation Fund)</li> <li>• Integrated Development of Wildlife Habitats (IDWH)</li> </ul>

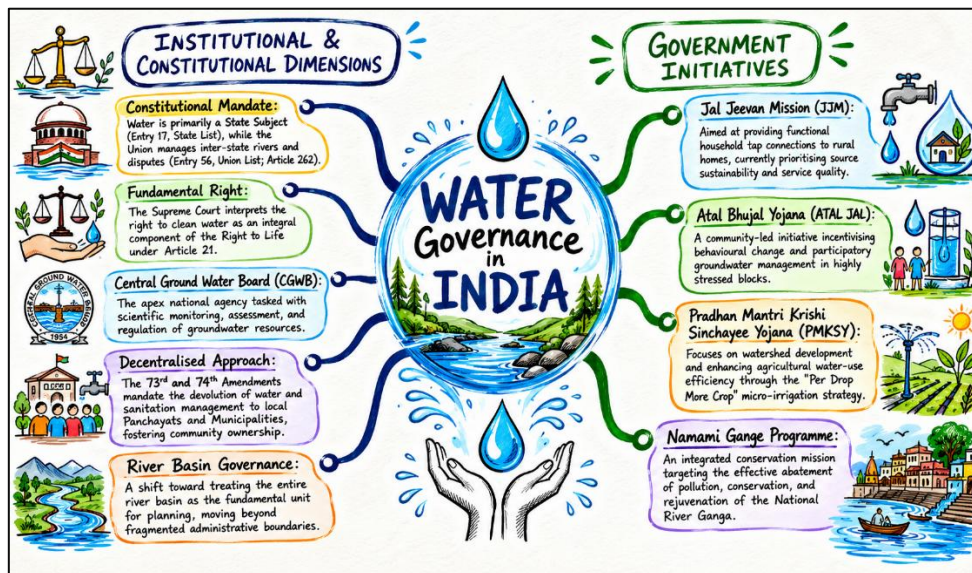
## 42. How India is Governing its Water Resources

### Context:

Recent data from the Central Water Commission (CWC) and Central Ground Water Board (CGWB) in early 2026 highlight a severe drop in major reservoir capacities alongside critical groundwater depletion, prompting urgent calls for systemic water governance reforms and a shift toward demand-side management.

### I. Water Resource Context:

- **Global Paradox:** India holds 18% of world's people but just 4% of freshwater, making it highly water-stressed.
- **Declining Availability:** Per capita supply has dropped from 5,000 to ~1,400 cubic metres, nearing scarcity.
- **Extraction Burden:** Largest global groundwater user, exceeding US and China combined, with stressed aquifers.



## II. Environmental & Climatic Concerns:

- **Spatial Inequality:** Rainfall (~4,000 BCM) is unevenly spread, concentrated in a short monsoon window.
- **Climate Variability:** Erratic monsoons and dry spells worsen droughts and hinder aquifer recharge.
- **Urbanisation & Encroachment:** Concretisation and wetland loss block percolation, causing floods and groundwater deficits.
- **Quality Crisis:** Untreated effluents, sewage, and runoff pollute rivers, shrinking usable freshwater.

## III. Socio-Economic Implications:

- **Agricultural Vulnerability:** Erratic supply threatens food security and raises farming costs.
- **Economic Bottlenecks:** Industry and cities face rationing and compliance burdens.
- **Health Burden:** Contaminated sources fuel waterborne diseases, hurting rural productivity and child health.
- **Regional Conflicts:** Depleting rivers spark inter-state disputes and local unrest.





## IV. Challenges & Concerns:

- **Fragmented Governance:** Split agencies block a unified "one water" policy.

- **Supply-Side Bias:** Focus on big projects, neglecting demand management.
- **Distorted Incentives:** Subsidies push paddy/sugarcane, worsening aquifer mining.
- **Data Deficits:** Lack of real-time hydrological data hampers fair allocation.

#### V. Way Forward:

- **Demand-Side Management:** Enforce efficiency, audits, and rational pricing.
- **Crop Diversification:** Incentivise shift to millets and pulses.
- **Circular Water Economy:** Mandate wastewater recycling for industry and cities.
- **Nature-Based Solutions:** Scale rainwater harvesting, sponge cities, and restore traditional water bodies.
- **Institutional Integration:** Form a National Water Commission for holistic basin-level management.

QUICK REVISION BOX						
	<b>UPSC KEYWORDS</b>	Demand-Side Management	Circular Water Economy	Nature-Based Solutions (NbS)	Spatial Inequality	Water Scarcity
	<b>IMPORTANT CONCEPTS</b>	Integrated Water Resource Management (IWRM)	Aquifer Management	Water Security	Watershed Management	
	<b>IMPORTANT ARTICLES</b>	Article 21 (Right to Life / Clean Water)	Entry 17 of State List	Entry 56 of Union List	Article 262	
	<b>IMPORTANT GOVERNMENT INITIATIVES</b>	Jal Jeevan Mission	Atal Bhujal Yojana	Namami Gange	PMKSY (Per Drop More Crop)	

## DEFENSE & INTERNAL SECURITY

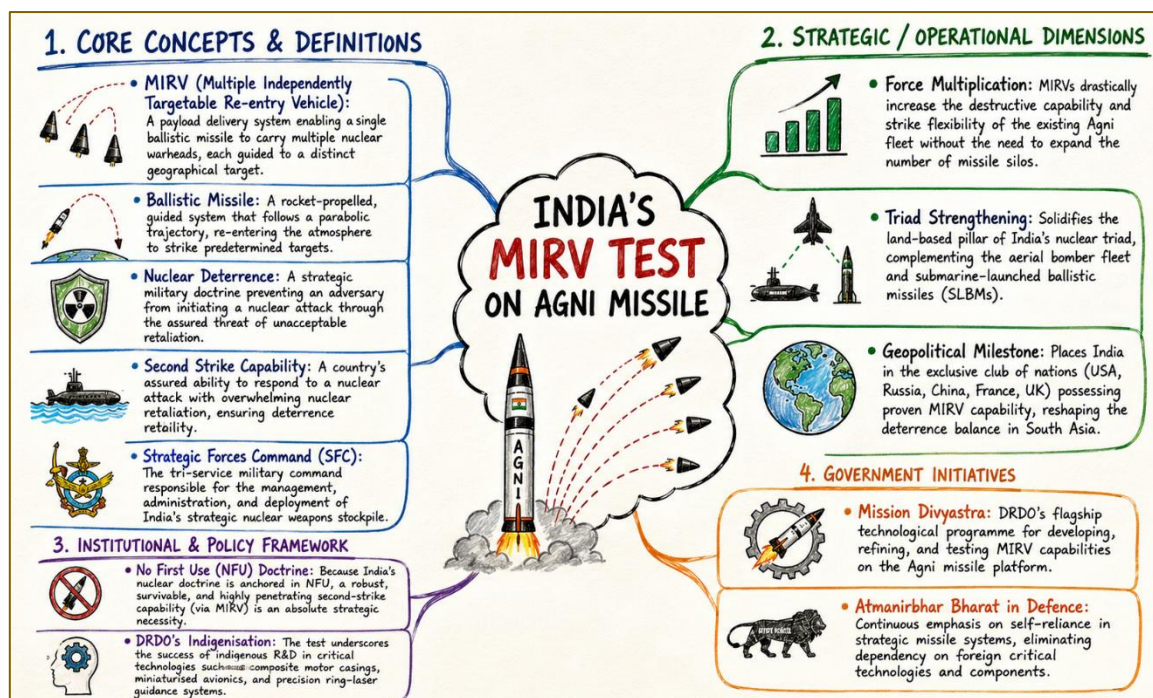
### 43. India Test-Fires Agni Missile Capable of Deploying Multiple Warheads

#### Context:

Recently, DRDO successfully tested an advanced Agni missile with MIRV technology. The breakthrough enables multiple warheads from a single missile, enhancing strike flexibility. This milestone strengthens India's strategic deterrence posture in the Indo-Pacific.

#### Security Context:

- **Evolving Threat Matrix:** Dual-front nuclear modernisation demands a shift to a survivable deterrence posture.
- **Missile Defence Evasion:** MIRV capability ensures penetration by overwhelming adversary BMD systems.
- **Deterrence Re-calibration:** Moves India's land-based strike from single-target threat to multi-target counter-strike.



### Challenges / Concerns:

- Technological Complexity:** Miniaturising warheads and ensuring precise re-entry remain engineering hurdles.
- Regional Arms Race:** MIRV deployment risks accelerating nuclear competition and counter-measures.
- Space Domain Intersections:** Overlap with space assets heightens miscalculation and escalation risks.

### Way Forward:

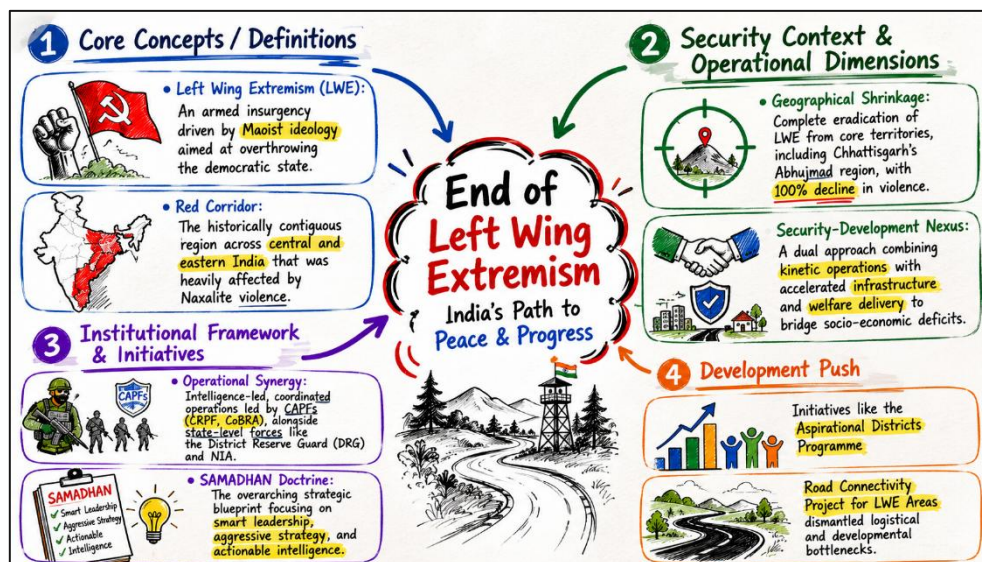
- System Operationalisation:** Fast-track user trials for seamless Strategic Forces Command induction.
- C4ISR Integration:** Strengthen networks to synchronise multi-warhead capability across the triad.
- Diplomatic Posturing:** Use this leap to push for balanced non-proliferation and stability dialogues.

QUICK REVISION BOX	
<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Credible Minimum Deterrence</li> <li>Nuclear Triad</li> <li>Force Multiplication</li> <li>C4ISR</li> <li>Ballistic Missile Defence (BMD) Evasion</li> </ul>
<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>MIRV</li> <li>Second Strike Capability</li> <li>No First Use (NFU)</li> </ul>
<b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>Defence Research and Development Organisation (DRDO)</li> <li>Strategic Forces Command (SFC)</li> </ul>
<b>IMPORTANT DEFENCE INITIATIVES</b>	<ul style="list-style-type: none"> <li>Mission Divyastra</li> <li>Agni Missile Series</li> <li>Atmanirbhar Defence</li> </ul>

## 44. India Declares End of Left Wing Extremism: Bastar Milestone

### Context:

The Union Home Minister recently declared India completely free from Left Wing Extremism (LWE) ahead of the March 31, 2026 deadline during a visit to Bastar. This marks a historic internal security milestone, reflecting the success of India's robust security-development paradigm in former conflict zones.





### Challenges / Concerns:

- **Ideological Resurgence:** Guard against youth radicalisation and “Urban Naxal” influence.
- **Rehabilitation of Cadres:** Ensure full socio-economic and psychological integration of surrendered Maoists.
- **Sustaining Momentum:** Maintain infrastructure pace in remote, harsh terrains.

### Way Forward:

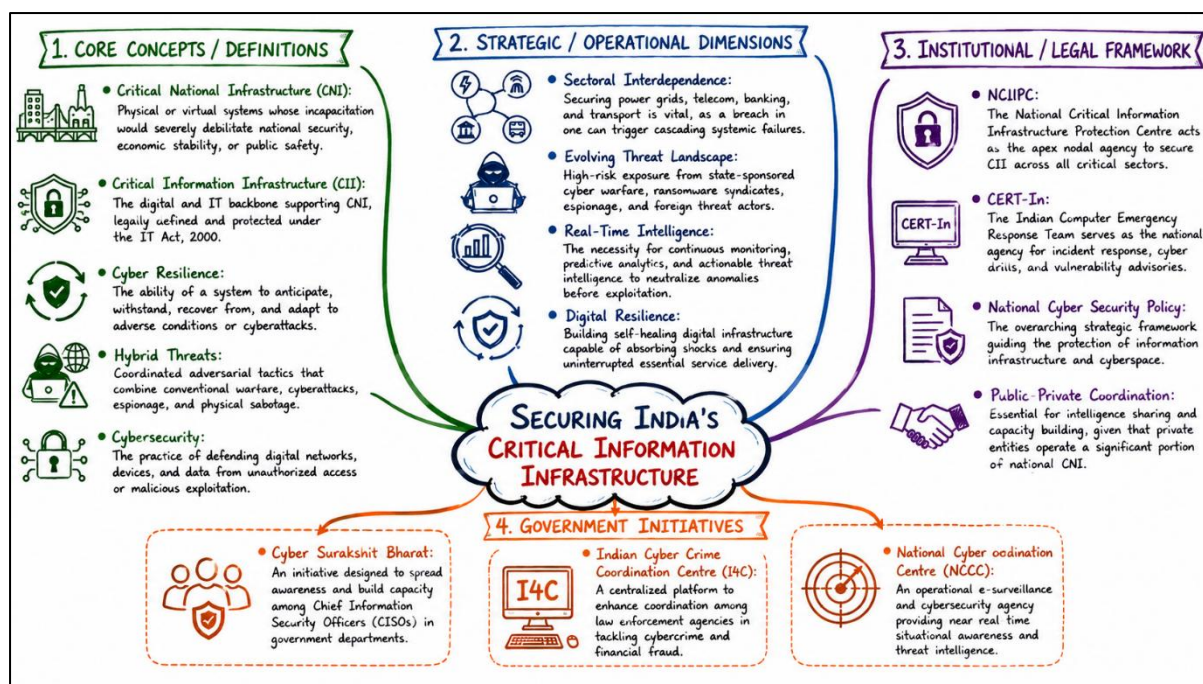
- **Tribal Empowerment:** Enforce FRA and PESA transparently to resolve land/resource grievances.
- **Civilian Transition:** Convert former security camps into Jan Suvidha Kendras for welfare delivery.
- **Sustained Vigilance:** Strengthen local intelligence and community policing to prevent regrouping.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS:</b>	Security-Development Nexus, Urban Naxalism, Asymmetric Warfare.
 <b>IMPORTANT CONCEPTS:</b>	Left Wing Extremism, Naxalism, Red Corridor.
 <b>IMPORTANT ORGANISATIONS:</b>	CAPFs, NIA, DRG, CoBRA.
 <b>IMPORTANT GOVERNMENT INITIATIVES:</b>	SAMADHAN Doctrine, Aspirational Districts Programme, Road Connectivity Project for LWE Areas.

## 45. India's Critical Infrastructure Under AI Threats

### Context:

Recent alerts concerning AI-facilitated assaults on financial infrastructures, coupled with the implementation of sophisticated AI frameworks under 'Project Glasswing' aimed at proactive vulnerability identification, have highlighted the robustness of India's Critical National Infrastructure (CNI).



### Challenges / Concerns:

- **IT-OT Convergence:** Linking legacy OT with modern networks widens the attack surface.
- **Siloed Intelligence:** Fragmented reporting and poor data sharing slow response.
- **Supply Chain Vulnerabilities:** Dependence on imported tech risks hidden backdoors.

### Way Forward:

- **Zero-Trust Architecture:** Enforce continuous verification of all users and devices.
- **Silicon Sovereignty:** Boost domestic chip production and sovereign cloud storage.

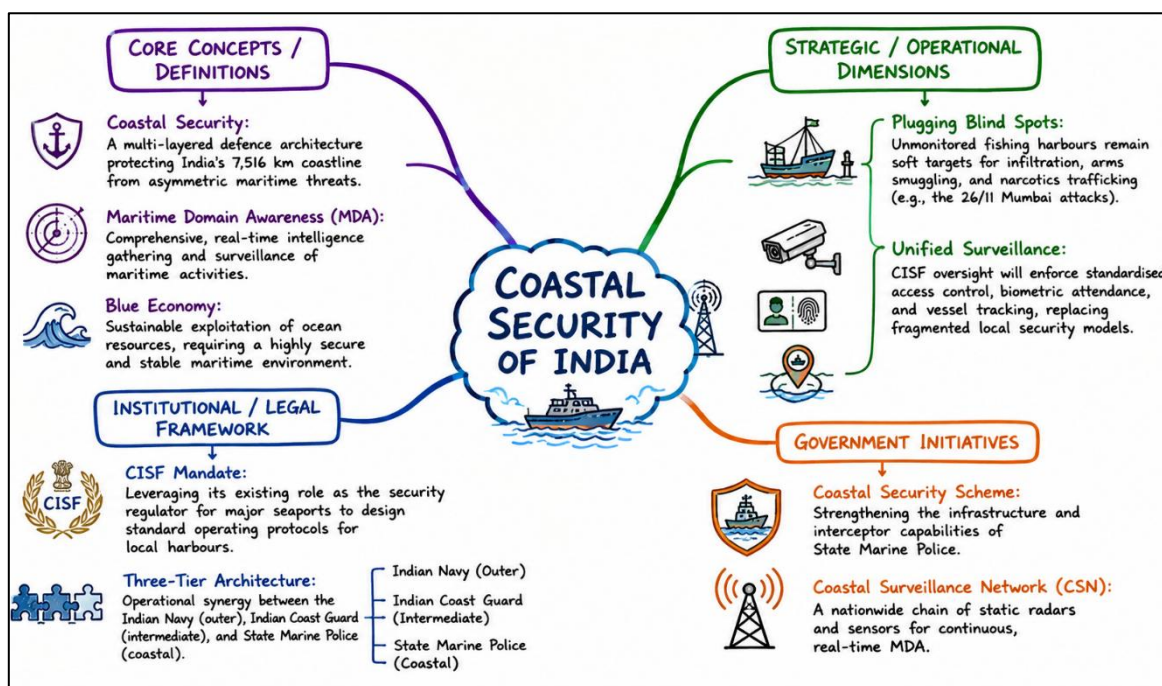
- **Future-Proofing Defense:** Deploy PQC and AI-driven algorithms against next-gen cyber threats.

QUICK REVISION BOX		
<b>UPSC KEYWORDS</b> <ul style="list-style-type: none"> <li>IT-OT Convergence</li> <li>Zero-Trust Architecture</li> <li>Asymmetric Warfare</li> <li>Silicon Sovereignty</li> <li>Cascading Failure.</li> </ul>	<b>IMPORTANT CONCEPTS</b> <ul style="list-style-type: none"> <li>Critical National Infrastructure (CNI)</li> <li>Critical Information Infrastructure (CII)</li> <li>Hybrid Threats</li> <li>Cyber Resilience.</li> </ul>	<b>IMPORTANT ORGANISATIONS</b> <ul style="list-style-type: none"> <li>NCIIPC</li> <li>CERT-In</li> <li>NTRC</li> </ul>
<b>IMPORTANT GOVERNMENT INITIATIVES</b> <ul style="list-style-type: none"> <li>Cyber Surakshit Bharat</li> <li>I4C</li> <li>National Cyber Coordination Centre (NCCC).</li> </ul>		

## 46. Coastal Security Boost: CISF to Guard 1,200 Harbours

### Context:

The Union Home Ministry intends to place approximately 1,200 fishing harbours and landing centres under the security supervision of the Central Industrial Security Force (CISF). This initiative seeks to standardize protocols and address ongoing vulnerabilities within India's coastal security framework.





### Challenges / Concerns:

- **Community Pushback:** Fisherfolk resist biometric tracking as curbs on rights and livelihoods.
- **Federal Friction:** States view Union oversight of landing centres as jurisdictional overreach.
- **Implementation Deficit:** High-tech surveillance rollout faces hurdles in remote, unorganised sites.

### Way Forward:

- **Community Integration:** Engage fishermen as intelligence partners through awareness drives.
- **Tech Harmonization:** Link harbour biometrics with AIS tracking and the CSN grid.
- **Federal Synergy:** Create Centre-State task forces to balance security with livelihoods.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>• Maritime Domain Awareness, Asymmetric Warfare, Force Multipliers, Federal Synergy.</li> </ul>
 <b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>• Coastal Security, Blue Economy, Three-Tier Architecture.</li> </ul>
 <b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>• CISF, Indian Coast Guard, Marine Police.</li> </ul>
 <b>IMPORTANT GOVERNMENT INITIATIVES</b>	<ul style="list-style-type: none"> <li>• Coastal Security Scheme,</li> <li>• Coastal Surveillance Network (CSN).</li> </ul>

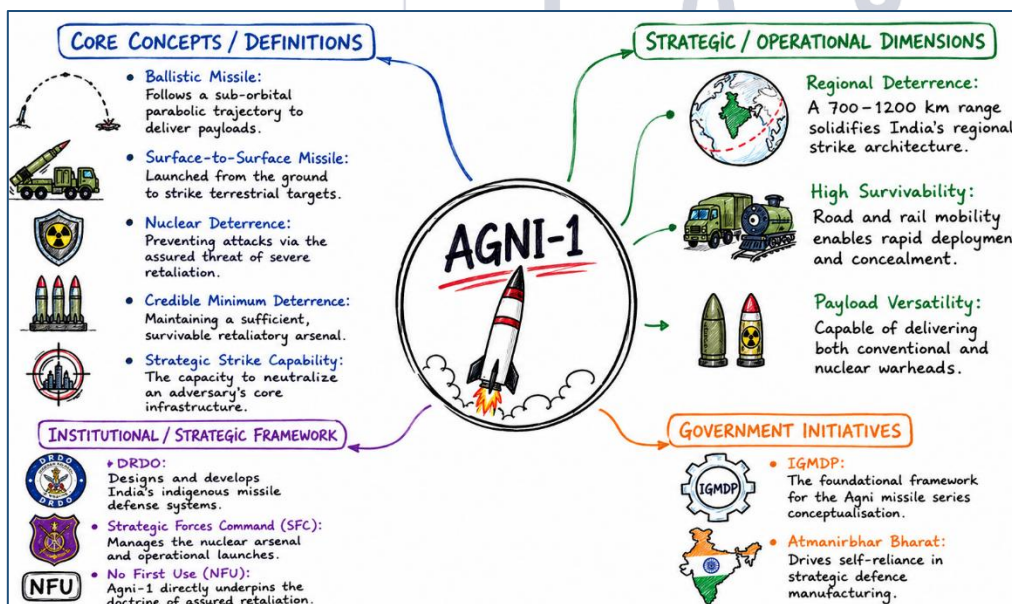
## 47. Agni-1 Validated: India Strengthens Regional Deterrence

### Context:

Recently, India successfully test-launched the Agni-1 short-range ballistic missile from the Integrated Test Range in Chandipur, Odisha. Overseen by the Strategic Forces Command, the launch validated all critical operational and technical parameters, marking a significant boost to India's deterrence posture

### Security Context:

- **Regional Dynamics:** Counterbalances tactical threats in India's immediate neighbourhood.
- **Capability Gap:** Bridges the crucial strike range between Prithvi-II and Agni-II missiles.



### Challenges / Concerns:

- **Tech Import Dependency:** Reliance on foreign microelectronics and precision sensors.

- **Adversary Shields:** Growing regional Anti-Ballistic Missile (ABM) capabilities limit strike efficacy.

#### Way Forward:

- **Sub-system Indigenisation:** Localise critical components under the Atmanirbhar framework.
- **Evasion Tech:** Upgrade strategic systems with manoeuvrable re-entry vehicles (MaRV).

QUICK REVISION BOX		
	<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>• Credible Minimum Deterrence</li> <li>• Strategic Strike Capability</li> <li>• NFU.</li> </ul>
	<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>• Ballistic Missile</li> <li>• Nuclear Deterrence</li> <li>• Surface-to-Surface Missile.</li> </ul>
	<b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>• DRDO</li> <li>• Strategic Forces Command (SFC).</li> </ul>
	<b>IMPORTANT DEFENCE INITIATIVES</b>	<ul style="list-style-type: none"> <li>• IGMDP</li> <li>• Atmanirbhar Bharat.</li> </ul>

## SCIENCE & TECHNOLOGY

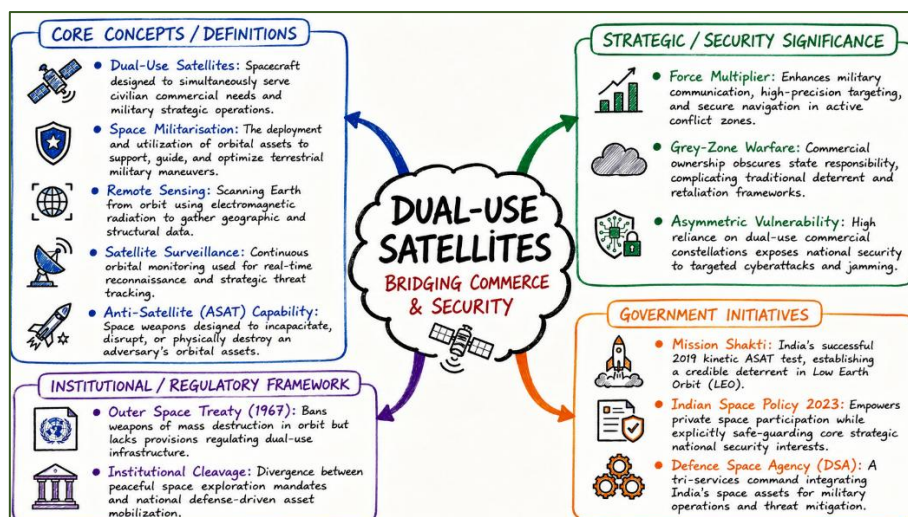
### 48. Dual-Use Satellites: Civilian Assets in Modern Space Warfare

#### Context:

Recent global conflicts have underscored the essential use of commercial orbital assets in battlefield logistics, sparking vigorous international discussions regarding the ways in which dual-use satellites are increasingly obscuring the distinctions between civilian purposes and contemporary space warfare.

#### Scientific / Technological Context

- **Multi-Mission Payloads:** Individual satellites contain high-resolution imaging systems and secure transponders catering to both civil and military clientele.
- **Edge Computing:** Sophisticated onboard processing transforms unprocessed commercial imagery into immediate military intelligence.



### Challenges / Concerns:

- Civilian satellites supporting defense risk becoming legitimate wartime targets.
- Tampering with satellites can create massive debris, threatening orbital sustainability. Way Forward

### Strengthening SSA:

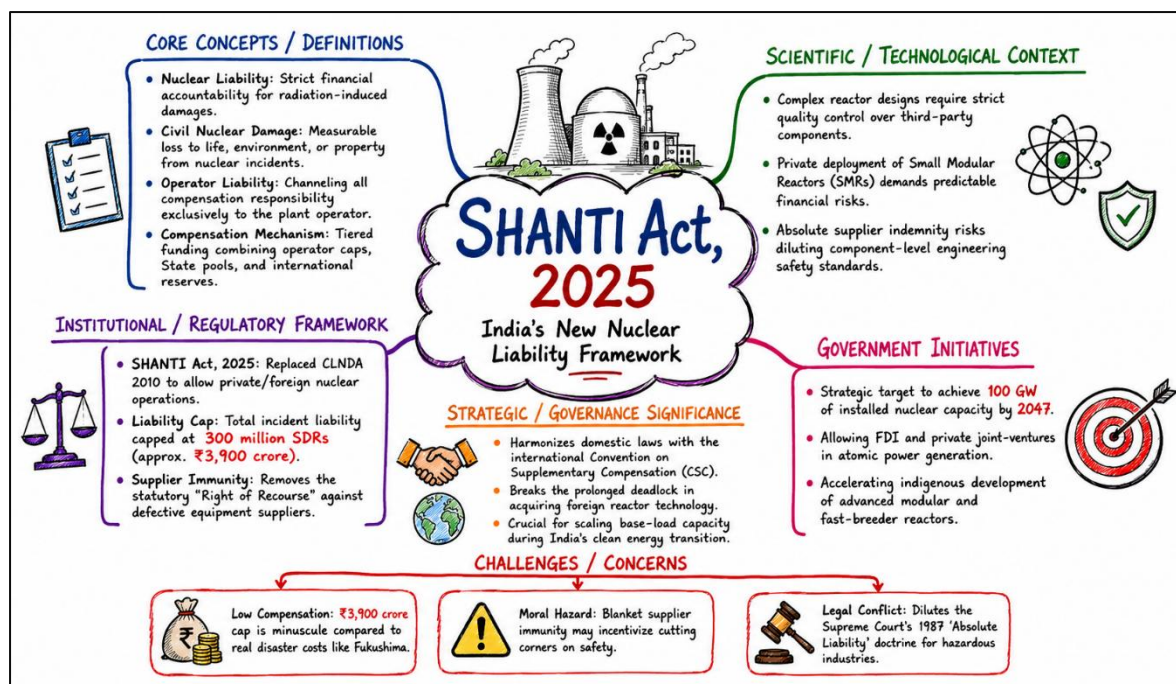
- Scale up Project NETRA for autonomous space situational awareness and threat monitoring.
- Advocate binding global frameworks to prevent weaponisation of commercial orbital networks.

QUICK REVISION BOX	
<b>UPSC Keywords:</b>	Space Militarisation, Grey-Zone Warfare, Space Situational Awareness, Force Multiplier.
<b>Important Concepts:</b>	Dual-Use Satellites, Remote Sensing, Anti-Satellite (ASAT) Capability.
<b>Important Organisations:</b>	ISRO, Defence Space Agency (DSA), Defence Space Research Organisation (DSRO).
<b>Important Missions / Policies:</b>	Mission Shakti, Indian Space Policy 2023, Project NETRA.

## 49. Nuclear Energy at Crossroads: SHANTI Act Sparks Legal and Strategic Debate

### Context:

The Supreme Court is examining a petition challenging the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act, 2025. The plea argues its nuclear liability limits are unconstitutionally low and unfairly exempt equipment suppliers from accountability.



### Way Forward:

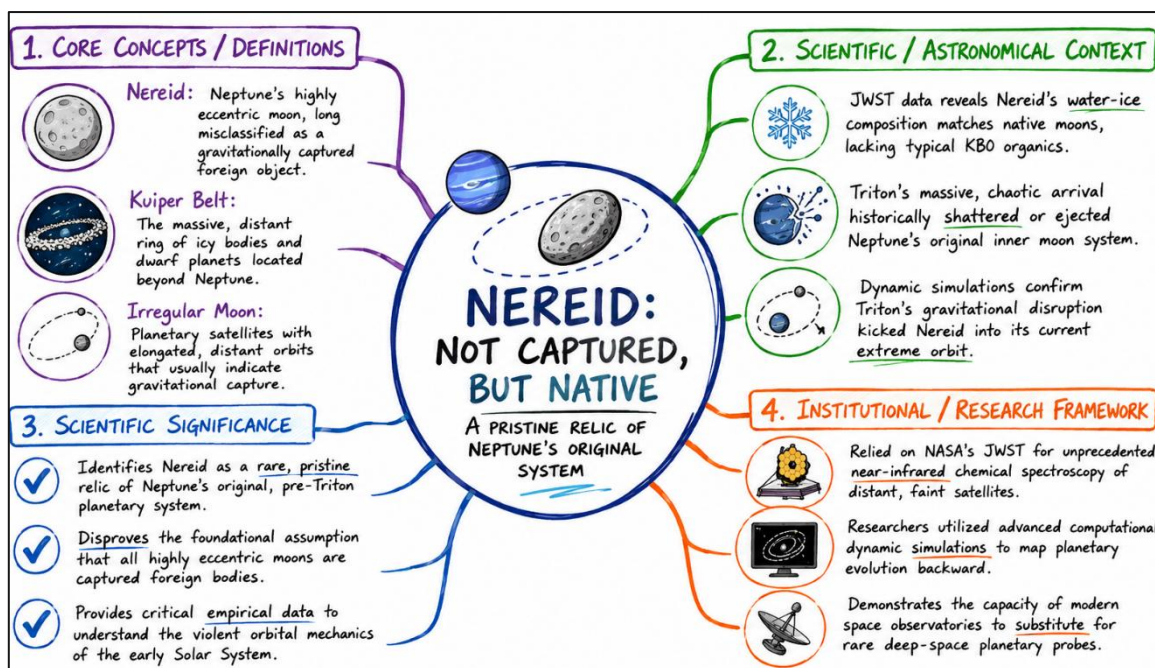
- Dynamically index liability caps to inflation and modern actuarial risk models.
- Ensure complete structural autonomy for the Atomic Energy Regulatory Board (AERB).
- Reintroduce graded supplier accountability for proven manufacturing or design defects.

QUICK REVISION BOX		
	<b>UPSC Keywords</b>	<ul style="list-style-type: none"> <li>• Absolute Liability</li> <li>• Moral Hazard</li> <li>• Right of Recourse</li> <li>• Base-load Power.</li> </ul>
	<b>Important Concepts</b>	<ul style="list-style-type: none"> <li>• Polluter Pays</li> <li>• Probabilistic Safety</li> <li>• Civil Nuclear Damage.</li> </ul>
	<b>Important Organisations</b>	<ul style="list-style-type: none"> <li>• AERB</li> <li>• Atomic Energy Commission (AEC)</li> <li>• IAEA.</li> </ul>
	<b>Important Acts / Policies</b>	<ul style="list-style-type: none"> <li>• SHANTI Act 2025</li> <li>• CLNDA 2010.</li> </ul>

### 50. Neptune's Forgotten Past: Nereid as a Relic of Pre-Triton System

#### Context:

Recent observations from the James Webb Space Telescope (JWST) indicate that Neptune's moon Nereid is likely a native satellite rather than a captured Kuiper Belt Object (KBO). Simulations suggest that Nereid endured a catastrophic event, referred to as a "moonpocalypse," which occurred when Neptune acquired its largest moon, Triton.







### Challenges / Concerns:

- Vast distances make outer Solar System bodies exceptionally faint, hindering continuous detailed study.
- Complete reliance on remote telescopes due to a severe lack of dedicated Ice Giant missions since 1989.
- Validating computational physics simulations ultimately requires complex and costly physical observation.

### Way Forward:

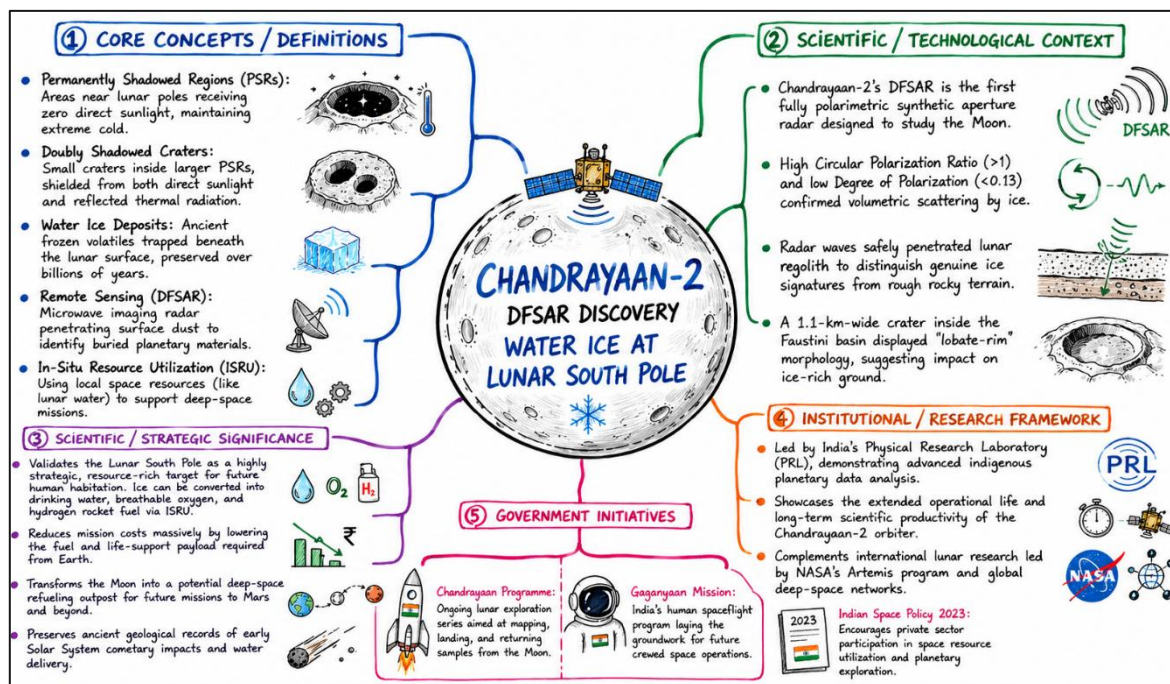
- Expedite global space agency approvals for dedicated, long-term orbiter missions to Uranus and Neptune.
- Expand international JWST time-sharing to catalog the chemical makeup of other irregular Solar System moons.
- Continually refine orbital dynamic models to improve predictive early Solar System evolutionary theories.

QUICK REVISION BOX	
	<b>UPSC KEYWORDS:</b> Dynamic Instability, Near-Infrared Spectrometry, In-situ Formation.
	<b>IMPORTANT CONCEPTS:</b> Eccentric Orbit, Kuiper Belt Object (KBO), Planetary Capture Theory.
	<b>IMPORTANT SPACE ORGANISATIONS:</b> NASA, ESA, Caltech.
	<b>IMPORTANT ASTRONOMICAL TERMS:</b> Ice Giants, Prograde vs. Retrograde Orbits, Celestial Mechanics.

## 51. Chandrayaan-2 Finds 'Possible Presence' of Ice in Lunar South Pole

### Context:

Recently, scientists from the Physical Research Laboratory (PRL) used Chandrayaan-2's Dual Frequency Synthetic Aperture Radar (DFSAR) to discover evidence of subsurface water-ice in the Moon's South Polar Region. The study identified strong radar signatures of ancient ice buried within ultra-cold "doubly shadowed craters".



### Challenges / Concerns:

- **Extreme Environment:** The extraction of ice at a temperature of 25 Kelvin (-248°C) presents significant challenges in thermomechanical engineering.
- **Topographical Hazards:** The presence of rugged terrain and complete darkness in Permanently Shadowed Regions (PSRs) makes rover navigation and landings particularly difficult.
- **Technological Limitations:** There is a necessity for advanced automated, nuclear-powered robotic systems capable of deep drilling to function effectively in the absence of light.
- **Legal Ambiguity:** The Outer Space Treaty does not provide explicit guidelines regarding the commercial exploitation of lunar resources.

### Way Forward

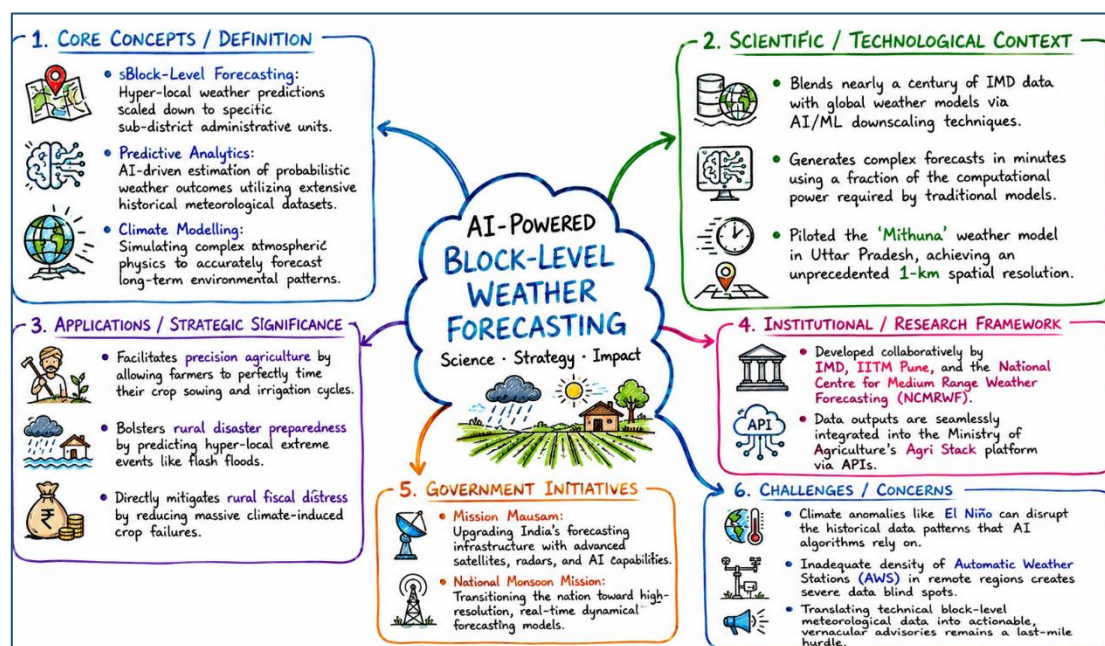
- Expedite the development of specialized nuclear-powered rovers to drill inside dark, freezing lunar craters.
- Foster global collaborative frameworks to establish peaceful, equitable norms for lunar ice extraction.
- Accelerate subsequent missions specifically targeting sample return from these deep-freeze polar regions.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>In-Situ Resource Utilization (ISRU)</li> <li>Volumetric Scattering</li> <li>Doubly Shadowed Craters</li> </ul>
 <b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>Permanently Shadowed Regions (PSRs)</li> <li>Lobate-rim morphology</li> <li>Polarimetry</li> </ul>
 <b>IMPORTANT SPACE ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>ISRO</li> <li>Physical Research Laboratory (PRL)</li> <li>NASA</li> </ul>
 <b>IMPORTANT MISSIONS / TERMS</b>	<ul style="list-style-type: none"> <li>Chandrayaan-2 (DFSAR Payload)</li> <li>Artemis Programme</li> <li>Faustini crater</li> </ul>

## 52. AI-Based Block-Level Monsoon Forecast System





### Context:

The India Meteorological Department (IMD) has recently introduced India's inaugural Artificial Intelligence (AI)-driven block-level monsoon forecasting system, capable of predicting weather conditions up to four weeks ahead. This system currently offers hyper-local probabilistic forecasts for 3,196 blocks within the nation's rainfed core zone.



### Way Forward:

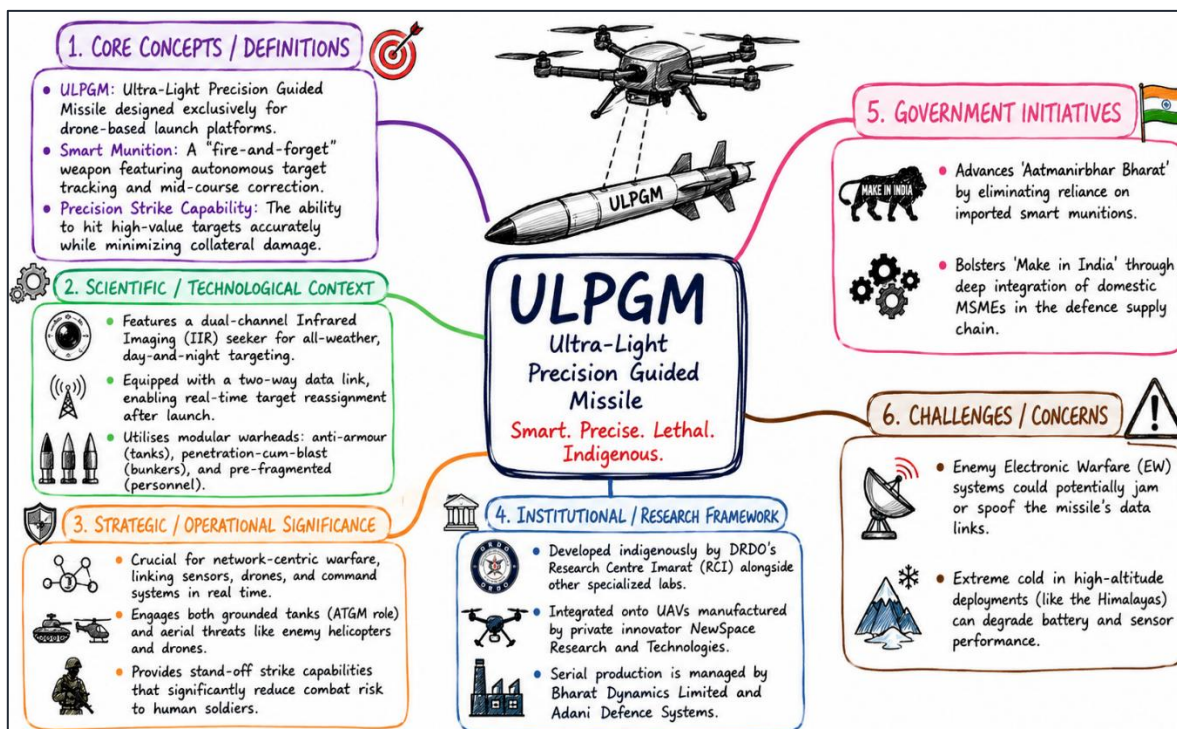
- Accelerate the expansion of AWS and Doppler radar networks to guarantee a continuous, real-time data stream.
- Establish a direct connection between these detailed forecasting parameters and the Pradhan Mantri Fasal Bima Yojana to facilitate the insurance claims process.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	: Precision Agriculture, AI Downscaling, Spatial Resolution, Agri Stack.
 <b>Important Concepts</b>	: Probabilistic Forecasting, Block-level Prediction.
 <b>Important Organisations</b>	: IMD, NCMRWF, IITM Pune.
 <b>Important Technology Initiatives</b>	: Mission Mausam, Mithuna Model.

## 53. ULPGM-V3 Trials: DRDO Validates Drone-Launched Precision Missile

### Context:

Recently, the Defence Research and Development Organisation (DRDO) successfully completed the final development trials of the Unmanned Aerial Vehicle Launched Precision Guided Missile (ULPGM)-V3 in both Air-to-Ground and Air-to-Air modes. Tested in Kurnool, Andhra Pradesh, the trials confirm the system's readiness for mass production and military induction.



### Way Forward:

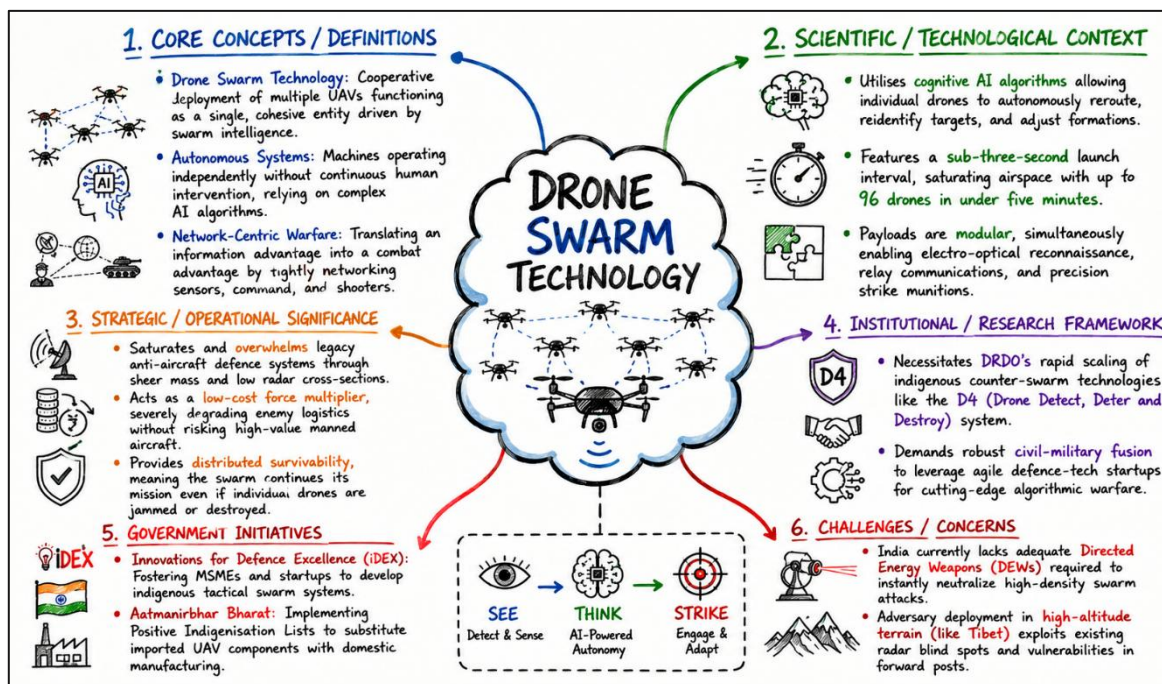
- Harden the missile's communication modules against advanced anti-drone jamming technologies.
- Expedite mass serial production to systematically equip UAV fleets across all three military branches.

QUICK REVISION BOX	
<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>• Network-Centric Warfare</li> <li>• Fire-and-Forget</li> <li>• Mid-Course Correction</li> <li>• Stand-off Strike</li> </ul>
<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>• Smart Munition</li> <li>• Dual-Channel Seeker</li> <li>• Anti-Tank Guided Missile (ATGM)</li> </ul>
<b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>• DRDO</li> <li>• Research Centre Imarat (RCI)</li> <li>• Bharat Dynamics Limited (BDL)</li> </ul>
<b>IMPORTANT DEFENCE INITIATIVES</b>	<ul style="list-style-type: none"> <li>• Aatmanirbhar Bharat</li> <li>• Defence Indigenisation</li> <li>• Make in India</li> </ul>

## 54. China's Atlas Drone Swarm: Strategic Challenge at the LAC

### Context:

Recently, China unveiled the 'Atlas' Drone Swarm Operations System, a highly mobile platform capable of launching and autonomously coordinating up to 96 drones from a single command node. This development has sparked global military attention due to its potential deployment along the Line of Actual Control (LAC).



### Way Forward

- Fast-track the deployment of high-power microwaves and laser-based hard-kill systems to counter drone saturation.
- Accelerate AI-driven 'counter-swarm' programmes to match the adversary's cognitive and algorithmic superiority.

QUICK REVISION BOX	
<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Algorithmic Warfare</li> <li>Directed Energy Weapons (DEWs)</li> <li>Swarm Intelligence</li> </ul>
<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>Saturation Attack</li> <li>Network-Centric Warfare</li> <li>Autonomous Systems</li> </ul>
<b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>DRDO</li> <li>iDEX</li> <li>Defence Innovation Organisation (DIO)</li> </ul>
<b>IMPORTANT DEFENCE INITIATIVES</b>	<ul style="list-style-type: none"> <li>Project ABHEDYA</li> <li>D4 System</li> <li>Positive Indigenisation List</li> </ul>

## HISTORY & CULTURE

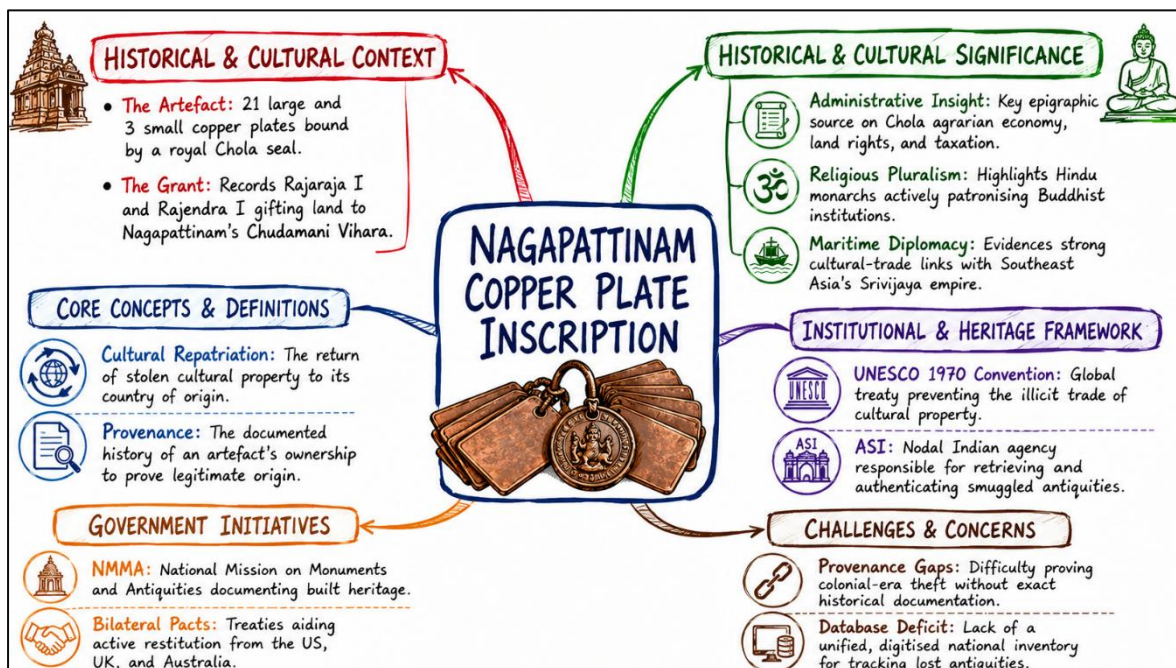
### 55. Return of Chola-era Copper Plates should Spark Efforts for Further Repatriations, say Indian Archaeologists

#### Context:

The 11th-century Anaimangalam Chola Copper Plates (Leiden Plates) were recently repatriated from the Netherlands to India. This return of colonial-era stolen heritage underscores India's growing diplomatic success in cultural restitution.




The Chola-era copper plates, which were handed back to India by the Netherlands on Saturday, and, right, the tower of the Buddha vihara, called Chulamani Vihara, near Nagapattinam in Tamil Nadu, which was demolished by Jesuit priests in 1867. #11



#### Way Forward

- **Global Forums:** Leverage ICPRCP and bilateral diplomacy for systematic restitution frameworks.
- **Digital Archiving:** Deploy blockchain-secured registries for seamless, tamper-proof heritage tracking.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Anaimangalam Plates</li> <li>Chudamani Vihara</li> <li>Srivijaya Empire</li> <li>Cultural Restitution</li> </ul>
 <b>IMPORTANT ORGANISATIONS</b>	<ul style="list-style-type: none"> <li>ASI</li> <li>ICPRCP</li> <li>UNESCO</li> <li>Idol Wing CID</li> </ul>
 <b>IMPORTANT ACTS / INITIATIVES</b>	<ul style="list-style-type: none"> <li>AATA 1972</li> <li>1970 UNESCO Convention</li> <li>NMMA</li> </ul>

## 56. Ancient Buddhist Site — Sarnath

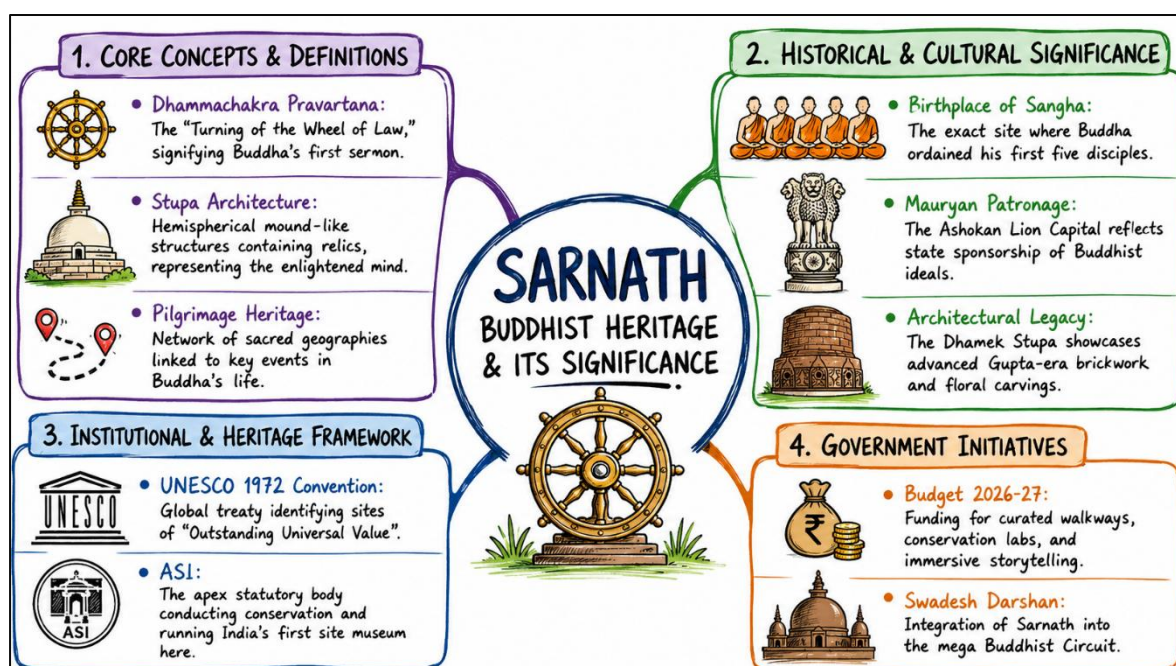
### Context:

The Union Budget 2026-27 has identified Sarnath to be developed as a vibrant, experiential cultural destination. Concurrently, India has nominated Sarnath for inclusion in the UNESCO World Heritage List for the 2025–26 cycle.



### Ancient Spiritual Nucleus at Ganga–Varuna

- Located at the sacred Ganga–Varuna confluence, serving as a historic spiritual hub.
- Houses antiquities spanning Mauryan (3rd century BCE) to Gahadavala (12th century CE) eras.







## Challenges & Concerns

- **Carrying Capacity:** Unregulated pilgrim influx strains the fragile unexcavated ruins.
- **Urban Encroachment:** Rapid urbanisation in Varanasi threatens the site's regulatory buffer zones.

## Way Forward

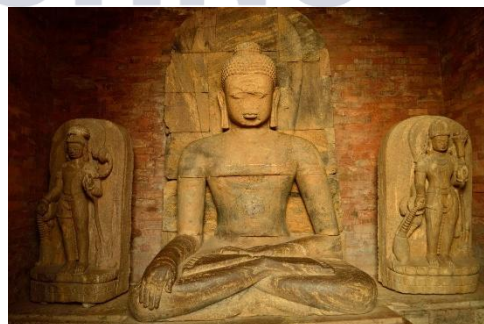
- **Digital Conservation:** Deploy LiDAR scanning and 3D-mapping to monitor structural integrity.
- **Sustainable Footprint:** Enforce stringent Heritage Impact Assessments (HIA) before infrastructure upgrades.

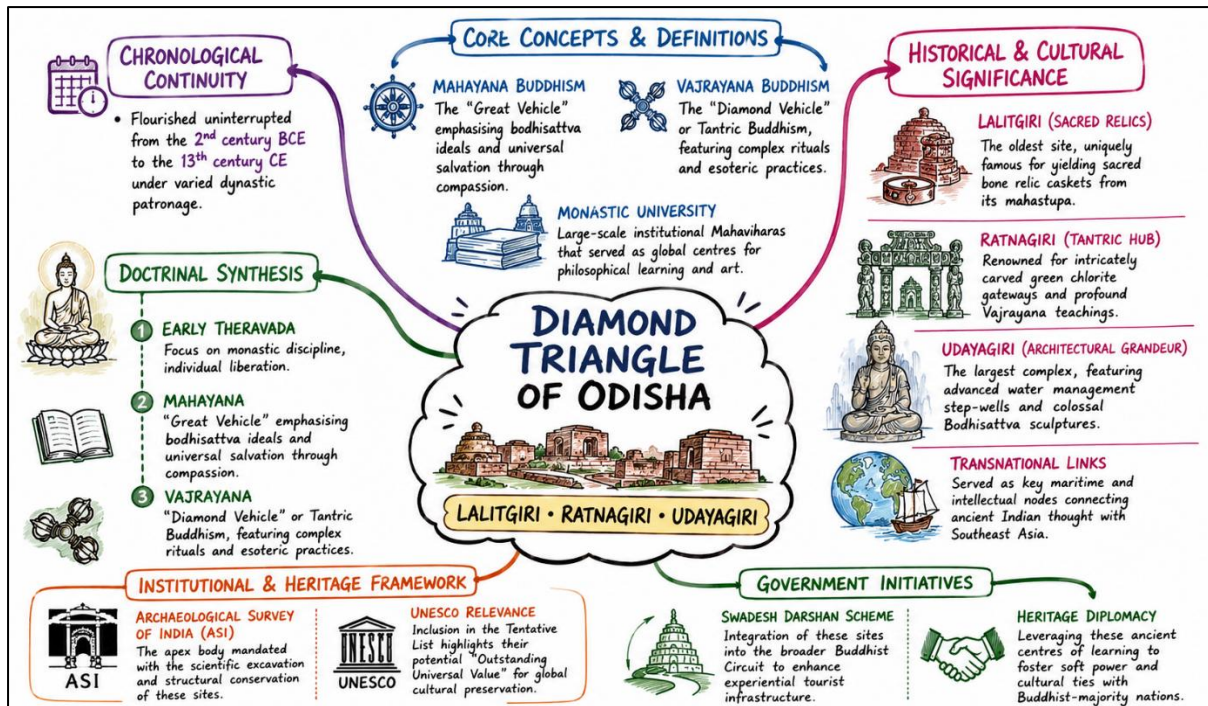
QUICK REVISION BOX		
	<b>UPSC Keywords</b>	Dharmachakra Pravartana, Dhamek Stupa, Experiential Destinations.
	<b>Important Concepts</b>	Stupa Architecture, Outstanding Universal Value (OUV).
	<b>Important Dynasties</b>	Mauryan, Shunga, Kushan, Gupta.
	<b>Government Initiatives</b>	Swadesh Darshan Scheme, Adopt a Heritage 2.0.

## 57. Ratnagiri-Udayagiri-Lalitgiri: The Diamond Triangle of Buddhism

### Context:

In early 2026, UNESCO formally added Odisha's Buddhist 'Diamond Triangle'—Ratnagiri, Udayagiri, and Lalitgiri—to India's Tentative List of World Heritage Sites. Concurrently, international heritage events have revitalised these ancient monastic universities as global spiritual tourism hubs, highlighting their civilisational legacy.





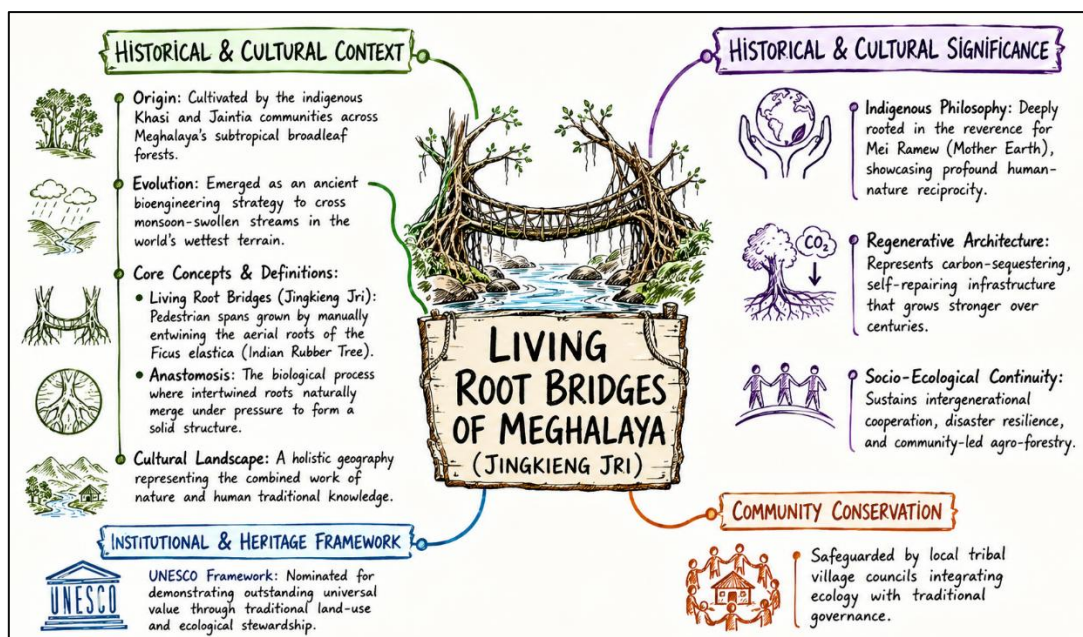
QUICK REVISION BOX	
<b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Diamond Triangle</li> <li>Relic Caskets</li> <li>Mahavihara</li> <li>UNESCO Tentative List</li> </ul>
<b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>Apsidal Chaityagriha</li> <li>Tantric Buddhism</li> <li>Bodhisattva Ideals</li> </ul>
<b>IMPORTANT DYNASTIES / TRADITIONS</b>	<ul style="list-style-type: none"> <li>Bhaumakara Dynasty</li> <li>Mahayana</li> <li>Vajrayana</li> </ul>
<b>IMPORTANT GOVERNMENT INITIATIVES</b>	<ul style="list-style-type: none"> <li>Buddhist Circuit (Swadesh Darshan)</li> <li>PRASHAD Scheme</li> </ul>

## 58. Jingkieng Jri / Lyu Charai Cultural Landscape

### Context:





India has formally submitted the nomination dossier for Meghalaya's "Jingkieng Jri / Lyu Chrai Cultural Landscape" to UNESCO for possible inscription on the World Heritage List during the 2026–27 evaluation cycle.





### Government Initiatives

- **Dossier Submission:** A coordinated diplomatic effort by the ASI and Meghalaya government for global heritage status.
- **Sustainable Integration:** Promoting community-led eco-tourism to boost local livelihoods without compromising structural integrity.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	: Jingkieng Jri, Mei Ramew, Anastomosis, Cultural Landscape, Regenerative Architecture.
 <b>IMPORTANT CONCEPTS</b>	: Bio-engineering, Nature-Based Solutions, Carbon-sequestering infrastructure.
 <b>IMPORTANT COMMUNITIES</b>	: Khasi and Jaintia tribes.
 <b>IMPORTANT HERITAGE INITIATIVES</b>	: UNESCO World Heritage Nomination (2026-27 cycle).

### 59. Lakkundi Heritage Town (Karnataka)




#### Context:

In early 2026, Karnataka accelerated archaeological excavations in the historic town of Lakkundi to unearth its legendary "101 temples and 101 stepwells" and officially prepared a proposal for its inclusion in the UNESCO World Heritage List.



## Government Initiatives

- Monument Protection:** Upgrading 44 sites to state-protected monuments and pursuing the repatriation of Lakkundi's artefacts from New Delhi.
- Heritage Tourism:** Developing open-air museums and integrating the site with broader state tourism circuits.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	<ul style="list-style-type: none"> <li>Lakkundi</li> <li>Vesara Architecture</li> <li>Tankashale</li> <li>Queen Attimabbe</li> </ul>
 <b>IMPORTANT CONCEPTS</b>	<ul style="list-style-type: none"> <li>Kalyani Stepwells</li> <li>Religious Pluralism</li> <li>Kalyana Chalukya Style</li> </ul>
 <b>IMPORTANT DYNASTIES</b>	<ul style="list-style-type: none"> <li>Kalyana Chalukyas</li> <li>Hoysalas</li> <li>Yadavas</li> </ul>
 <b>IMPORTANT INITIATIVES</b>	<ul style="list-style-type: none"> <li>Lakkundi Heritage Area Development Authority</li> <li>UNESCO Proposal</li> </ul>

## PLACES IN NEWS

### 60. Places in News: Mayon Volcano – Philippines

#### Context:

Mayon Volcano in the Philippines remains under Alert Level 3, recently exhibiting continued effusive eruptions, minor Strombolian activity, and pyroclastic density currents.

#### Location & Geography:

- **Location:** Albay province on the island of Luzon, Philippines.
- **Tectonic Setting:** Situated along the highly active Pacific Ring of Fire.







#### Key Features / Importance

- **Type:** Highly active stratovolcano.
- **Structure:** Globally renowned for its near-perfect, symmetrical cone shape.
- **Volcanic Activity:** The most active volcano in the Philippines, characterized by lava dome collapses and explosive bursts.

#### Environmental Relevance:

- **Primary Hazards:** Eruptions generate deadly pyroclastic density currents (PDCs) and widespread ashfall.
- **Secondary Hazards:** Post-eruption rainfall often triggers destructive mudflows (lahars).
- **Disaster Management:** Necessitates a strict 6-km Permanent Danger Zone (PDZ) to safeguard surrounding settlements and ecosystems.

QUICK REVISION BOX	
	<b>UPSC Keywords:</b> Mayon Volcano, Stratovolcano, Pacific Ring of Fire.
	<b>Location Facts:</b> Luzon Island, Philippines.
	<b>Important Geographic Tags:</b> Symmetrical Cone, Strombolian Eruption.
	<b>Environmental Tags:</b> Pyroclastic Density Currents (PDCs), Lahars, PDZ.

## 61. Gulf of Aden

### Context:

The Gulf of Aden is witnessing a significant resurgence in maritime security threats, highlighted by the May 2026 hijacking of the tanker M/T Eureka and increased small-boat attacks amidst regional instability.

### Location & Geography

- **Position:** Situated between the Arabian Peninsula (Yemen) to the north and the Horn of Africa (Somalia, Djibouti) to the south.
- **Linkage:** Connects the Red Sea to the Arabian Sea (Indian Ocean) via the strategic Bab-el-Mandeb Strait.






### Key Features / Importance

- **Global Artery:** A vital maritime chokepoint handling approximately 11% of the world's seaborne petroleum.
- **Trade Route:** Serves as the primary navigational corridor linking Asian and European commercial markets through the Suez Canal.

### Strategic Relevance

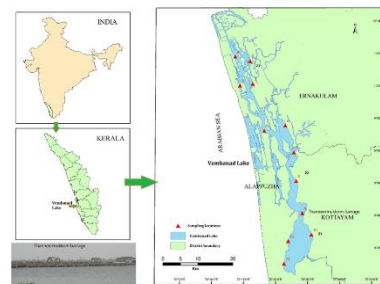
- **Piracy Hotspot:** Historically vulnerable to Somali piracy, which has seen a calibrated reactivation and expanded operational reach in early 2026.
- **Maritime Security:** Heavily patrolled by multinational naval coalitions utilizing the established Maritime Security Transit Corridor (MSTC) to safeguard commercial vessels.
- **Geopolitical Flashpoint:** Directly impacted by the ongoing Yemen conflict, Houthi-related missile threats, and broader Red Sea strategic competition.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS:</b>	Bab-el-Mandeb, Maritime Security Transit Corridor (MSTC), Horn of Africa.
 <b>LOCATION FACTS:</b>	Bordered by Yemen, Somalia, and Djibouti.
 <b>IMPORTANT WATER BODIES:</b>	Red Sea, Arabian Sea, Suez Canal.
 <b>STRATEGIC TAGS:</b>	Maritime Chokepoint, Sea Lines of Communication (SLOCs), Anti-Piracy Operations.

## 62. Vembanad Lake - Kerala

### Context:

The Kerala High Court recently barred houseboats lacking valid pollution control systems from operating in Vembanad Lake. Concurrently, new research revealed the lake's depth has reduced by over 50% due to severe siltation, exacerbating regional flood risks.



### Location & Geography


- **Location:** Encompasses the districts of Alappuzha, Kottayam, and Ernakulam in Kerala.
- **Dimensions:** Recognized as the longest lake in India and the largest lake within the state of Kerala.
- **Riverine Input:** Sustained by four principal rivers—Meenachil, Achankovil, Pampa, and Manimala.
- **Coastal Linkage:** Divided from the Arabian Sea by a slender barrier island, which constitutes the central part of the state's backwater system.

### Key Features / Importance

- **Wetland Status:** Recognized as a Ramsar Wetland of International Significance in 2002.
- **Water Profile:** A vibrant brackish ecosystem; primarily freshwater in the southern region, shifting to saline waters close to the Kochi estuary.
- **Cultural Significance:** Renowned for the annual Vallam Kali (Nehru Trophy Snake Boat Race) held in August.

### Environmental Relevance

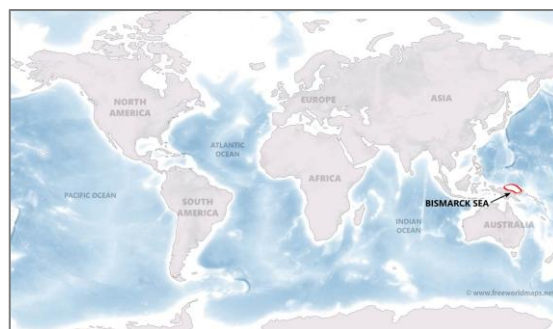
- **Avian Habitat:** The eastern shores are home to the Kumarakom Bird Sanctuary, which serves as an essential wintering site for migratory birds traveling across continents.
- **Ecological Functions:** It functions as a vast natural sponge that regulates flooding for the Kuttanad agricultural area, which is situated below sea level.
- **Current Threats:** The region is experiencing significant ecological decline due to untreated sewage from houseboats, agricultural runoff leading to eutrophication, encroachments on its structures, and elevated rates of siltation.

QUICK REVISION BOX		
	<b>UPSC Keywords:</b>	Ramsar Site, Brackish Water Ecosystem, Vallam Kali.
	<b>Location Facts:</b>	Longest in India, Largest in Kerala.
	<b>Important Rivers / Wetlands:</b>	Pampa, Meenachil, Kumarakom Bird Sanctuary.
	<b>Environmental Tags:</b>	Eutrophication, Siltation, Wetland Conservation.

## 63. Bismarck Sea

### Context:

The Titan Ridge Volcano, located in the central Bismarck Sea, has recently initiated a significant and continuous eruption. This occurrence has produced extensive volcanic pumice rafts, which have adversely affected maritime transport, fishing activities, and coastal ecosystems in Manus Province, Papua New Guinea.



### Location & Geography:





- **Location:** Situated in the western Pacific Ocean, forming a key maritime region north of Papua New Guinea.
- **Boundaries:** Enclosed by the island of New Guinea to the south and southwest, and bordered by the Bismarck Archipelago (including New Britain, New Ireland, and the Admiralty Islands) to the north and east.

### Key Features / Importance

- **Tectonic Setting:** This area is notably active, located on the Bismarck Plate, and represents an essential part of the Pacific Ring of Fire.
- **Geological Dynamics:** It is defined by intricate subduction zones, back-arc spreading ridges, and a high frequency of underwater volcanic and seismic events.

### Strategic / Environmental Relevance

- **Marine Ecosystems:** Supports dense coral reefs and rich fisheries that are vital for regional biodiversity and the daily sustenance of indigenous island communities.
- **Environmental Hazards:** Prone to significant geophysical risks, including sudden submarine eruptions that produce navigational hazards (like dense pumice rafts), localized tsunamis, and acute marine habitat degradation.

QUICK REVISION BOX	
 <b>UPSC Keywords</b>	• Titan Ridge Volcano, Submarine Eruption, Bismarck Plate, Pumice Rafts.
 <b>Location Facts</b>	• Western Pacific Ocean, Papua New Guinea.
 <b>Important Seas / Islands</b>	• Bismarck Archipelago, Manus Island, New Britain.
 <b>Strategic / Environmental Tags</b>	• Pacific Ring of Fire, Back-arc Basin, Volcanic Hazards.

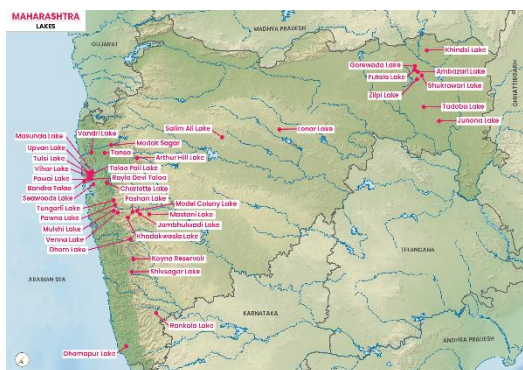
## 64. Ambazari Lake – Maharashtra

### Context:

Recently, the Nagpur Municipal Corporation (NMC) initiated an extensive mechanized operation aimed at eliminating more than 80,000 tonnes of invasive water hyacinth from Ambazari Lake in preparation for the monsoon season, while also installing new flood-escape gates.

### Location & Geography

- Positioned at the south-western boundary of Nagpur, Maharashtra.
- **Basin Connection:** Serves as the source and main headwaters for the Nag River.
- **Magnitude:** The most extensive and ancient among Nagpur's eleven urban lakes.







### Key Features / Importance

- **Historical Origin:** Constructed in 1870 during the Bhonsle dynasty to provide potable water to the city.
- **Ecological Zone:** Bordered by the Ambazari Biodiversity Park and Garden, functioning as an essential urban green space.
- **Water Management:** Currently experiencing significant structural enhancements (such as spillways) to effectively handle substantial monsoon water inflows.

### Environmental Relevance:

- **Urban Flooding:** Extremely susceptible to intense rainfall; its overflow resulted in substantial flooding in late 2023, leading to the initiation of continuous disaster mitigation efforts.
- **Invasive Species:** The ecosystem is under threat from thick mats of water hyacinth (*Eichhornia crassipes*) that reduce oxygen levels in the water and obstruct natural water movement.
- **Pollution Threats:** It experiences considerable deterioration due to the release of untreated sewage and the encroachment of urban development.

QUICK REVISION BOX	
	<b>UPSC Keywords:</b> Urban Flooding, Water Hyacinth ( <i>Eichhornia crassipes</i> ), Bhonsle Dynasty.
	<b>Location Facts:</b> Nagpur, Maharashtra.
	<b>Important Rivers / Parks:</b> Nag River, Ambazari Biodiversity Park.
	<b>Environmental Tags:</b> Invasive Alien Species, Disaster Mitigation, Urban Wetland Conservation.

## 65. Saraswati Wildlife Sanctuary – Haryana

### Context:

Recently, Haryana has unveiled its first 'Constellation Garden' (Nakshatra Vatika) situated in the Saraswati Wildlife Sanctuary, integrating Vedic astronomy with efforts in biodiversity conservation to support the growth of regional eco-tourism.



### Location & Geography

- **Location:** This area is distributed across the Kaithal and Kurukshetra districts in Haryana, commonly referred to as the Seonsar Forest.
- **Terrain:** It is located in the foothills of the Shivalik range and is geographically linked to the ancient channels of the legendary Saraswati River.

### Key Features / Importance

- **Forest Type:** Defined by tropical dry deciduous flora, such as Kikar, Neem, and Shisham.
- **Biodiversity:** An essential habitat for Nilgai, wild boar, the endangered hog deer, and more than 250 bird species.
- **Archaeology:** Contains remnants from the ancient Kushan/Gupta periods and a 400-year-old Mughal-era water well constructed with lakhauri bricks.

### Environmental Relevance

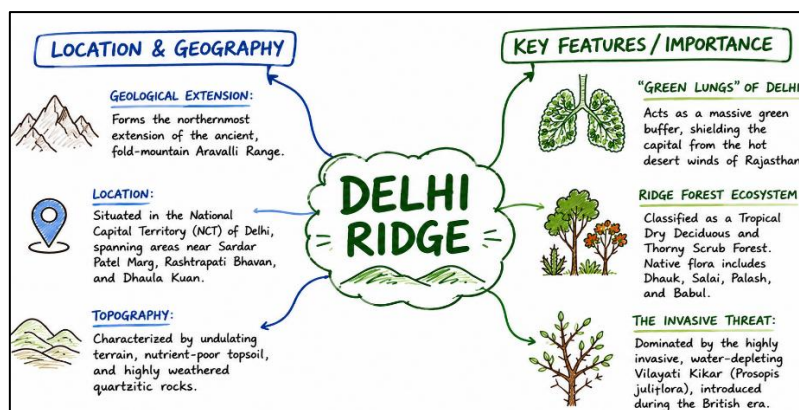
- **Conservation Strategy:** The innovative Nakshatra Vatika incorporates 27 species of trees that align with Indian Vedic constellations (nakshatras) to promote conservation efforts led by the community.
- **Challenges:** The ecological integrity of the sanctuary is at risk due to illegal logging, human encroachment, and the fragmentation of habitats.

QUICK REVISION BOX		
	<b>UPSC KEYWORDS</b>	Nakshatra Vatika, Seonsar Forest, Lakhauri Bricks.
	<b>LOCATION FACTS</b>	Haryana (Kaithal, Kurukshetra).
	<b>IMPORTANT HILLS / RIVERS / SANCTUARIES</b>	Shivalik Foothills, Saraswati River, Kalesar National Park.
	<b>ENVIRONMENTAL TAGS</b>	Tropical Dry Deciduous Forest, Eco-tourism, Habitat Fragmentation.

## 66. Delhi Central Ridge

### Context:

The Delhi Government recently notified 673.32 hectares of the Central Ridge as a 'Reserved Forest' under Section 20 of the Indian Forest Act, 1927, granting it the highest legal protection after a 32-year pendency.



### Environmental Relevance

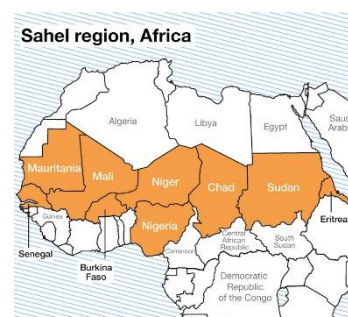
- **Urban Biodiversity:** Facilitates a variety of wildlife, including nilgai, jackals, and porcupines, as well as delicate biocrusts, which are living soil ecosystems dependent on fungi and termites.
- **Microclimate Regulation:** Essential for the percolation of groundwater, the storage of carbon, and the alleviation of the Urban Heat Island (UHI) phenomenon.
- **Conservation Challenges:** Faces significant threats from unlawful encroachments, habitat fragmentation, and misguided "restoration" practices that utilize heavy machinery and chemicals.

QUICK REVISION BOX	
	<b>UPSC Keywords</b> Reserved Forest (Sec 20, IFA 1927), Section 4 vs Section 20, Biocrusts, Ecosystem Engineers.
	<b>Location Facts</b> NCT of Delhi (Western Forest Division).
	<b>Important Hills / Forest Systems</b> Aravalli Hill System, Tropical Dry Deciduous & Thorny Scrub.
	<b>Environmental Tags</b> Vilayati Kikar (Invasive Alien Species), Dhauk/Palash (Native Flora), "Green Lungs"

## 67. Sahel Region

### Context:

The Sahel region is currently experiencing a profound and intensifying crisis characterized by rampant violence, military coups, and climatic disturbances. As of May 2026, approximately 24 million individuals are in dire need of humanitarian assistance, with recent coordinated assaults by al-Qaeda affiliates wreaking havoc in Mali.



### Location & Geography:

- **Transitional Zone:** Acts as a massive ecoclimatic and biogeographic transition zone in Africa, sandwiched between the arid Sahara Desert to the north and the tropical Sudanian Savanna to the south.
- **Geographical Extent:** Stretches across the African continent from the Atlantic Ocean in the west to the Red Sea in the east.


- **Key Countries:** Encompasses parts of Senegal, Mauritania, Mali, Burkina Faso, Algeria, Niger, Nigeria, Cameroon, Chad, Sudan, and Eritrea.

### Key Features / Importance

- **Climatic Region:** Defined by a hot semi-arid climate with irregular rainfall, making it highly vulnerable to prolonged droughts and extreme heatwaves.
- **Ecological Vulnerability:** Highly susceptible to desertification, land degradation, and the creeping expansion of the Sahara Desert.
- **Economic Zone:** Serves as a vital pastoral (nomadic herding) and agricultural zone, forming the backbone of the region's largely agrarian economies.

### Strategic / Environmental Relevance

- **Instability Hotspot:** The Central Sahel (Mali, Burkina Faso, Niger) is an epicenter for violent extremism (e.g., JNIM), political instability (military juntas), and human displacement.
- **Climate & Food Security:** Ranked among the world's most severe hunger crises; erratic rainfall and rising temperatures have triggered severe food and water insecurity. The Great Green Wall: A flagship African-led initiative aiming to plant an 8,000 km belt of trees across the Sahel to combat land degradation, restore ecosystems, and create green jobs.

QUICK REVISION BOX	
 <b>UPSC KEYWORDS</b>	Ecoclimatic Transition Zone, Desertification, Internal Displacement, JNIM (Jama'at Nusrat al-Islam wal-Muslimin).
 <b>LOCATION FACTS</b>	Transcontinental belt (Atlantic to Red Sea) separating Sahara and Sudanian Savanna.
 <b>IMPORTANT DESERTS / COUNTRIES</b>	South of Sahara; Central Sahel (Mali, Burkina Faso, Niger).
 <b>STRATEGIC / ENVIRONMENTAL TAGS</b>	Great Green Wall Initiative, Food Insecurity Hotspot, Sahel Security Crisis.

## SPECIES IN NEWS

### 68. Tigress, Four Cubs Die at Kanha Tiger Reserve

#### Context:

A tigress (T-141) and her four cubs recently died in Madhya Pradesh's Kanha Tiger Reserve due to an acute respiratory illness, suspected to be an outbreak of the highly contagious Canine Distemper Virus (CDV).

#### Scientific Classification / Habitat



- **Distribution:** Mainly located throughout the Indian subcontinent, particularly in tropical rainforests, moist deciduous forests, and grasslands.
- **Habitat:** The Kanha Tiger Reserve is located in the Maikal range of the Satpura hills, noted for its abundant Sal and bamboo forests.

#### Key Features:

- **Apex Predator:** Sits at the top of the terrestrial food chain; exhibits strictly solitary and territorial behavior.
- **Umbrella Species:** Conserving the tiger's vast habitat inherently protects numerous other co-existing species and ecosystems.

#### Conservation Status / Threats

- **IUCN Red List:** Endangered (Listed in WPA 1972 Schedule I & CITES Appendix I).
- **Key Threats:** Poaching, habitat fragmentation, human-animal conflict, and zoonotic disease spillover (e.g., CDV transmitted from feral and domestic dogs).

#### Ecological Importance

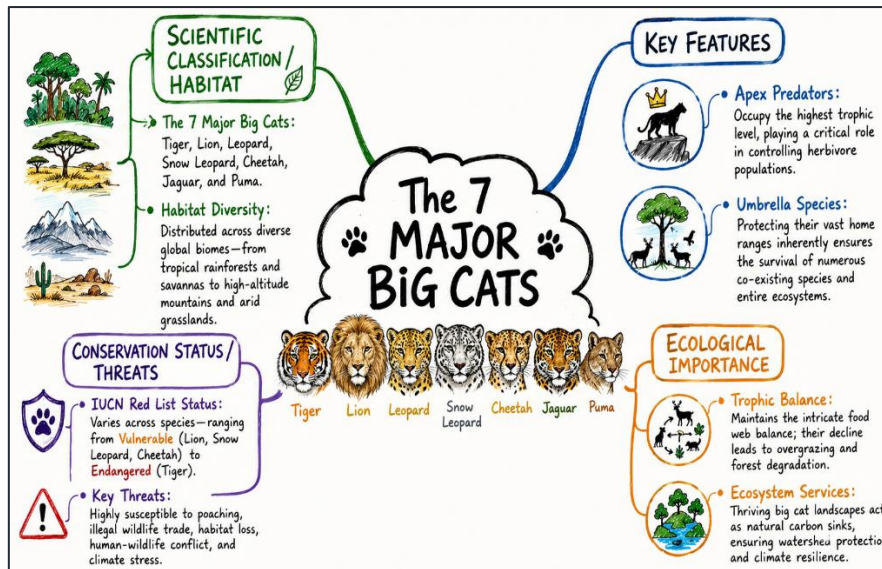
- **Ecosystem Balance:** Regulates herbivore populations (like deer and wild boar), which prevents overgrazing and maintains vegetation density.
- **Indicator Species:** A healthy, breeding tiger population signifies a robust, ecologically balanced forest environment.

QUICK REVISION BOX	
<b>UPSC Keywords:</b>	Canine Distemper Virus (CDV), Umbrella Species, Zoonotic Spillover, Project Tiger.
<b>Scientific Name:</b>	<i>Panthera tigris tigris</i> (Bengal Tiger).
<b>Habitat / Distribution:</b>	Maikal Hills, Satpura Range (Central Indian Highlands).
<b>IUCN Status:</b>	Endangered.
<b>Important Traits / Tags:</b>	Apex Predator, Solitary, Territorial.

### 69. India to Host First Big Cat Summit; 95 Countries to Participate

#### Context:

Recently, India revealed its plans to host the inaugural International Big Cat Alliance (IBCA) Summit in New Delhi, with the goal of formulating the 'Delhi Declaration' in partnership with 95 range countries to advance the cause of global big cat conservation.

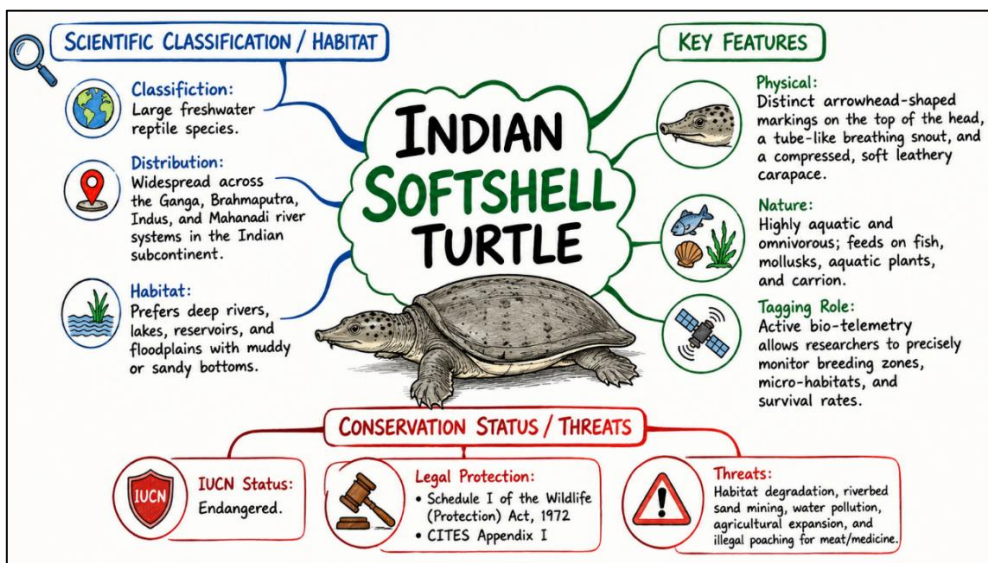


QUICK REVISION BOX	
<b>UPSC KEYWORDS</b>	IBCA   Delhi Declaration   Umbrella Species   Apex Predator   Trophic Regulation
<b>THE 7 BIG CATS</b>	<p>Tiger    Lion    Leopard    Snow Leopard    Cheetah    Jaguar    Puma</p>
<b>INDIA'S STATUS</b>	The only country to host five of the seven species in the wild.
<b>IMPORTANT TAGS</b>	Project Tiger   Project Cheetah   Top-Down Ecological Control

## 70. India's First Satellite-Tagged Ganges Soft-shell Turtle Released in Kaziranga National Park

### Context:

India's first satellite-tagged Ganges soft-shell turtle was released in Kaziranga National Park and Tiger Reserve to actively track its seasonal movement, habitat use, and migration patterns.



## Ecological Importance

- The role of this species encompasses functioning as a top predator in riverine ecosystems while also serving as an essential natural scavenger.
- In terms of conservation, it plays a crucial role in maintaining aquatic ecosystems by consuming dead and decaying organic material, thereby inhibiting the bacterial degradation processes within rivers.

QUICK REVISION BOX	
<b>UPSC Keywords:</b>	Active bio-telemetry, natural scavenger, Brahmaputra floodplain ecology.
<b>Scientific Name:</b>	<i>Nilssonia gangetica</i> .
<b>Habitat / Distribution:</b>	Turbid rivers and wetlands in Ganga-Brahmaputra-Indus basins.
<b>IUCN Status:</b>	Endangered.
<b>Important Traits / Tags:</b>	Arrowhead head markings, soft leathery shell, satellite-tagged for monitoring movement.

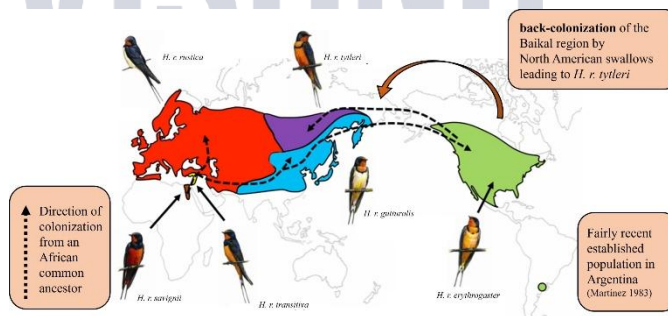
## 71. Barn Swallows in Manipur Shed their Migratory Trait

### Context:

A recent Wildlife Institute of India (WII) study revealed that Barn Swallows in Manipur's Imphal Valley have abandoned their traditional long-distance migration, establishing a permanent, year-round breeding population.

### Scientific Classification / Habitat:

- **Classification:** A small migratory passerine bird belonging to the swallow family.
- **Distribution:** Found extensively throughout Asia, Europe, and Africa.
- **Habitat:** Flourishes in proximity to wetlands, open grasslands, and areas inhabited by humans (exhibiting a high degree of synanthropy).



### Key Features:






- **Physical:** An agile flyer characterized by a unique long, deeply forked tail and shiny blue-black upperparts.
- **Diet:** Exhibits a strictly insectivorous feeding pattern.
- **Behaviour:** Noted for its extensive seasonal migration; however, the Manipur population shows a distinctive climate-driven behavioral adaptation by losing this migratory trait.

### Conservation Status / Threats

- **IUCN Status:** Least Concern.
- **Threats:** Changes in habitat, fluctuations in climate, urban development, and decreasing insect populations as a result of pesticide application.

## Ecological Importance

- **Function:** Functions as an essential natural pest-control agent within agricultural settings and wetland ecosystems.
- **Indicator:** Serves as an important bio-indicator for significant ecological and climatic shifts.

QUICK REVISION BOX		
	<b>UPSC Keywords</b>	Synanthrope species, behavioural adaptation, Meitei cultural protection (Sambrang).
	<b>Scientific Name</b>	<i>Hirundo rustica</i> .
	<b>Habitat / Distribution</b>	Global (Asia/Europe/Africa); builds cup-shaped mud nests in human-made structures.
	<b>IUCN Status</b>	Least Concern.
	<b>Important Traits / Tags</b>	Forked tail, insectivorous, shedding migratory traits for permanent residency.

## 72. DRI Recovers Two Indian Red Sand Boa Snakes in Telangana

### Context:

The Directorate of Revenue Intelligence (DRI) has recently seized two live Indian Red Sand Boa snakes as part of an anti-smuggling operation conducted in Warangal, Telangana.



### Scientific Classification / Habitat

- **Classification:** A non-venomous, burrowing snake belonging to the Boidae family.
- **Distribution:** Native to the Indian subcontinent, including India, Pakistan, and Iran.
- **Habitat:** Flourishes in dry, semi-arid areas, scrublands, and loose sandy soils.

### Key Features






- **Appearance:** A robust and sturdy physique characterized by a rounded, blunt tail that resembles a secondary head, commonly referred to as "Do-muha".
- **Behavior:** This species is mainly active during the night and is fossorial, meaning it predominantly lives underground.
- **Diet:** It captures its prey, mainly rodents, through the method of constriction.

### Conservation Status / Threats

- **Wildlife (Protection) Act, 1972:** Safeguarded from unlawful hunting, possession, and commerce.
- **IUCN Red List:** Classified as Near Threatened (NT).
- **CITES:** Listed in Appendix II.
- **Threats:** Subject to significant trafficking driven by superstitions associating the snake with black magic, sudden fortune, and unverified medicinal beliefs.

### Ecological Importance

- **Pest Management:** Functions as a natural biological control agent by managing populations of agricultural rodents.
- **Ecological Equilibrium:** An essential ambush predator within arid ecosystems.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Fossorial, Boidae, Constrictor, Bio-control agent.
 <b>Scientific Name:</b>	<i>Eryx johnii</i> .
 <b>Habitat:</b>	Semi-arid scrublands and sandy soils.
 <b>IUCN Status:</b>	Near Threatened (NT).
 <b>Important Traits:</b>	Non-venomous, nocturnal, blunt tail creating a "double-headed" illusion.

### 73. Rare Dragonfly Resurfaces in Arunachal, Underscores Need for Habitat Protection

#### Context:

Recently, the Long-tailed Duskhawker (*Gynacantha khasiaca*), a dragonfly species that is considered rare, was found again after 110 years in Namdapha National Park and Tiger Reserve in Arunachal Pradesh.



#### Scientific Classification / Habitat

- **Classification:** This insect is part of the family Aeshnidae and falls under the order Odonata.
- **Habitat:** It flourishes in pristine freshwater streams, along forest peripheries, and in undisturbed woodland areas.
- **Distribution:** This species is located throughout the Eastern Himalayan biodiversity region, which includes India, Nepal, Myanmar, and Bangladesh.

#### Key Features






- **Indicator Species:** This species is particularly sensitive to alterations in its environment; its existence signifies unspoiled freshwater ecosystems.
- **Physical Traits:** It features well-developed compound eyes that provide nearly 360° vision, a coloration that ranges from pale green to brown, and distinctive abilities to hover mid-air.
- **Behavior:** It demonstrates crepuscular activity (being active during dawn and dusk) and engages in territorial patrols.

#### Conservation Status / Threats

- **IUCN Status:** Data Deficient (DD).
- **Threats:** Extremely susceptible to habitat destruction, deforestation, chemical contamination, and the deterioration of freshwater streams.
- **Conservation Need:** Highlights the essential necessity for ongoing protection of wetland and forest habitats in Northeast India.

#### Ecological Importance

- **Food Web Function:** Serves as a top invertebrate predator that regulates pest populations, such as mosquitoes and flies, while also being a food source for larger birds and amphibians.
- **Ecosystem Well-being:** The aquatic larval phase of this organism is crucial as a biological indicator of freshwater quality and ecological equilibrium.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	Odonata, Bio-indicator, Crepuscular, Aeshnidae, Eastern Himalayas.
 <b>Scientific Name:</b>	<i>Gynacantha khasiaca</i> (Long-tailed Duskhawker).
 <b>Habitat / Distribution:</b>	Clean freshwater forest streams / Northeast India and neighboring nations.
 <b>IUCN Status:</b>	Data Deficient (DD).
 <b>Important Traits:</b>	Near-360° vision, agile mid-air hovering, purely aquatic larval stage.

## 74. New Cascade Frog Species Recorded in Nagaland's Hill-Stream Habitats

### Context:

Scientists from the Zoological Survey of India (ZSI) recently discovered a new-to-science cascade-dwelling frog species (*Amolops kamal*) in the hill-stream habitats of Nagaland's Kiphire district.



### Scientific Classification / Habitat

- **Classification:** This species is an amphibian that belongs to the genus *Amolops*, which is part of the Ranidae family, commonly known as true frogs.
- **Distribution:** It is found in the Northeast Himalayan biodiversity hotspot, specifically in Nagaland, India.
- **Habitat:** This frog species is adapted to live solely in rapidly flowing forest streams, rocky cascades, and waterfalls.

### Key Features






- **Streamlined Adaptations:** Features robust limbs, broad webbing between the toes, and sticky toe pads that enable it to cling to smooth rocks in fast-flowing water currents.
- **Cryptic Nature:** This species is classified as "cryptic"—morphologically indistinguishable from its relatives yet genetically unique, belonging to the *Amolops indoburmanensis* complex.

### Conservation Status / Threats

- **Threats:** Extremely vulnerable to pollution in freshwater systems, deforestation, hydropower initiatives, and localized disruptions to their habitat.
- **IUCN Status:** Currently unassessed (recently identified).

### Ecological Importance

- **Bio-indicator:** The existence of this organism serves as a clear sign of pristine, oxygen-abundant, and undisturbed freshwater hill-stream ecosystems.
- **Food Web Role:** It plays a crucial role in regulating insect populations and sustaining the ecological equilibrium of micro-habitats.

QUICK REVISION BOX	
 <b>UPSC Keywords:</b>	<i>Amolops kamal</i> , Cryptic species, ZSI, Bio-indicator, Hill-stream ecosystem.
 <b>Scientific Name:</b>	<i>Amolops kamal</i> (Commonly: Nagaland Cascade Frog).
 <b>Habitat / Distribution:</b>	Fast-flowing rocky streams / Kiphire, Nagaland.
 <b>IUCN Status:</b>	Not Assessed.
 <b>Important Traits:</b>	Adhesive toe pads, streamlined body, relies on highly oxygenated water.



## Telangana Current Affairs

### 75. Rare Rashtrakuta Veeragallu Unearthed in Telangana

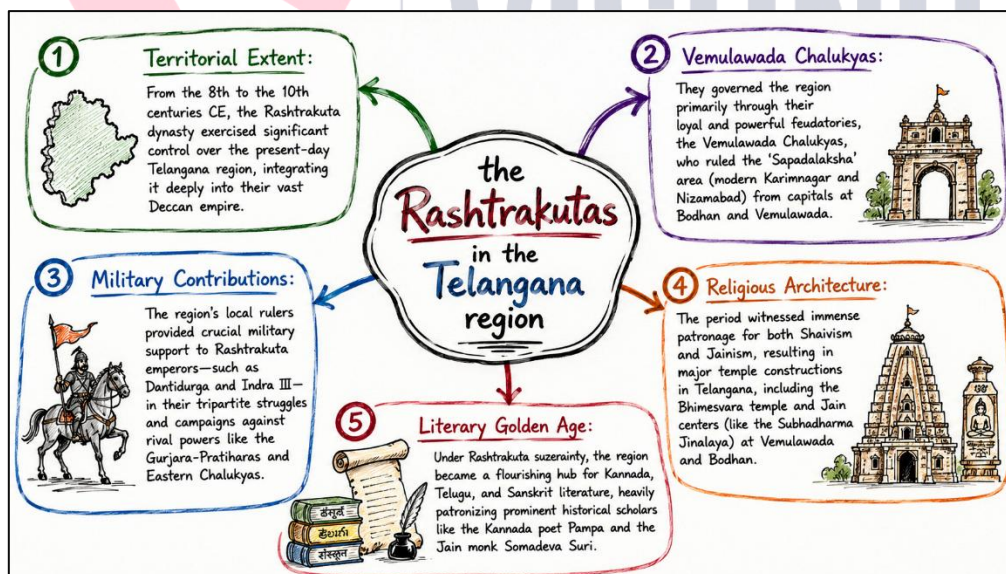
#### Context:

A rare 10th-century Rashtrakuta-era “Breast-Cutting Veeragallu” was recently discovered at a Shiva temple in Telangana. Located in Kodumunja village, Vemulawada mandal (Rajanna-Sircilla district), Telangana, India.



#### Historical & Cultural Significance:

- **Time Period:** The memorial stone belongs to the 10th century CE, corresponding to the Rashtrakuta period.
- **Sthanachedana Veeragallu:** The sculpture portrays a rare, extreme devotional practice where a wife severs her breast to accompany her deceased husband in pursuit of moksha (salvation).
- **Social Sacrifice:** Veeragallu (hero stones) were traditionally erected to immortalize individuals who sacrificed their lives for the welfare of society, such as dying for timely rainfall.



#### Other Archaeological Findings

- **Naga Deity Sculpture:** Found in the same temple premises, dating to the same Rashtrakuta period.
- **Iconography:** The serpent deity is carved holding a sword in its right hand and a child in its left.
- **Religious Beliefs:** Historically, devotees worshipped Naga deities seeking children, long life, and marital prosperity. Successful fulfillment of these wishes led to the commissioning of such sculptures as temple offerings.

## 76. Ganapatideva and Somaladevi Depicted in 13th-Century Sculpture

### Context:

A rare 13th-century sculptural panel depicting Kakatiya Emperor Ganapatideva and Queen Somaladevi was recently discovered, marking a first-of-its-kind find in Telangana.



### Geographical Location

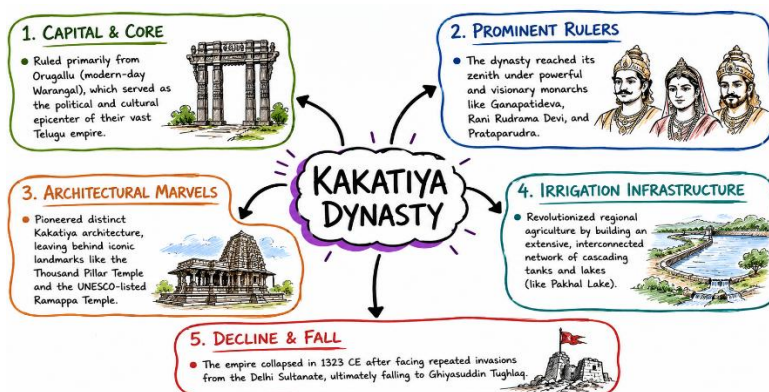
- **Site:** Found in Totapalli village, Bejjanki mandal, Siddipet district (Telangana, India).

### Historical Significance

- **Emperor Ganapatideva (1199–1262 CE):** The longest-reigning monarch of the Kakatiya dynasty. He successfully united most of the Telugu-speaking regions (present-day Andhra Pradesh and Telangana) through a mix of warfare and diplomacy.
- **Succession:** He was succeeded by his prominent daughter, Queen Rudrama Devi.
- **Rarity:** While Kakatiya temple sculptures are common, clearly identifiable depictions of Kakatiya royals are extremely rare.

### Art, Architecture & Iconography

- **The Artifact:** Carved on a 3-square-foot granite slab, showing the royal couple worshipping a miniature Sivalinga alongside their royal guru, Visveswara Sivacharya.
- **Royal Insignia:** Features Chatris (royal parasols) carved above the figures' heads, a crucial insignia confirming their royal identity.
- **Religious Iconography:** Depicts Ganapatideva as a devout Shaivite, adorned with rudraksha malas and a bun-shaped royal headgear. Queen Somaladevi sports a traditional Dhammilla-style hairdress.
- **Craftsmanship:** The sculptural style and iconography closely resemble the Kakatiya architectural features of the nearby Trikuta temple.



## 77. Kakatiya Hero Stones Unearthed in Sangareddy

### Context:

The recent discovery of four Kakatiya-era half-relief hero stones (veeragallu) highlights medieval martial traditions and the cultural honoring of combat sacrifices.

### Geographical Location

- **Site:** Rameswaram Banda in Patancheru mandal, Sangareddy district (Telangana, India).

#### Historical & Cultural Significance

- **Time Period:** Attributed to the Kakatiya period.
- **Hero Stones (Veeragallu):** Erected as memorial stones to commemorate the courage of warriors who sacrificed their lives in battle, believing they attained Veera Swarga (the heavenly realm of valor).
- **Elite Forces (Ekkatis / Ekanga Veeras):** Two of the warriors are identified as Ekkatis—highly trained, elite fighters comparable to modern-day commandos, skilled in advanced combat and the use of multiple weapons.



#### Art, Architecture & Iconography

- **Sculptural Style:** Carved as half-relief (embossed) sculptures in the distinctive Kakatiya style.
- **Warrior Depiction:** The figures feature flowing side-knotted hairstyles, large ear ornaments, necklaces, warrior belts, waistbands, and anklets.
- **Weaponry:** Two warriors are depicted wielding broad swords and bows (the Ekkatis), while the other two hold spears and shields.
- **Religious Affiliation:** A Shiva Linga carved above one warrior's head suggests strong devotion to Lord Shiva (Shaivism), a prominent religious sect during the Kakatiya rule.

## 78. NITI Aayog Flags Dropouts and Digital Divide in Telangana

### Context:

A NITI Aayog report notes that Telangana's school education is at a critical turning point, shifting its focus from ensuring basic access to improving learning outcomes, student retention, and bridging digital divides.

### Key Challenges Identified

- **High Dropouts:** The secondary-level dropout rate stands at 13.3%, primarily occurring during the critical transition phase after Class 8.
- **School Viability:** The state struggles with resource rationalization, having 2,245 schools with zero enrollment. Furthermore, 5,001 single-teacher schools currently cater to 62,288 students.
- **Private Migration:** Despite government efforts to upgrade infrastructure and introduce English-medium education, students steadily migrate to private institutions due to perceptions of better discipline, exam preparation, and digital infrastructure.
- **Infrastructure Deficit:** While smart classrooms stand at 63% statewide, rural connectivity remains poor. Crucial facilities like labs, libraries, and CwSN-friendly (Children with Special Needs) toilets (only 2.7%) are severely lacking.
- **Staffing Issues:** The system faces uneven teacher deployment, shortages of specialized subject teachers, and high administrative burdens on staff.

### Way Forward:

- Systemic reforms prioritizing employability, digital competence, and skill development are urgently required to prevent deepening inequality and help the state emerge as a national model for inclusive education.

## 79. Rare Aquatic Insects Discovered in Eastern Ghats

### Context:

Scientists from the Zoological Survey of India (Hyderabad Centre) and VHNSN College under Madurai Kamaraj University recorded two rare aquatic insect species — *Enithares metallica* and *Enithares intricata* — for the first time in the Indian subcontinent from the Eastern Ghats.



### Key Facts

- Species belong to aquatic backswimmers (family: Notonectidae).
- Previously known only from Southeast Asia.
- Discovery expands species distribution in the Oriental biogeographic region.
- Study published in Journal of Diversity Studies.

### Location Relevance

- **Eastern Ghats:** discontinuous mountain range along eastern India.
- Spread across Andhra Pradesh, Telangana, Odisha, Tamil Nadu and Karnataka.
- Rich but underexplored freshwater biodiversity zone.

### Scientific Methods Used

- Integrative taxonomy approach adopted.
- Included:
  - Classical morphology
  - DNA barcoding
  - Morphometric analysis
  - Phylogenetic reconstruction
  - Principal Component Analysis (PCA)
- Mitochondrial COI gene sequencing used for species confirmation.

### Ecological Importance

- Predators of mosquito larvae and aquatic invertebrates.
- Help maintain freshwater ecological balance.
- Serve as bioindicators of freshwater quality.
- Useful in ecological monitoring and conservation planning.

## 80. Three New Aquatic Beetle Species Discovered in India

### Context:

Scientists from the Zoological Survey of India (ZSI) discovered three new aquatic scavenger beetle species in India (Telangana and Uttar Pradesh), doubling the country's known species of the *Amphiops* genus.

### Taxonomy & Specific Locations:

- **Genus Character:** *Amphiops* genus; aquatic scavenger beetles thriving in shallow, muddy, vegetated freshwater.
- ***Amphiops hyderabadii*:** Discovered in a seasonal pond in Hyderabad, Telangana.
- ***Amphiops kinnerasani*:** Found inside Kinnerasani Wildlife Sanctuary, Telangana.
- ***Amphiops sandi*:** Discovered inside Sandi Bird Sanctuary, Uttar Pradesh.

**Scientific Methodology:**

- **Identification:** Confirmed via distinct body morphology, punctation patterns, and reproductive features.
- **DNA Barcoding:** Mitochondrial COI gene sequencing proved a distinct 7% to 17% genetic divergence.

**Ecological Significance & Policy Impact**

- **Biodiversity:** Number of known Amphips species in India successfully doubled from three to six.
- **Evolutionary History:** Establishes the Indian peninsula as a vital diversification hub linking Southeast Asian and tropical lineages.
- **Protected Areas:** Highlights the rich, overlooked micro-fauna inside Kinnerasani WS and Sandi Bird Sanctuary.
- **Environmental Conservation:** Underscores the urgent need to protect shrinking wetlands from urbanization and degradation.

**81. NFHS-6: Telangana Leads in Access, Lags in Surgical Discipline****Context:**

According to the NFHS-6 report by the Health Ministry, Telangana leads India in maternal healthcare indicators but records the nation's highest Caesarean section (C-section) rate at 62.2%.

**Maternal Healthcare & C-Section Crisis:**

- **Institutional Deliveries:** Achieved 98.8%, significantly higher than the national average of 90.6%.
- **C-Section Surge:** Rose to 62.2% from NFHS-5 (60.7%), more than double the national average (27.2%).
- **Private vs Public:** Private facilities average 83.9% C-sections; government hospitals stand at 48.1%.
- **Antenatal Care (ANC):** 80.3% of mothers completed at least 4 ANC visits (National: 65.2%).
- **Nutritional Inputs:** 81% of pregnant women consumed Iron and Folic Acid tablets for 100+ days.

**Child Health & Nutrition Upgrades:**

- **Postnatal Care:** 92.3% of mothers and 93% of newborns received care within two days of birth.
- **Stunting Reduction:** Malnutrition indicator for stunting dropped from 33.1% to 27%.
- **Wasting & Underweight:** Wasting decreased to 16.9% and underweight prevalence fell to 27.8%.

**Key Themes:**

- **Healthcare Paradox:** High institutional access coexists with potential medical over-commercialization.
- **Policy Intervention:** Emphasizes the need for surgical audits and strict regulation of private medical practices.
- **SDG Target 3:** Serves as critical data for analyzing progress towards Sustainable Development Goal 3 (Good Health).

## 82. Crisis in Karimnagar Silver Filigree Industry

### Context:

A 260% surge in silver prices over five years has severely hit Telangana's Karimnagar Silver Filigree industry, dropping business by nearly 50%.

### Key Issue:

- Silver prices spiked by 260% in five years, causing sales to plummet by 50%.
- Demand for handcrafted silver artefacts has declined sharply.
- Buyers are shifting towards silver bullion and coins as an investment.

### About Silver Filigree:

- Intricate metal craft using fine silver wires, locally known as Tarkashi.
- Crafted manually through precise "eye, flame, and hammer" coordination.
- Famous for figures like deer, peacocks, ships, and fine jewellery.



### Historical Background:

- The traditional craft is estimated to be around 450 years old.
- Deeply linked to the rise of the Qutb Shahi and Asaf Jahi periods.
- The art form flourished extensively during the Nizam rule.

### Geographical Indication (GI):

- Karimnagar Silver Filigree officially received the GI tag status in 2007.

### Economic Challenges:

- High raw material costs have drastically reduced sales and profit margins.
- Making charges have declined significantly, hurting artisan sustainability.
- Artisans are forced to shift towards making smaller and lighter products.

### Current Status:

- The industry nearly collapsed after Independence but was revived in the 1990s.
- Around 150 families currently depend on the craftwork under SIFKA.

### Important Personalities:

- Ashok Arroju: President of SIFKA and national award-winning artisan.
- Venkateswarlu Akoju: Treasurer of SIFKA, managing artisan affairs.

### Related Craft:

- Nakkashi metalcraft from the same region has also been severely affected.
- PM Narendra Modi gifted a regional Nakkashi box during his UAE visit.

### Cultural Importance:

- Represents Telangana's rich traditional craftsmanship and soft-power heritage.
- Passed down as precious heirloom art across multiple generations.

## 83. Telangana Fiscal Performance 2025-26

### Context:

Telangana's revenue receipts for FY 2025-26 fell below target to ₹2.6 lakh crore, driven down by massive tax deficits and an escalating debt burden.

### Revenue Receipts:

- Total receipts hit ₹2.6 lakh crore against the ₹2.84 lakh crore estimate.
- Actual revenue receipts were short by ₹38,000 crore against the budget target.
- Union tax devolution was stable at ₹21,080 crore (99.46% of target).

### Borrowings & Debt:

- Borrowings and liabilities scaled up significantly to ₹77,762 crore.
- Capital receipts breached the initial budget estimate of ₹55,116 crore.
- Shows a rising and unsustainable dependence on debt to fund operations.

#### Tax Revenue:

- Total tax collection stood at ₹1.52 lakh crore (87.72% of budget target).
- GST collections contributed ₹52,375 crore against a ₹59,704 crore target.
- Stamps & Registration brought ₹15,251 crore; State Excise yielded ₹23,359 crore.

#### Expenditure Burden:

- Interest payments mounted to ₹29,679 crore (153% of budget estimate).
- Salary and wage bills dragged down state finances at ₹47,400 crore.
- Pensions stood at ₹19,371 crore, with 5 pending DA installments looming.

#### Deficit Indicators:

- Revenue Deficit: Slipped to ₹9,235 crore against a projected surplus.
- Fiscal Deficit: Slid down heavily to ₹77,762 crore.
- Primary Deficit: Reached ₹48,082 crore, marking 138% of estimations.

#### Key Concerns:

- A mounting historical debt burden is consuming state revenues via interest.
- Severely reduced fiscal space for infrastructure and capital asset creation.
- Heavy borrowing dependency threatens the stability of long-term welfare spending.

## 84. Mesolithic–Neolithic Paintings Found at Dasarlapalli

### Context:

Recent discoveries of unprotected Mesolithic-Neolithic rock art sites in Telangana, India, have prompted archaeologists to demand immediate conservation.



A painting of an ox on the "Eddula Gundu" rock art site at Dasarlapalli village in Mulugu mandal of Siddipet district.

### Location & Geography

- **Location:** Forest outskirts of Dasarlapalli village, Mulugu mandal, Telangana, India.
- **Topography:** Primary sites are situated at an altitude of 624 meters above sea level.

### Key Archaeological Sites & Findings

- **Enugu Gundu (Elephant Rock):** Features prehistoric paintings of deer, cattle, and human figures.
- **Unique Weaponry Art:** Highlights a prominent image of a human carrying a backward-pronged harpoon.
- **Musical Rock:** An adjacent boulder containing 24 cup marks, likely used for rituals or recreation.
- **Neolithic Grooves:** Nearby rock grooves used by early humans for sharpening stone weapons.
- **Eddula Gundu (Bull Rock):** Showcases two distinct bull figures and prehistoric paint traces.
- **Quarry Gundu:** Features bull depictions alongside mysterious, script-like symbols.
- **Artifacts:** Abundant microlithic (small stone) hunting tools found scattered across the entire area.

### Historical Significance & Conservation

- **Timeline:** Artifacts and art span the Mesolithic to the Neolithic ages.
- **Significance:** Provides crucial evidence of regional early human habitation and cultural evolution.
- **Threats:** Sites are actively deteriorating due to exposure to rain and natural weathering.

## 85. Supreme Court Halts Tree Felling in KBR Park

### Context:

The Supreme Court stayed tree felling in KBR National Park's Eco-Sensitive Zone (ESZ) amidst protests against the H-CITI infrastructure project.

### KBR National Park Facts

- **Location:** Situated in Jubilee Hills, Hyderabad, Telangana, India.
- **Geography:** Spans 390 acres, serving as a critical urban green lung and micro-basin cooler.
- **Biodiversity:** Hosts 600+ plant species, 140 bird species, and diverse fauna like peacocks and civets.
- **History:** Formerly the Chiran Palace estate; officially designated as a National Park in 1998.

### The Ecological Dispute

- **Infrastructure Threat:** The H-CITI project proposes flyovers encircling the park, endangering over 1,300 trees.
- **ESZ Reduction:** The ESZ was allegedly reduced to just 3–29.8 meters to bypass environmental clearances.
- **Judicial Mandate:** Activists cite a 2022 SC ruling mandating a default 1 km ESZ for protected areas.
- **Ecological Risks:** Deforestation risks worsening urban heat islands, noise pollution, and stormwater flooding.
- **Core Demands:** Activists seek comprehensive studies on carbon emissions, biodiversity loss, and traffic impacts before construction.

## Andhra Pradesh Current Affairs

### 86. India's First Ethanol-to-Jet Fuel (SAF) Plant

#### Context:

India recently marked a significant milestone in its clean energy transition by initiating the construction of its first Ethanol-to-Jet (ETJ) Sustainable Aviation Fuel (SAF) plant.

#### Key Highlights of the Project:

- **Location:** Established at NTPC Green Energy's Green Hydrogen Hub in Pudimadaka, Andhra Pradesh.
- **Executing Agencies:** NTPC awarded the primary EPC contract to Bengaluru-based GPS Renewables.
- **Technology Backup:** Lummus Technology provides the core ETJ license, while Xytel India handles engineering.
- **Production Capacity:** Designed to generate 1,800 tonnes of SAF annually by March 2029.

#### The Technological Process:

- Utilizes ethanol directly derived from captured carbon dioxide.
- The multi-step process includes ethanol-to-ethylene conversion and olefins oligomerisation.
- Final hydroprocessing yields market-ready Sustainable Aviation Fuel and renewable diesel.

#### Significance:

- **Sustainable Aviation Fuel (SAF):** A green alternative to fossil jet fuels, cutting lifecycle carbon emissions by up to 80%.
- **CORSIA Compliance:** Helps Indian aviation align with the ICAO's Carbon Offsetting and Reduction Scheme.
- **Energy Security:** Reduces reliance on imported Aviation Turbine Fuel (ATF) by leveraging domestic biofuel.
- **Net Zero Goals:** Directly supports India's "Panchamrit" target of achieving net-zero emissions by 2070.
- **Circular Economy:** Converts waste CO<sub>2</sub> into valuable transport fuel, preventing atmospheric greenhouse gas buildup.

This indigenous capacity building shifts India from a technology importer to a domestic producer, making green aviation commercially viable while utilizing the existing ethanol ecosystem.

### 87. Visakhapatnam ITI Cluster: First PM-SETU Approval

#### Context:

Andhra Pradesh has become the first state in India to operationalize an industry partnership under the PM-SETU scheme, securing the National Steering Committee's approval for the Visakhapatnam ITI Cluster.

**Key Project Highlights:**

- **Industry Partnership:** The Strategic Investment Plan (SIP) was submitted by ArcelorMittal Nippon Steel India and NAMTECH.
- **Delivery Framework:** Operates on an industry-led "Hub-and-Spoke" model to integrate government ITIs with private sector expertise.
- **Core Objectives:** Focuses on critical infrastructure upgrades, improving training quality, and aligning courses with industry demands.

**Significance:**

- **PM-SETU Definition:** Stands for Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs.
- **Scale and Investment:** A ₹60,000 crore central initiative to comprehensively modernize 1,000 government ITIs nationwide.
- **Nodal Authority:** Administered by the Ministry of Skill Development and Entrepreneurship (MSDE).
- **Bridging the Skill Gap:** Addresses the critical mismatch between traditional vocational training and the needs of high-growth sectors.
- **Demographic Dividend:** Essential for equipping India's massive working-age population with employable, future-ready capabilities.
- **PPP in Education:** Demonstrates a highly effective Public-Private Partnership approach to institutional governance and workforce development.

PM-SETU shifts India's skilling paradigm from a traditional government-push approach to an industry-pull model, ensuring the emerging workforce is directly tailored for the modern economy.

**88. Operation Dandayana: AP Police Initiative for Women's Safety****Context:**

The Andhra Pradesh Police has launched a comprehensive statewide drive called 'Operation Dandayana'. Operating under a strict zero-tolerance policy, the initiative aims to curb crimes against women and children while ensuring speedy, time-bound justice for victims.

**Key Highlights of the Operation:**

- **Time-Bound Investigation:** Mandates the filing of chargesheets within 60 days for all women-related and POCSO offenses.
- **Speed Trial Monitoring:** Introduces a dedicated system to review case progress regularly from the district up to the state level.
- **Fast-Track Justice:** Sensational and severe offenses will be directly transferred to fast-track courts to ensure stringent punishments.
- **Tech-Enabled Surveillance:** Employs geo-tagging and Facial Recognition Systems (FRS) to continuously track repeat and suspicious offenders.
- **Sexual Offender Sheets:** Habitual offenders will have specific history sheets opened to strictly monitor their movements.
- **Holistic Rehabilitation:** Integrates counseling services and collaborates with NGOs and legal experts to support the victims' emotional recovery.
- **Community Policing:** Expands the "Neighbourhood Watch" program across villages and towns to boost public participation.

**Constitutional Backing**

- **Constitutional Mandate:** Directly aligns with Article 15(3) (special provisions for women/children) and Article 21 (Right to a speedy trial and life with dignity).

- **Statutory Alignment:** Reinforces the Criminal Law (Amendment) Act, 2018, which legally mandates concluding rape investigations within two months.
- **Internal Security & e-Governance:** Showcases the practical application of technology (FRS, Geo-tagging) in modernizing law enforcement and crime prevention.

'Operation Dandayana' exemplifies a multi-pronged governance approach—combining rapid legal procedures, technological surveillance, and community-driven rehabilitation to effectively tackle gender-based violence.

## 89. Andhra Pradesh: A Strategic Hub for Rare Earth Elements (REE)

### Context:

A recent report highlights that Andhra Pradesh holds nearly 30% of India's monazite reserves. This positions the state as a critical player in developing India's strategic minerals sector and reducing import dependence on China.

### Key Highlights of the Report:

- **Global Standing:** India holds about 8% of global REE reserves, making it the third-largest holder worldwide.
- **AP's Contribution:** Out of India's 13.15 million tonnes of monazite, Andhra Pradesh accounts for approximately 3.8 million tonnes.
- **Import Dependency:** Despite vast reserves, India imports 60-80% of its REE requirements, primarily from China, due to poor processing capacity.
- **State Investments:** The AP government plans a ₹50,000 crore investment over the next decade for REE mining and downstream manufacturing.
- **Strategic Corridors:** The Union Government plans dedicated rare earth corridors in coastal states, with a comprehensive policy expected by June 2026.

### Significance:

- **Monazite Sands:** Placer deposits found along the coastal regions of AP, Odisha, Kerala, and Tamil Nadu.
- **Mineral Composition:** Contains light rare earths (cerium, lanthanum, neodymium) crucial for EVs, semiconductors, and green technology.
- **Radioactive Element:** Monazite contains Thorium, a radioactive material strictly regulated under the Atomic Energy Act, 1962.
- **Regulatory Bottleneck:** Due to its radioactive nature, commercial mining is heavily restricted to state-run IREL (India) Limited, curbing private participation.
- **Strategic Autonomy:** Developing domestic REE processing is vital for India's technological sovereignty and transition to renewable energy.

Leveraging Andhra Pradesh's monazite reserves through advanced processing and private-public partnerships is essential to break the Chinese monopoly on critical minerals.

## 90. MEPMA & Araku Coffee MoU: A Push for Women's Entrepreneurship

### Context:

Andhra Pradesh's Mission for Elimination of Poverty in Municipal Areas (MEPMA) has signed an MoU with Native Araku Coffee Pvt. Ltd. to launch 100 women-led coffee outlets, aiming to boost urban female entrepreneurship.

### Key Highlights of the Initiative:

- **Target Beneficiaries:** Focuses on urban Self-Help Group (SHG) members and economically disadvantaged women.
- **Expansion Plan:** Operates on a franchise model, planning at least two shops per district within two years.
- **Financial Setup:** Capital required is ₹5.9 lakh for physical stores and ₹10 lakh for EV-based mobile shops.
- **Scheme Convergence:** Entrepreneurs will receive financial subsidies through central schemes like PMFME and PMEGP.
- **Collaborative Support:** MEPMA identifies and funds beneficiaries; Araku Coffee provides training and strategic business guidance.

#### Significance:

- **Araku Coffee Profile:** A premium Arabica variety organically cultivated by tribal communities in the Eastern Ghats (ASR District).
- **Geographical Indication:** Araku Valley Arabica Coffee holds a prestigious GI tag, signifying its unique regional quality.
- **MEPMA's Role:** The nodal agency in AP for urban poverty alleviation, transforming marginalized women into micro-entrepreneurs.
- **PMFME Scheme:** Pradhan Mantri Formalisation of Micro food processing Enterprises aids unorganized food micro-enterprises.
- **PMEGP:** A credit-linked subsidy program by the MSME Ministry to generate employment through micro-enterprises.

This initiative successfully links rural tribal agricultural heritage (Araku Coffee) with urban women's empowerment, creating a resilient, localized micro-economy.

### 91. Jaladhara-Jalaharathi Programme: Boosting Water Security

#### Context:

The Andhra Pradesh government's flagship "Jaladhara-Jalaharathi" programme is witnessing rapid execution in the NTR district. Driven by a 100-day special action plan, the initiative focuses on large-scale water conservation and groundwater recharge.

#### Key Highlights of the Initiative:

- **Targeted Action Plan:** Executed as a 100-day drive focusing on tank desilting, sluice repairs, and feeder channel restoration.
- **Scientific Approach:** Implements village-level water budgeting based on a thorough analysis of decade-long hydrological data.
- **Infrastructure Push:** Prioritizes the construction of recharge pits and percolation tanks to capture monsoon runoff effectively.
- **Massive Scale:** Aims to sustainably rejuvenate 439 traditional water bodies across the NTR district.
- **Community Driven:** Relies heavily on decentralized public participation and local irrigation associations for execution.

#### Significance:

- **Panchayati Raj Empowerment:** Aligns with the 11th Schedule (Article 243G), empowering local bodies in minor water management.
- **Sustainable Goals:** Directly advances India's commitment to SDG 6 (Clean Water and Sanitation).
- **Drought Mitigation:** Buffers groundwater tables against erratic monsoons, building climate resilience for rainfed agriculture.

- **Ecological Balance:** Restoring rural tanks supports local biodiversity and serves as a critical lifeline for livestock.

The "Jaladhara" model demonstrates that combining traditional water harvesting wisdom with scientific data and decentralized community participation is the most viable path to climate-resilient agriculture in Andhra Pradesh.

## 92. Carrier Global's Rs 1,000 Cr Unit in Sri City & AP's Industrial Push

### Context:

Andhra Pradesh is rapidly transforming into India's digital and manufacturing powerhouse. Recently, IT & HRD Minister Nara Lokesh laid the foundation for a major Carrier Global project, significantly boosting the state's industrial landscape.

### Key Highlights:

- **Major Investment:** Carrier Global is setting up a new air-conditioner manufacturing unit worth Rs 1,000 crore.
- **Project Location:** This state-of-the-art facility is situated in Sri City, Tirupati district.
- **Job Creation:** The upcoming project is expected to generate livelihood opportunities for around 3,000 people.
- **State Vision:** The AP government aims to position the state as the "Cool Capital of India".
- **Manufacturing Targets:** Sri City aims to meet 60% of India's AC demand by 2027 and 80% by 2028.
- **New Tech Initiative:** Launch of 'Naipunyam', India's first Conversational AI-based Skill Assessment Platform.
- **Ecosystem Growth:** AP is actively building an entire ecosystem for data centers and advanced cooling technologies.

### Core definitions:

- **Sri City:** A prominent Special Economic Zone (SEZ) and Integrated Business City in Tirupati district.
- **Industrial Success:** It is a flagship hub representing both "Make in India" and "Made in AP" initiatives.
- **HVAC Sector:** The acronym stands for Heating, Ventilation, and Air Conditioning.
- **Cabinet Portfolios:** Minister Nara Lokesh holds the Human Resources Development (HRD), IT, and Electronics portfolios.
- **Geography:** Tirupati district was officially formed in April 2022 during the AP district reorganization.

## 93. Andhra Pradesh Secures 2nd Spot in National Panchayat Awards-2025

### Context:

Andhra Pradesh has emerged as a top-performing state in rural governance by securing five National Panchayat Awards in 2025. Announced by the Union Ministry of Panchayati Raj, this achievement highlights the state's strong commitment to decentralized administration, good governance, and sustainable rural development.

### Key Highlights:

- **National Standing:** AP tied with Odisha for the 2nd position nationwide, trailing only behind Karnataka.
- **Nanaji Deshmukh Puraskar:** Kuppam Block Panchayat (Chittoor) was ranked India's 3rd best block, winning Rs 1.5 crore.
- **Good Governance:** Srungavaram GP (Visakhapatnam) secured the 1st rank nationally, earning Rs 1 crore.
- **Women-Friendly Panchayat:** Bokkasam Palem GP (Tirupati) achieved the 1st rank, receiving Rs 1 crore.
- **Poverty-Free & Livelihoods:** Chemmullapalli GP (YSR district) won the 2nd rank along with a Rs 75 lakh prize.
- **Infrastructure:** Gundamala GP (Prakasam) took the 3rd rank for self-sufficient infrastructure (Rs 25 lakh).

### Constitutional & Historical Background

- **73rd Amendment Act:** Constitutionalized Panchayati Raj Institutions (PRIs) in India in 1992.
- **National Panchayati Raj Day:** Celebrated annually on April 24 to commemorate the enforcement of the 73rd Amendment.
- **Historical Context:** AP was the second state in India (after Rajasthan) to establish the Panchayati Raj system in 1959.
- **Constitutional Provision:** Article 40 (DPSP) directs the State to organize village panchayats and endow them with power.
- **Award Namesakes:** The awards honor social reformers Nanaji Deshmukh and Deen Dayal Upadhyay for their rural development visions.

### 94. Rising Cybercrimes in Andhra Pradesh: NCRB 2024 Report

#### Context:

The latest 2024 National Crime Records Bureau (NCRB) data reveals a steady rise in cybercrimes in Andhra Pradesh. The surge highlights growing digital vulnerabilities, particularly concerning financial frauds and crimes against women and children.

#### Key Highlights of the Report:

- **State Ranking:** AP registered 2,528 cybercrime cases in 2024, ranking 8th in the country.
- **National Context:** India saw over 1 lakh cases, with Telangana ranking first with 27,230 cases.
- **Statistical Rates:** AP has a cybercrime rate of 4.7 per lakh population and a low chargesheeting rate of 28.6%.
- **Major Offenses:** The bulk of AP's cases involved cheating by personation and identity theft.
- **Vulnerable Groups:** Police recorded 642 cybercrimes against women (stalking, blackmail) and 55 against children.

#### Static Relevance & Core Concepts:

- **NCRB:** Formed in 1986 under the Ministry of Home Affairs to serve as the national repository of crime data.
- **IT Act, 2000 (Sec 66):** Section 66C penalizes identity theft, while Section 66D deals with cheating by personation.
- **IT Act, 2000 (Sec 67):** Sections 67, 67A, and 67B strictly penalize the transmission of obscene or sexually explicit material.

- **Right to Privacy:** Cyberstalking and data theft violate Article 21 (Right to Life and Liberty - Puttaswamy Judgement).
- **Bharatiya Nyaya Sanhita (BNS):** Modern penal provisions are now being applied alongside the IT Act to tackle organized cybercrimes.

The low chargesheeting rate (28.6%) in AP highlights a critical need for enhanced digital forensics training and capacity building within state law enforcement agencies.

### 95. Daughters' Coparcenary Rights: AP High Court Ruling

#### Context:

The Andhra Pradesh High Court has definitively reaffirmed that daughters acquire equal coparcenary rights in their father's ancestral property by birth, enforcing the mandate of the Hindu Succession (Amendment) Act, 2005.

#### Key Highlights of the Judgement:

- **Equal Share Granted:** The Court modified an older decree, elevating a daughter's share to equal that of her brother.
- **Father's Survival Irrelevant:** The father does not need to be alive when the 2005 amendment was enacted.
- **Crucial Cut-off Date:** The sole legal prerequisite is that the daughter must be alive on September 9, 2005.
- **Judicial Flexibility:** Courts hold the power to modify preliminary partition decrees if new legal changes occur before the final decree.

#### Static Relevance & Core Concepts:

- **Hindu Succession Act, 1956:** Originally, the traditional Mitakshara law restricted joint family property (coparcenary) rights exclusively to the male lineage.
- **2005 Amendment (Section 6):** Dismantled this patriarchal framework by conferring coparcenary status on daughters by birth.
- **Vineeta Sharma v. Rakesh Sharma (2020):** The landmark Supreme Court verdict establishing that the 2005 amendment is retroactive in nature.
- **Constitutional Alignment:** Upholds Article 14 (Equality before Law) and Article 15 (Prohibition of discrimination based on sex).
- **Economic Empowerment:** Independent property ownership is a foundational pillar for women's financial security and social standing.

This progressive ruling ensures that procedural delays in partition suits cannot be weaponized to deny women their substantive property rights enshrined under the 2005 amendment.

### 96. Mangrove Encroachment in West Godavari: An Ecological Crisis

#### Context:

Large stretches of ecologically sensitive mangrove forests along the Perupalem coast in West Godavari are facing severe threats due to rampant encroachment and their illegal conversion into aquaculture ponds.

#### Key Highlights of the Issue:

- **Drastic Decline:** Mangrove cover in the region has shrunk drastically from 2,000 acres in the 1950s to barely 510 acres today.

- **Illegal Conversions:** Nearly 70 acres of crucial creek and mangrove areas were recently converted into aqua ponds under the guise of tourism.
- **Regulatory Violations:** Aqua cultivation is operating illegally within the prohibited 300 to 500-metre radius of the forests.
- **Demanded Action:** Environmentalists are seeking an urgent joint departmental survey utilizing GPS mapping and historical land records.
- **Legal Recourse:** The Coastal Environment Protection Committee has threatened to approach the National Green Tribunal (NGT) over administrative inaction.

#### Static Relevance & Core Concepts:

- **CRZ-I Classification:** Mangroves are highly sensitive ecosystems strictly protected under Coastal Regulation Zone (CRZ-I) norms.
- **Statutory Backing:** CRZ notifications are issued by the MoEFCC under the Environment (Protection) Act, 1986.
- **Ecological Bio-shields:** Mangroves act as natural shock absorbers, protecting coastal communities from cyclones and storm surges.
- **Blue Carbon Sinks:** Coastal ecosystems are highly effective at sequestering carbon, aiding in climate change mitigation.
- **NGT Act, 2010:** Empowers the specialized tribunal to effectively expedite cases related to environmental protection and conservation.

The rampant degradation of West Godavari's mangroves highlights the urgent need for stringent CRZ enforcement to balance economically lucrative aquaculture with critical coastal ecological security.

## Practice Prelims MCQs

**1. Apnoea Test recently seen in news, is related to?**

- (a) Diagnosing sleep disorders
- (b) Measuring lung capacity
- (c) Verifying brainstem death
- (d) Assessing cardiac failure

**Answer: (c)**

**2. Consider the following statements with reference to Public Interest Litigation (PIL):**

1. The concept of Public Interest Litigation originated in India in the late nineteenth century.
2. It can be filed by a party without any locus standi to protect the general public interest.
3. Both the Supreme Court and the High Courts have the right to admit PILs.

**How many of the above given statements are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Answer: (b)**

**3. Consider the following countries:**

1. Saudi Arabia
2. United Arab Emirates
3. Venezuela
4. Pakistan
5. Nigeria
6. Congo

**Which of the above given countries are currently members of OPEC?**

- (a) 1, 3, 5 and 6 only
- (b) 1, 2, 3 and 5 only
- (c) 1, 4, 5 and 6 only
- (d) 2, 3, 4, 5 and 6

**Answer: (a)**

**4. Consider the following straits:**

1. Strait of Malacca
2. Strait of Hormuz
3. Singapore Strait
4. Bab-el-Mandeb

**Which of the above given straits are passed by ships on a sea route if a ship goes from India to Vietnam?**

- (a) 1 and 2 only
- (b) 1, 3 and 4 only
- (c) 2 and 4 only
- (d) 1 and 3 only

**Answer: (d)**

**5. Identify the correct statement with reference to the UDGM portal:**

- (a) It is a digital platform launched by the Securities and Exchange Board of India (SEBI) to help investors recover unclaimed corporate dividends.
- (b) It is a gateway developed by the National Bank for Agriculture and Rural Development (NABARD) to track pending direct benefit transfers for farmers.
- (c) It is an initiative by the Reserve Bank of India (RBI) that enables the public to search for their unclaimed deposits across multiple banks.
- (d) It is a centralized portal under the Ministry of Finance aimed at monitoring unspent Corporate Social Responsibility (CSR) funds.

**Answer: (c)**

**6. Consider the following statements with reference to the Monetary Policy Committee (MPC):**

1. It is a statutory body constituted under the provisions of the Reserve Bank of India Act, 1934.
2. It is a six-member committee, with the RBI Governor acting as its ex-officio chairperson.
3. The decisions taken by the Monetary Policy Committee are binding on the Reserve Bank of India.
4. The external members of the MPC hold office for a period of four years and are eligible for re-appointment.

**How many of the above statements are correct?**

- (a) Only one
- (b) Only two

- (c) Only three  
(d) All four

**Answer: (c)**

**7. Consider the following statements with reference to the Agni-1 Missile:**

1. It is a single-stage, solid-fuel missile that originated from India's 1983 Integrated Guided Missile Development Program (IGMDP).
2. It is powered by a liquid-propellant booster designed specifically for the Agni series.
3. The missile is designed to be launched strictly from fixed underground silos.

**Which of the statements given above is/are correct?**

- (a) 1 only  
(b) 1 and 2 only  
(c) 2 and 3 only  
(d) 1, 2 and 3

**Answer: (a)**

**8. Consider the following statements with reference to Nereid:**

1. It is the largest moon of Neptune, discovered recently by the James Webb Space Telescope.
2. It has a perfectly circular orbit around Neptune, completing one revolution in exactly 360 Earth days.
3. Recent observations have confirmed that Nereid migrated to Neptune's neighborhood from the Kuiper Belt.

**How many of the above statements are correct?**

- (a) Only one  
(b) Only two  
(c) All three

- (d) None

**Answer: (d)**

**9. Consider the following statements with reference to the ULPGM-V3:**

1. It is a drone-launched precision missile capable of engaging both ground and enemy aerial targets.
2. It is exclusively designed for deployment in plain terrains and lacks high-altitude operational capabilities.
3. It supports two-way real-time data transmission, allowing for post-launch target updates and mid-course aim-point corrections.
4. Its warhead is solely designed for anti-armour roles and cannot be used against fortified bunker structures.

**How many of the above statements are correct?**

- (a) Only one  
(b) Only two  
(c) Only three  
(d) All four

**Answer: (b)**

**10. The term "Buddhist 'Diamond Triangle'", which was recently added to India's Tentative List of UNESCO World Heritage Sites, refers to which of the following groups of ancient monastic sites?**

- (a) Bodh Gaya, Sarnath, and Kushinagar  
(b) Nalanda, Vikramashila, and Odantapuri  
(c) Ratnagiri, Udayagiri, and Lalitgiri  
(d) Sanchi, Bharhut, and Amaravati

**Answer: (c)**

## Practice Mains Questions

1. "Should official government communication during an election period be subject to greater scrutiny under the Model Code of Conduct? Discuss." (10 Marks, 150 Words)
2. "The exercise of gubernatorial discretion in a hung Assembly often becomes a subject of political controversy. Discuss with reference to constitutional principles and judicial pronouncements." (10 Marks, 150 Words)
3. "Analyze the role of Vietnam in advancing India's Act East Policy and Indo-Pacific vision." (10 Marks, 150 Words)
4. "The Israel-Palestine conflict presents both diplomatic opportunities and strategic challenges for India. Discuss in the context of India's commitment to a Two-State Solution." (15 Marks, 250 Words)
5. "The success of solid waste management depends more on local institutional capacity than on uniform national mandates. Discuss." (15 Marks, 250 Words)